Jurisdiction Profile	2
Overview	2
Population and Demographics	3
Population Growth	4
Existing Land Use And Development Trends	4
Changes in Vulnerability	5
Future Development	6
Plan Maintenance	6
Public Participation	7
Hazard Profiles	8
Dam Failure	8
Drought	9
Earthquake	10
Extreme Cold	12
Extreme Heat	13
Flood	14
Hail	18
Hurricane / Tropical Storm	21
Ice Storm	23
Landslide	24
Lightning	25
Snow Storm	27
Tornado	28
Wildfire	30
Wind	34
Climate Change Considerations	37
Human-Caused Hazards	37
Previous Mitigation Actions	38
New Mitigation Actions	42
Capability Assessment	59

The Saratoga County Hazard Mitigation Action Plan Update 2025 relates to the multiple jurisdictions therein from a county wide perspective. The shared plan includes the detailed hazard identification and risk assessment, a complete hazard event history, climate change trends and future impacts, location maps, extent tables and summary statements on both probability and potential severity. This annex is supplemental data provided specific to the municipality herein and focuses on the unique local risks and mitigation strategies.

JURISDICTION PROFILE

OVERVIEW

The Town of Moreau is located in Saratoga County, New York, with a population of 16,489. The Town of Moreau is located in the northeast part of the county north of Saratoga Springs. According to the United States Census Bureau, the town has a total area of 43.6 square miles, of which 42.2 square miles is land and 1.5 square miles (3.32%) is water. The town's northern and eastern boundaries are established by the Hudson River. The eastern town line, formed by the river, is the border of Washington County. The northern town line is the border of Warren County. Figure R-1 shows the general location of the Town of Moreau.

TOWN OF MOREAU CONTACT INFORMATION

Name: Jesse Fish

Title: Town Supervisor

Phone: (518) 792-1030

Address: 351 Reynolds Road, Moreau, NY

12828

Email: moreausuper@townofmoreau.org

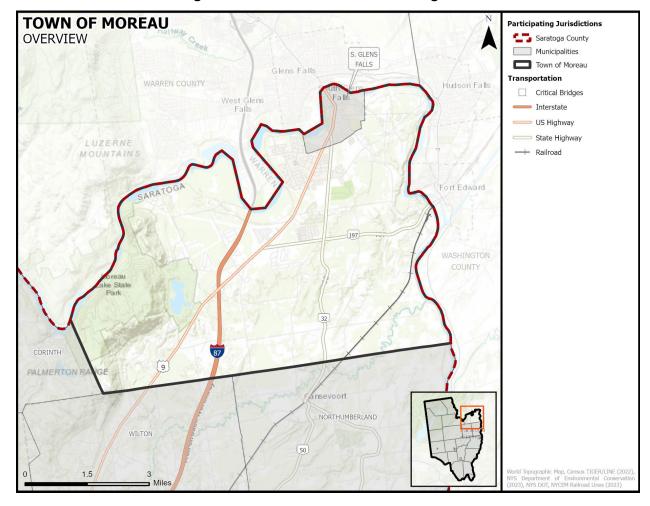


Figure R-1. Town of Moreau Planning Area

POPULATION AND DEMOGRAPHICS

According to the 2020 Census population count, the Town of Moreau has an official population of 16,202 residents, a 10 percent increase since the 2010 census. Table R-1 shows the population distribution in the Town of Moreau in 2010, 2020 (Census population count), and 2023 (2023 American Community Survey (ACS) five-year estimates. Note that in some cases the 2023 ACS estimates may differ from the 2020 Census count; the ACS estimates are used throughout this section for consistency.¹

Table R-1. Population Distribution, Town of Moreau

JURISDICTION	TOTAL 2010 POPULATION	TOTAL 2020 POPULATION (Census)	TOTAL 2023 POPULATION (ACS Estimates)	PERCENTAGE CHANGE 2010-2023
Town of Moreau	14,728	16,202	16,489	11.9%

¹ Source: https://www.census.gov/geographies/reference-maps/2010/geo/2010-pumas/new-york.html, https://www.census.gov/en.html and https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2023/

Table R-2 summarizes select characteristics of vulnerable or sensitive populations in the Town of Moreau using data from the U.S. Census Bureau 2023 American Community Survey (ACS) five-year estimates.

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 R-2. Populations at Greater Risk, Town of Moreau

JURISDICTION	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

POPULATION GROWTH

The official 2020 Town of Moreau population is 16,202. Overall, the Town of Moreau experienced an increase in population between 1990 and 2020 of 24 percent, or an increase of 3,180 residents. Between 2010 and 2020, the Town of Moreau experienced a population growth. Table R-3 provides historic change rates in the Town of Moreau.

Table R-3. Population Growth, Town of Moreau, 1990-2020²

JURISDICTION	1990³	20004	2010	2020	POP CHANGE 1990- 2020	PERCENT OF CHANGE	POP CHANGE 2010- 2020	PERCENT OF CHANGE
Town of Moreau	13,022	13,826	14,728	16,202	3,180	24%	1,474	10%

EXISTING LAND USE AND DEVELOPMENT TRENDS

A review of building permits can also give a picture of the built environment and the number of buildings that are being constructed in the Town of Moreau. Table R-4 lists the number of residential buildings and total units authorized through a permit from the Town of Moreau, where data was available, between 2019 and 2023.

Table R-4. Building Permits, Town of Moreau, 2019-2023⁵

	2019		2020		2021		2022		2023	
JURISDICTION	Total Buildings	Total Units								
Town of Moreau	64	119	58	180	65	65	53	53	43	43

² U.S. Census Bureau

³ Source: https://www2.census.gov/library/publications/decennial/1990/cp-1/cp-1-34-2.pdf?#

Source: https://www2.census.gov/library/publications/2001/compendia/ccdb00/2000ccdb.pdf

⁵ U.S. Census Bureau, Building Permit Survey, 1992-2022, https://www.census.gov/construction/bps/

Certain types of housing found in the Town of Moreau are more vulnerable than typical site-built, newly constructed residential structures. This includes mobile or manufactured homes, and single-family residences (SFR) that are built before 1980, as they are typically built to lower or less stringent construction standards than newer construction. Table R-5 includes housing inventory data for the Town of Moreau per the American Community Survey five-year estimates.

Table R-5. Housing Inventory and Vulnerable Structures, Town of Moreau⁶

JURISDICTION	TOTAL HOUSING UNITS	BUILT PRIOR TO 1980	MOBILE HOMES	
Town of Moreau	6,862	3,168	598	

CHANGES IN VULNERABILITY

The Town of Moreau has experienced an increase in overall population of 10 percent between 2010 and 2020. The American Community Survey estimates the 2023 total housing units for the Town of Moreau to be 6,862. The total building permits issued between 2019 and 2023 represent approximately 4.06 percent of the total housing units available in the Town of Moreau. The overall population increase, combined with the increase in housing units indicates a slight increase in vulnerability to all hazards in terms of populations and the built environment.

Table R-6. Changes in Vulnerability, Town of Moreau

JURISDICTION	POPULATION TREND	HOUSING TREND	OVERALL VULNERABILITY CHANGES
Town of Moreau	Increasing	Increasing	Slight Increase

Table R-7 lists the total number of building permits issued in the Town of Moreau from 2019 through 2023, including the number of permits issued in the Special Flood Hazard Area and the percentage of SFHA permits issued overall.

Table R-7. Building Permits, Town of Moreau, 2019-2023

JURISDICTION	TOTAL BUILDING PERMITS	SFHA PERMITS	PERCENT OF PERMITS IN SFHA
Town of Moreau	283	0	0

No permits were issued in the SFHA during that same time period, indicating no increase in flood risk due to new development.

Changes in vulnerability are applicable to all natural hazards except when discussing dam failure as vulnerability for this hazard is discussed in relation to changes in the estimated inundation areas for profiled dams. The Town of Moreau does not own any dams and is not located in any estimated dam inundation areas, therefore changes in vulnerability in the estimated inundation areas for profiled dams does not pertain to the Town of Moreau. While flood and wildfire hazards

⁶ The Housing Inventory and Vulnerable Structures are based off the 2023 American Community Survey 5-Year Estimates Data Profiles.

feature geographical boundaries, increases in population and building inventory can increase overall vulnerability for these hazards even when the trends occur outside of the known hazard boundary. Development decreases permeable surface areas and increases runoff, increasing flood risk. As population density increases, the Wildland Urban Interface (WUI) typically increases. WUI growth often results in more wildfire ignitions, which puts more houses and lives at risk.

FUTURE DEVELOPMENT

To better understand how future growth and development in the Town of Moreau 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 impacts.

Population projections from 2010 to 2040 are listed in Table R-8, as provided by Cornell University's Program on Applied Demographics⁷. **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 an overall increase for the planning area.

2010 2020 2030 2040 LAND AREA (square miles) 810 219,607 271.12 234,009 288.90 246,743 304.62 252,521 311.75

Table R-8. Saratoga County Population Projections

PLAN MAINTENANCE

The Saratoga 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 24 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 R-9 indicates the department and title of the party responsible for Plan monitoring, evaluating, updating, and review of the Plan.

Table R-9. Team Member Responsible for Plan Monitoring, Evaluating, Updating, and Review of the Plan

JURISDICTION	TITLE
Town of Moreau	Town Supervisor

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

PUBLIC PARTICIPATION

A series of public meetings were held throughout the Saratoga 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 Moreau's website. A total of one survey was completed for the Town of Moreau. Additional meeting documentation and survey results can be viewed in Appendix E and Appendix B, respectively.

The draft Plan was made available to the general public for review and comment on Saratoga County's website for 30 days. To ensure opportunities are given to all citizens including those without internet access, a paper copy of the draft plan annexes was also available at municipal offices and public library locations with a comment form that included an email and phone number for the public to provide feedback. Refer to Section 2 for additional information on public involvement in the planning process.

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 Moreau'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 newspapers 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 Instagram, will keep the public and stakeholders appraised of potential opportunities to fund and implement mitigation projects identified in the Plan.

HAZARD PROFILES

DAM FAILURE

The Town of Moreau is not profiling dam failure. The community does not own any dams and is not located in any estimated dam inundation zones. Dam failure has not impacted the community in the past and is not anticipated to impact the community in the future. Any localized flooding the community may experience due to a dam breach is addressed in the flood hazard profile. Therefore, this hazard does not require further analysis.

DROUGHT

HAZARD DESCRIPTION. LOCATION. EXTENT. & HISTORICAL OCCURRENCES

The Saratoga 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 Moreau, 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 Saratoga County planning area, the Town of Moreau 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 Saratoga County planning area, including the Town of Moreau, 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 Moreau 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 Moreau:

Table R-10. Critical Facilities at Risk

JURISDICTION	CRITICAL FACILITIES
Town of Moreau	4 Communication Facilities, 1 EMS Facility, 2 Energy Utility Facilities, 2 Fire Stations, 1 Health Service Facility, 5 School Facilities, 9 Sewage and Water Facilities

The population over 65 in the Town of Moreau is estimated at 18.0 percent of the Town's total population and children under the age of 5 are estimated at 4.9 percent. The population with a disability is estimated at 14.0 percent of the Town's total population. An estimated 10.4 percent of the Town of Moreau's population live below the poverty level and 1.6 percent of the populations speak a language other than English (Table R-11).

Table R-11. Populations at Greater Risk

JURISDICTION	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

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.

EARTHQUAKE

HAZARD DESCRIPTION. LOCATION. EXTENT. & HISTORICAL OCCURRENCES

The Saratoga County Hazard Mitigation Plan Update provides a hazard description, location, and extent of the earthquake hazard for each participating jurisdiction (Section 7). The concentration of earthquakes in New York State is located in three general regions. The Saratoga Planning area is located in one of these general regions that includes the northeast third of the State. There is no geographic boundary to the hazard within the planning area therefore the risk is considered similar for all participating jurisdictions throughout Saratoga County. Historical earthquake data for the County, including the Town of Moreau, are provided on a County-wide basis per the USGS database. Therefore, all historical events are listed in Section 7 of the Plan Update.

PROBABILITY OF FUTURE EVENTS

According to the USGS, the entire Saratoga County planning area, including Town of Moreau, has a five to twenty-five percent chance of a slightly damaging (or greater) earthquake within 100 years. Based on historical records, the probability of an earthquake affecting the planning area is "Unlikely," meaning that an event is probable in the next 10 years.

VULNERABILITY AND IMPACT

While the entirety of the Saratoga County planning area, including the Town of Moreau, is exposed to earthquke events, damaging earthquakes for the planning area are exceedingly rare. With no significant historical events recorded, neither annualized loss-estimates or a breakdown of potential dollar losses of critical facilities and infrastructure from earthquakes are available. According to the New York State Hazard Mitigation Plan there have been no known impacts to structures or infrastructure in the area due to earthquakes.

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.

The Town of Moreau 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 earthquake events. Earthquake impacts to critical facilities are similar across the entire planning area and are listed in detail in the earthquake hazard profile (Section 7). The following critical facilities would be vulnerable to earthquake events in the Town of Moreau:

Table R-12. Critical Facilities at Risk

JURISDICTION	CRITICAL FACILITIES
Town of Moreau	4 Communication Facilities, 1 EMS Facility, 2 Energy Utility Facilities, 2 Fire Stations, 1 Health Service Facility, 5 School Facilities, 9 Sewage and Water Facilities

The population over 65 in the Town of Moreau is estimated at 18.0 percent of the Town's total population and children under the age of 5 are estimated at 4.9 percent. The population with a disability is estimated at 14.0 percent of the Town's total population. An estimated 10.4 percent of the Town of Moreau's population live below the poverty level and 1.6 percent of the populations speak a language other than English (Table R-13).

Table R-13. Populations at Greater Risk

JURISDICTION	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

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.

EXTREME COLD

HAZARD DESCRIPTION. LOCATION. EXTENT. & HISTORICAL OCCURRENCES

The Saratoga County Hazard Mitigation Plan Update provides a hazard description, location, and extent of the extreme cold hazard for each participating jurisdiction (Section 8). 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, and frost/freeze. Historically extreme cold data for the County, including the Town of Moreau, 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 Saratoga County planning area, the Town of Moreau can expect to experience approximately three to four extreme cold events each year. This frequency supports a "Highly Likely" probability of future events.

VULNERABILITY AND IMPACT

While the entirety of the Saratoga County planning area, including the Town of Moreau, 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 Moreau planning team members identified the following critical facilities (Table R-14) 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 8). The following critical facilities would be vulnerable to extreme cold events in the Town of Moreau:

Table R-14. Critical Facilities at Risk

JURISDICTION	CRITICAL FACILITIES
Town of Moreau	4 Communications Facilities, 1 EMS Facility, 2 Energy Utility Facilities, 2 Fire Stations, 1 Health Services Facility, 5 School Facilities, 9 Sewage and Water Facilities

The population over 65 in the Town of Moreau is estimated at 18.0 percent of the Town's total population and children under the age of 5 are estimated at 4.9 percent. The population with a disability is estimated at 14.0 percent of the Town's total population. An estimated 10.4 percent of the Town of Moreau's population live below the poverty level and 1.6 percent of the populations speak a language other than English (Table R-15).

Table R-15. Populations at Greater Risk

JURISDICTION	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

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.

EXTREME HEAT

HAZARD DESCRIPTION. LOCATION. EXTENT. & HISTORICAL OCCURRENCES

The Saratoga County Hazard Mitigation Plan Update provides a hazard description, location, and extent of the extreme heat hazard for each participating jurisdiction (Section 9). 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 Moreau, are provided on a County-wide basis per the NCEI database. Therefore, all historical events are listed in Section 9 of the Plan Update.

PROBABILITY OF FUTURE EVENTS

According to historical records for the Saratoga County planning area, the Town of Moreau 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 Saratoga County planning area, including the Town of Moreau, 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 Moreau planning team members identified the following critical facilities (Table R-16) 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 9). The following critical facilities would be vulnerable to extreme heat events in the Town of Moreau:

Table R-16. Critical Facilities at Risk

JURISDICTION	CRITICAL FACILITIES
Town of Moreau	4 Communications Facilities, 1 EMS Facility, 2 Energy Utility Facilities, 2 Fire Stations, 1 Health Services Facility, 5 School Facilities, 9 Sewage and Water Facilities

The population over 65 in the Town of Moreau is estimated at 18.0 percent of the Town's total population and children under the age of 5 are estimated at 4.9 percent. The population with a disability is estimated at 14.0 percent of the Town's total population. An estimated 10.4 percent of the Town of Moreau's population live below the poverty level and 1.6 percent of the populations speak a language other than English (Table R-17).

Table R-17. Populations at Greater Risk

JURISDICTION	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

Historic losses are reported on a county-wide basis. Please see Section 9 of this Plan for additional information on historical and annualized losses for the entire planning area.

FLOOD

HAZARD DESCRIPTION. LOCATION. & EXTENT

The Saratoga County Hazard Mitigation Plan Update provides a hazard description and extent of the flood hazard for the entire Saratoga County planning area in Section 10. Full flood zone delineations are available in the Town of Moreau including some areas with base flood elevations. The location of estimated flood zones for the Town of Moreau, , based on data provided by the Capitol Region Transportation Council, is provided in Figure R-2. FEMA's regulatory flood insurance rate maps are available for all jurisdictions in Appendix H.

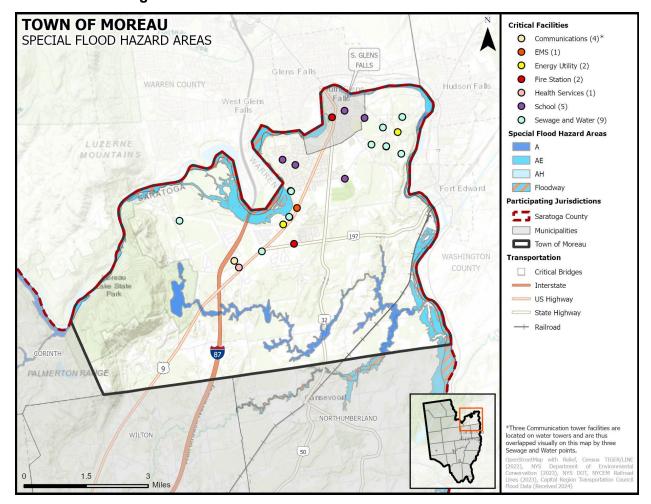


Figure R-2. Estimated Flood Zones in the Town of Moreau

HISTORICAL OCCURRENCES

Table R-18 provides the historical occurrences of flood events for the Town of Moreau according to the National Oceanic and Atmospheric Administration (NOAA) Storm Prediction Center, National Centers for Environmental Information (NCEI) database for Saratoga County. From January 1996 through June 2024, two flood events were known to have impacted the Town of Moreau, based upon NCEI records. Flood events are often reported on a county-wide basis, or under-reported for individual municipalities, particularly in smaller communities.

T 11 D 40		-	4000 0004
Table R-18.	Historical	Flood Events.	1996-2024

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Moreau	7/29/2021	0	0	\$0	\$0
Town of Moreau	7/29/2021	0	0	\$5,700	\$0
Tota	ls	0	0	\$5,700	

Based on the list of historical flood events for the Town of Moreau, two reported events have occurred since the 2019 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 Saratoga County planning area, the Town of Moreau can expect to experience approximately five flood events every year. This frequency supports a "Highly Likely" probability of future events.

VULNERABILITY AND IMPACT

The Town of Moreau 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 located in the floodplain in the Town of Moreau.

Historic loss estimates due to flood are presented in Table R-19 below.

Table R-19. Potential Annualized Losses, 1996-20248

JURISDICTION	NUMBER OF EVENTS	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Town of Moreau	2	\$5,700	\$200

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. The population over 65 in the Town of Moreau is estimated at 18.0 percent of the Town's total population and children under the age of 5 are estimated at 4.9 percent. The population with a disability is estimated at 14.0 percent of the Town's total population. An estimated 10.4 percent of the Town of Moreau's population live below the poverty level and 1.6 percent of the populations speak a language other than English (Table R-20).

⁸ Historical events are reported from 1996 through 2024; values are in 2024 dollars.

Table R-20. Populations at Greater Risk

JURISDICTION	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

The severity of a flooding event varies depending on the relative risk to citizens and structures located within each jurisdiction. Table R-21 depicts the level of impact for the Town of Moreau.

Table R-21 Town of Moreau Impact

JURISDICTION	IMPACT	DESCRIPTION
Town of Moreau	Limited	The Town of Moreau could have limited property damage with critical facilities typically shut down for 24 hours or less, and less than 10 percent of property would be destroyed or damaged.

NATIONAL FLOOD INSURANCE PROGRAM (NFIP) PARTICIPATION

The Town of Moreau 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 Moreau has developed mitigation actions that relate to NFIP participation, maintenance or compliance. Compliance and maintenance actions can be found in Section 23. Flooding was identified by the Town of Moreau as a high-risk hazard during hazard ranking activities at the Risk Assessment Workshop. Many of the mitigation actions for the jurisdiction were developed with flood mitigation in mind.

The Town of Moreau Building Inspector 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 (Table R-22). The local flood damage prevention ordinance is available for review at the local floodplain administrator's office. In addition, the ordinance can be viewed using the link provided below (Table R-22).

Table R-22. Flood Damage Prevention Ordinance

JURISDICTION	FLOOD DAMAGE PREVENTION ORDINANCE
Town of Moreau	https://ecode360.com/6820855#6820855

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 R-23 provides the most recent Community Assistance Visits (CAV) and Community Assistance Calls (CAC) dates along with the current status for the jurisdiction.

Table R-23. Compliance History

JURISDICTION	DATE OF LAST CAV	DATE OF LAST CAC	CURRENT NFIP STATUS	POLICIES IN FORCE
Town of Moreau	07/12/2011	05/27/2010	Good Standing	14

REPETITIVE LOSS

The Town of Moreau currently has no repetitive loss or severe repetitive loss properties.

HAIL

HAZARD DESCRIPTION. LOCATION. & EXTENT

The Saratoga County Hazard Mitigation Plan Update provides a hazard description, location and extent of the hail hazard for each participating jurisdiction (Section 11). 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 shown in Figure R-3 demonstrates that the Town of Moreau is vulnerable to hail events overall. Historical events are shown in Table R-24. A total of one reported historical hail event has impacted the Town of Moreau from January 1969 through June 2024; these events were reported to NCEI and NOAA databases and may not represent all hail events to have occurred during the past 55.5 years. Only those events for the Town of Moreau with latitude and longitude available were plotted (Figure R-3).

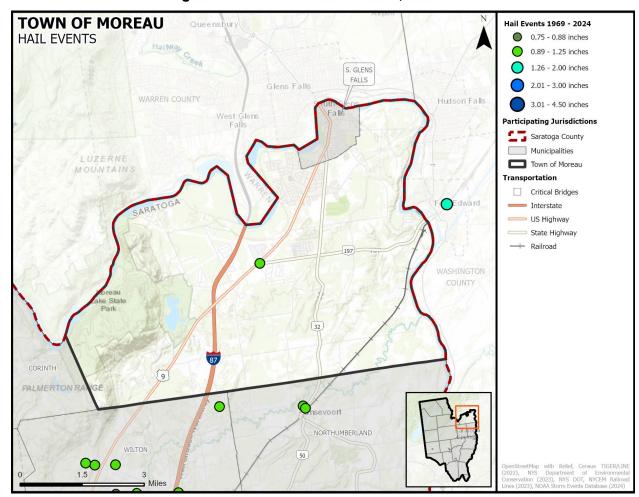


Figure R-3. Historical Hail Events, 1969-2024

JURISDICTION	DATE	MAGNITUDE (inches)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Moreau	5/19/2019	1	0	0	0	0
TOTALS		(Max Extent)	0	0	\$0	\$0

Based on the list of historical hail events for the Town of Moreau, one reported event has occurred since the 2019 Plan.

PROBABILITY OF FUTURE EVENTS

Historical hail events are 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 Saratoga County planning area, the Town of Moreau can expect approximately three to four hail events every year. This frequency supports a "Highly Likely" probability of future events.

VULNERABILITY AND IMPACT

The Town of Moreau 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 11).

Table R-25. Critical Facilities at Risk

JURISDICTION	CRITICAL FACILITIES
Town of Moreau	4 Communication Facilities, 1 EMS Facility, 2 Energy Utility Facilities, 2 Fire Stations, 1 Health Service Facility, 5 School Facilities, 9 Sewage and Water Facilities

The U.S. Census data indicates a total of 598 (8.7 percent of total housing stock) manufactured homes located in the Town of Moreau. In addition, 46.2 percent (approximately 3,168 structures) of the housing structures in the Town of Moreau 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 R-26. Structures at Greater Risk

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	MANUFACTURED HOMES
Town of Moreau	3,168	598

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. The population over 65 in the Town of Moreau is estimated at 18.0 percent of the Town's total population and children under the age of 5 are estimated at 4.9 percent. The population with a disability is estimated at 14.0 percent of the Town's total population. An estimated 10.4 percent of the Town of Moreau's population live

⁹ Historical events are reported from 1969 through 2024; values are in 2024 dollars.

below the poverty level and 1.6 percent of the populations speak a language other than English (Table R-27).

Table R-27. Populations at Greater Risk

JURISDICTION	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

Overall, the average loss estimate of property and crops in the Town of Moreau is \$0 with an average annualized loss of \$0. Based on historic loss and damages, the impact of hail damages on the Town of Moreau 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 R-28. Estimated Annualized Losses

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

HURRICANE / TROPICAL STORM

HAZARD DESCRIPTION. LOCATION. EXTENT. & HISTORICAL OCCURRENCES

The Saratoga County Hazard Mitigation Plan Update provides a hazard description, location, and extent of the hurricane/tropical storm hazard for each participating jurisdiction (Section 12). The location of the Saratoga County planning area is approximately 170 miles from the coast making the planning area, including Town of Moreau, vulnerable to threats directly and indirectly related to a hurricane event, such as high-force winds and flooding. There is no geographic boundary to the hazard therefore the risk is considered similar for all participating jurisdictions throughout Saratoga County, including the Town of Moreau. Historical hurricane data for the planning area, including the Town of Moreau, are provided on a regional basis per the NCEI database. Therefore, all historical events are listed in Section 12 of the Plan Update.

PROBABILITY OF FUTURE EVENTS

According to NOAA Historical Hurricane Tracks there have been six hurricanes or tropical storms track across or near the planning area between January 1996 and June 2024. The probability of a hurricane or tropical storm affecting the planning area is considered "Occasional", meaning that an event is probable in the next five years.

VULNERABILITY AND IMPACT

Hurricane and tropical storm events can cause major damage to large areas; hence, all existing buildings, facilities, and populations are equally exposed and vulnerable to this hazard and could potentially be impacted. The lack of historical impacts to the entire Saratoga County planning area 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 ten percent of property is destroyed or with major damage.

The Town of Moreau 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 hurricane events. Hurricane impacts to critical facilities are similar across the entire planning area and are listed in detail in the hurricane hazard profile (Section 12). The following critical facilities would be vulnerable to earthquake events in the Town of Moreau:

Table R-29. Critical Facilities at Risk

JURISDICTION	CRITICAL FACILITIES
Town of Moreau	4 Communication Facilities, 1 EMS Facility, 2 Energy Utility Facilities, 2 Fire Stations, 1 Health Service Facility, 5 School Facilities, 9 Sewage and Water Facilities

The population over 65 in the Town of Moreau is estimated at 18.0 percent of the Town's total population and children under the age of 5 are estimated at 4.9 percent. The population with a disability is estimated at 14.0 percent of the Town's total population. An estimated 10.4 percent of the Town of Moreau's population live below the poverty level and 1.6 percent of the populations speak a language other than English (Table R-30).

R-30. Populations at Greater Risk

JURISDICTION	ELDERLY (over 65)	YOUTH (under 5)	WITH A DISABILITY	BELOW POVERTY LEVEL	NON-ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

Historic losses are typically reported on a county-wide basis. Please see Section 12 of this Plan for additional information on historical and annualized losses for the entire planning area.

ICE STORM

HAZARD DESCRIPTION. LOCATION. EXTENT. & HISTORICAL OCCURRENCES

The Saratoga County Hazard Mitigation Plan Update provides a hazard description, location, and extent of the ice storm hazard for each participating jurisdiction (Section 13). 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 Moreau, are provided on a county-wide basis per the NCEI database. Therefore, all historical events are listed in Section 13 of the Plan Update.

PROBABILITY OF FUTURE EVENTS

According to historical records for the Saratoga County planning area, the Town of Moreau can expect to experience an ice storm event approximately every five years. This frequency supports a "Occasional" probability of future events.

VULNERABILITY AND IMPACT

While the entirety of the Saratoga County planning area, including the Town of Moreau, 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 Moreau planning team members identified the following critical facilities (Table R-31) 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 13). The following critical facilities would be vulnerable to ice storm events in the Town of Moreau:

Table R-31. Critical Facilities at Risk

JURISDICTION	CRITICAL FACILITIES
Town of Moreau	4 Communications Facilities, 1 EMS Facility, 2 Energy Utility Facilities, 2 Fire Stations, 1 Health Services Facility, 5 School Facilities, 9 Sewage and Water Facilities

The population over 65 in the Town of Moreau is estimated at 18.0 percent of the Town's total population and children under the age of 5 are estimated at 4.9 percent. The population with a disability is estimated at 14.0 percent of the Town's total population. An estimated 10.4 percent of the Town of Moreau's population live below the poverty level and 1.6 percent of the populations speak a language other than English (Table R-32).

Table R-32. Populations at Greater Risk

JURISDICTION	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

Historic losses are reported on a county-wide basis. Please see Section 13 of this Plan for additional information on historical and annualized losses for the entire planning area.

LANDSLIDE

HAZARD DESCRIPTION. LOCATION. EXTENT. & HISTORICAL OCCURRENCES

The Saratoga County Hazard Mitigation Plan Update provides a hazard description, location and extent of the landslide hazard for all participating jurisdictions prone to landslides (Section 14). The majority of Saratoga County is categorized as having a low landslide incidence overall with the eastern section along the Hudson River categorized as having a high landslide incidence, including the Town of Moreau.

Since 1996, the Saratoga County planning area has had 3 reported incidents and \$70,000 in damages due to landslides. It is noted however, that most landslide incidences within New York State have not been well documented.

PROBABILITY OF FUTURE EVENTS

Based on available records of historic events there are no known historic events of landslide in the Town of Moreau over the 28.5-year reporting period which provides a probability of one event every five years. This frequency supports an "Occasional" probability of future events for the Town of Moreau.

VULNERABILITY AND IMPACT

The only known areas susceptible to landslide within the planning area are located in the eastern and southern portions of the County along the Hudson River. Structures and infrastructure in close proximity to steep slopes along the river are vulnerable to landslide impacts. There have been minimal impacts to structures or infrastructure in the area due to landslide and there are no critical facilities located in the areas considered at 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.

LIGHTNING

HAZARD DESCRIPTION. LOCATION. & EXTENT

The Saratoga County Hazard Mitigation Plan Update provides a hazard description, location and extent of the lightning hazard for each participating jurisdiction (Section 15). 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 three recorded lightning events in the Town of Moreau from 1996 through June 2024. 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.

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
	5/24/2004	0	0	\$1,700	\$0
Town of Moreau	8/7/2014	0	0	\$2,600	\$0
	8/30/2022	0	0	\$42,200	\$0
TOTALS				\$46	6.500

Table R-33. Historical Lightning Events, 1996- June 2024¹⁰

Based on the list of historical lightning events for the Town of Moreau, there has been one reported event since the 2019 Plan.

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 Moreau 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 Moreau 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 15).

Table R-34. Critical Facilities at Risk

JURISDICTION	CRITICAL FACILITIES
Town of Moreau	4 Communication Facilities, 1 EMS Facility, 2 Energy Utility Facilities, 2 Fire Stations, 1 Health Service Facility, 5 School Facilities, 9 Sewage and Water Facilities

¹⁰ Historical events are reported from 1996 through 2024; values are in 2024 dollars.

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. The population over 65 in the Town of Moreau is estimated at 18.0 percent of the Town's total population and children under the age of 5 are estimated at 4.9 percent. The population with a disability is estimated at 14.0 percent of the Town's total population. An estimated 10.4 percent of the Town of Moreau's population live below the poverty level and 1.6 percent of the populations speak a language other than English (Table R-35).

Table R-35. Populations at Greater Risk

JURISDICTION	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

Historical losses and damages as a result of lightning events can be considered "Limited" with 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 loss estimate for the Town of Moreau (in 2024 dollars) is considered \$46,500 with an average annualized loss of \$1,600 (Table R-36).

Table R-36. Potential Annualized Losses

JURISDICTION	TOTAL PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Town of Moreau	\$46,500	\$1,600

SNOW STORM

HAZARD DESCRIPTION. LOCATION. EXTENT. & HISTORICAL OCCURRENCES

The Saratoga County Hazard Mitigation Plan Update provides a hazard description, location, and extent of the snow storm hazard for each participating jurisdiction (Section 16). 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, and winter storm. Historical snow storm data for the County, including the Town of Moreau, are provided on a county-wide basis per the NCEI database. Therefore, all historical events are listed in Section 16 of the Plan Update.

PROBABILITY OF FUTURE EVENTS

According to historical records for the Saratoga County planning area, the Town of Moreau can expect to experience a snow storm event approximately 13 times each year. This frequency supports a "Highly Likely" probability of future events.

VULNERABILITY AND IMPACT

While the entirety of the Saratoga County planning area, including the Town of Moreau, 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 Moreau planning team members identified the following critical facilities (Table R-37) 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 16). The following critical facilities would be vulnerable to snow storm events in the Town of Moreau:

Table R-37. Critical Facilities at Risk

JURISDICTION	CRITICAL FACILITIES
Town of Moreau	4 Communications Facilities, 1 EMS Facility, 2 Energy Utility Facilities, 2 Fire Stations, 1 Health Services Facility, 5 School Facilities, 9 Sewage and Water Facilities

The population over 65 in the Town of Moreau is estimated at 18.0 percent of the Town's total population and children under the age of 5 are estimated at 4.9 percent. The population with a disability is estimated at 14.0 percent of the Town's total population. An estimated 10.4 percent of the Town of Moreau's population live below the poverty level and 1.6 percent of the populations speak a language other than English (Table R-38).

Table R-38. Populations at Greater Risk

JURISDICTION	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

Historic losses are reported on a county-wide basis. Please see Section 16 of this Plan for additional information on historical and annualized losses for the entire planning area.

TORNADO

HAZARD DESCRIPTION. LOCATION. & EXTENT

The Saratoga County Hazard Mitigation Plan Update provides a hazard description, location and extent of the tornado hazard for each participating jurisdiction (Section 17). 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 1974 through June 2024, no tornado events are know to have impacted the Town of Moreau. Based on the list of historical tornado events for the Town of Moreau, there have been no recorded events since the 2019 Plan.

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 Saratoga County planning area, the Town of Moreau can expect to experience a tornado event once every three to four years. This frequency supports an "Likely" probability of future events.

VULNERABILITY AND IMPACT

The Town of Moreau 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 17).

Table R-39. Critical Facilities at Risk

JURISDICTION	CRITICAL FACILITIES
Town of Moreau	4 Communications Facilities, 1 EMS Facility, 2 Energy Utility Facilities, 2 Fire Stations, 1 Health Service Facility, 5 School Facilities, 9 Sewage and Water Facilities

According to the American Community Survey (ACS) five-year estimates for 2023, a total of 598 manufactured homes are located in the Town of Moreau (8.7 percent of total housing stock). In addition, 46.2 percent (approximately 3,168 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 R-40. Structures at Greater Risk

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	MANUFACTURED HOMES
Town of Moreau	3,168	598

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. The population over 65 in the Town of Moreau is estimated at 18.0 percent of the Town's total population and children under

the age of 5 are estimated at 4.9 percent. The population with a disability is estimated at 14.0 percent of the Town's total population. An estimated 10.4 percent of the Town of Moreau's population live below the poverty level and 1.6 percent of the populations speak a language other than English (Table R-41).

Table R-41. Populations at Greater Risk

JURISDICTION	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

The total annual loss estimate due to tornado events is \$0 (in 2024 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 Moreau 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 R-42. Estimated Average Annual Losses

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

WILDFIRE

HAZARD DESCRIPTION. & LOCATION

The Saratoga County Hazard Mitigation Plan Update provides a hazard description of the wildfire hazard for each participating jurisdiction (Section 18). 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 R-4). The Town of Moreau planning area is considered at low risk for wildfires with limited WUI areas.

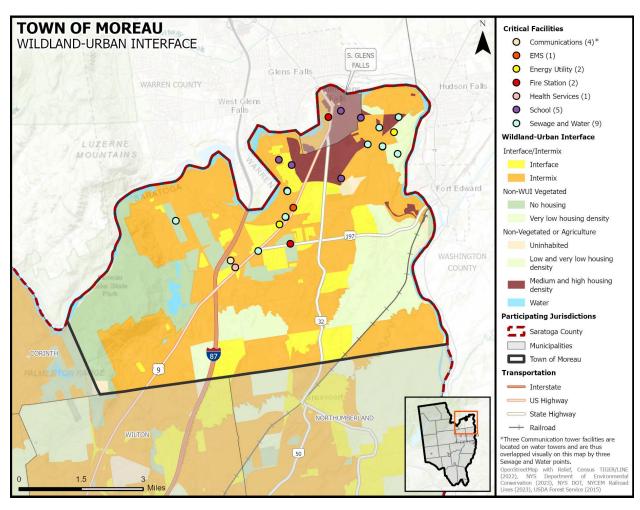


Figure R-4. Town of Moreau Wildland Urban Interface Map

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 of Forest Protection issues color coded danger alerts. The entire planning area, including the

Town of Moreau, had a "Moderate" FDRA Risk rating as of October 2024 (Section 18, Figure 18-2).

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 Saratoga County Hazard Mitigation Plan Update provides KBDI levels and descriptions along with the range of historical KBDI levels for the planning area (Section 18).

The average extent to be mitigated for the planning area is a KBDI of 300 to 400. 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 R-5). Detailed data on historic wildfires in the planning area, including damages, acres burned, fatalities, or injuries, was not available. There were ten wildfires greater than 10 acres in Saratoga County during that same period, with the greatest wildfires per square mile occurring in the southern portions of the county. The Saratoga County planning area can anticipate limited future wildfire events, typically burning less than 10 acres with infrequent events exceeding 10 acres.

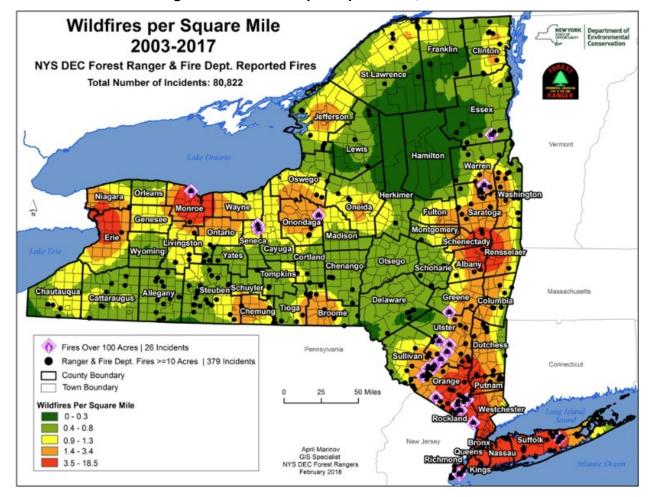


Figure R-5. Wildfires per Square Mile, 2003-2017

HISTORICAL OCCURRENCES

Between 2008 and 2022 there were 62 wildfire events in Saratoga County. These incidents are reported county-wide. Most of the incidents were timber fires (48), followed by grass fires (8), brush (4), and slash (2). Based on data provided for historical wildfire events for Saratoga County planning area, 19 events have occurred since the 2019 Plan.

PROBABILITY OF FUTURE EVENTS

With 62 events in a 15-year period, a wildfire event within Saratoga County planning area, including Saratoga County, is "Highly Likely" meaning an event is probable within the next year.

VULNERABILITY AND IMPACT

The Town of Moreau 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 18).

Table R-43. Critical Facilities at Risk

JURISDICTION	CRITICAL FACILITIES
Town of Moreau	4 Communication Facilities, 1 EMS Facility, 1 Energy Utility, 2 Fire Stations, 4 School Facilities, 3 Sewage and Water Facilities

For the Town of Moreau, 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.

WIND

HAZARD DESCRIPTION, LOCATION, & EXTENT

The Saratoga County Hazard Mitigation Plan Update provides a hazard description, location and extent of the wind hazard for each participating jurisdiction (Section 19). Wind events are not confined to specific geographic boundaries and are considered similar for all participating jurisdictions throughout the planning area.

HISTORICAL OCCURRENCES

Since 1960, 26 wind events are known to have occurred in the Town of Moreau. Table R-44 presents information on known historical events impacting the Town of Moreau.

Table R-44. Historical Wind Events, 1960-2024¹¹

JURISDICTION	DATE	TIME	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
	8/6/1988	1920	0	0	0	\$0	\$0
	8/4/1992	1130	0	0	0	\$0	\$0
	7/30/1994	1430	0	0	0	\$10,400	\$0
	7/15/1997	1951	-	0	0	\$5,800	\$0
	7/6/1999	1341	-	0	0	\$3,700	\$0
	8/19/2011	1350	50	0	0	\$0	\$0
	8/19/2011	1350	50	0	0	\$0	\$0
	8/5/2012	1920	50	0	0	\$0	\$0
	6/2/2013	1220	50	0	0	\$0	\$0
	7/8/2014	2014	50	0	0	\$0	\$0
Town of Moreau	7/8/2014	2014	50	0	0	\$0	\$0
Town or woreau	7/24/2015	1316	50	0	0	\$0	\$0
	4/7/2016	1541	50	0	0	\$0	\$0
	4/7/2016	1541	50	0	0	\$0	\$0
	7/18/2016	1215	50	0	0	\$0	\$0
	7/18/2016	1210	50	0	0	\$0	\$0
	7/18/2016	1215	50	0	0	\$0	\$0
	3/8/2017	1418	50	0	0	\$0	\$0
	6/27/2017	1553	50	0	0	\$0	\$0
	5/19/2019	1724	60	0	0	\$0	\$0
	5/19/2019	1725	50	0	0	\$0	\$0
	5/19/2019	1728	60	0	0	\$0	\$0

¹¹ Historical events are reported from 1960 through 2024. Magnitude is listed when available. Damage values are in 2024 dollars.

JURISDICTION	DATE	TIME	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
	5/19/2019	1730	50	0	0	\$0	\$0
	8/17/2019	1624	50	0	0	\$0	\$0
	5/29/2020	1722	50	0	0	\$0	\$0
	9/8/2021	1744	50	0	0	\$0	\$0
TOTALS			(MAX EXTENT)	0	0	\$19,900	\$0

Based on the list of historical wind events for the Town of Moreau, seven of the reported events have occurred since the 2019 Plan.

PROBABILITY OF FUTURE EVENTS

Historical wind events are typically 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 Saratoga County planning area, the Town of Moreau 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 Moreau 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 19).

Table R-45. Critical Facilities at Risk

JURISDICTION	CRITICAL FACILITIES
Town of Moreau	4 Communication Facilities, 1 EMS Facility, 2 Energy Utility Facilities, 2 Fire Stations, 1 Health Service Facility, 5 School Facilities, 9 Sewage and Water Facilities

According to the American Community Survey (ACS) five-year estimates for 2023, a total of 598 manufactured homes are located in the Town of Moreau (8.7 percent of total housing stock). In addition, 46.2 percent (approximately 3,168 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 significant wind events.

Table R-46. Structures at Greater Risk

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	MANUFACTURED HOMES
Town of Moreau	3,168	598

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. The population over 65 in the Town of Moreau is estimated at 18.0 percent of the Town's total population and children under the age of 5 are estimated at 4.9 percent. The population with a disability is estimated at 14.0

percent of the Town's total population. An estimated 10.4 percent of the Town of Moreau's population live below the poverty level and 1.6 percent of the populations speak a language other than English (Table R-47).

Table R-47. Populations at Greater Risk

JURISDICTION	65 AND OLDER	UNDER 5	WITH A DISABILITY	BELOW POVERTY LEVEL	LIMITED ENGLISH SPEAKING
Town of Moreau	2,960	807	2,315	1,715	269

Structural impact of wind events experienced in the Town of Moreau 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 64.5-year reporting period there has been a total of \$19,900 damages (in 2024 dollars) in the Town of Moreau due to wind events. The estimated average annual loss from a wind event is \$300.

Table R-48. Estimated Annualized Losses

JURISDICTION	TOTAL PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES	
Town of Moreau	\$19,900	\$300	

CLIMATE CHANGE CONSIDERATIONS

The Saratoga 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 Saratoga County unless otherwise stated. Please see Sections 5 through 19 of this Plan Update for additional information on climate change considerations by hazard.

HUMAN-CAUSED HAZARDS

The Saratoga County Hazard Mitigation Plan update provides a detailed hazard profile for the human-caused hazard invasive species. Information for this hazard 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 Saratoga County planning area. Please see Section 20 of this Plan Update for additional information on the human-caused hazard evaluated for this plan.

PREVIOUS MITIGATION ACTIONS

				TOWN C	F MOREA	U PREVIOUS	ACTIONS				
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
TMO-1a	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on costeffectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1- 3, 2-2, 2-3, 2-4, 3-1, 3- 5	NFIP Floodplain Administrator	SEMO, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share		Defer to plan update.
TMO-1b	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.	Existing	Flood, Severe Storm	1, 2, 3, 5	1-1, 1-2, 1- 3, 2-2, 2-3, 2-4, 3-1, 3- 5	NFIP Floodplain Administrator	SEMO, FEMA	High	FEMA Mitigation Grant Programs and local budget (or property owner) for cost share		Defer to plan update.
TMO-2	Consider participation in incentive- based programs such as CRS.	New & Existing	Flood	1, 2, 5	1-1, 1-3, 1-6, 2-1, 2-2, 2-3, 2-4, 5-2	NFIP Floodplain Administrator	SEMO, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update.
TMO-3	Continue to support the implementation, monitoring,	New & Existing	All Hazards	1 through 5	All	NFIP Floodplain	County (through Mitigation		Local Budget, possibly FEMA	Long Term	Defer to plan update.

				TOWN C	F MOREA	U PREVIOUS A	ACTIONS				
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	maintenance, and updating of this Plan, as defined in Section 7.0.					Administrator	Planning Coordinator), SEMO	update)	Mitigation Grant Funding for 5- year update		
TMO-4	Strive to maintain compliance with, and good-standing in the National Flood Insurance program.	New & Existing	Flood	1, 2, 4	1-1, 1-2, 1- 3, 1-8, 2-2, 2-3, 2-4, 4- 1, 4-2, 4-3, 4-4	NFIP	SEMO, ISO, FEMA	Low - Medium	Local Budget	Short Term	Defer to plan update.
TMO-5	Continue to develop, enhance, and implement existing emergency plans.	New & Existing	All Hazards	1, 3	1-1, 1-7, 3-	Office of Emergency Management with support from County OEM and SEMO	County Emergency Management, SEMO	Low - Medium	Local Budget	Short Term	Defer to plan update.
TMO-6	Create/enhance/ maintain mutual aid agreements with neighboring communities.	New & Existing	All Hazards	3, 5	3-4, 5-1, 5- 3	Emergency Management, Highway Superintendent	Surrounding municipalities and County	Low - Medium	Local Budget	Ongoing	Defer to plan update.
TMO-7	Support County-wide initiatives identified in Section 9.1 of the County Annex.	New & Existing	All Hazards	1 through 5	All	Local departments (as applicable for specific initiative)	County and Regional agencies (as appropriate for initiative)	Low - High	Existing programs and grant funding where applicable	Ongoing	Defer to plan update.
TMO-8	Determine the appropriate action and address flood damage along Old Bend Road and West River Road.	New & Existing	Flood, Severe Storm	1, 3	1-1, 1-5, 3- 1, 3-4	Emergency Manager and Highway Superintenden	Municipality and County t	Medium	Existing programs and grant funding where applicable	Ongoing – Long-term depending on initiative	Defer to plan update.
TMO-9	Strengthen or continue to strengthen provisions in the Zoning Law for the management of stormwater, erosion and the protection of open space. Per the Comprehensive Land Use Plan.	New & Existing	Flood, Severe Storm	1, 4	1-1, 1-7, 4- 1, 4-2, 4-3, 4-4		Municipality and County	Low	Budget	Short Term	Defer to plan update.
TMO-10	Review/revise the Town Zoning Law and Subdivision Regulations to reflect recommendations in the	New & Existing	All Hazards	1, 4		Zoning and Planning	Municipality and County	Low	Budget	Ongoing	Defer to plan update.

				TOWN C	OF MOREA	U PREVIOUS	ACTIONS				
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
	Comprehensive Plan (e.g., preserve open space, prohibit new mining as a use of land, carefully plan new development, etc.). Per the Comprehensive Land Use Plan.										
TMO-11	Participate in the Champlain Canal Heritage Area Program that is proposing to establish a Greenway Corridor along the Hudson River. Per the Comprehensive Land Use Plan.	New & Existing	All Hazards	4	4-2, 4-3	NFIP Floodplain Administrator	Municipality and County	Medium	Budget	Ongoing	Delete from plan update. Town no longer finds project a priority at this time.
TMO-12	Review the Comprehensive Land Use Plan every five years to make sure it remains consistent with the changing goals of the community. Per the Comprehensive Land Use Plan.	New & Existing	All Hazards	1, 3, 4	1-6, 1-8, 3- 2, 4-4	NFIP Floodplain Administrator	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Low	Budget	Long-term	Delete from plan update. Town no longer finds project a priority at this time.
TMO-13	Create/update the Emergency Action Plans for all dams located within the municipality.	Existing	Flood	1, 3	1-1, 1-6, 1- 7, 3-1, 3-2, 3-4		Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium to Low	FEMA HMA	Short Term	Delete Action. Jurisdiction is not profiling dam failure in Plan Update.
TMO-14	Implement dam structure repairs as required by dam safety report/protocols.	Existing	Flood	3	3-1, 3-3, 3- 6	NFIP Floodplain Administrator; Engineering Department	Watershed districts (if applicable); neighboring municipalities; County (if applicable); NYS	Medium	FEMA HMA	Short Term	Delete Action. Jurisdiction is not profiling dam failure in Plan Update.
TMO-15	Support the Installation/Implementation of Community Emergency Alert System.	New & Existing	All Hazards	1, 3, 5	1-1, 3-1, 3- 3, 3-5, 3-6, 5-1	LEMC	Watershed districts (if applicable); neighboring municipalities; County (if	Medium	FEMA НМА	Ongoing	Defer to plan update.

				TOWN C	F MOREA	U PREVIOUS	ACTIONS				
Initiative	Mitigation Initiative	Applies to New and/or Existing Structures	Hazards Mitigated	Goals Met	Objectives Met	Lead	Support	Estimated Cost	Sources of Funding	Timeline	2025 Analysis
							applicable); NYS				
TMO-16	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation projects which will fund cost-sharing portions of projects and be replenished during the annual budget cycle.	New & Existing	All Hazards	1, 2, 3, 5	1-3, 1-9, 2- 5, 3-1, 5-2	Town Board	Not Provided	Medium	Operating Budget	Long Term	Defer to plan update.
1100-17	Gather more information on the elevated groundwater occurring in Town and investigate possible actions to mitigate it.	N/A	All Hazards	1, 5	1-4, 5-2	NFIP Floodplain Administrator	Potentially the Town of Wilton	Low	Local Budget	Ongoing	Defer to plan update.

NEW MITIGATION ACTIONS

				Т	ow	N OF MO	REAU M	IITIGATION A	CTIONS					
			*Projects related to Ci	ritical Facilities (CF) will	prof	tect the fa	cility to th	ne 500-year e	vent or worst	damage scenario, w	hichever is	gre	ater.	
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
1	1.4 3.1	Flood	structure may not comply with commonly accepted	Implement the #50 Clark Road drainage and culvert upgrades by adding an additional culvert to increase the capacity handle demand.			60 months	Highway Department	\$1,000,000	capacity; Reduce risk of injuries to citizens; Reduce burden on	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	н	Safety/Security	Structure and Infrastructure
2	1.4	Flood	Culvert and drainage upgrades: Throughout the community culverts are undersized and in need of replacement. The hydraulic capacity of this structure may not comply with commonly accepted standards. This project protects the community.	Implement the Clark and Burt Road culvert up-sizing/upgrades to increase the capacity of the culvert and to handle demand as the current culverts have lifted out and destroyed the road.		ra\/la\//	60 months	Highway Department	\$1,000,000	capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	н	Safety/Security	Structure and Infrastructure
3	1.4 3.1	Flood	undersized and in need of replacement. The hydraulic capacity of this structure may not comply	and culvert upgrades by	No	ra\/la\//	60 months	Highway Department	\$1,000,000	improved drainage capacity; Reduce risk of injuries to citizens; Reduce	Department Budget; HMGP, BRIC, CDBG, PA 406 (when	н	Safety/Security	Structure and Infrastructure

				Т	ow	N OF MC	REAU N	IITIGATION A	CTIONS					
			*Projects related to C	ritical Facilities (CF) will	pro	tect the fa	cility to t	ne 500-year e	vent or worst	damage scenario, w	hichever is	gre	ater.	
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			standards. This project protects the community and reduces the risk of flooding.	this area.						during and after a flood event.	local bonds			
4	1.4	Flood		Implement the Birch Road right-of-way to maintain/upgrade culvert.	No	Further review required	60 months	Highway Department, Town Board	\$1,000,000	capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds		Safety/Security	Structure and Infrastructure
5	1.2 1.3 3.2	Flood	Water and Drainage System Assessment: Inadequate drainage systems cause flooding, damage to roadways, and create hazardous driving conditions for motorists. When shoulders, ditches, and bridges are washed out or impacted they are impassable for residents	Investigate and prioritize the shoulders, ditches and bridges that have washed out in the past and determine appropriate mitigation actions on Speakman Street.		Further review required	60 months	Highway Department	\$100,000	capacity; Reduce risk of injuries to citizens; Reduce burden on	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	Н	Safety/Security	Structure and Infrastructure

				Т	OW	N OF MC	REAU M	ITIGATION A	CTIONS					
			*Projects related to C	ritical Facilities (CF) will	pro	tect the fa	cility to th	ne 500-year e	vent or worst	damage scenario, w	vhichever is	gre	ater.	
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			projects that will mitigate the issues. This project protects the community and reduces the risk of flooding.											
6	1.4 3.1	Flood	hydraulic capacity of this structure may not comply		No	Further review required		Highway Department	\$1,000,000	Reduce risk of flood damages through improved drainage capacity; Reduce risk of injuries to citizens; Reduce burden on emergency services during and after a flood event.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds		Safety/Security	Structure and Infrastructure
7	3.3	Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning,	Generator for critical facilities: During power outages, critical facilities would be without lights, communications, and maintenance equipment/machinery. The operations are	Purchase and install hardwired generators for critical facilities to ensure continuity during emergencies.	Yes	Further review required	24 Months	Town Board	\$500,000	Provide power for critical facilities during power outages and ensure continuity of critical services.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	М	Energy (Power/Fuel) Safety/Security	Structure and Infrastructure

					ow	N OF MC	REAU M	IITIGATION A	CTIONS					_
			*Projects related to C	ritical Facilities (CF) will	pro	tect the fa	cility to tl	he 500-year e	ent or worst	damage scenario, w	hichever is	gre	ater.	
Project #	Goal / Objective	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
8	1.1,	Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning,	Standard for burial of utility lines: Due to the experience of utility failure, would need to explore alternative ways to protect power lines and utility service	Require all utilities for future development to be underground.	No	Further review required	24 Months	Town Board	\$500,000	Reduce damages to infrastructure; Ensure continuity of critical services during and after event; Reduce damages associated with power outages; Reduce risk of injuries or fatalities to vulnerable populations.	Local Department Budget	н	Safety/Security Energy (Power/Fuel)	Local Plans and Regulations Structure and Infrastructure
9	1.1 1.4 3.2	Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Lightning, Snowstorm	Retrofit RL/SRL Structures: Structures located in known hazard- prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support retrofitting of structures located in hazard-prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for retrofitting based on cost- effectiveness versus relocation. Where retrofitting is determined to be a viable option, consider implementation of that	Yes	Further review required		NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	Н	Safety/Security	Structure and Infrastructure

					Т	OW	N OF MC	REAU N	IITIGATION A	CTIONS					
				*Projects related to Ci	ritical Facilities (CF) will	prof	tect the fa	cility to t	he 500-year e	ent or worst	damage scenario, w	hichever is	gre	ater.	
	Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
					action based on available funding.										
1	10	1.1 1.4 3.2	Flood	Relocate Structures: Structures located in known hazard-prone areas are subject to repetitive damage. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Where appropriate, support purchase, or relocation of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority. Identify facilities that are viable candidates for relocation based on cost-effectiveness versus retrofitting. Where relocation is determined to be a viable option, consider implementation of that action based on available funding.		Further review required	60 Months	NFIP Floodplain Administrator	\$1,000,000	Reduce the risk of damage and loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds		Safety/Security	Structure and Infrastructure
	11	1.4 2.3	Flood	misurance premium rates	Consider participation in incentive-based programs such as CRS.	Yes	N/A		NFIP Floodplain Administrator	\$10,000		Local Department Budget, Staff time	М	Safety/Security	Local Plans and Regulations

				Т	ow	N OF MO	REAU M	IITIGATION A	CTIONS					
			*Projects related to Cr	itical Facilities (CF) will	prot	ect the fa	cility to tl	ne 500-year e	vent or worst	damage scenario, w	hichever is	gre	ater.	
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			reduce and avoid flood damage to insurable property, strengthen and support the insurance aspects of the National Flood Insurance Program and foster comprehensive floodplain management. This project promotes public safety.											
12		Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning,	Implementation, Monitoring, and Maintenance: There is a need to ensure a structured approach to quarantee that the Plan	Continue to support the implementation, monitoring, maintenance, and updating of this Plan, as defined in Section 24.	No	N/A	12-60	NFIP Floodplain Administrator	\$10,000	Ensure local	Local Department Budget, Staff time	Н	Safety/Security	Local Plans and Regulations
13	1.3	Flood	Failure to adhere to NFIP requirements can result in loss of program benefits,	Strive to maintain compliance with, and good standing in the National Flood Insurance program.	Yes		60	NFIP Floodplain Administrator	\$10,000		Local Department Budget, Staff time	М	Safety/Security	Local Plans and Regulations

				1	ow	N OF MC	REAU M	IITIGATION A	CTIONS					
			*Projects related to C	ritical Facilities (CF) will	prof	ect the fa	acility to t	he 500-year e	vent or worst	damage scenario, w	vhichever is	gre	ater.	
Project #	Goal / Objective	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			residents. There is a need to ensure compliance with NFIP standards to protect the community and secure affordable flood insurance options. This project promotes public safety.											
14	1.3	Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado,	Develop, enhance, and implement: There is a need to ensure a structured approach to guarantee that the Plan remains updated, effective, and aligned with its goals. This project promotes public safety by addressing all hazards		No	N/A	12-60 Months	Emergency Management with support from County OEM and NYS DHSES	\$10,000		Local Department Budget, Staff time	н	Safety/Security	Local Plans and Regulations
15	1.3	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/	Create, enhance, and maintain: Mutual aid agreements are crucial in disaster or emergency situations. Ensuring that mutual aid agreements are up to date will ensure that neighboring communities can help one	agreements with neighboring communities.	No	N/A	36-48 Months	Emergency Management, DPW and Roads	\$10,000		Local Department Budget, Staff time	Н	Safety/Security	Preparedness

					ow	N OF MC	REAU M	IITIGATION A	CTIONS					
			*Projects related to C	ritical Facilities (CF) will	prof	tect the fa	cility to th	ne 500-year e	vent or worst	damage scenario, v	hichever is	gre	ater.	
Project #	Goal / Objective	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	Action Type
		Storm,	another in a timely manner. This project promotes public safety.											
16	1.2 2.1	Drought, Earthquake Extreme Cold, Extreme Heat, Flood, Hail, Hurricane/ Tropical Storm, Ice Storm, Landslide, Lightning, Snowstorm Tornado, Wildfire	Emergency Notification System: The general public may not have the means to access educational material or notification alerts. By establishing an area wide notification system	Support the Installation/ Implementation of Community Emergency Alert System.	No	N/A	24-36 Months	LEMC	\$100,000	Reduce risk to residents through improved communication and early warning.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	н	Communication Safety/Security	Education and Awareness
17	5.3	Drought, Earthquake Extreme Cold, Extreme	Program: The general public may not be aware of the risk of hazards that could impact the County.	Create a mitigation support fund to provide matching funds on an ongoing basis for municipality and residential mitigation	No	N/A	60 Months	Town Board	\$10,000	Reduce the risk of damage and the loss of life.	Local Department Budget, Staff time	М	Safety/Security	Preparedness

	TOWN OF MOREAU MITIGATION ACTIONS													
			*Projects related to C	ritical Facilities (CF) will	prof	tect the fa	cility to t	he 500-year ev	ent or worst	damage scenario, v	whichever is	gre	ater.	
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
		Hurricane/ Tropical Storm, Ice Storm,	community members to support mitigation projects and costs associated with them. This project promotes public safety.											
18	1.1 3.3	Flood	projects that can be done to improve resiliency and decrease impact from the flooding events. This project protects the community and reduces the risk of groundwater related issues such as erosion or flood.	Gather more information on the elevated groundwater occurring in Town and investigate possible actions to mitigate risk. Prioritize and implement findings within study.		Further review required		NFIP Floodplain Administrator	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	М	Safety/Security	Education and Awareness Structure and Infrastructure
19	1.1 3.3	riood		Determine the appropriate action and address flood damage	No	Further review required		Emergency Manager and Highway	\$100,000	Reduce the risk of damage and the loss of life.	Local Department Budget; HMGP,	М	Safety/Security Water Systems	Structure and Infrastructure

					Т	ow	N OF MO	REAU M	ITIGATION A	CTIONS					
				*Projects related to C	ritical Facilities (CF) will	prot	ect the fa	cility to th	ne 500-year ev	ent or worst	damage scenario, v	vhichever is	gre	ater.	
# *************************************	# 100for - 0	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
					along Old Bend Road and West River Road.				Superintende nt			BRIC, CDBG, PA 406 (when applicable) local bonds		Transportation	
2	0	1.1 3.3	Flood	development in known high-risk hazard areas throughout town. Adoption of development restrictions protects infrastructure, reduces	Strengthen or continue to strengthen provisions in the Zoning Law for the management of	No	INI/A	12	NFIP Floodplain Administrator		Reduce risk of damages to new structures and infrastructure through building restrictions in high- risk areas.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	М	Safety/Security	Local Plans and Regulations

	TOWN OF MOREAU MITIGATION ACTIONS														
				*Projects related to C	ritical Facilities (CF) will	prot	tect the fa	cility to tl	ne 500-year ev	ent or worst	damage scenario, v	vhichever is	gre	ater.	
# *************************************	# \cdot \dec{\decision}{\decision}	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
2		1.1 3.3	Flood	reviewed and updated to ensure effectiveness. Enhancing local regulations are proven mitigation but enforcement is key component to ensure compliance. Jurisdictions need to evaluate and (where necessary) update	Review/revise the Town Zoning Law and Subdivision Regulations to reflect recommendations in the Comprehensive Plan (e.g., preserve open space, prohibit new mining as a use of land, carefully plan new development, etc.). Per the Comprehensive Land Use Plan.	No	N/A	12 months	Zoning and Panning	\$10,000	Reduce risk of damages to new structures and infrastructure through building restrictions in highrisk areas.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	М	Safety/Security	Local Plans and Regulations
2	2	2.2	Extreme Heat, Drought	Program: To make the public safer, education is crucial to improve their understanding of risks from local hazards and teach them how to protect themselves and their property. Education programs offer direct lifesaving benefits to residents by teaching safety practices and	Prepare 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, tree		N/A	12 months	Moreau Town Clerk in coordination with Saratoga County Emergency Management with Department of Health support	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	Н	Communication	Education and Awareness

				т	ow	N OF MC	REAU N	IITIGATION A	CTIONS					_
			*Projects related to C	ritical Facilities (CF) will	prot	tect the fa	cility to t	he 500-year ev	ent or worst	damage scenario, w	hichever is	gre	ater.	
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			damage through	planting, water conservation techniques, greywater reuse systems, etc.										
23	2.2	Extreme Cold, Ice Storm, Snow Storm	Public Awareness Program: To make the public safer, education is crucial to improve their understanding of risks from local hazards and teach them how to protect themselves and their property. Education programs offer direct life- saving benefits to residents by teaching safety practices and providing information on how to reduce property damage through mitigation efforts.	Prepare tips for avoiding impacts of extreme cold, ice storms and snowstorms 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, installing warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes, clearing gutters, improving insulation, sealing gaps and cracks around windows, etc.		N/A		Moreau Town Clerk in coordination with Saratoga County Emergency Management with Department of Health support	Staff Time		Local Department Budget, Staff time		Communication	Education and Awareness
24			Public Awareness Program: To make the public safer, education is	Prepare tips for avoiding impacts of hail, tornado, and wind to be		N/A	12 months	Moreau Town Clerk in coordination	Staff Time	Reduce risk to citizens by educating the public	Local Department	Н	Communication	Education and Awareness

						ow	N OF MC	DREAU N	MITIGATION A	CTIONS					
Ī				*Projects related to C	ritical Facilities (CF) will	prot	ect the fa	acility to t	he 500-year ev	ent or worst	damage scenario, w	hichever is	gre	ater.	
	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	Action Type
				understanding of risks from local hazards and teach them how to protect themselves and their property. Education programs offer direct lifesaving benefits to residents by teaching safety practices and providing information on how to reduce property damage through mitigation efforts.	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, hail resistant roofing materials, roof straps/protecting building envelope, tree removal/branch maintenance, covered parking, etc.				with Saratoga County Emergency Management with Department of Health support		on how to prepare for hazards and disasters.	Budget, Staff time			
	25	2.1 2.2	Lightning	Program: To make the public safer, education is crucial to improve their understanding of risks from local hazards and teach them how to protect themselves and their property. Education programs offer direct lifesaving benefits to residents by teaching	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, lightning protection		N/A	12 months	Moreau Town Clerk in coordination with Saratoga County Emergency Management with Department of Health support	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	Н	Communication	Education and Awareness

					Т	OW	N OF MC	REAU M	IITIGATION A	CTIONS					
Ī				*Projects related to C	ritical Facilities (CF) will	prof	tect the fa	cility to t	he 500-year e	vent or worst	damage scenario, w	hichever is	grea	ater.	
	Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
				how to reduce property damage through mitigation efforts.	systems, tree removal/branch maintenance, etc.										
	26	2.1 2.2	Wildfire	Public Awareness Program: To make the public safer, education is crucial to improve their understanding of risks from local hazards and teach them how to protect themselves and their property. Education programs offer direct life- saving benefits to residents by teaching safety practices and providing information on how to reduce property damage through mitigation efforts.	Prepare tips for avoiding impacts of wildfire 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 identification of high-risk areas, promote fire-resistant building materials, creating defensive space, clear gutters and roofs, brush/debris yard maintenance, etc.	No	N/A	12 months	Moreau Town Clerk in coordination with Saratoga County Emergency Management with Fire Department and Department of Health support			Local Department Budget, Staff time	Н	Communication	Education and Awareness
	27	2.1 2.2		Program: To make the public safer, education is crucial to improve their understanding of risks from local hazards and teach them how to protect themselves and their	Educate property owners, elected officials, and planning and zoning decision- makers about landslide risks and best management and development practices to minimize	No	N/A	24 months	Moreau Town Clerk in coordination with Saratoga County Emergency Management with Soil and Water	Staff Time		Local Department Budget, Staff time	Н	Communication	Education and Awareness

				Т	ow	N OF MO	REAU N	IITIGATION A	CTIONS					
			*Projects related to C	ritical Facilities (CF) will	prot	ect the fa	cility to t	ne 500-year ev	ent or worst	damage scenario, w	hichever is	gre	ater.	
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			saving benefits to residents by teaching safety practices and providing information on how to reduce property damage through mitigation efforts.	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).				Conservation District support						
228		Invasive Species	Public Awareness Program: To make the public safer, education is crucial to improve their understanding of risks from local hazards and teach them how to protect themselves and their property. Education programs offer direct life- saving benefits to residents by teaching safety practices and providing information on how to reduce property	Secure funding for education and best management practices from NYS DEC to reduce damage from invasive species on publicly owned and privately owned properties.	No	N/A		Moreau Town Clerk in coordination with Saratoga County Emergency Management with NYS DEC support	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	Н	Communication	Education and Awareness

	*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.													
			*Projects related to C	ritical Facilities (CF) will	prof	tect the fa	acility to t	he 500-year e	vent or worst	damage scenario, w	hichever is	gre	ater.	
Project #	Goal / Objective	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			damage through mitigation efforts.											
29	2.1 2.2	Hurricane/ Tropical Storm	Public Awareness Program: To make the public safer, education is crucial to improve their understanding of risks from local hazards and teach them how to protect themselves and their property. Education programs offer direct life- saving benefits to residents by teaching safety practices and providing information on how to reduce property damage through mitigation efforts.	Prepare tips for avoiding impacts of hurricanes/tropical 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 installation of roof ties/straps, anchoring heavy or dangerous items that can become dangerous projectiles in high winds, tree removal/branch maintenance, etc.	No	N/A	12 months	Moreau Town Clerk in coordination with Saratoga County Emergency Management with Public Works support	Staff Time	1 ' '	Local Department Budget, Staff time	Н	Communication	Education and Awareness
30	2.1 2.2	Earthquake	Public Awareness Program: To make the public safer, education is crucial to improve their understanding of risks from local hazards and teach them how to protect themselves and their property. Education	Prepare tips for avoiding impacts of earthquakes to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation		N/A	36 months	Moreau Town Clerk in coordination with Saratoga County Emergency Management with USGS	Staff Time		Local Department Budget, Staff time	Н	Communication	Education and Awareness

	TOWN OF MOREAU MITIGATION ACTIONS													
	*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		EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline	Action Type
			saving benefits to	measures to reduce injuries, fatalities, and property damages. This can include anchoring heavy appliances, installation of anchor bolts to secure the house frame to the foundation, adding steel bracing to door jams and other frame openings, etc.				guidance materials and support						

CAPABILITY ASSESSMENT

COMMUNITY CAPABILITY CHECKLIST	TOWN OF MOREAU
PLANS	
Basic Plan/Floodplain Management Plan	X
Capital Improvements Plan	
Climate Change Adaptation Plan	
Community Wildfire Protection Plan	
Comprehensive / Master Plan / Land Use Plan	X
Continuity of Operations Plan	
Drought Contingency Plan/Protocol on Water Restrictions	
Economic Development Plan	
Emergency Management/Response Action Plan	X
Emergency Operations Plan	
Evacuation Plan	
Extreme Heat Protocol	
Hazard Mitigation Plan	X
Open Space Plan	
Post Disaster Recovery Plan	
Shoreline Management Plan/Ordinance	
Stormwater Management Plan / Ordinance	X
Transportation Plan	
POLICIES/ORDINANCES	
Building Codes	X
Fire Code	X
Floodplain Ordinance	X
Manufactured Home Restrictions	X
Post Disaster Recovery Ordinance	
Real Estate Disclosure Requirement	

COMMUNITY CAPABILITY CHECKLIST	TOWN OF MOREAU
Site Plan Review Requirements	Х
Stormwater Ordinance	X
Subdivision Regulations	X
Wildfire Ordinance	
Zoning Ordinance/Land Use Restrictions	X
Other (Special Purpose Ordinance (i.e., critical or sensitive areas))	
PROGRAMS	
Firewise Communities	
Floodplain Maps/Flood Insurance Studies	X
Growth Management	
Hydrologic/Hydraulic Studies	
Mutual Aid Agreement	
National Flood Insurance Program Participant	X
NFIP Community Rating System Participant	
Property Acquisition Program	
Public Education/Awareness Programs	
Storm Drainage Systems Maintenance Program	
Stream Maintenance Program	
StormReady Communities	
Warning Systems/Services (reverse 911, outdoor warning sirens)	
STAFF / DEPARTMENTS	
Building Code Official	X
Emergency Manager	X
Engineers or Planners with Knowledge of Land Development and Land Management Practices	X
Engineers or Professionals Trained in Constructions Practices Related to Buildings and/or Infrastructure	Χ
Environmental Conservation Specialist	
Floodplain Administrator	X
Geographic Information System (GIS) Coordinator	

COMMUNITY CAPABILITY CHECKLIST	TOWN OF MOREAU
Personnel with Hazard Knowledge	X
Planners	X
Public Information Official	
Resource Development/Grant Writer	
Surveyors	X