



1.0 COUNTY OF PASSAIC

This jurisdictional annex to the Passaic County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the County of Passaic with reducing losses from future hazard events. This annex is not guidance of what to do when a disaster occurs; its focus is 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 Passaic, describes who participated in the planning process, assesses Passaic's risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

1.1 HAZARD MITIGATION PLANNING TEAM

The County of Passaic 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 Passaic County Office of Emergency Management represented the community on the Passaic 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 2-1 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 I.

Table 2-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Robert Scott, Deputy Coordinator, Office of Emergency Management Address: 300 Oldham Road Wayne, NJ 07470 Phone Number: 201-697-3890 Email: rscott@passaiccountynj.org	Name/Title: Maria Dombayci, Coordinator, Office of Emergency Management Address: 300 Oldham Road Wayne, NJ 07470 Phone Number: 973-904-3621 Email: Mariado@passaiccountynj.org
National Flood Insurance Program Floodplain Administrator	
<i>This is reported at the municipal level.</i>	
Additional Contributors	
Name/Title: Robert Scott, Deputy Coordinator, Office of Emergency Management Method of Participation:	
Name/Title: Maria Dombayci, Coordinator, Office of Emergency Management Method of Participation:	
Name/Title: Andras Holzman, Director of Planning Method of Participation: Participated on the steering committee and throughout the planning process.	
Name/Title: Dr. Arti Kakka, Director of Human Services Method of Participation: Participated on the steering committee and throughout the planning process.	
Name/Title: Jonathan Pera, County Engineer Method of Participation: Participated on the steering committee and throughout the planning process.	
Name/Title: Kelly Ruffel, Director of Cultural and Historic Affairs Method of Participation: Participated on the steering committee and throughout the planning process.	



Primary Point of Contact	Alternate Point of Contact
Name/Title: Kenneth Simpson, Supervisor of Roads Method of Participation: Participated on the steering committee and throughout the planning process.	
Name/Title: George Rosenthal, Sheriff's Office Method of Participation: Participated on the steering committee and throughout the planning process.	

1.2 COMMUNITY PROFILE

1.2.1 Brief History

Passaic County was formed in 1837 from sections of Bergen and Essex Counties. The County is situated in northeastern New Jersey and is made up of 16 municipalities that span approximately 197 square miles. Passaic County is bordered to the north by New York State, to the south by Essex and Morris Counties, to the east by Bergen County, and to the west by Sussex County. The boundaries of the County naturally divide it into northern and southern halves. The northern section of Passaic County is older suburban and rural to semi-rural, entirely in the Highlands Preservation and Planning Areas, with scenic vistas and environmentally sensitive forested areas surrounding reservoirs. Southern Passaic County is suburban and urban and includes the Cities of Passaic, Clifton, and Paterson (Passaic County HMP 2020).

1.2.2 Location

The County is located in the U.S. Census-defined New York-New Jersey Metropolitan Statistical Area. It is located 11.5 miles from the George Washington Bridge, 13 miles from the Lincoln Tunnel, and 17 miles from the Holland Tunnel. Because of its central location, Passaic County boasts easy accessibility by automobile, bus, freight, passenger train, and air from the Tri-State Region. Passaic County is at the crossroads of a number of New Jersey's major interstate highways (Routes 80, 287, 3, 20, 21, 23, 46, the Garden State Parkway, and the New Jersey Turnpike), which link the County to New York, Pennsylvania, and Connecticut. The County's location also provides ready accessibility to three international airports (Newark Liberty, LaGuardia, and John F. Kennedy) along with major international shipping ports (Port Newark and the Elizabeth Marine Terminal). Major freight rail service includes Norfolk Southern and New York, Susquehanna and Western (Passaic County HMP 2020).

Governing Body Format

Passaic County is governed by a seven-member Board of County Commissioners. Each County Commissioner is elected at large for a three-year term. The board is headed by a director, who is selected for a one-year term at the board's annual reorganization meeting (at the first meeting of the year in January). Under Passaic County's commission form of government, County Commissioners discharge both executive and legislative responsibilities.

1.2.3 Population and Social Vulnerability

According to the U.S. Census, the 2020 population for Passaic was 524,118, a 4.6 percent increase from the 2010 Census.

Research has shown that some populations are at greater risk from hazard events because of decreased resources or physical abilities. These populations can be more susceptible to hazard events based on a number of factors including their physical and financial ability to react or respond during a hazard, and the location and construction



quality of their housing. Data from the 2020 U.S. Census indicates that 6.4 percent of the population is 5 years of age or younger, 15.1 percent is 65 years of age or older, 13.3 percent is non-English speaking, 13.3 percent is below the poverty threshold, and 9.0 percent is considered disabled.

ALICE in Passaic County

ALICE is an acronym for Asset Limited, Income Constrained, Employed – households that earn more than the Federal Poverty Level, but less than the basic cost of living for the County. While conditions have improved for some households, many continue to struggle, especially as wages fail to keep pace with the rising cost of household essentials (housing, child care, food, transportation, health care, and a basic smartphone plan). Households below the ALICE Threshold – ALICE households plus those in poverty – can't afford the essentials.

According to 2022 Point-in-Time-Data from ALICE, 35 percent of the 179,292 households in Passaic County are ALICE households (compared to the state average of 26 percent). The median household income in Passaic is \$79,955, and the County sees a labor force participation rate of 66 percent. Passaic County faces a lower-than-average household income compared to the state average of \$96,346, and a higher-than-average poverty rate at 14 percent (compared to the state average of 10 percent) (United for ALICE 2022).

1.3 JURISDICTIONAL CAPABILITY ASSESSMENT AND INTEGRATION

Passaic 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:

- 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 succeed in reducing 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 Passaic to identify opportunities for integrating mitigation concepts into ongoing County procedures.

1.3.1 Planning and Regulatory Capability and Integration

Table 2-2 summarizes the planning and regulatory tools that are available to Passaic.



Table 2-2. Planning 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
CODES, ORDINANCES, & REGULATIONS				
Building Code	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Zoning/Land Use Code	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Subdivision Code	Yes	Subdivision Resolution, amended 2014	County	Passaic County Planning Board
How has or will this be integrated with the HMP and how does this reduce risk?				
All subdivision of land within Passaic County shall be submitted to the County Planning Board for review. All subdivision of land within Passaic County that affects County roads or drainage facilities as set forth herein shall be submitted to the County Planning Board for review and approval.				
A subdivision of land within Passaic County that has been classified as a minor subdivision or is exempt from municipal approval pursuant to 40:55-1. 14 and does not abut or affect County roads or drainage facilities shall be deemed to have been reviewed by the County Planning Board upon receipt of a copy of the sketch plat of said subdivision and shall not require response from the County Planning Board to the municipal agency, however the County Planning Board reserves the right to issue comments thereon.				
A complete subdivision application shall be submitted to the Passaic County Planning Board by the applicant. Incomplete applications shall be returned, if possible, to the applicant with a checklist of missing items.				
Site Plan Code	Yes	Site Plan Resolution, amended 2014	County	Planning Board
How has or will this be integrated with the HMP and how does this reduce risk?				
The County Planning Board conducts site plan review for land development along county roads or areas affecting county drainage facilities. For these types of projects, the County Planning Board must approve for development. All other development, the site plan review process is done at the municipal level.				
Stormwater Management Code	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Post-Disaster Recovery/ Reconstruction Code	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				



	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
Real Estate Disclosure Requirements	Yes	Senate Bill 3110; P. L. 2023, c. 93, July 3, 2023	State	Sellers and Landlords of commercial or residential property

How has or will this be integrated with the HMP and how does this reduce risk?

For leases, the law amends the New Jersey Truth-in-Renting Act, N.J.S.A. 46:8-43 et seq., to require every landlord to notify in writing each of the landlord's tenants, prior to lease signing or renewal, whether the property is located in the Federal Emergency Management Agency (FEMA) Special Flood Hazard Area ("100-year floodplain") or Moderate Risk Flood Hazard Area ("500-year floodplain") and if the landlord has actual knowledge that the rental premises or any portion of the parking areas of the real property containing the rental premises has been subjected to flooding. The law does not apply to (1) landlords who lease commercial space or residential dwellings for less than one month, (2) residential dwellings in a premises containing not more than two units, (3) owner-occupied premises containing not more than three units, or (4) hotels, motels, or other guest houses serving transient or seasonal guests for a period of less than 120 days.

The model notice is to contain the heading "Flood Risk" and questions for the landlord to answer regarding the landlord's actual knowledge of past flooding of the property. The questions regarding the property being in a FEMA Special or Moderate Risk Flood Hazard Area shall not contain the option for "unknown." To determine how the questions are to be answered, FEMA's current flood insurance rate maps for the leased premises area must be consulted. The landlord will be required to answer whether the rental premises or any portions of the parking areas of the real property containing the rental premises ever experienced any flood damage, water seepage, or pooled water due to a natural flood event and, if so, the number of times that has occurred.

The notice to residential tenants must also indicate that flood insurance may be available to renters through FEMA's National Flood Insurance Program to cover their personal property and contents in the event of a flood and that standard renter's insurance does not typically cover flood damage.

For sales, the law also amends the New Jersey Consumer Fraud Act, N.J.S.A. 56:8-1 et seq., to require sellers of real property to disclose, on the property condition disclosure statement, whether the property is located in the FEMA Special or Moderate Risk Flood Hazard Area and any actual knowledge of the seller concerning flood risks of the property to the purchaser before the purchaser becomes obligated under any contract for the purchase of the property.

The disclosure statement must contain the heading "Flood Risk" and ask the seller the following questions:

- Is any or all of the property in the Special Flood Hazard Area ("100-year floodplain") or a Moderate Risk Flood Hazard Area ("500-year floodplain") according to FEMA's current flood insurance rate maps?
- Is the property subject to any requirement under federal law to obtain and maintain flood insurance on the property? Properties in the Special Flood Hazard Area with mortgages from federally regulated or insured lenders are required to obtain and maintain flood insurance.
- Have you ever received assistance from, or are you aware of any previous owners receiving assistance from FEMA, the U.S. Small Business Administration, or any other federal disaster flood assistance for flood damage on the property? For properties that have received flood disaster assistance, the requirement to obtain flood insurance passes down to all future owners.
- Is there flood insurance on the property? A standard homeowner's insurance policy typically does not cover flood damage.
- Is there a FEMA elevation certificate available for the property? If so, it must be shared with the buyer. An elevation certificate is a FEMA form, completed by a licensed surveyor or engineer, that provides critical information about the flood risk of the property and is used by flood insurance providers to determine the appropriate insurance rating for the property.
- Have you ever filed a claim for flood damage to the property with any insurance provider? If the claim was approved, what was the amount received?
- Has the property experienced any flood damage, water seepage, or pooled water due to a natural flood event, such as heavy rainfall, coastal storm surge, tidal inundation, or river overflow? If so, how many times?

Not all provisions of this law have become effective at the time of the writing of this plan.



	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
Growth Management	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Environmental Protection Ordinance(s)	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Flood Damage Prevention Ordinance	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Wellhead Protection	Yes		County and Local	
How has or will this be integrated with the HMP and how does this reduce risk? Protects underground sources of drinking water from contaminants that may adversely affect human health.				
Emergency Management Ordinance	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Climate Change Ordinance	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
PLANNING DOCUMENTS				
Comprehensive/Master Plan	Yes	Passaic County Master Plan	County	Planning and Economic Development
How has or will this be integrated with the HMP and how does this reduce risk? Contains several elements to address a variety of issues around the County, including – <ul style="list-style-type: none">• Transportation• Corridor Enhancement• Green Stormwater Infrastructure• Parks, Recreation and Open Space• Sustainability				
Capital Improvement Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk? This is included in the county's budget each year and performed by the County Administration and Freeholders.				
Disaster Debris Management Plan	Pending	-	County	County Administrator
How has or will this be integrated with the HMP and how does this reduce risk? In progress for the County and all municipalities. County's HMP vulnerability assessment to obtain estimated debris produced during each storm.				
Floodplain Management or Watershed Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				



	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
Stormwater Management Plan	Yes	Passaic County Master Plan, Green Stormwater Infrastructure Element	County	Planning Department
How has or will this be integrated with the HMP and how does this reduce risk? Outlines a comprehensive strategy for stormwater management based on widespread application of low impact development and green stormwater infrastructure.				
Open Space Plan	Yes	Passaic County Master Plan, Parks, Recreation and Open Space Element, 2014	County	Parks and Recreation
How has or will this be integrated with the HMP and how does this reduce risk? Provides detailed recommendations for the maintenance and improvement of all County Parks and Open Space areas.				
Urban Water Management Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Habitat Conservation Plan	Yes		County	
How has or will this be integrated with the HMP and how does this reduce risk? Consider the following: <ul style="list-style-type: none">Does the plan identify and map environmental systems that protect development from hazards?Do environmental policies maintain and restore protective ecosystems?Do environmental policies encourage development outside of protective ecosystems?				
Economic Development Plan	Yes	Passaic County, New Jersey Comprehensive Economic Development Strategy, 2015	County	Economic Development
How has or will this be integrated with the HMP and how does this reduce risk? Brings together the public, non-profit and private sectors to establish a comprehensive framework for economic growth and revitalization in the County. The CEDS Plan is designed to accelerate public/private investment, create job opportunities, advance regional competitiveness, and attract and retain skilled workforce participants.				
Community Wildfire Protection Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Community Forest Management Plan	Yes	Forest Management Plan, 2020	County	County Forester
How has or will this be integrated with the HMP and how does this reduce risk? The Forest Management Plan has directed the County on how to proceed with staying ahead of the Emerald Ash Borer infestation of ash trees. The Forester is working to develop a tree inventory to help guide in the future on all hazard trees. See 2020-Passaic-007.				
Transportation Plan	Yes	Passaic County Master Plan, Transportation Element, 2012	County	Planning Department
How has or will this be integrated with the HMP and how does this reduce risk? Serves as the blueprint for the county's future transportation system including roads, transit, waterways, and bicycle and pedestrian facilities. It identifies the types of policies and investments needed to ensure future mobility for our residents, support economic vitality, and contribute to a high quality of life throughout the County over the next several decades.				
Agriculture Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				



	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
Climate Action/ Resilience/Sustainability Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Tourism Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Business/ Downtown Development Plan	Yes	Passaic County New Jersey Comprehensive Economic Development Strategy, 2015	County	Economic Development
How has or will this be integrated with the HMP and how does this reduce risk? Brings together the public, non-profit and private sectors to establish a comprehensive framework for economic growth and revitalization in the County. The CEDS Plan is designed to accelerate public/private investment, create job opportunities, advance regional competitiveness, and attract and retain skilled workforce participants.				
Other	Yes	Storm Water Pollution Prevention Plan (SWPPP) or 5G3 General Construction Stormwater Permit Guidance	County	Engineering Department
How has or will this be integrated with the HMP and how does this reduce risk? Stormwater runoff from construction sites can cause significant harm to New Jersey's rivers, lakes, and coastal waters if not managed properly. To address these impacts, it is necessary to control soil erosion and sedimentation during land disturbance, as well as minimize stormwater contamination from other construction related activities.				
RESPONSE/RECOVERY PLANNING				
Emergency Operations Plan	Yes	Emergency Operations Plan	County and Local	Emergency Management
How has or will this be integrated with the HMP and how does this reduce risk? Details what each facility or agency will do during a disaster (incident command implementation, command center location and activities, specific plans by department, etc.).				
Continuity of Operations Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Substantial Damage Response Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Threat and Hazard Identification and Risk Assessment	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Post-Disaster Recovery Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Public Health Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other	Yes	Passaic County Code Blue Alert Plan	County	Emergency Management
How has or will this be integrated with the HMP and how does this reduce risk? Ensures that at risk individuals are being protected from weather related exposure and possible death.				



1.3.2 Development and Permitting Capability

Table 2-3 summarizes the capabilities of Passaic to oversee and track development.

Table 2-3. Development and Permitting Capability

	Yes/No	Comment
Do you issue development permits? <ul style="list-style-type: none">If you issue development permits, what department is responsible?If you do not issue development permits, what is your process for tracking new development?	Yes	Planning Board reviews and approves all developments abutting County roads
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	The Planning Board does not issue building permits. The Planning Board provides approvals which then allow applicants to apply for the appropriate permits. Building permits are a municipal responsibility and are issued (along with occupancy permits) only after the applicant receives County Planning Board approval when required. There are County permits that can be required which are obtained through the Passaic County Roads and/or Engineering department including road opening permits and right-of-way access permits. They also need approval to connect to the County stormwater system or encroach into County rights-of-way (Freeholder approval).
Do you have a buildable land inventory? <ul style="list-style-type: none">If you have a buildable land inventory, please describe	No	-
Describe the level of buildout in your jurisdiction.	N/A	

1.3.3 Administrative and Technical Capability

Table 2-4 summarizes potential staff and personnel resources available to Passaic and their current responsibilities that contribute to hazard mitigation.

Table 2-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
ADMINISTRATIVE CAPABILITY		
Planning Board	Yes	Prior to the issuance of any building permit by a municipal building official or any other agency or individual with authority to approve a site plan or issue a building permit, the site plan for any proposed land development along County roads or which will cause stormwater to drain either directly or indirectly to a County road or through any drainage-way, structure, pipe, culvert or facility for which the County is responsible for the construction, maintenance or proper functioning shall be submitted to the County Planning Board for review and approval.



Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
Zoning Board of Adjustment	Yes	The Passaic County Construction Board of Appeals serves as a quasi-judicial body to hear appeals filed by owners of properties in Passaic County from decisions, actions or inaction made by a municipal official.
Planning Department	Yes	<p>The Department of Planning and Economic Development serves as the staff resource for the Board of County Commissioners, the Passaic County Planning Board, Passaic County Agriculture Development Board, and the Open Space, Farmland and Historic Preservation Trust Fund Advisory Committee. Planning and Economic Development also administers the Community Development Block Grant (CDBG) program.</p> <p>The department facilitates the development and redevelopment of communities that offer citizens a high quality of life by meeting their needs for employment, affordable housing, efficient transportation, and access to leisure, recreational and cultural opportunities. The department provides a process that assists citizens and community leaders in directing future changes in the county.</p> <p>The Department maintains and develops spatial data for Passaic County and provides geographic information system (GIS) resources to citizens, businesses, and other county departments. The Passaic County GIS mapping is compiled from existing state GIS datasets such as digitized parcels created from scanned tax maps. The base mapping is organized into Shapefiles and File Geodatabases and is available as countywide data or by municipality.</p>
Mitigation Planning Committee	Yes	Office of Emergency Management – Mitigation Plan Lead
Environmental Board/Commission	No	-
Open Space Board/Committee	Yes	Open Space, Farmland, and Historic Preservation Advisory Committee. The citizens approved an Open Space and Farmland Preservation Trust Fund referendum and an Open Space and Parks Improvement referendum, which were ultimately consolidated as a result of legislative initiative. The County manages and provides grants to municipal and non-profit partners for open space acquisition, park development, and historic preservation projects from the Open Space, Farmland, and Historic Preservation Trust Fund on an annual basis.
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	<p>The Passaic County Roads Division maintains and repairs all county roadways, culverts, catch basins, and guide rails. This consists of 246 miles of roadway throughout 16 municipalities.</p> <p>Roadway maintenance include pavement between the curblines, drainage system, street cleaning, and snow and ice control. Within County Right-of-Ways, warning and</p>



Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
		<p>guide signs and trees are maintained. The services and programs carried out by the Division are to provide for the safe passage of both motorists and pedestrians while using County roads.</p> <p>The Engineering Department protects and enhances the quality of life of residents through various infrastructure projects, including bridges, culverts, drainage systems, and road/traffic operations. This department is charged with preparing plans and specifications, project management and construction inspection of the County's capital improvement projects for the County's 122 bridges, 292 culverts, 246 miles of roadway, associated drainage, five dams, buildings and parks projects.</p> <p>The Engineering Department also maintains records of County facilities, recommends traffic rules and regulations.</p>
Construction/Building/Code Enforcement Department	No	
Emergency Management/Public Safety Department	Yes	The Office of Emergency Management acts as a coordinating agency among local, state, and federal agencies. The Office of Emergency Management works in conjunction with county and municipal health agencies and health care providers, and emergency service personnel including police, fire, EMS, and the Sheriff's Office to coordinate responses in the event of an emergency. The mission of the Office of Emergency Management is to provide expertise and leadership for the Department's emergency management responsibilities through the integration of emergency management programs, functions, and supporting activities to prevent, protect against, mitigate the effects of, respond to, and recover from all hazards
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Engineering, Office of Emergency Management
Mutual aid agreements	Yes	Fire and HazMat
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	No	-
Other	No	-
TECHNICAL/STAFFING CAPABILITY		
Planners or engineers with knowledge of land development and land management practices	Yes	Department of Planning, Department of Engineering
Engineers or professionals trained in building or infrastructure construction practices	Yes	Department of Engineering



Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
Planners or engineers with an understanding of natural hazards	Yes	Department of Engineering
Staff with expertise or training in benefit/cost analysis	Yes	Department of Engineering
Professionals trained in conducting damage assessments		
Personnel skilled or trained in GIS and/or Hazus applications	Yes	Department of Planning and Economic Development
Staff that work with socially vulnerable populations or underserved communities	Yes	Board of Social Services, Board of Mental Health, Youth Services Commission, Public Housing Agency
Environmental scientists familiar with natural hazards	Yes	Contract out on per project basis, as needed
Surveyors	No	-
Emergency manager	Yes	Emergency Management Coordinator at OEM
Grant writers		
Consider the following: Are data and maps from the HMP used to support documentation in grant applications?		
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	No	-

1.3.4 Fiscal Capability

Table 2-5 summarizes financial resources available to Passaic.

Table 2-5. Fiscal Capabilities

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



Financial Resources	Accessible or Eligible to Use? (Yes/No)
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

1.3.5 Education and Outreach Capability

Table 2-6 summarizes the education and outreach resources available to Passaic.

Table 2-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment
Public information officer or communications office	Yes	County has Public Information Officer
Personnel skilled or trained in website development	Yes	IT Department
Hazard mitigation information available on your website	Yes	Mitigation Plan published and OEM mitigation page, Hurricane Survival Guide, natural disaster and emergency preparedness information
Social media for hazard mitigation education and outreach	Yes	Facebook and X (Formerly Twitter)
Citizen boards or commissions that address issues related to hazard mitigation		
Warning systems for hazard events	Yes	Reverse 911 – Sheriff's Department
Natural disaster/safety programs in place for schools		
Organizations that conduct outreach to socially vulnerable populations and underserved populations	Yes	The Department of Human Services is an umbrella social service agency concerned with the planning and funding services for the county's disadvantaged and homeless citizens. Programs operate out of four divisions: Mental Health and Addiction Services, Community Outreach and Family Services, Juvenile Administration, and Workforce Development Board (WDB).
Public outreach mechanisms / programs to inform citizens on natural hazards, risk, and ways to protect themselves during such events		

1.3.6 Community Classifications

Table 2-7 summarizes classifications for community programs available to Passaic.

Table 2-7. Community Classifications

Program	Participating? (Yes/No)	Classification	Date Classified
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	No	-	-
National Weather Service StormReady Certification	No	-	-
Firewise Communities classification	No	-	-



Program	Participating? (Yes/No)	Classification	Date Classified
New Jersey Sustainable Jersey Community	No	-	-
Other: Organizations with mitigation focus (advocacy group, non-government)	No	-	-

N/A = Not applicable

— = Unavailable

1.3.7 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 2-8 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 2-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam Failure	Moderate
Drought	Moderate
Extreme Temperature	Moderate
Flood	Moderate
Geological Hazards	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate
Wildfire	Moderate

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). The floodplain administrator listed in Table 2-1 is responsible for maintaining this information.

1.4.1 NFIP Statistics

Table 2-9 summarizes the NFIP policy and claim statistics for Passaic.

Table 2-9. Passaic NFIP Summary of Policy and Claim Statistics

# Policies	2,150
# Claims (Losses)	9,538



Total Loss Payments	\$267,215,197
# Repetitive Loss Properties (NFIP definition)	884
# Repetitive Loss Properties (FMA definition)	20
# Severe Repetitive Loss Properties	510

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: NJOEM 2024

1.4.2 Flood Vulnerability Summary

Table 2-10 provides a summary of the NFIP program in Passaic.

Table 2-10. NFIP Summary

NFIP Topic	Comments
<i>Floodplain administration is conducted at the municipal level. Refer to the municipal annexes.</i>	

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 2-11 through Table 2-13.

Table 2-11. Number of Building Permits for New Construction Issued Since the Previous HMP

	New Construction Permits Issued			
	Single Family	Multi-Family	Other (commercial, mixed-use, etc.)	Total
<i>Construction permits are issued at the municipal level. Refer to the municipal annexes.</i>				

SFHA = Special Flood Hazard Area (1% flood event)

Table 2-12. Recent Major Development and Infrastructure from 2019 to Present

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zones*	Description / Status of Development
DPW Garage	Garage	1	Route 23	N/A	Fully Built



* Only location-specific hazard zones or vulnerabilities identified.

Table 2-13. 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 Zones*	Description / Status of Development
None Identified					

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 Passaic's risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

1.6.1 Hazard Area

Hazard area maps provided are shown in the hazard profiles in Volume 1. The maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps are provided only for hazards that can be identified clearly using mapping techniques and technologies and for which Passaic has significant exposure. --

1.6.2 Hazard Event History

The history of natural and non-natural hazard events in Passaic is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 2-14 provides details on loss and damage in Passaic during hazard events since the last hazard mitigation plan update.

Table 2-14. Hazard Event History in Passaic

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Passaic
January 20, 2020 – May 11, 2023	Covid-19 Pandemic (EM-3451-NJ, DR-4488-NJ)	Yes	As of September 26, 2023, Passaic County accounted for 7,530 positive cases of COVID-19, and 32 reported deaths (State of New Jersey, 2023).	-
September 1-3, 2021	Remnants of Hurricane Ida (EM-3573-NJ, DR-4614-NJ)	Yes	The remnants of Hurricane Ida produced heavy rainfall and riverine and flash floods. Rainfall totals exceed 3 inches in parts of County; 4 water rescues occurred due to flash flooding.	-



Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Passaic
December 17-23, 2023	Flood	Yes	Over 5 inches of rainfall resulted in major flooding and power outages in the region. State of emergency and evacuations were declared during the initial storm and subsequent riverine flooding.	-

EM = Emergency Declaration (FEMA)

FEMA = Federal Emergency Management Agency

DR = Major Disaster Declaration (FEMA)

N/A = Not applicable

1.6.3 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 Passaic

Hazard Ranking

The participating jurisdictions have differing degrees of vulnerability to the hazards of concern, so each jurisdiction ranked its own degree of risk to each hazard. The community-specific hazard ranking is based on problems and impacts identified by the risk assessment presented in Volume I. 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; community capabilities to address the hazard; and changing future climate conditions. Passaic reviewed the County hazard ranking and individual results to assess the relative risk of the hazards of concern to the community. During the review of the hazard ranking, the County agreed with the following preliminary rankings.

Table 2-15 shows Passaic's final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 2-15. Hazard Ranking

Hazard	Rank
Dam Failure	Medium
Drought	Medium
Extreme Temperature	Medium
Flood	High
Geological Hazards	Low
Severe Weather	Medium
Severe Winter Weather	Medium
Wildfire	Low

Note: The scale is based on the hazard rankings established in Volume I, modified as appropriate based on review by the jurisdiction



Critical Facilities

Table 2-16 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 2-16. Critical Facilities Flood Vulnerability

Name	Type	Vulnerability	
		1% Annual Chance Event	0.2% Annual Chance Event

None Identified

Source: Passaic County 2020 HMP, Passaic County 2024, NJGIN 2017, 2021, 2022, HIFLD 2017, 2018, 2022, 2023, Passaic County Dept. of Planning & Economic Development 2024

In addition to critical facilities that are exposed to flooding, the following high hazard dams are located in Passaic:

- Post Brook Dam
- Green Swamp #1 Dam
- Irish Brook Dam
- Kampfe Lake Dam
- Star Lake Upper Dam
- Cedar Grove North Res Dam
- Haledon Reservoir Dam
- Oldham Pond Dam
- Pompton Lakes Dam
- Sallys Pond Dam
- Monksville Dam
- Furnace Road Dam
- Skyline Lake #2 (Upper) Dam
- Skyline Lake #1 (Lower) Dam
- Erskine Upper Lake Dam
- Cupsaw Lake Dam
- Raymond Dam
- Green Swamp #3 Dam
- Midvale Dam
- Green Swamp #2 Dam
- Overflow Weir Dam
- Wolf Den Dam
- Green Swamp #4 Dam
- Pines Lake Dam



- Point View Dam
- Packanack Lake Dam
- Preakness Hills C.C. Dam No. 1
- Lionshead Lake Dam
- Echo Lake Spillway Dam
- Greenwood Lake Dam
- River Wall Dam
- Upper Mount Glen Lake Dam
- High Crest Lake Dam
- New Jersey No Name # 40 Dam
- Lower Mount Glen Lake Dam
- Macopin Reservoir Dam
- Green Turtle Pond Dam
- Upper Greenwood Lake Dam
- Lookover Lake Dam
- West Milford Lake Dam
- Charlotteburg Dam
- Gordon Lakes Dam
- Echo Lake Intake Dam
- Clinton Reservoir Dam
- Lake Arcadia Dam #1
- Pinecliff Lake Dam
- Lindy's Lake Dam
- Highland Lake Dam
- New Street Reservoir Dam
- Great Notch Reservoir Dam

1.6.4 Identified Issues

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

- The requirements of Green Stormwater Infrastructure within the County Site Plan and Subdivision resolution are not included.
- There is no spatial platform to track asset inventories and their associated status and needs for maintenance and mitigation. An interdepartmental system is needed to support web mapping.
- The County-owned Mount Prospect Avenue in Clifton has drainage issues that produce flooding that affects nearby properties.



- There are several roads throughout the County that frequently flood and become impassable. Drivers will ignore signs or cones to detour traffic and use the flooded roadway, putting themselves and others at risk of potential injury.
- The County experiences consistent flooding along the Passaic River, where there is significant residential development.
- Passaic County contains many underground tanks that provide heating oil and fuel for various critical facilities and other functions. Some tanks are decades old and may be more vulnerable to physical damage in the event of a hazard (i.e., rising water table, soil movement, soil aridity). The Engineering Department recently successfully relocated an underground tank that was beneath a golf course.
- Several critical facilities lack backup generators, which are needed to ensure their continuous accessibility during a hazard event, as exemplified by Hurricane Sandy.
- Portions of the Highlands Rail Trail, both new and future extensions, experience occasional flooding that may block users from traveling along the path.

1.7 MITIGATION STRATEGY AND PRIORITIZATION

This section discusses the status of mitigation actions from the previous HMP, describes proposed hazard mitigation actions, and prioritizes actions to address over the next five years.

1.7.1 Past Mitigation Action Status

Table 2-17 indicates progress on the County's mitigation strategy identified in the 2020 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.

1.7.2 Additional Mitigation Efforts

In addition to the mitigation actions completed in Table 2-17, Passaic identified the following mitigation efforts completed since the last HMP:

- None Identified

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

- None Identified



Table 2-17. 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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020- Passaic County- 001	Countywide Debris Management Plan	Flood, Coastal Storm, Severe Weather, Severe Winter Storm	Passaic County Office of Emergency Management; New Jersey Department of Environmental Protection	Problem: The County does not have a countywide debris management plan with staging areas. Solution: Passaic County OEM will develop a countywide debris management plan, in coordination with NJDEP. OEM will work with all municipalities to identify staging areas and NJDEP will assist with determining if proposed staging areas are located in the floodplain.	1. 2.	1. 2. 3.
2020- Passaic County- 002	Stormwater Infrastructure Upgrades	Flood, Coastal Storm, Severe Weather	Passaic County Engineer	Problem: The storm sewer system requires an increase in capacity along County roadways; locations may be in all municipalities. Currently there are	1. Complete 2.	1. Discontinue 2. Not Applicable 3. This action 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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				<p>three high priority locations identified in need of this work to alleviate flooding</p> <p>Solution: Install new storm sewer systems, consisting of reinforced concrete pipe, inlets, manholes and slope stabilization to eliminate existing ponding, localized flooding and slope erosion along the below listed project limits. The work includes final restorations including replacement of sidewalk impacted by the work, asphalt restorations, and topsoiling and seeding of disturbed areas. Valley Road, Wayne – Location between Little Pond Road and Rose Terrace Jackson Avenue, Wayne – Location between</p>		



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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
				Harmony Lane and a point 600' westerly Passaic Ave, Passaic – Location Terhune Avenue to Pleasant Avenue		
2020-Passaic County-003	Ensure continuity of operations at critical facilities and lifelines by ensuring there is backup power	Flood, Coastal Storm, Severe Weather	Passaic County Office of Emergency Management	<p>Problem: There is no backup power available at County assets that are also considered critical facilities and community lifelines.</p> <p>Solution: Install a permanent generator at the following facilities:</p> <ul style="list-style-type: none">• County Jail• 495 River Street - Procurement, Paterson• 77 Hamilton Street, Paterson• 63 Hamilton Street – Courthouse Annex, Paterson• 930 Riverview Drive, Totowa	1. 2.	1. 2. 3.



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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020- Passaic County- 004	Inventory of dam maintenance and deficiency status	Dam Failure	Department of Engineering	<p>Problem: The County has 49 high hazard dams. Their ownership and status of maintenance and deficiencies is not known at the County to assist with identifying projects and conducting outreach to owners.</p> <p>Solution: Request status of all dams from NJDEP and develop an outreach program to all dam owners with identified deficiencies and discuss next steps to bring to compliance, funding sources, etc.</p>	1. Ongoing 2.	1. Discontinue 2. Not Applicable 3. This is an ongoing capability.



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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020- Passaic County- 005	Evacuation Routes	Costal Storm	Office of Emergency Management	<p>Problem: Coastal Storm is a high ranked hazard at the County. The County needs updated evacuation routes mapped and accessible to residents in the event of evacuation.</p> <p>Solution: The Office of Emergency Management will coordinate with State Police and State Department of Transportation to identify and map evacuation routes in the County. These routes will be accessible via online through the State's ArcGIS Online system.</p>	1. 2.	1. 2. 3.



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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020- Passaic County- 006	Tree Inventory	Infestation and Invasive Species	Department of Parks and Recreation	<p>Problem: There is no countywide tree inventory to guide the Department of Parks and Recreation on infested trees.</p> <p>Solution: Develop an inventory of trees in the County and identify the trees that are hazards, such as ash trees susceptible to Emerald Ash Borer and other infestations/invasive species.</p>	<p>1. [REDACTED] 2. The status of this action is TBD. [REDACTED] Planning/Engineering will check on the status.</p>	<p>1. [REDACTED] 2. [REDACTED] 3. [REDACTED]</p>



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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020- Passaic County- 007	Pandemic Preparedness	Disease Outbreak	Department of Health	<p>Problem: The COVID-19 pandemic has put a tremendous strain on local and county resource with insufficient supplies and training.</p> <p>Solution: Passaic County needs additional supplies/equipment and storage facility space to stockpile to prepare for a pandemic. In addition, a hot wash is needed to gather lessons learned and gaps/needs from the current pandemic and implement training to prepare for the next event.</p>	1. Complete 2. County also is constructing satellite office in West Milford and has been procuring backup generators for the department and other critical facilities, such as DPW.	1. Discontinue 2. Not Applicable 3. This action 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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020- Passaic County- 008		Disease Outbreak	Division of Economic Development	<p>Problem: The COVID-19 pandemic has impacted businesses and the local economy.</p> <p>Solution: The COVID-19 pandemic has prompted the US Congress to provide funds to the NJEDA to develop a grant program for companies who have been impacted by COVID-19. The Division of Economic Development is currently assessing how they can assist businesses in the County recover. This action is in the early stages of development and will continue to be updated.</p>	1. Complete 2. This was a one-time funding opportunity and has been expended.	1. Discontinue 2. Not Applicable 3. This action 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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020- Passaic County- 009	County Site Plan and Subdivision Ordinance Update	Flood, Coastal Storm, Severe Weather	Department of Planning and Economic Development	Problem: The requirements of Green Stormwater Infrastructure within the County Site Plan and Subdivision resolution are not included. Solution: Adopt an update to the County's Site Plan and Subdivision Resolutions to incorporate Low Impact Development/Green Stormwater Infrastructure.	1. In Progress 2. Anticipated approval Fall 2025	1. Include 2. Keep as is 3. Not Applicable



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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020- Passaic County- 010	Establish an Enterprise GIS system to manage assets/maintenance/mitigation needs	All	Department of Planning and Economic Development, County Engineer	<p>Problem: There is no spatial platform to track asset inventories and their associated status and needs for maintenance and mitigation. An interdepartment system is needed to support web mapping.</p> <p>Solution: Passaic County Department of Planning will develop an Enterprise GIS system which will allow for departments to store and are live data services and support web mapping products. This would be a password- protected system to display the County's asset inventory to include but not limited to roads, bridges and associated status and needs.</p>	1. In Progress 2. County has developed inventory of County buildings and is currently working with agencies/municipalities to develop inventory of roads and bridges.	1. Include 2. Keep as is 3. Not Applicable



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 2025 HMP or Discontinue 2. If including action in the 2025 HMP, revise/reword to be more specific (as appropriate). 3. If discontinue, explain why.
2020- Passaic County- 011	Green Stormwater Infrastructure Implementation Plan	Coastal Storm, Flood, Severe Storm	Department of Planning and Economic Development	Problem: Passaic County does not have a countywide green stormwater infrastructure implementation plan as identified as a follow-up item in the Green Stormwater Infrastructure Master Plan Element. Solution: Develop a green stormwater infrastructure implementation plan to prioritize actions and identify funding opportunities and mechanisms to implement green stormwater infrastructure in the County.	1. Complete 2. Plan was completed in 2018	1. Discontinue 2. Not Applicable 3. This action has been completed.



1.7.3 Proposed Hazard Mitigation Actions for the HMP Update

Passaic 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 Passaic 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 County priorities.

Table 2-18 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 2-19 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.



Table 2-18. 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	X				X					
Drought	X	X			X	X		X		
Extreme Temperature	X	X			X					X
Flood	X	X	X		X	X		X		X
Geological Hazards	X	X			X	X		X		X
Severe Weather	X	X	X		X	X		X		X
Severe Winter Weather	X	X	X		X	X		X		X
Wildfire	X	X			X					X

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 2-19. Summary of Prioritization of Actions

Project Number	Project Name	Scores for Evaluation Criteria															High / Medium / Low
		Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Local Objectives	Total	
2025-Passaic County-001	County Site Plan and Subdivision Ordinance Update	0	1	1	1	1	1	1	0	1	1	1	1	0	1	11	High
2025-Passaic County-002	Establish and Enterprise GIS System to Manage Assets/Maintenance/Mitigation Needs	0	0	1	1	1	1	0	0	1	1	0	1	1	1	9	Medium
2025-Passaic County-003	Mount Prospect Avenue Drainage	1	1	1	1	1	-1	1	0	1	1	1	1	0	0	10	Medium
2025-Passaic County-004	Flood Prone Roadways	1	1	1	1	1	-1	1	1	1	1	1	1	1	1	13	High
2025-Passaic County-005	Flood Prone Property Buyout	1	1	1	1	1	-1	1	1	1	1	1	1	0	1	12	High
2025-Passaic County-006	Removal of Underground Tanks	0	1	1	1	1	1	1	0	1	1	1	1	0	0	10	Medium
2025-Passaic County-007	Backup Generators – Critical Facilities	1	1	1	1	1	-1	0	1	1	1	1	1	1	1	12	High



Project Number	Project Name	Scores for Evaluation Criteria															High / Medium / Low
		Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Local Objectives	Total	
2025-Passaic County-008	Flooding at Highlands Rail Trail	0	1	1	1	1	1	1	0	1	1	1	1	0	1	11	High

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



Action 2025-PassaicCounty-001. County Site Plan and Subdivision Ordinance Update

Lead Agency:	Department of Planning and Economic Development	
Supporting Agencies:	-	
Hazard(s) of Concern:	Flood, Severe Weather	
Description of the Problem:	The requirements of Green Stormwater Infrastructure within the County Site Plan and Subdivision resolution are not included.	
Description of the Solution:	Adopt an update to the County's Site Plan and Subdivision Resolutions to incorporate Low Impact Development/Green Stormwater Infrastructure. Anticipated approval in Fall 2025.	
Estimated Cost:	Low	
Potential Funding Sources:	County Budget	
Implementation Timeline:	1-5 years	
Goals Met:	1,2,4,5,7	
Benefits:	Adopting Low Impact Development and Green Stormwater Infrastructure reduces runoff and improves water quality, while also lowering infrastructure costs.	
Impact on Socially Vulnerable Populations:	This action will help mitigate flooding in areas that are often disproportionately affected, reducing the risk of property damage and displacement.	
Impact on Future Development:	Low Impact Development/Green Stormwater Infrastructure help meet environmental regulations and standards, making it easier for developers to comply with legal requirements.	
Impact on Critical Facilities/Lifelines:	This action will minimize the risk of flooding around essential infrastructure, ensuring that critical services remain operational during adverse conditions.	
Impact on Capabilities:	Low Impact Development/Green Stormwater Infrastructure provide more effective and sustainable stormwater management solutions, improving overall infrastructure management.	
Climate Change Considerations:	Climate change is leading to more frequent and intense storms, which can increase stormwater runoff. This can overwhelm existing stormwater management systems, causing localized flooding and water pollution.	
Mitigation Category	Local Plans and Regulation	
CRS Category	Preventative Measures	
Priority	High	
Alternatives:	Action	Evaluation
	No Action	-
	Detention Basins	Requires regular maintenance, can be costly.
	Combined Sewer Systems	Can lead to overflow issues.



Action 2025-PassaicCounty-002. Establish and Enterprise GIS System to Manage Assets/Maintenance/Mitigation Needs

Lead Agency:	Department of Planning and Economic Development	
Supporting Agencies:	County Engineering	
Hazard(s) of Concern:	Dam Failure, Drought, Extreme Temperature, Flood, Geological Hazards, Severe Weather, Severe Winter Weather, Wildfire	
Description of the Problem:	There is no spatial platform to track asset inventories and their associated status and needs for maintenance and mitigation. An interdepartmental system is needed to support web mapping.	
Description of the Solution:	Passaic County Department of Planning will develop an Enterprise GIS system which will allow for departments to store and access live data services and support web mapping products. This would be a password-protected system to display the County's asset inventory to include but not limited to roads, bridges and associated status and needs. Currently, the County has developed inventory of County buildings and is currently working with agencies/municipalities to develop inventory of roads and bridges.	
Estimated Cost:	Medium	
Potential Funding Sources:	County Budget	
Implementation Timeline:	1-5 years	
Goals Met:	1,2,4,5,6,7	
Benefits:	This action will ensure accurate and up-to-date information on the County's asset inventory, including roads, bridges, and buildings.	
Impact on Socially Vulnerable Populations:	This action will enhance data management allowing for better identification and allocation of resources to areas with high social vulnerability.	
Impact on Future Development:	The platform will provide detailed spatial data that can guide sustainable development practices and ensure environmental considerations are integrated into planning.	
Impact on Critical Facilities/Lifelines:	This action will ensure accurate and real-time data, helping to maintain the functionality of critical facilities during emergencies.	
Impact on Capabilities:	This will promote interdepartmental and interagency collaboration through shared data and resources.	
Climate Change Considerations:	N/A	
Mitigation Category	Local Plans and Regulations	
CRS Category	Preventative Measures	
Priority	Medium	
Alternatives:	Action	Evaluation
	No Action	-
	Paper-Based System	Time consuming and difficult to share across departments.
	Open-source GIS solutions	Requires customization and ongoing maintenance.



Action 2025-PassaicCounty-003. Mount Prospect Avenue Drainage

Lead Agency:	County Roads Division	
Supporting Agencies:	County Engineering	
Hazard(s) of Concern:	Flood, Severe Weather	
Description of the Problem:	The County-owned Mount Prospect Avenue in Clifton has drainage issues that produce flooding that affects nearby properties.	
Description of the Solution:	The County Roads Division will initiate the design phase for the construction of an adequate drainage system on Mount Prospect Avenue to prevent flooding to nearby properties. Construction is anticipated to begin in the 2026/2027 timeframe.	
Estimated Cost:	Medium	
Potential Funding Sources:	County Budget, HMGP, BRIC	
Implementation Timeline:	1-5 years	
Goals Met:	1,2,5,6,7,8	
Benefits:	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.	
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding along flood-prone roads.	
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.	
Impact on Critical Facilities/Lifelines:	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.	
Impact on Capabilities:	Not applicable	
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events.	
Mitigation Category	Local Plans and Regulations	
CRS Category	Preventative Measures, Property Protection	
Priority	Medium	
Alternatives:	Action	Evaluation
	No Action	-
	Elevate roadway	Costly and may not solve problem
	Relocate roadway	Not possible



Action 2025-PassaicCounty-004. Flood Prone Roadways

Lead Agency:	County Road Division	
Supporting Agencies:	County Engineering	
Hazard(s) of Concern:	Flood, Severe Weather	
Description of the Problem:	There are several roads throughout the County that frequently flood and become impassable. Drivers will ignore signs or cones to detour traffic and use the flooded roadway, putting themselves and others at risk of potential injury.	
Description of the Solution:	The County will develop a countywide planning study to determine the need for physical gates to prevent drivers from accessing flooded roadways. The study will focus on County-owned assets but will also examine how to better support municipalities that are also experiencing this issue on locally owned roads.	
Estimated Cost:	Medium	
Potential Funding Sources:	County Budget. HMGP, BRIC	
Implementation Timeline:	1-5 years	
Goals Met:	1,2,3,7	
Benefits:	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.	
Impact on Socially Vulnerable Populations:	This action will assist socially vulnerable populations whose properties are impacted by flooding along flood-prone roads.	
Impact on Future Development:	Future development in the impacted area will be less likely to be flooded.	
Impact on Critical Facilities/Lifelines:	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.	
Impact on Capabilities:	Not applicable	
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events.	
Mitigation Category	Local Plans and Regulations	
CRS Category	Preventative Measures, Property Protection	
Priority	High	
Alternatives:	Action	Evaluation
	No action	Current problem continues
	Relocate all flood-prone road system	Not feasible
	Raise all flood prone roads	Cost prohibitive



Action 2025-PassaicCounty-005. Flood Prone Property Buyout

Lead Agency:	Department of Planning and Economic Development	
Supporting Agencies:	County Engineering	
Hazard(s) of Concern:	Flood, Severe Weather	
Description of the Problem:	The County experiences consistent flooding along the Passaic River, where there is significant residential development.	
Description of the Solution:	The County is looking at properties along the Passaic in Paterson for potential buyouts. It is currently completing the environmental investigation to determine impacts.	
Estimated Cost:	Medium	
Potential Funding Sources:	HMGP, BRIC, FMA, match from property owners	
Implementation Timeline:	1-5 years	
Goals Met:	1,2,3,7,8	
Benefits:	Eliminates flood damage to homes and residences, which creates an open space for the municipality and increases flood storage.	
Impact on Socially Vulnerable Populations:	Removing homes from the floodplain immediately removes the risk to life and property. Socially vulnerable populations may be able to have houses elevated or acquired when it would otherwise be unaffordable.	
Impact on Future Development:	Increased outreach to homeowners within a flood prone area will limit construction in areas that are prone to hazard events. Homes may be acquired, which will remove those structures from the floodplain and prevent future development on those sites.	
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue.	
Impact on Capabilities:	Removing the risk from the immediate floodplain via acquisition of properties will free up resources for search and rescue and other emergency operations as needed.	
Climate Change Considerations:	Climate change is likely to increase the frequency and severity of severe rainfall, flash flooding, riverine flooding, and coastal flooding from sea level rise and storm surge events. Removing structures from the floodplain will reduce the response and recovery costs as a result of these events and decrease the loss of human life as a result of these events. Elevating structures will reduce the recovery costs as a result of these events.	
Mitigation Category	Structure and Infrastructure Project	
CRS Category	Property Protection	
Priority	High	
Alternatives:	Action	Evaluation
	No Action	-
	Levee around floodplain	Costly, not enough room
	Deployable flood barriers	Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled.



Action 2025-PassaicCounty-006. Removal of Underground Tanks

Lead Agency:	County Engineering	
Supporting Agencies:	-	
Hazard(s) of Concern:	Drought, Flood, Geological Hazards	
Description of the Problem:	Passaic County contains many underground tanks that provide heating oil and fuel for various critical facilities and other functions. Some tanks are decades old and may be more vulnerable to physical damage in the event of a hazard (i.e., rising water table, soil movement, soil aridity). The Engineering Department recently successfully relocated an underground tank that was beneath a golf course.	
Description of the Solution:	The County Engineering will oversee the removal of all underground tanks by 2030. This includes identifying tanks that can be relocated aboveground and determining alternative solutions for those that can be replaced with non-tank systems.	
Estimated Cost:	Medium	
Potential Funding Sources:	County Budget	
Implementation Timeline:	1-5 years	
Goals Met:	2,5,6	
Benefits:	Relocating tanks aboveground or replacing them with non-tank systems minimizes the risk of physical damage from natural hazards.	
Impact on Socially Vulnerable Populations:	This action will assist with reducing the risk of leaks and contamination protects the health and safety of socially vulnerable populations who may be more affected by environmental hazard.	
Impact on Future Development:	By addressing potential environmental hazards, the project supports sustainable development and makes the area more attractive for future investments.	
Impact on Critical Facilities/Lifelines:	Protecting critical facilities from potential hazards ensures they remain operational during emergencies, supporting community resilience.	
Impact on Capabilities:	Aboveground tanks and non-tank systems are easier to monitor and maintain, improving overall infrastructure management capabilities.	
Climate Change Considerations:	Climate change is leading to more frequent and intense storms, which can raise water tables and increase the risk of flooding. Underground tanks are particularly vulnerable to flooding, which can cause physical damage and lead to leaks or contamination.	
Mitigation Category	Structure and Infrastructure Project	
CRS Category	Property Protection, Preventative Measures, Natural Resource Protection	
Priority	Medium	
Alternatives:	Action	Evaluation
	No action	-
	Enhanced Monitoring/Maintenance	Temporary Solution, High Costs
	Repairing damage when it occurs	Temporary Solution



Action 2025-PassaicCounty-007. Backup Generators – Critical Facilities

Lead Agency:	County Engineering	
Supporting Agencies:	-	
Hazard(s) of Concern:	Extreme Temperatures, Flood, Geological Hazards, Severe Weather, Severe Winter Weather, Wildfire	
Description of the Problem:	Several critical facilities lack backup generators, which are needed to ensure their continuous accessibility during a hazard event, as exemplified by Hurricane Sandy.	
Description of the Solution:	Procure new backup generators for County-owned critical facilities. The County has already procured backup generators for Health Department and Public Works facilities.	
Estimated Cost:	Medium	
Potential Funding Sources:	County Budget, HMGP, BRIC	
Implementation Timeline:	1-5 years	
Goals Met:	1,2,5,6	
Benefits:	This action protects public health and safety and ensures continued operation of a critical facility and its essential functions during a power outage.	
Impact on Socially Vulnerable Populations:	Protection of critical facilities provides an opportunity for first responders, utility workers, and emergency managers to stage and deploy resources to vulnerable and hazard prone areas.	
Impact on Future Development:	This action results in protection of a critical facility that could support future development.	
Impact on Critical Facilities/Lifelines:	This action protects public health and safety and ensures continued operation of a critical facility and its essential functions during a power outage.	
Impact on Capabilities:	This action ensures continuity of operations to maintain capabilities.	
Climate Change Considerations:	Climate change is likely to increase severe weather events such as flooding, wind, and extreme temperatures that result in power failures. This action accounts for a likely increase in power failure events.	
Mitigation Category	Structure and Infrastructure Projects	
CRS Category	Emergency Services	
Priority	High	
Alternatives:	Action	Evaluation
	No action	-
	Microgrid	Costly and difficult to implement.
	Solar panels and battery backup	Solar power is unlikely to be able to provide battery power for extended power failure events.



Action 2025-PassaicCounty-008. Flooding at Highlands Rail Trail

Lead Agency:	County Parks and Recreation	
Supporting Agencies:	County Planning and Economic Development	
Hazard(s) of Concern:	Flood, Severe Weather, Severe Winter Weather	
Description of the Problem:	Portions of the Highlands Rail Trail, both new and future extensions, experience occasional flooding that may block users from traveling along the path.	
Description of the Solution:	Determine feasibility of green infrastructure and nature-based solutions based on local conditions, such as soil types. For example, a portion of the trail constructed in Wanaque used pervious asphalt to mitigate flooding.	
Estimated Cost:	Medium	
Potential Funding Sources:	County budget	
Implementation Timeline:	1-5 years	
Goals Met:	2,5,7	
Benefits:	This action will improve the Highlands Rail Trail's resilience to flooding, enhance environmental quality, and provide social and economic benefits to the community.	
Impact on Socially Vulnerable Populations:	This action will ensure that the trails are accessible and safe, offering recreational spaces which improve quality of life.	
Impact on Future Development:	Not applicable	
Impact on Critical Facilities/Lifelines:	This action will mitigate flood risks and ensure the continued functionality of the transportation routes provided by the trail.	
Impact on Capabilities:	This action provides more effective and sustainable flood management solutions, improving overall infrastructure management.	
Climate Change Considerations:	Climate change is leading to more frequent and intense storms, which can increase the risk of flooding. Portions of the trail are already experiencing occasional flooding, and these events are likely to become more common and severe.	
Mitigation Category	Structure and Infrastructure Project, Natural Systems Protection	
CRS Category	Preventative Measures, Property Protection, Natural Resource Protection	
Priority	High	
Alternatives:	Action	Evaluation
	No action	-
	Installing retention ponds	Requires regular maintenance and can be costly
	Elevating the trail	May not be feasible in all areas