



9.7 Town of Patterson

This section presents the jurisdictional annex for the Town of Patterson. 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 Town participated in the planning process; an assessment of the Town of Patterson’s risk and vulnerability; the different capabilities utilized in the Town; and an action plan that will be implemented to achieve a more resilient community.

9.7.1 Hazard Mitigation Planning Team

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

Table 9.7-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Richard Williams Sr. Address: PO Box 470, 1142 Route 311, Patterson, NY 12563 Phone Number: 845-878-6500 Email: supervisor@pattersonny.org	Name/Title: Peter Dandreano Address: PO Box 470, 1142 Route 311, Patterson, NY 12563 Phone Number: 845-878-6500 Email: pdandreano@pattersonny.org
NFIP Floodplain Administrator	
Name/Title: Richard Williams Sr. Address: PO Box 470, 1142 Route 311, Patterson, NY 12563 Phone Number: 845-878-6500 Email: planning@pattersonny.org	

9.7.2 Municipal Profile

The Town was first settled around 1720 in The Oblong, which was a disputed area in southeastern New York also claimed by the colony of Connecticut. The Oblong was a strip of land approximately 2.9 km wide between Dutchess County New York and Connecticut, ceded to New York in the 1731 Treaty of Dover. Between 1720 and 1776 a large number of mostly Connecticut families settled in the southern Oblong who could not settle west of it because that land was privately owned by the Philipse Family, who owned virtually all of the rest of the future Putnam County. The first such settlers were the Hayt family, who built a house at The Elm in 1720.

Another early settler was Jacob Haviland, who settled Haviland Hollow in 1731. The first village in Putnam County, the hamlet of Patterson, was originally called Frederickstown, which lent its name to the eastern part of the future Putnam County other than the oblong, which was called Southeast Precinct (not the same as the current town of Southeast). After the revolution, the Philipse land was confiscated, and in 1788, the former Philipse portion of the Oblong was chartered as the Town of Southeast, the remainder of the region being chartered as the Town of Fredericktown. In 1795, Fredericktown Township was split up into four parts:

1. Town of Carmel,
2. A part which was combined with the northern half of Southeast and became the Town of Franklin, which was renamed the Town of Patterson in 1808,
3. A part which was combined with the southern half of Southeast and became the new, much larger town of Southeast, and
4. The remnant of the town, which was the Town of Frederick for a while, but was renamed the Town of Kent in 1817.



The Town Board is the main governing body in the Town of Patterson. The Supervisor is the chief elected official, and serves a term of four years. Town Councilperson serves terms of four years.

The Town of Patterson is located in the northeast corner of Putnam County, New York, in the Lower Hudson Valley region of New York State.

According to the 2010 U.S. Census, the population of the Town of Patterson was 12,023.

9.7.3 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.7-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figure 9.7-1 at the end of this annex illustrates the geographically-delineated hazard areas and the location of potential new development, where available.

Table 9.7-2. Recent and Expected Future Development

Type of Development	2014		2015		2016		2017		2018	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ Outside regulatory floodplain)										
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
Single Family	4	0	5	0	3	0	0	0	3	0
Multi-Family	0	0	0	0	0	0	0	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	1	0	1	0
Total	4	0	5	0	3	0	1	0	4	0
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development				
Recent Major Development and Infrastructure from 2015 to Present										
Paddock View Estates Subdivision	Residential	9		Burton Farm Road	N/A	Under Construction				
2160 Route 22 Site Plan	Non-Residential	68,900 sq. ft. flex building suitable for professional, office, warehouse, light manufacturing, R&D		2160 Route 22	None	Under Construction as a self-storage facility				
Patterson Crossing	Non-Residential	382,560 sq. ft. retail center, with management and meeting space, a substation for the Putnam County Sheriff's Dept. and 28,000 sq. ft. garden center		22-3-1 Route 311/I-84 Intersection	-	-				
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years										
Fox Run Estates	Residential	Proposed 80 unit "Active Adult" residential community		215 Bullet Hole Road	None	Approvals Pending				



Type of Development	2014	2015	2016	2017	2018
Ice Pond Estates	Residential	24 lot residential subdivision	272 Ice Pond Road	Wildfire Intermix	-

SFHA Special Flood Hazard Area (1% flood event)

* Only location-specific hazard zones or vulnerabilities identified.

9.7.4 Capability Assessment

The Town of Patterson performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 6 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- The municipality’s understanding of local capacity for adapting to current and future risks and changing conditions.

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, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized in Capability Assessment (Section 9.7.4). The Town of Patterson identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy.

Planning, Legal, and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Town of Patterson and where hazard mitigation has been integrated.

Table 9.7-3. Planning, Legal, and Regulatory Capability

	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated	Have aspects of this been integrated into your mitigation plan? If no - can it be a mitigation action? If yes, add Mitigation Action #.	
Codes, Ordinances, & Requirements							
Building Code	Yes	Town Code, Ch. 64 initially adopted 3/10/1993; readopted 5/23/2007.	Local and State	Building Department	Yes	NA	NA
Comments: NYS Uniform and Energy Code 2020; Regulated at local and state levels. The Uniform Code (19 NYCRR Parts 1219 to 1229) now includes the 2015 editions of the code books published by the International Code Council (the “2015 I-Codes”), as amended by the publication entitled the 2017 Uniform Code Supplement (publication date: July 2017).. Article 18 of the Executive Law (§§ 370 through 383) establishes the State Fire Prevention and Building Code Council, directs the Code Council to promulgate and maintain the Uniform Code, and charges each city, town, and village in the State (with the exception of the City of New York) with the duty of administering and enforcing the Uniform Code within its municipal boundaries.							
Zoning Code	Yes	Town Code, Ch. 154 6/12/1942; readopted 4/13/2005	Local and State	Building Department/ Planning Department	No	Yes	NA



	Does your municipality have this? (Yes/No)	Code Citation and Date (code chapter, name, date, link)	Authority (local, Town, state, federal)	Department / Agency Responsible	State Mandated	Have aspects of this been integrated into your mitigation plan? If no - can it be a mitigation action? If yes, add Mitigation Action #.	
<p>Comment:</p> <ul style="list-style-type: none"> Chapter 154, Zoning, adopted 04-13-05 with subsequent amendments. It is the purpose of this Chapter to: A. Guide the future development of the town in accordance with a comprehensive plan; B. To conserve the natural resources and rural character of the town; C. To provide for adequate light, air and privacy; to promote safety from fires, floods and other dangers, and to prevent overcrowding of the land and undue congestion of the population; D. To protect the character and the social and economic stability of all parts of the town; E. To protect and conserve the value of land and buildings throughout the town; F. Bring about the gradual conformity of the uses of land and buildings throughout the town to the comprehensive zoning plan; G. To aid and encourage the wise use and sound management of the groundwater systems, drainage basins, streams, lakes and ponds; H. To aid in bringing about the most beneficial relation between the uses of land and buildings and the movement of traffic through and the circulation of traffic within the town; I. To aid in providing a guide for public policy and action in the adequate provision of transportation, water, sewerage, schools, parks and other public facilities and services, and for private enterprise in building development, investment and other economic activity; J. To recognize the economic value of Patterson's natural beauty and environmental amenities, to protect the integrity of scenic views, ridge lines, agricultural land, existing and potential recreation areas, waterways, ground and surface water supplies, ecological systems, wetlands, wildlife habitat, and natural vegetation, and to maintain environmentally significant open space; K. To promote attractive well-designed development; and L. To protect the ecological integrity and benefits provided by the wetland system identified as the Great Swamp, which includes water filtration, groundwater recharge, flood control, habitat for plants, animals and rare species, recreation and scenic views. No land, building or part thereof shall hereafter be used, and no building or part thereof shall be constructed, reconstructed, extended, enlarged, moved, arranged or altered, except in conformity with this chapter. The Town Board of the Town of Patterson has determined that freshwater wetlands are invaluable resources for flood protection; erosion control; wildlife habitat; forests; pollution treatment; open space; water, including groundwater recharge; recreation; and other benefits associated therewith which, if preserved and maintained in an undisturbed natural condition, constitute important assets to present and future residents of the town. When considering a development permit the Environmental Conservation Inspector (ECI) shall consider the effect of the proposed activity with reference to public health and welfare; fishing, flood, hurricane and storm dangers; and protection or enhancement of the several functions of freshwater wetlands and the benefits therefrom. In no event shall any use which causes the emanation of noxious or offensive odors, vapors, dust, vibration, smoke, gas, noise, fumes, glare or radiation, or is otherwise injurious to any of the surrounding properties or to their owners and occupants or which presents any other hazard to public health or safety. 							
Subdivision Regulations	Yes	Town Code, Ch.138 readopted 4/13/2005	Local and State	Building Department/ Planning Department	No	Yes	NA
<p>Comment:</p> <ul style="list-style-type: none"> Chapter 138, Subdivision of Land, last adopted 04-13-05. The Planning Board is hereby authorized and empowered to approve plats for subdivisions within the Town of Patterson. The intent of the regulations is to encourage the most appropriate and best development of land in order to protect and promote the health, safety, and general welfare by promoting the wise use and sound management of the groundwater systems, drainage basins, wetlands, streams, lakes and ponds and all other natural resources throughout the Town, and maintaining, through all subdivision planning and development the existing character and development patterns of neighboring properties. Whenever a developer, during the course of development and before acceptance of any construction under this chapter and the road specifications of the Town of Patterson, encounters conditions such as flood areas, groundwater conditions, springs, intermittent streams, rock, unsuitable slopes or unusual circumstances not foreseen in the general planning, such conditions shall be reported to the Town Engineer, In addition, land to be subdivided shall be of such character that it can be used safely for building purposes without danger to health or peril from fire, flood or other menace. In general a subdivider shall demonstrate that a lot has a suitable house location including a thirty (30) foot building envelope which is free from a Town- or State-regulated wetland area and buffer. Land subject to flooding shall not be platted for residential occupancy nor for such other uses as may increase danger to health, life or property or aggravate the flood hazard. An Erosion and Sediment Control Plan shall be prepared and approved by the Planning Board for all land disturbance. 							
Stormwater Management Regulations	Yes	Town Code, Ch. 133, Adopted 4/13/2005	Local	Planning Department	Yes	Yes	NA
<p>Comment:</p> <ul style="list-style-type: none"> Chapter 133, Stormwater, Soil Erosion and Sediment Control, last adopted 04-13-05. The Town of Patterson finds that land development activities, associated increases in site impervious cover, disturbances to the natural vegetative cover, and changes to the topography of the land can often alter the hydrologic response of local watersheds and increase stormwater runoff rates and volumes. These changes to the hydrology of the watershed can cause an increase in flooding, stream bank erosion, impairment to aquatic resources from silt or other pollutants, degradation of water quality and a loss of wildlife habitat. To accomplish the purposes of this Chapter, the Town Board of the Town of Patterson has promulgated standards and regulations which seek to achieve the following objectives: (1) Minimize increases in peak rate of stormwater runoff from land development activities in order to reduce flooding, siltation, increases in stream temperature, and streambank erosion and maintain the 							



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<p><i>integrity of stream channels; (2) Minimize increases in pollution caused by stormwater runoff from land development activities which would otherwise degrade local water quality; (3) Minimize the total volume of stormwater runoff which flows from any specific site during, and following development; (4) Reduce soil erosion and sediment transport; (5) Meet the requirements of minimum 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; and (6) 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.</i></p> <ul style="list-style-type: none"> • Prior to, during and after site preparation and construction, an integrated drainage system shall be provided which at all times minimizes erosion, sediment, hazards of slope instability and adverse effect on neighboring property owners. • Where a major or minor Land Development Permit is required An Environmental Assessment Form (EAF) pursuant to SEQRA shall be prepared and submitted by the applicant. 							
Post-Disaster Recovery Plan or Regulation	No	-	Local		No	-	-
Comment:							
Real Estate Disclosure	Yes	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes	NA	NA
Comment: In addition to facing potential liability for failing to disclose under the exceptions to "caveat emptor," a home seller must make certain disclosures under the law or pay a credit of \$500 to the buyer at closing. While the PCDA requires a seller to complete a standardized disclosure statement and deliver it to the buyer before the buyer signs the final purchase contract, in practice, most home sellers in New York opt not to complete the statement and instead pay the credit.							
Growth Management Regulation	No	?	Local	Local Planning Board	No	-	-
Comment: In New York State, virtually all land use regulation, which is the primarily tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government). Land use planning is also primarily a municipal function. While State law provides for certain planning functions at the county or regional level, these mechanisms are largely advisory, whereas municipal planning is directly related to land use regulation.							
Site Plan Review	Yes	Town Code, Ch. 154 6/12/1942; readopted 4/13/2005	Local and State	Planning Board / Planning Department	No	-	-
Comment: The authority to require site plan review is derived from the State enabling Statutes (General City Law s. 27-a, Town Law s. 247a, Village Law s. 7-725a)The local legislative body has the power to delegate site plan review to the planning board, zoning board, etc.							
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	Planning Dept.	Yes	NA	NA
Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019							
Flood Damage Prevention Law	Yes	Town Code, Ch. 91, adopted 8/26/1987, readopted 2/13/2013 Other regulations supporting the FDPO are the Town's Wetlands/Watercourse regulations found in the Zoning Code at Sec. 154-18	Local, State, Federal	Planning Department	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)	-	-
<p>Comment: A community must adopt a Flood Damage Prevention Ordinance to participate in the National Flood Insurance Program.</p> <ul style="list-style-type: none"> • Chapter 91, Flood Damage Prevention. Amended in its entirety on 2-13-2013. The Town Board of the Town of Patterson finds that the potential and/or actual damages from flooding and erosion may be a problem to the residents of the Town of Patterson and that such damages may include destruction or loss of private and public housing, damage to public facilities, both publicly and privately owned, and injury to and loss of human life. <p>It is the purpose of this chapter to: A. Regulate uses which are dangerous to health, safety and property due to water or erosion hazards or which resulting increases in erosion or in flood heights or velocities; B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial Construction; C. Control the alteration of natural floodplains, stream channels and natural protective barriers which are involved in the accommodation of</p>							



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<p><i>floodwaters; D. Control filling, grading, dredging and other development which may increase erosion or flood damages; E. Regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands; and F. Qualify for and maintain participation in the National Flood Insurance Program.</i></p> <ul style="list-style-type: none"> <i>The Town Planner is hereby appointed to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions.</i> <i>A development permit shall be obtained before the start of construction, or the start of any other development within the area of special flood hazard as defined herein, and shown on the maps and study described in § 91-6.</i> <i>The following standards apply to all new subdivision proposals and other proposed development in areas of special flood hazard; A. Proposals shall be consistent with the need to minimize flood damage. Public utilities and facilities such as sewer, gas, electrical and water systems shall be located and constructed so as to minimize flood damage; and C. Adequate drainage shall be provided to reduce exposure to flood damage.</i> <i>On streams with a regulatory floodway, as shown on the Flood Boundary and Floodway Map or the Flood Insurance Rate Map adopted in §91-6, no new construction, substantial improvements or other development in the floodway (including fill) shall be permitted unless a technical evaluation by a licensed professional engineer shows that such an encroachment shall not result in any increase in flood levels during occurrence of the base flood.</i> <i>The following standards apply to new and substantially improved residential structures located in areas of special flood hazard. Within Zones A1-A30, AE and AH and also Zone A if base flood elevation data are available, new construction and substantial improvements shall have the lowest floor (including basement) elevated to or above two feet above the base flood elevation.</i> <i>The following standards apply to new and substantially improved commercial, industrial and other non-residential structures located in areas of special flood hazard, Within Zones A1-A30, AE and AH, and also Zone A if base flood elevation data are available, new construction and substantial improvements of any non-residential structure shall either:</i> <ol style="list-style-type: none"> <i>Have the lowest floor, including basement or cellar, elevated to or above two feet above the base flood elevation; or</i> <i>Be floodproofed so that the structure is watertight below two feet above the base flood elevation, including attendant utility and sanitary facilities, with walls substantially impermeable to the passage of water.</i> <i>In order to prevent potential flood damage to certain facilities that would result in serious danger to life and health, or widespread social or economic dislocation, no new critical facility shall be located within any Area of Special Flood Hazard, or within any 500-year flood zone shown as a B zone or a Shaded X zone on the Community's Flood Insurance Rate Maps.</i> 							
Municipal Separate Storm Sewer System (MS4) Regulation	Yes	EPA Phase II Stormwater Rule	Federal	Planning Dept.	Yes	No	-
Comment: This requires urbanized areas (local governments) to develop a stormwater management program that will reduce the amount of pollutants carried by stormwater during storm events to waterbodies to the "maximum extent practicable". The goal of the program is to improve water quality and recreational use of waterways. A Municipal Separate Storm Sewer Systems Permit, GP-0-15-003 is required.							
Emergency Management	Yes	NYS Executive Law, Article 2B.	Local	Local OEM	Yes	NA	NA
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B.							
Climate Adaptation	No	NYS Executive Law, Article 75	Local	n/a	Yes	-	-
Comment: The environmental conservation law was amended by adding ARTICLE 75 - CLIMATE CHANGE under Assembly Bill A. 8429 and Senate Bill S. 6599, dated June 18, 2019.							
Disaster Recovery Ordinance	No	-	Local	n/a	No	-	-
Comment:							
Disaster Reconstruction Ordinance	No	-	Local	n/a	No	-	-
Comment:							
Other Applicable Codes, Ordinances, & Requirements	-	-	-	-	-	-	-
Comment:							
Planning Documents							
Comprehensive Plan	Yes	Adopted 12/13/2000	Local	Town Board	No	No	-
Comment:							



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<ul style="list-style-type: none"> Comprehensive Plan, adopted 12-13-2000. The Goals of the Comprehensive Plan are to; Preserve and enhance the natural beauty and rural quality of the community and protect the small-town atmosphere; Protect environmentally sensitive areas and natural resources such as scenic roads and vistas, waterways, floodplains and wetlands; Establish environmentally sound land use development policies which respect private property rights and ensure balanced and orderly patterns of future growth; Encourage regional cooperation to safeguard Patterson's environmental setting; Foster and preserve the community's heritage by protecting historic structures and sites which foster the natural beauty of the Town; Provide adequate public utilities and recreation facilities, and minimize the fiscal burden of such services on the existing community; Improve traffic conditions, and provide adequate parking and local circulation within secondary highway networks; Promote environmentally sound management of the waste stream; Promote non-residential growth in areas suitable for such uses; Accommodate new growth in a manner which protects the semi-rural character of the Town; and Provide sufficient variety and quantity of housing to accommodate the present and future needs of various income levels and age groups, including housing suitable for people of low and moderate income. To promote the goals of the open space component of the Plan the Town seeks to; Preserve natural areas; Provide recreational opportunities; Protect environmentally sensitive areas and natural resources such as scenic vistas and roadways, waterways, floodplain and wetlands; and Create a system of linking greenway corridors throughout the Town. The physical characteristics of the Town should be carefully considered in creating a plan for commercial and residential densities, including topography, streams, wetlands, hydrogeology, soils, slopes and floodplains. The restrictions currently in the zoning ordinance providing for special use and construction requirements in the areas subject to flooding should be reinforced by means of an "overlay" district, consistent with FEMA boundaries, on the zoning map. In 1988 the Putnam County Legislature declared the Great Swamp a "Critical Environmental Area". Through implementation of a land preservation initiative program Putnam County has acquired eleven parcels located in the Town of Patterson that total 160.53 acres. 							
Capital Improvement Plan	No	General Municipal Law Section 99-g.	Local	n/a	No	-	-
Comment: A local government can decide to adopt its capital plan pursuant to General Municipal Law Section 99-g.							
Disaster Debris Management Plan	No	-	Local	n/a	No	-	-
Comment: Based on past experience with disaster management, it is apparent that local municipalities that have an Emergency Debris Management Plan in place are able to manage their emergency response in a more comprehensive and coordinated manner and are able to address recovery and clean up faster and more efficiently than those without plans. With that in mind, the Department developed an Emergency Management Plan Tool Kit. The NYSDEC (Department) strongly urges all municipal officials to conduct pre-disaster planning and prepare emergency debris management plans. The Department recommends that these plans should be reviewed and updated annually.							
Floodplain or Watershed Plan	No	-	Local	n/a	No	-	-
Comment: The State Pollutant Discharge Elimination System (SPDES) permit program is a primary way the DOW implements its watershed protection and restoration activities.							
Stormwater Plan	Yes	Implemented 2003	Local	Planning Dept.	No	-	-
Comment: Local Authority - Could be an element of the Comprehensive Plan. There is a required planning process that must be followed when addressing stormwater management in regulated new development and redevelopment projects.							
Open Space Plan	Yes	Contained within Master Plan	Local	Town Board	Yes	-	-
Comment: Planning boards prepare or oversee the preparation of local comprehensive plans, which should include an open space element. The primary purpose of a local open space plan is to cause the important open lands in the community to be conserved for open space uses.							
Urban Water Management Plan	No	-	Local	n/a	No	-	-
Comment:							
Habitat Conservation Plan	No	-	Local	n/a	No	-	-
Comment: Laws related to habitat protection and biodiversity control the use and application of certain pesticides, demolition projects and clearing of vegetated areas. Identifying certain critical habitat areas could be included in the Comprehensive Plan. Critical Habitat is a part of certain State and Federal Permitting. The State had a Wildlife Action Plan requires to maintain eligibility for the State Wildlife Grant Program.							
Economic Development Plan	No	-	Local	n/a	No	-	-
Comment: An Economic Development Plan may be prepared by a local government and be included or separate from the Comprehensive plan. **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.							
Shoreline Management Plan	No	Article 34, Environmental Conservation Law,	Local	-	Yes	NA	NA



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		Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations					
Comment: Article 34, Environmental Conservation Law, Coastal Erosion Hazard Areas 6 NYCRR Part 505, Coastal Erosion Management Regulations							
Community Wildfire Protection Plan	No	-	Local	-	No	-	-
Comment: Under the federal Farm Bill, every 10 years each state must submit a State Forest Action Plan to the U.S. Forest Service. The Plan must be approved by the State Forester, who in New York is the director of DEC's Division of Lands and Forests. The next update of the Plan must be submitted to the Forest Service by June 2020.							
Forest Management Plan	No	-	Local	-	No	-	-
Comment:							
Transportation Plan	No	-	Local	-	No	-	-
Comment:							
Agriculture Plan	No	NYCRR Part 390 Agricultural and Farmland Protection -	Local	n/a	Yes	-	-
Comment: Municipalities may develop agricultural and farmland protection plans, in cooperation with cooperative extension and other organizations, including local farmers.							
Other (tourism, business dev, etc.)	-	-	-	-	-	-	-
Comment: <ul style="list-style-type: none"> Wetland/watercourse permit requirements contained within Ch. 154, Zoning. Regulated area includes a 100' buffer. Planning Board/Environmental Conservation Inspector, Local 							
Response/Recovery Planning							
Comprehensive Emergency Management Plan	Yes	Emergency Action Plan last revised 8/24/16 Putnam Lake EAP last revised (Pending)	Local	Town Board	Yes	-	-
Comment: The development of the New York State Comprehensive Emergency Management Plan (CEMP) is required under NYS Executive Law, Article 2B. The plan is developed and maintained by the New York State Office of Emergency Management and agencies that comprise the NYS Disaster Preparedness Commission (DPC).							
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	Local	Local OEM	Yes	-	-
Comment: THIRA is an annual requirement that all states must complete to remain eligible to receive federal homeland security grant funding. It also involves a hazard and capability assessment but DHSES has several methodological concerns with the THIRA process and has developed CEPA to serve as the State's system to capture and analyze hazard/capability information. However, CEPA has been engineered to support the completion of the THIRA.							
Post-Disaster Recovery Plan	No	-	Local	-	No	-	-
Comment:							
Continuity of Operations Plan	No	-	Local	-	No	-	-
Comment: According to the FEMA, "State and local governments should consider developing or updating contingency plans for the continuity of operations (COOP) of vital government functions. Jurisdictions must be prepared to continue their minimum essential functions throughout the spectrum of possible threats from natural disasters through acts of terrorism. COOP planning facilitates the performance of State and local government and services during an emergency that may disrupt normal operations.							
Public Health Plan	No	-	Local	-	?	-	-



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Comment:							
Other: Emergency Response Plan	No	-	Local		No	-	-
Comment: Nothing is mandated by law in NYS, however, article 2B of the Executive Law provides for authority to draft emergency plans by various levels of government in NYS.							
Other: Special Purpose Ordinances (such as critical or sensitive areas) Wetlands greater than ½ acre, watercourses, lakes and ponds are protected under the Zoning Code Section 154-18							
Comment:							

Table 9.7-4. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	Yes- Building Department, Planning Department
Permits are tracked by hazard area. For example, floodplain development permits.	-
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	In 2001, while developing the “Croton Plan” a buildout analysis of the Town of Patterson was completed for the former zoning and proposed zoning.

Administrative and Technical Capability

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

Table 9.7-5. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	Yes	The Planning Board is responsible for controlling and guiding development in the Town, with concerns for the impact on: town economy, town services, especially emergency services, water quality, New York City watershed, traffic, air, noise, and light pollution, quality of life in the community
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Warning Systems / Services (mass notification system, outdoor warning signals)	No	-
Maintenance programs to reduce risk	No	-
Mutual aid agreements	Yes	TOPEMS/PFD/PLFD
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning Department



Resources	Available? (Yes or No)	Department/ Agency/Position
Engineers or professionals trained in building or infrastructure construction practices	Yes	Consulting Engineer
Planners or engineers with an understanding of natural hazards	Yes	Planning Department
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Planning Department
Scientist familiar with natural hazards	No	-
NFIP Floodplain Administrator (FPA)	Yes	Planning Department
Surveyor(s)	No	-
Emergency Manager	No	-
Grant writer(s)	Yes	Planning Department
Resilience Officer	No	-
Other	No	-

Fiscal Capability

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

Table 9.7-6. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	No
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	Yes (Recreation)
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
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

Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Town of Patterson.

Table 9.7-7. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	No
Personnel skilled or trained in website development?	Yes
Hazard mitigation information available on your website; if yes, describe	No
Social media for hazard mitigation education and outreach; if yes, briefly describe.	No



Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	Yes. Planning Board evaluates risks/impacts during review of projects.
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	No
Warning systems for hazard events; if yes, briefly describe.	No
Natural disaster/safety programs in place for schools; if yes, briefly describe.	No
Other	No

Community Classifications

The table below summarizes classifications for community programs available to the Town of Patterson.

Table 9.7-8. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	TBD	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	8	Pending
NYSDEC Climate Smart Community	No	-	-
Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other	No	-	-

Note:

- N/A Not applicable
- NP Not participating
- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

Table 9.7-9. Adaptive Capacity of Climate Change

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Drought	Medium
Disease Outbreak	High
Earthquake	Medium
Extreme Temp	Medium
Flood	Low
Harmful Algal Bloom	High
Severe Storm	Medium
Severe Winter Storm	Medium
Terrorism	High



Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low*
Wildfire	High

*High Capacity exists and is in use
 Medium Capacity may exist; but is not used or could use some improvement
 Low Capacity does not exist or could use substantial improvement
 Unsure Not enough information is known to assign a rating

National Flood Insurance Program

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

NFIP Floodplain Administrator (FPA)

Richard Williams, Sr. – Town Supervisor

National Flood Insurance Program (NFIP) Summary

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

Table 9.7-10. NFIP Summary

Municipality	# Policies	# Claims (Losses)	Total Loss Payments	# RL Properties
Patterson (T)	20	11	\$20,454	0

Source: FEMA 2020

Notes: Policies, claims, and repetitive loss statistics provided by FEMA Region 2, and current as of July 28, 2020. The total number of repetitive loss properties does not include severe repetitive loss properties

RL Repetitive Loss

Resources

The NFIP Floodplain Administrator has primary responsibility in this role. Utilizing both the Town Engineer and the Environmental Conservation Inspector to assist is possible if necessary. Any development in a floodplain or deviation from the standards requires approval from the Patterson Zoning Board of Appeals. Duties and responsibilities of the NFIP Administrator are permit review, record keeping, inspections, and GIS.

Compliance History

The community is currently in good standing in the NFIP and has no outstanding compliance issues. According to FEMA, the most recent CAV was conducted on October 23, 2003.

An assessment of post-Hurricane Sandy damage revealed there were no structures damaged. The NFIP Floodplain Administrator does not make Substantial Damage estimates. There are no property owners interested in mitigation.

Regulatory

The communities Flood Damage Prevention Ordinance (FDPO) was last updated on February 13, 2013, and is found at Chapter 91 of the local code.

Floodplain management regulations and ordinances meet the minimum requirements set forth by both FEMA and New York State. There are other ordinances within the Town supporting the implementation of the Flood Damage Prevention Ordinance.



The community FDPO identifies the Town Planner as the local NFIP Floodplain Administrator, currently Richard Williams Sr., for which floodplain administration is an auxiliary duty.

An assessment of post-Hurricane Sandy damage revealed there were no structures damaged. The NFIP Floodplain Administrator does not make Substantial Damage estimates. There are no property owners interested in mitigation. The Town does not maintain a record of properties that have been flood damaged or the interest of property owners in completing mitigation projects.

Richard Williams Sr. feels he is adequately supported and trained to fulfill his responsibilities as the municipal floodplain administrator. Richard Williams Sr. is not certified in floodplain management, however, attends regular continuing education programs for code enforcement and other matters pertinent to his role.

The Town of Patterson does not currently have a formal education and outreach program in place for floodplain management. Duties and responsibilities of the NFIP Administrator are permit review, record keeping, inspections, and GIS.

Richard Williams Sr. did not identify any barriers to running an effective floodplain management program in the Town of Patterson. Pursuing additional training and education on matters regarding floodplain management and the Community Rating System (CRS) would be of interest to Richard Williams Sr. Though the Town of Patterson does not currently participate in the CRS program, after receiving information on the program the Town would consider joining.

Additional Areas of Existing Integration

Floodplain Management: The Town's NFIP FPA intends to work with the Town to receive additional floodplain management training and would attend a CRS workshop if offered locally. The Town Board oversees the Stormwater, Soil Erosion, and Sediment Control plan, which has been integrated to the Town Stormwater Pollution Prevention Plan (SPPP).

Building Local Mitigation Capabilities: The Town has included an initiative within the proposed mitigation strategy to support and participate in county-led initiatives intended to build local and regional mitigation and risk-reduction capabilities.

Capital Improvements: As evidenced by the various capital improvement projects identified on the following page, the Town considers natural hazard mitigation whenever performing repairs and upgrades to local infrastructure. The Town will continue to consider and include selected projects that include mitigation benefits into their capital improvements planning process.

Land Use Planning: The Town Subdivision of Land regulations follow guidance from the Official Town Map, Comprehensive Plan, and Zoning regulations, and is overseen by the Planning Board. Additional subdivision provisions are found in Article 16, §276 of the Town Law and §10 of Municipal Home Rule Law.

Firefighting: The Town is installing of dry hydrants into lakes and streams and underground storage tanks.

Evacuation, Sheltering, Temporary Housing, and Permanent Housing

Evacuation routes, sheltering measures, temporary housing, and permanent housing must all 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.



Evacuation Routes

NYS Route 22 traverses the Town in a north-south direction. NYS Route 311 traverses the Town from the northeast to the southwest, and connects with a major interstate highway (Interstate 84), which bisects the southwest corner of the Town. Evacuation routes and detours are based on the location of the event, the type of event.

Sheltering

The Town of Patterson does not currently have an agreement in place with neighboring municipalities or outside agencies for sheltering, or to manage sheltering. The Town of Patterson owns a 22,400 s.f. facility with kitchen facilities, men’s and women’s locker rooms, showers and bathrooms, and full backup generator that would be used for sheltering during and event.

Temporary Housing

There are no identified temporary housing locations in Patterson.

Permanent Housing

There are no identified permanent housing locations in Patterson.

9.7.5 Hazard Event History Specific to the Town of Patterson

Putnam County has a history of natural hazard events as detailed in Volume I, Section 5 (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. The Town of Patterson history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Putnam County. Table 9.7-11 provides details regarding municipal-specific loss and damages the Town 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 9.7-11. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
March 2, 2018	Nor’easter	No	Winter Storm “Riley” resulted in utility damage and closed roads	--
March 7, 2018	Nor’easter	No	Winter Storm “Quinn” resulted in utility damage and closed roads	--
May 15, 2018	Tornado/Severe Storm	No	Severe downdraft	Significant tree damage along Town Roads; 213 NYSEG Utility poles were broken and required full replacement

Notes:

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

9.7.6 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 Town of Patterson’s risk assessment results and data used to determine the hazard ranking.

Critical Facilities

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 states 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 2’ 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 (NYS DHSES 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 9.7-12. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
ROUTE 311 BRIDGE	Highway Bridge	X	X	006
PUTNAM LAKE DAM	Dam	X	X	006
NYS ROUTE 164	Rail Bridge	X	X	006
ROUTE 22 BRIDGE	Highway Bridge	X	X	006
BRIDGE	Highway Bridge	X	X	006
FRONT STREET PUMP STATION	Wastewater	X	X	006

Hazard Ranking

This section provides 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 (Risk Assessment) 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 jurisdiction may have differing degrees of risk exposure and vulnerability compared to Putnam 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 Patterson. The Town of Patterson 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 Town of Patterson did not modify its hazard ranking.



Table 9.7-13. Hazard Ranking Input

Disease Outbreak	Drought	Earthquake	Extreme Temperature	Flood
Medium	Medium	Low	Medium	Medium
Harmful Algal Bloom	Severe Weather	Severe Winter Weather	Terrorism	Wildfire
Low	High	High	Medium	Medium

Note: The scale is based on the following hazard rankings as established in Section 5.3.

*The municipality changed the initial ranking of this hazard based on event history, municipal experience, and feedback from the municipality

Identified Issues

The municipality has identified the following vulnerabilities within their community:

- Improvements to Putnam Lake Dam – The dam is in need of improvement and rehabilitation to withstand future flooding events (*Action 002*)
- Emergency Bypass Road - NYS Route 311 provides the main route between the fire/ambulance service and western areas of the Town. The route is bisected by the Metro North railroad line. Should an incident occur which obstructs the Route 311 crossing, the alternate route is approximately 8 miles or 18 minutes. (*Action 003*)
- Fire Fighting Water Supply - Deficiency in the quantity of water needed within a reasonable distance that may be used to fight a structure fire, or forest fire.
- Mobile Emergency Supplies Unit - Providing adequate supplies to people in need after a disaster has occurred.
- Emergency Response Training - Lack of trained and experienced individuals responding to a disaster.
- Stagecoach Road/ Birch Hill Road from washouts due to excessive rain. (*Action 006*)
- Lakeshore Drive near Valley Road from washout due to excessive rain. (*Action 006*)
- East Branch Road at Haviland Hollow Road from flooding. (*Action 006*)
- Private property at 325 Route 292 from flooding. (*Action 006*)
- Fairfield Drive damage from flooding to headwall of culvert crossing. (*Action 006*)
- 1112 Route 311 damage from fire due to lightning.
- Haviland Hollow Road from flooding. (*Action 006*)

Specific areas of concern based on resident response to the Putnam County Hazard Mitigation Citizen survey include:

- Delayed power restoration in the area and frequent power outage events owing to trees.
- Confusion about ownership of rights-of-way needs to be addressed vis-à-vis vegetation removal and powerlines. Property owners do not maintain trees on their property and are unaware of their responsibilities.
- The local grocery store was noted as lacking a backup power supply.
- The Great Swamp has caused flooding on nearby roadways.

9.7.7 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 2015 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.

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Table 9.7-14. Status of Previous Mitigation Actions

Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2020 HMP or Discontinue 2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection Damages Avoided; Evidence of Success	
PAT-1	Improvements to Putnam Lake Dam	Flood, Severe Storm, Climate Change	Town of Patterson – Engineering, DPW	Structural improvements to dam to address deficiencies in design and rehabilitation of the dam, increasing the safety of the structure. See Action Worksheet.	In progress	Cost		1. Continue
PAT-2	Emergency Bypass Road	All Hazards	Town of Patterson – Engineering, DPW	Construction of Bypass Road from Route 311 to West Street to the south to provide emergency bypass to NYS Route 311 should Route 311 / MetroNorth railroad crossing become obstructed. See Action Worksheet.	No progress	Cost		1. Continue
PAT-3	Fire Fighting Water Supply	Wildfire	Town of Patterson	Installation of dry hydrants into lakes and streams and underground storage tanks.	Ongoing Capability	Cost		1. Discontinue
PAT-4	Mobile Emergency Supplies Unit	All Hazards requiring emergency medical response	Town OEM Coordinator	Maintain a mobile emergency trailer containing basic supplies needed post-disaster.	Ongoing Capability	Cost		1. Continue
PAT-5	Emergency Response Training	All Hazards	Town OEM Coordinator	The Town will provide training to employees in order that they may better respond to a natural disaster.	Ongoing Capability	Cost		1. Continue, combined with 2020-Patterson-005



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)		Next Steps 1. Project to be included in 2020 HMP or Discontinue 2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
						Cost	Level of Protection	
PAT-6	Support and participate in county led initiatives intended to build local and regional mitigation and risk-reduction	All Hazards	Putnam County, as supported by relevant local department leads,	Support and participate in county led initiatives intended to build local and regional mitigation and risk-reduction capabilities specifically: <ul style="list-style-type: none"> Re-Establish Local Emergency Planning Committees (LEPCs) within the County, with an emphasis on stronger municipal level participation. Workshops and Seminars to build local capabilities in floodplain management and disaster recovery (PCBES-11), potentially to include: <ul style="list-style-type: none"> NFIP Community Rating System (CRS) Benefit-Cost Analysis (BCA) Substantial Damage Estimating (SDE) NFIP Elevation Certificates (EC) Certified Floodplain Manager (CFM) Training and Certification County-Wide Housing Location/Relocation Planning Initiative for Disaster Displaced Residents and Structures 	No progress	Cost		1. Continue
						Level of Protection		
						Damages Avoided; Evidence of Success		
						Level of Protection		
PAT-7	The Town will evaluate the following identified vulnerabilities, and as appropriate, evaluate possible mitigation	All Hazards	Town of Patterson – Engineering, DPW	The Town will evaluate the following identified vulnerabilities, and as appropriate, evaluate possible mitigation solutions and implement appropriate and cost-effective projects as funding is secured or appropriated: <ul style="list-style-type: none"> Stagecoach Road/ Birch Hill Road from washouts due to excessive rain. 	No progress	Cost		1. Continue
						Level of Protection		
						Damages Avoided; Evidence of Success		
						Level of Protection		



Project #	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Status (In Progress, Ongoing, No Progress, Complete)	Evaluation of Success (if complete)	Next Steps 1. Project to be included in 2020 HMP or Discontinue 2. If including action in the 2020 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
	solutions and implement appropriate and cost-effective projects as funding is secured or appropriated:			<ul style="list-style-type: none"> Lakeshore Drive near Valley Road from washout due to excessive rain. East Branch Road at Haviland Hollow Road from flooding. Private property at 325 Route 292 from flooding. Fairfield Drive damage from flooding to headwall of culvert crossing. 1112 Route 311 damage from fire due to lightning. Haviland Hollow Road from flooding. 		Damages Avoided; Evidence of Success	

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Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Town of Patterson has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2014 Plan:

- Initiated 24-7 Town-owned and operated BLS ambulance service to address shortage of EMT's serving volunteer Fire Departments.

Proposed Hazard Mitigation Initiatives for the Plan Update

The Town of Paterson participated in a mitigation action workshop in August 2020 and was provided the following publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: Putnam County Mitigation Catalogue and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

Table 9.7-15 summarizes the comprehensive-range of specific mitigation initiatives the Town of Patterson 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 9.7-16 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.7-15. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2020-Patterson-001	Continuity of Operations	G-4 G-5	Severe Storm, Severe Winter Storm, Disease Outbreak	<p>Problem: Natural and man-made events can cause an interruption or loss of municipal services provided by Town Hall and Justice Court employees by forcing the closure of municipal facilities</p> <p>Solution: Provide municipal office employees from Town Hall and Justice Court the ability to work remotely.</p>	Yes	No	6 Months	Town of Patterson	\$55,000	Residents would continue to have access to municipal services; continuity of operations	Municipal budget; CDBG	High	LPR	ES
2020-Patterson-002 (Former PAT-1)	Improvements to Putnam Lake Dam	G-1, G-3, G-5	Flood, Severe Storm	<p>Problem: Putnam Lake is a 225 acre man-made lake impounded by an earthen dam constructed in the 1930's. Water leaves the lake by a sluiceway valve and a concrete/ stone spillway. Very little maintenance has been performed to the sluiceway valve, and the dam has other design deficiencies. The spillway for the dam does not pass the ½ probable maximum flood event. This condition may result in overtopping of the dam by 1 to 1.5 feet and breach of the dam. Downstream vulnerabilities include several residences and a special needs school.</p> <p>Solution: Structural improvements to dam to address deficiencies in design and rehabilitation of the dam, increasing the safety of the structure. Specifically, rehabilitation activities would include armoring the face of the dam with rip rap to arrest wave erosion; providing for an emergency spillway; and upgrading to the sluiceway valve.</p>	Yes	Yes	Short	Town of Patterson – Engineering, DPW; WestCOG	High (~\$180,000)	Prevention of dam breach resulting from large storm event and compounded by deficiency in dam design. Avoided losses include the breach of a downstream dam, several residential homes and a special needs school.	HMGP; local budget for Match.	High	SIP	SP



Table 9.7-15. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
2020-Patterson-003 (Former PAT-2)	Emergency Bypass Road	G-1, G-5	All Hazards	<p>Problem: NYS Route 311 provides the main route between the fire /ambulance service and western areas of the Town. The route is bisected by the Metro North railroad line. Should an incident occur which obstructs the Route 311 crossing, the alternate route is approximately 8 miles or 18 minutes.</p> <p>Solution: Construction of Bypass Road from Route 311 to West Street to the south.</p>	No	Yes	Short	Town of Patterson – Engineering, DPW	Medium	Minimizes or prevents damage to structures and loss of life by increase the ability of emergency services to respond more quickly.	Potential Funding Sources Grants with local match	Medium	SIP	ES
2020-Patterson-004 (Former PAT-3)	Fire Fighting Water Supply	G-1, G-3, G-5	Wildfire	<p>Problem: In some cases there is a deficiency in the quantity of water needed within a reasonable distance that may be used to fight a structure fire, or forest fire.</p> <p>Solution: Installation of dry hydrants into lakes and streams and underground storage tanks.</p>	No	Yes	Short	Town of Patterson	High	Improved response time. Reduces the damage caused to structures and natural areas by minimizing the duration and extent of a fire.	AFG, HMGP	Medium	SIP	ES
2020-Patterson-005 (Former PAT-6)	Patterson Risk Reduction Initiative	G-2, G-4	All Hazards	<p>Problem: The Town has identified a need to enhance training for officials and build capacity for emergency response and risk reduction capabilities.</p> <p>Solution: Support and participate in county led initiatives intended to build local and regional mitigation and risk-reduction capabilities (see Section 9.1), specifically:</p> <ul style="list-style-type: none"> • Re-Establish Local Emergency Planning Committees (LEPCs) within the County, with an emphasis on stronger municipal level participation. (PCBES-1). • Workshops and Seminars to build local capabilities in 	No	No	Short	Putnam County, as supported by relevant local department leads	Low-Medium (locally)	High (comprehensive improvements mitigation and risk-reduction capabilities)	HMGP; County funds; existing resources	Medium	EAP	PI





Table 9.7-15. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<p>floodplain management and disaster recovery (PCBES-11), potentially to include:</p> <ul style="list-style-type: none"> - NFIP Community Rating System (CRS) - Benefit-Cost Analysis (BCA) - Substantial Damage Estimating (SDE) - NFIP Elevation Certificates (EC) - Certified Floodplain Manager (CFM) Training and Certification • County-Wide Housing Location/Relocation Planning Initiative for Disaster Displaced Residents and Structures (2020-Putnam County-010) 										
2020-Patterson-006 (Former PAT-7)	Patterson Localized Vulnerability	G-1, G-3, G-4, G-5	All Hazards	<p>Problem: There are acute areas of vulnerability in Patterson that include both areas of flood damage to individual properties as well as locations of critical facilities located in the Special Flood Hazard Area.</p> <p>Solution: The Town will contact property owners, evaluate the following identified vulnerabilities, and as appropriate, evaluate possible mitigation solutions and implement appropriate and cost-effective projects as funding is secured or appropriated:</p> <ul style="list-style-type: none"> • Stagecoach Road/ Birch Hill Road from washouts due to excessive rain. • Lakeshore Drive near Valley Road from washout due to excessive rain. 	No	No	Evaluation – Short Term; Studies – Short to long term; Project Implementation – Long Term	Town of Patterson – Engineering, DPW	Low- Outreach Medium – High – Evaluation/studies of vulnerabilities to identify appropriate mitigation actions; High – project implementation	High – Reduced vulnerability of infrastructure to natural hazard damage; potential life safety	FMA; HMGP; Individual contributions	Medium	EAP	PI



Table 9.7-15. Proposed Hazard Mitigation Initiatives

Project Number	Project Name	Goals Met	Hazard(s) to be Mitigated	Description of Problem and Solution	Critical Facility (Yes/No)	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Mitigation Category	CRS Category
				<ul style="list-style-type: none"> • East Branch Road at Haviland Hollow Road from flooding. • Private property at 325 Route 292 from flooding. • Fairfield Drive damage from flooding to headwall of culvert crossing. • 1112 Route 311 damage from fire due to lightning. • Haviland Hollow Road from flooding. 										

Notes:

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

Acronyms and Abbreviations:

- CAV Community Assistance Visit
- CRS Community Rating System
- DPW Department of Public Works
- EHP Environmental Planning and Historic Preservation
- 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:

- BRIC Building Resilient Infrastructure and Communities
- FMA Flood Mitigation Assistance Grant Program
- HMGF Hazard 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.

Critical Facility:

Yes Critical Facility located in 1% floodplain

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*

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Table 9.7-16. 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
2020-Patterson-001	Continuity of Operations	1	1	1	1	1	1	-1	0	0	1	1	1	1	1	10	High
2020-Patterson-002	Improvements to Putnam Lake Dam	1	1	1	1	1	1	-1	1	0	0	1	1	1	1	10	High
2020-Patterson-003	Emergency Bypass Road	1	0	1	1	0	0	-1	0	1	1	1	0	1	1	7	Medium
2020-Patterson-004	Fire Fighting Water Supply	1	1	1	1	0	0	-1	-1	1	1	1	1	1	1	8	Medium
2020-Patterson-005	Patterson Risk Reduction Initiative	1	1	1	1	0	0	-1	0	1	1	1	0	1	1	8	Medium
2020-Patterson-006	Patterson Localized Vulnerability	1	1	1	1	0	0	-1	0	1	1	1	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).





9.7.8 Proposed Mitigation Action Types

The table below indicates the range of proposed mitigation action categories.

Table 9.7-17. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Drought		003		005 006			005 006			003
Disease Outbreak	001	003		005 006			005 006			001 003
Earthquake		003		005 006			005 006			003
Extreme Temp		003		005 006			005 006			003
Flood	002	003		005 006			005 006		002	003
Harmful Algal Bloom		003		005 006			005 006			003
Severe Storm	001	002 003		005 006			005 006		002	001 003
Severe Winter Storm	001	003		005 006			005 006			001 003
Terrorism		003		005 006			005 006			003
Wildfire		003 004		005 006			005 006			003 004

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

9.7.9 Staff and Local Stakeholder Involvement in Annex Development

The Town of Patterson 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 Richard Williams, Town Supervisor and Peter Dandreano, Town Councilman. Richard Williams, Sr. represented the community on the Putnam County Hazard Mitigation Plan Planning Partnership, Steering Committee, 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.

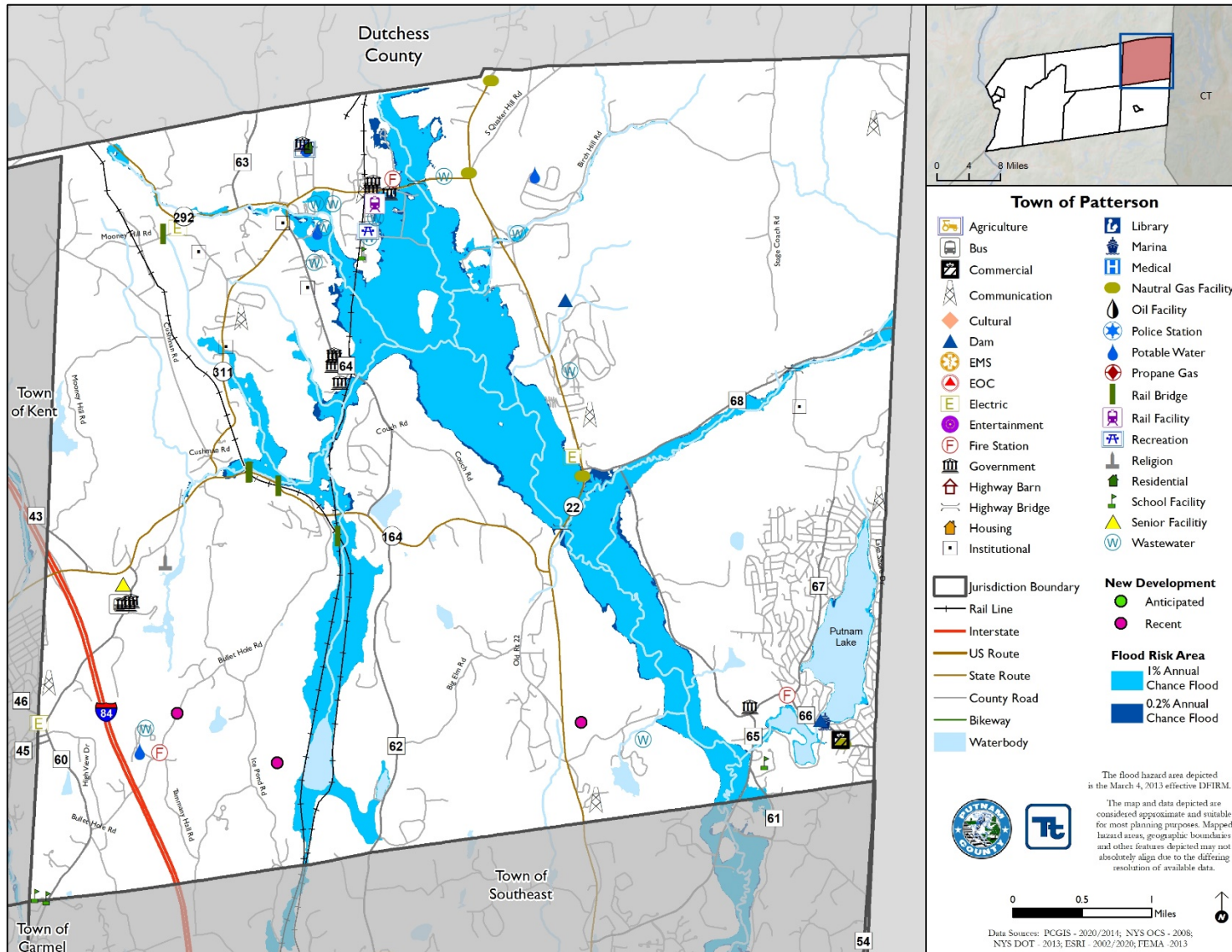
Additional documentation on the municipality’s planning process through Planning Partnership meetings is included in Section 3 (Planning Process) and Appendix C (Meetings).

9.7.10 Hazard Area Extent and Location

A hazard area extent and location map has been generated for the Town of Patterson that illustrates the probable areas impacted within the municipality. This map is based on the best available data at the time of the preparation of this plan, and is considered to be adequate for planning purposes. The map has only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Town of Patterson has significant exposure. The map is illustrated below.



Figure 9.7-1. Town of Patterson Hazard Area Extent and Location Map





Action Worksheet			
Project Name:	Continuity of Operations		
Project Number:	2020-Patterson-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Storm, Severe Winter Storm, Disease Outbreak		
Description of the Problem:	Natural and man-made events can cause an interruption or loss of municipal services provided by Town Hall and Justice Court employees by forcing the closure of municipal facilities		
Action or Project Intended for Implementation			
Description of the Solution:	Provide municipal office employees from Town Hall and Justice Court the ability to work remotely.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
(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:	Project would provide for the continuation of services	Estimated Benefits (losses avoided):	Residents would continue to have access to municipal services
Useful Life:	15 years	Goals Met:	4, 5
Estimated Cost:	\$55,000	Mitigation Action Type:	Local Plans and Regulations
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Immediate
Estimated Time Required for Project Implementation:	6 Months	Potential Funding Sources:	Municipal budget; grants
Responsible Organization:	Town of Patterson	Local Planning Mechanisms to be Used in Implementation if any:	None
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues;
	Standby generator	Medium	Does not mitigate disease outbreak hazard
	Remote Working	\$55,000	Allows continuation of operations regardless of hazard
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Continuity of Operations	
Project Number:	2020-Patterson-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Action will allow continuity of service so Town can continue to meet the needs of our residents during, and after an event.
Property Protection	1	Action will allow continuity of service so Town can continue to meet the needs of our residents during, and after an event.
Cost-Effectiveness	1	
Technical	1	The action involves the purchase of electronic hardware to allow for municipal operations to continue remotely.
Political	1	
Legal	1	
Fiscal	-1	Funding the project in the Town's budget is not feasible with the current 2% Tax Cap.
Environmental	0	There are no environmental impacts
Social	0	The project is socially neutral
Administrative	1	
Multi-Hazard	1	The action will minimize the impact of a disease outbreak, severe storm or severe winter storm
Timeline	1	Implementation would take approximately 6 months
Agency Champion	1	
Other Community Objectives	1	The action improves resiliency in municipal operations.
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Putnam Lake Dam		
Project Number:	2020-Patterson-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood; Extreme Storms		
Description of the Problem:	Putnam Lake is a 225 acre man-made lake impounded by an earthen dam constructed in the 1930's. Water leaves the lake by a sluiceway valve and a concrete/ stone spillway. Very little maintenance has been performed to the sluice gate valve, and the dam has other design deficiencies. The spillway for the dam does not pass the ½ probable maximum flood event. This condition may result in overtopping of the dam by 1 to 1.5 feet and breach of the dam. Downstream vulnerabilities include several residences and a special needs school.		
Action or Project Intended for Implementation			
Description of the Solution:	Structural improvements to dam to address deficiencies in design and rehabilitation of the dam, increasing the safety of the structure. Specifically, rehabilitation activities would include armoring the face of the dam with rip rap to arrest wave erosion; providing for an emergency spillway; and upgrading to the sluice gate valve.		
Is this project related to a Critical Facility?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Is the critical facility located in the 1% annual chance flood area?		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
(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:	Provide spillway capacity to pass the ½ Probable Maximum Flood Event	Estimated Benefits (losses avoided):	Prevent downstream flooding from dam breach
Useful Life:	30+ years	Goals Met:	1
Estimated Cost:	\$350,000	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Immediate
Estimated Time Required for Project Implementation:	2 Years	Potential Funding Sources:	Municipal budget; NYSDEC Grants
Responsible Organization:	Town of Patterson; WestCOG	Local Planning Mechanisms to be Used in Implementation if any:	None
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues;
	Drain the Lake	\$0	Loss of recreational value of lake
	Dam improvements	\$350,000	Continued lake functionality
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Putnam Lake Dam	
Project Number:	2020-Patterson-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	A dam breach during an extreme storm event would place lives at risk.
Property Protection	1	A dam breach during an extreme storm event would place property at risk
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	-1	Funding to implement this project is not available
Environmental	1	
Social	0	
Administrative	0	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	