



9.1 Putnam County

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

9.1.1 Hazard Mitigation Planning Team

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

Table 9.1-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Robert Lipton; Deputy Commissioner, Bureau of Emergency Services 112 Old Route 6, Carmel, NY 845-808-4000 robert.lipton@putnamcountyny.gov	Name/Title: Ken Clair, Commissioner, Bureau of Emergency Services Address: 112 Old Route 6, Carmel, NY Phone Number: 845-808-4000 Email: ken.clair@putnamcountyny.gov

9.1.2 County Profile

Please refer to Section 4 of this Plan for details on Putnam County’s population, location, climate, history, growth and development.

9.1.3 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. The jurisdictional annexes for each municipality summarize recent and expected future development trends, including major residential/commercial development and major infrastructure development. The Putnam County Department of Planning, Development, and Public Transportation is responsible for reviewing subdivisions of land and site plans, advising freeholders on planning matters, and providing information for individual citizens, industries, public service groups, and government officials.

9.1.4 Capability Assessment

Putnam County 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 County’s understanding of local capacity for adapting to current and future risks and changing conditions.

Areas that mitigation is currently integrated are summarized in this Capability Assessment. Putnam County identified specific integration activities that will be incorporated into procedures are included in the updated mitigation strategy.

Planning, Legal, and Regulatory Capability

The table below summarizes the regulatory tools that are available to Putnam County and where hazard mitigation has been integrated.

Table 9.1-2. Planning, Legal, and Regulatory Capability

	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated? If no - can it be a mitigation action? If yes, add Mitigation Action #. (Tetra Tech to complete)	
Codes, Ordinances, & Requirements							
Building Code	No	Regulated at local and state levels.	State, Local	-	Yes	No	-
<i>Comment: NYS Uniform and Energy Code 2020; Regulated at local and state levels.</i>							
Zoning Code	No	Individual municipal codes	Local	-	No	No	-
<i>Comment: In Putnam County, zoning codes are regulated at the local level. In New York State, the zoning enabling acts continue to require that zoning be undertaken “in accord with a well-considered plan” or “in accordance with a comprehensive plan.” Unless the town, city or village has adopted a comprehensive plan document using the more recently-enacted statutes, local officials must refer to the extensive body of case law to determine how zoning can meet the more general “comprehensive plan” requirement. **May be impacted by State wetland regulations which protect wetlands greater than 12.4 acres and established buffer zones.</i>							
Subdivisions	No	Individual municipal codes	Local	-	No	No	-
<i>Comment: Subdivision is defined in the State enabling Statutes as: the division of any parcel of land into a number of lots, blocks, or sites as specified i a local ordinance, law or regulation, with or without streets or highways, for the purpose of sale, transfer of ownership, or development. There is not a requirement by NYS for subdivisions. Each municipality is permitted to further define subdivision for its own purposes in connection with its subdivision review procedure. The enabling statutes provide that a plat showing a division of land which is subject to a municipality's subdivision regulations, may not also be subject to review under its site plan review authority. (general city law s. 32 & 33, Town Law s. 276 & 277, Village Law s. 7-728 & 7-730).</i>							
Stormwater Management	Yes	Stormwater Management and Land Use Regulation, December 2017	County	Department of Planning	No	No	-
<i>Comment: The County annually undertakes education, outreach, and documentation in support of the MS4 program.</i>							
Post-Disaster Recovery	Yes	CEMP Appendix	County	PCBES	No	No	-
<i>Comment: The County has procedures related to post-disaster operations in its CEMP.</i>							
Real Estate Disclosure	No	Property Condition Disclosure Act, NY Code - Article 14 §460-467	State	NYS Department of State, Real Estate Agent	Yes	No	-
<i>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 Act 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.</i>							



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated? If no - can it be a mitigation action? If yes, add Mitigation Action #. (Tetra Tech to complete)	
Growth Management	No	-	Local	Local Planning Board	No	No	-
Comment: Growth management and land use planning in Putnam County is performed at the local level. In New York State, virtually all land use regulation, which is the primary tool for Smart Growth, takes place at the municipal level (i.e., in a city, village or town government).							
Site Plan Review	Yes	New York General Municipal Law GMU NY GEN MUN Section 239-l.	County	Planning	Yes	No	-
Comment: The County Planning Department reviews and provides comments on certain types of developments, including those impacting County facilities. Per Section 239, zoning ordinances, special use permits, site plans, area variances, and comprehensive plan adoptions are subject to County referral if they impact property within 500 feet of a municipal boundary, the boundary of an existing or proposed state park, the right-of-way of county or state roadways, the right-of-way of a stream or drainage channel owned by the County, the proposed boundary of any county or state owned land on which a public building is situated, or the boundary of a farm operation located in an agricultural district.							
Environmental Protection	Yes	Title 6 NYCRR Part 617	State	Planning	Yes	No	-
Comment: New State Environmental Quality Review Act (SEQR) Title 6 NYCRR Part 617 Regulations are in effect as of January 1st, 2019. The Soil and Water Conservation District undertakes various natural resource protection programs, including stormwater management, agricultural policy, and environmental demonstration projects.							
Flood Damage Prevention	No	N/A	Federal, State, Local	Local jurisdictions; FEMA	Yes - BFE+2 feet for all construction in the SFHA (residential and non-residential)	No	-
Comment: Adopted and enforced by local jurisdiction with some review from FEMA							
Municipal Separate Storm Sewer System (MS4)	Yes	EPA Phase II Stormwater Rule	Federal; State; County	Highways	State, County	No	-
Comment: The County annually undertakes education, outreach, and documentation in support of the MS4 program.							
Emergency Management	Yes	Chapter 52, Emergency Services	County	PCBES	No	Yes	006, 010
Comment: Chapter 52 of the County's Code establishes the Bureau of Emergency Services and enables the Commissioner of the Bureau to undertake various duties.							
Climate Change	Yes	Mid-Hudson Regional Sustainability Plan, Final - May 2013.	County	Soil and Water	No	Yes	-
Comment: <ul style="list-style-type: none"> The Mid-Hudson Regional Sustainability Plan sets out a vision for sustainable development that builds on the Region's unique social, cultural, and natural history, with the goal of promoting economic development, environmental sustainability, and enhancing quality of life for the more than two million residents that call the Region home. Recent experience with Hurricanes Irene and Sandy underscore the tremendous economic, environmental, and social impacts that can be caused by severe weather events, which are predicted to increase in frequency and severity as a result of climate change. Secondary impacts include flooding, drought, and heat waves. In 2008, the Region's clean water and sewer infrastructure investment needs were estimated to be approximately \$2.75 billion, with Westchester, Rockland and Putnam's request totaling about \$1.4 billion alone. The Croton system, in Westchester and Putnam Counties, now requires potable water filtration per the US EPA and NYSDOH. Watershed management plans and smart growth strategies can help to protect watersheds and mitigate impacts such as flooding. Projects are needed to identify and reduce risks faced by water infrastructure so as to better prepare the Region for the effects of climate change. Planning for today's 100-year flood is no longer adequate. 							



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated? If no - can it be a mitigation action? If yes, add Mitigation Action #. (Tetra Tech to complete)	
Disaster Recovery Ordinance	No	-	-	-	-	-	-
Comment:							
Disaster Reconstruction Ordinance	No	-	-	-	-	-	-
Comment:							
Other	No	-	-	-	-	-	-
Comment:							
Planning Documents							
Comprehensive Plan	No	Vision 2010	County	County Planning	No	No	-
Comment:							
<ul style="list-style-type: none"> While not a true Comprehensive Plan, the Vision 2010 Plan provides a foundation for a continuing dialogue among community leaders and local residents as to the direction Putnam County should travel on its path towards 2010. The Principles guiding Vision 2010 are Balance, Respect and Partnership. Recommendations of the Plan include; Cultivating expanded partnerships among the County, New York City Department of Environmental Protection, municipalities, and State and federal agencies to maximize financial and technical assistance for protecting water quality and quantity; Completing and implementing the Groundwater Protection and Utilization Plan; Facilitating the requirements of the United States Environmental Protection Agency and the New York State Department of Environmental Conservation's Phase II Stormwater Management Program, as required by the Clean Water Act; Supporting Putnam's agricultural economy by providing enhanced technical assistance in areas of environmental best management practices, farm business management assistance, and improved access to local and regional markets; Creating harmony between the built and non-built environment through innovate land use policies; and Inventorying streams to identify stream channel erosion and begin remediation activities. 							
Capital Improvement Plan	Yes	Ongoing (meet monthly)	County	County Budget Committee— if it takes more than 40 man hours and/or \$5,000	No	No	-
Comment: Any mitigation projects requiring capital expenditures are subject to the CIP process.							
Disaster Debris Management Plan	Yes	N/A	County	PCBES; Highway; Combined task force; Utility Companies; NYSDOT	No	Yes	003
Comment: Document not available for review.							
Floodplain or Watershed Plan	Yes	Flood Preparedness and Response: A Guide for Municipalities, 2014	County	Lower Hudson Coalition of Conservation Districts	No	Yes	-
Comment:							
<ul style="list-style-type: none"> The purpose of this guide is specifically to address the flooding of streams and creeks that affects bridges, roadways and other public infrastructure. Municipalities are encouraged to take proactive steps to understand and reduce flooding risks by planning emergency response procedures and addressing the causes of flooding and flood risk. This plan outlines procedures and chains of command during any disaster, including flooding, to allow effective, efficient response. Municipalities can work with county agencies, local fire departments, school districts and other entities to develop a plan. Each Municipality should prepare an Emergency Action Plan (EAP) The purpose of the EAP is to establish procedures to protect life and property. The EAP should contain at a minimum: Emergency Notification Flowchart; Site Description; Emergency Detection, Evaluation and Classification; and Inundation Maps. Other Flood-Smart Strategies and recommended Actions include: Taking stock of infrastructure; Creating a Multi-Hazard Mitigation Plan; Attend Post-Flood Emergency Stream 							



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<i>Intervention Training; Slow the flow off Land; Reconsider Land Use Within Floodplains; and Regulate Runoff that Could Worsen Flooding.</i>							
Stormwater Plan	Yes	Stormwater Improvement Study Final Report December 2009	County	County MS4 Coordinating Committee	No	No	-
Comment:							
Open Space Plan	No	-	-	-	-	-	-
Comment: Not applicable							
Urban Water Management Plan	No	-	-	-	-	-	-
Comment: Not applicable							
Habitat Conservation Plan	No	-	-	-	-	-	-
Comment: Not applicable							
Economic Development Plan	Yes	Hudson Valley Region Comprehensive Economic Development Strategy 2019-2023	County/Hudson Valley Regional Council	Hudson Valley Regional Council	No	No	-
Comment:							
<ul style="list-style-type: none"> The threats associated with climate change and those accompanying global and technological challenges have the potential to dramatically undermine economic and environmental progress in the Region and beyond. Although the smallest of the region's counties by area, Putnam County continues to position itself to take better advantage of for tourism and other forms of targeted economic development. As noted in annual updates of the previous CEDS, the largest constraint facing the County is that forty percent of its land is owned by the New York City Department of Environmental Protection as part of the New York City water supply system and 96 percent of the County is in the City's watershed. While many municipalities in the County are struggling to find sufficient infrastructure to support development. Nonetheless, the County reports making significant strides in improving its overall economic competitiveness. For the Hudson Valley Region, one of the types of Resiliency considered was Environmental Resilience and the ability to withstand Natural disasters and the effects of Climate change. The Hudson Valley is all too familiar with natural disasters, the region has seen 7 Federal Disaster Declarations since 2010 but it was Superstorm Sandy that got everyone's attention. The Hudson Valley Regional Council is addressing this issue through education and outreach to communities to give them the tools they need to make decisions about addressing vulnerabilities at all levels. 							
Shoreline Management Plan	No	-	-	-	-	-	-
Comment: Not applicable							
Community Wildfire Protection Plan	No	-	-	-	-	-	-
Comment: Not applicable							
Forest Management Plan	No	-	-	-	-	-	-
Comment: Not applicable							
Transportation Plan	No	-	-	-	-	-	-
Comment: Not applicable							
Agriculture Plan	Yes	An Agricultural and Farmland Protection Plan for Putnam	County	?	No	?	?



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		County, August 2004.					
<p>Comment:</p> <ul style="list-style-type: none"> The Plan establishes five major goals, and multiple objectives and strategies to fulfill the vision for agriculture and farmland in Putnam County. Goal 1: Economic Opportunities - Preserve agriculture as an important industry in the county and promote further agricultural economic development. Goal 2: Community Support - Increase community support of agriculture and cultivate an enhanced appreciation of agriculture and the many roles it plays in Putnam County. Goal 3: Supportive Policies and Programs - Promote regional, county, and local policies and programs that encourage and sustain farming. Goal 4: Education - Promote policies and programs that enhance farm viability and profitability. Goal 5: Open Space and Natural Resources - Preserve agriculture as working open space and promote farm practices that protect natural resources. The goals will be accomplished by; aggressively integrating agriculture into existing county economic programs and initiatives; establishing new agricultural promotion efforts aimed at local decision makers, the general public, and area businesses; strengthening the role of the Putnam County Agriculture and Farmland Protection Board as an advocate for agriculture in the County. 							
Other (this could include a climate action plan, tourism plan, business development plan, etc.)	Yes	Indian Point Emergency Guide, 2011-2012 Edition	County/State	State Officials and other County Executives	No?	No	-
<p>Comment:</p> <ul style="list-style-type: none"> Indian Point Emergency Guide, 2011-2012 Edition. The information in this booklet is for the people in the communities close to Indian Point. Emergency planners want people who live, work or visit Putnam County to have this information because it will help keep them safe in the unlikely event of an emergency at Indian Point. A key component in the ongoing public education campaign is the New York State Office of Emergency Management website for the Joint Information Center developed primarily for Indian Point issues. 							
Response/Recovery Planning							
Comprehensive Emergency Management Plan	Yes	PCBES; Multiple Plans (Haz-Mat, CEMP); January 2020	County and Local	BES	Yes	Yes- integrated with Health Department	006, 010
<p>Comment:</p> <ul style="list-style-type: none"> The Putnam County CEMP was prepared by county officials working cooperatively with state, federal, and private agencies in a planning effort coordinated by NYS DHSES. The plan was designed to reduce or prevent emergency/disaster situations that the county is predisposed to, and enhance the adeptness of response and recovery operations. The Putnam County Bureau of Emergency Services Commissioner or Designee has been designated the County Hazard Mitigation Coordinator. All County agencies will participate in risk reduction activities with the cooperation and coordination of the Putnam County Bureau of Emergency Services Commissioner; the County Hazard Mitigation Coordinator will be consulted as appropriate with relation to hazards involving environmental or naturally occurring risks. 							
Strategic Recovery Planning Report	No	-	-	-	-	-	-
<p>Comment:</p>							
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	CEPA, 2017 Update	State	NYS DHSES	Yes	No	-
<p>Comment:</p> <ul style="list-style-type: none"> The Putnam County Bureau of Emergency Services (BES) manages and coordinates the County's fire, HazMat, EMS, Enhanced 911 system, fire investigations, fire police, trainings, radiological emergency preparedness and fire training center. BES manages a countywide communications systems and is tasked with planning for response, remediation / mitigation and recovery from natural and manmade disasters including those resulting from biological, nuclear, incendiary, chemical and explosive causes. 							
Post-Disaster Recovery Plan	Yes	CEMP Appendix	County	PCBES	No	Yes – part of the County's CEMP	-
<p>Comment: This is part of the County's CEMP</p>							
Continuity of Operations Plan	Yes	Development in progress	County	PCBES	No	Yes	-
<p>Comment: The County is currently developing a Continuity of Operations Plan</p>							



	Do you have this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Department / Agency Responsible	State Mandated	Has this been integrated? If no - can it be a mitigation action? If yes, add Mitigation Action #. (Tetra Tech to complete)	
Public Health Plan	Yes	Multiple Plans; Chapter 10.04 of Putnam County Charter	County	PC Department of Health	Yes	No	-
<i>Comment:</i>							
Other: Hazmat	Yes	PCBES	County	PCBES	YES (LEPC)	No	-
<i>Comment:</i>							

Table 9.1-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Response Yes/No; Provide further detail
Development Permits. If yes, what department?	No
Permits are tracked by hazard area. For example, floodplain development permits.	No
Buildable land inventory If yes, please describe If no, please quantitatively describe the level of buildout in the jurisdiction.	No; the County has assisted in identifying some lands on a piecemeal basis in some municipalities

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Putnam County.

Table 9.1-4. Administrative and Technical Capabilities

Resources	Available? (Yes or No)	Department/ Agency/Position
Administrative Capability		
Planning Board	No	-
Mitigation Planning Committee	Yes	Putnam County HMP Steering Committee
Environmental Board/Commission	Yes	Agricultural Board; Soil & Water Conservation Board with Laurie One legislator is appointed by County and sits on both boards
Open Space Board/Committee	No	
Economic Development Commission/Committee	Yes	Putnam County Economic Development Corporation
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	PCBES – Putnam County Storm Watch, NY-Alert; Code Red; Outdoor warning sirens (Indian Point); Emergency Alert System
Maintenance programs to reduce risk	Yes	County Highway Department
Mutual aid agreements	Yes	PCBES, Local fire and ambulance corps
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	PC Planning
Engineers or professionals trained in building or infrastructure construction practices	Yes	PC Highways
Planners or engineers with an understanding of natural hazards	Yes	PC Planning
Staff with expertise or training in benefit/cost analysis	Yes	PC Planning, BES
Professionals trained in conducting damage assessments	No	-



Resources	Available? (Yes or No)	Department/ Agency/Position
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	PC Highways, PC IT
Scientist familiar with natural hazards	Yes	PCHD, PC Planning, PCBES
NFIP Floodplain Administrator (FPA)	No	Performed at the municipal level
Surveyor(s)	Yes	PC Highways (1)
Emergency Manager	Yes	PCBES
Grant writer(s)	Yes	PC Planning, BES (2)
Resilience Officer	No	-
Other	No	-

Fiscal Capability

The table below summarizes financial resources available to the Putnam County.

Table 9.1-5. Fiscal Capabilities

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

Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Putnam County.

Table 9.1-6. Education and Outreach Capabilities

Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Public information officer or communications office?	Yes, the Bureau has a PIO position
Personnel skilled or trained in website development?	Yes- OTGIS maintains the County Website for all Departments.
Hazard mitigation information available on your website; if yes, describe	Yes- Meetings bulletins, upcoming training courses, and hazard mitigation news (including planning updates) are available on the PCBES website
Social media for hazard mitigation education and outreach; if yes, briefly describe.	PCBES and the County have a Facebook page
Citizen boards or commissions that address issues related to hazard mitigation; if yes, briefly describe.	No
Other programs already in place that could be used to communicate hazard-related information; if yes, briefly describe.	Yes; Fire Prevention programs are frequently held.



Indicate if your jurisdiction has the following resources	Yes/No; Please describe
Warning systems for hazard events; if yes, briefly describe.	Yes; there is a County-wide CODE RED system and portions of the county are covered by the Indian Point warning siren
Natural disaster/safety programs in place for schools; if yes, briefly describe.	Yes; individual districts provide education on fire safety and prevention.
Other	No

Community Classifications

The table below summarizes classifications for community programs available to the Putnam County.

Table 9.1-7. Community Classifications

Program	Participating? (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)	No	-	-
NYSDEC Climate Smart Community	Yes	The County is not certified but has taken the Climate Smart Communities Pledge	June 26, 2019
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 9.1-8. Adaptive Capacity of Climate Change

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





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

National Flood Insurance Program

Management and regulation of the regulatory floodplains are done at the local level. Refer to the individual jurisdictional annexes for details on the NFIP for each municipality.

Additional Areas of Existing Integration

The following describes the areas of integration in Putnam County.

PCBES: County personnel are trained for situations in which the EOC is activated.

Road Operations: The County Department of Highway and Facilities continues to undertake risk reduction projects such as retrofits and hardening of existing structures, including bridges, roads, and abutments.

Local Emergency Management: The Putnam County Bureau of Emergency Services intends to re-establish Local Emergency Planning Committees (LEPCs) within the County, with an emphasis on stronger municipal level participation. The January 2013 NYSDHSES “A Guidance Document for LEPCs” shall be used to support this effort. Further, the County will work with LEPCs to integrate the findings and recommendations of this HMP within the LEPC programs, and conversely to integrate the needs and interests of the LEPCs into annual HMP reviews and 5-year updates, as appropriate.

Floodplain Management: The County will work to promote or facilitate workshops and seminars intended to build local capabilities in floodplain management, natural hazard risk reduction and disaster recovery, specifically in such areas as grant writing and Benefit/Cost Analysis, NFIP floodplain management and Certified Floodplain Manager (CFM) Training and Certification, NFIP Community Rating System (CRS), Substantial Damage Estimating (SDE), and preparing NFIP Elevation Certificates (EC).

Outreach and Education: The Putnam County Bureau of Emergency Services intends to promote, support and leverage the Public Officials Conference (Per NYS Executive Law Article 2B) to include relevant training and education in support of the implementation of this HMP.

Climate Change and Sea Level Rise: While considering, planning, engineering and undertaking projects throughout the County, and particularly along the Hudson River, the County will review and incorporate the latest information on climate change and sea level rise projections. Current sea level rise and coastal flooding adaptation information is available from the following sources:

- NYSERDA’s ClimAid report and 2014 updated sea level rise projections (<http://www.nyserda.ny.gov/Cleantech-and-Innovation/Environment/Environmental-Research-and-Development-Technical-Reports/Response-to-Climate-Change-in-New-York.aspx>)
- Scenic Hudson’s sea level rise mapper (<http://www.scenichudson.org/slr/mapper>)
- FEMA’s Coastal Construction Manual (<https://www.fema.gov/media-library/assets/documents/3293>)
- NYS DEC’s Climate Smart Communities program (<http://www.dec.ny.gov/energy/50845.html>)
- NYS Community Risk and Resiliency Act (adopted Sep 2014) (http://assembly.state.ny.us/leg/?default_fld=&bn=A06558&term=2013&Summary=Y&Actions=Y&Memo=Y&Text=Y)



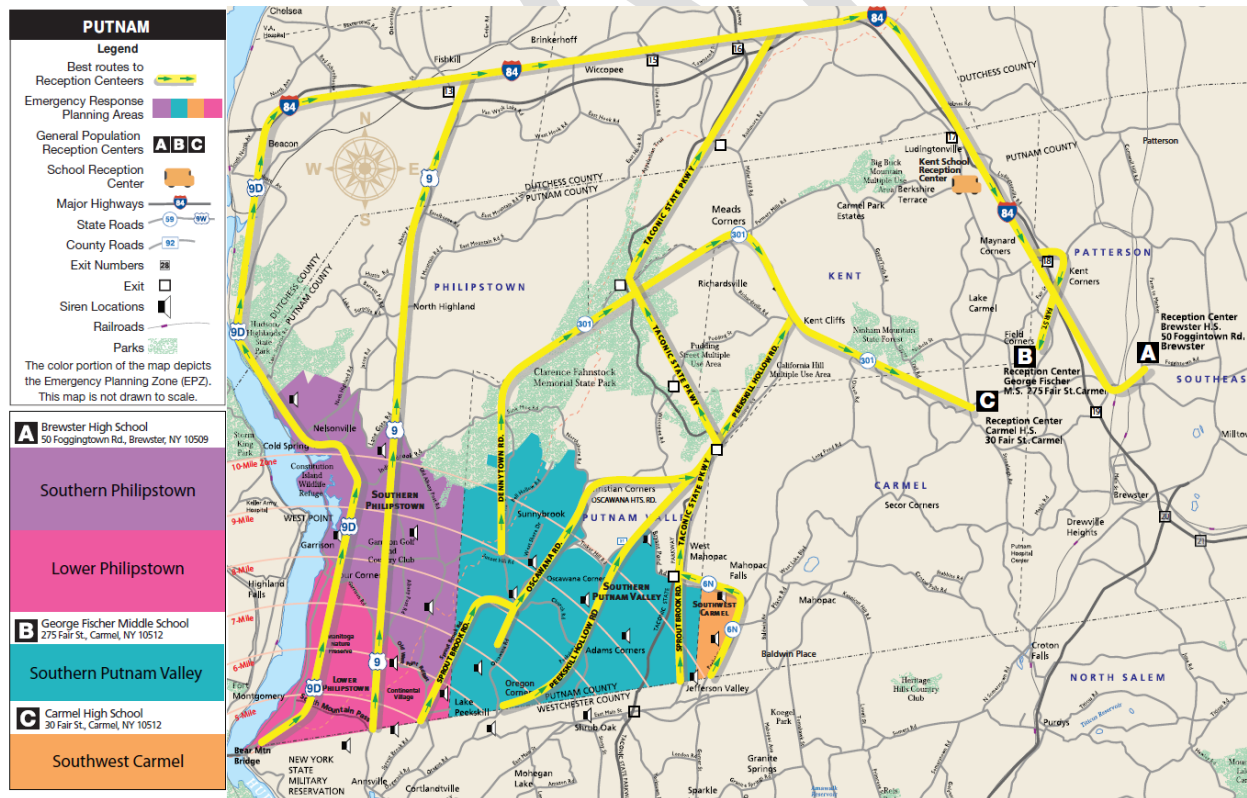
Evacuation, Sheltering, Temporary Housing, and Permanent Housing

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. For an overall description of evacuation routes, shelters, temporary and long-term housing, refer to Section 4 (County Profile) and the jurisdiction annexes (Section 9).

Evacuation Routes

Portions of Putnam County are located within the Indian Point Energy Center Energy Planning Zones. These zones include areas within ten miles of Indian Point, which is a nuclear power station anticipated to be decommissioned in 2021. According to the Putnam County Indian Point Emergency Guide, there are four county-specific response areas that include Lower Philipstown, Southern Philipstown (including Nelsonville and Cold Spring), Southern Putnam Valley, and Southwest Carmel. During an emergency at the plant requiring evacuation, the Emergency Guide directs residents of these areas to evacuate north and east to reception centers located in both Carmel and in Brewster. Major evacuation routes include Route 9D, Route 9, Peekskill Hollow Road, Sprout Book Road, Oscawana Road, Dennytown Road, Route 6N, and the Taconic State Parkway. Routes 9D and 9 and the Taconic State Parkway evacuate to Interstate 84 in Dutchess County, which continues east and south towards reception centers in the eastern portion of Putnam County. The Putnam County Radiological Emergency Response Plan includes Traffic Management Plan and General Population Evacuation appendices. A copy of the evacuation map is found in the following map from the Putnam County Indian Point Emergency Guide.

Figure 9.1-1. Putnam County Indian Point Evacuation.



Putnam County faces challenges in terms of navigation due to the County’s unique topography and settlement patterns. With some exceptions, the County’s major roadways run north-south rather than east-west. Population



centers in western Putnam County (including Philipstown, Cold Spring, and Nelsonville) do not have direct routes traveling eastward into the County excepting Route 301. During an evacuation scenario, western Putnam County residents may face difficulty traveling eastward.

Sheltering

The Putnam County Bureau of Emergency Services maintains a mobile 100-person sheltering trailer that can be deployed county-wide. The trailer is 7' x 16' and is furnished with cots, blankets, and personal hygiene kits. The trailer has not been used for County residents but has been deployed to the Putnam Hospital for emergency staff during the COVID-19 pandemic and for workers who were restoring power following the 2018 tornado.

Temporary Housing

The Putnam County Bureau of Emergency Services does not have designated temporary housing locations. Putnam County municipalities have identified temporary housing locations and are noted in the respective annexes.

Permanent Housing

The County does not have designated long-term housing locations. Putnam County municipalities have identified permanent housing locations and are noted in the respective annexes.

9.1.5 Hazard Event History Specific to the Putnam County

Putnam County has a history of hazard events, as detailed in Volume I, Section 5 (Risk Assessment) of this .

9.1.6 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 County of Putnam'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 9.1-9. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Addressed by Proposed Action
		1% Event	0.2% Event	
Putnam County Personnel/Misc Services	Government	Y	Y	008

Sources: HAZUS, Putnam County GIS 2020

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 Putnam County. Putnam County 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 Steering Committee indicated that the initial risk ranking produced by the Planning Partnership was accurate. However, the initial risk ranking had identified the County and some municipalities with wildfire as a “high” ranked hazard. The lack of large-scale wildfire events, climatic factors, and existing capabilities were recognized as sufficient for ranking wildfire as a “medium” ranked hazard.

Table 9.1-10. Hazard Ranking Input

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

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

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

Identified Issues

The County has identified the following vulnerabilities within their community:

- There are few east-west access routes traversing the County, which may present a vulnerability during storm or evacuation events. Streets such as Peekskill Hollow Road see many accidents.
- The County’s lakes have been increasingly impacted by harmful algal blooms, resulting in lake closures throughout the County.
- The County has limited storage for PPE and emergency supplies. (See 2020-Putnam-005)
- Route 52 between Carmel and Lake Carmel has a power vulnerability that impacts a large area with blackouts if there are small disruptions along the distribution line’s route.
- Putnam County residents experience power outages due to storms at a high frequency.





9.1.7 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 2016 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 9.1-11. 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	
PCBES-1	Re-Establish Local Emergency Planning Committees	All Hazards	PCBES – OEM; working with all municipalities and countywide stakeholders	Re-Establish Local Emergency Planning Committees (LEPCs) within the County, with an emphasis on stronger municipal level participation. The Jan. 2013 NYSDHSES “A Guidance Document for LEPCs” shall be used to support this effort. Further, the County will work with LEPCs to integrate the findings and recommendations of this HMP within the LEPC programs, and conversely to integrate the needs and interests of the LEPCs into annual HMP reviews and 5-year updates, as appropriate.	In progress	Cost		1. Continue
						Level of Protection		
						Damages Avoided; Evidence of Success		
PCBES-2	County Incident Command Systems Training	All Hazards	Putnam County Bureau of Emergency Services, Robert Lipton, Deputy Commissioner - Putnam County Bureau of Emergency Services	County Incident Command Systems Training. Fire/ambulance services undertake their own training but County personnel require training in instances where the EOC is activated.	Ongoing capability	Cost		1. Discontinue – this is an ongoing capability and part of the County’s day-to-day services
						Level of Protection		
						Damages Avoided; Evidence of Success		
PCBES-3	County Electrical Live Line Training Capabilities / Preparedness	Severe Storms, Severe Winter Storms	Putnam County Bureau of Emergency Services, Robert Lipton, Deputy Commissioner of Emergency Services	County Electrical Live Line Training Capabilities / Preparedness	No Progress	Cost		1. Discontinue- no longer a priority
						Level of Protection		
						Damages Avoided; Evidence of Success		



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	
PCBES-4	Enhance Putnam County Fire Training Center Emergency Preparedness Capabilities	Wildfire, Structural Fire	Putnam County Bureau of Emergency Services, Robert Lipton, Deputy Commissioner of Emergency Services	Enhance Putnam County Fire Training Center Emergency Preparedness Capabilities	In Progress	Cost	N/A	1. Continue
PCBES-5	Putnam County Emergency Operations Center (EOC) Incident & Resource Management	All Hazards	Putnam County Bureau of Emergency Services, Robert Lipton, Deputy Commissioner of Emergency Services	Putnam County Emergency Operations Center (EOC) Incident & Resource Management	Complete	Cost	N/A	1. Complete
						Level of Protection	Enhanced capabilities for training/response in EOC auditorium.	
						Damages Avoided; Evidence of Success	Integrated EOC into 9-1-1 dispatch and added traffic cameras	
PCBES-6 (LOI #475)	Putnam County Animal Emergency Response Site	All Hazards requiring sheltering	Putnam County, Robert Lipton, Deputy Commissioner of Emergency Services	Putnam County Animal Emergency Response Site- Develop site for animal emergency response.	No progress	Cost		1. Continue
						Level of Protection		
						Damages Avoided; Evidence of Success		
PCBES-7 (LOI #481)	Enhance / Upgrade Tools for Disaster Damage Assessment & Tracking	All Hazards	Putnam County, Robert Lipton, Deputy Commissioner of Emergency Services	Enhance / Upgrade Tools for Disaster Damage Assessment & Tracking	Complete	Cost	N/A	1. Discontinue- no longer a priority
						Level of Protection	Purchase of D-LAN software used by State and adjacent counties.	
						Damages Avoided; Evidence of Success	Allows coordination of response and assessment	
PCBES-8	Transportation Hardening &	All Hazards	Putnam County, Robert Lipton, Deputy	Transportation Hardening & Evacuation Upgrades		Cost		1. Continue
						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.
						Damages Avoided; Evidence of Success	Cost	
(LOI #487)	Evacuation Upgrades	requiring Evacuation	Commissioner of Emergency Services		No progress	Damages Avoided; Evidence of Success		
PCBES-9 (LOI #491)	Earthquake Retrofits for Critical Infrastructures	Earthquake	Putnam County, Robert Lipton, Deputy Commissioner of Emergency Services	Earthquake Retrofits for Critical Infrastructures	Ongoing capability	Cost		1. Continue
						Level of Protection		
						Damages Avoided; Evidence of Success		
PCBES-10	Promote, support and leverage the Public Officials Conference	All Hazards	PCBES – OEM; working with municipal Supervisors, Highway Superintendents, Local Officials, County and Town attorneys	Promote, support and leverage the Public Officials Conference (Per NYS Executive Law Article 2B) to include relevant training and education in support of the implementation of this HMP.	No progress	Cost		1. Discontinue- no longer a priority
						Level of Protection		
						Damages Avoided; Evidence of Success		
PCBES-11	Facilitate Workshops and Seminars to build local capabilities in floodplain management and disaster recovery	All Hazards	Putnam County OEM, as supported by relevant County and local department leads	Facilitate Workshops and Seminars to build local capabilities in floodplain management and disaster recovery, anticipated to include based on municipal and county interest: <ul style="list-style-type: none"> NFIP Community Rating System (CRS) Benefit-Cost Analysis (BCA) Substantial Damage 	In progress	Cost		1. Continue
						Level of Protection		
						Damages Avoided; Evidence of Success		



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.					
				<ul style="list-style-type: none"> Estimating (SDE) NFIP Elevation Certificates (EC) Certified Floodplain Manager (CFM) Training and Certification 									
PCBES-12	County-Wide Housing Location/Relocation Planning Initiative for Disaster Displaced Residents and Structures	All hazards requiring temporary or permanent relocation	PCOEM, working with all municipalities	County-Wide Housing Location/Relocation Planning Initiative for Disaster Displaced Residents and Structures: PCOEM to develop and implement a program to work with all Putnam County municipalities to identify sites within the community suitable for relocation of houses out of the floodplain, or building new houses once properties in the floodplain are razed. As part of this program, all communities will be surveyed to identify potential sites, including any pre-disaster actions that may be required to make them viable for these purposes. It is noted that while a community may identify suitable sites, the use (including transfer of ownership) of suitable private property would be at	No progress	<table border="1"> <tr> <td>Cost</td> <td></td> </tr> <tr> <td>Level of Protection</td> <td></td> </tr> <tr> <td>Damages Avoided; Evidence of Success</td> <td></td> </tr> </table>	Cost		Level of Protection		Damages Avoided; Evidence of Success		1. Discontinue
Cost													
Level of Protection													
Damages Avoided; Evidence of Success													



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	
PCHWY - 1 (LOI #811)	Hazardous Tree Mitigation	Severe Storm, Severe Winter Storm	Putnam County Highways & Facilities	Hazardous Tree Mitigation	Ongoing capability	Cost		1. Continue
PCHWY - 2 (LOI #353)	Storm Sewer Improvement Program	Flood	Putnam County Highways and Facilities, Robert Lipton, Deputy Commissioner Bureau of Emergency Services	Storm Sewer Improvement Program	Ongoing Capability	Cost		1. Continue
PCHWY - 3 (LOI #377)	UST/AST Continuity of Service and Hardening	Flood	Putnam County Highways and Facilities, Robert Lipton, Deputy Commissioner Bureau of Emergency Services	UST/AST Continuity of Service and Hardening-transition existing underground storage tanks into above-ground storage tanks	Ongoing capability	Cost		1. Continue
PCHWY - 4 (LOI #379)	Dam Hardening	Flood, Severe Storm, Earthquake - Dam Failure	Putnam County Highways and Facilities Robert Lipton, Deputy Commissioner Bureau of Emergency Services	Dam Hardening	Ongoing capability	Cost		1. Continue
PCHWY - 5 (LOI #380)	Bridge, Culvert and Road Hardening	Flood, Severe Storm	Putnam County Highways and Facilities	Bridge, Culvert and Road Hardening	Ongoing capability	Cost		1. Continue



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.
						of Success		
PCHWY - 6 (LOI #381)	Utility Upgrade and Connection for Critical Infrastructure	Severe Storm, Severe Winter Storm	Putnam County Highways and Facilities Robert Lipton, Deputy Commissioner Bureau of Emergency Services	Utility Upgrade and Connection for Critical Infrastructure	Ongoing capability	Cost		1. Continue
PCHWY - 7 (LOI #437)	Earthquake Retrofits for Critical Infrastructures	Earthquake	Putnam County Highways and Facilities Robert Lipton, Deputy Commissioner Bureau of Emergency Services	Earthquake Retrofits for Critical Infrastructures	Ongoing capability	Level of Protection		1. Discontinue
PCOIT- 1 (LOI #472)	Critical Network Infrastructure	Severe Storms, Severe Winter Storms, Earthquake	Putnam County Office of IT & GIS, Robert, Lipton	Critical Network Infrastructure	No progress	Damages Avoided; Evidence of Success		1. Discontinue- no longer a priority
PCPlan - 1	Complete and adopt a Countywide Stormwater Management Plan	All Hazards	PC Planning Department / Soil and Water Conservation District; working with all County Departments	Complete and adopt a Countywide Stormwater Management Plan. Incorporate the findings and recommendations of this HMP, as appropriate. Mitigation initiatives identified in the development of the Stormwater Management Plan should be incorporated	No progress	Cost		1. Discontinue- no longer a priority



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.
				into the annual reviews of this HMP, and five-year updates as appropriate.				
PCPlan - 2	Continue to seek funding to conduct and inventory of Ash trees along County Highways and other county properties	EAB Infestation creating hazardous trees that are susceptible to severe storms and severe win	PC Planning Department / Soil and Water Conservation District	Continue to seek funding to conduct and inventory of Ash trees along County Highways and other county properties (Emerald Ash Borer - EAB). Then seek funding to implement a program to mitigate the spread of EAB through removal, disposal, and long term monitoring of affected trees.	No progress	Cost		1. Discontinue- no longer a priority
						Level of Protection		
						Damages Avoided; Evidence of Success		





Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

Putnam County has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2016 Plan:

- Since March 2020, the Bureau of Emergency Services has been coordinating the response to and distribution of PPE and supplies as a result of the COVID-19 pandemic. The Department of Health has undertaken the public health response to coronavirus, including testing, education, and contact tracing.
- The Department of Health has undertaken monitoring, warning, and education about harmful algal blooms in the County.
- The Department of Highway and Facilities has installed numerous retention ponds to capture stormwater at a cost of \$2.5 million. These include a retention pond built at Highway Department headquarters in Patterson, a retention pond at Tilly Foster Farm, an underground infiltration system at the County's golf course in Mahopac, and a bio-retention pond also built at the golf course.

Proposed Hazard Mitigation Initiatives for the Plan Update

Putnam County participated in a mitigation action workshop in August 2020 and was provided a Mitigation Catalogue to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards.

Table 9.1-12 summarizes the comprehensive-range of specific mitigation initiatives Putnam County 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 9.1-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



Table 9.1-12. 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-Putnam County-001	Highway Department Generators	G-1 G-4 G-5	Extreme temperatures; Earthquake; Flood; Severe Storm; Severe Winter Storm; Terrorism	<p>Problem: Not all Highway facilities are on generators. There are two mobile generators available. During recent storms, the Highway Department requested smaller generators for traffic lights. Additional generators are needed to support facilities. Previously, the County's fixed generator had been dispatched to the Hospital and to an adult care facility.</p> <p>Solution: The Department seeks large fixed generators (800 kW) that can be deployed via tractor trailer to lifeline facilities as well as additional smaller, mobile generators that can power traffic lights.</p>	Yes	No	1-5 years	PCBES; Highway Department	Medium	Continued power for critical facilities	BRIC; HMGP; County Funds	High	SIP	ES
2020-Putnam County-002	Gas Station Generators	G-1 G-4 G-5	Extreme temperatures; Earthquake; Flood; Severe Storm; Severe Winter Storm; Terrorism	<p>Problem: Gas stations need generators as evidenced by damages seen during the Halloween 2013 storm. Gas stations provide motor vehicle fuel as well as fuel such as fuel for home heating systems in some instances.</p> <p>Solution: As suggested by the County legislators, gas stations and fuel distributors should have backup power due to their importance during storm events and power outages. An incentive program will be developed to encourage private owners to acquire generators.</p>	No	No	1-5 Years	Putnam County Highway Department; individual owners	Low	Continued motor vehicle and home heating fuel during inclement weather events	BRIC; HMGP; County Funds	High	SIP	ES
2020-Putnam	Debris Management	G-1 G-4	All hazards	<p>Problem: Following storm events, the clearance of debris from roadways and properties</p>	Yes	No	2 Years	Highway; Municipal stakeholders;	Low	Enhanced coordination	In-house capability	High	LPR	PR





Table 9.1-12. 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
County-003	Plan Development			<p>requires better coordination. Debris from State facilities has been left at Putnam County facilities indefinitely and there are restrictions on the re-use and disposition of debris. Debris management requires better coordination and centralization to enhance readiness.</p> <p>Solution: The Department will develop a Disaster Debris Management Plan to better coordinate the removal and storage of debris for the County and responders following storm events.</p>				utilities; agencies. NYSDOT		of debris removal				
2020-Putnam County-004	Department of Health Capacity Building	G-1 G-2 G-4	All hazards	<p>Problem: The Department of Health lacks personnel capacity and suffers turnover and loss of institutional expertise due to grant-funded positions and attrition. This issue compromises the ability of the Department to function to its full potential during hazard events.</p> <p>Solution: The County will seek and secure training resources for health and terrorism incidents and funding to fill permanent positions and build expertise.</p>	No	No	5 Years	Department of Health	New staff, funded positions	Enhanced capability of Department and delivery of services	County funds; public health capacity building grants	High	EAP	PR
2020-Putnam County-005	Readiness Materials Storage	G-1 G-4 G-5	All hazards	<p>Problem: Storage of materials (particularly temperature-sensitive supplies) is extremely limited. There is no place to store materials (no warehousing, no garage space). There are many vehicles that need to be parked outside. The breakout</p>	Yes	No	5 Years	County Department of Health; Bureau of Emergency Services; Highway Department	Medium-construction and siting of new warehousing facility to meet standards	Secure and climate-controlled storage of crucial PPE and supplies; increased availability	HMGP; BRIC; CDBG	High	SIP	ES





Table 9.1-12. 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
				room and large breakout room are used as supply rooms. Solution: Construct a climate-controlled stockpile building to store temperature-sensitive supplies such as vaccines and PPE.						of stockpiling capacity for the County				
2020-Putnam County-006 (Former PCBES-1)	LEPC Re-mobilization	G-1 G-2 G-4 G-5	All hazards	Problem: Putnam County’s LEPC is not active and needs County and municipal participation to reactivate. The Jan. 2013 NYSDHSES “A Guidance Document for LEPCs” shall be used to support this effort. Further, the County will work with LEPCs to integrate the findings and recommendations of this HMP within the LEPC programs, and conversely to integrate the needs and interests of the LEPCs into annual HMP reviews and 5-year updates, as appropriate. Solution: The LEPC should be re-activated through engagement with local emergency management officials to encourage preparedness among local governments. PCBES can coordinate this effort.	No	No	1 Year	PCBES	Low	Enhanced capacity building, shared services, and operational efficiency through coordination	In-House	High	EAP	PI
2020-Putnam County-007 (Former PCBES-4)	Fire Training Center Enhancements	G-4	Wildfire	Problem: The tower at the Fire Training Center has been condemned and repairing the facility has become costly. The County completed structural analysis of the entire facility, which is supposed to have large scale renovations every five years.	Yes	No	5 Years	PCBES	\$200,000	Support training for County firefighters	AFG Grant; CDBG	Medium	EAP	PI





Table 9.1-12. 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
				Solution: A new fire training tower should be constructed to continue to provide training for firefighters.										
2020-Putnam County-008 (Former PCBES-6)	Animal Emergency Response Site	G-1	All Hazards requiring sheltering	<p>Problem: Putnam County has a need to provide a site to shelter / house animals displaced by a natural and or manmade disaster. This project is designed to assist in complying with the Pets & Evacuation Transportation Standards Act of 2006. This act calls for the emergency managers / directors to take into account the needs of individuals with pets during and following a major disaster.</p> <p>Solution: Upgrade, prepare, and renovate the existing Tilly Foster Farm property with materials to accommodate the needs of people with pets and service animals during a disaster. Providing a place for people to bring pets in a disaster will alleviate the current problem of people arriving at human shelters where they are generally not prepared to accept or accommodate them.</p>	Yes	No	Short	PCBES	\$550,000	Improved life-safety (facilitates human sheltering)	Federal or State HLS grants (incl. EMPG); County Budget for Local Match	Medium	SIP	ES
2020-Putnam County-009 (Former PCBES-7)	Transportation Hardening	G-1 G-5	All Hazards requiring Evacuation	<p>Problem: The Putnam County Busing System has been identified as a storm critical resource required for the evacuation and movement of the public. This project would involve development and implementation of an emergency transportation plan</p>	Yes ⬇️	Yes	Short	PCBES/Putnam County Highway	\$2M	High – Life Safety	Federal or State HLS grants (incl. EMPG); County Budget	Medium	SIP	PP





Table 9.1-12. 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>and related recommendations to facilitate the evacuation capabilities and needs of the residents of Putnam County. Putnam County has a population of approximately 100,000 people in a 246 square mile area.</p> <p>Solution: This project would include the development of an Emergency Transportation plan and implementation of resulting recommendations to accommodate the hardening of the current transportation facilities and related transportation vehicles and equipment. It will address the evacuation and movement requirements that may be encountered during an emergency / disaster event in our County.</p>							for Local Match			
2020-Putnam County-010 (Former PCBES-11)	Capacity-Building Training for Local Jurisdictions	G-2 G-5	All hazards	<p>Problem: Enhancements and capacity building are needed to advance professional development and local officials' education about flooding and other hazards. Municipal officials reported being unaware of repetitive loss properties in their jurisdictions and their locations. This hinders the provision of technical services, mitigation, and emergency services to property owners and residents.</p> <p>Solution: Request and acquire NFIP policy data from FEMA, including</p>	No	No	3 Years	Putnam County OEM, as supported by relevant County and local department leads; FEMA	Low- cost of class materials	Enhanced technical assistance and expertise of County and local government employees	HMGP; BRIC; DHSES	High	EAP	PI



Table 9.1-12. 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	
				repetitive loss information, to distribute to municipalities to support floodplain administration. Facilitate Workshops and Seminars to build local capabilities in floodplain management and disaster recovery, anticipated to include based on municipal and county interest: <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 											

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
- HMGP 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 9.1-13. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2020-Putnam County-001	Highway Department Generators	1	1	1	1	1	1	0	0	1	1	1	1	1	1	12	High
2020-Putnam County-002	Gas Station Generators	1	1	1	1	0	0	0	0	1	0	1	1	1	1	9	High
2020-Putnam County-003	Debris Management Plan Development	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2020-Putnam County-004	Department of Health Capacity Building	1	0	1	1	1	1	-1	1	1	1	1	1	1	1	11	High
2020-Putnam County-005	Readiness Materials Storage	1	0	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2020-Putnam County-006 (Former PCBES-1)	LEPC Re-mobilization	1	1	1	1	1	1	0	0	1	0	1	0	1	1	10	High
2020-Putnam County-007 (Former PCBES-4)	Fire Training Center Enhancements	1	1	1	1	1	1	-1	0	0	0	-1	0	1	1	6	Medium
2020-Putnam County-008 (Former PCBES-6)	Animal Emergency Response Site	1	0	0	1	1	1	0	0	1	0	1	0	1	1	8	Medium
2020-Putnam County-009 (Former PCBES-7)	Transportation Hardening	1	1	1	1	1	1	-1	-1	1	1	1	-1	1	1	8	Medium
2020-Putnam County-010	Capacity-Building Training for Local Jurisdictions	1	1	1	1	0	1	1	0	1	1	1	0	1	1	11	High

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



9.1.8 Proposed Mitigation Action Types

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

Table 9.1-14. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Drought										
Disease Outbreak	003	005		004 006 010	003 004		006 010			005 008
Earthquake	003	001 002 005 008 009		004 006 010	003 004		006 010			001 002 005 008 009
Extreme Temp	003	001 002 005 008		004 006 010	003 004		006 010			001 002 005 008
Flood	003	001 002 005 008 009		004 006 010	003 004		006 010			001 002 005 008 009
Harmful Algal Bloom	003	005		004 006 010	003 004		006 010			005
Severe Storm	003	001 002 005 008 009		004 006 010	003 004		006 010			001 002 005 008 009
Severe Winter Storm	003	001 002 005 008 009		004 006 010	003 004		006 010			001 002 005 008 009
Terrorism	003	001 002 005 008 009		004 006 010	003 004		006 010			001 002 005 008 009
Wildfire	003	005 008 009		004 006 007 010	003 004		006 007 010			005 008 009

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

9.1.9 Staff and Local Stakeholder Involvement in Annex Development

Putnam County followed the planning process described in Section 3 (Planning Process) in Volume I of this plan update. This annex was developed over the course of several months with input from many departments, including: the Bureau of Emergency Services, Highway and Facilities, Department of Planning, Soil and Water, and the Department of Health. Representatives of these departments served on the Steering Committee. 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).

9.1.10 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for Putnam County 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 Putnam County has significant exposure. Countywide hazard maps are included in Section 5 of this plan. Municipal hazard profiles are included within Section 5.4, Volume I of this Plan.

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Action Worksheet			
Project Name:	Highway Department Generators		
Project Number:	2020-Putnam County-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Extreme temperatures; Earthquake; Flood; Severe Storm; Severe Winter Storm; Terrorism		
Description of the Problem:	Not all Highway facilities are on generators. There are two mobile generators available. During recent storms, the Highway Department requested smaller generators for traffic lights. Additional generators are needed to support facilities. Previously, the County's fixed generator had been dispatched to the Hospital and to an adult care facility.		
Action or Project Intended for Implementation			
Description of the Solution:	The Department seeks large fixed generators (800 kW) that can be deployed via tractor trailer to lifeline facilities as well as additional smaller, mobile generators that can power traffic lights.		
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:	N/A	Estimated Benefits (losses avoided):	Continued power for critical facilities during outage events
Useful Life:	20 years	Goals Met:	1, 4, 5
Estimated Cost:	Medium	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	1 Year
Estimated Time Required for Project Implementation:	1-5 years	Potential Funding Sources:	BRIC; HMGP; County Funds
Responsible Organization:	PCBES; Highway Department	Local Planning Mechanisms to be Used in Implementation if any:	Emergency Management Plans
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	Medium	Continued power outages at critical facilities; costs due to motor vehicle crashes due to uncleared roads/broken traffic lights
	Microgrid	High	Cannot be deployed reflexively, high cost
	Fixed/mobile generator combination	Medium	Can be flexibly deployed and procured
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Highway Department Generators	
Project Number:	2020-Putnam County-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Generators will enhance life safety
Property Protection	1	Generators provide protection of public property in mitigating power outages
Cost-Effectiveness	1	Generators are cost effective in comparison to loss of service
Technical	1	Generators are technically feasible
Political	1	Generators are politically feasible
Legal	1	Generators are legally feasible
Fiscal	0	
Environmental	0	
Social	1	Lack of outages maintains social stability
Administrative	1	Administratively feasible
Multi-Hazard	1	Generators can protect against multiple hazards
Timeline	1	Generators can be installed relatively quickly if funds are available
Agency Champion	1	PCBES/Highway are project champions
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	2020-Putnam County-002		
Project Number:	Gas Station Generators		
Risk / Vulnerability			
Hazard(s) of Concern:	Extreme temperatures; Earthquake; Flood; Severe Storm; Severe Winter Storm; Terrorism		
Description of the Problem:	Gas stations need generators as evidenced by damages seen during the Halloween 2013 storm. Gas stations provide motor vehicle fuel as well as fuel such as fuel for home heating systems in some instances.		
Action or Project Intended for Implementation			
Description of the Solution:	The County legislators suggested procuring generators for gas station/fuel distributors due to their importance during storm events. An incentive program should be developed to encourage private owners to acquire generators.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" 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:	N/A	Estimated Benefits (losses avoided):	Continued motor vehicle and home heating fuel distribution during inclement weather events
Useful Life:	20 Years	Goals Met:	1, 4, 5
Estimated Cost:	Medium	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	2 Years
Estimated Time Required for Project Implementation:	1-5 Years	Potential Funding Sources:	BRIC; HMGP; County Funds
Responsible Organization:	PCBES; Putnam County Highway Department; individual owners	Local Planning Mechanisms to be Used in Implementation if any:	Emergency Management Plans
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	Medium	Continued outages/disruptions to fuel supply chain during outages
	Microgrid	High	Cost too high for distributed privately owned facilities
	Private Generator Incentive	Medium	Voluntary, flexible program
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	2020-Putnam County-002	
Project Number:	Gas Station Generators	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Promotes life safety/continued lifeline function
Property Protection	1	Mitigates outages to lifeline facility
Cost-Effectiveness	1	Generators are generally cost effective
Technical	1	Project is technically feasible
Political	0	Public funds to for-profit businesses requires consideration
Legal	0	Public funds to for-profit businesses requires consideration
Fiscal	0	Public funds to for-profit businesses requires consideration
Environmental	0	Environmental issues extant with fuel stations
Social	1	Promotes social stability/facilitates movement of people
Administrative	0	
Multi-Hazard	1	Generators can function in multiple hazards
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
Total	9	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Debris Management Plan Development		
Project Number:	2020-Putnam County-003		
Risk / Vulnerability			
Hazard(s) of Concern:	All hazards		
Description of the Problem:	Following storm events, the clearance of debris from roadways and properties requires better coordination. Debris from State facilities has been left at Putnam County facilities indefinitely and there are restrictions on the re-use and disposition of debris. Debris management requires better coordination and centralization to enhance readiness.		
Action or Project Intended for Implementation			
Description of the Solution:	The Department will develop a Disaster Debris Management Plan to better coordinate the removal and storage of debris for the County and responders following storm events.		
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:	N/A	Estimated Benefits (losses avoided):	Enhanced coordination of debris removal
Useful Life:	Indefinite	Goals Met:	1, 4
Estimated Cost:	Low	Mitigation Action Type:	LPR
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Immediately
Estimated Time Required for Project Implementation:	2 Years	Potential Funding Sources:	None needed- within existing capabilities
Responsible Organization:	Highway; Municipal stakeholders; utilities; agencies. NYSDOT	Local Planning Mechanisms to be Used in Implementation if any:	CEMP; Disaster Debris Management Plan
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	Medium	Continue existing level of coordination for debris management- administrative difficulties
	Decentralize coordination	High	Loss of efficiencies and facility functions due to debris placement
	Debris Management Plan		Enhanced functionality and organization
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Debris Management Plan Development	
Project Number:	2020-Putnam County-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Debris management enhances life safety/cleanup operations
Property Protection	1	Management proactively protects property
Cost-Effectiveness	1	Pre-planning costs are low or negligible
Technical	1	Coordination is technically possible
Political	1	Coordination is politically feasible
Legal	1	Coordination is legally feasible but may require MOU
Fiscal	1	
Environmental	1	Debris management protects environmental resources
Social	1	Decrease disruption
Administrative	1	Enhanced administrative operations
Multi-Hazard	1	Can apply to any hazard
Timeline	1	Can be developed quickly
Agency Champion	1	Highway and Facilities can lead
Other Community Objectives	1	
Total	14	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Department of Health Capacity Building		
Project Number:	2020-Putnam County-004		
Risk / Vulnerability			
Hazard(s) of Concern:	All hazards		
Description of the Problem:	The Department of Health lacks personnel capacity and suffers turnover and loss of institutional expertise due to grant-funded positions and attrition. This issue compromises the ability of the Department to function to its full potential during hazard events.		
Action or Project Intended for Implementation			
Description of the Solution:	The County will seek and secure training resources for health and terrorism incidents and funding to fill permanent positions and build expertise.		
Is this project related to a Critical Facility?		Yes <input type="checkbox"/>	No <input checked="" 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:	N/A	Estimated Benefits (losses avoided):	Enhanced capability of Department and delivery of services
Useful Life:	Indefinite	Goals Met:	1, 2, 4
Estimated Cost:	New staff and funded positions	Mitigation Action Type:	EAP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Immediately upon funding
Estimated Time Required for Project Implementation:	5 Years or more	Potential Funding Sources:	County funds; public health capacity building grants; US HHS; CDC
Responsible Organization:	Department of Health	Local Planning Mechanisms to be Used in Implementation if any:	Public health plans; CEMP
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	High	Continued attrition and decreased delivery of services
	Grant funded/term positions	Low-Medium	Low cost but fails to deliver long-term department development/institutional knowledge building
	New full-time hires	High	Most effective project to build long-term department resilience
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Department of Health Capacity Building	
Project Number:	2020-Putnam County-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Enhanced operations protect life safety
Property Protection	0	
Cost-Effectiveness	1	Long-term benefits to enhanced capabilities
Technical	1	
Political	1	
Legal	1	Fundable positions already exist
Fiscal	-1	Funding of new positions is costly
Environmental	1	Action will protect environmental health
Social	1	
Administrative	1	
Multi-Hazard	1	DOH assists in multiple types of hazards
Timeline	1	
Agency Champion	1	Department of Health serves as champion
Other Community Objectives	1	
Total	11	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Readiness Materials Storage		
Project Number:	2020-Putnam County-005		
Risk / Vulnerability			
Hazard(s) of Concern:	All hazards		
Description of the Problem:	Storage of materials (particularly temperature-sensitive supplies) is extremely limited. - No place to store materials- need warehousing. No garage space left. Lots of vehicles- vehicles had to park outside. Breakout room turned into supply room. Half the garage is still being used. Large breakout room turned to storehouse.		
Action or Project Intended for Implementation			
Description of the Solution:	Construct a climate-controlled stockpile building to store temperature-sensitive supplies such as vaccines and PPE.		
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:	N/A	Estimated Benefits (losses avoided):	Secure and climate-controlled storage of crucial PPE and supplies; increased availability of stockpiling capacity for the County
Useful Life:	50 Years	Goals Met:	1, 4, 5
Estimated Cost:	Medium- construction and siting of new warehousing facility to meet standards	Mitigation Action Type:	SIP
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Immediately upon secure of funding
Estimated Time Required for Project Implementation:	5 Years	Potential Funding Sources:	HMGP; BRIC; CDBG
Responsible Organization:	PCBES; Department of Health	Local Planning Mechanisms to be Used in Implementation if any:	CEMP
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	Medium	Increased costs for transportation of materials;
	Distributed materials in existing facilities	Medium	Lack of capacity and decreased organizational efficiencies
	New stockpile building	Medium	Store materials on-site and safely
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Readiness Materials Storage	
Project Number:	2020-Putnam County-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Readiness of materials promotes life safety
Property Protection	0	
Cost-Effectiveness	1	Long-term storage is crucial and alleviates need for last-minute, high cost deliveries
Technical	1	
Political	1	Additional storage has political support
Legal	1	
Fiscal	-1	
Environmental	1	Stockpiling in County facilities is environmentally efficient
Social	1	Stockpiling maintains social stability and benefits all residents
Administrative	1	Proposed action will enable better tracking of available equipment
Multi-Hazard	1	Can be used for any hazard
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
Total	11	
Priority (High/Med/Low)	High	