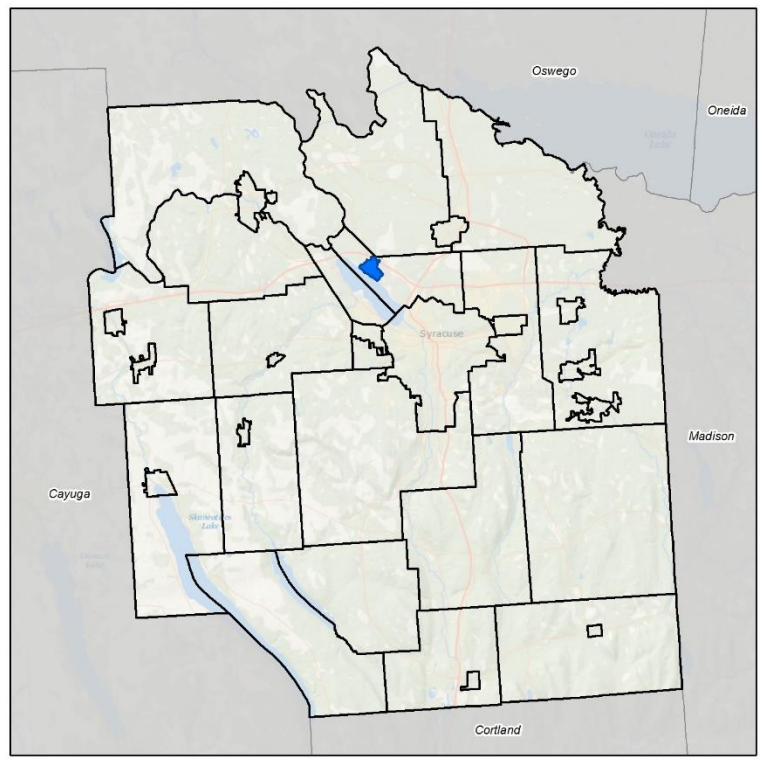
MUNICIPAL ANNEX | Village of Liverpool



Total Population (2010 Census)
2,347

Total Land (square miles)
0.8

Total Number of Buildings
1,379

Percent of Buildings in Regulatory Floodplain
2%

Number of National Flood Insurance Program (NFIP) Policies and Percent in Regulatory Floodplain
8 (38%)

Number of Repetitive Loss (RL) Properties
0

Total Agricultural Land (acres)
0.0

Harmful Algal Bloom Impacted Waterbody
No

Proposed Project Types

Education and Awareness Programs, Structure and Infrastructure Projects, and Natural Systems Protection

Mitigation Focus

Severe Storm
Severe Winter Storm

9.17 VILLAGE OF LIVERPOOL

This section presents the jurisdictional annex for the Village of Liverpool. It includes resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. This annex includes a general overview of the municipality and who in the village participated in the planning process; an assessment of the Village of Liverpool's risk and vulnerability; the different capabilities utilized in the village; and an action plan that will be implemented to achieve a more resilient community.

9.17.1 Hazard Mitigation Planning Team

The following individuals have been identified as the Village of Liverpool's hazard mitigation plan primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Name: William Reagan Title: Code Officer Phone Number: 315-457-3441 Address: 310 Sycamore Street, Liverpool, NY 13088 Email: codes@villageofliverpool.org	Name: William Asmus Title: DPW Supervisor Phone Number: 315-457-1882 Address: 310 Sycamore Street, Liverpool, NY 13088 Email: dpw@villageofliverpool.org
Floodplain Administrator	
Name: William Reagan Title: Code Officer Phone Number: 315-457-3441 Address: 310 Sycamore Street, Liverpool, NY 13088 Email: codes@villageofliverpool.org	

9.17.2 Municipal Profile

The Village of Liverpool is bordered on three sides by the Town of Salina in the north-central part of Onondaga County in western New York State. Refer to Section 9.28 (Town of Salina) for their individual annex. The Village of Liverpool has a total area of 0.8 square miles. The village is mainly residential, with some commercial use and park development running along the entire Onondaga Lake shoreline. Bloody Brook rises in the Town of Salina just to the east of Liverpool. Two small segments of the stream are located in the eastern part of the village. Onondaga Lake Park is one of the most prominent locales in Liverpool, known for its several trams that travel the length of the park. It attracts over one million visitors each year. New York State Route 370 is an east-west highway that runs through the village. The New York State Thruway (Interstate 90) passes through the northern part of the village. The Village of Liverpool is bordered to the northwest and south east by the Town of Salina and Onondaga Lake to the southwest. The estimated 2016 population was 2,252, a 4.0 percent decrease from the 2010 Census (2,347). The Village of Liverpool is governed by a mayor, a deputy mayor and three trustees.

Data from the 2016 U.S. Census American Community Survey estimates that 1.9 percent of the town population is five years of age or younger, and 22.6 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

History and Cultural Resources

The Liverpool area was originally inhabited by the Iroquois Indians, starting in the 16th century. In the mid-17th century, Canadian French Jesuits visited the area, setting up missions. Once the Erie Canal and Oswego Canals

were built, the area was settled by Irish canal workers, Yankee settlers, and, later, German immigrants. The early recorded name for the village was "Little Ireland."

The Village of Liverpool was incorporated in 1830 and named after the City of Liverpool in England. This was because Liverpool produced salt and wanted to capitalize on the name of another famous salt producing region thus forming John's Salt. Early industries included several salt works in the 19th Century and a saw mill. A history of the area's salt mining can be found at the Salt Museum.

For many years the village was supported by the willow weaving industry. This was reputedly started in the early 1850's by a German salt boiler named John Fischer. By 1870, the industry had grown, using mostly German workers, to produce baskets and furniture. Otherwise poor land was planted with the trees, providing a growing industry which gave the area an economic boost as the salt industry was in decline. At its peak in 1892, around 360,000 baskets were shipped across the country. The depression era was the death knell for the industry in the 1930, although some weavers were still active as late as the 1960's. In 1918, the Oswego Canal was closed. The Onondaga Lake Park, established in 1931, is now the location of much of the old canal bed.

Growth/Development Trends

Table 9.17-1 summarizes major residential/commercial development that have been developed as of July 2018 and any known or anticipated major residential/commercial development and major infrastructure development that is likely to be occur within the municipality in the next five years. Refer to the map in Figure 9.17-1 of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.17-1. Growth and Development

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or Parcel ID)	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2013 to present					
Dunkin' Donuts	Comm.	1	105 Second Street	NEHRP: D&E	Complete
Known or Anticipated Development in the Next Five (5) Years					
Meyor Manor	Res.	108 / 5	0091.-01-29.1	Could not be located.	Apartments / Approved
Gormel Apartments	Res.	1/40	Lake Drive	Flood: 1% Annual Chance Flood; NEHRP: D&E	Apartments / Proposed

** Only location-specific hazard zones or vulnerabilities identified.*

9.17.3 Hazard Event History Specific to the Village of Liverpool

Onondaga County has a history of natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. The Village of Liverpool's history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Onondaga County. Table 9.17-2 provides details regarding municipal-specific loss and damages the village experienced during hazard events. Information provided in the table below is based on reference material or local sources. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

Table 9.17-2. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	Onondaga County Designated?	Summary of Event	Municipal Summary of Damages and Losses
April – May 2011	Severe Storms, Flooding, Tornadoes, and Straight-Line Winds (FEMA-DR-1993)	Yes	A slow moving warm front pushed northward across central New York late in the afternoon on April 25th. Severe weather developed, and in addition to reports of severe wind damage and hail, plenty of wind shear in the vicinity of the warm front allowed for a few super-cell thunderstorms and tornadoes to develop. In addition, areas of heavy rain caused significant flash flooding in several locations of central New York. On May 26, a deep upper level low pressure system shifted east from the mid-Mississippi Valley region through the afternoon and evening, allowing numerous showers and thunderstorms to develop. Many reports of large hail and damaging winds occurred in central New York.	The Village of Liverpool experienced minor tree damage.
June 30-July 1, 2015	Flash Flood	No	An unseasonably strong storm system tapping into above normal moisture sources across the Great Lakes and Northeast triggered multiple heavy rain producing thunderstorms across the region. Localized torrential rainfall in central New York caused serious urban flash flooding in the Syracuse, NY metropolitan area. Damages are estimated between three and five million dollars.	Although the county was impacted, the village did not report any damages.
July 1, 2017	Flash Flood	No	A tropical moisture laden air mass produced numerous showers and thunderstorms which traveled repeatedly over the same areas of the Finger Lakes Region and Upper Mohawk Valley. Widespread flash and urban flooding developed in portions of Cayuga, Onondaga, Madison and Oneida counties. Hardest hit areas were the villages and towns of Moravia, Chittenango, Oneida, and Utica to name a few. Total rainfall amounts along a narrow corridor from Moravia to Utica generally ranged from 2.5 to 5 inches, most of which fell in less than 1 to 2 hours. Total damages from this event range from $10-$15 million dollars Countywide.	Although the county was impacted, the village did not report any damages.

Notes:
EM *Emergency Declaration (FEMA)*
FEMA *Federal Emergency Management Agency*
DR *Major Disaster Declaration (FEMA)*
N/A *Not applicable*

9.17.4 Hazard Ranking and Jurisdiction-Specific Vulnerabilities

The hazard profiles in Section 5.0 (Risk Assessment) of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the hazards of greatest concern and risk to the Village of Liverpool. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

Hazard Risk Ranking

This section includes the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 5 of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 5.3 (Hazard Ranking), each participating town or village may have differing degrees of risk exposure and vulnerability compared to Onondaga County as a whole. Therefore, each municipality ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Village of Liverpool. The Village of Liverpool has reviewed the County hazard risk/vulnerability risk ranking table as well as its individual results to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the village indicated the following:

- The village changed the ranking for earthquake from medium to low.
- The village changed the ranking for flood from medium to low.
- The village agreed with the remainder of the risk rankings.

Table 9.17-3. Village of Liverpool Municipal Hazard Ranking Input

HAZARD	Drought	Earthquake	Flood	Geologic	Harmful Algal Bloom	Invasive Species	Severe Storm	Severe Winter Storm
RELATIVE RISK FACTOR	Low	Low	Low	Low	Low	Low	High	High

Notes: The scale is based on the following hazard rankings as established in Section 5.3.
High = Total hazard priority risk ranking score of 5 and above
Medium = Total hazard priority risk ranking of 3.9 – 4.9
Low = Total hazard risk ranking below 3.8

Critical Facilities Flood Risk

New York Department of Environmental Conservation (DEC) Statute 6 CRR-NY 502.4 sets forth floodplain management criteria for state projects located in flood hazard areas. The law provides that no such projects related to critical facilities shall be undertaken in a Special Flood Hazard Area (SFHA) unless constructed according to specific mitigation specifications, including being raised two feet above the Base Flood Elevation (BFE). This statute is outlined at http://tinyurl.com/6-CRR-NY-502-4 While all vulnerabilities should be assessed and documented, the State places a high priority on exposure to flooding. Critical facilities located in an SFHA, or having ever sustained previous flooding, must be protected to the 500-year flood even, or worst damage scenario. For those that do not meet this criteria, the jurisdiction must identify an action to achieve this level of protection (NYSDHSES 2017).

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.17-4. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event		Addressed by Proposed Action
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	
OLP MAINTENANCE FACILITY	County Facility	X	X	9.5%	63.5%	V. Liverpool-4
OLP MARINA	County Facility	X	X	3.1%	18.8%	V. Liverpool-5
OLP PARKS MAIN OFFICE	County Facility	X	X	11.1%	68.2%	V. Liverpool-6

Name	Type	Exposure		Potential Loss from 1% Flood Event		Addressed by Proposed Action
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage	
OLP PLAYGROUND	County Facility	X	X	7.6%	55.4%	-
OLP RANGER OFFICE	County Facility	X	X	4.8%	29.1%	V. Liverpool-7
OLP SALT MUSEUM	County Facility	X	X	14.5%	95.3%	V. Liverpool-8
OLP SKATE PARK	County Facility	X	X	14%	83%	V. Liverpool-9
OLP SKATE RENTAL	County Facility	X	X	6.6%	45.6%	V. Liverpool-10
OLP VISITOR CENTER	County Facility	X	X	6.4%	43.4%	V. Liverpool-11
OLP VOLLEYBALL	County Facility	X	X	13.3%	76.6%	V. Liverpool-12
OLP YACHT CLUB	County Facility	X	X	13.1%	75%	V. Liverpool-13
Onondaga Lake Park Maintenance Facility	County DPW	X	X	10.3%	25.4%	V. Liverpool-14
WEP Hickory Street Pump Station	County Waste Water Pump Station		X	-	-	-
Village DPW	DPW	X	X	-	-	V. Liverpool-2

Source: FEMA 2016, SOPA 2018

The village reviewed the critical facilities table and determined that the OLP Playground was not a critical facility and therefore did not develop a mitigation action to protect the playground from flooding.

Identified Issues

The municipality has identified the following vulnerabilities within their community:

- The village has two areas with a single point of entry: Hiawatha Trail and Springmoor Drive.
- The village DPW garage is located in the floodplain; but has not experienced damages associated with flooding.
- Major concern with manmade hazards, including transportation (rail and railway) of hazardous materials and the location in the landing/takeoff path of a major airport.
- Frequent power failures.
- Located downwind of nuclear power plants.

9.17.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program

- Integration of mitigation planning into existing and future planning mechanisms

Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Village of Liverpool.

Table 9.17-5. Planning and Regulatory Tools

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
Planning Capability				
Comprehensive Plan	Yes, 8/21/2006	Local	Codes	Comprehensive Plan 2025
Capital Improvements Plan	Yes	Local	Village Board	Identified in Comprehensive Plan – Chapter III
Floodplain Management / Basin Plan	No	-	-	-
Stormwater Management Plan	Yes, 6/1/2018	Local	Codes	Stormwater Management Plan
Open Space Plan	No	-	-	-
Stream Corridor Management Plan	No	-	-	-
Watershed Management or Protection Plan	No	-	-	-
Economic Development Plan	No	-	-	-
Comprehensive Emergency Management Plan	Yes, 1/23/2013	Local	Police	Village of Liverpool EM Plan
Emergency Operation Plan	Yes, 1/23/2013	Local	Police	Village of Liverpool EO Plan
Evacuation Plan	Yes, 1/23/2013	Local	Police	Village of Liverpool EM Plan
Post-Disaster Recovery Plan	No	-	-	-
Transportation Plan	No	-	-	-
Strategic Recovery Planning Report	No	-	-	-
Climate Adaptation Plan	No	-	-	-
Resilience Plan	No	-	-	-
Other Plans:	No	-	-	-
Regulatory Capability				
Building Code	Yes, 10/31/2017	State	Codes	Village Code Chapter 156
Zoning Ordinance	Yes, 8/1/2008	Local	Codes	Village Code Chapter 380
Subdivision Ordinance	Yes, 2/25/2002	Local	Codes	Village Code Chapter 334
NFIP Flood Damage Prevention Ordinance	Yes, 9/19/2016	Local	Codes	Village Code Chapter 205
NFIP: Cumulative Substantial Damages	No	-	-	-

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
NFIP: Freeboard	Yes	State	Codes	State mandated BFE+2 for all construction, both residential and non-residential
Growth Management Ordinances	No			
Site Plan Review Requirements	Yes, 4/7/2008	Local	Codes	Village Code Article XIV
Stormwater Management Ordinance	Yes, 10/15/2007	Local	Codes	Village Code Chapter 321
Municipal Separate Storm Sewer System (MS4)	Yes	State	DPW	-
Natural Hazard Ordinance	No	-	-	-
Post-Disaster Recovery Ordinance	No	-	-	-
Real Estate Disclosure Requirement	Yes	State	NYS Department of State, Real Estate Agent	NYS mandate, Property Condition Disclosure Act, NY Code - Article 14 §460-467
Other (Special Purpose Ordinances [i.e., sensitive areas, steep slope])	No	-	-	-

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Village of Liverpool.

Table 9.17-6. Administrative and Technical Capabilities

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	Codes
Mitigation Planning Committee	Yes	Codes
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Maintenance programs to reduce risk	Yes	DPW
Mutual aid agreements	No	-
Technical/Staffing Capability		
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Codes
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Codes/ Dunn & Sgromo Engineering
Planners or engineers with an understanding of natural hazards	Yes	Codes/ Dunn & Sgromo Engineering
NFIP Floodplain Administrator (FPA)	Yes	Codes
Surveyor(s)	Yes	Dunn & Sgromo Engineering

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Codes/ Dunn & Sgromo Engineering
Scientist familiar with natural hazards	No	-
Warning systems/services	No	-
Emergency Manager	Yes	Police Chief
Grant writer(s)	Yes	Dunn & Sgromo Engineering
Staff with expertise or training in benefit/cost analysis	Yes	Dunn & Sgromo Engineering
Professionals trained in conducting damage assessments	Yes	Dunn & Sgromo Engineering

Fiscal Capability

The table below summarizes financial resources available to the Village of Liverpool.

Table 9.17-7. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes (Sewer)
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other	No

Community Classifications

The table below summarizes classifications for community programs available to the Village of Liverpool.

Table 9.17-8. Community Classifications

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	NP	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	3	10/27/2016
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	3	4/23/18
NYSDEC Climate Smart Community	No	-	-

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Storm Ready Certification	NP	-	-
Firewise Communities classification	NP	-	-
Natural disaster/safety programs in/for schools	NP	-	-
Organizations with mitigation focus (advocacy group, non-government)	No	-	-
Public education program/outreach (through website, social media)	No	-	-
Public-private partnership initiatives addressing disaster-related issues	No	-	-
Other	No	-	-

Note:
N/A *Not applicable*
NP *Not participating*
- *Unavailable*

The classifications listed above relate to the community's ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community's capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule (https://www.isomitigation.com/bcegs/)
- The ISO Mitigation online ISO's Public Protection website at https://www.isomitigation.com/ppc/
- New York State Climate Smart Communities (http://www.dec.ny.gov/energy/56876.html)
- The National Weather Service Storm Ready website at https://www.weather.gov/stormready/communities
- The National Firewise Communities website at http://firewise.org/

Self-Assessment of Capability

The table below provides an approximate measure of the Village of Liverpool's capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

Table 9.17-9. Self-Assessment Capability for the Municipality

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Planning and regulatory capability			X
Administrative and technical capability			X

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Fiscal capability			X
Community political capability			X
Community resiliency capability			X
Capability to integrate mitigation into municipal processes and activities			X

National Flood Insurance Program

This section provides specific information on the management and regulation of the regulatory floodplain.

NFIP Floodplain Administrator (FPA)

William Reagan, Code Official

National Flood Insurance Program (NFIP) Summary

The Village of Liverpool does not maintain lists/inventories of properties that have been flood damaged and does not make substantial damage estimates. The FPA noted that no properties have recently been flooded and no properties are interested in mitigation at this time.

The following table summarizes the NFIP statistics for the Village of Liverpool.

Table 9.17-10. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties	# SRL Properties	# Policies in the 1% Flood Boundary
Village of Liverpool	8	8	$5,221	0	0	3

Source: FEMA Region 2 2018.
(1) Policies, claims, RL, and SRL statistics provided by FEMA Region 2, and are current as of June 30, 2018. Total number of RL properties does not include SRL properties. Number of claims represents claims closed by July 31, 2018.
(2) Total building and content losses from the claims file provided by FEMA Region 2.
(3) Number of policies inside and outside of flood zones is based on latitude and longitude coordinates provided by FEMA Region 2 in the policy file. FEMA noted that for a property with more than one entry, more than one policy may have been in force or more than one Geographic Information System (GIS) specification was possible. Number of policies and claims, and claims total, exclude properties outside Onondaga County boundary, based on provided latitude and longitude coordinates.
RL Repetitive Loss
SRL Severe Repetitive Loss

Resources

The FPA is the sole person responsible for floodplain administration, with the assistance of the Village Engineer as necessary. NFIP administration services and functions include permit review, inspections, record-keeping, GIS, education and outreach. When a project is proposed or a permit applied for, a thorough review of the NFIP requirements is done with the applicant. The FPA noted that they do not have access to resources to determine possible future flooding conditions from climate change. However, they feel adequately supported and do not feel there are any barriers to running an effective floodplain management program. The FPA noted they would consider attending continuing education and/or certification training on floodplain management if it were offered in the County for all local floodplain administrators.

Compliance History

The Village of Liverpool is in good-standing in the NFIP. According to data received by NYSDEC, a compliance audit has not been conducted for the municipality.

Regulatory

Flood Damage Prevention Ordinance: The Village of Liverpool's Flood Damage Prevention Ordinance (Chapter 205 of the municipal code) was last adopted in 2016 to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- Regulate uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities.
- Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.
- Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of floodwaters.
- Control filling, grading, dredging and other development which may increase erosion or flood damages.
- Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.
- Qualify and maintain for participation in the National Flood Insurance Program.

The objectives of this chapter are:

- To protect human life and health.
- To minimize expenditure of public money for costly flood control projects.
- To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.
- To minimize prolonged business interruptions.
- To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone, sewer lines, streets and bridges located in areas of special flood hazard.
- To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas.
- To provide that developers are notified that property is in an area of special flood hazard.
- To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

The FPA noted that there are other local ordinances, plans or programs (e.g. site plan review) that support floodplain management and meeting the NFIP requirements. The FPA stated that the village has considered joining the Community Rating System (CRS) program to reduce flood insurance premiums for their insured and would attend a CRS seminar if offered locally.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures, which is also indicated below.

Planning

Existing Integration

Existing planning initiatives in the village include a Comprehensive Plan, Stormwater Annual Report and local ordinances that integrate hazard mitigation, site design and building orientation.

Comprehensive Plan: The Village of Liverpool's Comprehensive Plan does not include information on natural hazard risk or refer to the Countywide Hazard Mitigation Plan.

Stormwater Management Plan: The Village of Liverpool is an MS4 Regulared Community and has a formal Stormwater Management Plan. The Plan specifies projects/actions/initiaives to reduce the volume of stormwater, or otherwise mitigate stormwater flooding. The 2017 Stormwater Management Program MS4 Annual Report (SWMPP) encompasses a summary of the village's compliance measures for the 2016-2017 reporting year. The report includes a variety of minimum control measures such as current measurable goals. These measurable goals include objectives that provide a guideline for future measurable actions for stormwater management. The minimum control measures (MCM) include: Public Education and Outreach, Public Involvement, Illicit Discharge Detection and Elimination, Construction Site Stormwater Runoff Control, Post-Construction Stormwater Management, Pollution Prevention for Municipal Operations. An example of a specific measurable goal and action identified in the SWMPP is enforcing local laws which established the village's post-construction stormwater management program through SWPP reviews focused on ensuring compliance with the most current design manual.

These planning resources collectively help the village to guide land use and development while protecting critical resources and ensures the continuation of municipal services to the community. Municipal services provide potential hazard mitigation improvements that include the protection of water resources, site design, and smart growth principles among many others. Opportunities for Future Integration

Opportunities for Future Integration

Updates to existing plans or new plans could include information on natural hazard risk and refer to the Countywide Hazard Mitigation Plan.

Regulatory and Enforcement (Ordinances)

Existing Integration

The village has multiple ordinances pertaining to the mitigation of hazards. These ordinances include the Establishment of Boards (see Operational and Administration below), Fire Prevention Ordinance, Flood Damage Prevention Ordinance, Stormwater Management Ordinance, Zoning Ordinance, Subdivision of Land Ordinance. The Town also adheres to the New York State Fire Prevention and Building Code. The municipal Code and ordinances are available on the village website: http://www.villageofliverpool.org/index.html

Zoning Ordinance: The Village of Liverpool's Zoning Ordinance (Chapter 380 of the municipal code) provides for regulating, controlling and restricting the use and development of land and buildings within the Village of Liverpool consistent with the Village of Liverpool Comprehensive Plan 2025 in order to promote and protect, to the fullest extent permissible, the environment of the village and its public health, safety and general welfare in accordance with the purposes outlined in Article 7 of the Village Law. most recently updated in 2017, creates a Floodplain District (F) which regulates the structures and uses within the floodplain.

Subdivision Ordinance: The Village of Liverpool's Subdivision of Land Ordinance (Chapter 334 of the municipal code) provides for orderly, efficient growth within the community and to afford adequate facilities for

the transportation, housing, comfort, convenience, safety, health and welfare of its population pursuant to the following objectives:

- Land to be subdivided and developed shall be of such character that it can be used safely for building purposes without danger to health or safety, or peril from flood or other menace.
- Provisions shall be made for adequate water supply, drainage, sewerage and other needed improvements and utilities according to acceptable engineering principals.
- Proposed development shall be designed in harmony with the development pattern of adjacent properties.
- Development shall be provide for adequate fire and emergency services access and fire hydrants for fire protection.
- Provisions shall be made for protection of natural drainage and significant historical and/or environmental features.

Stormwater Management and Erosion and Sediment Control Ordinance: The Village of Liverpool's Stormwater Management and Erosion and Sediment Control Ordinance (Chapter 321 of the municipal code) was established to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing within the Village of Liverpool and to address the findings of fact identified herein. This chapter seeks to meet those purposes by achieving the following objectives:

- Meet the requirements of minimum control measures 4 and 5 of the SPDES General Permit for Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s), Permit No. GP-02-02, or as amended or revised;
- Require land development activities to conform to the substantive requirements of the NYS Department of Environmental Conservation State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities GP-02-01, or as amended or revised;
- Minimize increases in stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and streambank erosion and maintain the integrity of stream channels;
- Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality;
- Minimize the total annual volume of stormwater runoff which flows from any specific site during and following development to the maximum extent practicable; and
- Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management practices and to ensure that these management practices are properly maintained and eliminate threats to public safety.

The Village of Liverpool's municipal zoning, subdivision regulations, and site plan review process consider naturual hazard risk and require developers to take additional actions to mitigate natural hazard risk. The Planning Board/ZBA is provided with flood maps and aerial photography to guide their decisions with respect to natural hazard risk mangement.

Opportunities for Future Integration

The village will consider natural hazards and resilience when updating ordinances and regulations.

Operational and Administration

Existing Integration

The village has established a Planning Board and Zoning Board of Appeals to support land use decisions, public health and safety and assure compliance with regulations, ordinances and the Comprehensive Plan. Village staff includes a Code Enforcement Officer.

Planning Board: The Village of Liverpool's Planning meets, as needed, on the 4th Monday of each month. The meetings begin at 7:00 p.m. and are held in the Meeting Room at Village Hall. The Planning Board meets to approve site plans, subdivision plots, special permits, review zoning, amendments or other development approvals. The Board ensures that hazard mitigation is included in any proposed project.

Zoning Board of Appeals: The Village of Liverpool's Zoning Board of Appeals meets, as needed, on the 4th Monday of each month. The meetings begin at 6:00 p.m. and are held in the Meeting Room at Village Hall. The Zoning Board of Appeals meets to review requests for area or use variances to the Code of the Village of Liverpool. The Board ensures that hazard mitigation is included in any proposed project.

The Village of Liverpool does not have a municipal planner or contract planning firm. NFIP Floodplain Management and Stormwater Management functions are performed by the Code Official. The village has staff or contract with firms that have experience with developing Benefit-Cost Analysis, can perform Substantial Damage Estimates, and have experience in preparing grant applications for mitigation projects. No village staff have job descriptions that involve natural hazard risk, staff do not receive training or continuing professional education which supports natural hazard risk reduction, and no staff participate in associations, organizations, groups or other committees that support natural hazard risk reduction and build hazard management capabilities. The Village DPW regularly inspects and cleans stormwater catch basins. The village also has a Tree Committee which includes functions with respect o managing natural hazards.

Opportunities for Future Integration

Staff could receive training regarding natural hazard mitigation.

Funding

Existing Integration

The Village of Liverpool does not have a line item for mitigation projects/activities in the municipal budget. The village has a Capital Improvements Budget which includes budget for mitigation-related projects. The village has not pursued or been awarded grant funds for mitgation-related projects. The village does not have any other mechanisms to fiscally support hazard mitgation projects.

Pre-disaster mitigation funds will be available upon FEMA approval of this plan, along with other funding available through state and federal sources, such as the NYS Department of Environmental Conservation (Climate Smart Communities Grants, Water Quality Improvements Program, Trees for Tribes), NYS Environmental Facilities Corporation (Wastewater Infrastructure Engineering Planning, Clean Water Revolving Loan Fund, Green Innovation Grant Program), New York State Energy Research and Development Authority (Clean Energy Communities Program), and Empire State Development.

Opportunities for Future Integration

The village could apply for grants and allocate funding from the municipal budget funding to support hazard mitigation projects.

Education and Outreach

Existing Integration

The Village of Liverpool currently does not have any public outreach mechanisms/programs to inform citizens on natural hazards. The village operates a municipal website (http://www.villageofliverpool.org/). The village's website posts information regarding upcoming community events and important municipal decisions. The website provides information related to safety and hazard mitigation including local emergency response contact information, current project information, general information for village residents, and links to the Code of the Village of Liverpool and related ordinances (see Regulatory and Enforcement). The village also has a Facebook page and Twitter account.

Opportunities for Future Integration

The village could include information on natural hazards on the village website and develop outreach programs.

Sheltering, Evacuation, and Temporary Housing

Temporary housing, evacuation routes, and sheltering measures must be in place and available for public awareness to protect residents, mitigate risk, and relocate residents, if necessary, to maintain post-disaster social and economic stability.

Temporary and Permanent Housing

The Village of Liverpool has identified the following potential sites for the placement of temporary housing for residents displaced by a disaster:

- School of Cinema: 800 Fourth Street
- Liverpool Elementary School: 910 Second Street

To accommodate longer term housing needs of permanently displaced residents, there is an existing supply of vacant housing units within the county which may be able to satisfy and absorb those housing needs. The county also has ample buildable land availability throughout its communities to satisfy construction of new housing units if needed, as mapped in Section 4, figure 4-20 in Volume I of this plan. Of note, given the nature of the hazards of concern to Onondaga County, the extent of housing need is also not likely to exceed currently available housing stock for all but the most extreme and widespread hazard events.

Evacuation and Sheltering Needs

The Village of Liverpool has designated the following emergency shelters:

- Liverpool Village Hall: The Hall has a capacity of 123, accommodates pets, and has backup power.
- Liverpool Fire Department: The Fire Department has a capacity of 266, accommodates pets, has backup power, and provides EMT medical services.

The village has identified the following evacuation routes and evacuation procedures:

- Incident Requiring an Evacuation to the North of the village: Residents would be directed to utilize Second Street, Oswego Street, Tulip Street or Vine Street. Residents could access the NYS Thruway I90 via Oswego Street to head East or West if necessary.
- Incident Requiring an Evacuation to the South of the village: Residents would be directed to utilize Second Street and Oswego Street. Residents could then access Onondaga Lake Parkway to I81 South

or Old Liverpool Road to I81 South. Residents could access the NYS Thruway I90 via Electronics Parkway to head East or West if necessary.

Per the County Emergency Management Plan, in the event of a hazard occurrence, the Department of Emergency Management is tasked with coordinating evacuation procedures with the Sheriff's Department, the On-Scene Commander, the Transportation Coordinator, the ARC, hospitals, special facilities, the fire service and the Health Department. The Sheriff's Department is responsible for implementing traffic control procedures including coordination of vehicular traffic and protection of resources, facilities and services in the affected areas. As noted in Section 4, Figure 4-19 in Volume I of this plan, the primary roads and highways are the evacuation routes for Onondaga County; the county is fortunate to have a variety of well-connected arterial and collector roadways to provide a variety of routing options during times of large-scale evacuation.

The American Red Cross (ARC) has primary contractual responsibility to provide sheltering, including short term housing, for Onondaga County individuals and families during an emergency occurring in Onondaga County. Services of the ARC include emergency sheltering needs, mass care, feeding, information and referral, and special population assistance. A confidential shelters list is maintained by the Department of Emergency Management and the ARC which identifies capacity for 15,000+ residents across Onondaga County. The ARC is responsible for maintaining shelter and temporary housing agreements with selected facilities.

9.17.6 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2013 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.

Table 9.17-11. Status of Previous Mitigation Actions

Project #	Project	Hazard(s) Addressed	Brief Summary of the Original Problem	Responsible Party	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if project status is complete)		Next Steps 1. Project to be included in 2019 HMP or Discontinue 2. If including action in the 2019 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
VLP-1a	Inventory all trees on village property and street rights-of-way. Have arborist rate the condition of all trees and list hazardous conditions.	Wind, snow, ice	Property damage and power outages due to tree failure	DPW	Complete	Cost	$4,000	1. Discontinue 2. - 3. Project has been completed; therefore, it will not be included in the village's updated mitigation strategy.
						Level of Protection	50-year wind storm	
						Damages Avoided; Evidence of Success	Better understanding of damaged trees	
VLP-1b	Prune or remove at risk trees on village property and street rights-of-way.	Wind, snow, ice	Property damage and power outages due to tree failure	DPW	In Progress	Cost	$22,000	1. Include in 2019 HMP 2. Prune or remove at risk trees on village property and street rights-of-way. 3. -
						Level of Protection		
						Damages Avoided; Evidence of Success		
VLP-2	Replace aging storm water drainage system – Hickory, Fifth & Sixth streets	Flooding	Localized flooding	DPW	Complete	Cost	$250,000	1. Discontinue 2. 3. Project has been completed; therefore, it will not be included in the village's updated mitigation strategy.
						Level of Protection	25-year storm	
						Damages Avoided; Evidence of Success	Decrease or eliminate stormwater flooding in this area of the village	

Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Village of Liverpool has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2013 Plan:

- The Village of Liverpool has performed ongoing maintenance projects to reduce the impact of flooding but has not identified specific mitigation projects/activities that have been completed but were not identified in the previous mitigation strategy in the 2013 Plan.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Village of Liverpool participated in a mitigation action workshop on January 14, 2019 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

Table 9.17-12**Error! Reference source not found.** summarizes the comprehensive-range of specific mitigation initiatives the Village of Liverpool would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.17-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.

Table 9.17-12. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Description of the Problem	Description of the Solution	Hazard(s) Mitigated	Goals Met	Critical Facility (Yes / No)	EHP Issues?	Estimated Timeline	Lead and Support Agencies	Estimated Cost	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
V. of Liverpool-1 (previous action)	Prune or remove at risk trees on village property and street rights-of-way.	There are over 1,900 trees on village property and street rights of ways. A survey was conducted and 83 high priority trees were identified as needing trimming or removal. Falling trees or limbs may cause loss of power, damage to assets, dangerous conditions for emergency personnel, injury or death to persons, or obstruction of emergency response.	The village will enhance their tree trimming and removal program based on the inventory that was conducted. The 83 high priority trees identified will be taken care of first and then the village will continue with the remainder of the trees. The village will replaced the trees that were removed with new trees.	Severe Storm and Severe Winter Storm	1, 3, 4	No	No	Within 1 year	Village Highway Dept.	$20,000+	Reduce or eliminate risk of fallen trees and damages associated with trees	Village Budget, FEMA HMGP, NYSDEC Environmental Protection Fund	High	SIP, NSP	PP
V. of Liverpool-2	Floodproof Village DPW	Village DPW facility is located within the 100 year floodplain which could lead to vulnerabilities	While there is no land available to relocate the DPW facility, the Village will incorporate	Flood	1, 3, 6	Yes	No	Within 5 years	Village Highway Dept., Village Engineer, and Village Floodplain Administrator	$100,000	Reduce or eliminate flood damage to building; continuity of operations;	Village Budget, FEMA FMA and HMGP, NYS State and Municipal Facilities Program	High	SIP	PP

Project Number	Project Name	Description of the Problem	Description of the Solution	Hazard(s) Mitigated	Goals Met	Critical Facility (Yes / No)	EHP Issues?	Estimated Timeline	Lead and Support Agencies	Estimated Cost	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
		or damage during flood events. Damage due to flooding at the DPW facility could prevent the DPW from assisting residents and local businesses in the event of a disaster. The loss of vehicles or equipment could be significant. The DPW provides essential services to the village and need to be able to function during severe weather events. The main source of flooding to impact the DPW facility would be from Onondaga Lake.	various floodproofing measures to protect the facility. The village will elevate the utilities above the 500 year elevation. The walls of the facility will be strengthened, and openings will be sealed to help prevent water from getting into the facility.								protects equipment				
V. Liverpool-3	Village DPW Generator	The village DPW facility currently does	Purchase and install a backup	All	1, 3, 6	Yes	No	Within 2 years	Village Highway Department	$200,000	Provide power during	Village Budget,	Medium	SIP	PP

Project Number	Project Name	Description of the Problem	Description of the Solution	Hazard(s) Mitigated	Goals Met	Critical Facility (Yes / No)	EHP Issues?	Estimated Timeline	Lead and Support Agencies	Estimated Cost	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
		not have backup power. This poses a problem in the event of a power outage. The facility needs to continuously operate during disasters. Without power, trucks cannot be fueled as well.	generator at the DPW facility. With the facility being located in a floodplain, the generator will be elevated above the base flood elevation to ensure it will function during flood events.								power outages; continuity of operations	FEMA FMA and HMGP			
V. Liverpool-4	Protect the OLP Maintenance Facility to the 500-year flood level.	The Facility is located in the 100-year floodplain. The village does not have jurisdiction over the facility and cannot mitigate themselves.	The village will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Flood	1, 2	Yes	None	Within 6 months	Village Floodplain Administrator working with facility operators/owners	<$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Municipal budget	Medium	EAP	PI
V. Liverpool-5	Protect the OLP Marina to the 500-year flood level.	The Facility is located in the 100-year floodplain. The village does not have jurisdiction over the facility and cannot	The village will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Flood	1, 2	Yes	None	Within 6 months	Village Floodplain Administrator working with facility operators/owners	<$100	Provide outreach to the property owner and informing them of potential flood damage and	Municipal budget	Medium	EAP	PI

Project Number	Project Name	Description of the Problem	Description of the Solution	Hazard(s) Mitigated	Goals Met	Critical Facility (Yes / No)	EHP Issues?	Estimated Timeline	Lead and Support Agencies	Estimated Cost	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
		mitigate themselves.									possible solutions				
V. Liverpool-6	Protect the OLP Parks Main Office to the 500-year flood level.	The Facility is located in the 100-year floodplain. The village does not have jurisdiction over the facility and cannot mitigate themselves.	The village will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Flood	1, 2	Yes	None	Within 6 months	Village Floodplain Administrator working with facility operators/owners	<$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Municipal budget	Medium	EAP	PI
V. Liverpool-7	Protect the OLP Ranger Office to the 500-year flood level.	The Facility is located in the 100-year floodplain. The village does not have jurisdiction over the facility and cannot mitigate themselves.	The village will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Flood	1, 2	Yes	None	Within 6 months	Village Floodplain Administrator working with facility operators/owners	<$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Municipal budget	Medium	EAP	PI
V. of Liverpool-8	Protect the OLP Salt Museum to the 500-year flood level.	The Facility is located in the 100-year floodplain. The village does not have jurisdiction over the facility and cannot mitigate themselves.	The village will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Flood	1, 2	Yes	None	Within 6 months	Village Floodplain Administrator working with facility operators/owners	<$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Municipal budget	Medium	EAP	PI

Project Number	Project Name	Description of the Problem	Description of the Solution	Hazard(s) Mitigated	Goals Met	Critical Facility (Yes / No)	EHP Issues?	Estimated Timeline	Lead and Support Agencies	Estimated Cost	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
V. of Liverpool-9	Protect the OLP Skate Park to the 500-year flood level.	The Facility is located in the 100-year floodplain. The village does not have jurisdiction over the facility and cannot mitigate themselves.	The village will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Flood	1, 2	Yes	None	Within 6 months	Village Floodplain Administrator working with facility operators/owners	<$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Municipal budget	Medium	EAP	PI
V. of Liverpool-10	Protect the OLP Skate Rental to the 500-year flood level.	The Facility is located in the 100-year floodplain. The village does not have jurisdiction over the facility and cannot mitigate themselves.	The village will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Flood	1, 2	Yes	None	Within 6 months	Village Floodplain Administrator working with facility operators/owners	<$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Municipal budget	Medium	EAP	PI
V. of Liverpool-11	Protect the OLP Visitor Center to the 500-year flood level.	The Facility is located in the 100-year floodplain. The village does not have jurisdiction over the facility and cannot mitigate themselves.	The village will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Flood	1, 2	Yes	None	Within 6 months	Village Floodplain Administrator working with facility operators/owners	<$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Municipal budget	Medium	EAP	PI

Project Number	Project Name	Description of the Problem	Description of the Solution	Hazard(s) Mitigated	Goals Met	Critical Facility (Yes / No)	EHP Issues?	Estimated Timeline	Lead and Support Agencies	Estimated Cost	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
V. of Liverpool-12	Protect the OLP Volleyball facility to the 500-year flood level.	The Facility is located in the 100-year floodplain. The village does not have jurisdiction over the facility and cannot mitigate themselves.	The village will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Flood	1, 2	Yes	None	Within 6 months	Village Floodplain Administrator working with facility operators/owners	<$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Municipal budget	Medium	EAP	PI
V. of Liverpool-13	Protect the OLP Yacht Club to the 500-year flood level.	The facility is located in the 100-year floodplain. The village does not have jurisdiction over the facility and cannot mitigate themselves.	The village will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Flood	1, 2	Yes	None	Within 6 months	Village Floodplain Administrator working with facility operators/owners	<$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Municipal budget	Medium	EAP	PI
V. of Liverpool-14	Protect the Onondaga Lake Park Maintenance Facility to the 500-year flood level	The facility is located in the 100-year floodplain. The fillage does not have jurisdiction over the facility and cannot mitigate themselves.	The village will contact the facilities manager and discuss options for protecting the facility to the 500-year flood level	Flood	1, 2	Yes	None	Within 6 months	Village Floodplain Administrator working with facility operators/owners	<$100	Provide outreach to the property owner and informing them of potential flood damage and possible solutions	Municipal budget	Medium	EAP	PI

Notes:

Not all acronyms and abbreviations defined below are included in the table.

**Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.*

Acronyms and Abbreviations:

CAV	*Community Assistance Visit*
CRS	*Community Rating System*
DPW	*Department of Public Works*
FEMA	*Federal Emergency Management Agency*
FPA	*Floodplain Administrator*
HMA	*Hazard Mitigation Assistance*
N/A	*Not applicable*
NFIP	*National Flood Insurance Program*
OEM	*Office of Emergency Management*

Potential FEMA HMA Funding Sources:

FMA	*Flood Mitigation Assistance Grant Program*
HMGP	*Hazard Mitigation Grant Program*
PDM	*Pre-Disaster Mitigation Grant Program*

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Mitigation Category:

- *Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.*
- *Structure and Infrastructure Project (SIP) - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.*
- *Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.*
- *Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities*

CRS Category:

- *Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.*
- *Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.*
- *Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.*
- *Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.*
- *Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.*
- *Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities*

Critical Facility:

Yes 💧 *Critical Facility located in 1% floodplain*

Table 9.17-13. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
V. of Liverpool-1 (previous action)	Prune or remove at risk trees on village property and street rights-of-way.	1	1	1	1	1	1	0	1	0	1	1	1	1	0	11	High
V. of Liverpool-2	Floodproof Village DPW	1	1	1	1	1	1	0	1	1	1	0	1	1	1	12	High
V. of Liverpool-3	Village DPW Generator	1	1	1	1	0	0	0	0	1	1	1	1	0	0	8	Medium
V. of Liverpool-4	Protect the OLP Maintenance Facility to the 500-year flood level.	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium
V. of Liverpool-5	Protect the OLP Marina to the 500-year flood level.	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium
V. Liverpool-6	Protect the OLP Parks Main Office to the 500-year flood level.	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium
V. of Liverpool-7	Protect the OLP Ranger Office to the 500-year flood level.	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium
V. of Liverpool-8	Protect the OLP Salt Museum to the 500-year flood level.	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium
V. of Liverpool-9	Protect the OLP Skate Park to the 500-year flood level.	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium
V. of Liverpool-10	Protect the OLP Skate Rental to the 500-year flood level.	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium
V. of Liverpool-11	Protect the OLP Visitor Center to the 500-year flood level.	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium
V. of Liverpool-12	Protect the OLP Volleyball facility to the 500-year flood level.	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium

Table 9.17-13. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community	Total	High / Medium / Low
V. of Liverpool-13	Protect the OLP Yacht Club to the 500-year flood level.	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium
V. of Liverpool-14	Protect the Onondaga Lake Park Maintenance Facility to the 500-year flood level	0	1	0	1	1	0	1	1	1	0	0	0	1	1	8	Medium

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions. Low (0-4), Medium (5-8), High (9-14).

9.17.7 Future Needs To Better Understand Risk/Vulnerability

None at this time.

9.17.8 Staff and Local Stakeholder Involvement in Annex Development

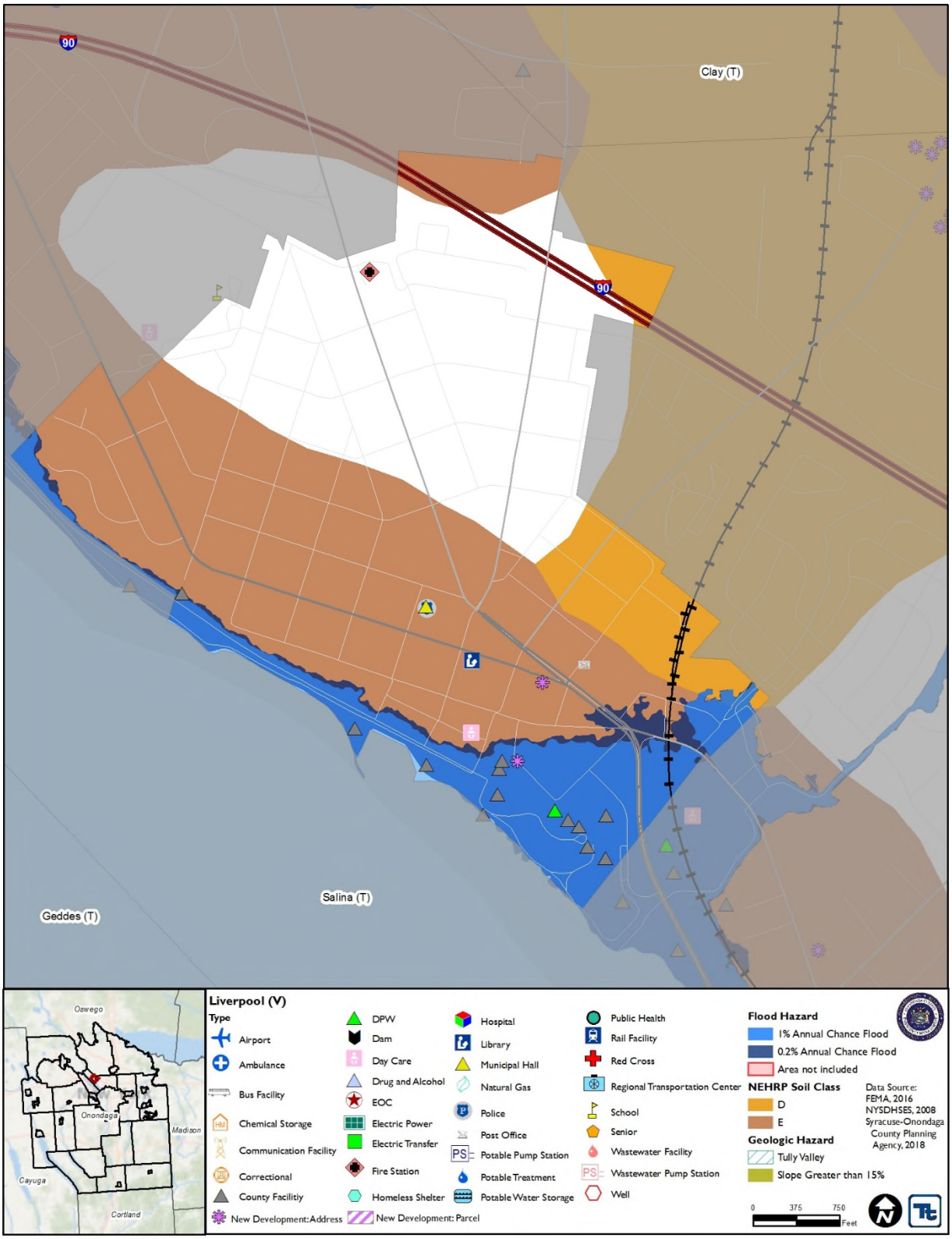
The Village of Liverpool followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many village departments, including: the Codes Department and the Highway Department. The Codes Officer represented the community on the Onondaga County Hazard Mitigation Plan Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.17.9 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Village of Liverpool that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Village of Liverpool has significant exposure. A map of the Village of Liverpool hazard area extent and location is provided on the following page. This map indicates the location of the regulatory floodplain as well as identified critical facilities within the municipality.

Figure 9.17-1. Village of Liverpool Hazard Area Extent and Location Map



Action Worksheet			
Project Name:	Prune or remove at risk trees on village property and street rights-of-way.		
Project Number:	V. Liverpool-1		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Storms and Severe Winter Storms		
Description of the Problem:	There are over 1,900 trees on village property and street rights of ways. A survey was conducted and 83 high priority trees were identified as needing trimming or removal. Falling trees or limbs may cause loss of power, damage to assets, dangerous conditions for emergency personnel, injury or death to persons, or obstruction of emergency response.		
Action or Project Intended for Implementation			
Description of the Solution:	The village will enhance their tree trimming and removal program based on the inventory that was conducted. The 83 high priority trees identified will be taken care of first and then the Village will continue with the remainder of the trees. The village will replaced the trees that were removed with new trees.		
Is this project related to a Critical Facility?	Yes ☐	No ☒	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes ☐	No ☒	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	50-year wind event	**Estimated Benefits (losses avoided):**	Reduce or eliminate risk of fallen trees and damages associated with trees
Useful Life:	20 years	**Goals Met:**	1, 3, 4
Estimated Cost:	$20,000+	**Mitigation Action Type:**	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 6 months
Estimated Time Required for Project Implementation:	Within 1 year	**Potential Funding Sources:**	Village Budget, FEMA HMGP, NYSDEC Environmental Protection Fund
Responsible Organization:	Village Highway Department	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Current problem continues
	Let the trees fall naturally	$0	The village does not have control as to when the trees will fall; significant concern to health and safety of residents in the village and puts residents at risk of injury or death.
	Continue with tree trimming program on a regular basis	$40,000	While this is currently taking place, the village has fallen behind due to the high number of trees in the village and available funds and staff.

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

Action Worksheet		
Project Name:	Prune or remove at risk trees on village property and street rights-of-way.	
Project Number:	V. Liverpool-1 (previous action)	
Criteria		
Life Safety	1	
Property Protection	1	Protects buildings and powerlines from damage from falling trees
Cost-Effectiveness	1	
Technical	1	
Political	1	The public is supportive of the project
Legal	1	The village has the legal authority to complete the project
Fiscal	0	Project requires grant funding assistance
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	1	Severe Storm, Severe Winter Storm
Timeline	1	
Agency Champion	1	Highway Department
Other Community Objectives	0	
Total	11	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Floodproof Village DPW		
Project Number:	V. Liverpool-2		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	The Village DPW facility is located within the floodplain which could lead to vulnerabilities or damage during flood events. Damage due to flooding at the DPW facility could prevent the DPW from assisting residents and local businesses in the event of a disaster. The loss of vehicles or equipment could be significant. The DPW provides essential services to the village and need to be able to function during severe weather events. The main source of flooding to impact the DPW facility would be from Onondaga Lake.		
Action or Project Intended for Implementation			
Description of the Solution:	While there is no land available to relocate the DPW facility, the village will incorporate various floodproofing measures to protect the facility. The village will elevate the utilities above the base flood elevation. The walls of the facility will be strengthened, and openings will be sealed to help prevent water from getting into the facility.		
Is this project related to a Critical Facility?	Yes ☒	No ☐	
Is this project related to a Critical Facility located within the 100-year floodplain?	Yes ☒	No ☐	
(If yes, this project must intend to protect the 500-year flood event or the actual worse case damage scenario, whichever is greater)			
Level of Protection:	500-year event	**Estimated Benefits (losses avoided):**	Reduce or eliminate flood damage to building; continuity of operations; protects equipment
Useful Life:	25-years	**Goals Met:**	1, 3, 6
Estimated Cost:	$100,000	**Mitigation Action Type:**	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	Within 6 months
Estimated Time Required for Project Implementation:	Within 5 years	**Potential Funding Sources:**	Village Budget, FEMA FMA and HMGP, NYS State and Municipal Facilities Program
Responsible Organization:	Village Highway Dept., Village Engineer, and Village Floodplain Administrator	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation, Capital Improvement

Three Alternatives Considered (including No Action)

	Action	Estimated Cost	Evaluation
Alternatives:	No Action	$0	Current problem continues
	Relocate DPW Facility	$1,00,000+	There is no land suitable in the village to relocate the facility.
	Elevate the current DPW facility	$500,000+	Not feasible due to the extent of work needed to elevate the facility; potential issues getting equipment in and out of the garage

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

Action Worksheet		
Project Name:	Floodproof Village DPW	
Project Number:	V. Liverpool-2	
Criteria		
Life Safety	1	The project will protect the critical functions of the DPW
Property Protection	1	The project will protect the DPW from flood damage
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The village has the legal authority to complete the project
Fiscal	0	The project requires grant funding assistance
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	1	
Agency Champion	1	Highway Department, Engineer, FPA
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	