19. SECAUCUS MUNICIPAL UTILITIES AUTHORITY

This jurisdictional annex to the Hudson County Hazard Mitigation Plan (HMP) provides information to assist public and private sectors in the participating special districts 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 Secaucus Municipal Utilities Authority (SMUA), describes who participated in the planning process, assesses SMUA's risk, vulnerability, and capabilities, and outlines a strategy for achieving a more resilient community.

19.1 Hazard Mitigation Planning Team

The Secaucus Municipal Utilities Authority 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 deputy executive director represented the SMUA on the Hudson 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 19-1 summarizes the SMUA officials who participated in the development of the annex and in what capacity. Additional documentation of the SMUA's planning activities through Planning Partnership meetings is included in Volume I.

Table 19-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name / Title: Brian Bigler, Executive Director Address: 1100 Koelle Blvd., Secaucus, NJ 07094 Phone Number: 201-330-2089 Email: bbigler@secaucus.net	Name / Title: Glenn Beckmeyer, Secaucus MUA Engineer Address: 117 Herman St., East Rutherford, NJ 07073 Phone Number: 201-635-9401 Email: gbeckmeyer@beckmeyerengineering.com
National Flood Insurance Program Floodplain Administrator	
Please see Chapter 11, the Town of Secaucus Annex	
Additional Contributors	
Name/Title: Method of Participation:	
Name/Title: Method of Participation:	
Name/Title: Method of Participation:	
Name/Title: Method of Participation:	
Name/Title: Method of Participation:	
Name/Title: Method of Participation:	

Commented [SU1]: MUA: Please verify all information. Update as needed. Also, list any additional contributors.

19.2 Community Profile

The Secaucus Municipal Utilities Authority (Secaucus MUA) is responsible for processing all of the wastewater generated within the Township of Secaucus. The Authority owns and operates seven pumping stations that vary in capacity from approximately 30,000 gallons per day to over 2,000,000 gallons per day. Each pumping station has back-up power.

Additionally, the Authority maintains approximately 10 miles of collection system piping. This collection system is maintained in conjunction with the Department of Public Works and preventative maintenance is routinely performed. The wastewater treatment facility, located at 1100 Koelle Boulevard, currently processes 3,150,000 gallons per day (Secaucus MUA 2025).

This facility is an advanced secondary (Level III) treatment facility, with stringent discharge limitations that are met prior to final discharge into Mill Creek {a tributary of the Hackensack River}. There has not been a violation of these New Jersey Department of Environmental Protection imposed limits since the facility upgrade was completed in 1991. The facilities are manned 24 hours per day, seven days per week, including holidays.

19.3 Jurisdictional Capability Assessment and Integration

SMUA 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 jurisdiction 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 SMUA to identify opportunities for integrating mitigation concepts into ongoing County procedures.

19.3.1 Planning and Regulatory Capability and Integration

Table 19-2 summarizes the planning and regulatory tools that are available to the Secaucus Municipal Utilities Authority.

Table 19-2. 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	-	State and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Zoning/Land Use Code	No	-	Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Subdivision Code	No	-	Local	
How has or will this be integrated with the HMP and how does this reduce risk?				
Site Plan Code	No	-	Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Stormwater Management Code	No	-	Local	
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.

Growth Management	No	-	Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Environmental Protection Ordinance(s)	No	-	State, County and Local	-
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
Flood Damage Prevention Ordinance	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Wellhead Protection	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Emergency Management Ordinance	No	-	State, County and Local	-
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	-	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
PLANNING DOCUMENTS				
General/Comprehensive/Master Plan	No	-	State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Capital Improvement Plan	Yes	Capital Improvement Plan	Local	SMUA
A yearly Capital Improvement Plan includes items which include items identified in the HMP				
Disaster Debris Management Plan	No	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Floodplain Management or Watershed Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Stormwater Management Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Open Space Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Urban Water Management Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				

Commented [SU2]: MUA: Please provide response for items in green

	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
Habitat Conservation Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Economic Development Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Community Wildfire Protection Plan	No	-	Federal and State	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Community Forest Management Plan	No	-	Federal and State	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Transportation Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Agriculture Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Climate Action/ Resilience/Sustainability Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Tourism Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Business/ Downtown Development Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other	-	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				
RESPONSE/RECOVERY PLANNING				
Emergency Operations Plan	No	-	Federal, State, County and Local	-
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
Continuity of Operations Plan	No	-	Federal, State, County and Local	-
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	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Post-Disaster Recovery Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Public Health Plan	No	-	Federal, State, County and Local	-
How has or will this be integrated with the HMP and how does this reduce risk?				
Other	-	-	-	-
How has or will this be integrated with the HMP and how does this reduce risk?				

19.3.2 Development and Permitting Capability

Table 19-3 summarizes the capabilities of the SMUA to oversee and track development.

Table 19-3. Development and Permitting Capability

	Yes/No	Comment
Do you issue development permits? • If you issue development permits, what department is responsible? • If you do not issue development permits, what is your process for tracking new development?	No	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	-
Do you have a buildable land inventory? • If you have a buildable land inventory, please describe	No	-
Describe the level of buildout in your jurisdiction.	N/A	

19.3.3 Administrative and Technical Capability

Table 19-4 summarizes potential staff and personnel resources available to the SMUA and their current responsibilities that contribute to hazard mitigation.

Table 19-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
ADMINISTRATIVE CAPABILITY		
Planning Board	No	-
Zoning Board of Adjustment	No	-
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	No	-
Construction/Building/Code Enforcement Department	No	-
Emergency Management/Public Safety Department	No	-
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	No	-
Mutual aid agreements	No	-
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	available staff, when required
Engineers or professionals trained in building or infrastructure construction practices	Yes	available staff, when required
Planners or engineers with an understanding of natural hazards	Yes	available staff, when required
Staff with expertise or training in benefit/cost analysis	Yes	available staff, when required
Professionals trained in conducting damage assessments	Yes	available staff, when required

Resources	Available? (Yes/No)	Comment (available staff, responsibilities, support of hazard mitigation)
Personnel skilled or trained in GIS and/or Hazus applications	Yes	available staff, when required
Staff that work with socially vulnerable populations or underserved communities	No	
Environmental scientists familiar with natural hazards	Yes	available staff, when required
Surveyors	Yes	available staff, when required
Emergency manager	Yes	available staff, when required
Grant writers	Yes	available staff, when required, all available information is utilized
Resilience Officer	No	
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	available staff, when required

19.3.4 Fiscal Capability

Table 19-5 summarizes financial resources available to the SMUA.

Table 19-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital improvement project funding	Yes
Authority to levy taxes for specific purposes	No
User fees for water, sewer, gas, or electric service	No
Impact fees for homebuyers or developers of new development/homes	Yes
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state funding programs	Yes
Open Space Acquisition funding programs	No
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	Yes

19.3.5 Education and Outreach Capability

Table 19-6 summarizes the education and outreach resources available to the SMUA.

Table 19-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment
Public information officer or communications office	No	Town of Secaucus
Personnel skilled or trained in website development	No	Town of Secaucus
Hazard mitigation information available on your website	No	
Social media for hazard mitigation education and outreach	No	
Citizen boards or commissions that address issues related to hazard mitigation	No	
Warning systems for hazard events	No	
Natural disaster/safety programs in place for schools	No	
Organizations that conduct outreach to socially vulnerable populations and underserved populations	No	
Public outreach mechanisms / programs to inform citizens on natural hazards, risk, and ways to protect themselves during such events	No	Town of Secaucus

19.3.6 Community Classifications

Table 19-7 summarizes classifications for community programs available to the SMUA.

Table 19-7. Community Classifications

Program	Participating? (Yes/No)	Classification	Date Classified
Community Rating System (CRS)	N/A	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	N/A	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	N/A	-	-
National Weather Service StormReady Certification	N/A	-	-
Firewise Communities classification	N/A	-	-
Sustainable Jersey	N/A		
Other: Organizations with mitigation focus (advocacy group, non-government)	N/A	-	-

N/A = Not applicable
— = Unavailable

19.3.7 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 19-8 summarizes the adaptive capacity for each identified hazard of concern and the Secaucus Municipal Utilities Authority'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 19-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak
Dam/Levee	Moderate
Drought	Moderate
Extreme Temperatures	Moderate
Flood	Strong
Geologic Hazards	Moderate
Severe Weather	Moderate
Severe Winter Weather	Moderate
Wildfire	Moderate

19.4 National Flood Insurance Program Compliance

The SMUA does not participate in the NFIP. For NFIP compliance with the Town of Secaucus, please refer to the Town's annex (Chapter 11).

19.5 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 19-9 through Table 19-11.

Table 19-9. 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
The Secaucus Municipal Utilities Authority is not responsible for permitting new construction. Permitting is the responsibility of the Town of Secaucus.				

Table 19-10. 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
None Identified					

Table 19-11. 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					

19.6 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 Secaucis Municipal Utilities Authority's risk assessment results and data used to determine the hazard ranking. Key local risk assessment information is presented below.

19.6.1 Hazard Area

Hazard area maps illustrate the probable hazard areas impacted within the County, to include SMUA. These hazard maps are shown in Volume 1 of this plan within the hazard profiles. These 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 Hudson has significant exposure. The maps show the location of potential new development, where available.

19.6.2 Hazard Event History

The history of natural and non-natural hazard events in the SMUA is detailed in Volume I, where each hazard profile includes a chronology of historical events that have affected the County and its municipalities. Table 19-12 provides details on loss and damage in the SMUA during hazard events since the last hazard mitigation plan update.

Table 19-12. Hazard Event History in Hudson

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Hudson
February 25, 2019	Strong Wind, High Wind	No	Widespread damaging wind gusts occurred as storms moved through Hudson County. Wind gusts reached an estimated 58 miles per hour. Damages from these strong, damaging winds totaled over $50,000 across the County.	N/A
January 20, 2020 – May 11, 2023	Covid-19 Pandemic (EM-3451-NJ, DR-4488-NJ)	Yes	As of March 4, 2023, Hudson County accounts for 219,191 positive cases of COVID-19 in the State of New Jersey, and 2,671 of the reported deaths. A total of 1,565,233 vaccinations have been delivered in the County to both residents and non-residents.	N/A
February 7, 2020	Strong Wind, High Wind	No	Widespread damaging wind gusts occurred as storms moved through Hudson County. Wind gusts reached an estimated 53 miles per hour. Damages from these strong, damaging winds totaled over $50,000 across the County.	N/A
April 13, 2020	Strong Wind, High Wind	No	Widespread damaging wind gusts occurred as storms moved through Hudson County. Wind gusts reached an estimated 58 miles per hour. Damages from these strong, damaging winds totaled over $50,000 across the County.	N/A
August 4, 2020	Tropical Storm Isaias (DR-4574-NJ)	Yes	The remnants of Hurricane Ida produced heavy rainfall, flash floods, widespread wind damage, and power outages. There were multiple disruptions to mass transit and road closures due to downed power lines and trees were noted, with numerous water systems having to move to alternate power. One person was injured in Hudson County because of this event.	N/A

Dates of Event	Event Type (Disaster Declaration)	County Designated?	Summary of Event	Summary of Damage and Losses in Hudson
September 1-3, 2021	Remnants of Hurricane Ida (EM-3573-NJ, DR-4614-NJ)	Yes	Extremely heavy rainfall associated with the remnants of Hurricane Ida overspread northeast New Jersey during the evening of September 1 and continued through the early morning hours of September 2. Rainfall totals ranged from 5-8+ inches across much of the region, with much of that rain falling in just a few hours. This resulted in widespread flash flooding leading to numerous road closures and water rescues in addition to extensive river flooding. One fatality and seven injuries occurred in Hudson County as a result of this storm.	N/A
January 28-29, 2022	Winter Storm	No	A Nor'easter brought snow and gusty winds. Wind gusts of 40 mph were reported. Snow and blowing snow impacted Hudson County, with snow totals amounting to 8.5 inches in Hudson County.	N/A

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

19.6.3 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 the SMUA.

19.6.3.1 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. The Secaucus Municipal Utilities Authority 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 SMUA indicated the following:

- None Identified

Table 19-13 shows Hudson's final hazard rankings for identified hazards of concern. Mitigation action development uses the ranking to target hazards with the highest risk.

Table 19-13. Hazard Ranking

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

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

19.6.3.2 Critical Facilities

Table 19-14 identifies critical facilities in the community located in the 1 percent and 0.2 percent annual chance floodplains.

Table 19-14. Critical Facilities Flood Vulnerability

Name	Type	Vulnerability	
		1% Annual Chance Event	0.2% Annual Chance Event
Koelle Boulevard Sewage Treatment	Wastewater Treatment	X	X

Source: Hudson County; HIFLD; NJGIN

19.6.4 Identified Issues

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

- Loss of primary power in the Town can lead to pumps not working properly or not working at all.
- Stormwater is getting into the sanitary system due to infiltration and broken pipes. This can lead to sanitary sewer overflows, creating a hazard. This also reduces the sewer systems capacity and puts a burden on operation and maintenance. Backups and overflows require emergency response and leads to disruption of service.
- During heavy rain events, the sanitary sewer system can backup.
- Roof drains are connected to the sanitary system, causing stormwater to enter the system. This reduces the capacity of the sanitary system and can lead to sewer overflow and system failures.
- Many homes in the Town of Secaucus have sump pumps in their basements. Discharge from the sump pumps is entering the sanitary sewer system (the system is not designed for stormwater). This leads to a surplus of water entering the system, creating overflows.

19.7 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.

19.7.1 Past Mitigation Action Status

Table 19-15 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.

19.7.2 Additional Mitigation Efforts

In addition to the mitigation actions completed in Table 19-15, Hudson identified the following mitigation efforts completed since the last HMP:

- None Identified

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

- None Identified

Table 19-15. 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-SMUA-001	Purchase mobile generator	All	SMUA	**Problem**: Loss of primary power in the Town can lead to pumps not working properly or not working at all. **Solution**: Purchase a mobile generator to be used at different locations during a power outage. This will allow the MUA to provide power to specific pumps.	1.In Progress 2. In lieu of purchasing a single mobile generator, the SMUA installed 2 new permanent generators and upgraded 1 existing generator. Remaining Pump Station generators are being analyzed.	1.Include 2. No change 3. N/A

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-SMUA-002	Infiltration and Inflow Study	Coastal Storm, Flood, Severe Weather	SMUA	**Problem**: Stormwater is getting into the sanitary system due to infiltration and broken pipes. This can lead to sanitary sewer overflows, creating a hazard. This also reduces the sewer systems capacity and puts a burden on operation and maintenance. Backups and overflows require emergency response and leads to disruption of service. **Solution**: Conduct an Infiltration and Inflow (I&I) study to determine the amount of I&I entering the collection system and how to address the issue.	1.In Progress 2. Throughout the year, the SMUA is cleaning and televising all sanitary sewers for I/I. When located, the sanitary main is repaired to eliminate the I/I. This is a continuous process that does not end.	1.Include 2. No change 3. N/A

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-SMUA-003	Increase pump capacities	Coastal Storm, Flood, Severe Weather	SMUA	**Problem**: During heavy rain events, the sanitary sewer system can backup. **Solution**: Increase the size of the pumps at both stations and add another force main and valve between so you can use either pump or use both. This will help with storm events and helps with potential sanitary sewer backups.	1.In Progress 2. Sanitary flow Studies are being prepared and analyzed.	1.Include 2. No change 3. N/A

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-SMUA-004	Smoke Test	Coastal Storm, Flood, Severe Weather	SMUA	**Problem**: Roof drains are connected to the sanitary system, causing stormwater to enter the system. This reduces the capacity of the sanitary system and can lead to sewer overflow and system failures. **Solution**: Conduct a smoke test to identify where stormwater/groundwater are entering the sanitary sewer system. Direct connections, including catch basins, downspouts, area drains, driveway drains, stairwell drains, patio drains, and storm drain inlets or ditches can be confirmed with this test.	1. In Progress 2. Throughout the year, the SMUA is observing all cross connections within the sanitary system. Smoke testing is one method of observing the connections. Televising the sewer mains is also another method of determination. When located, the cross connections is disconnected from the Sanitary system. This is a continuous process that does not end.	1. Include 2.No change 3. N/A

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-SMUA-005	Smoke Test	Coastal Storm, Flood, Severe Weather, Severe Winter Weather	SMUA	**Problem**: Many homes in the Town of Secaucus have sump pumps in their basements. Discharge from the sump pumps is entering the sanitary sewer system (the system is not designed for stormwater). This leads to a surplus of water entering the system, creating overflows. **Solution**: Work with the Town of Secaucus to install piping behind the curbs for homes to use with their sump pumps. This piping will be connected to the stormwater system.	1. No Progress 2. Work would be done under the initiative form the Town of Secaucus	1. Include 2. No change 3. N/A

19.7.3 Proposed Hazard Mitigation Actions for the HMP Update

Hudson 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 Hudson 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 19-16 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 19-17 provides a summary of the prioritization of all proposed mitigation actions for the HMP update.

Table 19-16. Analysis of Mitigation Actions by Hazard and Category

	Actions That Address the Hazard, by Action Category									
	FEMA				CRS					
Hazard	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam and Levee Failure		X				X				X
Drought		X				X				X
Extreme Temperatures		X				X				X
Flood	X	X			X	X				X
Geological Hazards		X				X				X
Severe Weather	X	X			X	X				X
Severe Winter Weather		X				X				X
Wildfire		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 19-17. 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-SMUA-001	Purchase Mobile Generator	1	1	1	0	1	0	1	1	1	1	1	1	1	1	**12**	High
2025-SMUA-002	Infiltration and Inflow Study	0	1	1	0	0	0	1	0	1	1	1	1	1	0	**8**	Medium
2025-SMUA-003	Increase Pump Capacities	1	1	1	0	1	0	0	0	1	1	1	1	1	0	**9**	Medium
2025-SMUA-004	Smoke Test	1	1	1	0	0	1	0	0	1	1	1	1	1	0	**9**	Medium
2025-SMUA-005	Basement Sump Pump Piping	1	1	1	0	0	1	0	1	1	1	1	1	1	0	**10**	Medium

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

Action 2025-SMUA-001. Purchase Mobile Generator

Commented [SU3]: MUA: Verify funding sources as these were pulled from last plan.

Lead Agency:	SMUA
Supporting Agencies:	-
Hazards of Concern:	Dam/Levee Failure, Drought, Extreme Temperatures, Flood, Geological Hazards, Severe Weather, Severe Winter Weather, Wildfire
Description of the Problem:	Loss of primary power in the Town can lead to pumps not working properly or not working at all.
Description of the Solution:	To ensure reliable power supply during outages, the MUA initially proposed purchasing a mobile generator for deployment at various locations to support critical pump operations. However, in lieu of acquiring a single mobile unit, the SMUA has made significant infrastructure upgrades: two new permanent generators have been installed, and one existing generator has been upgraded. Evaluation of the remaining pump station generators is currently underway to determine further needs and ensure comprehensive power resilience.
Estimated Cost:	Medium
Potential Funding Sources:	FEMA HMGP with local share (MUA)
Implementation Timeline:	1-5 years
Goals Met:	1,2,3,4,6,7
Benefits:	Reduced vulnerability of critical facilities to shut down due to power outages, public health and environmental impacts avoided.
Impact on Socially Vulnerable Populations:	Reduces risk of sewage backups and service disruptions in vulnerable, flood-prone neighborhoods.
Impact on Future Development:	Supports resilient infrastructure needed for safe expansion in surrounding areas.
Impact on Critical Facilities/Lifelines:	Maintains essential sanitation services during emergencies, protecting public health and safety.
Impact on Capabilities:	Improves system reliability and emergency preparedness across multiple pumping stations.
Climate Change Considerations:	Enhances resilience to more frequent and severe storms that threaten power supply and infrastructure.
Mitigation Category	Structure and Infrastructure Project
CRS Category	Property Protection, 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-SMUA-002. Infiltration and Inflow Study

Lead Agency:	SMUA	
Supporting Agencies:	-	
Hazards of Concern:	Flood, Severe Weather	
Description of the Problem:	Stormwater is getting into the sanitary system due to infiltration and broken pipes. This can lead to sanitary sewer overflows, creating a hazard. This also reduces the sewer systems capacity and puts a burden on operation and maintenance. Backups and overflows require emergency response and leads to disruption of service.	
Description of the Solution:	To identify and mitigate sources of Infiltration and Inflow (I&I) within the sanitary sewer collection system, the MUA proposed conducting a comprehensive I&I study. In practice, the SMUA has implemented an ongoing program involving the systematic cleaning and televising of all sanitary sewers to detect I&I. When I&I sources are identified, immediate repairs are made to the affected sanitary mains. This proactive and continuous approach ensures long-term system integrity and reduces excess flow into the collection system.	
Estimated Cost:	Medium	
Potential Funding Sources:	Water Pollution Control Grans Program (USEPA), MUA Budget	
Implementation Timeline:	1-5 years	
Goals Met:	1,2,4,6	
Benefits:	Reduce or eliminate the amount of infiltration entering the system; allows system to keep its capacity; reduces emergency response	
Impact on Socially Vulnerable Populations:	Reducing I&I helps prevent sewer overflows that disproportionately affect vulnerable communities, improving public health and safety.	
Impact on Future Development:	Eliminating I&I preserves sewer capacity, supporting sustainable future growth without overburdening infrastructure.	
Impact on Critical Facilities/Lifelines:	Improved sewer reliability protects essential services like hospitals and emergency facilities from disruptions.	
Impact on Capabilities:	The ongoing I&I program enhances operational efficiency, system knowledge, and long-term maintenance planning.	
Climate Change Considerations:	Addressing I&I strengthens system resilience against increased rainfall and flooding due to climate change.	
Mitigation Category	Local Plans and Regulations	
CRS Category	Preventative Measures	
Priority	Medium	
Alternatives	**Action**	**Evaluation**
	No Action	-
	Reactive Maintenance Only	Higher costs, environmental and public health risks
	Full System Replacement	Costly

Action 2025-SMUA-003. Increase Pump Capacities

Lead Agency:	SMUA	
Supporting Agencies:	-	
Hazards of Concern:	Flood, Severe Weather	
Description of the Problem:	During heavy rain events, the sanitary sewer system can backup.	
Description of the Solution:	Increase the size of the pumps at both stations and add another force main and valve between so you can use either pump or use both. This will help with storm events and helps with potential sanitary sewer backups. Sanitary flow studies will be prepared and analyzed.	
Estimated Cost:	High	
Potential Funding Sources:	Water Pollution Control Grans Program (USEPA), MUA Budget	
Implementation Timeline:	1-5 years	
Goals Met:	1,2,4	
Benefits:	Reduce potential sewer backups, continuity of operations	
Impact on Socially Vulnerable Populations:	Enhancing pump capacity and system flexibility reduces the risk of sewer backups during storms, protecting vulnerable communities from health hazards and property damage.	
Impact on Future Development:	Increased pumping and conveyance capacity supports future growth by ensuring the sewer system can handle higher flows from new developments.	
Impact on Critical Facilities/Lifelines:	Improved system reliability minimizes the risk of service disruptions to essential facilities during high-flow events.	
Impact on Capabilities:	The upgrades enhance operational flexibility and emergency response by allowing either or both pump stations to manage flow as needed.	
Climate Change Considerations:	The improvements prepare the system for more intense and frequent storm events expected with climate change, reducing overflow risks.	
Mitigation Category	Structure and Infrastructure Project	
CRS Category	Property Protection	
Priority	Medium	
Alternatives	**Action**	**Evaluation**
	No Action	-
	Temporary Bypass Pumping during Storm Events	Reactive, Short-term relief
	Installing Storage Tanks or Basins	High cost

Action 2025-SMUA-004. Smoke Test

Lead Agency:	SMUA
Supporting Agencies:	Town of Secaucus
Hazards of Concern:	Flood, Severe Weather
Description of the Problem:	Roof drains are connected to the sanitary system, causing stormwater to enter the system. This reduces the capacity of the sanitary system and can lead to sewer overflow and system failures.
Description of the Solution:	To identify and eliminate sources of stormwater and groundwater entering the sanitary sewer system, the SMUA is conducting ongoing inspections to detect cross connections. Smoke testing is one method used to confirm direct connections such as catch basins, downspouts, area drains, and storm inlets. In addition, the SMUA is televising sewer mains to further identify unauthorized connections. When cross connections are found, they are promptly disconnected from the sanitary system. This is a continuous, proactive process aimed at improving system integrity and reducing inflow and infiltration.
Estimated Cost:	High
Potential Funding Sources:	MUA Budget
Implementation Timeline:	1-5 years
Goals Met:	1,2,4
Benefits:	Ensures uninterrupted operation of critical wastewater infrastructure during power outages.
Impact on Socially Vulnerable Populations:	Identifying and removing cross connections reduces the risk of sewer backups and overflows, protecting vulnerable communities from health hazards and costly damages.
Impact on Future Development:	Maintaining system integrity by eliminating unauthorized inflow ensures capacity is preserved for future development and growth.
Impact on Critical Facilities/Lifelines:	Reducing excess flow into the sanitary system enhances reliability and prevents service disruptions at essential facilities during storm events.
Impact on Capabilities:	The continuous inspection and disconnection process improves system monitoring, operational efficiency, and long-term maintenance planning.
Climate Change Considerations:	Proactively removing stormwater inflow strengthens the system's resilience to increased rainfall and extreme weather events driven by climate change..
Mitigation Category	Structure and Infrastructure Project
CRS Category	Property Protection
Priority	Medium

Alternatives

Action	Evaluation
No Action	-
Relying Solely on Flow Monitoring or Metering	Ineffective for Targeted Repairs
Expanding the Capacity of Sanitary Sewer System	Temporary relief

Action 2025-SMUA-005. Basement Sump Pump Piping

Lead Agency:	SMUA
Supporting Agencies:	Town of Secaucus
Hazards of Concern:	Flood, Severe Weather, Severe Winter Weather
Description of the Problem:	Many homes in the Town of Secaucus have sump pumps in their basements. Discharge from the sump pumps is entering the sanitary sewer system (the system is not designed for stormwater). This leads to a surplus of water entering the system, creating overflows.
Description of the Solution:	Collaborate with the Town of Secaucus to install piping behind the curbs for residential sump pump discharge. This piping will be connected to the stormwater system. The work will be carried out under an initiative led by the Town of Secaucus.
Estimated Cost:	Medium
Potential Funding Sources:	MUA Budget
Implementation Timeline:	1-5 years
Goals Met:	1,2,4,7
Benefits:	Reduce the amount of stormwater that enters the sanitary sewer, continuity of operations
Impact on Socially Vulnerable Populations:	This project reduces flood risk for socially vulnerable residents by providing a publicly supported solution for sump pump discharge.
Impact on Future Development:	The infrastructure supports sustainable growth by integrating stormwater management into future residential and commercial development planning.
Impact on Critical Facilities/Lifelines:	By easing pressure on the stormwater system, the project indirectly helps protect nearby critical facilities and essential services.
Impact on Capabilities:	The initiative strengthens municipal capabilities in flood mitigation and fosters collaboration between the town and residents.
Climate Change Considerations:	The project enhances climate resilience by preparing infrastructure for more frequent and intense rainfall events.
Mitigation Category	Structure and Infrastructure Project
CRS Category	Property Protection
Priority	Medium
Alternatives	**Action** / **Evaluation**
	No Action / -
	Relying on Homeowners to discharge / Can create safety hazards, does not address proper stormwater management
	Install individual dry wells / Requires sufficient space, and regular maintenance