9.25 Borough of Merchantville

This section presents the jurisdictional annex for the Borough of Merchantville and includes resources and information to assist public and private sectors with reducing losses from future hazard events. This annex is not intended as guidance for actions to take during a disaster. Rather, this annex provides actions that can be implemented prior to a disaster to reduce or eliminate damage to property and people. The annex includes a general overview of the municipality and who in the Borough participated in the planning process, an assessment of the Borough of Merchantville's risk and vulnerability, the different capabilities used in the Borough, and an action plan that will be implemented to achieve a more resilient community.

9.25.1 Hazard Mitigation Planning Team

The Borough of Merchantville followed the planning process described in Section 2 (Planning Process) in Volume I of this plan update and developed the annex over the course of several months with input from many Borough departments as summarized in the table below. The primary and alternate points of contact represented the community on the Planning Partnership and supported the local planning process requirements by securing input from persons with specific knowledge to enhance the plan. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization.

The following table summarizes municipal officials that participated in the development of the annex and in what capacity, including the Borough of Merchantville's hazard mitigation plan primary and alternate points of contact. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 2 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.25-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Jon Paul Beauchamp, OEM Coordinator **Address**: 1 West Maple Avenue **Phone Number:** 610-636-6852 **Email:** OEM@MerchantvilleNJ.gov	**Name/Title:** Taylor Ruilova, Deputy OEM Coordinator **Address:** 1 West Maple Avenue **Phone Number:** 856-905-5198 **Email:** OEM1@MerchantvilleNJ.gov
NFIP Floodplain Administrator	
Name/Title: Denise Brouse, Borough Clerk **Address:** 1 West Maple Avenue **Phone Number:** 856-662-2474 **Email:** DBrouse1@merchantvilleNJ.gov	
Additional Contributors	
Name/Title: Kevin Patti, Fire Chief **Method of Participation:** Submitted hazard event history, floodplain administration information, mitigation action review, building permits, provided data for capability assessment, and contributed to mitigation strategy.	

9.25.2 Municipal Profile

Merchantville Borough is located in the northern part of Camden County. The Borough is an inland, urban residential community. There are no major waterbodies within the Borough. Major transportation routes include Camden County 616 and Route 537. The land is predominantly flat.

According to the U.S. Census, the 2010 population for the Borough of Merchantville was 3,821. The estimated 2019 population was 3,719, a 2.7 percent decrease from the 2010 Census. Data from the 2019 U.S. Census American Community Survey indicate that 7.6 percent of the population is 5 years of age or younger and 19.1 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.25.3 Jurisdictional Capability Assessment and Integration

The Borough of Merchantville performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning, legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of administrative and technical capabilities
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Classification under various community mitigation programs.
- The community's adaptive capacity to withstand hazard events.

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. Annex development included reviewing planning and policy documents and surveying each jurisdiction to obtain a better understanding of their progress in plan integration and how risk reduction is supported. Areas with current mitigation integration are summarized in this jurisdictional Capability Assessment (Section 9.25.3). The updated mitigation strategy includes opportunities the Borough of Merchantville identified for integration of mitigation concepts to be incorporated into municipal procedures.

9.25.3.1 Planning, Legal, and Regulatory Capability

Section 5 (Capability Assessment) provides an overview of the planning, legal, and regulatory capabilities. The table below summarizes the regulatory tools that are available to the Borough of Merchantville, what is present in the jurisdiction, and code citation and date.

Table 9.25-2. Planning, Legal, and Regulatory Capability

	Do you have this? (Yes/No)	**Required by State?** (Yes/No)	**Citation and Date** (code chapter and enaction date or name of plan and date of plan)	**Authority** (local, state, federal)	**Individual / Department / Agency Responsible**
Codes, Ordinances, & Regulations					
Building Code	Yes	Yes	IBC 2018, Chapter 15 Construction Codes, Uniform	State and Local	Code Enforcement
Zoning/Land Use Code	Yes	No	Chapter 94 Zoning	Local	Mara Wuebker / Community Development
Subdivision Ordinance	Yes	No	Chapter 73A Subdivision of Land	Local	Mara Wuebker / Community Development
Stormwater Management Ordinance	Yes	Yes	Chapter 71A Stormwater Management	Local	Public Works Department
Post-Disaster Recovery/ Reconstruction Ordinance	No	No	-	-	-
Real Estate Disclosure	Yes	Yes	N.J.A.C. 13:45A-29.1	State	State, Division of Consumer Affairs
Growth Management	No	No	-	-	-
Site Plan Ordinance	Yes	No	Chapter 94 Zoning Article XVI Site Plan Review	Local and County	Mara Wuebker/Zoning Dept.
Environmental Protection Ordinance	No	Yes, depends on type of environmental areas	-	-	-
Flood Damage Prevention Ordinance	Yes	Yes	Chapter 33A Flood Damage Prevention, 3/9-12-2016	Federal, State, County and Local	Kevin Patti/Public Works
Wellhead Protection	No	No	-	-	-
Emergency Management Ordinance	No	No	-	-	-
Climate Change Ordinance	No	No	-	-	-
Disaster Recovery Ordinance	No	No	-	-	-

	Do you have this? (Yes/No)	Required by State? (Yes/No)	Citation and Date (code chapter and enaction date or name of plan and date of plan)	Authority (local, state, federal)	Individual / Department / Agency Responsible
Disaster Reconstruction Ordinance	No	No	-	-	-
Other	No	-	-	-	-

Codes, Ordinances, & Regulations Connection to Mitigation and Safe Growth

How are codes, ordinances and regulations contributing to risk reduction in your community?

- Building Code:
  - The State of New Jersey has adopted the 2018 International Building Code (IBC). Flood design provisions are found in the Building Subcode (Section 1612), Residential Subcode, Rehabilitation Subcode, and Plumbing, Mechanical, and Fuel Gas subcodes. The flood provisions are deemed by FEMA to meet or exceed NFIP requirements for buildings and structures.
  - The IBC includes design requirements for structural wind resistance. Design wind speeds in New Jersey vary based on structure type and location, with higher wind design speeds required in coastal areas.

- Flood Damage Prevention Ordinance:
  - A local flood damage prevention ordinance sets design standards for reducing flood losses and is required for participation in the National Flood Insurance Program.
  - The local flood damage prevention ordinance requires permits for floodplain development, adopts and enforces flood maps, requires new and substantially improved structures be elevated above the base flood elevation, among other standards.
  - In the State of New Jersey, all new and substantially improved structures are required to be elevated at least one foot above the base flood elevation.

- Stormwater Ordinance
  - New Jersey municipalities enact stormwater management ordinances to regulate runoff quantity and quality, groundwater recharge, and erosion control. Municipalities are required to update their municipal stormwater control ordinance to reflect amendments to the Stormwater Management rules at N.J.A.C. 7:8, adopted March 2, 2020 and should use NJ DEP's Model Stormwater Control Ordinance for Municipalities.
  - Stormwater ordinances for major development require mitigating runoff by requiring that peak runoff rates for the 2, 10, and 100-year storms be below pre-construction conditions and not increase flood damage downstream of the site.

Prior to zoning changes or development approvals, does the jurisdiction review the hazard mitigation plan and other hazard analyses to ensure consistent and compatible land use? No

Does the zoning ordinance discourage development or redevelopment within natural areas including wetlands, floodways, and floodplains? N/A

Does the ordinance require developers to take additional actions to mitigate natural hazard risk? No

Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use? N/A

Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas? N/A

	Do you have this? (Yes/No)	Required by State? (Yes/No)	Citation and Date (code chapter and enaction date or name of plan and date of plan)	Authority (local, state, federal)	Individual / Department / Agency Responsible
Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources? N/A ***Do the regulations allow density/development transfers where hazard areas exist?*** N/A					
Planning Documents					
Master Plan	Yes	Yes	Borough Master Plan, October 2007/ Re-examined in 2020	Local	Community development
Capital Improvement Plan	No	No	-	local	Administration and Planning Board, is authorized to prepare 6-year program.
Disaster Debris Management Plan	Yes	No	Disaster Debris Management Plan, 2019	Local	Department of Public Works
Floodplain Management or Watershed Plan	No	No	-	-	-
Stormwater Management Plan	Yes	All but Boroughs of Pine Valley and Tavistock	Stormwater Management Plan 2018	Local	Department of Public Works
Stormwater Pollution Prevention Plan	Yes	All but Boroughs of Pine Valley and Tavistock	Stormwater Pollution Prevention Plan revised 2018	Local	Department of Public Works
Urban Water Management Plan	No	No	-	-	-
Habitat Conservation Plan	No	No	-	-	-
Economic Development Plan	Yes	No	Borough Master Plan, October 2007	Local	Mara Wuebker / Community Development
Shoreline Management Plan	N/A	No	-	-	-
Community Wildfire	No	No	-	-	-

	Do you have this? (Yes/No)	Required by State? (Yes/No)	Citation and Date (code chapter and enaction date or name of plan and date of plan)	Authority (local, state, federal)	Individual / Department / Agency Responsible
Protection Plan					
Community Forestry Management Plan	Yes	No	Forestry Management Plan, 5yr plan 12/2018	Local	Nina Scarpa / Shade tree commission
Transportation Plan	Yes	No	Circulation Element in Borough Master Plan, 2007	Local	Community Development
Agriculture Plan	No	No	-	-	-
Climate Action/ Resiliency Plan	No	No	-	-	-
Tourism Plan	No	No	-	-	-
Business/ Downtown Development Plan	Yes	No	Borough Master Plan, October 2007 and 2016 Downtown Redevelopment Plan Amendment	Local	Mara Wuebker / Community Development
Other	No	No	-	-	-

Planning Connection to Mitigation and Safe Growth

How are your plans contributing to risk reduction in your community? Implementation of the Community Forest Management Plan and Stormwater Pollution plan contribute to risk reduction in our community.

Does the future land use map clearly identify natural hazard areas? Yes

Do the land use policies discourage development or redevelopment within natural hazard areas? N/A

Does the land use plan provide adequate space for expected future growth in areas located outside natural hazard areas? Yes

Is transportation policy used to guide growth to safe locations? N/A

Are transportation systems designed to function under disaster conditions (e.g. evacuation)? Yes

Are environmental systems that protect development from hazards identified and mapped (i.e., dunes, rip rap, defensible space, wetlands/natural shoreline)? N/A

Do environmental policies maintain and restore protective ecosystems? N/A

Response/Recovery Planning

	Do you have this? (Yes/No)	Required by State? (Yes/No)	Citation and Date (code chapter and enaction date or name of plan and date of plan)	Authority (local, state, federal)	Individual / Department / Agency Responsible
Emergency Operations Plan	Yes	Yes	Municipal Emergency Operations Plan, Updated 2020	Local	OEM
Strategic Recovery Planning Report	No	No	-	-	-
Threat & Hazard Identification & Risk Assessment (THIRA)	No	No	-	-	-
Post-Disaster Recovery Plan	No	No	-	-	-
Continuity of Operations Plan	No	No	-	-	-
Public Health Plan	No	No	-	-	-
Other	No	-	-	-	-

Response/Recovery Planning Connection to Mitigation and Safe Growth

How do your response/recovery plans contribute to risk reduction in your community?

- Emergency Operations Plan (EOP):
  - NJ Rev Stat § App.A:9-43.2 (2013) requires a written Emergency Operations Plan (EOP) for each Borough and municipality in the State that coordinates with neighboring jurisdictions.
  - EOPs must address the needs of animals and individuals with animals; evacuation procedures for hospitals and health care facilities; and addressing evacuation of families and dependents of emergency responders.
  - EOPs must include a basic plan as well as Emergency Support Functions (ESF) annexes that address public information, hazardous materials, emergency warnings, and related subjects.
  - Emergency operations plans must be certified for approval by the New Jersey Office for Emergency Management.

Does your EOP cover short-term response and long-term recovery to address communications, evacuation, and housing necessary for identified hazards? Yes

9.25.3.2 Development and Permitting Capability

The table below summarizes the capabilities of the Borough of Merchantville to oversee and track development.

Table 9.25-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment
Do you issue development permits? - If yes, what department is responsible? - If no, what is your process for development?	Yes	Construction Office and Zoning Department
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	-
Do you have a buildable land inventory? - If yes, describe. - If no, quantitatively describe the level of buildout in the jurisdiction.	Yes	2007 Master Plan and 2015 Housing Element has a buildable land inventory

9.25.3.3 Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Borough of Merchantville and their current responsibilities which contribute to hazard mitigation.

Table 9.25-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	The Borough of Merchantville has a consolidated Planning Board and Zoning Board of Adjustment, known as the Joint Land Use Board (JLUB). 9 members, one staff person - The Joint Land Use Board is responsible for adopting the Borough's Master Plan, which is a broad policy document that guides the physical, economic, and social development of the community. Additionally, the Board reviews and approves site plan and subdivision applications and conducts preliminary investigations of areas in need of redevelopment. Lastly, the Board reviews land use related ordinances for a determination of consistency with the Master Plan and often will provide recommendations to Council on proposed ordinance amendments.
Zoning Board of Adjustments	Yes	The Borough of Merchantville has a consolidated Planning Board and Zoning Board of Adjustment, known as the Joint Land Use Board (JLUB). 9 members, 1 staff person, community development director - The Joint Land Use Board also hears zoning related matters, such as applications for use variances and bulk variances. This occurs when an Applicant is seeking to depart from the requirements of the Zoning Ordinance. For instance, a property owner or tenant may seek a use variance when it proposes a use on property that is prohibited in the zoning district. On the other hand, a property owner may seek a bulk variance for physical improvements to the

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		property that do not comply with the dimensional requirements of the applicable zoning district, such as setback, height, impervious coverage, or other physical requirements.
Planning Department	Yes	Community Planning & Development Department. The Department performs various functions related to the physical, social, and economic development of the community, including, but not limited to: • Reviews and issues zoning permits for structures, improvements, and land uses; • Provides planning and administrative services to the Joint Land Use Board (JLUB) and Historic Preservation Commission (HPC); • Works with the Borough's Code Enforcement, Fire, and Construction Departments to protect the quality and character of the Borough's residential and business districts; • Prepares grant applications and manages awarded grants for various community development initiatives, in coordination with the Borough Clerk; • Proposes amendments to the Borough's Master Plan and Land Use Regulations; • Prepares Redevelopment and Revitalizations Plans; • Works with the Mayor, Council, and other departments on special planning initiatives; • Works with the Mayor, Council, and the Housing Liaison to implement the Borough's Housing Element and Fair Share Plan; • Assists with the Borough's economic development policies and serves as staff liaison to the business community; • Updates the Borough's website for community-development related matters; • Updates social media pages for events and business happenings.
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	No Environmental Commission, but the Borough has a Green Team and a Shade Tree Commission. The Green Team manages the Borough's participation in the Sustainable Jersey program. The Shade Tree Commission is a seven member volunteer commission. It plants and maintains all curbside trees (trees between the curb and sidewalk, or within the Borough right of way in areas without sidewalks) as well as all public trees (in the parks or

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		on municipal property) in the Borough. The Shade Tree Commission Responsibilities include: • Removal and/or trimming of curbside and public trees • Providing guidelines for dealing with tree damaged sidewalks
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Community Development. Community Development Director, in conjunction with Mayor and Council Economic Development Director
Public Works/Highway Department	Yes	Department of Works. Staff of three for tasks such as road maintenance and tree maintenance to support hazard mitigation
Construction/Building/Code Enforcement Department	Yes	Construction Office made up of two staff.
Emergency Management/Public Safety Department	Yes	The Office of Emergency Management is comprised of 43 staff members, The Office is involved in all aspects of public safety.
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	Reverse 911
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Department of Public Works
Mutual aid agreements	Yes	County and neighboring municipalities
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	Community Development Director is a licensed professional planner
Engineers or professionals trained in building or infrastructure construction practices	Yes	Town Engineer consultant
Planners or engineers with an understanding of natural hazards	Yes	Town Engineer consultant
Staff with expertise or training in benefit/cost analysis	Yes	CFO and Purchasing agent
Professionals trained in conducting damage assessments	Yes	Construction Official & Fire Official
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	No	-
Scientist familiar with natural hazards	No	-
Surveyor(s)	No	-
Emergency Manager	Yes	Jon Paul Beauchamp, OEM Coordinator

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Grant writer(s)	No	Community development director and Borough Clerk. Are data and maps from the HMP used to support documentation in grant applications?
Resilience Officer	No	-
Other	No	-
How do your administrative/technical capabilities contribute to risk reduction in your community? *Borough* professional staff continually look at projects and try to reduce risks.		

9.25.3.4 Fiscal Capability

The table below summarizes financial resources available to the Borough of Merchantville.

Table 9.25-5. Fiscal Capabilities

Financial Resources	Are these accessible or eligible to use for mitigation? (Yes/No) If yes, please describe. If no, can this be used to support in the future?
Community development Block Grants (CDBG, CDBG-DR)	Yes – no low/mod districts currently. Potentially available for seniors or specialized populations.
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	Yes, affordable housing
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state funding programs	No
Open Space Acquisition funding programs	No
Other	No
Fiscal Connection to Mitigation and Safe Growth	
How do your fiscal capabilities contribute to risk reduction in your community? Our ability to utilize all of finance resources to mitigate are more serious risks. ***When constructing upcoming budgets, hazard mitigation actions will be funded as budget allows. Construction projects will be evaluated to see if they meet the hazard mitigation goals.*** Yes ***Annually, the jurisdiction will review mitigation actions when allocating funding.*** We do ***Do budgets limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?*** Yes	

Financial Resources	**Are these accessible or eligible to use for mitigation?** (Yes/No) If yes, please describe. If no, can this be used to support in the future?
Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards? N/A ***Do budgets provide funding for hazard mitigation projects identified in the County HMP?*** Yes	

9.25.3.5 Education and Outreach Capability

The table below summarizes the education and outreach resources available to the Borough of Merchantville.

Table 9.25-6. Education and Outreach Capabilities

Outreach Resources	**Available?** (Yes/No)	**Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events?** If yes, please describe.
Public information officer or communications office	No	-
Personnel skilled or trained in website development	Yes	Consultant. The Borough has personnel that are assigned to maintain the website.
Hazard mitigation information available on your website	Yes	Information on hazards, preparedness, disaster recovery, and hazard mitigation are located on the Borough website.
Social media for hazard mitigation education and outreach	No	The Borough has two personnel that are responsible for social media content and a part-time communications intern.
Citizen boards or commissions that address issues related to hazard mitigation	Yes	Shade Tree Commission
Other programs already in place that could be used to communicate hazard-related information	Yes	The Fire Department and the Police Department complete regular outreach programs.
Warning systems for hazard events	Yes	Reverse 911
Natural disaster/safety programs in place for schools	Yes	
Other	No	

9.25.3.6 Community Classifications

The table below summarizes classifications for community programs available to the Borough of Merchantville.

Table 9.25-7. Community Classifications

Program	**Participating?** (Yes/No)	**Classification** (if applicable)	**Date Classified** (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	3, 3	2017

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	Class 3	2017
Sustainable Jersey	Yes	Bronze	2020
StormReady Certification	No	-	-
Firewise Communities classification	No	-	-

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

The Borough of Merchantville is a bronze certified community in the Sustainable Jersey program. The following actions relating to hazard mitigation contributed to the Borough's certification:

- *Green Team:* The Borough established a Green Team to support the Borough's entry into and maintenance within the Sustainable Jersey program.
- *Adopt a Storm Drain:* Over the past few years Merchantville citizens noted areas surrounding storm sewers in residential and municipal areas had, at various times, become packed with debris that funnels through grates to enter and contaminate waterways. Public works employees are responsible for removing trash surrounding storm drains; however, due to limited personnel some drains had not been maintained. Volunteer driven Adopt a Storm Drain (ASD) is a no cost initiative that addresses this issue, protecting valuable resources and managing waste. Members of the Green Team, Merchantville Garden Club, Merchantville Shade Tree Commission and Merchantville Incredible Edibles conceived and executed the initiative; municipal staff and the Merchantville Public Works Department acted in an advisory capacity. Initial program implementation included (1) volunteers locating and mapping all storm drains in residential and municipal areas (2) promoting public awareness of the role of storm drains in waterway contamination by placing signage at storm drains and uploading information to appropriate websites. Ongoing program efforts include (1) soliciting community members to adopt and pledge to maintain one or more storm drains and (2) maintaining a spreadsheet to track program participation and gather feedback.
- *Community Forestry Management Plan and NJUCF Accreditation:* Merchantville has submitted its 2018-2022 Community Forestry Plan and has completed the Annual Accomplishment report for 2019. All the members of the Shade Tree Commission have attended CORE training as included in New Jersey Shade Tree and Community Forestry Assistance Act. All the Commission members have attended continuing education courses at the New Jersey Shade Tree Federation's annual meeting and have earned CEUs. One member of the Commission is certified arborist and certified roadside tree expert. Another member has a Bachelor of Science in Landscape Architecture. The commission itself regularly performs inventories to identify planting sites, trees to preserve and hazards to respond to. Merchantville' s tree protection ordinance is in the process of being updated along with their planting plan.

9.25.3.7 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 2014). In other words, it describes a jurisdiction's current capabilities to adjust to, protect from, or withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each hazard of concern and the jurisdiction's rating.

Table 9.25-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak*
Coastal Erosion/Sea Level Rise	Weak
Dam Failure/Levee Failure	Weak
Disease Outbreak/Pandemic	Moderate
Drought	Moderate
Earthquake	Moderate
Extreme Temperatures	Moderate
Flood	Weak
Geological Hazards	Moderate
High Wind	Strong
Invasive Species/Harmful Algal Bloom	Moderate
Severe Summer Weather	Strong
Severe Winter Weather	Strong
Wildfire	Moderate

**Strong = Capacity exists and is in use, Moderate = Capacity may exist; but is not used or could use some improvement, Weak = Capacity does not exist or could use substantial improvement.*

9.25.4 National Flood Insurance Program (NFIP) Compliance

Th table below provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP.

Table 9.25-9. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
• # NFIP Policies: 7 • # RL properties: 0 • # SRL properties: 0 • # RL/SRL mitigated: 0	• Total premium in force: $3,244 • # claims filed: 0 • Total loss payments: $0
Describe areas prone to flooding in your jurisdiction.	Glenwood Avenue
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation, and if so, how many are interested in (elevation or acquisition)?	No

NFIP Topic	Comments
How do you make Substantial Damage determinations? • How many were declared for recent flood events in your jurisdiction?	None
Detail any RiskMAP projects currently underway in your jurisdiction.	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes
NFIP Administration	
What local department is responsible for floodplain management?	Administration
Are any staff certified floodplain managers (CFMs) or is a consultant retained?	Yes, CME
Provide an explanation of who in your municipality provides NFIP administration services (permit review, GIS, education/outreach, inspections, engineering capability).	Borough Clerk
What specific training or support does your floodplain management staff need to support its floodplain management program?	None
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	N/A
Do you have access to resources to determine possible future flooding conditions from climate change?	No
NFIP Compliance	
List any outstanding NFIP compliance violations.	None
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	None on file with NJ DEP.
What is the local law number or municipal code of your flood damage prevention ordinance? What is the date that your flood damage prevention ordinance was last amended?	Chapter 33A Flood Damage Prevention, 3/9-12-2016
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets
Are there other local ordinances, plans, or programs (site plan review, consideration of flood risk reduction when granting height variances) that support floodplain management and meeting the NFIP requirements?	Planning & Zoning ordinances
Does your jurisdiction participate in CRS? • If yes, is your jurisdiction interested in improving its CRS Classification? • If no, is your jurisdiction interested in joining the CRS program?	No

Source:
Notes:
RL—Repetitive Loss; SRL—Severe Repetitive Loss; NA—Not applicable

9.25.5 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 understanding a jurisdiction's overall risk to its

hazards of concern. The table below summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development.

Table 9.25-10. Recent and Expected Future Development

Type of Development	2016		2017		2018		2019		2020		2021	
Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ outside regulatory floodplain)												
	Total	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**
Single Family	0	0	0	0	0	0	0	0	0	0	0	0
Multi-Family	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0
Total Permits Issued	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)*	Description / Status of Development
Recent Major Development and Infrastructure from 2015 to Present					
None identified					
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years					
None identified					

SFHA Special Flood Hazard Area (1% annual chance flood event)

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

9.25.6 Jurisdictional Risk Assessment

The hazard profiles in Section 4 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 4.2 (Methodology and Tools), Section 4.3 (Hazards of Concern), and Section 4.4 (Hazard Ranking) provide a detailed summary for the Borough of Merchantville's risk assessment results, and data used to determine the hazard ranking are discussed later in this section.

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction. 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 were only generated for those hazards that can be clearly identified using mapping techniques and technologies and for which the Borough of Merchantville has significant exposure. The maps also show the location of potential new development, where available.

Figure 9.25 -1. Borough of Merchantville Hazard Area Extent and Location Map 1

Figure 9.25-2. Borough of Merchantville Hazard Area Extent and Location Map 2

9.25.6.1 Hazard Event History

Borough of Merchantville has a history of natural hazard events as detailed in Section 4 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the Borough and its municipalities.

The Borough of Merchantville's history of federal declarations (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Borough of Merchantville. The table below provides details regarding municipal-specific loss and damages the Borough experienced during hazard events since the last hazard mitigation plan update. Information provided in the table below is based on reference material or local sources.

Table 9.25-11. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	Borough Designated?	Summary of Event	Municipal Summary of Damages and Losses
February 15, 2015	Cold/Wind Chill	No	The center of an arctic air mass brought some of the lowest wind chills and temperatures of the winter season to New Jersey. Wind chill factors were recorded as low as 22 degrees below zero, with actual temperatures reaching -2ºF.	The extreme cold weather caused pipes to freeze and burst, displacing 16 residents from the Gloucester Township Senior Campus. Property damages in Camden County were estimated at $150,000.
June 23, 2015	Severe Storm (DR-4231-NJ)	Yes	Hot and humid air combined with an approaching cold mass, resulting in a squall line of severe thunderstorms to move through southern new Jersey on the afternoon of June 23. Estimated wind gusts reached 85 mph and knocked down thousands of trees and caused extensive damages and power losses to over 410,000 homes throughout the area.	The Camden County Public Safety Office fielded over 3,500 calls for assistance during the event. Damages included crop losses, and structural damages to buildings and facilities throughout the County, an estimated total over $3.35 million.
January 22 – 24, 2016	Severe Winter Storm and Snowstorm (DR-4264-NJ)	Yes	A low-pressure system moved up along the Carolina Coast intensifying into a major nor'easter, producing record snowfall in New Jersey on January 23. Wind gusts reached upwards of 60 mph and visibility was one-quarter mile or less throughout the region. Damages across the state were estimated at $82.6 million.	Up to 22 inches of snow was reported in Camden County.

Dates of Event	Event Type (Disaster Declaration if applicable)	Borough Designated?	Summary of Event	Municipal Summary of Damages and Losses
March 6, 2018	Winter Storm	No	A low pressure system moved northeast across Delaware and New Jersey bringing a wintery snow/rain mix overnight on March 6. Across the state, snowfall totals ranged from 6 to 24 inches. Heavy, wet snow downed trees and limbs leaving 350,000 customers state-wide without power.	Snowfall totals in Camden County reached 9 inches in some areas near the Delaware River.
August 19, 2019	Strong Thunderstorm	No	Trees and wires down with power outages	Numerous trees down creating excess debris
June 3, 2020	Strong Thunderstorm	No	Trees and wires down with power outages	Numerous trees down and power outages
January 31, 2021	Nor'easter, Snow	Yes	7 to 10 inches of snow fell	Hazardous driving conditions
January 20, 2020 – Present	Covid-19 Pandemic (EM-3451-NJ) (DR-4488-NJ)	Yes	Beginning on January 20, 2020, the pandemic resulting from the Coronavirus Disease (COVID-19) created conditions of sufficient severity and magnitude to warrant a disaster declaration in the State of New Jersey.	Between March 1, 2020 and February 18, 2021, Camden County reported 38,352 confirmed cases of COVID-19, and 1,023 total fatalities.

9.25.6.2 Hazard Ranking and Vulnerabilities

The hazard profiles in Section 4.3 (Hazards of Concern) of this plan have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the Borough of Merchantville's risk assessment results and data used to determine the hazard ranking.

Hazard Ranking

This section provides the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 4 (Risk Assessment) of the plan. The ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy as well as community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 4.4 (Hazard Ranking), each participating jurisdiction can have differing degrees of risk exposure and vulnerability compared with Borough of Merchantville as a whole. The table below

summarizes the hazard risk/vulnerability rankings of potential natural hazards for the Borough of Merchantville. The Borough of Merchantville reviewed the Borough hazard risk/vulnerability risk ranking table, including municipal-specific results, to reflect the relative risk of the hazards of concern to the community.

During the review of the hazard/vulnerability risk ranking, the Borough indicated the following:

- While disease outbreak and pandemic are an issue, given the scale of this hazard being affecting the entire state and nation, the community believes that the municipality has limited options to respond to this hazard, and compared to other communities it is not necessarily more vulnerable. Therefore, the Borough changed the hazard ranking from high to medium.
- The Borough is well equipped to handle severe winter weather and changed the hazard ranking from high to medium.

Table 9.25-12. Hazard Ranking Input

Coastal Erosion/ Sea Level Rise	Dam Failure/ Levee Failure	Disease Outbreak/ Pandemic	Drought	Earthquake	Extreme Temperatures	Flood
Low	Low	Medium	Medium	Low	Medium	Medium

Geological Hazards	High Wind	Invasive Species/ Harmful Algal Bloom	Severe Summer Weather	Severe Winter Weather	Wildfire
Low	High	Medium	Medium	Medium	Low

Note: The scale is based on the hazard rankings established in Section 4.4 (Hazard Ranking) and modified as appropriate during review by the jurisdiction.

Critical Facilities

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain and presents Hazus estimates of the damage and loss of use to critical facilities as a result of a 1-percent annual chance flood event.

Table 9.25-13. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event	
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage
None Identified					

Source: FEMA DFIRM – 2016

9.25.6.3 Identified Issues

After review of the Borough of Merchantville's hazard event history, hazard rankings, jurisdiction specific vulnerabilities, hazard area extent and location, and current capabilities, the Borough of Merchantville has identified the following vulnerabilities within their community:

- The Merchantville Elementary School and Saint Peter School / Shelter located at 51 West Maple Avenue does not have backup power. These buildings serve as evacuation facilities in the Borough. The facilities require continuous power connection in order to operate as emergency shelters.
- The intersection of Glenwood Avenue and Holly Avenue has continuous ponding issues as the stormwater infrastructure at this location is under capacity and the original design was not intended for such extreme weather events. When the Borough receives heavy rain, the street and intersection floods and closes down. This causes other major cascading issues in the municipality.
- Multiple areas of N & S Route 130, Route 38; Route 70, underpass areas, and the Cooper River area on Cuthbert Road have repetitive flooding issues. This is primarily due to the stormwater infrastructure not being designed to withstand such extreme downpour events in recent years. The piping is too small and the poor undersized culverts have caused flooding and ponding which led to road closures and hazardous driving conditions.
- The DPW has had issues, especially in recent years regarding debris management after severe storms and strong winds. The department believes they need to increase capacity as the current equipment will not suffice as long as the storms worsen over the coming years.
- The Merchantville PD HQ, Merchantville DPW, and Senior Center/ Community Center (shelter) do not have backup power. These facilities are all critical and essential facilities that are an essential component to the municipality's baseline functions and thus need to be operating at all times. Without generator power, these facilities are either unable to fully operate or operate at all and thus need continuous power during all times to avoid any cascading effects from such power outages.
- As a result of frequent power outages, the municipality's traffic lights are also subject to lose power, causing hazardous driving conditions/ traffic congestions.
- The municipality often has road closures due to downed trees and damaged roads after severe weather. It is often difficult for the municipality to respond and redirect traffic in times of need as it does not have the necessary equipment to redirect traffic when roads require closure for repair.
- The current flood damage prevention ordinance does not meet the state's recommendation for a code-coordinated flood damage prevention ordinance.
- The Borough lacks an adopted Disaster Debris Management Plan.

9.25.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and their prioritization.

9.25.7.1 Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2017 HMP. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and are discussed in the 'Capability Assessment' presented previously in this annex.

Table 9.25-14. Status of Previous Mitigation Actions

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
M-1	Identify and pursue outreach and education opportunities.	Municipal OEM	Ongoing Capability	No	-	-
M-2	Prioritize critical facilities and complete site and facility surveys to identify vulnerabilities and potential mitigation measures.	Municipal OEM and Facility Managers	Ongoing Capability	No	-	-
M-3	Prioritize recurrent drainage problem areas and initiate data collection to track unreimbursed damages and related response and recovery expenses.	Municipal OEM and Municipal Working Group	In Progress	Yes	Prioritize recurrent drainage problem areas and initiate data collection to track unreimbursed damages and related response and recovery expenses.	Municipal OEM and Municipal Working Group
M-4	Conduct regular Municipal Working Group meetings.	Municipal OEM and Municipal Working Group	Ongoing Capability	No	-	-
M-5	Install electrical hook-ups for portable back-up emergency power generator remote access for the Community Center located at 212 Summerset Avenue (CF-2).	Municipal OEM	No Progress	Yes	This facility houses the Emergency Operations Center and it does not have back up power.	Municipal OEM
M-6	Install electrical hook-ups for portable back-up emergency power generator remote access for the Merchantville Elementary School located at 130 South Centre Street (CF-5).	Municipal OEM	No Progress	Yes	This building serves as one of the evacuation facilities in the Borough. There is no back up power to this facility.	Local OEM, School Board

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
					A fixed site generator is needed.	
M-7	Acquire front loader debris removal equipment for the Department of Public Works located at 2 North Cove Road (CF-1).	Municipal OEM, Public Works Department	In Progress- working on getting specifications.	Yes	Acquire front loader debris removal equipment for the Department of Public Works located at 2 North Cove Road (CF-1).	Municipal OEM, Public Works Department
M-8	Install permanent back-up emergency power generator for the Police Station located at 1 West Maple Avenue (CF-3).	Municipal OEM, MPD	In Progress, a generator transfer switch was installed. Funded by local capitol money.	Yes	Local law enforcement HQ	Local OEM, PD
M-9	Upgrade portable generator to permanent back-up emergency power generator for the Fire Department located at 22 East Park Avenue (CF-4).	Municipal OEM, FD	Completed. The generator was funded by municipal money. $15,000 to install. Implemented by the Fire Department.	No	-	-
M-10	Acquire portable back-up emergency power generator for Merchantville Elementary School / Shelter located at 130 South Centre Street (CF-5).	Municipal OEM and School Board	No Progress	Yes	This building serves as one of the evacuation facilities in the Borough. There is no back up power to this facility	Local OEM, Diocesan of Camden, School staff
M-11	Retrofit roof for the Saint Peter School / Shelter located at 51 West Maple Avenue (CF-6).	Municipal OEM and Saint Peter School	No Progress	No	-	-
M-12	Support acquisition of portable back-up emergency power generator for the Saint Peter	Municipal OEM and Saint Peter School	No Progress	Yes	This building serves as one of the evacuation facilities	OEM

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
	School / Shelter located at 51 West Maple Avenue (CF-6).				in the Borough. There is no back up power to this facility. A fixed site generator is needed.	
MJ-1	Improve drainage to alleviate flooding issue at Glenwood Avenue and Holly Avenue.1	Municipal OEM, Municipal DPW, NJ Transit, NJ DPW	In-progress, cost being funded by Federal money and the Borough Engineer is the project manger	Yes	When the Borough receives heavy rain, the street and intersection floods and closes down.	Local OEM, Local DPW, NJ transit, Conrail

[1] Project impacts the New Jersey Transit Railroad.

9.25.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Borough of Merchantville has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2017 HMP:

- None identified

9.25.7.3 Proposed Hazard Mitigation Initiatives for the HMP Update

The Borough of Merchantville participated in a mitigation action workshop in May 2021 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

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

Table 9.25-15. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Coastal Erosion/Sea Level Rise	X	X		X			X			X
Dam Failure/Levee Failure	X	X		X			X			X
Disease Outbreak/Pandemic	X	X		X			X			X
Drought	X	X		X			X			X
Earthquake	X	X		X			X			X
Extreme Temperatures	X	X		X			X			X
Flood	X	X		X	X		X		X	X
Geological Hazards	X	X		X			X			X
High Wind	X	X		X			X			X
Invasive Species/Harmful Algal Bloom	X	X		X			X			X
Severe Summer Weather	X	X		X			X		X	X
Severe Winter Weather	X	X		X			X			X
Wildfire	X	X		X			X			X

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

The table below summarizes the comprehensive range of specific mitigation initiatives the Borough of Merchantville would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of

the 14 evaluation criteria to assist with prioritizing your actions as 'High', 'Medium', or 'Low.' The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.25-17 provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

Table 9.25-16. Proposed Hazard Mitigation Initiatives and Associated Priority

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
2022-B. Merchantville-001	Generator Installation for Schools	**Problem**: The Merchantville Elementary School and Saint Peter School / Shelter located at 51 West Maple Avenue does not have backup power. These buildings serve as evacuation facilities in the Borough. The facilities require continuous power connection in order to operate as emergency shelters. **Solution**: The Borough will provide support for the Boards of Education of each facility, providing input on backup power requirements and helping to identify potential funding sources. Upon installation, the Borough will provide guidance on	Existing	All Hazards	1,2,3,5,6	OEM and Facility Managers	Borough budget	Continued Operations	Staff time	Within 6 months	High	EAP	PI

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		maintenance requirements.											
2022-B. Merchantville-002	Glenwood Avenue and Holly Avenue Intersection Flood Mitigation	**Problem**: The intersection of Glenwood Avenue and Holly Avenue has continuous ponding issues as the stormwater infrastructure at this location is under capacity and the original design was not intended for such extreme weather events. When the Borough receives heavy rain, the street and intersection floods and closes down. This causes other major cascading issues in the municipality. **Solution**: The Borough has designed a pump station to reduce the ponding at the intersection. The Borough will apply for funding support	Existing	Flood, Severe Summer Weather	1,2,3,5,6	DPW	HMGP, BRIC, Municipal budget	Flood Mitigation	$500k – 1 million	6 months once funding secured	High	SIP	SP

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		and DPW will oversee the construction of the pump station.											
2022-B. Merchantville-003	Stormwater Retrofitting and rightsizing	**Problem**: Multiple areas of N & S Route 130, Route 38; Route 70, underpass areas, and the Cooper River area on Cuthbert Road have repetitive flooding issues. This is primarily due to the stormwater infrastructure not being designed to withstand such extreme downpour events in recent years. The piping is too small and the poor undersized culverts have caused flooding and ponding which led to road closures and hazardous driving conditions. **Solution**: The Borough DPW will conduct a feasibility study to determine what specific infrastructure	Existing	Flood, Severe Summer Weather	1,2,3,5,6	DPW	HMGP, BRIC; Municipal Budget	Flood Mitigation	$500k – 1 million	1 year once funding secured and designs developed	High	SIP	SP

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		solutions might be available for the municipality to pursue. Once this is determined, the DPW will make the necessary improvements to the stormwater infrastructure.											
2022-B. Merchantville-004	Debris Removal Equipment	**Problem**: The DPW has had issues, especially in recent years regarding debris management after severe storms and strong winds. The department believes they need to increase capacity as the current equipment will not suffice as long as the storms worsen over the coming years. **Solution**: The Borough will acquire a front loader debris removal equipment for the Department of Public Works located at 2 North Cove Road.	New	Severe Summer Weather, Strong Winds, Severe Winter Weather	1,2,4,5,6	DPW	Municipal DPW Budget	Increased capacity for debris removal	$200k	3 months once funding secured	High	LPR	ES

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
2022-B. Merchantville-005	Generator for Critical Facilities	**Problem**: The Merchantville PD HQ, Merchantville DPW, and Senior Center/ Community Center (shelter) do not have backup power. These facilities are all critical and essential facilities that are an essential component to the municipality's baseline functions and thus need to be operating at all times. Without generator power, these facilities are either unable to fully operate or operate at all and thus need continuous power during all times to avoid any cascading effects from such power outages. **Solution**: The municipality would like to apply for grant for backup generators at municipal critical facilities. The Police HQ requires a 50kw	Existing	All Hazards	1,2,4,5,6	OEM, DPW, and Borough Building Operations Managers	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Sustained Operations	$100k per facility	6 months once funding secured	High	SIP	ES

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		generator, DPW a 10kw generator, and Senior Center a 100-150kw generator. The Borough DPW will purchase and install generators and necessary electrical components. After installation, DPW will be responsible for maintenance.											
2022-B. Merchantville-006	Traffic Light Backup power	**Problem**: As a result of frequent power outages, the municipality's traffic lights are also subject to lose power, causing hazardous driving conditions/ traffic congestions. **Solution**: The municipality would like to install backup power generator/ battery ($1500x4) for four intersections to mitigate future power outages at streetlights. By installing backup power, the streetlights would	Existing	Severe Winter Weather, Severe Summer Weather, High Winds, Flood	1,2,3,5,6	OEM, DPW	HMGP, BRIC, municipal budget	Continued operations of traffic lights	$6k-10k	6 months once funding secured	High	SIP	ES

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		continue to operate during severe storms and thus allow the OEM/ FD/PD to respond to other, more pressing issues that occur during and after the storm.											
2022-B. Merchantville-007	Digital Message Board	**Problem:** The municipality often has road closures due to downed trees and damaged roads after severe weather. It is often difficult for the municipality to respond and redirect traffic in times of need as it does not have the necessary equipment to redirect traffic when roads require closure for repair. **Solution:** The municipality will purchase a digital traffic message board (3 lines) to redirect traffic in times where temporary road closure is needed. This message board	New	Severe Winter Weather, Severe Summer Weather, Strong Winds, Flood	1,2,4,5,6	DPW	Borough budget	Traffic Safety	$20k	3 months once funding secured	High	EAP	PI

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		would be powered by backup power and or batteries/ solar as needed.											
2022-B. Merchantville-008	Flood Damage Prevention Ordinance	**Problem:** The current flood damage prevention ordinance does not meet the state's recommendation for a code-coordinated flood damage prevention ordinance. **Solution:** The Borough will update the flood damage prevention ordinance using the NJ DEP's model code coordinated ordinance to create better coordination between NFIP implementation by the floodplain administrator, the New Jersey Flood Hazard Area Control Act (FHACA) implemented at the State level by the NJDEP, and the Uniform	New	Flood	2	Floodplain Administrator, Administration	Borough budget	Meet state and FEMA standards for flood damage prevention, reduce flood risk on new development	Staff time	6 months	Medium	LPR	PR

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		Construction Code (UCC) implemented by the Construction Official.											
2022-B. Merchantville-009	Disaster Debris Management Plan	**Problem**: The Borough lacks an adopted Disaster Debris Management Plan. **Solution**: The Borough will complete and adopt the in-progress Disaster Debris Management Plan.	Existing	All Hazards	5, 6	Public Works, OEM	Borough budget	Increased planning for post-disaster response and cleanup.	Staff time	6 months	High	LPR	ES

Notes:

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

Acronyms and Abbreviations:

CAV *Community Assistance Visit*
CRS *Community Rating System*
DPW *Department of Public Works*
EHP *Environmental Planning and Historic Preservation*
FEMA *Federal Emergency Management Agency*
FPA *Floodplain Administrator*
HMA *Hazard Mitigation Assistance*
N/A *Not applicable*
NFIP *National Flood Insurance Program*
OEM *Office of Emergency Management*

Potential FEMA HMA Funding Sources:

FMA *Flood Mitigation Assistance Grant Program*
HMGP *Hazard Mitigation Grant Program*
BRIC *Building Resilient Infrastructure and Communities Program*

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

Mitigation Category:

- *Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.*
- *Structure and Infrastructure Project (SIP) - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.*
- *Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.*
- *Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.*

CRS Category:

- *Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.*
- *Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.*
- *Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.*
- *Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.*
- *Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.*
- *Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.*

Table 9.25-17. Summary Evaluation and Action Priority

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2022-B. Merchantville-001	Generator Installation for Schools	1	1	1	1	1	1	-1	0	1	1	1	1	1	1	11	High ⚠
2022-B. Merchantville-002	Glenwood Avenue and Holly Avenue Intersection Flood Mitigation	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2022-B. Merchantville-003	Stormwater Retrofitting and rightsizing	1	1	1	1	1	1	-1	1	1	1	1	1	1	1	12	High
2022-B. Merchantville-004	Debris Removal Equipment	1	1	1	1	1	1	0	1	1	1	1	1	1	1	13	High
2022-B. Merchantville-005	Generator for Critical Facilities	1	1	1	1	1	1	-1	0	1	1	1	1	1	1	11	High
2022-B. Merchantville-006	Traffic Light Backup power	1	1	1	1	1	1	0	0	1	1	1	1	1	1	12	High
2022-B. Merchantville-007	Digital Message Board	1	1	1	1	1	1	0	0	1	1	1	1	1	1	12	High
2022-B. Merchantville-008	Flood Damage Prevention Ordinance	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2022-B. Merchantville-009	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High

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

⚠ *This action has been identified as being of highest importance to the municipality and an action that the municipality would like to complete as soon as funding is received.*

9.25.8 Action Worksheets

The following action worksheets have been developed by the Borough of Merchantville to aid in the submittal of grant applications to support the funding of high priority proposed actions. The State of New Jersey requires at least two projects be developed with action worksheets.

Action Worksheet			
Project Name:	Glenwood Avenue and Holly Avenue Intersection Flood Mitigation		
Project Number:	2022-B. Merchantville-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Summer Weather		
Description of the Problem:	The intersection of Glenwood Avenue and Holly Avenue has continuous ponding issues as the stormwater infrastructure at this location is under capacity and the original design was not intended for such extreme weather events. When the Borough receives heavy rain, the street and intersection floods and closes down. This causes other major cascading issues in the municipality.		
Action or Project Intended for Implementation			
Description of the Solution:	The Borough has designed a pump station to reduce the ponding at the intersection. The Borough will apply for funding support and DPW will oversee the construction of the pump station.		
Is this project related to a Critical Facility?		Yes ☐	No ☒
Level of Protection:	25 year storm	**Estimated Benefits (losses avoided):**	Flood Mitigation
Useful Life:	20 years	**Goals Met:**	1,2,3,5,6
Estimated Cost:	1 million	**Mitigation Action Type:**	Structural and Infrastructure Project
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	6 months once funding secured
Estimated Time Required for Project Implementation:	1.5 years	**Potential Funding Sources:**	HMGP, BRIC, Municipal budget
Responsible Organization:	DPW	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation, Stormwater Management
Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Current problem continues
	Close Roads	Low	High Opportunity Cost in the long run
	Stormwater upgrades	Moderate	Best option in the long run
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Action Worksheet		
Project Name:	Glenwood Avenue and Holly Avenue Intersection Flood Mitigation	
Project Number:	2022-B. Merchantville-002	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	This protects life
Property Protection	1	This project protects property
Cost-Effectiveness	1	This is most cost effective
Technical	1	There are no technical issues
Political	1	No political issues
Legal	1	No legal issues
Fiscal	-1	Need additional funding
Environmental	1	Positive environmental impact
Social	1	Positive social impact
Administrative	1	Administrative support available
Multi-Hazard	1	This addresses multiple hazards
Timeline	1	The timeline is feasible
Agency Champion	1	DPW
Other Community Objectives	1	Various
Total	12	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Stormwater Retrofitting and Rightsizing		
Project Number:	2022-B. Merchantville-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Summer Weather		
Description of the Problem:	Multiple areas of N & S Route 130, Route 38; Route 70, underpass areas, and the Cooper River area on Cuthbert Road have repetitive flooding issues. This is primarily due to the stormwater infrastructure not being designed to withstand such extreme downpour events in recent years. The piping is too small and the poor undersized culverts have caused flooding and ponding which led to road closures and hazardous driving conditions.		
Action or Project Intended for Implementation			
Description of the Solution:	The Borough DPW will conduct a feasibility study to determine what specific infrastructure solutions might be available for the municipality to pursue. Once this is determined, the DPW will make the necessary improvements to the stormwater infrastructure.		
Is this project related to a Critical Facility?		Yes ☐	No ☒
Level of Protection:	TBD by feasibility assessment	**Estimated Benefits (losses avoided):**	Flood Mitigation
Useful Life:	20 years	**Goals Met:**	1,2,3,5,6
Estimated Cost:	1 million	**Mitigation Action Type:**	Structural and Infrastructure Project
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	1 year once funding secured
Estimated Time Required for Project Implementation:	3 years	**Potential Funding Sources:**	HMGP, BRIC, Municipal Budget
Responsible Organization:	DPW	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation, Stormwater Management

Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Current problem continues
	Close Roads	Low	High Opportunity Cost in the long run
	Stormwater upgrades	Moderate	Best option in the long run

Progress Report (for plan maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Action Worksheet		
Project Name:	Stormwater Retrofitting and Rightsizing	
Project Number:	2022-B. Merchantville-003	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	This protects life
Property Protection	1	This project protects property
Cost-Effectiveness	1	This is most cost effective
Technical	1	There are no technical issues
Political	1	No political issues
Legal	1	No legal issues
Fiscal	-1	Need additional funding
Environmental	1	Positive environmental impact
Social	1	Positive social impact
Administrative	1	Administrative support available
Multi-Hazard	1	This addresses multiple hazards
Timeline	1	The timeline is feasible
Agency Champion	1	DPW
Other Community Objectives	1	Various
Total	12	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Generator for Critical Facilities		
Project Number:	2022-B. Merchantville-005		
Risk / Vulnerability			
Hazard(s) of Concern:	All Hazards		
Description of the Problem:	The Merchantville PD HQ, Merchantville DPW, and Senior Center/ Community Center (shelter) do not have backup power. These facilities are all critical and essential facilities that are an essential component to the municipality's baseline functions and thus need to be operating at all times. Without generator power, these facilities are either unable to fully operate or operate at all and thus need continuous power during all times to avoid any cascading effects from such power outages.		
Action or Project Intended for Implementation			
Description of the Solution:	The municipality would like to apply for grant for backup generators at municipal critical facilities. The Police HQ requires a 50kw generator, DPW a 10kw generator, and Senior Center a 100-150kw generator. The Borough DPW will purchase and install generators and necessary electrical components. After installation, DPW will be responsible for maintenance.		
Is this project related to a Critical Facility?	Yes ☒	No ☐	
Level of Protection:	Backup power established	**Estimated Benefits (losses avoided):**	Continued Operation – traffic safety
Useful Life:	20 years	**Goals Met:**	1,2,3,5,6
Estimated Cost:	$100k per facility	**Mitigation Action Type:**	Structural and Infrastructure Project
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	6 months once funding secured
Estimated Time Required for Project Implementation:	2 years	**Potential Funding Sources:**	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
Responsible Organization:	OEM, DPW, and Facility managers	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation, Stormwater Management
Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Problem continues.
	Install Solar at each site	High	Variable based on weather
	Generator Installation	High	Best feasible option
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Evaluation and Prioritization		
Project Name:	Generator for Critical Facilities	
Project Number:	2022-B. Merchantville-005	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	This protects life
Property Protection	1	This project protects property
Cost-Effectiveness	1	This is most cost effective
Technical	1	There are no technical issues
Political	1	No political issues
Legal	1	No legal issues
Fiscal	-1	Need additional funding
Environmental	1	No adverse impact on environment
Social	1	Positive social impact
Administrative	1	Administrative support available
Multi-Hazard	1	This addresses multiple hazards of concern
Timeline	1	The timeline is feasible
Agency Champion	1	OEM, DPW, and Facility managers
Other Community Objectives	1	Various
Total	12	
Priority (High/Med/Low)	High	

Action Worksheet			
Project Name:	Traffic Light Backup power		
Project Number:	2022-B. Merchantville-006		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Winter Storms, Severe Summer Weather, High Winds, Flooding		
Description of the Problem:	As a result of frequent power outages, the municipality's traffic lights are also subject to lose power, causing hazardous driving conditions/ traffic congestions.		
Action or Project Intended for Implementation			
Description of the Solution:	The municipality would like to install backup power generator/ battery ($1500x4) for four intersections to mitigate future power outages at streetlights. By installing backup power, the streetlights would continue to operate during severe storms and thus allow the OEM/ FD/PD to respond to other, more pressing issues that occur during and after the storm.		
Is this project related to a Critical Facility?	Yes ☐	No ☒	
Level of Protection:	Backup power established	**Estimated Benefits (losses avoided):**	Continued Operation – traffic safety
Useful Life:	20 years	**Goals Met:**	1,2,3,5,6
Estimated Cost:	$6-10k	**Mitigation Action Type:**	Structural and Infrastructure Project
Plan for Implementation			
Prioritization:	High	**Desired Timeframe for Implementation:**	6 months once funding secured
Estimated Time Required for Project Implementation:	1 year	**Potential Funding Sources:**	HMGP, BRIC, municipal budget
Responsible Organization:	OEM, DPW	**Local Planning Mechanisms to be Used in Implementation if any:**	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
Alternatives:	**Action**	**Estimated Cost**	**Evaluation**
	No Action	$0	Problem continues.
	Expand PD force	High	Too expensive
	Install backup power	Low	Best Option
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

Evaluation and Prioritization		
Project Name:	Traffic Light Backup power	
Project Number:	2022-B. Merchantville-006	
Criteria	**Numeric Rank (-1, 0, 1)**	**Provide brief rationale for numeric rank when appropriate**
Life Safety	1	This protects life
Property Protection	1	This project protects property
Cost-Effectiveness	1	This is most cost effective
Technical	1	There are no technical issues
Political	1	No political issues
Legal	1	No legal issues
Fiscal	0	Need additional funding
Environmental	0	No adverse impact on environment
Social	1	Positive social impact
Administrative	1	Administrative support available
Multi-Hazard	1	This addresses multiple hazards of concern
Timeline	1	The timeline is feasible
Agency Champion	1	OEM, DPW
Other Community Objectives	1	Various
Total	12	
Priority (High/Med/Low)	High	