

## SECTION 9. JURISDICTIONAL ANNEX

### 9.1 ROCKLAND COUNTY

This jurisdictional annex to the Rockland County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the County with reducing losses from future hazard events. This annex is not guidance of what to do when a disaster occurs; it focuses on actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. The annex presents a general overview of the County, describes who participated in the planning process, assesses the County’s risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

#### 9.1.1 Hazard Mitigation Planning Team

Rockland County identified primary and alternate HMP points of contact and developed this plan over the course of several months, with input from many County departments. The County Office of Fire and Emergency Services (OFES) represented the community on the Rockland County HMP Planning Partnership and Steering Committee and supported the local planning process 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.

Table 9.1-1 summarizes County officials who participated in the development of the annex and in what capacity. Additional documentation of the County’s planning activities through Planning Partnership meetings is included in Volume 1.

**Table 9.1-1. Hazard Mitigation Planning Team**

Primary Point of Contact	Alternate Point of Contact
Name/Title: Chris Jensen, Program Coordinator, Rockland County OFES Address: 35 Firemen’s Memorial Drive Phone Number: (845) 364-8902 Email: jensenc@co.rockland.ny.us	Name/Title: Allie Manigo, Data Entry Operator, Rockland County OFES Address: 35 Firemen’s Memorial Drive Phone Number: (845) 364-8824 Email: manigoa@co.rockland.ny.us
<b>Additional Contributors</b>	
Name/Title: Vince Alteri, Executive Director, Rockland County Drainage Agency Method of Participation: Served on the Steering Committee and Planning Partnership, provided feedback on capability assessment and mitigation strategy, attended meetings, and reviewed documents	
Name/Title: Mike DiMola, Parks Operations Manager, Rockland County Division of Environmental Resources Method of Participation: Served on the Steering Committee and Planning Partnership, provided feedback on capability assessment and mitigation strategy, attended meetings, and reviewed documents	
Name/Title: Al Carnevale, Deputy Superintendent, Rockland County Highway Department Method of Participation: Served on the Steering Committee and Planning Partnership, provided feedback on capability assessment and mitigation strategy, attended meetings, and reviewed documents	
Name/Title: Jake Palant, Associate Planner, Rockland County Department of Planning Method of Participation: Served on the Steering Committee and Planning Partnership, provided feedback on capability assessment and mitigation strategy, attended meetings, and reviewed documents	

Primary Point of Contact	Alternate Point of Contact
Name/Title: Scott Lounsbury, GIS Planning Coordinator Method of Participating: Served on the Steering Committee and Planning Partnership, provided feedback on capability assessment and mitigation strategy, attended meetings, and reviewed documents	

### 9.1.2 County Profile

Please refer to Section 3 of this HMP for details on Rockland County’s population, location, climate, history, growth, and development.

### 9.1.3 Jurisdictional Capability Assessment and Integration

Rockland County performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume I describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment for this annex includes analyses of the following capabilities and programs:

- Planning and regulatory capabilities
- Development and permitting capabilities
- Administrative and technical capabilities
- Fiscal capabilities
- Education and outreach capabilities
- Classification under various community mitigation programs
- Adaptive capacity to withstand hazard events

For a community to successfully reduce long-term risk, hazard mitigation must be integrated into day-to-day local government operations. As part of the hazard mitigation analysis, planning and policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. Development of an updated mitigation strategy provided an opportunity for Rockland County to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

### Planning, Legal, and Regulatory Capability and Integration

Table 9.1-2 summarizes the regulatory tools that are available to Rockland County.

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

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
<i>Codes, Ordinances, &amp; Regulations</i>				
<b>Building Code</b>	Yes	Chapter 220 Building Construction, Rockland County Code	State, County	Rockland County Buildings & Codes Department
<p><i>How has or will this be integrated with the HMP and how does this reduce risk?</i></p> <p>This chapter ensures that homes, buildings, and businesses are structurally sound and compliant with New York State Uniform and Energy Code. The chapter focuses on new construction techniques that presents different and significant challenges and potential danger to firefighters and firemanic personnel in fighting fires in such structures should they catch fire. That danger includes faster burning and faster and unexpected ceiling and roof collapses.</p>				

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
<b>Zoning/Land Use Code</b>	Yes	New York General Municipal Law (GML), Article 12-B, §239	County	Rockland County Planning Department, Land Use Division
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The GML requires that certain types of municipal planning, zoning and subdivision projects be referred to County Planning for review prior to local action being taken. The requirement seeks to promote coordination of land use decision-making and to enhance consideration of potential inter-municipal and county-wide impacts. This requirement is outlined in Article 12-B of the GML, §239 l, m, and n. This process is commonly referred to across New York State as the "GML 239 referral", the "GML 239 review", or simply the "239 review" process. The responsibility for all Section 239 reviews has been given to the Rockland County Commissioner of Planning, pursuant to Article X, Section 5-82 of the Rockland County Charter. This provision applies to development that is within 500 feet from County or State-owned rights-of-way, parks, or facilities and institutions; County rivers and streams; and intermunicipal boundaries. The County Planning Department regularly incorporates comments into its GML reviews pertaining to flood mitigation and other potential hazards.				
In May 2017, Rockland County signed an Executive Order that will prohibit County departments from issuing permits for developments that have not complied with GML. GML requires towns and villages comply with the findings of the County Planning Commissioner or file a reason why a decision has not been made to comply. Failure to do so will result in the County not issuing permits for such uses as water and sewer connections, well permits, rooming house permits, drainage permits, road opening permits, issuance of new addresses and others.				
<b>Subdivision Code</b>	Yes	New York General Municipal Law (GML), Article 12-B, §239	County	Rockland County Planning Department, Land Use Division
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The GML §239 n requires that subdivision applications within a certain distance from County interests are referred to County Planning for review to promote coordination of land use decisions and local/county impacts.				
<b>Site Plan Code</b>	Yes	New York General Municipal Law (GML), Article 12-B, §239	County	Rockland County Planning Department, Land Use Division
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The GML §239 m and l requires that site plan applications within a certain distance from County interests are referred to County Planning for review to promote coordination of land use decisions and local/county impacts.				
<b>Stormwater Management Code</b>	Yes	Chapter 345, Sewers	County, Local	Rockland County Division of Environment
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
This chapter establishes rules and regulations governing the discharge of sewage, industrial wastes and other waste into the Rockland County Sewer District No. 1 and public sewers tributary. The chapter's stated purposes include provisions to prohibit excess volumes and/or rates of flow and to prevent public nuisance.				
<b>Post-Disaster Recovery/ Reconstruction Code</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
<b>Real Estate Disclosure Requirements</b>	Yes	New York State (NYS) mandate, Property Condition Disclosure Act, NY Code – Article 14 §460-467	State, County	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The NYS mandate requires sellers to disclose to potential buyers whether their property is in a designated floodplain.				
<b>Growth Management</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
<b>Environmental Protection Ordinance</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
<b>Flood Damage Prevention Ordinance</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
<b>Wellhead Protection</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
<b>Emergency Management Ordinance</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
<b>Climate Change Ordinance</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
<b>Planning Documents</b>				
<b>General/Comprehensive Plan</b>	Yes	Rockland Tomorrow: Rockland County Comprehensive Plan (2011)	County	Rockland County Planning Department
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The County created a comprehensive plan that will serve as the basis for all County government planning and development issues for the next 10 to 20 years and provide guidance for future planning and zoning actions by towns and villages. The plan also creates a framework for future capital expenditure decisions by the County government. The Comprehensive Plan includes several references to the 2010 County Hazard Mitigation Plan. This includes the total area of the County that is located within flood risk zones, total dollar amount of flood losses, and discussion of the hazard mitigation initiative (Office of Fire and Emergency Services). In 2024, the Rockland County Planning Department has started the process of updating its Comprehensive Plan and will incorporate elements of the updated HMP.				
<b>Capital Improvement Plan</b>	Yes	Capital Improvement Program 2022-2027, Adopted 2022	County	Rockland County Planning Department, Rockland County Capital Projects Committee
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Capital Improvement Program considers the necessity, priority, feasibility, location, cost, and method of financing of all existing and proposed capital projects. The current budget identifies several capital projects that can reduce the County's risk to hazards, including emergency generators and electrical improvements to County center buildings and numerous drainage projects.				
<b>Disaster Debris Management Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
<b>Floodplain Management or Watershed Plan</b>	Yes	Resilient NY Flood Mitigation Studies: Hackensack River, Mahwah River, Minisceongo Creek, Ramapo River, Saddle River, Sparkill Creek (2018)	State	NYS Department of Environmental Conservation
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> This plan was developed with support from the Resilient NY program. The studies evaluate watershed-level resiliency to extreme weather events that result in flooding and ice jam formations. Each study conducts an analysis on high-risk areas, identifies mitigation recommendations and actions, and conducts a zoning and land use assessment for each municipality.				
<b>Stormwater Management Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
<b>Open Space Plan</b>	Yes	Resolution No. 406 of 2019	County	Open Space Acquisition Program
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> After a 10-year moratorium on Open Space acquisitions, County Executive Ed Day, announced that the County will once again be acquiring Open Space properties starting in January 2020. The County has committed up to \$30,000,000 to fund this program.				
<b>Urban Water Management Plan</b>	Yes	Rockland County Comprehensive Water Conservation and Implementation Plan (2020)	County	Rockland County Department of Planning
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> The Plan provides a comprehensive water policy to ensure a safe, cost-effective, long-term water supply for the County that incorporates sustainability, demand-side principles, and conservation. The Plan evaluates existing and future conditions and recommends water conservation measures that can inform the HMP's County and Municipal Profiles and Risk Assessments.				
<b>Habitat Conservation Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
<b>Economic Development Plan</b>	Yes	Chapter 252, Empire Zones	County	Rockland County Department of Planning
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Section 961 of Article 18-B of the GML authorizes the County to prepare and submit the County's application for designation as an Empire Zone, including the proposed boundaries thereto, to the New York State Commissioner of Economic Development.				
<b>Community Wildfire Protection Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
<b>Community Forest Management Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
<b>Transportation Plan</b>	Yes	Regional Transportation Plan – Moving Forward	Regional	New York Metropolitan Transportation Council
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
Rockland County is an active member of the New York Metropolitan Transportation Council (NYMTC), the area's Metropolitan Planning Organization (MPO) responsible for coordinating and administering federal funding for eligible transportation planning and construction projects. NYMTC's work program is developed annually. It defines the priorities in the planning area and describes all transportation-related activities anticipated within a given program year. The work program also indicates which of these planning activities will receive federal funding. Its successful completion each year enables federal funding assistance to undertake planning activities by NYMTC's staff and its members.				
<b>Agriculture Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
<b>Climate Action/ Resiliency/Sustainability Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The County intends to create a County Operations Climate Action Plan in the near future, which will incorporate elements of the HMP.				
<b>Tourism Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
<b>Business/ Downtown Development Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
<b>Other (for example NYRCR, etc.)</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				
<b>Response/Recovery Planning</b>				
<b>Emergency Operations Plan</b>	Yes	Rockland County Comprehensive Emergency Management Plan	County	Rockland County OFES
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
The OFES maintains the Rockland County Comprehensive Emergency Management Plan (CEMP) that is reviewed bi-annually. The County CEMP contains Hurricane/Coastal Storm and Winter Storm annexes. Four of the five Towns have CEMPs (updated within the year); 6 of the 19 Villages have CEMPs and some Villages defer to the Town's plan. Specific evacuation plans are identified in the Rockland County CEMP Hurricane/Coastal Storm Annex and Dam Safety Plans (Emergency Action Plans), as well within plans to evacuate portions of the County in the event of a radiological release at the Indian Point Nuclear Power Plant in Buchanan (Westchester County).				
<b>Continuity of Operations Plan</b>	Yes	Rockland County Continuity of Operations Plan	County	Rockland County OFES
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
This plan puts forth a strategy to ensure the County Government and its departments can continue operations of essential functions under a broad range of conditions, particularly hazard conditions.				
<b>Substantial Damage Response Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i>				
N/A				

	Jurisdiction has this? (Yes/No)	Citation and Date (code chapter or name of plan, date of enactment or plan adoption)	Authority (local, county, state, federal)	Responsible Person, Department or Agency
<b>Threat and Hazard Identification and Risk Assessment</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
<b>Post-Disaster Recovery Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
<b>Public Health Plan</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				
<b>Other</b>	No	-	-	-
<i>How has or will this be integrated with the HMP and how does this reduce risk?</i> N/A				

### Development and Permitting Capability

Table 9.1-3 summarizes the capabilities of Rockland County to oversee and track development.

**Table 9.1-3. Development and Permitting Capability**

Indicate if your jurisdiction implements the following	Yes/No	Comment:
Do you issue development permits?	Yes	<p>A majority of permitting in Rockland County is performed at the local level; however, the County does require permits for various activities. The Highway Department requires permits for the following activities:</p> <ul style="list-style-type: none"> <li>• Installing any utilities or other excavations on a county right-of-way.</li> <li>• Construction of or additions to residential structures with frontage on county highway even if there is no direct access to a county highway.</li> <li>• Constructing an approach or access connection, such as a driveway, street, or temporary entrance, to the county road system.</li> <li>• Construction on property adjacent to a county road right-of-way, such as excavating for new structures, drainage, roof drain connection, landscaping projects, fences, driveway repairs, curbing, sidewalks, and connections to catch basins.</li> <li>• Moving overweight and oversized loads over county roads, subdivisions, or other street connections.</li> <li>• Special activities impacting county roadways, such as road closings, parades, banners, etc.</li> <li>• Any other proposed work, not outlined above, to take place within or adjacent to the county right-of-way.</li> </ul> <p>The Rockland County Department of Health is mandated under Part 5 of the New York State Sanitary Code, 10 NYCRR § 5 - Drinking Water Supplies, to provide technical assistance to residents regarding their drinking water wells, and to require that new water supply wells are constructed pursuant to the requirements contained within Appendix 5-B of that regulation. The Department’s permitting program ensures that water supply wells, as well as resource evaluation and geothermal wells, are properly constructed, and that unused or poorly maintained wells are properly decommissioned, in accordance with state and local requirements.</p>
If you issue development permits, what department is responsible?	Yes	Rockland County Highway Department; Rockland County Department of Health

Indicate if your jurisdiction implements the following	Yes/No	Comment:
If you do not issue development permits, what is your process for tracking new development?	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	Permits require the identification of floodplains and bodies of water
Do you have a buildable land inventory?	Yes	Rockland County is preparing a build-out analysis (as of February 2024) to understand buildable land throughout the County. The Rockland County GIS Division maintains a GIS portal that has data and maps with tax parcels, municipal boundaries, roads, public transportation, historic resources, economic data, land use data, planimetric data, environmental data, and topography.
If you have a buildable land inventory, please describe	N/A	-
Describe the level of build-out in your jurisdiction.	N/A	-

### Administrative and Technical Capability

Table 9.1-4 summarizes potential staff and personnel resources available to Rockland County and their current responsibilities that contribute to hazard mitigation.

**Table 9.1-4. Administrative and Technical Capabilities**

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<i>Administrative Capability</i>		
Planning Board	Yes	The Rockland County Planning Board is comprised of nine county residents, made up of engineers, attorneys, contractors, and retirees, etc. The Planning Board members serve in an advisory capacity to the Commissioner of Planning about the reviews undertaken by the Department of Planning as required under GML.  The Rockland County Planning Board advises the Commissioner of Planning, the County Executive and the County Legislature in matters relating to planning and shall have and exercise such other and related duties required by them. In addition, the Board advises the Planning Commissioner in matters related to comprehensive metropolitan, regional, county, and municipal planning.
Zoning Board of Adjustment	No	-
Planning Department	Yes	Rockland County Planning Department performs a variety of tasks, focusing on topics related to housing, environmental and natural issues, historic and cultural resources, recreation and open space, and infrastructure. The staff also study the environmental impacts of proposed projects under the State Environmental Quality Review Act. The County Planning Department issues GML 239 Reviews to its municipalities for site plans, variances, special permits, and other proposals as required by State law.
Mitigation Planning Committee	Yes	Rockland County Local Emergency Planning Committee’s primary duty is to develop and maintain an Emergency Response Plan that establishes procedures for receiving and processing public requests for information concerning chemicals and chemical spills within the county. The Committee reviews the plan annually.



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Environmental Board/Commission	Yes	The Rockland County Environmental Management Council (EMC) was established by the Legislature in 1973. The EMC is comprised of a volunteer board representing the five towns (13-member board with at-large members, but at the time of this plan’s development, the County proposed to change the board to nine members).
Open Space Board/Committee	Yes	The Rockland County Park Commission is advisory and serves as a liaison between the community and the Rockland County Executive and Legislature. The Commission's primary goal is two-fold: to protect the natural resources and landscape of Rockland County through preservation of open space dedicated as County parkland and to help develop policies for the operation and utilization of the Rockland County Parks System.
Economic Development Commission/Committee	Yes	The Rockland County Department of Economic Development & Tourism promotes economic stability and growth by supporting a healthy business environment and empowering companies to grow and succeed. The Department provide services directly to businesses through advocacy, retention and expansion assistance, and workforce development, and practice economic development through the implementation of various programs including grant assistance; business attraction, retention & expansion assistance; resource & incentive coordinators; and workforce development.
Public Works/Highway Department	Yes	The Rockland County Highway Department has the responsibility for the administration, construction, maintenance, supervision, repair, and care of approximately 340 lane miles (167 centerline miles) of roadways, 83 bridges and 115 culverts within the county jurisdiction. The Department’s mission is to provide a safe, well maintained and efficient operation of the county highway and bridge system.
Construction/Building/Code Enforcement Department	Yes	<p>The Rockland County Office of Buildings and Codes ensures that homes, buildings, and businesses within the Village of Spring Valley are structurally sound and compliant with New York State Uniform and Energy Code. Responsibilities include:</p> <ul style="list-style-type: none"> <li>• Issue and review all types of permits for the Village of Spring Valley including building permits, mobile home park permits, and junkyard permits.</li> <li>• Perform inspections for annual permits.</li> <li>• Issue certificates of occupancy.</li> <li>• Schedule building construction inspections.</li> <li>• Investigate reports regarding any issues of noncompliance with the Uniform or Energy Code.</li> <li>• Maintain records and collect fees for any operation that requires fee collection for permits.</li> <li>• Meet with individuals concerning any building code matters.</li> <li>• Administer procedural rules for court hearings.</li> </ul>
Emergency Management/Public Safety Department	Yes	The Rockland County OFES responds to natural disasters such as snowstorms, floods, and hurricanes; technical disasters such as chemical spills; and hazardous materials incidents. The Office provides 911 service for the residents of Rockland County where they dispatch fire companies and ambulance squads. The Office also conducts Indian Point drills on a regular basis. The overall mission of the Office is to provide support and training necessary to the Rockland County Fire Service and all Emergency Responders so that they may provide our citizens with the finest available emergency services.



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Highway Department Maintenance & Construction Division performs the following activities: <ul style="list-style-type: none"> <li>• Removing snow and ice from the county road system to achieve snow and ice-free roads (i.e., "black pavement" policy).</li> <li>• Maintaining and repairing pavement and shoulders on county roads including pothole repair, crack sealing, micro-paving, and hot and cold blacktop.</li> <li>• Maintaining and repairing county bridges and culverts.</li> <li>• Maintaining and/or constructing drainage systems and drainage structures on the county road system.</li> <li>• Maintaining guide railing, and replacing substandard and/or deteriorated guide railing, on the county road system.</li> <li>• Maintaining and installing traffic control and delineation devices (signs, line and zone striping, etc.) on the county road system.</li> <li>• Maintaining and repairing the Highway Department's fleet of vehicles and construction equipment.</li> <li>• Storing 4,700± tons of salt in the Town of Stony Point and Village of Pomona for snow and ice removal.</li> <li>• Removing trees from the county's right-of-way that are dead, dying, weakened, or impeding sight distances on a county road.</li> <li>• Maintaining and/or landscaping vegetated areas within the county's right-of-way.</li> </ul>
Mutual aid agreements	Yes	The County has memorandums of understanding (MOU) with schools, bus companies, hospitals, and the American Red Cross.
Human Resources Manual	Yes	County-wide for all employees
Other	N/A	-
<i>Technical/Staffing Capability</i>		
Planners or engineers with knowledge of land development and land management practices	Yes	Rockland County Planning Department Land Use Division
Engineers or professionals trained in building or infrastructure construction practices	Yes	Rockland County Highway Department Engineering Division
Planners or engineers with an understanding of natural hazards	Yes	Rockland County Planning Department Land Use Division; OFES
Staff with expertise or training in benefit/cost analysis	Yes	Rockland County Finance and Budgeting Department
Professionals trained in conducting damage assessments	Yes	Rockland County Highway Department Engineering Division
Personnel skilled or trained in GIS and/or Hazus applications	Yes	Rockland County Planning Department – GIS Division
Staff that work with socially vulnerable populations or underserved communities	Yes	The following county departments provide services to socially vulnerable and underserved communities: Health, Office of Aging, and Mental Health. The non-profit organization United Way of Rockland County also provides these services.
Environmental scientist familiar with natural hazards	Yes	County consults with contractors, academia, and engineers/
Surveyor(s)	Yes	Rockland County Highway Department’s Engineering Division
Emergency Manager	Yes	Rockland County OFES
Grant writer(s)	Yes	Contracted out – Millenium
Resilience Officer	No	The County Planning Department will be hiring a Sustainability Coordinator in 2024.

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Other	No	-

### Fiscal Capability

Table 9.1-5 summarizes financial resources available to Rockland 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 – Rockland County Capital Project Budget
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	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	Economic Development Loan Program; NY Rising community Reconstruction Program; U.S. Department of Housing and Urban Development (HUD) HOME Investments Partnerships and Emergency Solutions Grant; Department of Homeland Security grants

### Education and Outreach Capability

Table 9.1-6 summarizes the education and outreach resources available to Rockland County.

**Table 9.1-6. Education and Outreach Capabilities**

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	Yes	County Executive’s Office
Personnel skilled or trained in website development	Yes	County Information Technology
Hazard mitigation information available on your website	Yes	Information can be found under the Rockland County Fire and Emergency Services website
Social media for hazard mitigation education and outreach	Yes	County and local websites; social media accounts
Citizen boards or commissions that address issues related to hazard mitigation	Yes	Local Emergency Planning Committee (LEPC)
Warning systems for hazard events	Yes	Mass notification systems (NYAlert, CodeRED, RAVE), cell phone notifications, interoperable radio systems, access, and functional needs registry
Natural disaster/safety programs in place for schools	Yes	Community Emergency Response Team (CERT) training in school districts

Outreach Resources	Available? (Yes/No)	Comment:
Organizations that conduct outreach to socially vulnerable populations and underserved populations	Yes	United Way of Rockland County, Rockland County Department of Health, Department of Mental Health, Office for People with Disabilities, and Office for the Aging
Public outreach mechanisms/programs to inform citizens on natural hazards, risk, and ways to protect themselves during such events	Yes	Through the County’s website, social media accounts, and mass notification systems

### Community Classifications

Table 9.1-7 summarizes classifications for community programs available to Rockland 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	-	-
New York State Department of Environmental Conservation (NYSDEC) Climate Smart Community	Yes	Registered	August 2, 2010
National Weather Service Storm Ready Certification	No	-	-
Firewise Communities classification	No	-	-
Other: Organizations with mitigation focus (advocacy group, non-government)	No	-	-

N/A = Not applicable  
 — = 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, 2022). Each jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. Table 9.1-8 summarizes the adaptive capacity for each identified hazard of concern and the County’s capability to address related actions using the following classifications:

- Strong: Capacity exists and is in use.
- Moderate: Capacity might exist; but is not used or could use some improvement.
- Weak: Capacity does not exist or could use substantial improvement.

**Table 9.1-8. Adaptive Capacity**

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Moderate
Extreme Temperature	Moderate
Flood	Moderate

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Landslide	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate
Wildfire	Moderate

### 9.1.4 National Flood Insurance Program Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the National Flood Insurance Program (NFIP). Floodplain administration is performed at the local level; however, Rockland County provides floodplain services where applicable.

#### NFIP Summary

Table 9.1-9 summarizes the NFIP policy and claim statistics for Rockland County.

**Table 9.1-9. Rockland County NFIP Summary of Policy and Claim Statistics**

# Policies	962
# Claims (Losses)	3,113
Total Loss Payments	\$43,849,675
# Repetitive Loss Properties (NFIP definition)	11
# Repetitive Loss Properties (FMA definition)	292
# Severe Repetitive Loss Properties	40
# Policies Within the 1% Annual Chance Flood Boundary	38

*NFIP Definition of Repetitive Loss: The NFIP defines a repetitive loss property as any insurable building for which two or more claims of more than \$1,000 were paid by the NFIP within any rolling 10-year period since 1978.*

*FMA Definition of Repetitive Loss: FEMA’s Flood Mitigation Assistance (FMA) program defines a repetitive loss property as any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.*

*Definition of Severe Repetitive Loss: A residential property covered under an NFIP flood insurance policy and: (a) That has at least four NFIP claim payments over \$5,000 each, and the cumulative amount of such claims payments exceeds \$20,000; or (b) For which at least two separate claims payments have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building. At least two of the claims must have occurred within any 10-year period, more than 10 days apart.*

Source: FEMA, December 2023

Note: RL count may include properties also identified as SRL.

#### Flood Vulnerability Summary

Table 9.1-10 provides a summary of the NFIP program and floodplain administration, where appropriate, in Rockland County.

**Table 9.1-10. NFIP Summary**

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
Describe areas prone to flooding in your jurisdiction.	Refer to each municipal annex (Sections 9.2 through 9.24) for flood-prone areas in the County.

NFIP Topic	Comments
Do you maintain a list of properties that have been damaged by flooding?	This is performed at the local level, where applicable.
Do you maintain a list of property owners interested in flood mitigation?	This is performed at the local level, where applicable.
How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	N/A
Are any RiskMAP projects currently underway in your jurisdiction? <ul style="list-style-type: none"> <li>If so, state what projects are underway.</li> </ul>	N/A
How do you make Substantial Damage determinations?	This is performed at the local level.
How many Substantial Damage determinations were declared for recent flood events in your jurisdiction?	N/A
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? <ul style="list-style-type: none"> <li>If there are mitigation properties, how were the projects funded?</li> </ul>	Between 1999 and 2010, 31 individual properties were acquired preserving 1,204 acres of land. A total of \$23,300,000 in County funds were expended while \$11,576,000 in state grants and partnerships with Land Trusts and local municipalities were leveraged. The Open Space Acquisition Program has successfully provided access to the Hudson River (27 acres), preserved steep slopes (500 acres), protected wetlands (350 acres), and preserved a valuable historic resource (0.5 acres). The remaining acreage includes floodplains, scenic vistas, and properties to provide access to other parklands. These parcels are scattered throughout the five Towns in the County and offer a variety of recreational opportunities.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> <li>If not, state why.</li> </ul>	Yes, the maps adequately show flood risk in the County; however, stormwater flooding is a concern and the flood hazard maps do not reflect areas of stormwater flooding.
<b>NFIP Compliance</b>	
What local department is responsible for floodplain management?	The Rockland County Drainage Agency (RCDA) was established under authority of Chapter 846 of the Laws of 1975 to regulate construction and maintenance along designated County regulated streams. In conjunction with the New York State Department of Environmental Conservation (DEC), the Army Corps of Engineers (COE), and local municipalities, the RCDA regulates development and activity along 14 streams - approximately 78 miles - within the County. The Drainage Agency also performs inspections of County Regulated Streams to identify obstructions or damage.
Are any certified floodplain managers on staff in your jurisdiction?	Yes
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> <li>If so, what type of assistance/training is needed?</li> </ul>	County staff receives support and training as needed.
Provide an explanation of NFIP administration services you provide (e.g., permit review, GIS, education/outreach, inspections, engineering capability)	The Rockland County Drainage Agency requires permits for construction activity on properties within 100 feet of the channel lines of any Official Regulated Stream. Additionally, prior to filing at the Rockland County Clerk's Office, all subdivision plats must be signed by the Chairman of the Drainage Agency.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	The County does not issue building permits; therefore, they do not determine substantial improvements.

NFIP Topic	Comments
What are the barriers to running an effective NFIP program in the community, if any?	N/A
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> <li>If so, state the violations.</li> </ul>	N/A
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	N/A
What is the local law number or municipal code of your flood damage prevention ordinance?	N/A
What is the date that your flood damage prevention ordinance was last amended?	N/A
Does your floodplain management program meet or exceed minimum requirements? <ul style="list-style-type: none"> <li>If exceeds, in what ways?</li> </ul>	N/A
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes. The County Planning Board does consider efforts to reduce flood risks when reviewing applications; however, they are advisory to the County Planning Department and Local Boards.
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	N/A

### 9.1.5 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 appreciating a jurisdiction’s overall risk to its hazards of concern. Recent and expected future development trends, including major residential/commercial development and major infrastructure development, are summarized in Table 9.1-11 and Table 9.1-12. Building permits for new construction are issued at the local level.

**Table 9.1-11. Recent Major Development and Infrastructure from 2018 to Present**

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
New Highway Facility	Building	5	26 Scotland Hill Rd	-	Complete
Reconstruction of River Road in Grandview-on-Hudson	Road and drainage	1.7 miles of road	River Rd., Grandview-on-Hudson	-	Complete
Replacement of West Washington Avenue Bridge	Bridge replacement	1	West Washington Avenue in Town of Orangetown	-	In Progress

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

**Table 9.1-12. Known or Anticipated Major Development and Infrastructure in the Next Five Years**

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
Shoreline stabilization in Town of Haverstraw	Shoreline stabilization	-	Bowline Park	-	In process of getting environmental approvals

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

### 9.1.6 Jurisdictional Risk Assessment

The hazard profiles in Volume I provide detailed information regarding each planning partner’s vulnerability to the identified hazards, including summaries of the County’s risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

#### Hazard Event History

Rockland County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 4 (Risk Assessment). 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.

#### Hazard Ranking and Vulnerabilities

The hazard profiles in Volume I have detailed information regarding each planning partner’s vulnerability to the identified hazards. The following presents key risk assessment results for Rockland County.

#### 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 Volume 1, Section 4 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with the highest level of concern.

As discussed in Volume 1, Section 4.4 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Refer to Section 4.4 (Hazard Ranking) for countywide rankings of each hazard.

#### Critical Facilities

Table 9.1-13 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

**Table 9.1-13. Critical Facilities Flood Vulnerability**

Name	Type	Vulnerability		Addressed by Proposed Action	Already Protected to 0.2% Flood Level (describe protections)
		1% Event	0.2% Event		
Rockland Print Co Dam	Dam	X	X	2024-Rockland County-014	No
Rockland Print Co Dam #2 (significant hazard)	Dam	X	X	2024-Rockland County-014	No

Source: Rockland County 2023, FEMA

In addition to critical facilities that are exposed to flooding, the following high hazard dams are in or could impact Rockland County:

- Central Nyack Dam



- Lake Suzanne Dam
- Lake Lucille Dam
- Lake Kanawauke Dam
- Potake Lake Dam
- Pine Grove Lake Dam
- Congers Lake Dam
- First Reservoir Dam
- Garnerville Dam
- Lake Welch Dam
- Lake Sebago Dam
- Lake Deforest Dam
- Tivoli Lake Dam

## Identified Issues

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After review of the County's hazard event history, hazard rankings, hazard location, and current capabilities, the County identified the following vulnerabilities within their community:

- Rockland County has identified emergency shelters to use as needed during flooding and landslides due to dam/levee failures, intense precipitation during severe storms, snowmelt from severe winter storms; extreme temperatures; wildfires; as well as PPE distribution and medical testing during disease outbreaks. Shelters can also provide water and resources during periods of drought. However, the medical capabilities and needs of each shelter needs to be documented. The County needs to develop an inventory of shelters, their capabilities, and what is needed at each to address health concerns and assure the well-being of residents utilizing the shelters, including socially vulnerable populations. During heavy rain and snow events, Routes 303 and 59 near the Palisades Mall are susceptible to flooding which leads to road closures, flood damage, and impacts emergency response to this area of the County. Route 59 is a state road and the County and municipalities do not have jurisdiction over the road and cannot implement mitigation measures. Beach Road, a County road, floods from excessive precipitation from severe storms and severe winter storms with no evacuation route for residents who reside in Stony Point. A Dam/Levee failure may also result in Beach Road flooding with no evacuation route. Disease outbreak incidents can occur anywhere in the County and may result in loss of life if left untreated. Recent outbreak includes the COVID-19 outbreak in 2020. This outbreak resulted in over 900 deaths (from 2020 to 2023) in the County. This type of outbreak has an immediate impact on all healthcare facilities in the County (e.g. hospitals, nursing homes, adult care facilities, etc.) that includes scarce resources (personal protective equipment [PPE], medical personnel) and services (preventative services such as immunizations and elective surgeries).
- Several streambanks in Rockland County, including Minisceongo Creek near Samsondale Road and DMV parking lot, Pascack Brook near Memorial Park in Spring Valley, and the Mahwah River in Suffern are in need of stabilization along embankments due the increase in frequency and severity of precipitation events. If these streambanks fail, sewer lines and water quality will be significantly impacted, nearby roads will experience flooding, and the potential for landslides to occur increases Spook Rock Road Dam is

regulated by NYSDEC and does not meet modern standards. It needs upgrades and replacements to satisfy NYSDEC standards. Garnerville Dam and Suffern Lane Dam are both deficient and need to be upgraded and strengthened to prevent dam breaks or overtopping during flood events caused by extreme precipitation or severe storms. The dams were combined by the NYSDEC because they are close to each other and have overlapping inundation zones. There is flooding in Memorial Park, which is located in the Village of Spring Valley (an Environmental Justice area) due to an increase in frequency and intensity of precipitation events. The County has large debris removals that need to be performed after natural hazard events and it can be a very labor intensive and money intensive process. Some hazard events such as severe storms, fires and earthquakes can lead to a buildup of debris that has the potential to clog or dam waterbodies, leading to increased flood hazards. The County does not have equipment to help clear roadways during flood events, which is an issue that is becoming more and more frequent with an increase in intensity and frequency of precipitation events. Flooded roads may negatively impact the transportation of emergency responders. Natural disasters such as earthquakes, floods, dam/levee failures, landslides, severe storms, winter storms and wildfires may lead to road closures and necessary detours. During these disasters, road closures and/or power outages affect traffic flow. Detours and barricades are used for temporary closures; however, road closures may extend beyond the event until repairs can be made, and emergency signage is needed to alert the public and emergency responders of traffic issues. While the County focuses on completing projects that will ensure a more sustainable and resilient Rockland County, the County does not have a person responsible for coordinating sustainability efforts throughout Rockland County. This means that the County does not develop actions that consider long-term risks or impacts due to climate change from dam/levee failures, droughts, earthquakes, extreme temperatures, floods, landslides, severe storms, severe winter storms, and wildfires. The West Washington Avenue Bridge, which carries County Route 30 over the Pascack Brook, has outlived its useful service life and needs replacement. The roadway approaches are sharp turns on steep grades and are difficult to navigate during adverse weather conditions. The channel alignment of Pascack Brook in relation to West Washington Avenue in the vicinity of the bridge results in embankment scour and roadway flooding during extreme storm events.

- The County has socially vulnerable populations that have accessibility issues in terms of access to emergency notifications. The following critical facilities are located floodplain and identified as vulnerable to the flood, dam failure, and severe storm hazards: Rockland Print County Dam and Rockland Print County Dam #2. The latter of these dam is noted as a significant hazard. Both dams are owned by the Rockland County Drainage Agency.

*\*This issue was identified as a specific area of concern based on resident response to the Rockland County Hazard Mitigation Citizen survey.*

### 9.1.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

## Past Mitigation Initiative Status

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Table 9.1-14 indicates progress on the County's mitigation strategy identified in the 2019 HMP. Actions that are still recommended but not completed or that are in progress are carried forward and combined with new actions as part of the mitigation strategy for this plan update. Previous actions that are now ongoing programs and capabilities are indicated as such and are presented in the capability assessment earlier in this annex.

## Additional Mitigation Efforts

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In addition to the mitigation initiatives completed in Table 9.1-14, Rockland County identified the following mitigation efforts completed since the last HMP:

- Completion of new Grassy Point Bridge over Minisceongo Creek in the Town of Haverstraw in November 2023
- Culvert assessments w/ Soil and Water – assessments finished but inventory documents need to be complete (Ramapo and Clarkstown)

Since the adoption of the County's first HMP, Rockland County has made significant mitigation progress in the following areas:

- The Open Space Acquisition Program first launched in 1999 when County Executive C. Scott Vanderhoef announced the County's would acquire areas of scenic beauty, environmentally sensitive lands, farms, and Hudson River waterfront areas. He realized the importance of protecting the rapidly disappearing natural, cultural, and historic resources in Rockland County and decided to take action to protect these important features for the future by creating the program.
  - Between 1999 and 2010, 31 individual properties were acquired preserving 1,204 acres of land. A total of \$23,300,000 in County funds were expended while \$11,576,000 in state grants and partnerships with Land Trusts and local municipalities were leveraged. The Open Space Acquisition Program has successfully provided access to the Hudson River (27 acres), preserved steep slopes (500 acres), protected wetlands (350 acres), and preserved a valuable historic resource (0.5 acres). The remaining acreage includes floodplains, scenic vistas, and properties to provide access to other parklands. These parcels are scattered throughout the five Towns in the County and offer a variety of recreational opportunities.
  - In 2020, the Program was resurrected, and the County funded the program with \$30 million. Between 2023 and 2024, 39 acres of land have been acquired to preserve from development.

**Table 9.1-14. Status of Previous Mitigation Actions**

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
RC-001	Enhance Education and Outreach	All Hazards	RCOFES	Expand GIS via acquisition of HAZUS-MH to collect and develop more sophisticated mapping and loss estimation to include future changing conditions. Ensure information will be available to the public and to relevant communities and agencies.	1. Ongoing Capability 2. County continues to make updates to their GIS data; share information with all departments when that comes in	1. Discontinue 2. N/A 3. This is an ongoing capability that the County continues to make updates and share information accordingly.
RC-002	Review existing emergency response plans	All Hazards	RCOFES and Planning Department supporting all municipalities	Review existing plans for enhancement opportunities: work with social support agencies, homeowners associations and general public to develop and implement monitoring and warning systems focused on vulnerable populations and provision of adequate shelter facilities	1. Ongoing Capability 2. The County Office of Fire and Emergency Services continues to work with the County VOAD to expand and maintain the Web bases Access and Functional Needs Registry. Health Care Facilities are contacted every six months to update their facility's information. Bi-annually, an electronic copy of registrants is shared with each municipality.	1. Discontinue 2. N/A 3. The County Office of Fire and Emergency Services continues to work with the County VOAD to expand and maintain the Web bases Access and Functional Needs Registry. Health Care Facilities are contacted every six months to update their facility's information. Bi-annually, an electronic copy of registrants is shared with each municipality.
RC-003	HMP Integration	All Hazards	RCOFES and Planning Department supporting all municipalities	Fully integrate the results and recommendations of this HMP into the pending update of the County Comprehensive Emergency Management Plan.	1. Ongoing Capability 2. The County has begun the process of incorporating recommendations from the HMP into the CEMP.	1. Discontinue 2. N/A 3. The County has begun the process of incorporating recommendations from the HMP into the CEMP.
RC-004	Determine the year built and level of protection for critical emergency facilities and shelters	All Hazards	RCOFES, Department of General Services – Facilities Management and Capital Projects Division, Planning Department, and municipal agencies	Determine the year built and level of protection for critical emergency facilities and shelters to highlight structures built before codes and standards were put in place to provide some degree of protection from natural hazards, and pursue potential mitigation opportunities to protect these sites as funding becomes available; if located in the floodplain protect to the 500-year event.	1. Ongoing Capability 2. N/A	1. Discontinue 2. N/A 3. This is an ongoing capability; therefore, it will not be included in the 2024 HMP.

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
RC-005	Ensure continuity of operations at County buildings and shelters	All Hazards	RCOFES	Ensure continuity of operations at County buildings and shelters: <ul style="list-style-type: none"> <li>Rockland Community College – final stage to secure contractor (GOSR funding \$1.3M)</li> <li>County Office Building (Capital Program)</li> <li>Highway Building (Capital Program)</li> </ul>	<ol style="list-style-type: none"> <li>In Progress</li> <li>The installation of the emergency generator for the Rockland Community College Fieldhouse in nearing completion. The generator has been delivered and the electrical contractor is finishing his site work. The foundation of several of the buildings at the new County Highway Garage have been poured. Structural steel has been erected at two of the buildings.</li> </ol>	<ol style="list-style-type: none"> <li>Discontinue</li> <li>N/A</li> <li>Generators have either been purchased and installed or in the process of being installed at the three facilities; therefore, this project will not be included in the 2024 HMP.</li> </ol>
RC-006	Medical Needs at Shelters	All Hazards	RCOFES	Rockland County OFES will explore and document the consideration for medical needs at identified shelters in the County and include as part of the update of the County Emergency Management Plan or the Countywide Sheltering Plan.	<ol style="list-style-type: none"> <li>In Progress</li> <li>Staffing of Special Needs shelters continue to be a hurdle. We may need to focus on identifying one facility within the county.</li> </ol>	<ol style="list-style-type: none"> <li>Include in the 2024 HMP</li> <li>Rockland County OFES will explore and document the consideration for medical needs at identified shelters in the County and include as part of the update of the County Emergency Management Plan or the Countywide Sheltering Plan.</li> <li>N/A</li> </ol>
RC-007	Redundant Backup Public Safety Radio	All Hazards	RCOFES	Redundant Backup Public Safety Radio to be developed to provide backup for 911 dispatch and cellular 911 phone calls	<ol style="list-style-type: none"> <li>Completed</li> <li>The backup 911 Dispatch Center has been completed.</li> </ol>	<ol style="list-style-type: none"> <li>Discontinue</li> <li>N/A</li> <li>Project has been completed; therefore, it will not be included in the 2024 HMP.</li> </ol>
RC-008	Construct a new animal shelter facility	All Hazards	General Services	Construct a new animal shelter facility	<ol style="list-style-type: none"> <li>In Progress</li> <li>Site work is set to commence on the new building this summer. Rockland Green has made an offer to take on the responsibility of managing the shelter. Legislature and County Executive reviewing pros and cons.</li> </ol>	<ol style="list-style-type: none"> <li>Discontinue</li> <li>N/A</li> <li>Project is in progress and work will begin in summer 2024; therefore, it will not be included in the 2024 HMP.</li> </ol>
RC-009	Upgrade radio communications room, equipment; and deploy new records management system	All Hazards	General Services	Upgrade radio communications room, equipment; and deploy new records management system being implemented in Sheriff Department that the local police can use (countywide system)	<ol style="list-style-type: none"> <li>In Progress</li> <li>The County has partially rolled out the Spellman Software. The towns of Haverstraw, Orangetown and Stony Point as well as Villages of Suffern, Piermont, and South Nyack Grandview are currently utilizing the system.</li> </ol>	<ol style="list-style-type: none"> <li>Discontinue</li> <li>N/A</li> <li>Project is in progress and upgrades are being made; therefore, it will not be included in the 2024 HMP.</li> </ol>

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
RC-011	Ensure that the local comprehensive plans incorporate hazard areas, changing conditions, and natural disaster mitigation techniques	All Hazards	County Planning; RCOFES; supporting all municipalities	Ensure that the local comprehensive plans incorporate hazard areas, changing conditions, and natural disaster mitigation techniques through a courtesy review of draft plans by the County Planning Department.	1. Ongoing Capability 2. Local comprehensive plans are completed by their respective municipalities. The County Planning Department provides recommendations for local comprehensive plans through the GML Review process; however, the County Planning Department cannot ensure that its recommendations are incorporated. Hazard areas will be incorporated into the County Comprehensive Plan.	1. Discontinue 2. N/A 3. This is an ongoing capability, and the Planning Department provides recommendations for local comprehensive plans through the GML Review process; however, the County Planning Department cannot ensure that its recommendations are incorporated. Hazard areas will be incorporated into the County Comprehensive Plan.
RC-012	Enhance GIS services and data in the County	All Hazards	Planning Department; RCOFES	Upgrade the County –based GIS emergency management application, targeted to local and County users, to support emergency management planning and response activities, which includes the input of such things as road closures and obstructions.  Develop a mobile application for emergency service/responders regarding road closures/impediments; this will serve as a means to store historic information and to prioritize and strategy improvements and needs.	1. Ongoing Capability 2. Consolidated with RC-001 into a new action	1. Discontinue 2. N/A 3. This is an ongoing capability that the County continues to make updates and share information accordingly.
RC-013	GIS-based review software for Land Use Review and Permitting Committee	All Hazards	Code Enforcement Task Force	The Land Use Review and Permitting Committee, consisting of departments involved in the land planning review and/or permitting process, are looking to deploy a GIS-centric software solution, providing a central database solution. Those departments involved in land use reviews, permits, inspections and/or complaints would be provided access to the central repository for more efficient access to information and monitoring of land use activity.	1. In Progress – to be completed in 2024 2. This will be completed in 2024 and will be integrated with the local government departments as well.	1. Discontinue 2. N/A 3. This will be completed in 2024 and will be integrated with the local government departments as well.

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinued, explain why.
RC-014	Upgrade emergency power system at the New City yard	All Hazards	County Highway Department	New City yard still needs to be updated; currently built a substation on Hunt Road yard (built 2016) that does not have emergency power. This project will service the Highway Department and County Complex as well.	1. Completed 2. Highway has moved to a new facility with emergency power.	1. Discontinue 2. N/A 3. Department moved to new facility
RC-015	Relocate/construct a new highway department facility with emergency backup power out of the floodplain.	Flood, Severe Storm	County Highway Department	Relocate/construct a new highway department facility with emergency backup power out of the floodplain.	1. Complete 2. The department moved into the new facility in November 2023.	1. Discontinue 2. N/A 3. The new facility was completed in November 2023
RC-016	Enhance scour protection on County bridges	Flood, Severe Storm, Severe Winter Storm	County Highway Department	Enhance scour protection on County bridges; not every bridge is built to current scour protection standards (standard changed 2006/2007 timeframe); require to drive the piles and expensive upgrade	1. Ongoing Capability 2. All new bridge replacement projects require scour protection analysis and design to meet NYS DOT Specifications.	1. Discontinue 2. N/A 3. This is an ongoing capability and completed as needed; therefore, it will not be included as an action in the 2024 HMP
RC-017	Identify site(s) to utilize in an emergency to stockpile equipment, snow, and/or debris	All	County Highway Department; municipalities	Identify site(s) to utilize in an emergency to stockpile equipment, snow, and/or debris. Further, develop a stockpile of material/equipment (or access to) for work to respond in a timely fashion.	1. Ongoing Capability 2. County Highway has increased capacity from construction of new facility	1. Discontinue 2. N/A 3. This is an ongoing capability, and the County will continue to stockpile equipment as needed.
RC-018	Develop a robust communication system or plan to allow interoperability in the County	All Hazards	County Highway Department	Develop a robust communication system or plan to allow interoperability in the County to communicate on the same channel; redundancy is needed; and communicate with municipalities	1. Ongoing Capability 2. County performs this and makes updates as necessary	1. Discontinue 2. N/A 3. This is an ongoing capability, and the County performs updates and enhancements as necessary.
RC-019	Pascack Brooke Easement	Flood, Severe Storm, Severe Winter Storm	County Drainage Agency	Stabilize banks and implement erosion control to reduce flooding including concrete structures and plantings.	1. In Progress – near completion; funded through HMGP 2. N/A	1. Discontinue 2. N/A 3. This project is near completion; therefore, it will not be included in the 2024 HMP.



Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
RC-020	Enhance the current mapping capabilities	All Hazards	Rockland County Highway Department	Enhance the current mapping capabilities and purchase hand-held portable devices for use to capture data in the field during emergencies.	1. In Progress – Highway Dept. starting GIS within the department and will be purchasing tablets to use with GIS. 2. N/A	1. Discontinue 2. N/A 3. The County is purchasing the tablets in 2024 and will use the tablets to enhance mapping capabilities while in the field.
RC-021	Conduct a countywide culvert study to determine if upgrades are needed for crossings in the County right-of-way.	Flood, Severe Storm, Severe Winter Storm		Conduct a countywide culvert study to determine if upgrades are needed for crossings in the County right-of-way.	1. Complete 2. Soil & Water completed this project; data is publicly available; completed in Summer 2023 (countywide)	1. Discontinue 2. N/A 3. Project has been complete; therefore, it will not be included in the 2024 HMP
RC-022	Rebuild the Spook Rock Road Spillway	Flood, Severe Storm, Severe Winter Storm	Rockland County Highway Department	Rebuild the Spook Rock Road Spillway	1. In Progress 2. Engineering design underway.	1. Discontinue 2. N/A 3. The County is completing an engineering design and will move forward with rebuilding the spillway once the design is complete.
RC-023	Elevate Beach Road	Flood, Severe Storm	Rockland County Highway Department,	Elevate Beach Road (County Road) (approximately 2-3 feet) to provide access to residents to evacuate flooding (Stony Point)	1. No Progress 2. Project requires adjustment of sanitary sewer main and raising first floor elevation of residences along the road.	1. Include in the 2024 HMP 2. Complete a feasibility study to determine projects that will reduce flooding and provide access to residents living along Beach Road in Stony Point. 3. N/A
RC-024	Armor shoreline to prevent erosion due to wave action in Grassy Point, Stony Point (Town of Haverstraw to intersection with Tompkins Cove hamlet)	Flood, Severe Storm, Severe Winter Storm	Towns of Haverstraw and Stony Point	Armor shoreline to prevent erosion due to wave action in Grassy Point, Stony Point (Town of Haverstraw to intersection with Tompkins Cove hamlet)	1. Complete 2. Project finished in November 2023	1. Discontinue 2. N/A 3. Project completed.
RC-025	Conduct a study to determine feasible mitigation measures to address flooding in Suffern Squires Gate neighborhood	Flood, Severe Storm, Severe Winter Storm	Rockland County Drainage Agency	Conduct a study to determine feasible mitigation measures to address flooding in Suffern Squires Gate neighborhood	1. Complete 2. Study was funded by New York Rising program. In 2022, Suffern acquired 58 properties and demolished buildings, preserving the land for open space.	1. Discontinue 2. N/A 3. Project completed.

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
RC-026	Conduct a Muddy Creek Flood Mitigation Study	Flood, Severe Storm, Severe Winter Storm	Drainage Agency	Conduct a Muddy Creek Flood Mitigation Study to explore mitigation actions to reduce/eliminate impacts to existing development	1. Complete. 2. Difficult project; Town did not indicate interest.	1. Discontinue 2. N/A 3. Studies completed for nearby waterbodies include some findings for Muddy Creek.
RC-027	Coordinate with NYS to identify mitigation measures to reduce impacts from flooding at the Palisades Mall (Route 303 and 59)	Flood, Severe Storm	Drainage Agency, NYS DOT, Clarkstown	Coordinate with NYS to identify mitigation measures to reduce impacts from flooding at the Palisades Mall (Route 303 and 59)	1. In Progress 2. The County has been talking with USACE,	1. Include in the 2024 HMP 2. Coordinate with NYS to identify mitigation measures to reduce impacts from flooding at the Palisades Mall (Route 303 and 59) 3. N/A
RC-028	Repair and consider upsizing six Rockland County storm drainage culverts	Flood, Severe Storm	Rockland County Highway Department, NYSDOT, Federal Highway Administration	Repair and consider upsizing six Rockland County storm drainage culverts that were damaged by Hurricane Irene. The proposed work locations are as follows: <ul style="list-style-type: none"> <li>• CR 106, Route 210, just west of Central Highway in the Town of Stony Point</li> <li>• CR 23, Sickletown Road, just south of the Palisades Interstate Parkway bridge in the Town of Orangetown</li> <li>• CR 23, Strawtown Road, just south of Germonds Road in the Town of Clarkstown</li> <li>• CR 108, Old Route 210, just west of Wayne Avenue in the Town of Stony Point</li> <li>• CR 23, Sickletown Road, just north of Fifth Avenue in the Town of Orangetown</li> <li>• CR 15, Western Highway, just north of Convent Road in the Town of Orangetown</li> </ul>	1. Completed 2. Repairs to culverts have been performed.	1. Discontinue 2. N/A 3. Project has been complete; therefore, it will not be included in the 2024 HMP

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
RC-029	Purchase inflatable tiger dam barrier system to deploy to locations in the County as needed	Flood, Severe Storm	Drainage Agency	Purchase inflatable tiger dam barrier system to deploy to locations in the County as needed to replace time-consuming and labor-intensive sandbags. This will help the county deploy a temporary mitigation measure to areas that flood in the future with a current unknown flood risk (changing future conditions/climate change).	1. Complete – County funded 2. N/A	1. Discontinue 2. N/A 3. Project has been complete; therefore, it will not be included in the 2024 HMP
RC-030	Purchase and install five Kohler Generac Generators	All Hazards	Rockland County Solid Waste Management Authority	Purchase and install five Kohler Generac Generators (150 KW, 480V, 3Phase powered by natural gas). Back-up power is needed at each of the Authority’s three transfer stations, at the Authority’s Materials Recovery Facility (MRF), and at the Authority’s Household Hazardous Waste Facility (HHW) in order to maintain materials management operations and fuel dispensing at such times that there may be severe storms or emergencies with loss of power. Maintaining waste management operations without loss of service is critical to the health, safety, and well-being of the communities within the Service Unit area.	1. No Progress 2. N/A	1. Discontinue 2. N/A 3. No funding has been secured for this project to date.
RC-031	Develop a plan to cover the five towns and 19 villages in the County to integrate roles and responsibilities between all jurisdictions and the Rockland County Solid Waste Management Authority	All Hazards	Rockland County Solid Waste Management Authority; municipalities	Develop a plan to cover the five towns and 19 villages in the County to integrate roles and responsibilities between all jurisdictions and the Rockland County Solid Waste Management Authority	1. No Progress 2. N/A	1. Discontinue 2. N/A 3. The Authority continues to use its existing Solid Waste Management Plan.

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
RC-032	Develop Road/Stream Crossing Management Plans	Flood, Severe Storm, Severe Winter Storm	Rockland County Soil & Water Conservation District	Develop Road/Stream Crossing Management Plans for climate-resilient and fish-friendly road/stream crossings in Hudson River Valley through 2018	1. In Progress 2. Rockland SWCD shifted from Management Plans to providing assessments of road-stream crossings along with a Town Level Inventory Document. We no longer offer the Management Plan. We have completed three Town Inventory Documents for Stony Point, Haverstraw and Orangetown. We just completed all assessments for Ramapo and will work on their Town Inventory Document to be completed in 2023. Clarkstown will take 2 summers to complete assessments and then another year following that to complete their inventory document. Hydrologic modeling is completed by NYS DEC in partnership with Cornell WRI which takes time to receive back. This data is necessary to complete the Town Level Inventory Documents. In all, we anticipate completing the whole County (all 5 towns) by 2026.	1. Discontinue 2. N/A 3. Rockland SWCD shifted from Management Plans to providing assessments of road-stream crossings along with a Town Level Inventory Document. We no longer offer the Management Plan. We have completed three Town Inventory Documents for Stony Point, Haverstraw and Orangetown. We just completed all assessments for Ramapo and will work on their Town Inventory Document to be completed in 2023. Clarkstown will take 2 summers to complete assessments and then another year following that to complete their inventory document. Hydrologic modeling is completed by NYS DEC in partnership with Cornell WRI which takes time to receive back. This data is necessary to complete the Town Level Inventory Documents. In all, we anticipate completing the whole County (all 5 towns) by 2026.
RC-033	Obtain data and mapping from MS4 Program	Flood, Severe Storm, Severe Winter Storm	Cornell Cooperative Extension  Stormwater Consortium of Rockland County – grant administrator and subcontracting to Cornell Cooperative Extension	The Stormwater Consortium will work with the County to obtain data and mapping from MS4 program from Villages and Town integrate into the County GIS map portal. Data standardization is needed of outfall locations and attributes based on differing users and use of the data.	1. Ongoing Capability – County will need to upgrade as part of the new requirements 2. The County continues to discuss this issue with the Stormwater Consortium.	1. Discontinue 2. N/A 3. The Stormwater Consortium will work with the County to obtain data and mapping from MS4 program from Villages and Town integrate into the County GIS map portal. Data standardization is needed of outfall locations and attributes based on differing users and use of the data.

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
RC-034	Watershed Assessment and Management Plan for this tri-county resource (Orange, Rockland, Bergen)	Flood, Severe Storm, Severe Winter Storm	Rockland County Soil & Water Conservation District	The Ramapo River, considered a sole source aquifer, provides drinking water to over 81,000 residents of Rockland County and northern New Jersey. The Rockland County Task Force on Water Resources Management has contracted with Rutgers University to complete a Watershed Assessment and Management Plan for this tri-county resource (Orange, Rockland, Bergen). The plan will include both the Ramapo and Mahwah Rivers watershed area. The final plan will include recommendations on source water protection and improve water qualities of these waterways.	1. Completed 2. Completed within the last 5 years	1. Discontinue 2. N/A 3. Plan has been completed; therefore, this action will not be included in the 2024 HMP.
RC-035	Continue to identify funding sources and acquire open space in the County to increase flood storage.	Flood, Severe Storm	Rockland County Soil & Water Conservation District	Continue to identify funding sources and acquire open space in the County to increase flood storage.	1. In Progress – more funding received to acquire additional properties; completed 1 <sup>st</sup> round to acquire 12 properties and now starting the 2 <sup>nd</sup> round to assess properties to acquire 2. N/A	1. Include in the 2024 HMP 2. Continue to identify funding sources and acquire open space in the County to increase flood storage. 3. N/A
RC-036	Replace aging on-site emergency generators, fuel tanks and transfer switches at sewage pumping stations.	All Hazards	Rockland County Sewer District	Replace aging on-site emergency generators, fuel tanks and transfer switches at sewage pumping stations. At this time 21 of the 27 locations have been identified.	1. Complete 2. N/A	1. Discontinue 2. N/A 3. Project has been completed

Project Number	Project Name	Hazard(s) Addressed	Responsible Party	Brief Summary of the Original Problem and the Solution (Project)	Action Review 1. Status (In Progress, Ongoing Capability, No Progress, Complete) 2. Provide a narrative to describe progress or obstacles that have prevented implementation	Next Steps 1. Project to be included in the 2024 HMP or Discontinue 2. If including action in the 2024 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
RC-037	Identify feasible and cost-effective mitigation measures to protect County-owned pump stations	Flood, Severe Storm	Rockland County Sewer District	Identify feasible and cost-effective mitigation measures to protect the following County-owned pump stations to the 500-year event including purchasing and utilizing portable flood barriers to protect in the short-term: <ul style="list-style-type: none"> <li>• Pascack Pump Station</li> <li>• Fourth Street Pump Station</li> <li>• Mahwah Pump Station</li> <li>• Montebello Pump Station</li> <li>• Pomona Heights Pump Station</li> <li>• Lincoln Street Pump Station</li> </ul>	1. Complete 2. N/A	1. Discontinue 2. N/A 3. Inflatable barriers were purchased to use to protect these structures from flooding.

## Proposed Hazard Mitigation Initiatives for the HMP Update

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Rockland County participated in the mitigation strategy workshop for this HMP to identify appropriate actions to include in a local hazard mitigation strategy. Its comprehensive consideration of all possible activities to address hazards of concern included review of the following FEMA documents:

- FEMA 551 “Selecting Appropriate Mitigation Measures for Floodprone Structures” (March 2007)
- FEMA “Mitigation Ideas—A Resource for Reducing Risk to Natural Hazards” (January 2013).

The action worksheets included at the end of this annex list the mitigation actions that the county would like to pursue in the future to reduce the effects of hazards. The actions 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 the county’s priorities.

Table 9.1-15 indicates the range of proposed mitigation action categories. The four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide range of activities and mitigation measures selected.

Volume I identifies 14 evaluation criteria for prioritizing the mitigation actions. To assist with rating each mitigation action as high, medium, or low priority, a numeric rank is assigned (-1, 0, or 1) for each of the evaluation criteria.

Table 9.1-15 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.



**Table 9.1-15. Analysis of Mitigation Actions by Hazard and Category**

Hazard	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam Failure	3	8	-	2	2	3	2	-	2	4
Disease Outbreak	3	2	-	1	2	-	1	-	-	3
Drought	3	1	-	1	2	-	1	-	-	2
Earthquake	3	3	-	1	2	-	1	-	-	4
Extreme Temperature	3	1	-	1	2	-	1	-	-	2
Flood	5	10	-	2	2	4	2	2	3	5
Landslide	3	4	-	1	2	1	1	1	-	4
Severe Weather	5	10	-	2	2	4	2	2	3	5
Severe Winter Weather	5	7	-	1	2	2	1	1	1	5
Wildfire	3	3	-	1	2	-	1	-	-	4

*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 structures to reduce the impact of hazards.

*Natural Systems Protection (NSP)*—These are actions that minimize damage and losses and 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

*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 preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

*Structural Flood Control Projects (SP)*—Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.

*Emergency Services (ES)*—Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.

Table 9.1-16. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Community Objectives	Total	High / Medium / Low
2024-Rockland County-01	Medical Needs at Shelters	1	1	1	1	1	0	0	1	1	1	0	1	1	1	11	High
2024-Rockland County-02	Reduce Flood Impacts at Palisades Mall	1	1	1	1	0	0	0	1	1	1	1	1	1	1	11	High
2024-Rockland County-03	Elevate Beach Road	1	1	1	1	1	0	1	1	1	1	1	1	1	1	13	High
2024-Rockland County-04	Identify and Accommodate County Facilities for Disease Outbreak Response	1	1	1	0	1	1	1	1	1	1	0	1	1	1	12	High
2024-Rockland County-05	Streambank Stabilization	1	1	1	1	1	-1	1	1	1	1	1	1	1	1	12	High
2024-Rockland County-06	Dam Rehabilitation	1	1	1	1	1	-1	1	1	1	1	1	1	1	1	12	High
2024-Rockland County-07	Pascack Brook Flood Mitigation Project	1	1	1	1	1	-1	1	1	1	1	1	1	1	1	12	High
2024-Rockland County-08	Large Capacity Dump Trailer	0	1	0	0	1	0	1	0	1	1	0	1	0	0	6	Medium
2024-Rockland County-09	Portable Pumps	1	1	1	0	1	0	0	0	1	1	1	1	1	0	9	Medium
2024-Rockland County-10	Temporary Traffic Signals	1	1	0	0	1	0	0	0	1	1	1	0	1	0	7	Medium
2024-Rockland County-011	Sustainability Coordinator for Rockland County	1	1	1	1	1	1	1	0	1	1	1	1	0	1	12	High

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Community Objectives	Total	High / Medium / Low
2024-Rockland County-012	Replacement of West Washington Avenue Bridge over Pascack Brook	1	1	1	0	0	0	0	1	1	1	1	1	1	0	9	Medium
2024-Rockland County-013	Emergency Notifications for Residents with Accessibility Issues	1	1	1	0	1	0	0	1	1	1	0	1	1	0	9	Medium
2024-Rockland County-014	Critical Facilities in the Floodplain	0	1	1	0	0	0	0	0	1	1	1	1	1	0	7	Medium

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-6), Medium (7-10), High (11-14).

**Action 2024-Rockland County-01. Medical Needs at Shelters**

<b>Action Name:</b>	Medical Needs at Shelters		
<b>Description of the Problem:</b>	Rockland County has identified emergency shelters to use as needed during flooding and landslides due to dam/levee failures, intense precipitation during severe storms, snowmelt from severe winter storms; extreme temperatures; wildfires;, as well as PPE distribution and medical testing during disease outbreaks. Shelters can also provide water and resources during periods of drought. However, the medical capabilities and needs of each shelter needs to be documented. The County needs to develop an inventory of shelters, their capabilities, and what is needed at each to address health concerns and assure the well-being of residents utilizing the shelters, including socially vulnerable populations		
<b>Hazard(s) of Concern:</b>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
<b>Description of the Solution:</b>	Rockland County OFES will explore and document the consideration for medical needs at identified shelters in the County and include as part of the update of the County Emergency Management Plan or the Countywide Sheltering Plan. This can include preparedness planning, stockpiling medical supplies and equipment, implementing health screening and assessment processes, training, outreach, and coordination.		
<b>Lead Agency:</b>	Rockland County Office of Fire and Emergency Services		
<b>Supporting Agencies:</b>	Rockland County Department of Health		
<b>Estimated Cost:</b>	\$50,000		
<b>Potential Funding Sources:</b>	County Budget		
<b>Implementation Timeline:</b>	Within five years		
<b>Goals Met:</b>	1, 2, 3		
<b>Benefits:</b>	This action provides resources and shelter for residents after disasters; assists with emergency management response in the County; serves vulnerable populations.		
<b>Mitigation Action Type:</b>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
<b>CRS Category:</b>	<input checked="" type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
<b>Impact on Socially Vulnerable Populations:</b>	Provides services to socially vulnerable populations that may use shelters during emergencies		
<b>Impact on Critical Facilities/Lifelines:</b>	This project is related to critical facilities and community lifelines in Rockland County and will enhance the services shelters provide during emergencies.		
<b>Impact on Capabilities:</b>	This project will be incorporated into the County’s CEMP and sheltering plan.		
<b>Impact on Future Development:</b>	N/A		
<b>Climate Change Considerations:</b>	N/A		
<b>Priority:</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
<b>Alternatives</b>	<b>Action</b>	<b>Evaluation</b>	
	No action	Current problem continues	
	Contract outside medical providers to assist in shelters when needed	Not feasible during emergencies; costly	
	Send sheltered residents to local hospitals for medical care	Not preferred post-disaster as it may have life-safety impacts due to delay of care	

**Action 2024-Rockland County-02. Reduce Flood Impacts at Palisades Mall**

<b>Action Name:</b>	Reduce Flood Impacts at Palisades Mall		
<b>Description of the Problem:</b>	During heavy rain and snow events, Routes 303 and 59 near the Palisades Mall are susceptible to flooding which leads to road closures, flood damage, and impacts emergency response to this area of the County. Route 59 is a state road and the County and municipalities do not have jurisdiction over the road and cannot implement mitigation measures.		
<b>Hazard(s) of Concern:</b>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
<b>Description of the Solution:</b>	The County will complete a feasibility study to determine options to reduce or eliminate flooding in this section of the County and will implement the best and most cost-effective solutions. The County will also coordinate with New York State to address cost effective solutions to mitigate flood issues along Route 59.		
<b>Lead Agency:</b>	Rockland County Highway Department and Drainage Agency		
<b>Supporting Agencies:</b>	NYSDOT, Town of Clarkstown		
<b>Estimated Cost:</b>	High (> \$1,000,000)		
<b>Potential Funding Sources:</b>	FEMA BRIC and FMA, NYSDOT		
<b>Implementation Timeline:</b>	Within five years		
<b>Goals Met:</b>	1, 2, 4, 6		
<b>Benefits:</b>	This action allows for continuity of operations, reduces/eliminates flood damage, and keeps major roadways open and accessible.		
<b>Mitigation Action Type:</b>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
<b>CRS Category:</b>	<input type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
<b>Impact on Socially Vulnerable Populations:</b>	Allows the road to remain accessible during emergencies		
<b>Impact on Critical Facilities/Lifelines:</b>	Allows the road to remain accessible during emergencies		
<b>Impact on Capabilities:</b>	N/A		
<b>Impact on Future Development:</b>	N/A		
<b>Climate Change Considerations:</b>	Climate change projections will be considered when developing the feasibility study and identifying mitigation measures to reduce or eliminate flooding		
<b>Priority:</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
<b>Alternatives</b>	<b>Action</b>	<b>Evaluation</b>	
	No action	Current problem continues	
	Acquire all homes in this section of Clarkstown/Rockland County	Requires property owner consent to acquire homes; road will still flood and impact access points in the Town; costly	
	Elevate all homes in this section of Clarkstown/Rockland County	Requires property owner consent to elevate homes; road will still flood and impact access points in the Town; costly	

**Action 2024-Rockland County-03. Elevate Beach Road**

<b>Action Name:</b>	Elevate Beach Road		
<b>Description of the Problem:</b>	Beach Road, a County road, floods from excessive precipitation from severe storms and severe winter storms with no evacuation route for residents who reside in Stony Point. A Dam/Levee failure may also result in Beach Road flooding with no evacuation route.		
<b>Hazard(s) of Concern:</b>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
<b>Description of the Solution:</b>	The County will elevate Beach Road (County Road) (approximately two to three feet) to provide access to residents to evacuate flooding in Stony Point.		
<b>Lead Agency:</b>	Rockland County Highway Department and Engineer		
<b>Supporting Agencies:</b>	Town of Stony Point		
<b>Estimated Cost:</b>	\$1 million+		
<b>Potential Funding Sources:</b>	CDBG-DR, FEMA BRIC and FMA, County Budget		
<b>Implementation Timeline:</b>	Within five years		
<b>Goals Met:</b>	All		
<b>Benefits:</b>	The County will protect the roadway from future flood damages and allows it to remain open to access the Town		
<b>Mitigation Action Type:</b>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
<b>CRS Category:</b>	<input type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
<b>Impact on Socially Vulnerable Populations:</b>	Allows the road to remain accessible during emergencies		
<b>Impact on Critical Facilities/Lifelines:</b>	Allows the road to remain accessible during emergencies		
<b>Impact on Capabilities:</b>	N/A		
<b>Impact on Future Development:</b>	N/A		
<b>Climate Change Considerations:</b>	The County will determine the height at which the road needs to be elevated and will consider climate change projections to ensure it is at a height that will be protected from future events		
<b>Priority:</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
<b>Alternatives</b>	<b>Action</b>	<b>Evaluation</b>	
	No action	Current problem continues	
	Acquire all homes along Beach Road	Requires property owner consent to acquire homes; road will still flood and impact access points in the Town; costly	
	Elevate all homes along Beach Road	Requires property owner consent to elevate homes; road will still flood and impact access points in the Town; costly	

**Action 2024-Rockland County-04. Identify and Accommodate County Facilities for Disease Outbreak Response**

<b>Action Name:</b>	Identify and Accommodate County Facilities for Disease Outbreak Response		
<b>Description of the Problem:</b>	Disease outbreak incidents can occur anywhere in the County and may result in loss of life if left untreated. Recent outbreak includes the County COVID-19 outbreak in 2020. This outbreak resulted in over 900 deaths (from 2020 to 2023) in the County. This type of outbreak has an immediate impact on all healthcare facilities in the County (e.g. hospitals, nursing homes, adult care facilities, etc.) that includes scarce resources (PPE, medical personnel) and services (preventative services such as immunizations and elective surgeries).		
<b>Hazard(s) of Concern:</b>	<input type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input type="checkbox"/> Flood <input type="checkbox"/> Landslide <input type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
<b>Description of the Solution:</b>	The County will coordinate with hospitals and critical facilities to ensure all are prepared for a disease outbreak. The physical area to be affected will include healthcare facilities' ability to reorganize their existing space to accommodate the results of a disease outbreak. Facilities will need to be ready to quickly shift their existing space to accommodate sudden surges of patients while also providing space for day-to-day operations. County space will need to be identified to assist with any type of mass vaccination and testing. Currently there are plans to utilize the County's large indoor facilities such as Rockland Community College and the Palisades Mall to provide treatment to large number of County/regional residents.		
<b>Lead Agency:</b>	Rockland County Department of Health (in conjunction with the County's Sheriff's Office).		
<b>Supporting Agencies:</b>	NYS DOH, Rockland County Sheriff's Department and Rockland County's Five Towns.		
<b>Estimated Cost:</b>	Modifications to hospitals and to County sites may not cost much (re-design of existing space) or may cost \$2 million for the County's two major hospitals (\$1million per hospital).		
<b>Potential Funding Sources:</b>	FEMA HMGP		
<b>Implementation Timeline:</b>	Short-term (Two to three years)		
<b>Goals Met:</b>	1, 2, 5		
<b>Benefits:</b>	The benefits will be lifesaving. Loss of life will occur again if no financial resources are available to the County healthcare systems to deal with another COVID-19 pandemic scenario.		
<b>Mitigation Action Type:</b>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
<b>CRS Category:</b>	<input checked="" type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
<b>Impact on Socially Vulnerable Populations:</b>	Most of the deaths that will occur there is a disease outbreak will affect underserved communities in the County. It did during COVID-19 and it will happen again if such a scenario would happen again in the County.		
<b>Impact on Critical Facilities/Lifelines:</b>	Providing increased services/spaces in healthcare facilities and in the County, will lessen the burden on the County's existing healthcare infrastructure and ultimately save lives.		
<b>Impact on Capabilities:</b>	N/A		
<b>Impact on Future Development:</b>	N/A		
<b>Climate Change Considerations:</b>	N/A		
<b>Priority:</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
<b>Alternatives</b>	<b>Action</b>	<b>Evaluation</b>	
	No action	Current problem continues	



	Utilize healthcare facilities for response	Not feasible; healthcare facilities and hospitals will already be at capacity and unable to assist the County with day-to-day response and services related to disease outbreak events
	Stockpile supplies	While supplies are needed for response, it does not address the need for specific locations to provide vaccinations, etc.

**Action 2024-Rockland County-05. Streambank Stabilization**

<b>Action Name:</b>	Streambank Stabilization	
<b>Description of the Problem:</b>	Several streambanks in Rockland County, including Minisceongo Creek near Samsondale Road and DMV parking lot, Pascack Brook near Memorial Park in Spring Valley, and the Mahwah River in Suffern are in need of stabilization along embankments due the increase in frequency and severity of precipitation events. If these streambanks fail, sewer lines and water quality will be significantly impacted, nearby roads will experience flooding, and the potential for landslides to occur increases	
<b>Hazard(s) of Concern:</b>	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
<b>Description of the Solution:</b>	The County will conduct stream bank studies to determine what area need stabilization and the County will implement the best and most cost-effective solution. The following will also be completed to stabilize the streambanks in Rockland County: <ul style="list-style-type: none"> <li>• Minisceongo Creek Embankment Stabilization near Samsondale Rd (embankment eroded exposing sewer waste line)</li> <li>• Minisceongo Creek Embankment Stabilization near DMV parking lot (just upstream of State Rt 9W): gabion basket retaining wall collapsed, we will do an emergency repair and look to stabilize the entire length of the South side of the Creek</li> <li>• Mahwah River Embankment Stabilization Project--stabilize a failed section of embankment along the Mahwah River in Suffern, NY to protect a large sewer line.</li> </ul>	
<b>Lead Agency:</b>	Rockland County Drainage Agency	
<b>Supporting Agencies:</b>	Rockland County Highway Department	
<b>Estimated Cost:</b>	High (> \$1,000,000)	
<b>Potential Funding Sources:</b>	NYSDEC Water Quality Improvement Project (WQIP) Program, USDA Emergency Watershed Protection Program (EWPP), County Budget, FEMA BRIC and HMGP	
<b>Implementation Timeline:</b>	Short-term (Two to three years)	
<b>Goals Met:</b>	1, 2, 7	
<b>Benefits:</b>	This action protects against infrastructure failure by embankment stabilizations, protect against loss of life or property in the case of a dam failures, enable Environmental Justice community to better utilize park and parking lot	
<b>Mitigation Action Type:</b>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
<b>CRS Category:</b>	<input type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input checked="" type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
<b>Impact on Socially Vulnerable Populations:</b>	N/A	

<b>Impact on Critical Facilities/Lifelines:</b>	The County will stabilize embankments to protect sewer lines and bodies of water.		
<b>Impact on Capabilities:</b>	N/A		
<b>Impact on Future Development:</b>	N/A		
<b>Climate Change Considerations:</b>	Some erosion and flooding conditions may occur more frequently because of climate change; therefore, this project will help reduce the impacts of failing streambanks.		
<b>Priority:</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
<b>Alternatives</b>	<b>Action</b>	<b>Evaluation</b>	
	No action	Current problem continues	
	Retreat from areas near stream	Costly, unpopular	
	Levees along stream	Not feasible/environmentally damaging, costly	

**Action 2024-Rockland County-06. Dam Rehabilitation**

<b>Action Name:</b>	Dam Rehabilitation	
<b>Description of the Problem:</b>	Spook Rock Road Dam is regulated by NYSDEC and does not meet modern standards. It needs upgrades and replacements to satisfy NYSDEC standards. Garnerville Dam and Suffern Lane Dam are both deficient and need to be upgraded and strengthened to prevent dam breaks or overtopping during flood events caused by extreme precipitation or severe storms. The dams were combined by the NYSDEC because they are close to each other and have overlapping inundation zones.	
<b>Hazard(s) of Concern:</b>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
<b>Description of the Solution:</b>	The County will replace spillway, replace parapet, and redo the roadway for Spook Rock Road Dam. In 2025, the County will contract an engineering firm to examine the Garnerville Dam and the Suffern Lane Dam (both along the Minisceongo Creek), and will implement cost-effective solutions to be rebuild and upgraded the dams.	
<b>Lead Agency:</b>	Rockland County Drainage Agency	
<b>Supporting Agencies:</b>	Rockland County Highway Department	
<b>Estimated Cost:</b>	High (>\$1,000,000)	
<b>Potential Funding Sources:</b>	FEMA High-Hazard Potential Dam (HHPD) program, NYSDEC County Budget	
<b>Implementation Timeline:</b>	Short-term (Two to three years)	
<b>Goals Met:</b>	1, 2, 7	
<b>Benefits:</b>	This action protects against infrastructure failure by embankment stabilizations, protect against loss of life or property in the case of a dam failures, enable Environmental Justice community to better utilize park and parking lot	
<b>Mitigation Action Type:</b>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
<b>CRS Category:</b>	<input type="checkbox"/> Preventative Measures (PR) <input checked="" type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
<b>Impact on Socially Vulnerable Populations:</b>	N/A	

Impact on Critical Facilities/Lifelines:	The County will upgrade dams to help prevent failures and stabilize embankments to protect sewer lines		
Impact on Capabilities:	N/A		
Impact on Future Development:	N/A		
Climate Change Considerations:	Some erosion and flooding conditions may occur more frequently because of climate change; therefore, this project will help reduce the impacts of failing streambanks.		
Priority:	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
Alternatives	<b>Action</b>	<b>Evaluation</b>	
	No action	Current problem continues	
	Repair Only	Will not meet Dam Safety requirements	
	Remove Dam	Dam cannot be removed for safety reason.	

**Action 2024-Rockland County-07. Pascack Brook Flood Mitigation Project**

Action Name:	Pascack Brook Flood Mitigation Project		
Description of the Problem:	There is flooding in Memorial Park, which is located in the Village of Spring Valley (an Environmental Justice area) due to an increase in frequency and intensity of precipitation events.		
Hazard(s) of Concern:	<input type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
Description of the Solution:	The County will hire an engineering firm to analyze and identify proposed solutions to flooding in Memorial Park in Spring Valley. This area of the County is identified as an environmental justice area and flooding in this area impacts the widely used park/playground/soccer fields, parking lot in the Village.		
Lead Agency:	Rockland County Drainage Agency		
Supporting Agencies:	Rockland County Highway Department, Spring Valley		
Estimated Cost:	High (> \$1,000,000)		
Potential Funding Sources:	FEMA BRIC and FMA, County Budget		
Implementation Timeline:	Short-term (Two to three years)		
Goals Met:	1, 2, 7		
Benefits:	This action protects against infrastructure failure by embankment stabilizations, protects against loss of life or property in the case of a dam failures, and enables Environmental Justice community to better utilize park and parking lot		
Mitigation Action Type:	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
CRS Category:	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
Impact on Socially Vulnerable Populations:	Pascack Brook Flood Mitigation Project is in downtown Spring Valley, NY. Preventing or lowering the flood risk will benefit an Environmental Justice community.		
Impact on Critical Facilities/Lifelines:	N/A		
Impact on Capabilities:	N/A		
Impact on Future Development:	N/A		

<b>Climate Change Considerations:</b>	Some erosion and flooding conditions may occur more frequently as a result of climate change; therefore, this project will help reduce the impacts of failing streambanks.		
<b>Priority:</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
<b>Alternatives</b>	<b>Action</b>	<b>Evaluation</b>	
	No action	Current problem continues	
	Elevate roadways	Costly and may not solve problem	
	Buyout homes	Costly, negative social impacts	

**Action 2024-Rockland County-08. Large Capacity Dump Trailer**

<b>Action Name:</b>	Large Capacity Dump Trailer		
<b>Description of the Problem:</b>	The County has large debris removals that need to be performed after natural hazard events and it can be a very labor intensive and money intensive process. Some hazard events such as severe storms, fires and earthquakes can lead to a buildup of debris that has the potential to clog or dam waterbodies, leading to increased flood hazards.		
<b>Hazard(s) of Concern:</b>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire	
<b>Description of the Solution:</b>	The County will purchase a large dump trailer, which will allow more material to be removed in less trips. This will also reduce the number of trucks needed for debris removal at each location, and will also reduce the amount of time and money needed to complete debris removal.		
<b>Lead Agency:</b>	Rockland County Highway Department		
<b>Supporting Agencies:</b>	N/A		
<b>Estimated Cost:</b>	Medium (\$80,000)		
<b>Potential Funding Sources:</b>	County Budget, FEMA Emergency Management Performance Grants		
<b>Implementation Timeline:</b>	Short-term (Two to three years)		
<b>Goals Met:</b>	2, 5		
<b>Benefits:</b>	This action will improve response time and assist with debris removal after hazard events		
<b>Mitigation Action Type:</b>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
<b>CRS Category:</b>	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)	
<b>Impact on Socially Vulnerable Populations:</b>	N/A		
<b>Impact on Critical Facilities/Lifelines:</b>	Allows emergency routes to remain accessible and free from debris; providing continuity of operations during response and recovery		
<b>Impact on Capabilities:</b>	N/A		
<b>Impact on Future Development:</b>	N/A		
<b>Climate Change Considerations:</b>	N/A		
<b>Priority:</b>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
<b>Alternatives</b>	<b>Action</b>	<b>Evaluation</b>	

	No action	Current problem continues
	Initiate shared services agreements with neighboring counties	Not feasible as other counties may need the equipment themselves; equipment may not always be available
	Contract outside contractors	Can be costly and may have limited availability during and after events

**Action 2024-Rockland County-09. Portable Pumps**

<b>Action Name:</b>	Portable Pumps	
<b>Description of the Problem:</b>	The County does not have equipment to help clear roadways during flood events, which is an issue that is becoming more and more frequent with an increase intensity and frequency of precipitation events. Flooded roads may negatively impact the transportation of emergency responders.	
<b>Hazard(s) of Concern:</b>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire
<b>Description of the Solution:</b>	The Town will purchase 4 portable 6-inch pumps along with hoses and accessories to clear flooded roads. The pumps will be used in various locations throughout the County to allow draining of roads inundated by floodwaters to ensure access for emergency responders	
<b>Lead Agency:</b>	Rockland County Highway Department	
<b>Supporting Agencies:</b>	N/A	
<b>Estimated Cost:</b>	High (\$100,000)	
<b>Potential Funding Sources:</b>	County Budget, FEMA HMGP	
<b>Implementation Timeline:</b>	Short-term (Two to three years)	
<b>Goals Met:</b>	1, 2	
<b>Benefits:</b>	This action promotes risk reduction; continuity of operations; access to critical facilities and community lifelines.	
<b>Mitigation Action Type:</b>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
<b>CRS Category:</b>	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
<b>Impact on Socially Vulnerable Populations:</b>	Keeps roadways accessible to emergency personnel and residents	
<b>Impact on Critical Facilities/Lifelines:</b>	Keeps roadways accessible to emergency personnel and residents	
<b>Impact on Capabilities:</b>	N/A	
<b>Impact on Future Development:</b>	N/A	
<b>Climate Change Considerations:</b>	N/A	
<b>Priority:</b>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low
<b>Alternatives</b>	<b>Action</b>	<b>Evaluation</b>
	No action	Current problem continues
	Install permanent floodwalls	Not feasible as it is not a portable solution

	Elevate all floodprone roadways in the County	Not feasible and costly; the County does not have jurisdiction over some roads
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**Action 2024-Rockland County-010. Temporary Traffic Signals**

<b>Action Name:</b>	Temporary Traffic Signals	
<b>Description of the Problem:</b>	Natural disasters such as earthquakes, floods, dam/levee failures, landslides, severe storms, winter storms and wildfires may lead to road closures and necessary detours. During these disasters, road closures and/or power outages affect traffic flow. Detours and barricades are used for temporary closures; however, road closures may extend beyond the event until repairs can be made, and emergency signage is needed to alert the public and emergency responders of traffic issues.	
<b>Hazard(s) of Concern:</b>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
<b>Description of the Solution:</b>	The County will purchase temporary traffic signals in various languages that can be used to direct traffic during road closures or used when traffic signals are damaged so that socially vulnerable populations that do not speak English can understand the signs.	
<b>Lead Agency:</b>	Rockland County Highway Department	
<b>Supporting Agencies:</b>	N/A	
<b>Estimated Cost:</b>	High (\$300,000)	
<b>Potential Funding Sources:</b>	FEMA HMGP, County Budget	
<b>Implementation Timeline:</b>	Short-term (Four to five years)	
<b>Goals Met:</b>	1, 2	
<b>Benefits:</b>	This action promotes risk reduction and continuity of operations.	
<b>Mitigation Action Type:</b>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
<b>CRS Category:</b>	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
<b>Impact on Socially Vulnerable Populations:</b>	This action aims to provide emergency signage that can be interpreted by those that do not speak English.	
<b>Impact on Critical Facilities/Lifelines:</b>	Maintains control of intersections and detours during storm events.	
<b>Impact on Capabilities:</b>	N/A	
<b>Impact on Future Development:</b>	N/A	
<b>Climate Change Considerations:</b>	N/A	
<b>Priority:</b>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low
<b>Alternatives</b>	<b>Action</b>	<b>Evaluation</b>
	No action	Current problem continues
	Install generators at each traffic light	Not a portable option; the County will still need someone to guide traffic
	Utilize staff to direct traffic	Not feasible; restricts availability of staff to assist with response and recovery

**Action 2024-Rockland County-011. Sustainability Coordinator for Rockland County**

<b>Action Name:</b>	Sustainability Coordinator for Rockland County	
<b>Description of the Problem:</b>	While the County focuses on completing projects that will ensure a more sustainable and resilient Rockland County, the County does not have a person responsible for coordinating sustainability efforts throughout Rockland County. This means that the County does not develop actions that consider long-term risks or impacts due to climate change from dam/levee failures, droughts, earthquakes, extreme temperatures, floods, landslides, severe storms, severe winter storms, and wildfires.	
<b>Hazard(s) of Concern:</b>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
<b>Description of the Solution:</b>	<p>Rockland County Department of Planning will select and hire a person to serve as the Sustainability Coordinator for Rockland County. Responsibilities include:</p> <ul style="list-style-type: none"> <li>• Implementing and overseeing the County’s Sustainability Program by developing goals, actions, strategies and providing leadership for the County’s participation and involvement in federal and New York State sustainability programs such as the Climate Smart Communities (CSC) and Clean Energy Communities (CEC) programs;</li> <li>• Coordinate with County departments to implement, collect and submit documentation required to achieve CSC certification and CEC designation;</li> <li>• Coordinate the preparation of a Greenhouse Gas (GHG) Inventory and a Climate Action Plan (CAP), regularly reviewing and updating the CAP;</li> <li>• Assist in the creation of a (CSC) Task Force by organizing and helping to facilitate Task Force meetings to discuss progress, provide recommendations and strategies, prepare agendas and meeting minutes;</li> <li>• Develop, draft, and recommend regulatory action, policies and procedures related to sustainability initiatives;</li> <li>• Identify grant funding opportunities, complete and submit grant applications, administer and manage grants needed to implement the sustainability programs;</li> <li>• Prepare timely responses to requests for information from the public, advisory board members, and committees, appointed and elected government officials;</li> <li>• Develop and participates in studies involving research, investigation, and analysis of sustainability initiatives, including but not limited to, energy and water conservation, renewable energy, greenhouse gas emissions reduction, land use and smart growth, transportation, materials management, climate justice and disadvantaged communities, and climate adaptation and resiliency planning, etc.;</li> <li>• Participate in other County planning efforts (i.e., Comprehensive Plan, Multi-jurisdictional Hazard Mitigation Plan, Corridor Studies, Water Conservation Plan, Economic Development Plans, Housing Plans) to ensure coordination with the County Sustainability Program.</li> </ul> <p>This position would help develop projects that lessen the impacts of climate-influenced hazards by integrating climate projections and considerations into the development of projects.</p>	
<b>Lead Agency:</b>	Rockland County Department of Planning	
<b>Supporting Agencies:</b>	Rockland County Division of Environmental Resources, Rockland County Legislature	
<b>Estimated Cost:</b>	Low (Staff time)	
<b>Potential Funding Sources:</b>	County Budget	
<b>Implementation Timeline:</b>	Short-term (Within 2 years)	
<b>Goals Met:</b>	1, 2, 3, 4, 5, 6, 7	



<b>Benefits:</b>	Someone to oversee the County’s sustainability program and assist the County with implementing the program and providing services to the different county departments		
<b>Mitigation Action Type:</b>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)	
<b>CRS Category:</b>	<input checked="" type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)	
<b>Impact on Socially Vulnerable Populations:</b>	N/A		
<b>Impact on Critical Facilities/Lifelines:</b>	N/A		
<b>Impact on Capabilities:</b>	This action will provide additional capabilities to Rockland County and supports sustainability efforts across the County.		
<b>Impact on Future Development:</b>	N/A		
<b>Climate Change Considerations:</b>	The sustainability coordinator will review and factor in climate change information into plans, programs, and other initiatives.		
<b>Priority:</b>	<input checked="" type="checkbox"/> High	<input type="checkbox"/> Medium	<input type="checkbox"/> Low
<b>Alternatives</b>	<b>Action</b>	<b>Evaluation</b>	
	No action	Current problem continues	
	Hire an environmental consultant to provide these services	Not a full-time county employee and may not be fully available	
	Have current staff take on these roles/responsibilities	Not feasible as department staff have responsibilities and requirements; additional roles/responsibilities will increase workload and they cannot focus on the sustainability aspect	

**Action 2024-Rockland County-012. Replacement of West Washington Avenue Bridge over Pascack Brook**

<b>Action Name:</b>	Replacement of West Washington Avenue Bridge over Pascack Brook		
<b>Description of the Problem:</b>	The West Washington Avenue Bridge, which carries County Route 30 over the Pascack Brook has outlived its useful service life and needs replacement. The roadway approaches are sharp turns on steep grades and are difficult to navigate during adverse weather conditions. The channel alignment of Pascack Brook in relation to West Washington Avenue in the vicinity of the bridge results in embankment scour and roadway flooding during extreme storm events.		
<b>Hazard(s) of Concern:</b> <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire	
<b>Description of the Solution:</b>	The project will replace the bridge with a new structure having improved hydraulic capacity, alignment, and scour resistance. The new structure will be upstream of the existing bridge with the stream channel adjusted to improve its alignment with the structure and eliminate or minimize the potential for embankment and foundation scour. The bridge will be designed to accommodate all legal loads. The project will realign the approach roadways between Old Pascack Road and Highland Avenue to improve horizontal and vertical curves and consider replacement of drainage systems.		
<b>Lead Agency:</b>	Rockland County Highway Department		
<b>Supporting Agencies:</b>	Town Highway Department		



<b>Estimated Cost:</b>	High (\$3,000,000)	
<b>Potential Funding Sources:</b>	FEMA HMGP, Federal, State	
<b>Implementation Timeline:</b>	Requests for proposals issued late 2023. Construction expected to begin early 2024.	
<b>Goals Met:</b>	1, 2	
<b>Benefits:</b>	This action will replace the existing bridge, including upgrading drainage systems and realigning channels, so that the roadway will be accessible for evacuations, travel, and emergency response during heavy precipitation and severe storm events.	
<b>Mitigation Action Type:</b> <i>Check all that apply</i>	<input type="checkbox"/> Local Plans and Regulations (LPR) <input checked="" type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input type="checkbox"/> Education and Awareness Programs (EAP)
<b>CRS Category:</b> <i>Check all that apply</i>	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input checked="" type="checkbox"/> Structural Flood Control Projects (SP) <input type="checkbox"/> Emergency Services (ES)
<b>Impact on Socially Vulnerable Populations:</b>	Not applicable	
<b>Impact on Critical Facilities/Lifelines:</b>	This action will identify measures to protect infrastructure in the transportation lifeline, which will lead to the assurance of clear roadways for evacuations, regular travel, and emergency responses.	
<b>Impact on Capabilities</b>	Not applicable	
<b>Impact on Future Development:</b>	Future development in the surrounding area will be less likely to experience damage from flooding and to be isolated due to an impassable bridge.	
<b>Climate Change Considerations:</b>	A warmer atmosphere means more intense precipitation events and storms, which elevates the risk for overtopping.	
<b>Priority:</b> <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low
<b>Alternatives</b>	<b>Action</b>	<b>Evaluation</b>
	No action	Severity of access problem continues, failure potential increases
	Remove the structure	Eliminates critical travel route, likely low political and public support
	Replace structure with current alignment	Current access problems continue

**Action 2024-Rockland County-13. Emergency Notifications for Residents with Accessibility Issues**

<b>Action Name:</b>	Emergency Notifications for Residents with Accessibility Issues	
<b>Description of the Problem:</b>	The County has socially vulnerable populations that have accessibility issues in terms of access to emergency notifications.	
<b>Hazard(s) of Concern:</b>	<input checked="" type="checkbox"/> Dam/Levee Failure <input checked="" type="checkbox"/> Disease Outbreak <input checked="" type="checkbox"/> Drought <input checked="" type="checkbox"/> Earthquake <input checked="" type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input checked="" type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input checked="" type="checkbox"/> Severe Winter Storm <input checked="" type="checkbox"/> Wildfire
<b>Description of the Solution:</b>	The County will perform an assessment of needs to mitigate situation at hand and emergency communication accessibility. The County will ensure that emergency notifications are located in areas where socially vulnerable populations are present.	

<b>Lead Agency:</b>	Office for People with Disabilities	
<b>Supporting Agencies:</b>	Office of Emergency Management	
<b>Estimated Cost:</b>	Medium (\$15,000 to \$20,000)	
<b>Potential Funding Sources:</b>	Rockland County, NY State, Community Development Block Group (CDBG) BRIC (through FEMA)	
<b>Implementation Timeline:</b>	Short-term (Two years)	
<b>Goals Met:</b>	1, 3, and 5	
<b>Benefits:</b>	The County will reduce the risk & costs to first responders in the County by reducing the potential for dangerous rescue operations.	
<b>Mitigation Action Type:</b>	<input checked="" type="checkbox"/> Local Plans and Regulations (LPR) <input type="checkbox"/> Structure and Infrastructure Project (SIP)	<input type="checkbox"/> Natural Systems Protection (NSP) <input checked="" type="checkbox"/> Education and Awareness Programs (EAP)
<b>CRS Category:</b>	<input type="checkbox"/> Preventative Measures (PR) <input type="checkbox"/> Property Protection (PP) <input checked="" type="checkbox"/> Public Information (PI)	<input type="checkbox"/> Natural Resource Protection (NR) <input type="checkbox"/> Structural Flood Control Projects (SP) <input checked="" type="checkbox"/> Emergency Services (ES)
<b>Impact on Socially Vulnerable Populations:</b>	It is specifically targeting socially vulnerable populations because we are concentrating on this population.	
<b>Impact on Critical Facilities/Lifelines:</b>	Accessibility to evacuation routes and shelters, as well as other necessary services as needed.	
<b>Impact on Capabilities</b>	Improvement of local capabilities because it improves accessibility awareness & preparedness.	
<b>Impact on Future Development:</b>	N/A	
<b>Climate Change Considerations:</b>	N/A	
<b>Priority:</b>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium
<b>Alternatives</b>	<b>Action</b>	
	<b>Evaluation</b>	
	No action	Current problem continues
	Door-to-door notification program	Not feasible due to the number of staff needed to support this effort
Mass notification system for vulnerable populations	Not all residents have ways to receive mass notifications	

**Action 2024-Rockland County-14. Critical Facilities in the Floodplain**

<b>Action Name:</b>	2024- Rockland County-14. Critical Facilities in the Floodplain	
<b>Description of the Problem:</b>	The following critical facilities are located floodplain and identified as vulnerable to the flood, dam failure, and severe storm hazards: Rockland Print County Dam and Rockland Print County Dam #2. The latter of these dam is noted as a significant hazard. Both dams are owned by the Rockland County Drainage Agency.	
<b>Hazard(s) of Concern:</b> <i>Check all that apply</i>	<input checked="" type="checkbox"/> Dam/Levee Failure <input type="checkbox"/> Disease Outbreak <input type="checkbox"/> Drought <input type="checkbox"/> Earthquake <input type="checkbox"/> Extreme Temperature	<input checked="" type="checkbox"/> Flood <input type="checkbox"/> Landslide <input checked="" type="checkbox"/> Severe Storm <input type="checkbox"/> Severe Winter Storm <input type="checkbox"/> Wildfire

<b>Description of the Solution:</b>	The Drainage Agency will evaluate the need for potential mitigation projects to protect the dams to the 500-year flood or worst-case scenario. Potential feasible projects may include the following: elevations, dry floodproofing, backup power supply, retrofits, or relocation. The private owners will need to determine the most cost effective and feasible mitigation action for these facilities.		
<b>Lead Agency:</b>	Rockland County Drainage Agency		
<b>Supporting Agencies:</b>	Rockland County OFES		
<b>Estimated Cost:</b>	Low (< \$10,000)		
<b>Potential Funding Sources:</b>	Town Operating Budget		
<b>Implementation Timeline:</b>	Short-term (< 5 years)		
<b>Goals Met:</b>	2		
<b>Benefits:</b>	Low (> \$10,000)		
<b>Mitigation Action Type:</b> <i>Check all that apply</i>	<input type="checkbox"/> Local Plans and Regulations (LPR)	<input type="checkbox"/> Natural Systems Protection (NSP)	<input checked="" type="checkbox"/> Education and Awareness Programs (EAP)
	<input type="checkbox"/> Structure and Infrastructure Project (SIP)		
<b>CRS Category:</b> <i>Check all that apply</i>	<input type="checkbox"/> Preventative Measures (PR)	<input type="checkbox"/> Natural Resource Protection (NR)	<input type="checkbox"/> Structural Flood Control Projects (SP)
	<input type="checkbox"/> Property Protection (PP)	<input type="checkbox"/> Emergency Services (ES)	
	<input checked="" type="checkbox"/> Public Information (PI)		
<b>Impact on Socially Vulnerable Populations:</b>	N/A		
<b>Impact on Critical Facilities/Lifelines:</b>	This project aims to ensure the ability of the dams to continue functioning during severe storms so as not to lead to additional flooding.		
<b>Impact on Capabilities:</b>	N/A		
<b>Impact on Future Development:</b>	This project can help mitigate potential damage in the inundation areas.		
<b>Climate Change Considerations:</b>	N/A		
<b>Priority:</b> <i>Check one</i>	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Low
<b>Alternatives</b>	<b>Action</b>		<b>Evaluation</b>
	No action		Problem persists
	Town completes mitigation actions in inundation areas		Does not reduce or eliminate risk