



## 9.2 TOWN OF ARGYLE

This section presents the jurisdictional annex for the Town of Argyle.

### 9.2.1 Hazard Mitigation Plan Point of Contact

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

Primary Point of Contact	Alternate Point of Contact
Robert Henke, Town Supervisor 41 Main Street, PO Box 38, Argyle, New York 12809 (518) 638-8681 ext. 12 <a href="mailto:argylesupervisor@hotmail.com">argylesupervisor@hotmail.com</a>	Bob Humiston, Highway Superintendent 41 Main Street, PO Box 38, Argyle, New York 12809 (518) 638-8210 <a href="mailto:esther6454@msn.com">esther6454@msn.com</a>

### 9.2.2 Municipal Profile

The Town of Argyle is located in the central portion of Washington County. It is bordered to the north by the Towns of Kingsbury and Hartford; to the south by Town of Greenwich; to the east by the Town of Hebron; and to the south by the Town of Fort Edward. According to the 2010 Census, the Town’s population was 3,782. The Town has a total area of 57.8 square miles, of which 56.7 square miles of it is land and 1.1 square miles of it is water.

There are several communities located within the Town of Argyle, which includes the following: Durkeetown, Goose Island, Lick Springs, North Argyle and South Argyle. Additionally, there are lakes and streams located in the Town: Cossayuna Lake, Dead Creek, Moses Kill, Mud Pond, Summit Lake, and the headwaters of Wood Creek.

### Growth/Development Trends

The following table summarizes recent residential/commercial development since 2010 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality.

**Table 9.2-1. 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
<b>Recent Development from 2010 to present</b>					
Dollar General	Commercial	1 5,000 square foot retail store	171.3-1-40	none	In construction
<b>Known or Anticipated Development in the Next Five (5) Years</b>					
None identified					

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

### 9.2.3 Natural Hazard Event History Specific to the Municipality

Washington County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 – Risk Assessment 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. For the purpose of this plan update, events that have occurred in the County from 2008 to present were summarized to indicate the





range and impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 – Risk Assessment of this plan.

**Table 9.2-2. Hazard Event History**

Dates of Event	Event Type (FEMA Disaster Declaration if applicable)	Washington County Designated?	Summary of Damages/Losses
December 11-31, 2008	Severe Winter Storm DR-1827	Yes	A barn roof collapsed in the Town. Other losses/costs to the Town included cleanup, highway department overtime and debris removal. \$192,000 losses to Town covered by FEMA
August 26-September 5, 2011	Hurricane/T.S. Irene DR-4020	Yes	There were widespread power outages in the Town, South Valley Road, Archard Lane, and Sullivan Lane were all closed. Culverts and roads were damaged which led to culvert replacement and road construction at South Valley Road, Archard Lane, and Sullivan Lane. Other losses/costs to the Town included highway crew overtime (clearing roads, removing debris, and road repairs). \$67,000 losses to Town covered by FEMA

Notes:

- EM Emergency Declaration (FEMA)
- FEMA Federal Emergency Management Agency
- DR Major Disaster Declaration (FEMA)

### 9.2.4 Hazard Vulnerabilities and Ranking

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 hazard vulnerabilities and their ranking in the Town of Argyle. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0 – Risk Assessment. Refer to Figure 9.2-1 later in this annex for hazard vulnerable areas located in the Town of Argyle.

#### Natural Hazard Risk/Vulnerability Risk Ranking

As discussed in Section 5.3 (Hazard Ranking), each participating town or village may have differing degrees of risk exposure and vulnerability compared to Washington 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 Town of Argyle. Table 9.2-12 provides proposed mitigation initiatives for the high ranked hazards.

**Table 9.2-3. Hazard Risk/Vulnerability Risk Ranking**

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
Earthquake	100-Year GBS: \$3,806,001 500-Year GBS: \$48,024,634 2,500-Year GBS: \$331,519,714	Occasional	32	High
Flood	Damage estimate not available.	Frequent	30	Medium
Severe Weather	100-Year MRP: \$35,567 500-year MRP: \$277,684 Annualized: \$2,167	Frequent	48	High
Severe Winter Weather	1% GBS: \$5,765,312	Frequent	51	High





Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
	5% GBS: \$28,826,559			
Wildfire	Estimated Value in the WUI Hazard Areas: \$523,595,246	Frequent	48	High

Notes:

- a. Building damage ratio estimates based on FEMA 386-2 (August 2001)
- b. The valuation of general building stock and loss estimates was based on custom inventory for the municipality.  
High = Total hazard priority risk ranking score of 31 and above  
Medium = Total hazard priority risk ranking of 20-30+  
Low = Total hazard risk ranking below 20
- c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
- d. Loss estimates for the flood and earthquake hazards represent both structure and contents.
- e. The HAZUS-MH earthquake model results are reported by Census Tract.
- f. Damage estimate for flood unavailable due to lack of digital floodplain data for Washington County.

### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Town of Argyle.

**Table 9.2-4. NFIP Summary**

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)
Argyle (T)	4	1	\$7,454	0	0

Source: FEMA, 2016

Note (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA and are current as of April 30, 2016 and are summarized by Community Name. Please note the total number of repetitive loss properties excludes the severe repetitive loss properties. The number of claims represents claims closed by 4/30/2016.

Note (2) Total building and content losses from the claims file provided by FEMA Region 2.

Note (3) The policies inside and outside of the flood zones are unavailable due to lack of digital floodplain for Washington County.

Note (4) FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.

### Critical Facilities

At the time of this HMP Update, digitized flood maps for Washington County are unavailable. In order to provide some level of beneficial analysis, a desktop analysis was performed to identify critical facilities located within the floodplain (refer to Section 5.1 [Methodology and Tools] for details). The following table identifies critical facilities located within the municipality and their exposure, if any, to the possible floodplain. This information is a resource for the municipality to determine if flood mitigation actions are appropriate based on historical events and proximity of the facility to a water body. At the time of this 2018 HMP Update, the municipality did not identify any actions associated with these facilities.

The Town of Argyle understands the limitation of the map data and once the updated maps are available, the municipality will work with Washington County to determine which critical facilities are located within the 1% and 0.2% annual chance flood zones. Once identified, the municipality will work with the property owners and develop mitigation actions for each of the critical facilities, ensuring they will be protected to the 500-year (or worst-case scenario) level.



**Table 9.2-5. Potential Flood Losses to Critical Facilities**

Name	Type	Potential Flood Exposure
None identified		

Source: Washington County; NYS GIS Clearinghouse

**Other Vulnerabilities Identified**

The following are identified vulnerable areas within the Town:

- North Street Road near County Route 48 – this is a dirt road with an undersized that culvert that floods
- Street Road experiences shoulder erosion
- McNeil Road near Scott Road – the stream overwashes this area of roadway
- Archard Lane – needs tubes, road needs to be moved
- Mahaffey Road, between road #43 and #44 at 90 degree turn
- Hinds Road #42
- Sullivan Lane, between County Road 40 and Greenwich town line – five-foot tube January 2006
- Mud Lake Road – when a beaver dam breaks, this road washes out
- Hinds Road is vulnerable to slope erosion which is impacting the roadway and culverts.
- Sullivan Lane, Archard Lane, and Coach Road are all prone to flooding during periods of heavy rain due to undersized culverts.

**9.2.5 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 Town of Argyle.

**Table 9.2-6. 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.)
<b>Planning Capability</b>				
Master Plan	Yes, 1991	Town	Town Board	Currently seeking grant funding to update 1991 plan
Capital Improvements Plan	No	-	-	-
Floodplain Management / Basin Plan	No	-	-	-
Stormwater Management Plan	No	-	-	-
Open Space Plan	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.)
Stream Corridor Management Plan	No	-	-	-
Watershed Management or Protection Plan	No	-	-	-
Economic Development Plan	No	-	-	-
Comprehensive Emergency Management Plan	No	-	-	-
Emergency Response Plan	Yes, 2004	County	County OEM	County Emergency Management Plan
Post-Disaster Recovery Plan	Yes, 2004	County	County OEM	County Emergency Management Plan
Transportation Plan	No	-	-	-
Strategic Recovery Planning Report	No	-	-	-
Other Plans:	No	-	-	-
<b>Regulatory Capability</b>				
Building Code	Yes	State & Local	Code Enforcement (County)	Building Code of New York State (NYS), Local Law #1
Zoning Ordinance	No	-	-	-
Subdivision Ordinance	Yes	Local	Planning Board	Information not provided at the time of the 2018 HMP Update
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Code Enforcement Officer	Information not provided at the time of the 2018 HMP Update
NFIP: Cumulative Substantial Damages	No	-	-	-
NFIP: Freeboard	Yes	State, Local	Code Enforcement (County)	State mandated BFE+2 for single and two-family residential construction, BFE+1 for all other construction types
Growth Management Ordinances	No	-	-	-
Site Plan Review Requirements	No	-	-	-
Stormwater Management Ordinance	No	-	-	-
Municipal Separate Storm Sewer System (MS4)	No	-	-	-
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])	Yes	Local	Code Enforcement (County)	Mobile home prohibition

**Administrative and Technical Capability**

The table below summarizes potential staff and personnel resources available to the Town of Argyle.





**Table 9.2-7. Administrative and Technical Capabilities**

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Argyle Planning Board
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Maintenance programs to reduce risk	No	-
Mutual aid agreements	Yes	Highway Department, Fire Companies
<b>Technical/Staffing Capability</b>		
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Outside firm contracted
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Outside firm contracted
Planners or engineers with an understanding of natural hazards	Yes	Outside firm contracted
NFIP Floodplain Administrator (FPA)	Yes	Town Supervisor
Surveyor(s)	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Scientist familiar with natural hazards	No	-
Emergency Manager	No	-
Grant writer(s)	No	-
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	No	-

**Fiscal Capability**

The table below summarizes financial resources available to the Town of Argyle.

**Table 9.2-8. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	No
Authority to levy taxes for specific purposes	Yes—legislative restrictions in place currently
User fees for water, sewer, gas or electric service	No
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	By referendum
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No





Financial Resources	Accessible or Eligible to Use (Yes/No)
Other federal or state Funding Programs	No
Open Space Acquisition funding programs	No
Other	No

**Community Classifications**

The table below summarizes classifications for community program available to the Town of Argyle.

**Table 9.2-9. Community Classifications**

Program	Do you have this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	6/6Y	8/27/15
NYSDEC Climate Smart Community	No	-	-
Storm Ready	No	-	-
Firewise	No	-	-
Disaster/safety programs in/for schools	Yes	Refer to the 'Integration of Hazard Mitigation into Existing and Future Planning Mechanisms' below for details	
Organizations with mitigation focus (advocacy group, non-government)	No	-	-
Public education program/outreach (through website, social media)	No	-	-
Public-Private Partnerships	Yes	Private	N/A

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 website at <https://www.isomitigation.com/bcegs/>
- The ISO Mitigation online ISO’s Public Protection website at <https://www.isomitigation.com/ppc/>
- The National Weather Service Storm Ready website at <https://www.weather.gov/stormready/>
- The National Firewise Communities website at <https://www.nfpa.org/Public-Education/By-topic/Wildfire/Firewise-USA>







### Self-Assessment of Capability

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

**Table 9.2-10. 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	limited personnel		
Fiscal capability	Limited due to state mandates		
Community political capability		x	
Community resiliency capability		x	
Capability to integrate mitigation into municipal processes and activities	X political will		

### National Flood Insurance Program

#### NFIP Floodplain Administrator (FPA)

While the Flood Damage Prevention Ordinance identifies the Code Enforcement Officer for the Town of Argyle, code enforcement is performed by Washington County and the County does not provide floodplain administration to any municipality. Therefore, Mr. Robert Henke, Town Supervisor, provided information regarding floodplain administration for the town.

#### Flood Vulnerability Summary

The Town of Argyle does not maintain lists/inventories of properties that have been damaged by floods. No structures were damaged during Irene or other recent flood events. There is currently no interest within the Town regarding mitigation (elevation or acquisition) of properties.

#### Resources

The municipal FPA is the sole person assuming the responsibilities of floodplain administration; however, staff can be contracted if needed. To date, NYSDEC staff has been used for difficult situations within the Town. NFIP administration services and functions provided by the FPA includes review of building permits. The FPA reviews permits and makes a determination using 1974 floodplain maps. If a project is determined to be in a floodplain, Code Enforcement inspectors mandate that the project meet state floodplain building specifications. If a determination cannot be made due to the inadequacy of maps, the project is deferred to the NYSDEC for a determination. However, no inspections are done on a town-level.

Education and outreach provided to community regarding flood hazards/risk and flood risk reduction includes the posting of periodic information received from the NYSDEC and other sources.

The FPA indicated that there are barriers to running an effective floodplain management program. This includes the inadequate floodplain mapping for the Town. The scale on the maps is such that the width of the lines designating floodplain areas is 12 feet, which makes it difficult to read in areas with large gradients across the property. The FPA also indicated that he does not feel adequately trained to fulfill this





responsibility but there is support if needed. The FPA stated that he would consider attending continuing education and/or certification training on floodplain management if it were offered.

### Compliance History

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The community is in good standing with the NFIP. According to NYS DEC, the Town of Argyle's last Community Assistance Visit was on May 5, 2016.

### Regulatory

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The Town's floodplain management ordinances meet the minimum requirements set by FEMA and the State. There are no additional local ordinances, plans or programs that support floodplain management. The Town does not participate in the CRS program; however, the Town would attend a seminar if offered.

### Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

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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.

### Planning

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The Town of Argyle Planning Board reviews permit and subdivision applications. The Town Clerk maintains records of Ordinances, resignations, petitions, proof of publications, vouchers, zoning ordinances and maps, annual budgets, etc. There are no zoning regulations within the Town apart from mobile home regulations and subdivision regulations.

### Regulatory and Enforcement (Ordinances)

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**Code Enforcement:** Washington County provides code enforcement duties and responsibilities to the Town of Argyle.

**Construction Codes, Uniform:** The building codes are strictly enforced to make new and renovated buildings as prepared as possible for hazard related incidents. The Town complies with New York State Uniform Fire Prevention and Building Code (the Uniform Code) and the State Energy Conservation Construction Code (the Energy Code).

The Town of Argyle requires a county and town building permit application, as well as one set of prints, a Driveway Permit Application & a Local Compliance Checklist to be completed.

**Flood Damage Prevention Ordinance:** This ordinance promotes the public health, safety, and general welfare of residents and seeks to minimize public and private losses due to flood conditions. It regulates development to promote flood resistant structures and controls the alteration of floodplains to prevent increased vulnerability.

**Sewers:** The Town abides by the County-wide Sanitary Code, which protects and regulates its sewage collection and treatment facilities as a matter of public health and environmental safety. It seeks to prohibit the introduction of stormwater, surface, or sub-surface waters into sanitary sewers and to control the quantity and quality of wastes in the sewage system.



**Subdivision of Land:** The Town’s Planning Board is tasked with site plan/subdivision review. The Planning Board pays special attention to ensure that developments mitigate the issues associated natural hazards.

### Operational and Administration

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The Town has an invasive vegetation intervention and weed harvest in the Cossayuna Lake Basin.

### Fiscal

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The Town’s municipal budget includes line items for strategic culvert replacements, road grading strategies, and ditching programs. Additionally, the budget includes funding for mitigation-related projects through funding from the Consolidated Local Street and Highway Improvement Program (CHIPS).

### Education and Outreach

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The Town’s Highway Superintendent attends annual Highway School in Cornel. The Washington County Highway Association provides training, and annual safety day training.

The Town offers public outreach mechanisms/programs to inform its citizens on natural hazards. This includes educational material distributed at the Town Office Front Porch Forum which is a community email server used to distribute information.

There are two fire companies in the Town of Argyle - J.A. Barkley Hose Company and Cossayuna Vol. Fire Company. The J. A. Barkley Hose Co. #1 Inc., also known as the Argyle Fire Department or Argyle Fire/Rescue, is an all-volunteer Fire Department that provides fire/rescue protection for the Town & Village of Argyle. The company maintains a public website with links to local weather forecasts, the Argyle EMS website, and numerous video clips and other resources about fire safety. They also maintain a Facebook page, and provide mutual-aid for several neighboring departments.

## 9.2.6 Mitigation Strategy and Prioritization

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

### Past Mitigation Initiative Status

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The following table indicates progress on the community’s mitigation strategy identified in the 2010 Plan. It should be noted that during the 2010 planning process, only general, countywide actions were identified for each municipality. The Town of Argyle reviewed the previous actions and selected actions they chose to carry forward as part of this plan update. 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 9.2-11. Status of Previous Mitigation Actions**

2010 Mitigation Action	Responsible Party	Status (In progress, No progress, Complete)	Describe Status	Next Step (Include in 2018 HMP or Discontinue)	Describe Next Step
Improve drainage at sites where roads have washed out due to natural hazards in the past	County and NYS DHSES	In Progress	The Town replaces culverts as needed and this includes upsizing from original culvert size. Changing from steel to plastic.	Discontinue	This is an ongoing action for the Town
Purchase equipment to provide for local personnel to conduct the drainage improvement	County and NYS DHSES	In Progress	The Town replaces culverts as needed and this includes upsizing from original culvert size. Changing from steel to plastic.	Discontinue	This is an ongoing action for the Town; the Town has adequate equipment to conduct such services
Engineering assessment to determine feasibility of each site improvement	County and NYS DHSES	No Progress	This action doesn't apply to the Town	Discontinue	This action doesn't apply to the Town
Improve dams to prevent flooding causing roads to wash out.	County and NYS DHSES	No Progress	There are no dams in the Town	Discontinue	This action doesn't apply to the Town
Improve identified sites where slope stability is subject to land subsidence and where excavation or planting could mitigate future damage.	County and NYS DHSES	No Progress	Due to funding, this project has not been completed	Include in the 2018 Update	Engineering study of Hinds Road



### **Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy**

The Town of Argyle has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2010 Plan:

- Gordon Road at East Lake – NYSDEC grant received (in-kind) – \$44,000 - extremely steep road – filled in deep ditches that eroded and added in stone and riprap to prevent runoff from going into Cossayuna Lake
- EFC Grant for siltation, flooding mitigation on steep slope roadways in Cossayuna Lake Basin, \$44,000 with local match with in-kind services for performing the work. Private engineer hired to do design.
- The Highway Department replaces culverts throughout the Town as needed

### **Proposed Hazard Mitigation Initiatives for the Plan Update**

The Town of Argyle participated in a mitigation action workshop in September 2016 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 9.2-12 summarizes the comprehensive-range of specific mitigation initiatives the Town of Argyle 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 – Mitigation Strategy, 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 9.2-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



**Table 9.2-12. Proposed Hazard Mitigation Initiatives**

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
T. Argyle - 1	Purchase and install permanent generator at the municipal building (critical facility).	Existing	All	1, 4	Town of Argyle Highway Department	High	Medium to High	FEMA Hazard Mitigation Assistance (FMA, HMGP)	Short Term – one to five years	High	SIP	PP, ES
T. Argyle - 2	Purchase and install permanent generator at the highway building (critical facility).	Existing	All	1, 4	Town of Argyle Highway Department	High	Medium to High	FEMA Hazard Mitigation Assistance (FMA, HMGP)	Short Term – one to five years	High	SIP	PP, ES
T. Argyle - 3 (old)	Hinds Road - Slope erosion is affecting the road and causing non-function of a very large cement culvert. An engineering study is needed for this area.	Existing	Flood, Severe Storm	1	Town of Argyle Highway Department	Medium to High	Low to Medium	Washington County Soil & Water Conservation District, Municipal Budget, WQIP	Short Term – one to five years	Medium	LPR	PR, SP
T. Argyle - 4	Replacement and upgrade of existing culverts on Sullivan and Archard Lanes.	Existing	Flood, Severe Storm	1	Town of Argyle Highway Department	High	Low - \$15,000	Washington County Soil & Water Conservation District, Municipal Budget, WQIP	Short Term – one to five years	High	SIP	PP
T. Argyle - 5	Replacement and upgrade of culvert on Coach Road.	Existing	Flood, Severe Storm	1	Town of Argyle Highway Department	Medium to High	Low to Medium	Washington County Soil & Water Conservation District, Municipal Budget, WQIP	Short Term – one to five years	Medium	SIP	PP
T. Argyle - 6	Utilize the Hazard Mitigation Plan (HMP) when updating the Master Plan.	Both	All	All	Town Planning Board	High	Low	Municipal Budget and Staff Time	Short Term – one to five years	High	LPR	PR

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

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program  
 HMGP Hazard Mitigation Grant Program  
 PDM Pre-Disaster Mitigation Grant Program  
 RFC Repetitive Flood Claims Grant Program (discontinued in 2015)  
 SRL Severe Repetitive Loss Grant Program (discontinued in 2015)

Timeline:

Short 1 to 5 years  
 Long Term 5 years or greater  
 OG On-going program  
 DOF Depending on funding





OEM Office of Emergency Management  
WQIP Water Quality Improvement Project Grant

Costs:

Where actual project costs have been reasonably estimated:

- Low < \$10,000
- Medium \$10,000 to \$100,000
- High > \$100,000

Where actual project costs cannot reasonably be established at this time:

- Low Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
- Medium Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
- High Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

- Low= < \$10,000
- Medium \$10,000 to \$100,000
- High > \$100,000

Where numerical project benefits cannot reasonably be established at this time:

- Low Long-term benefits of the project are difficult to quantify in the short term.
- Medium Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
- High Project will have an immediate impact on the reduction of risk exposure to life and property.

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





Table 9.2-13. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
T. Argyle - 1	Purchase and install permanent generator at the municipal building (critical facility).	1	1	1	1	1	1	0	0	1	1	1	1	0	0	10	High
T. Argyle - 2	Purchase and install permanent generator at the highway building (critical facility).	1	1	1	1	1	1	0	0	1	1	1	1	0	0	10	High
T. Argyle - 3 (old)	Hinds Road - Slope erosion is affecting the road and causing non-function of a very large cement culvert. An engineering study is needed for this area.	1	1	1	0	0	0	0	1	0	1	1	1	0	0	7	Medium
T. Argyle - 4	Replacement and upgrade of existing culverts on Sullivan and Archard Lanes.	1	1	1	1	1	1	0	1	0	1	1	1	1	0	11	High
T. Argyle - 5	Replacement and upgrade of culvert on Coach Road.	1	1	1	1	0	0	0	1	0	1	1	1	0	0	8	Medium
T. Argyle - 6	Utilize the Hazard Mitigation Plan (HMP) when updating the Master Plan.	1	1	1	1	0	1	1	0	0	1	1	1	0	0	9	High

Note: Refer to Section 6 – Mitigation Strategy, which conveys guidance on prioritizing mitigation actions.







### **9.2.7 Future Needs to Better Understand Risk/Vulnerability**

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None at this time.

### **9.2.8 Hazard Area Extent and Location**

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Hazard area extent and location maps have been generated for the Town of Argyle 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 Town of Argyle has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

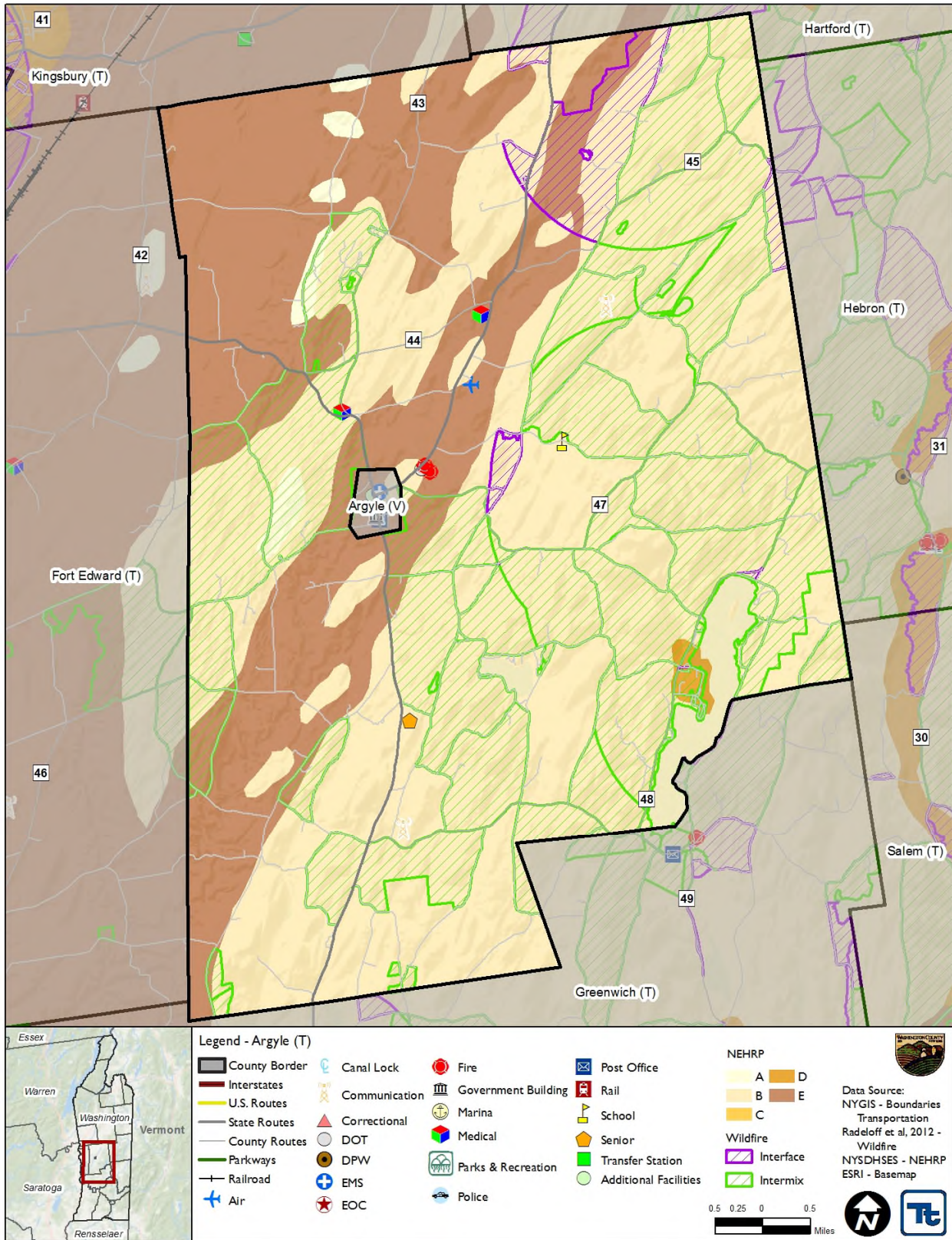
### **9.2.9 Additional Comments**

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None at this time.



Figure 9.2-1. Town of Argyle Hazard Area Extent and Location





Action Number:

T. Argyle - 1

Mitigation Action Name:

Purchase and install permanent generators at the municipal building.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	All
<b>Specific problem being mitigated:</b>	The Town is vulnerable if there is a loss of power during any event. The municipal building does not have emergency backup power to allow for continuity of operations during a power outage. While power outages are not a frequent occurrence in the town, they do occur during high wind events and last from one hour to several days. If a generator is secured, Town employees can provide public services to the community.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No action - Current problem persists. Install solar panels – costly, weather dependent.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Purchase and install a generator at the municipal building, an identified critical facility for the Town. The generator will provide power to the entire building, and municipal employees will benefit as they will be able to continue their day-to-day duties in the event of a power outage.
<b>Mitigation Action Type</b>	Structure and Infrastructure Project (SIP)
<b>Goals Met</b>	Goal 1: Protect Life and Property Goal 4: Provide for Emergency Services
<b>Applies to existing and or new development, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	Medium to High
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Highway Department
<b>Local Planning Mechanism</b>	Hazard Mitigation
<b>Potential Funding Sources</b>	FEMA Hazard Mitigation Assistance (FMA, HMGP)
<b>Timeline for Completion</b>	Short Term – one to five years
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 6/01/2017 Progress on Action/Project: Due to funding, the project has not been completed



Action Number: T. Argyle - 1  
 Mitigation Action Name: Purchase and install permanent generators at the municipal building.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Allow critical facilities to function during periods of power outages
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Need to seek grant funding
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	
Agency Champion	0	
Other Community Objectives	0	
<b>Total</b>	10	
<b>Priority (H/M/L)</b>	High	



Action Number:

T. Argyle -2

Mitigation Action Name:

Purchase and install permanent generator at the highway building.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	All
<b>Specific problem being mitigated:</b>	The Town is vulnerable if there is a loss of power during any event. The municipal building does not have emergency backup power to allow for continuity of operations during a power outage. While power outages are not a frequent occurrence in the town, they do occur during high wind events and last from one hour to several days. If a generator is secured, Town employees can provide public services to the community.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No action - Current problem persists. Install solar panels – costly, weather dependent
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Purchase and install a generator at the highway building, an identified critical facility for the Town. The generator will provide power to the entire building, and municipal employees will benefit as they will be able to continue their day-to-day duties in the event of a power outage.
<b>Mitigation Action Type</b>	Structure and Infrastructure Project (SIP)
<b>Goals Met</b>	Goal 1: Protect Life and Property Goal 4: Provide for Emergency Services
<b>Applies to existing and or new development, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	Medium to High
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Highway Department
<b>Local Planning Mechanism</b>	Hazard Mitigation
<b>Potential Funding Sources</b>	FEMA Hazard Mitigation Assistance (FMA, HMGP)
<b>Timeline for Completion</b>	Short Term – one to five years
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 6/01/2017 Progress on Action/Project: Due to funding, the project has not been completed





**Action Number:**  
**Mitigation Action Name:**

T. Argyle -2  
 Purchase and install permanent generator at the highway building.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Allow critical facilities to function during periods of power outages
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Need to seek grant funding
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	
Agency Champion	0	
Other Community Objectives	0	
<b>Total</b>	10	
<b>Priority (H/M/L)</b>	High	



Action Number:

T. Argyle - 3

Mitigation Action Name:

Hinds Road engineering study.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood, Severe Storm
<b>Specific problem being mitigated:</b>	Due to nearby slope erosion, the culvert on Hinds Road is being clogged with debris. This inhibits its stormwater capacity and causes the large cement culvert to not function properly.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No action - Current problem persists. Clear debris regularly – problem persists.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Complete an engineering study of Hinds Road culvert and surrounding area to determine a plan for mitigation to reduce or alleviate the problem.
<b>Mitigation Action Type</b>	Local Plans and Regulations (LPR)
<b>Goals Met</b>	Goal 1: Protect Life and Property
<b>Applies to existing and or new development, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	Medium to High
<b>Estimated Cost</b>	Low to Medium
<b>Priority*</b>	Medium
Plan for Implementation	
<b>Responsible Organization</b>	Highway Department
<b>Local Planning Mechanism</b>	Hazard Mitigation
<b>Potential Funding Sources</b>	Washington County Soil & Water Conservation District, Municipal Budget, Water Quality Improvement Project Grant
<b>Timeline for Completion</b>	Short term – one to five years
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	No progress; New project





Action Number: T. Argyle - 3  
 Mitigation Action Name: Hinds Road engineering study.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	0	
Political	0	
Legal	0	
Fiscal	0	Need grant funding
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm
Timeline	1	
Agency Champion	0	
Other Community Objectives	0	
<b>Total</b>	7	
<b>Priority (H/M/L)</b>	Medium	



Action Number:

T. Argyle - 4

Mitigation Action Name:

Replacement and upgrade of existing culverts on Sullivan and Archard Lanes.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood, Severe Storm
<b>Specific problem being mitigated:</b>	Road closures and flooding from the inadequate culverts on these roadways has caused flooding and complications in emergency response during flooding events in the Town.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No action - Current problem persists. Buyout homes and remove dead end roads where flooding is a problem – cost.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Replace existing culverts with larger sized culverts, and install additional culverts in the area of Sullivan and Archard Lanes, both dead end roads. This will reduce the amount of time roads are closed and will allow emergency personnel to access homes on these roads in the event of an emergency.
<b>Mitigation Action Type</b>	Structure and Infrastructure Project (SIP)
<b>Goals Met</b>	Goal 1: Protect Life and Property
<b>Applies to existing and or new development, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	Low - \$15,000
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Highway Department
<b>Local Planning Mechanism</b>	Hazard Mitigation
<b>Potential Funding Sources</b>	Washington County Soil & Water Conservation District, Municipal Budget, Water Quality Improvement Project Grant
<b>Timeline for Completion</b>	Short term – one to five years
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	No progress; New project



Action Number: T. Argyle – 4  
 Mitigation Action Name: Replacement and upgrade of existing culverts on Sullivan and Archard Lanes.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	Need to obtain funding
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
<b>Total</b>	11	
<b>Priority (H/M/L)</b>	High	



Action Number:

T. Argyle - 5

Mitigation Action Name:

Replacement and upgrade of culvert on Coach Road.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood, Severe Storm
<b>Specific problem being mitigated:</b>	Road closures and flooding from the inadequate culverts on Coach Road near the intersection of McEachron Hill Road has caused flooding of residential properties and complications in emergency response during flooding events in the Town.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No action - Current problem persists. Raise roadway above flood elevation – cost, flooding of residential properties continues
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Replace existing culverts with larger sized culverts in the area of Coach Road near the intersection of McEachron Hill Road. This will reduce the amount of time roads are closed and will allow emergency personnel to access homes on these roads in the event of an emergency.
<b>Mitigation Action Type</b>	Structure and Infrastructure Project (SIP)
<b>Goals Met</b>	Goal 1: Protect Life and Property
<b>Applies to existing and or new development, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	Medium to High
<b>Estimated Cost</b>	Low to Medium
<b>Priority*</b>	Medium
Plan for Implementation	
<b>Responsible Organization</b>	Town of Argyle Highway Department
<b>Local Planning Mechanism</b>	Hazard Mitigation
<b>Potential Funding Sources</b>	Washington County Soil & Water Conservation District, Municipal Budget, Water Quality Improvement Project Grant
<b>Timeline for Completion</b>	Short term – one to five years
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	No progress; New project



Action Number: T. Argyle - 5  
 Mitigation Action Name: Replacement and upgrade of culvert on Coach Road.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	Provide further protection to surrounding properties
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	0	Need grant funding
Environmental	1	
Social	0	
Administrative	1	
Multi-Hazard	1	Flood, Severe Storm
Timeline	1	
Agency Champion	0	
Other Community Objectives	0	
<b>Total</b>	8	
<b>Priority (H/M/L)</b>	Medium	



Action Number:

T. Argyle - 6

Mitigation Action Name:

Utilize the Hazard Mitigation Plan (HMP) when updating the Master Plan.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	All
<b>Specific problem being mitigated:</b>	The Master Plan does not currently address hazard identification and risk assessment or mitigation goals.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	No action - Current problem persists. Update the Master Plan without incorporating mitigation – does not help the Town with preparing for hazard impacts.
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Use the results and guidance from the Hazard Mitigation Plan to steer future Master Plan updates to incorporate mitigation into the goals and objectives, as well as in future planning decisions.
<b>Mitigation Action Type</b>	Local Plans and Regulations (LPR)
<b>Goals Met</b>	Goal 1: Protect Life and Property Goal 2: Increase Public Awareness Goal 3: Encourage Partnerships Goal 4: Provide for Emergency Services Goal 5: Encourage the development and implementation of long-term, cost-effective, and resilient mitigation projects to preserve or restore the functions of natural systems
<b>Applies to existing and or new development, or not applicable</b>	Both
<b>Benefits (losses avoided)</b>	High
<b>Estimated Cost</b>	Low – less than \$10,000
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Town
<b>Local Planning Mechanism</b>	Hazard Mitigation
<b>Potential Funding Sources</b>	Municipal Budget and Staff Time
<b>Timeline for Completion</b>	Short Term – one to five years
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	No progress; New project



Action Number:  
Mitigation Action Name:

T. Argyle - 6  
Utilize the Hazard Mitigation Plan (HMP) when updating the Master Plan.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	1	
Fiscal	1	Employee time and municipal budget
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	
Agency Champion	0	
Other Community Objectives	0	
<b>Total</b>	9	
<b>Priority (H/M/L)</b>	High	