



9.1 MERCER COUNTY

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

9.1.1 Hazard Mitigation Planning Team

Mercer County 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 municipal 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 Mercer County 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 9.1-1. Hazard Mitigation Planning Team

Primary Point of Contact	Alternate Point of Contact
Name/Title: Robert Hartman, Coordinator, Office of Emergency Management Address: 175 South Broad Street, Trenton, NJ 08650 Phone Number: 609-281-7228 Email: rhartman@mercercounty.org	Name/Title: Rana Terzian, Emergency Management Deputy Coordinator, Office of Emergency Management Address: 175 South Broad Street, Trenton, NJ 08650 Phone Number: Email: rterzian@mercountny.org
Additional Contributors	
Name/Title: Basit Muzzaffar, County Engineer Method of Participation: Contributed to mitigation strategy	
Name/Title: Katelyn Disler, Intern, Office of Emergency Management Method of Participation: Contributed to mitigation strategy	
Name/Title: Matthew Lawson, Principal Planner Transportation Method of Participation: Contributed to mitigation strategy	
Name/Title: Marygrace Billek, Director of Human Services Method of Participation: Contributed to mitigation strategy	
Name/Title: Andrew Lloyd, Senior Planner Method of Participation: Contributed to mitigation strategy	
Name/Title: Kristin Reed, Health Officer Method of Participation: Contributed to mitigation strategy	

9.1.2 Municipal Profile

According to the U.S. Census, the 2010 population for Mercer County was 366,513. The estimated 2019 population was 367,922, a 3.9 percent increase from the 2010 Census. Data from the 2019 U.S. Census American Community Survey indicate that 5.7 percent of the population is 5 years of age or younger and 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.

9.1.3 Jurisdictional Capability Assessment and Integration

Mercer County 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 9.1.3). The updated mitigation strategy includes opportunities Mercer County identified for integration of mitigation concepts to be incorporated into municipal procedures.

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 Mercer County, what is present in the jurisdiction, and code citation and date.

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

	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Codes, Ordinances, & Regulations					
Building codes, ordinances, and regulations are administered at the local municipal level in Mercer County.					
Planning Documents					
Master Plan	Yes	Yes – County	Mercer County Master Plan	County	Planning Department
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> • The Mercer County Master Plan was adopted by the Mercer County Planning Board on September 8, 2010. The Mercer County Master Plan consists of a parent document and four elements, each of which had been independently updated on a periodic basis since 1986. In addition to the Framework (parent document), the Master Plan elements include: Farmland Preservation, Mobility (formerly the Highways Plan), Historic Preservation, and Open Space. The Historic Preservation Plan was readopted in its entirety without revisions. 					
Capital Improvement Plan	Yes	Allowed	County Budget	County	Treasurer’s Office
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> • The County budget can be used to allocate funding to support mitigation project implementation. 					



	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Disaster Debris Management Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Floodplain Management or Watershed Plan	Yes	No	A Multi-Jurisdictional Flood Mitigation Plan for Municipalities in the Non-tidal, New Jersey Section of the Delaware River Basin—Applicable to six jurisdictions within Mercer County	Local, Regional	Delaware River Basin Commission
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Discusses flood risk and identified projects to mitigate flooding in the participating jurisdictions. 					
Stormwater Management Plan	Yes	Yes	Mercer County Land Development Standards Stormwater Management Amendment	County	Planning Department
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Provides stormwater management standards for the review of subdivisions and site plans by the County Planning Board. 					
Stormwater Pollution Prevention Plan	Yes	Yes	2005 County of Mercer Stormwater Pollution Prevention Plan revised 1/6/2020	County	Highway Agency (Mercer DOT)
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Sets standards and schedules for tasks such as storm water inlet inspection and clearing, inspecting stormwater facilities for illicit connections, storage of de-icing materials, and safety measures for fueling operations 					
Urban Water Management Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Habitat Conservation Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Economic Development Plan	Yes	No	Mercer County Opportunity Zones	County	Economic Development
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Mercer County currently comprises eight Opportunity Zones - seven in Trenton and one in Hamilton. These sites are economically distressed communities where new investments, under certain conditions, may be eligible for preferential tax treatment. 					
Shoreline Management Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Community Wildfire Protection Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Community Forest Management Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Transportation Plan	Yes	No	Transportation Development District	County	Planning Department



	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
<i>How does this reduce risk?</i>					
Agriculture Plan	Yes	No	Mercer County Master Plan, Farmland Preservation	County	Planning Department
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Included as element of master plan. Includes preservation goals and project areas for preservation. 					
Climate Action/ Resiliency Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Tourism Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Business/ Downtown Development Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Other	No	-	-	-	-
Planning Connection to Mitigation and Safe Growth					
<ul style="list-style-type: none"> 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. Annually, the jurisdiction will review mitigation actions when allocating funding. Do budgets limit expenditures on projects that would encourage development in areas vulnerable to natural hazards? Mercer County does not have the ability to direct development. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards? The County is limited in this ability, but the WQMP (wastewater management) process does not allow for development within the Riparian Buffer Zones delineated in NJAC 7:13. Do budgets provide funding for hazard mitigation projects identified in the County HMP? Yes Does the future land use map clearly identify natural hazard areas? No such master mapping exists, but WQMP does maintain a GIS layer of "developable land" based on that which is not covered by GIS layers of environmentally sensitive areas (ESAs). Do the land use policies discourage development or redevelopment with natural hazard areas? The County does not set land use policy. That is a municipal function in NJ. The County is able to affect land use in Mercer County by "negation," that is, by preserving land, it is effectively removed from the developable land inventory. County policies follow state regulations. Developers have ways to challenge those regulations, such as Habitat Studies, Wetlands LOIs, which the state rules over and the County cannot supersede. The County also does not preside over municipal zoning and land development processes. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas? The County does not have jurisdiction over land use policy. No plan exists. Does the transportation plan limit access to hazard areas? No Is transportation policy used to guide growth to safe locations? The County does not guide growth. Are transportation systems designed to function under disaster conditions (e.g. evacuation)? The County does not control transportation systems. Are environmental systems that protect development from hazards identified and mapped? Floodplains and wetlands are mapped, but holistically, not modeled to illustrate protective functions Do environmental policies maintain and restore protective ecosystems? Yes, State regulations are in place for this purpose. The County's Open Space Plan seeks to protect stream corridors and at-risk habitat and work continues through stewardship efforts. Do environmental policies provide incentives to development that is located outside protective ecosystems? The County does not control development, nor can it incent development to locations outside of protective ecosystems, except by preserving land in protective ecosystems. 					
Response/Recovery Planning					
Emergency Operations Plan	Yes	Yes	Emergency Operations Plan	County	Emergency Management and Public Safety
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Outlines responsibilities during emergency events for emergency response. 					
Strategic Recovery Planning Report	No	No	-	-	-
<i>How does this reduce risk?</i>					



	Jurisdiction has this? (Yes/No)	Required by State? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	No	As part of Emergency Operations Plan	County	Emergency Management and Public Safety
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Component of Emergency Operations Plan. 					
Post-Disaster Recovery Plan	No	No	-	-	-
<i>How does this reduce risk?</i>					
Continuity of Operations Plan	Yes	No	As part of Emergency Operations Plan	County	Emergency Management and Public Safety
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Component of Emergency Operations Plan. 					
Public Health Plan	Yes	No	Public Health Plan	County	Division of Public Health
<i>How does this reduce risk?</i>					
<ul style="list-style-type: none"> Addresses disease outbreak events. 					
Other	No	-	-	-	-
Response/Recovery Planning Connection to Mitigation and Safe Growth					
<ul style="list-style-type: none"> Does your EOP cover short-term response and long-term recovery to address communications, evacuation, and housing necessary for identified hazards? Yes 					

Development and Permitting Capability

The table below summarizes the capabilities of Mercer County to oversee and track development.

Table 9.1-3. Development and Permitting Capability

Indicate if your jurisdiction implements the following	Yes/No	Comment
Do you issue development permits? - If yes, what department is responsible? - If no, what is your process for development?	No	Development permits are issued at the municipal level.
Are permits tracked by hazard area? (For example, floodplain development permits.)	N/A	-
Do you have a buildable land inventory? - If yes, describe. - If no, quantitatively describe the level of buildout in the jurisdiction.	Yes	Mapped ESAs as part of wastewater management planning, but these are not enforceable by County, just representative of ESAs as mapped by NJDEP.

Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to Mercer County and their current responsibilities which contribute to hazard mitigation.

Table 9.1-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Planning Board	Yes	Planning Board
Zoning Board of Adjustments	No	-



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Planning Department	Yes	<p>Planning Department. Planning Department staff is responsible for reviewing all development proposals (i.e subdivision and site plan applications) to determine whether County roads/property and/or drainage facilities would be adversely affected. Department staff, in collaboration with the County Engineer, provide recommendations to the Planning Board's Land Development Committee for mitigating traffic and storm water impacts.</p> <p>The Engineering Division is responsible for project development, design, construction and maintenance of 687 bridges and culverts; nearly 300 electrically operated traffic control devices; and 180 miles (425 lane miles) of pavement and the supporting drainage, lane markings and traffic and wayfaring signs within the county roadway network. This Division is also responsible for the review and approval of site plans and subdivisions submitted to the Mercer County Planning Board. Mercer County's Engineering Division continues to successfully acquire state and federal funding for substantial capital investments to minimize the expenditure of County funds.</p>
Mitigation Planning Committee	No	-
Environmental Board/Commission	Yes	<p>The Mercer County Soil Conservation District works to protect, improve and sustain the natural resources of Mercer County. The District is responsible for promoting stewardship by developing, evaluating and implementing conservation practices through cooperative land users. The District provides technical guidance, on-site expertise, and education for agencies and the public in resource conservation.</p>
Open Space Board/Committee	Yes	<p>In 1989, Mercer County established an Open Space Preservation Board whose primary responsibility is to make recommendations regarding the overall administration of the county open space program. The board's duties include preparation of a county open space plan, recommendation of open space areas for acquisition and development of a funding assistance program. The Open Space Preservation Board consists of eleven members who serve five year terms. The board consists of: the County Executive, a County Commissioner, representatives from the Park Commission, Mercer County Planning Board, Cultural & Heritage Commission, State Green Acres and the County Agricultural Development Board and one citizen representative from each of the four geographic regions of the county. The Mercer County Planning Department administers the open space program and provides staff support to the Board.</p>
Economic Development Commission/Committee	Yes	<p>The Mercer County Office of Economic Development provides a variety of business development programs and workshops to help small and large businesses in the County build growing, successful companies.</p>
Public Works/Highway Department	Yes	<p>The Superintendent and Director of Public Works manage the operation of the Highway Division under the direction of the Deputy Administrator of the</p>



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		Department of Transportation & Infrastructure (DOT&I). The Division comprises six Units: Bridges & Culverts, Mosquito Control, Motor Pool, Roads, Shade Tree and Traffic & Signal. Each Unit is unique in their responsibilities and all work together in enhancing the quality of life for Mercer County residents by ensuring a safe, efficient and reliable transportation system. Public Works also maintains the Stormwater Pollution Prevention Plan and the MS4 Highway Agency permit.
Construction/Building/Code Enforcement Department	No	-
Emergency Management/Public Safety Department	Yes	The mission of the Office of Emergency Management is to protect life and property in emergencies. The Emergency Management Coordinator prepares detailed plans for response to natural and man-made disasters. The OEM also provides for the training of volunteers to be relied upon in fire and medical emergencies. The County OEM gets involved in any disaster that gets beyond the capabilities of the municipality to properly respond. The OEM is often activated whenever there are severe blizzards, floods, hurricanes, fires and chemical spills by coordinating the activities of the thirteen municipalities of the County. Assistance may also be obtained from the State OEM.
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	Swift911
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Completed by Public Works.
Mutual aid agreements	Yes	Mercer County Improvement Authority
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	Yes	MUAs with several counties in the southern region; in-county MUA with 8 out of 12 municipalities completed
Other	Yes	Park Commission
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Planning Department, Engineering Division
Engineers or professionals trained in building or infrastructure construction practices	Yes	Transportation and Infrastructure Department
Planners or engineers with an understanding of natural hazards	Yes	Planning Department, Public Safety and Emergency Management Department, Transportation and Infrastructure Department
Staff with expertise or training in benefit/cost analysis	No	-
Professionals trained in conducting damage assessments	No	-
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Planning Department, GIS
Scientist familiar with natural hazards	No	-
Surveyor(s)	No	-



Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Emergency Manager	Yes	Public Safety and Emergency Management Department
Grant writer(s)	Yes	Various Departments. Are data and maps from the HMP used to support documentation in grant applications? Yes
Resilience Officer	No	-
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Engineering Division does review stormwater plans that come under the County's purview (development that disturbs greater than 1 acre or more and/or affects County drainage).
How do your administrative/technical capabilities contribute to risk reduction in your community? Staff are trained to respond to and mitigated hazard events.		

Fiscal Capability

The table below summarizes financial resources available to Mercer County.

Table 9.1-5. 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
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state funding programs	Yes
Open Space Acquisition funding programs	Yes. Mercer County has several programs that are funded through the Mercer County Open Space Preservation Trust Fund Tax, a voter-approved tax that raises funds to preserve open space and farmland.
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No

Fiscal Connection to Mitigation and Safe Growth

How do your fiscal capabilities contribute to risk reduction in your community? PLACEHOLDER

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. PLACEHOLDER

Annually, the jurisdiction will review mitigation actions when allocating funding. PLACEHOLDER

Do budgets limit expenditures on projects that would encourage development in areas vulnerable to natural hazards? PLACEHOLDER



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? PLACEHOLDER	
Do budgets provide funding for hazard mitigation projects identified in the County HMP? PLACEHOLDER	

Education and Outreach Capability

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

Table 9.1-6. 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	Yes	Public Information
Personnel skilled or trained in website development	Yes	IT
Hazard mitigation information available on your website	Yes	Information on the HMP planning process is located on the County website. When complete, the final plan is also posted.
Social media for hazard mitigation education and outreach	Yes	Website
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Other programs already in place that could be used to communicate hazard-related information	Yes	Social media as maintained by the Public Information office.
Warning systems for hazard events	Yes	Swift911
Natural disaster/safety programs in place for schools		
Other	Yes	MUA with hospitals and all colleges in the county; partnerships with Rescue Mission and Salvation Army

Community Classifications

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

Table 9.1-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
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	-	-
Sustainable Jersey	N/A	-	-
StormReady Certification	No	-	-
Firewise Communities classification	No	-	-

Note:

- N/A Not applicable
- NP Not participating





- Unavailable

Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current 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 9.1-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak*
Dam Failure	Moderate
Disease Outbreak	Moderate
Drought	Moderate
Earthquake	Moderate
Flood	Moderate
Geological Hazards	Moderate
Hazmat	Moderate
Hurricane	Moderate
Infestation and Invasive Species	Moderate
Nor’Easter	Moderate
Severe Weather	Moderate
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.

9.1.4 National Flood Insurance Program (NFIP) Compliance

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

Table 9.1-9. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
<ul style="list-style-type: none"> # NFIP Policies: 1,761 # RL properties: 275 # SRL properties: 33 # RL/SRL mitigated: 6 	<ul style="list-style-type: none"> # claims filed: 1,702 Total loss payments: \$36,481,349
Describe areas prone to flooding in your jurisdiction.	The County has flood vulnerability along the Delaware River and its tributaries. Additionally, various locations located in and outside of the special flood hazard area are attributed to stormwater infrastructure deficiencies. The County intends to address these issues as part of the County’s mitigation strategy.
Do you maintain a list of properties that have been damaged by flooding?	Lists of property damages are maintained at the local municipal level.
Do you maintain a list of property owners interested in flood mitigation, and if so, how many are interested in (elevation or acquisition)?	Lists of interested property owners are maintained at the local municipal level.



NFIP Topic	Comments
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> How many were declared for recent flood events in your jurisdiction? 	Substantial Damage determinations are made at the local municipal level.
Detail any RiskMAP projects currently underway in your jurisdiction.	There is a RiskMAP for HUC8 02030105, which is Eastern part of County, but many attributes are not complete for Mercer portion. Planning Department has hard copy of one done for Delaware River Riverine Project Area (Western part of County) but has not obtained the underlying data to date.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If not, state why. 	SFHA mapping is not sufficient due to lack of incorporating manmade structures and impervious surfaces into model, increased intensity of precipitation, and current lack of mapping of repetitive loss properties and other non-reg mapping products that would help more fully understand and plan.
NFIP Administration	
NFIP Administration is carried out at the local municipal level in Mercer County.	
NFIP Compliance	
NFIP Compliance is carried out at the local municipal level in Mercer County.	

Source: FEMA Region 2 2019

Notes:

RL—Repetitive Loss; SRL—Severe Repetitive Loss; NA—Not applicable

9.1.5 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction’s overall risk to its hazards of concern. The jurisdictional annexes for each municipality summarize recent and expected future development trends, including major residential/commercial development and major infrastructure development.

Table 9.1-10. 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	Refer to municipal annexes											
Multi-Family												
Other (commercial, mixed-use, etc.)												
Total Permits Issued												
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												
Refer to municipal annexes												
Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years												
Refer to municipal annexes												

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

* Only location-specific hazard zones or vulnerabilities identified.



9.1.6 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 Mercer County’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 in each of the hazard profiles illustrate the probable areas impacted within Mercer County.

Hazard Event History

Mercer County 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 county and its municipalities.

Mercer County’s history of federal declarations (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Mercer County. The table below provides details regarding municipal-specific loss and damages the County 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 9.1-11. Hazard Event History

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
February 13-14, 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 - 2°F.	Many local governments across the area set up Code Blue shelters for the vulnerable population
January 22 – 24, 2016	Blizzard (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 24 inches of snow was reported in Mercer County.
March 7, 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.	Up to 11.5 inches of snowfall was reported in Mercer County.
August 4, 2020	Tropical Storm	N/A	Tropical Storm Isaias brought high winds, heavy rain, several tornadoes, and coastal flooding to the mid-Atlantic region, becoming the most impactful tropical cyclone to impact most of the region since Sandy in 2012.	High winds and heavy rain impacted Mercer County.



Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Damages and Losses
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.	The coronavirus pandemic resulted in closures and masking and social distancing requirements.
January 18, 2019	Winter Storm	No	A heavy snow event impacted Mercer County.	Heavy snow caused numerous road closures, trees down, and power outages
February 25, 2019	Severe Wind Event	No	A departing very deep cyclone combined with strong high pressure to the west yielded a strong pressure gradient from the Plains eastward to the northern Mid-Atlantic and New England regions. High winds gusting 50-60 mph resulted in scattered power outages and trees down across the region.	Caused numerous power outages, some taking many days to restore, and roads closed because of trees down.
July 17, 2019	Severe Wind Event	No	A hot air mass existed east of a frontal system, and the tropical moisture associated with Barry combined with the heat to create an unstable environment primed for heavy rainfall and severe weather. Widespread convection developed, with a number of storms producing damaging wind.	Straight line winds reaching over 80 mph caused numerous power outages, some taking many days to restore, and roads closed because of trees down.
October 31- November 1, 2019	Severe Thunderstorm	No	A severe weather outbreak impacted the mid-Atlantic from the evening of October 31 through the pre-dawn hours of November 1. This generated enough instability, combined with extremely strong wind fields, to produce a low topped line of severe convection which tracked across the entire region. Widespread damaging wind occurred as the squall line moved through, along with a couple of short lived embedded tornadoes.	Beginning late on 10/31 and continuing into the early morning hours on 11/1 caused numerous power outages, some taking many days to restore, and roads closed because of trees down.
December 16, 2020	Winter Storm	No	A heavy snow event impacted Mercer County.	The storm caused minor damage and road closures.

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 Mercer County’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 Mercer County as a whole. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for Mercer County. Mercer County reviewed the community’s 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, Mercer County indicated the following:

- The County agreed with the calculated hazard rankings.

Table 9.1-12. Hazard Ranking Input

Dam Failure	Disease Outbreak	Drought	Earthquake	Flood	Geological Hazards	Hazardous Materials
Medium	High	Medium	Low	Medium	Low	High
Hurricane/ Tropical Storm	Infestation and Invasive Species	Nor’Easter	Severe Weather	Severe Winter Weather	Wildfire	
High	High	Medium	High	High	Medium	

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 9.1-13. Potential Flood Losses to Critical Facilities

Name	Type	Exposure	
		1% Event	0.2% XEvent
415.2 - LOWER FERRY RD CR 643 OVER GOLD*	Bridge	X	X
415.6 - PARKWAY AVE CR 634 OVER GOLD RUN	Bridge	X	X
441.4 - LOWER FERRY RD CR 643 OVER SHAB*	Bridge	X	X
441.20 - CENTRAL AVE OVER SHABAKUNK CRK*	Bridge	X	X
441.22 - N OLDEN AVE CR 622 OVER SHABAK*	Bridge	X	X
441.24 - PARKSIDE AVE CR 636 OVER SHABA*	Bridge	X	X
441.32 - BRADWAY AVE OVER SHABAKUNK CRK*	Bridge	X	X
441.33 - STRATFORD AVE OVER SHABAKUNK C*	Bridge	X	X
441.2 - PROSPECT ST CR 627 OVER SHABAKU*	Bridge	X	X
442.2 - GREEN LN OVER SHABAKUNK CRK	Bridge	X	X
442.4 - EWINGVILLE RD OVER SHABAKUNK CRK	Bridge	X	X



Name	Type	Exposure	
		1% Event	0.2% XEvent
4-215.1 - BEAR TAVERN RD RT 579 OVER EW*	Bridge	X	X
5-441.1 - SPRUCE ST CR 613 OVER SHABAKU*	Bridge	X	X
442.1 - EWINGVILLE RD CR 636 OVER SHABA*	Bridge	X	X
441.19 - TRAIL (THURSTON AVE TO SUTHERL*)	Bridge	X	X
4-215.2 - NURSERY RD CR 647 OVER EWING *	Bridge	X	X
414.1 - WILBURTHA RD OVER DELAWARE RIV *	Bridge	X	X
414.3 - WILBURTHA RD OVER DELAWARE RIV *	Bridge	-	X
441.23 - N OLDEN AVE CR 622 OVER SHABAK*	Bridge	X	X

Source: Mercer County 2021, FEMA 2016

DRAFT



Identified Issues

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

- The County lacks a complete inventory of the stormwater system. This lack of an inventory limits the County's ability to understand the cause of flooding and options to mitigate flooding.
- The County is impacted by chronic flooding at various locations including:
 - County Route 571 at the Tennis Center
 - County Route 610 at Mount Rose Road
 - Parkside Avenue and Oak Lane (Ewing)
 - Areas along Jacobs Creek (Ewing)
 - River Road in Princeton along Millstone River
 - Lower Ferry Road and Carlton Avenue (Ewing)
 - Nottingham Way (border of Hamilton and Trenton)
 - Grand Avenue – RR underpass (Ewing Township)
 - Parkside Avenue (Trenton)
 - Lawrence Station Road (Lawrenceville)
- Backup power sources are necessary to maintain critical services for critical facilities. The following facilities have been identified as having a lack of backup power or undersized generators to meet needs:
 - Airport Fire House
 - County Rangers building
 - County park facilities
 - Dempster Training Center (currently has undersized generator and serves as Emergency Operations Center and Communications Center)
 - Administration Building (needed to ensure continuity of IT services)
- Power failure results in the loss of traffic signals, causing unsafe traffic conditions, requiring police to direct traffic, and limiting staffing capabilities to respond to other aspects of the hazard event that caused the power failure.
- The most critical of facilities should be isolated from potential power loss events.
- The Prosecutor's Major Crimes Unit on Lambertson Road is exposed to potential flooding from the Delaware River.
- Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The County has 1,761 repetitive loss properties and 33 severe repetitive loss properties but other properties may be impacted by flooding as well.
- County facilities may not meet modern standards for high winds, snow loads, and flood protection and may have limitations that will prevent continuity of operations.
- The County requires an auxiliary sand/salt structure to protect the salt and sand supplies from exposure.
- Unhealthy, diseased, or infested trees can result in falling branches which can block roads, bring down power lines, and damage buildings and cars.
- First responders are not aware of what detours should be established during hazard events when road closures are necessary.
- Additional vulnerability assessment and emergency planning is needed for the dam failure hazard.
- Increased flood awareness is needed throughout the County.
- The current pump station at the Mercer County Corrections Center is outdated and flood-prone.
- County owned bridges, culverts, and retaining walls could be prone to failure if not protected from scouring and high velocity flood conditions.
- Additional methods are needed to support outreach and emergency notifications to drivers.
- More detailed planning is needed to support continuity of operations.



- Harmful algal blooms are becoming more frequent. Testing to confirm blooms is completed by NJ DEP but identification is needed for suspected blooms.
- Knowledge of the Community Rating System is limited among municipal administrations and staff.
- The County lacks a Disaster Debris Management Plan to respond to post-disaster debris.
- The County has various Emergency Action Plans for dams located in the County or dams outside the County that would impact the County during a failure. The dam failure inundation mapping for many of these Plans is not digitized.

9.1.7 Mitigation Strategy and Prioritization

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

Past Mitigation Initiative Status

The following table indicates progress on Mercer County’s mitigation strategy identified in the 2016 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.

DRAFT



Table 9.1-14. Status of Previous Mitigation Actions

#	2016 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 2021 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.
Mercer-1 (new and old Buildings and Grounds 5)	Ensure continuity of operations at county-owned buildings and critical facilities/infrastructure. The following locations are identified at this time to purchase and install generators: 1. County morgue 2. Airport Fire House 3. Three radio tower sites – in progress 4. County DOT complex – in progress 5. Mercer County Community College (shelter) – in progress 6. County Rangers building 7. County park facilities	County OEM	Three radio tower sites, County DOT complex, and Mercer County Community College (shelter) are complete. Morgue and Fire House are being reconsidered. Others are still in need of generators.	Yes	Ensure continuity of operations at county-owned buildings and critical facilities/infrastructure. The following locations are identified at this time to purchase and install generators: 1. Airport Fire House 2. County Rangers building 3. County park facilities	County OEM
Mercer-2 (new)	Conduct outreach to municipalities regarding zoning changes to ensure generators are included in developments with community centers.	County OEM	Complete. This is not a requirement but has been recommended to a number of facilities.	No	-	-
Mercer-3 (revised old 1.A.1, 1.A.2, 1.C.1, 2.A.1)	The county participates in the Delaware Valley Regional Planning Commission (DVRPC) – develop municipal information tools regarding hazard, risk, mitigation and send out to all municipalities in the nine-county region	County OEM and DVRPC	Ongoing Capability	No	-	-
Mercer-4 (revised old 4.A.2, 4.A.5)	Support the mitigation of vulnerable structures and infrastructure from future damage and losses	County	In Progress	Yes	Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as	OEM, local FPAs, supports by homeowners





#	2016 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 2021 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.
					documented by paid NFIP claims. The County has 1,761 repetitive loss properties and 33 severe repetitive loss properties but other properties may be impacted by flooding as well.	
Mercer-5 (new)	Conduct study to investigate possible mitigation flood solutions; potentially install flood gates and elevate roadways at the following locations: 1. River Road in Princeton 2. Nottingham Way (border of Hamilton and Trenton) 3. Grand Avenue – RR underpass (Ewing Township) 4. Parkside Avenue (Trenton) 5. Lawrence Station Road (Lawrenceville)	DOT and Highway Department	No Progress	Yes	The County is impacted by chronic flooding at various locations	Engineering, Highway Division
Mercer-6 (new)	Construct an auxiliary salt dome	Highway Division	No Progress	Yes	The County requires an auxiliary sand/salt structure to protect the salt and sand supplies from exposure.	Highway Division
Mercer-7 (new/revised 3.E.1)	Collect and conduct an inventory and generate mapping of the entire stormwater system in Mercer County	Highway Division	No Progress	Yes	The County lacks a complete inventory of the stormwater system. This lack of an inventory limits the County's ability to understand the cause of flooding and options to mitigate flooding.	Highway Division, Planning Department



#	2016 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 2021 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.
Mercer-8 (old 1.A.1 and 1.A.2)	Enhance the county's All Hazards public education and outreach program for hazard mitigation and preparedness	OEM	In Progress	Yes	Increased flood awareness is needed throughout the County.	Highway Division, Planning Department
Mercer-9 (new)	Inventory and assess health of roadside shade trees and within parks (database and management plan)	Highway Division, Parks Division	No Progress	Yes	Unhealthy, diseased, or infested trees can result in falling branches which can block roads, bring down power lines, and damage buildings and cars.	Highway Division, Parks Division
Mercer-10 (new)	Develop and document detour plans for County routes and intersections to distribute to local first-responders	OEM	No Progress	Yes	First responders are not aware of what detours should be established during hazard events when road closures are necessary.	County OEM
Mercer-11 (new)	Conduct hydrological analysis of the stormwater system and associate with the established inventory; this will assist with detour analysis so local, county, and state roads have this analysis conducted	Highway Division	No Progress	Yes	The County lacks a complete inventory of the stormwater system. This lack of an inventory limits the County's ability to understand the cause of flooding and options to mitigate flooding.	Engineering, Highway Division
Mercer-12 (revised old 2.A.20, 2.A.21, 2.A.22, 2.A.23)	Conduct risk assessment of all dams (county dams 20 and 21, as well as municipal- and privately owned dams) located in Mercer County to assess breach/failure; this would include modeling and evaluation of evacuation routes	Highway Division	No Progress	Yes	Additional vulnerability assessment and emergency planning is needed for the dam failure hazard.	Highway Division





#	2016 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 2021 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.
Mercer-13 (revised old 2.A.16, 2.A.20, 2.A.21, 2.A.22, 2.A.23, 3.E.1)	Develop a publicly available spatial application to distribute the flood potential of local waterways and post evacuation routes.	Highway Division	In Progress	Yes	Increased flood awareness is needed throughout the County.	Highway Division, Planning Department
Mercer-14 (new)	Replace and elevate the lower pumping station at the Mercer County Corrections Center (Pleasant Valley and Route 29)	Transportation and Infrastructure	In Progress	Yes	The current pump station at the Mercer County Corrections Center is outdated and flood-prone.	Transportation and Infrastructure
Mercer-15 (new)	Upgrade the stormwater, drainage capacity of county roadways that experience frequent flooding conditions.	Transportation and Infrastructure	In Progress	Yes	The County is impacted by chronic flooding at various locations.	Engineering, Highway Division
Mercer-16 (new)	Protect existing substructures / foundations / footings of County culverts, bridge and retaining walls against scour and flood conditions (bridges 20-feet and over are inspected every 2 years)	Highway Division	In Progress	Yes	County owned bridges, culverts, and retaining walls could be prone to failure if not protected from scouring and high velocity flood conditions.	Highway Division
Mercer-17 (new)	Evaluate alternatives to ensure continuity of traffic-signal operations at county-owned intersections	Highway Division	No Progress	Yes	Power failure results in the loss of traffic signals, causing unsafe traffic conditions, requiring police to direct traffic, and limiting staffing capabilities to respond to other aspects of the hazard event that caused the power failure.	Highway Division





#	2016 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 2021 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.
Mercer-18 (new)	Purchase and install upgraded mobile and permanent message boards at major-roadways	OEM, Highway Division, and Municipalities	In Progress	Yes	Additional methods are needed to support outreach and emergency notifications to drivers.	OEM, Highway Division, and Municipalities
Mercer-19 (old 1.A.2)	Establish a dedicated AM radio station for Mercer County for public information	OEM	No Progress	No	-	-
Mercer-20 (new)	Purchase a portable water pump (trailer unit) to deploy as needed	Highway Division	No Progress	No	-	-
Mercer-21 (new)	Conduct sustainability assessment of county-owned buildings to ensure continuity of operations for disaster events (e.g., assess heating/cooling, fuel storage)	OEM, Engineering	In Progress. HVAC at the County Admin building filtering upgraded during the coronavirus pandemic. This should be included going forward for other facilities	Yes	County facilities may not meet modern standards for high winds, snow loads, and flood protection and may have limitations that will prevent continuity of operations.	County OEM, Engineering, Planning Department
Mercer-22 (new/old 1.A.1)	Review and enhance existing and effective technology to deploy real-time public notification to ensure effective disaster communication within the county's integration system.	OEM; Public Information Officer / Director of Communications	Ongoing Capability. The County has increased public outreach through a new system and has increased a social media presence.	No	-	-
Mercer-23 (new)	Conduct more robust all-hazard COOP planning	MC Prosecutor's Office	In Progress	Yes	More detailed planning is needed to support continuity of operations.	County OEM



Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

Mercer County 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.

Proposed Hazard Mitigation Initiatives for the HMP Update

Mercer County participated in a mitigation action workshop in June 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 9.1-15. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam Failure	X			X			X			X
Disease Outbreak	X			X			X			X
Drought	X			X			X			X
Earthquake	X			X			X			X
Flood	X	X		X		X	X		X	X
Geological Hazards	X			X			X			X
Hazmat	X			X			X			X
Hurricane	X	X	X	X			X	X		X
Infestation and Invasive Species	X		X	X			X	X		X
Nor’Easter	X	X	X	X		X	X	X		X
Severe Weather	X	X	X	X		X	X	X	X	X
Severe Winter Weather	X	X	X	X		X	X	X		X
Wildfire	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 Mercer County would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.1-17 provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.



Table 9.1-16. 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
2021-Mercer County -001	Stormwater Inventory and Mapping	<p>Problem: The County lacks a complete inventory of the stormwater system. This lack of an inventory limits the County’s ability to understand the cause of flooding and options to mitigate flooding.</p> <p>Solution: The County will collect and conduct an inventory and generate mapping of the entire stormwater system in Mercer County. This data and mapping will be available for municipalities to use for their own mitigation planning and stormwater management as well.</p>	Existing	Flood, Severe Weather	2, 4, 5	Engineering, Highway Division, Planning Department	BRIC, County budget	Identification of stormwater components to support mitigation actions	High	Within 5 years	High	LPR	SP
2021-Mercer County -002	Address Stormwater Flooding	<p>Problem: The County is impacted by chronic flooding at various locations including:</p> <ul style="list-style-type: none"> County Route 571 at the Tennis Center County Route 610 at Mount Rose Road Parkside Avenue and Oak Lane (Ewing) Areas along Jacobs Creek (Ewing) River Road in Princeton along Millstone River 	Existing	Flood, Severe Weather	1, 2	Engineering, Highway Division	HMGP, BRIC, County budget	Reduction in flooding and flood damages	High	Within 5 years	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
		<ul style="list-style-type: none"> Lower Ferry Road and Carlton Avenue (Ewing) Nottingham Way (border of Hamilton and Trenton) Grand Avenue – RR underpass (Ewing Township) Parkside Avenue (Trenton) Lawrence Station Road (Lawrenceville) <p>Solution: Using the stormwater inventory in 2021-Mercer County-001, the County will work to upgrade and upsize stormwater components that have been identified as being undersized or deficient. The County will prioritize this work in areas that have been identified as being floodprone and have experienced damaging events.</p>											
2021-Mercer County -003	Backup Power at County Owned Critical Facilities	<p>Problem: Backup power sources are necessary to maintain critical services for critical facilities. The following facilities have been identified as having a lack of backup power or undersized generators to meet needs:</p> <ul style="list-style-type: none"> Airport Fire House County Rangers building 	Existing	Severe Weather, Severe Winter Weather, Nor' Easter, Hurricane	1,2, 6	County OEM	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency	Ensures continuity of operations of critical facilities	High	Within 5 years	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
		<ul style="list-style-type: none"> County park facilities Dempster Training Center (currently has undersized generator and serves as Emergency Operations Center and Communications Center) Administration Building (needed to ensure continuity of IT services) <p>Solution: The County Engineer will determine what size generator is needed to power each facility. The County will then purchase and install the selected generator and necessary electrical components to supply backup power to each facility.</p>					Management Performance Grants (EMPG) Program, Municipal Budget						
2021-Mercer County -004	Battery Backup for Traffic Signals	Problem: Power failure results in the loss of traffic signals, causing unsafe traffic conditions, requiring police to direct traffic, and limiting staffing capabilities to respond to other aspects of the hazard event that caused the power failure.	Existing	Severe Weather, Severe Winter Weather, Nor' Easter, Hurricane	1, 2, 6	Highway Division	HMGP, BRIC, County budget	Continuity of service for traffic signals, reduction in necessary response by police	High	Within 5 years	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
		Solution: The County will install battery backup and solar panels at critical County owned traffic signals.											
2021-Mercer County -005	Microgrid	Problem: The most critical of facilities should be isolated from potential power loss events. Solution: The County will work to establish a microgrid to support Mercer County Airport, the Highway Division offices (300 Scotch Road), and the State Police Regional Operations & Intelligence Center (ROC).	Existing	Severe Weather, Severe Winter Weather, Nor' Easter, Hurricane	1, 2, 6	Engineer, OEM	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget	Continuity of highly critical services	High	Within 5 years	High	SIP	ES
2021-Mercer County -006	Floodproof the Prosecutor's Major Crimes Unit	Problem: The Prosecutor's Major Crimes Unit on Lamberton Road is exposed to potential flooding from the Delaware River. Solution: The County will conduct a feasibility assessment to determine the best floodproofing measures to prevent damages. Once cost-effective measures are	Existing	Flood	1, 2, 6	Engineer	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, County budget	Ensures continuity of operations of Prosecutor's Major Crimes Unit, prevents flood damage	TBD by feasibility assessment	Within 5 years	High	SIP	PP





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
		identified, the County will support implementation.											
2021-Mercer County -007	Support Repetitive Loss Mitigation	<p>Problem: Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The County has 1,761 repetitive loss properties and 33 severe repetitive loss properties but other properties may be impacted by flooding as well.</p> <p>Solution: Support the development of municipal FEMA grant applications and BCAs to obtain funding to implement acquisition/purchase/moving/ elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).</p>	Existing	Flood, Severe Weather	1, 2	OEM, local FPAs, supports by homeowners, Planning Department	FEMA HMGP, BRIC, and FMA, local cost share by residents	Eliminates flood damage to homes and residents, creates open space for the county increasing flood storage.	\$200 Million for mitigation of all flood-prone properties. Depend on homeowner buy in and available funding.	3 years	High	SIP	PP
2021-Mercer County -008	Retrofit County Facilities	<p>Problem: County facilities may not meet modern standards for high winds, snow loads, and flood protection and may have limitations that will prevent continuity of operations.</p>	Existing	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter, Flood	1, 2, 6	Engineer, OEM	HMGP, BRIC, USDA Community Facilities Grant Program,	Reduction in structural failure and protection of critical services	High	3 years	High	SIP	PP





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
		Solution: The County will inventory County facilities to determine necessary retrofits to protect from damage from heavy snow, wind, and flooding. The County will then implement retrofitting for the facilities that do not meet modern standards.					County budget						
2021-Mercer County -009	Construct an Auxiliary Salt Dome	Problem: The County requires an auxiliary sand/salt structure to protect the salt and sand supplies from exposure. Solution: The County will construct an auxiliary salt barn with a structurally sound and weather-proof structure to protect the County salt and sand supply for winter storm response. The Highway Division will be responsible for construction.	New	Severe Winter Weather, Nor'easter	5	Highway Division	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, County budget	Continuity of road clearing services in winter	High	Within 5 years	High	SIP	PP, ES
2021-Mercer County -010	Inventory and Assess Health of Roadside Trees	Problem: Unhealthy, diseased, or infested trees can result in falling branches which can block roads, bring down power lines, and damage buildings and cars. Solution: The County will complete an inventory and assess the health of roadside shade trees and within parks (database and management	N/A	Severe Weather, Severe Winter Weather, Nor'easter, Hurricane, Invasive Species	2	Highway Division, Parks Division	County budget	Reduction in falling branches, reduction in spread of disease/infection in trees	High	Within 5 years	High	NSP	NR





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
		plan). Hazardous trees will be trimmed or removed.											
2021-Mercer County -011	Develop Detour Plans for County Routes	<p>Problem: First responders are not aware of what detours should be established during hazard events when road closures are necessary.</p> <p>Solution: The County will develop and document detour plans for County routes and intersections to distribute to local first-responders.</p>	Existing	All Hazards	3, 6	OEM, Planning Department	County budget	Detour routes for hazard events established	Low	Within 5 years	High	LPR	ES
2021-Mercer County -012	Risk Assessment for County Dams	<p>Problem: Additional vulnerability assessment and emergency planning is needed for the dam failure hazard.</p> <p>Solution: Conduct risk assessment of all dams (county dams 20 and 21, as well as municipal- and privately owned dams) located in Mercer County to assess breach/failure; this would include modeling and evaluation of evacuation routes.</p>	Existing	Dam Failure	7	Highway Division	County budget	Dam vulnerabilities better understood, emergency planning improved	Medium	Within 5 years	High	LPR	ES
2021-Mercer County -013	Spatial Flood Potential Application	<p>Problem: Increased flood awareness is needed throughout the County.</p> <p>Solution: The County will develop a publicly available</p>	N/A	Flood	3	Highway Division, Planning Department	County budget	Increased public awareness of flooding	Medium	Within 5 years	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
		spatial application to distribute the flood potential of local waterways and post evacuation routes.											
2021-Mercer County -014	Corrections Center Pump Station	<p>Problem: The current pump station at the Mercer County Corrections Center is outdated and flood-prone.</p> <p>Solution: The County will replace and elevate the lower pumping station at the Mercer County Corrections Center (Pleasant Valley and Route 29).</p>	Existing	Flood, Severe Weather	2	Transportation and Infrastructure	HMGP, BRIC, County budget	Reduction in flooding	\$3 million	Within 5 years	High	SIP	SP
2021-Mercer County -015	Protect Infrastructure from Scouring and Flood Damage	<p>Problem: County owned bridges, culverts, and retaining walls could be prone to failure if not protected from scouring and high velocity flood conditions.</p> <p>Solution: The Highway Division will identify inadequate or vulnerable bridges, culverts, sub-structures, and retaining walls within the County and retrofit the identified infrastructure to protect from damages and scouring.</p>	Existing	Flood	2	Highway Division	FEMA HMGP, FMA, BRIC	Infrastructure protected from hazard damages	High	Within 5 years	High	SIP	PP
2021-Mercer County -016	Message Boards for Outreach and Emergency	<p>Problem: Additional methods are needed to support outreach and emergency notifications to drivers.</p>	N/A	All Hazards	3	OEM, Highway Division, and	County budget	Increased emergency awareness	Medium	Within 5 years	Medium	EAP	PI, 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
	Notification	Solution: Purchase and install upgraded mobile and permanent message boards at major-roadways				Municipalities							
2021-Mercer County -017	Continuity of Operations Planning	Problem: More detailed planning is needed to support continuity of operations. Solution: The County will conduct more robust all-hazard COOP planning within the Emergency Operations Plan.	N/A	All Hazards	6	OEM	County budget	Increased continuity of operations	Low	Within 2 years	High	LPR	ES
2021-Mercer County -018	Harmful Algal Bloom Training	Problem: Harmful algal blooms are becoming more frequent. Testing to confirm blooms is completed by NJ DEP but identification is needed for suspected blooms. Solution: County staff will be trained to identify suspected blooms and taught how to notify NJ DEP for testing.	N/A	Invasive Species	2	Soil and Water District, Parks Department	County budget	Harmful algal blooms identified.	Low, staff time	Within 6 months	High	LPR, EAP	PI
2021-Mercer County -019	CRS Training	Problem: Knowledge of the Community Rating System is limited among municipal administrations and staff. Solution: The County will host trainings for municipal staff on the benefits of the Community Rating System, how to enroll, and how to support advancement in the program.	N/A	Flood	5	Planning	County budget	Increased participation in the CRS program	Staff time	Within 2 years	High	LPR, 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
2021-Mercer County -020	Disaster Debris Management Plan	Problem: The County lacks a Disaster Debris Management Plan to respond to post-disaster debris. Solution: The County will develop and adopt a Disaster Debris Management Plan.	Existing	All Hazards	5	OEM, Public Works	County budget	Increased post disaster planning and capabilities	Staff time	1 year	Medium	LPR	ES
2021-Mercer County -021	Digitize Dam Inundation Mapping	Problem: The County has various Emergency Action Plans for dams located in the County or dams outside the County that would impact the County during a failure. The dam failure inundation mapping for many of these Plans is not digitized. Solution: The County will digitize dam failure inundation zones for mapping that currently is not in a digital form to support emergency management and hazard mitigation.	Existing	Dam Failure	1, 5, 6, 7	OEM	County budget	Increased emergency management capabilities, data to support hazard mitigation	Low	1 year	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 9.1-17. 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
2021-Mercer County-001	Stormwater Inventory and Mapping	0	1	0	1	1	1	0	1	1	1	1	0	1	1	10	High
2021-Mercer County-002	Address Stormwater Flooding	1	1	0	1	1	1	0	1	1	0	1	0	1	1	10	High
2021-Mercer County-003	Backup Power at County Owned Critical Facilities	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Mercer County-004	Battery Backup for Traffic Signals	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Mercer County-005	Microgrid	1	1	0	1	1	1	-1	1	1	1	1	0	1	1	10	High
2021-Mercer County-006	Floodproof the Prosecutor’s Major Crimes Unit	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
2021-Mercer County-007	Support Repetitive Loss Mitigation	1	1	1	1	1	1	-1	1	0	0	1	0	1	1	9	High
2021-Mercer County-008	Retrofit County Facilities	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2021-Mercer County-009	Construct an Auxiliary Salt Dome	1	0	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2021-Mercer County-010	Inventory and Assess Health of Roadside Trees	1	1	0	1	1	1	1	1	1	1	1	0	1	1	12	High
2021-Mercer County-011	Develop Detour Plans for County Routes	1	0	1	1	1	1	1	1	1	1	1	0	1	1	12	High
2021-Mercer County-012	Risk Assessment for County Dams	1	1	0	1	1	1	1	1	1	0	0	0	1	1	10	High





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
2021-Mercer County-013	Spatial Flood Potential Application	1	0	1	1	1	1	1	1	1	1	0	0	1	1	11	High
2021-Mercer County-014	Corrections Center Pump Station	0	1	1	1	0	1	0	1	1	1	1	0	1	1	10	High
2021-Mercer County-015	Protect Infrastructure from Scouring and Flood Damage	1	1	1	1	1	0	0	1	1	1	0	0	1	1	10	High
2021-Mercer County-016	Message Boards for Outreach and Emergency Notification	1	0	0	1	1	1	1	1	1	1	1	0	1	1	11	High
2021-Mercer County-017	Continuity of Operations Planning	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	High
2021-Mercer County-018	Harmful Algal Bloom Training	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High
2021-Mercer County-019	CRS Training	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13	High
2021-Mercer County-020	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2021-Mercer County-021	Digitize Dam Inundation Mapping	1	1	0	1	1	1	1	1	1	1	0	1	1	1	12	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.





9.1.8 Action Worksheets

The following action worksheets have been developed by Mercer County 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.

DRAFT



Action Worksheet			
Project Name:	Stormwater Inventory and Mapping		
Project Number:	2021-Mercer County-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Weather		
Description of the Problem:	The County lacks a complete inventory of the stormwater system. This lack of an inventory limits the County's ability to understand the cause of flooding and options to mitigate flooding.		
Action or Project Intended for Implementation			
Description of the Solution:	The County will collect and conduct an inventory and generate mapping of the entire stormwater system in Mercer County. This data and mapping will be available for municipalities to use for their own mitigation planning and stormwater management as well.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	N/A	Estimated Benefits (losses avoided):	Identification of stormwater components to support mitigation actions
Useful Life:	N/A	Goals Met:	2, 4, 5
Estimated Cost:	High	Mitigation Action Type:	Local Plans and Regulations
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	5 years	Potential Funding Sources:	BRIC, County budget
Responsible Organization:	Engineering, Highway Division, Planning Department	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation planning, stormwater planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Identify components in flood prone areas as identified	Medium	Leaves gaps in datasets
	Upsize all stormwater components County-wide	High	Costly, not necessary
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 Inventory and Mapping	
Project Number:	2021-Mercer County-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Reduction in flooding risk
Cost-Effectiveness	0	
Technical	1	Technically feasible project
Political	1	
Legal	1	The County has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	Within 5 years
Agency Champion	1	Engineering, Highway Division, Planning Department
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Address Stormwater Flooding		
Project Number:	2021-Mercer County-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Weather		
Description of the Problem:	<p>The County is impacted by chronic flooding at various locations including:</p> <ul style="list-style-type: none"> • County Route 571 at the Tennis Center • County Route 610 at Mount Rose Road • Parkside Avenue and Oak Lane (Ewing) • Areas along Jacobs Creek (Ewing) • River Road in Princeton along Millstone River • Lower Ferry Road and Carlton Avenue (Ewing) • Nottingham Way (border of Hamilton and Trenton) • Grand Avenue – RR underpass (Ewing Township) • Parkside Avenue (Trenton) • Lawrence Station Road (Lawrenceville) 		
Action or Project Intended for Implementation			
Description of the Solution:	Using the stormwater inventory in 2021-Mercer County-001, the County will work to upgrade and upsize stormwater components that have been identified as being undersized or deficient. The County will prioritize this work in areas that have been identified as being floodprone and have experienced damaging events.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	TBD by developed actions	Estimated Benefits (losses avoided):	Reduction in flooding and flood damages
Useful Life:	30 years	Goals Met:	1, 2
Estimated Cost:	TBD by developed actions. Anticipated High.	Mitigation Action Type:	Structure and Infrastructure Projects
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	6 months	Potential Funding Sources:	HMGP, BRIC, County budget
Responsible Organization:	Engineering, Highway Division	Local Planning Mechanisms to be Used in Implementation if any:	Hazard mitigation planning
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate homes	Very High	Costly and would not solve roadway flooding
	Buyout homes	Very High	Costly and would not solve roadway flooding
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Address Stormwater Flooding	
Project Number:	2021-Mercer County-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects life from flooding and maintains emergency access.
Property Protection	1	Protects buildings from flood damage
Cost-Effectiveness	0	
Technical	1	Technically feasible project
Political	1	
Legal	1	The County has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	1	Project would reduce flooding impacts
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	Within 5 years
Agency Champion	1	Engineering, Highway Division
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Backup Power at County Owned Critical Facilities		
Project Number:	2021-Mercer County-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Weather, Severe Winter Weather, Nor'Easter, Hurricane		
Description of the Problem:	<p>Problem: Backup power sources are necessary to maintain critical services for critical facilities. The following facilities have been identified as having a lack of backup power or undersized generators to meet needs:</p> <ul style="list-style-type: none"> • Airport Fire House • County Rangers building • County park facilities • Dempster Training Center (currently has undersized generator and serves as Emergency Operations Center and Communications Center) • Administration Building (needed to ensure continuity of IT services) 		
Action or Project Intended for Implementation			
Description of the Solution:	The County Engineer will determine what size generator is needed to power each facility. The County will then purchase and install the selected generator and necessary electrical components to supply backup power to each facility. Public Works will be responsible for maintenance of the generators following installation.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	N/A	Estimated Benefits (losses avoided):	Ensures continuity of operations of critical facilities
Useful Life:	20 years	Goals Met:	1, 3
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
Responsible Organization:	Engineer, Public Works	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.
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Backup Power at County Owned Critical Facilities	
Project Number:	2021-Mercer County-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services
Property Protection	1	Project will protect facilities from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The County has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Severe Winter Weather, Nor'Easter, Hurricane
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Public Works
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Battery Backup for Traffic Signals		
Project Number:	2021-Mercer County-004		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Weather, Severe Winter Weather, Nor'Easter, Hurricane		
Description of the Problem:	Power failure results in the loss of traffic signals, causing unsafe traffic conditions, requiring police to direct traffic, and limiting staffing capabilities to respond to other aspects of the hazard event that caused the power failure.		
Action or Project Intended for Implementation			
Description of the Solution:	The County will install battery backup and solar panels at critical County owned traffic signals.		
Is this project related to a Critical Facility?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	N/A	Estimated Benefits (losses avoided):	Continuity of service for traffic signals, reduction in necessary response by police
Useful Life:	20 years	Goals Met:	1, 2, 6
Estimated Cost:	\$4,000 per battery backup	Mitigation Action Type:	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	FEMA HMGP and BRIC, County budget
Responsible Organization:	Highway Division	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.
	Install hookups for portable generators	High	Requires deployment of portable generators
	Install wind turbines	\$100,000 per turbine	Weather dependent; costly; poses a threat to wildlife; expensive repairs if needed
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Battery Backup for Traffic Signals	
Project Number:	2021-Mercer County-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Preserves function of traffic signals during power outages
Property Protection	1	Project will protect traffic signals from power loss.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The County has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Severe Winter Weather, Nor'Easter, Hurricane
Timeline	0	Within 5 years
Agency Champion	1	Highway Division
Other Community Objectives	1	Reduction in necessary response by police
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Microgrid		
Project Number:	2021-Mercer County-005		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Weather, Severe Winter Weather, Nor'Easter, Hurricane		
Description of the Problem:	The most critical of facilities should be isolated from potential power loss events.		
Action or Project Intended for Implementation			
Description of the Solution:	The County will work to establish a microgrid to support Mercer County Airport, the Highway Division offices (300 Scotch Road), and the State Police Regional Operations & Intelligence Center (ROC).		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	N/A	Estimated Benefits (losses avoided):	Continuity of highly critical services
Useful Life:	20 years	Goals Met:	1, 2, 6
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
Responsible Organization:	Engineer, OEM	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.
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Microgrid	
Project Number:	2021-Mercer County-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Mercer County Airport, the Highway Division, and the State Police Regional Operations & Intelligence Center (ROC).
Property Protection	1	Project will protect buildings from power loss.
Cost-Effectiveness	0	
Technical	1	
Political	1	
Legal	1	The County has the legal authority to complete the project.
Fiscal	-1	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Weather, Severe Winter Weather, Nor'Easter, Hurricane
Timeline	0	Within 5 years
Agency Champion	1	Engineer, OEM
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Floodproof the Prosecutor's Major Crimes Unit		
Project Number:	2021-Mercer County-006		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	The Prosecutor's Major Crimes Unit on Lamberton Road is exposed to potential flooding from the Delaware River.		
Action or Project Intended for Implementation			
Description of the Solution:	The County will conduct a feasibility assessment to determine the best floodproofing measures to prevent damages. Once cost-effective measures are identified, the County will support implementation.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	500-year flood level	Estimated Benefits (losses avoided):	Ensures continuity of operations of Prosecutor's Major Crimes Unit, prevents flood damage
Useful Life:	TBD by feasibility assessment	Goals Met:	1, 2, 6
Estimated Cost:	TBD by feasibility assessment	Mitigation Action Type:	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, County budget
Responsible Organization:	Engineer	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.
	Relocate facility	N/A	Not possible
	Build levee around facility	N/A	No space for full levee system
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Floodproof the Prosecutor’s Major Crimes Unit	
Project Number:	2021-Mercer County-006	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of Prosecutor’s Major Crimes Unit
Property Protection	1	Project will protect Prosecutor’s Major Crimes Unit from flood damage.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The County has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	0	Within 5 years
Agency Champion	1	Engineer
Other Community Objectives	1	Protection of critical services
Total	11	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Support Repetitive Loss Mitigation		
Project Number:	2021-Mercer County-007		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Summer Weather, Coastal Erosion and Sea Level Rise		
Description of the Problem:	Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The County has 1,761 repetitive loss properties and 33 severe repetitive loss properties but other properties may be impacted by flooding as well.		
Action or Project Intended for Implementation			
Description of the Solution:	Support the development of municipal FEMA grant applications and BCAs to obtain funding to implement acquisition/purchase/moving/elevating residential homes in the flood prone areas that experience frequent flooding (high risk areas).		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	1% annual chance flood event + freeboard (<i>in accordance with flood ordinance</i>)	Estimated Benefits (losses avoided):	Eliminates flood damage to homes and residents, creates open space for the county increasing flood storage.
Useful Life:	Acquisition: Lifetime Elevation: 30 years (residential)	Goals Met:	1, 2
Estimated Cost:	\$200 Million for mitigation of all floodprone properties. Dependent on homeowner buy in and available funding.	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	6-12 months
Estimated Time Required for Project Implementation:	Three years	Potential Funding Sources:	FEMA HMGP, BRIC, and FMA, local cost share by residents
Responsible Organization:	OEM, local FPAs, supports by homeowners, Planning Department	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Support Repetitive Loss Mitigation	
Project Number:	2021-Mercer County-007	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Families moved out of high-risk flood areas.
Property Protection	1	Properties removed from high-risk flood areas.
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	1	The County has the legal authority to conduct the project.
Fiscal	-1	Project will require grant funding.
Environmental	1	
Social	0	Project would remove families from the flood prone areas of the County.
Administrative	0	
Multi-Hazard	1	Flood, Severe Weather
Timeline	0	
Agency Champion	1	OEM, local FPAs, supports by homeowners, Planning Department
Other Community Objectives	1	
Total	9	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Retrofit County Facilities		
Project Number:	2021-Mercer County-008		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Weather, Severe Winter Weather, Hurricane, Nor'Easter, Flood		
Description of the Problem:	County facilities may not meet modern standards for high winds, snow loads, and flood protection and may have limitations that will prevent continuity of operations.		
Action or Project Intended for Implementation			
Description of the Solution:	The County will inventory County facilities to determine necessary retrofits to protect from damage from heavy snow, wind, and flooding. The County will then implement retrofitting for the facilities that do not meet modern standards.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	500-year	Estimated Benefits (losses avoided):	Reduction in structural failure and protection of critical services
Useful Life:	25 years	Goals Met:	1, 2, 6
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	3 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	HMGP, BRIC, USDA Community Facilities Grant Program, County budget
Responsible Organization:	Engineer, OEM	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	Current problem continues
	Build new DPW Garage	High	Costly, unnecessary
	Build small backup garage in case of failure	High	Costly, facility unlikely to be used
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Retrofit County Facilities	
Project Number:	2021-Mercer County-008	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects critical services
Property Protection	1	Protects County facilities from damages
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	1	
Legal	1	The County has the legal authority to complete the project
Fiscal	0	The project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Winter Weather, Nor'Easter
Timeline	0	3 years
Agency Champion	1	Engineer, OEM
Other Community Objectives	1	
Total	12	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Construct an Auxiliary Salt Dome		
Project Number:	2021-Mercer County-009		
Risk / Vulnerability			
Hazard(s) of Concern:	Severe Winter Weather, Nor'Easter		
Description of the Problem:	The County requires an auxiliary sand/salt structure to protect the salt and sand supplies from exposure.		
Action or Project Intended for Implementation			
Description of the Solution:	The County will construct an auxiliary salt barn with a structurally sound and weather-proof structure to protect the County salt and sand supply for winter storm response. The Highway Division will be responsible for construction.		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	Structure to meet building code	Estimated Benefits (losses avoided):	Continuity of road clearing services in winter
Useful Life:	50 years	Goals Met:	5
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	3 months	Potential Funding Sources:	FEMA HMGP, BRIC, USDA Community Facilities Grant Program, Municipal Budget
Responsible Organization:	Highway Division	Local Planning Mechanisms to be Used in Implementation if any:	Capital Improvements, Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Problem continues.
	Hire contractor for roadway treatment	Variable based on rate and number of applications per year; assumed at \$600 per mile	Costly, most contractors are too small to service the entire County
	Contract with municipalities for roadway treatment	Variable based on rate and number of applications per year; assumed at \$600 per mile	Costly
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:	Construct an Auxiliary Salt Dome	
Project Number:	2021-Mercer County-009	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects continuity of services to keep roadways clear for safe travel and emergency response.
Property Protection	0	
Cost-Effectiveness	1	
Technical	1	The project is technically sound
Political	1	There is public support for the project
Legal	1	The County has the legal authority to complete the project
Fiscal	0	Project requires funding support
Environmental	1	Project will reduce chance of runoff and groundwater contamination
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Winter Weather, Nor'Easter
Timeline	0	Within 5 years
Agency Champion	1	Highway Department
Other Community Objectives	1	Continuity of critical services
Total	11	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Corrections Center Pump Station		
Project Number:	2021-Mercer County-014		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood, Severe Storm		
Description of the Problem:	The current pump station at the Mercer County Corrections Center is outdated and flood-prone.		
Action or Project Intended for Implementation			
Description of the Solution:	The County will replace and elevate the lower pumping station at the Mercer County Corrections Center (Pleasant Valley and Route 29).		
Is this project related to a Critical Facility?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	500-year flood level	Estimated Benefits (losses avoided):	Reduction in flooding
Useful Life:	50 years	Goals Met:	2
Estimated Cost:	\$3 million	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	HMGP, BRIC, County budget
Responsible Organization:	Transportation and Infrastructure	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.
	Raise roadways in the area	\$250,000	Flooding likely to impact property owners
	Elevate the Mercer County Corrections Center in the area	High	Costly and roadways still flood
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:	Corrections Center Pump Station	
Project Number:	2021-Mercer County-014	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Project will protect properties in the area from flooding
Cost-Effectiveness	1	
Technical	1	The project is technically feasible
Political	0	
Legal	1	The County is legally able to complete the project
Fiscal	0	Project requires funding support
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Storm, Flood
Timeline	0	Within 5 years
Agency Champion	1	Transportation and Infrastructure
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	



Action Worksheet			
Project Name:	Protect Infrastructure from Scouring and Flood Damage		
Project Number:	2021-Mercer County-015		
Risk / Vulnerability			
Hazard(s) of Concern:	Flood		
Description of the Problem:	County owned bridges, culverts, sub-structures, and retaining walls could be prone to failure if not protected from scouring and high velocity flood conditions.		
Action or Project Intended for Implementation			
Description of the Solution:	The Highway Division will identify inadequate or vulnerable bridges, culverts, sub-structures, and retaining walls within the County and retrofit the identified infrastructure to protect from damages and scouring.		
Is this project related to a Critical Facility or Lifeline?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Level of Protection:	500-year event	Estimated Benefits (losses avoided):	Infrastructure protected from hazard damages
Useful Life:	25 years	Goals Met:	2
Estimated Cost:	High	Mitigation Action Type:	Structure and Infrastructure Project
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Within 5 years
Estimated Time Required for Project Implementation:	Within 5 years	Potential Funding Sources:	FEMA HMGP, FMA, BRIC
Responsible Organization:	Highway Division	Local Planning Mechanisms to be Used in Implementation if any:	Hazard Mitigation
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Remove vulnerable infrastructure	High	Loss of access/protections
	Rebuild all impacted infrastructure	High	Costly and unnecessary.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			



Action Worksheet		
Project Name:	Protect Infrastructure from Scouring and Flood Damage	
Project Number:	2021-Mercer County-015	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Reduces flood risk to life, maintain access for emergency services
Property Protection	1	Reduces damage risk to infrastructure
Cost-Effectiveness	1	Cost-effective project
Technical	1	Technically feasible project
Political	1	
Legal	0	The project may require permitting
Fiscal	0	Project will require grant funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	0	Within 5 years
Agency Champion	1	Engineer
Other Community Objectives	1	
Total	10	
Priority (High/Med/Low)	High	