



Cumberland County Multi-Hazard Mitigation Plan Update
Participating Jurisdiction Appendices

Appendix 10
Maurice River Township, New Jersey

Preliminary Draft

September 7, 2021

Notes to Preliminary Draft Reviewers

This Preliminary Draft of the Maurice River Township Appendix to the Cumberland County Multi-Hazard Mitigation Plan Update (CC HMPU) includes:

Updated tables containing information available as of September 7th for the community's:

- Working Group
- Critical Facilities
- Mitigation Measures included in the 2016 Mitigation Plan for Four New Jersey Counties (NJ4 HMP)
- Plan Review and Integration document status

In addition, the Preliminary Draft contains:

- Preliminary Hazard Identification and Risk Assessment (HIRA) Update – including mapping and data tabulations regarding vulnerability to natural hazards and social vulnerability considerations
- Hazard Priorities – as determined by the Working Group
- Goals and Strategies

Finally, the Preliminary Draft includes initial lists of proposed Municipal and Multi-Jurisdictional Mitigation Measures to be included in the CC HMPU.

Text highlighted in **yellow** indicates information requested of the community's Working Group as part of this review.

Text highlighted in **blue** indicates information to be provided and/or actions to be taken at a later date.

Please provide any questions, input, or comments to your community's Emergency Management Coordinator:

Pat Phillips

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This review period will close on Friday, October 1st. However, there will be additional opportunities to participate in the development of the CC HMPU. These opportunities will be identified on the project website (<https://cchmpu21.com>).

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Part 1: Overview

Part 1.1: Cumberland County Multi-Hazard Mitigation Plan Update

The Cumberland County Multi-Hazard Mitigation Plan Update (CC HMPU) incorporates input from all 15 participating jurisdictions in Cumberland County, including Cumberland County and 14 separate municipalities.

The CC HMPU is an update of the Mitigation Plan for Four New Jersey Counties (NJ4 HMP) that was completed by all fifteen jurisdictions in Cumberland County along with over 70 additional jurisdictions from Camden, Gloucester, and Salem Counties. The Cumberland County portions of the NJ4 HMP were adopted by the participating jurisdictions and approved by the Federal Emergency Management Agency in 2016.

The CC HMPU has two main parts:

- Cumberland County Multi-Hazard Mitigation Plan Update, or the “Base Plan”.
- County and Municipal Appendices.

The Base Plan **[will include]** descriptions and information that is common to all 15 participating jurisdictions organized according to the following three focus areas:

- Planning Process
- Hazard Identification and Risk Assessment
- Mitigation Measures

The County and Municipal Appendices include specific information for these same three focus areas for each of the 15 participating jurisdictions. Detailed tabulations are included in these Municipal Appendices for critical facilities, the status of past mitigation activities, and proposed mitigation measures for each municipality.

Part 1.2: Maurice River Township Municipal Appendix

This Municipal Appendix is focused on Maurice River Township in Cumberland County, New Jersey.

The Maurice River Township Municipal Working Group **[will recommend]** the Maurice River Township Municipal Appendix for adoption to the Maurice River Township Committee.

The Maurice River Township Committee **[will adopt]** the Municipal Appendix by resolution (see Attachment B: Adoption Resolution).

Region II of the Federal Emergency Management Agency **[will approve]** the Municipal Appendix (see Attachment C: Approval Letter).

Part 2: Participation

Part 2.1: Municipal Working Group Participation

Part 2.1 includes:

- *Municipal Working Group members including positions in the community, meetings and work sessions attended, and specific contributions to the Municipal Appendix*
- *Municipal positions and organizations that were invited but were not able to participate in the plan update process*
- *Municipal positions and organizations that have been recommended by the Federal Emergency Management Agency (FEMA) as candidates for participation on Municipal Working Groups but do not exist in the municipality*

Table 10-1 identifies the Municipal Working Group members. As [will be] detailed in *Section 2: Planning Process* of the Base Plan, the Municipal Working Groups are comprised of community representatives who worked to make sure mitigation measures included in the Municipal Appendix addressed the risks faced by residents, businesses, and property owners and reflected the priorities of the community.

Municipal Working Group members reviewed briefing materials and contributed during Work Sessions and Meetings and [will review] the Preliminary Draft and Draft versions of the CC HMPU Base Plan and Appendices. The Working Group will also continue to stay involved during the implementation and maintenance of the CC HMPU.

Due to the on-going COVID-19 pandemic during the plan update process, Working Group meetings were conducted in a variety of ways including virtual meetings. However, when local conditions permitted, in-person meetings were conducted.

Note: Three members of the Working Group also participated in the development of the 2016 NJ4 HMP. These members are indicated with an () following their last names.*

Table 10-1: Maurice River Township Working Group

First Name	Last Name	Department	Position	Project Kick-off Meeting ¹	Round 1 Work Session ²	Round 2 Work Session ³	Working Group Meeting ⁴	Contribution ⁵
Pat	Phillips	OEM / Fire Department	OEM Coordinator / Fire Department Representative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Organized Working Group and Work Sessions.
Derek	Leary	Code Enforcement	Zoning Official / Construction Official / Floodplain Administrator					
Ken	Whildin	Township Administration	Mayor		<input checked="" type="checkbox"/>			
Steve	Hageman *	Public Works	Supervisor					

¹ Project Kickoff Meeting was held on May 20, 2021.

² Round 1 Work Session was held on August 12, 2021.

³ Round 2 Work Session [will be] held on [to be determined].

⁴ Working Group Meeting [will be] held on [to be determined (if applicable)].

⁵ Additional or unusual contributions are noted in the far-right hand column.

Part 2: Participation

First Name	Last Name	Department	Position	Project Kick-off Meeting ¹	Round 1 Work Session ²	Round 2 Work Session ³	Working Group Meeting ⁴	Contribution ⁵
Cormac	Morrisey *	Dixon Associates Engineering, LLC	Township Engineer		<input checked="" type="checkbox"/>			
Ben	Stowman *	Land Use Board	Chairman		<input checked="" type="checkbox"/>			
John	Campbell	OEM / Bayside Correctional Facility / School Board	Deputy Coordinator / Fire Marshal / Member (pending)		<input checked="" type="checkbox"/>			

The following lists candidate positions and organizations within the community that [will be extended invitations to participate] during the development of the Municipal Appendix. These positions and organizations will continue to be extended invitations to participate during subsequent plan implementation and maintenance activities.⁶

- Community Businesses
- Community / Faith-Based Organizations

The following lists positions and organizations that are generally recommended for consideration as members of the Municipal Working Groups by FEMA but do not currently exist within the community. An invitation to participate will be extended if positions are created or filled and as organizations are formed.

- GIS/IT Specialist (services provided by Cumberland County)
- Police (services provided by New Jersey State Police)
- Environmental Organizations
- Healthcare Institutions

⁶ Plan implementation and maintenance activities [will be] described in Section 4: Mitigation Measures of the CC HMPU Base Plan.

Part 2: Participation

Part 2.2: Public Participation

Part 2.2 **will include** all opportunities provided to the public and interested parties in the municipality to participate during the plan update process.

Table 10-2 **will identify** the date, type of involvement, and location (where applicable) for all opportunities provided to the public and interested parties to participate in the development of the plan update.

Table 10-2: Public Participation

Date	Type of Involvement	Location
[insert date link was established]	Link to Project Website ⁷ established and maintained.	[insert municipal website URL]
[insert date meeting was held (if applicable)]	Public meeting conducted with presentation and open discussion.	[insert location]
September 8, 2021	Preliminary Municipal Appendix available for public comment.	Project Website
[insert date link was established]	Notice posted re: Preliminary Municipal Appendix review period with link to Project Website.	[insert municipal website URL]
[date(s) to be determined]	Public outreach via [insert audience(s) and outreach method(s)].	[insert location(s)]
[date to be determined]	Draft Municipal Appendix will be available for public comment.	Project Website
[date to be determined]	Public hearing will be conducted regarding the Draft Municipal Appendix providing for open discussion and public comment.	[insert location]

Public comments and input received for the Preliminary Draft and Draft versions of the Municipal Appendix **will be**:

- Considered by the Municipal Working Group and **will be** incorporated into the Municipal Appendix where appropriate.
- Included in Attachment A to the Municipal Appendix along with a brief explanation of if and how the comments were addressed in the Municipal Appendix.

In addition, the Municipal Appendix **will be** adopted as part of a regularly scheduled public meeting (see Attachment B: Adoption Resolution).

Public education and outreach is an on-going mitigation measure included in the Municipal Appendix.⁸ In addition, public participation will continue to be encouraged during subsequent plan implementation and maintenance activities.⁹

⁷ <https://cchmpu21.com/documents>

⁸ See Mitigation Measure M-1 in Part 4 of the Municipal Appendix.

⁹ Public education and outreach **will be** described in *Section 4: Mitigation Measures* of the CC HMPU Base Plan.

Part 2: Participation

Part 3: Hazard Identification and Risk Assessment

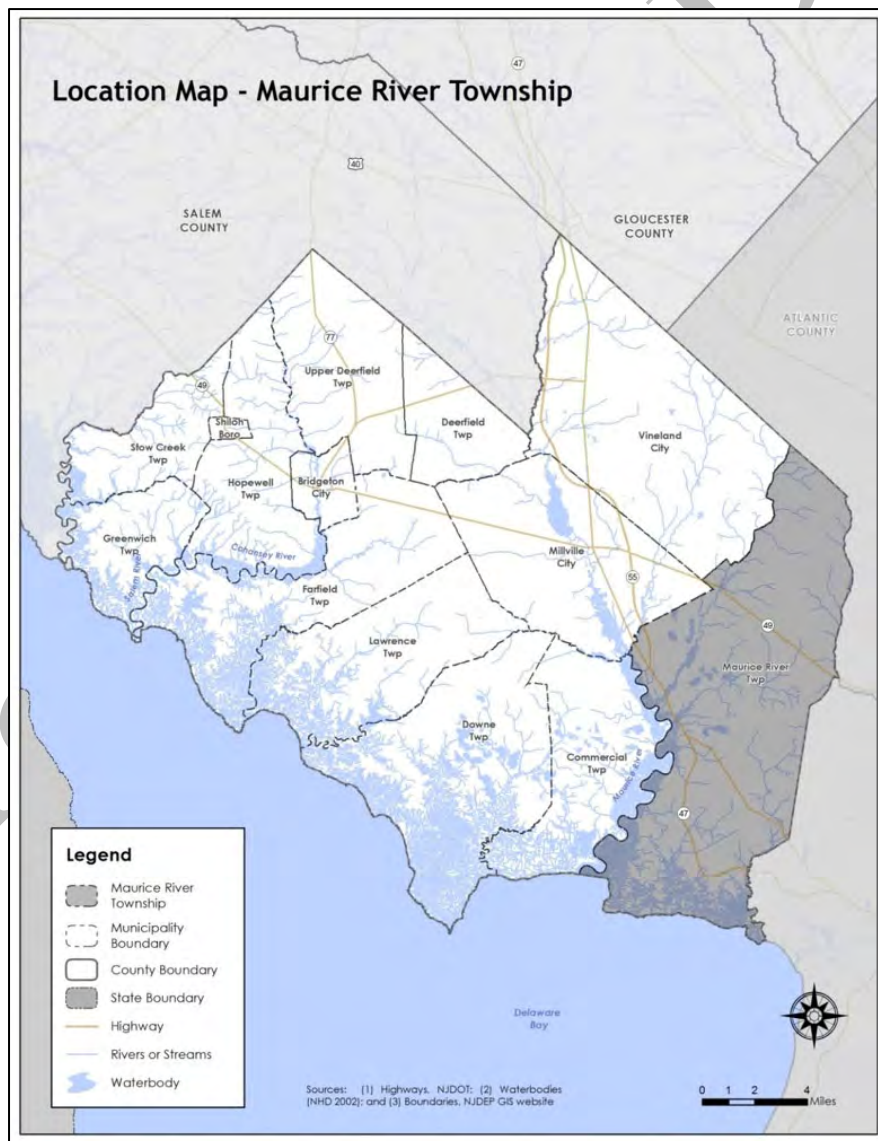
Part 3 includes seven subparts:

- Part 3.1: Profile
- Part 3.2: General Building Stock
- Part 3.3: Critical Facilities
- Part 3.4: Hazard Exposure Assessment
- Part 3.5: Demographic Considerations
- Part 3.6: Observations
- Part 3.7: Hazard Priorities

Part 3.1: Municipal Profile

Maurice River Township is located in the southeastern portion of Cumberland County (See Figure 10-1).

Figure 10-1: Maurice River Township Location Map

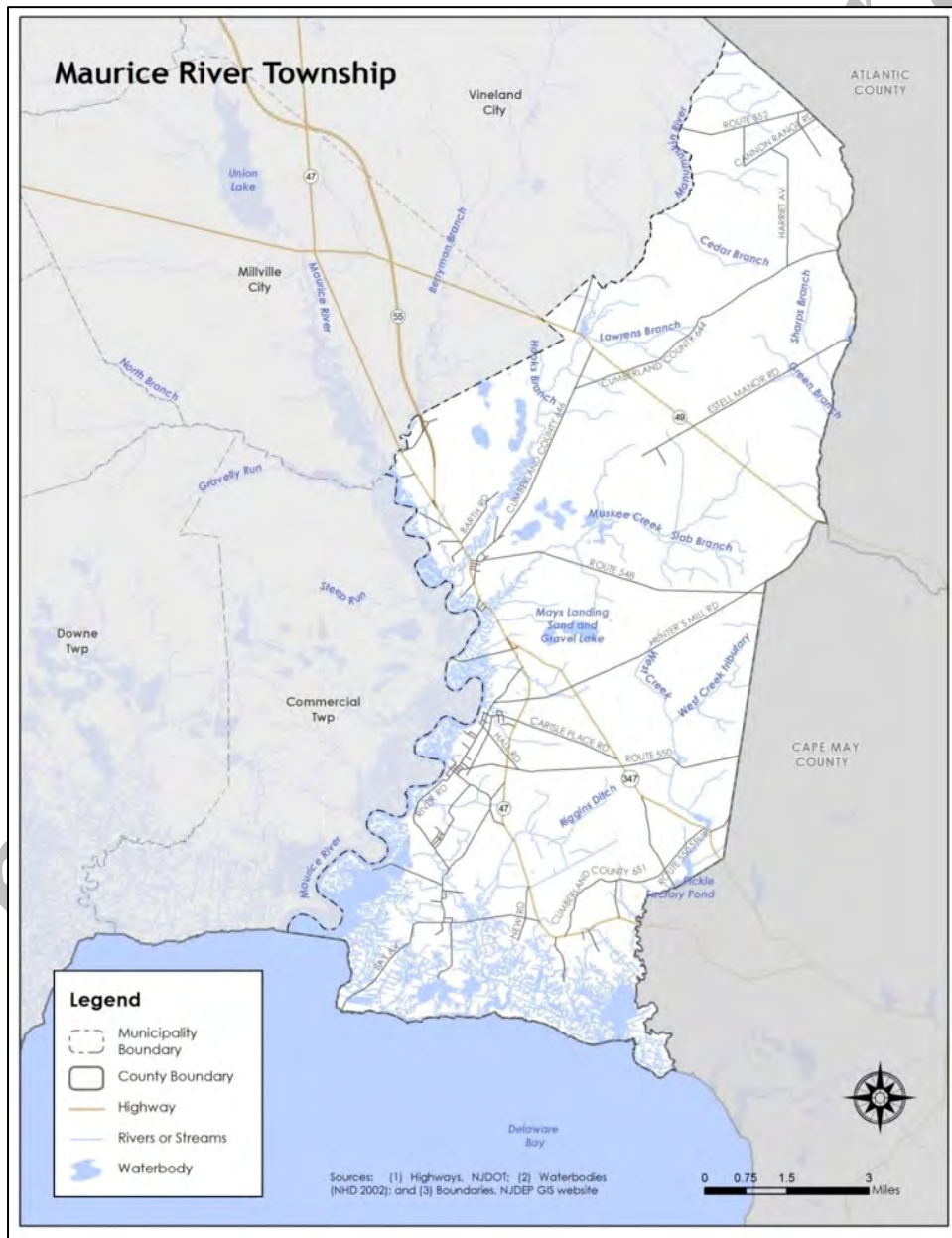


Part 2: Participation

Maurice River Township is a bay shore, rural residential community and is the largest in land area of all the municipalities in the four-county region. Villages are spread across the municipality including Bricksboro, Cumberland, Delmont, Dorchester, Heislerville, Leesburg, Port Elizabeth, and a portion of Milmay. Over 60% of the housing stock was built between 1940 and 1989, and only 10% in the last two decades.

Per Figure 10-2, major water bodies include the Delaware Bay, Maurice River, Tuckahoe River, West Creek, and Manumuskin River, which together form parts of the southern, western, and northwestern borders of the municipality respectively. Major transportation routes include State Highway Routes 47 and 49. Most of the internal road network consists of Cumberland County maintained roads. The land is predominantly flat to gently rolling and a high percentage of existing land cover consists of forests and marshes with most of the township included in the Pinelands National Reserve.

Figure 10-2: Maurice River Township Base Map



Part 2: Participation

Part 3.2: General Building Stock

As of 2015, there are 2,761 buildings in Maurice River Township with a total assessed value of improvements of \$389,623,350. Figure 10-3 shows the footprints of these buildings.

Figure 10-3: Maurice River Township Building Footprints¹⁰

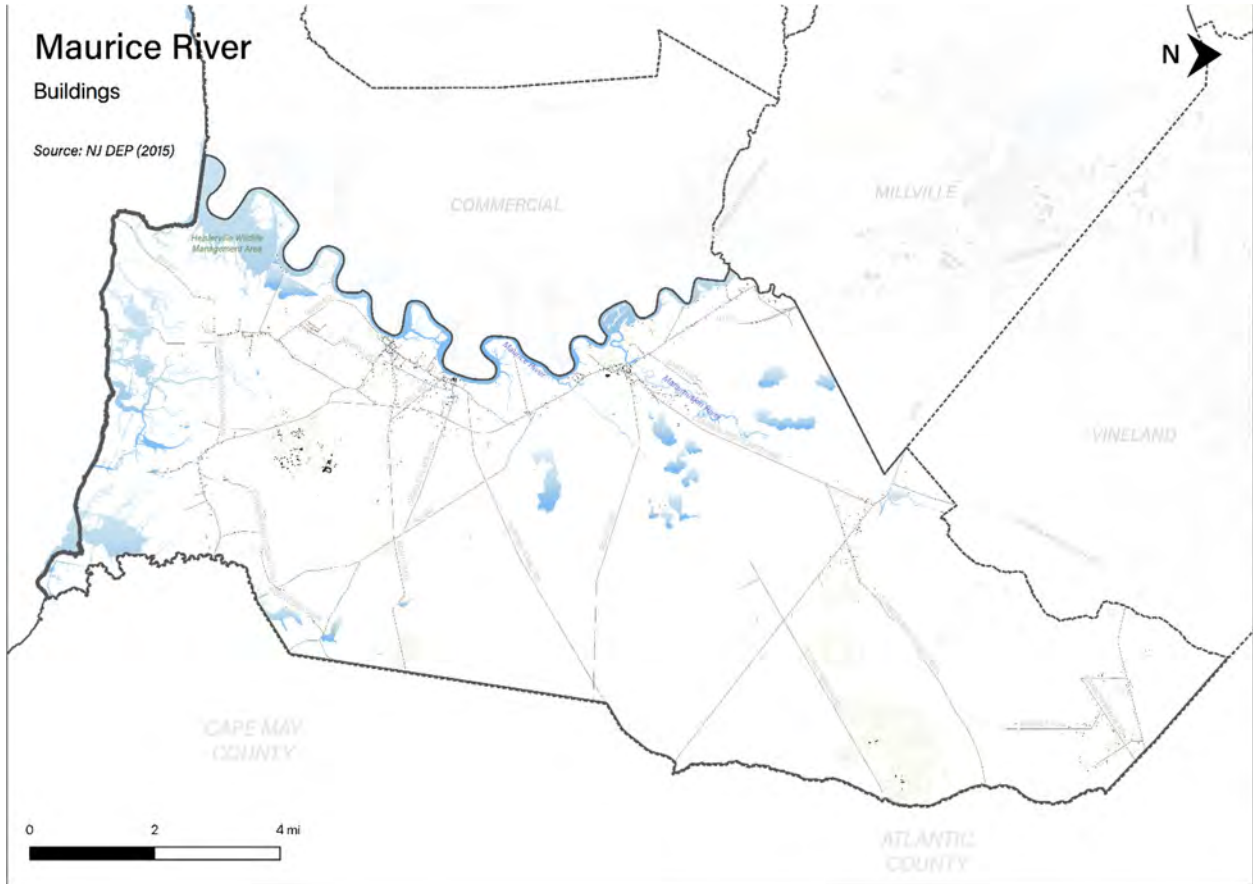


Table 10-3 [will show] the distribution of these structures according to land use distinctions.

Table 10-3: Maurice River Township Buildings per Land Use Type¹¹

Land Use Type	Number of Buildings
Residential	[TBD]
Commercial	[TBD]
Industrial	[TBD]

¹⁰ Building footprint data was isolated from "Impervious Surfaces" data (2015) per <https://gisdata-njdep.opendata.arcgis.com/>. Note: This (map/publication/report) was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized or endorsed.

¹¹ Land use types [will be] isolated from MOD-IV Parcels and Tax Assessor data composite (2021) per <https://njogis-newjersey.opendata.arcgis.com/documents/parcels-and-mod-iv-of-cumberland-county-nj-shp-download/about> from the New Jersey Office of GIS

Part 2: Participation

Part 3.3: Critical Facilities¹²

As of August 2021, there are ten critical facilities in Maurice River Township.

Critical facilities are prime candidates for mitigation measures due to important functions staged from these facilities prior to, during, and after natural hazards including emergency services and housing vulnerable populations.

Table 10-4 includes current inventory information for municipal critical facilities **and will include** cross-references to related mitigation measures **to be** identified in Part 4 of the Municipal Appendix. Figure 10.4 shows the location of these critical facilities.

In addition to reviewing all entries for accuracy, need to provide confirmation and/or information for all highlighted entries.

Table 10-4: Maurice River Township Critical Facilities Inventory

CF #	Name	Type	Sub-Type	Address	Co-located CF #	Shelter (Y/N)	Generator (Y/N)	Comments	Mitigation Measure #
CF-1	Township Hall	Municipal	Administrative Offices	590 Main Street, Leesburg		Y	Y ¹³	Shelter of last resort	[TBD]
CF-2	Office of Emergency Management / Emergency Operations Center	EOC	Stand-alone Facilities	556 Main Street, Leesburg		Y	Y		[TBD]
CF-3	Communications Towers	Communications	Communications Towers	Multiple locations		N/A	N ¹⁴	[provide information regarding multiple tower locations]	[TBD]
CF-4	Public Works Facility	Public Works	[identify functions for this facility]	552 Main Street, Leesburg		N	Y		[TBD]
CF-5	Heislerville Station	FireStation/EMS	Stations	164 Main Street, Heislerville		N	N		[TBD]
CF-6	Leesburg Station	FireStation/EMS	Stations	550 Main Street, Leesburg		N	Y		[TBD]
CF-7	Cumberland Station	FireStation/EMS	Stations	5272 State Highway 49, Millville		N	Y ¹³	Located in wildland-urban interface area	[TBD]

¹² Critical facility definitions and considerations **will be** described in *Section 3: Hazard Identification and Risk Assessment* of the CC HMPU Base Plan.

¹³ Existing generator is considered adequate for all necessary functions.

¹⁴ In the past, relied on battery power which would typically last for a few hours (Back-up power available for emergency communications tower @ Cumberland Fire Station)

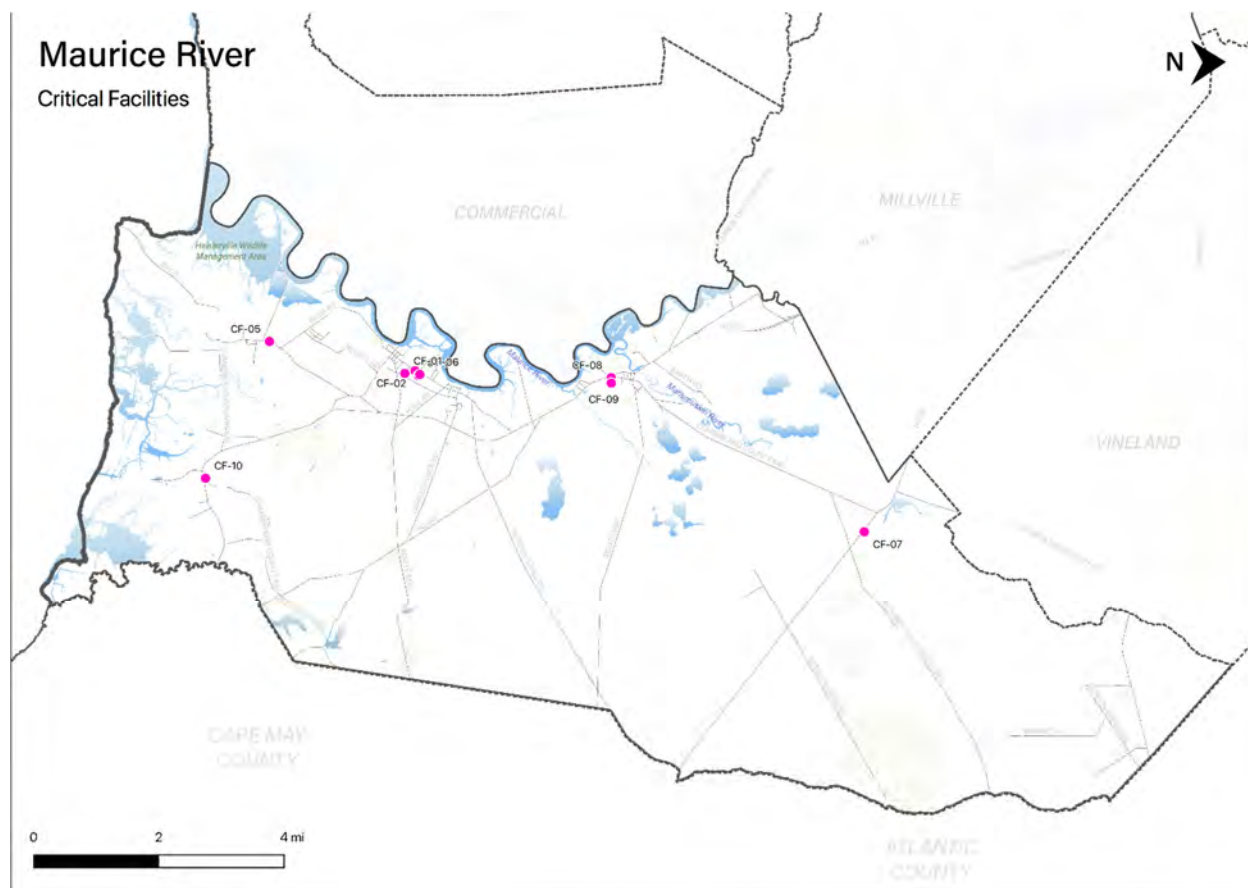
Part 2: Participation

CF #	Name	Type	Sub-Type	Address	Co-located CF #	Shelter (Y/N)	Generator (Y/N)	Comments	Mitigation Measure #
CF-8	Port Elizabeth Station	FireStation/EMS	Stations	7 Port Elizabeth Cumberland Road, Port Elizabeth		N	N		[TBD]
CF-9	Maurice River Township Elementary School	Schools	[confirm potential use as shelter ¹⁵]	3593 State Highway 47, Port Elizabeth		N	N		[TBD]
CF-10	Delmont Building	EMS	Private Stations	4507 State Highway 47, Delmont		N	N	Houses the Delmont Post Office	[TBD]
	[provide information re: existing day care centers]								[TBD]
	[provide relevant information per special needs list]								[TBD]

¹⁵ No commitments re: use of school as shelter per previous concern regarding designated evacuation routes from shore communities in Cape May County in recent history. However, change in State sheltering strategy may address concern.

Part 3: Hazard Identification and Risk Assessment

Figure 10-4: Maurice River Township Critical Facilities



Note: All mapping corresponding to results described in Parts 3.3 through 3.5 can be viewed in .pdf format at: <https://www.dropbox.com/sh/gd2nk7iohmnbuig/AADLPoxoRSze-8mWtBmYyDkxa?dl=0>

Part 3.4: Hazard Exposure Assessment

Hazard exposure assessments **will be completed** for the twelve (12) natural hazards identified in the CC HMPU Base Plan¹⁶.

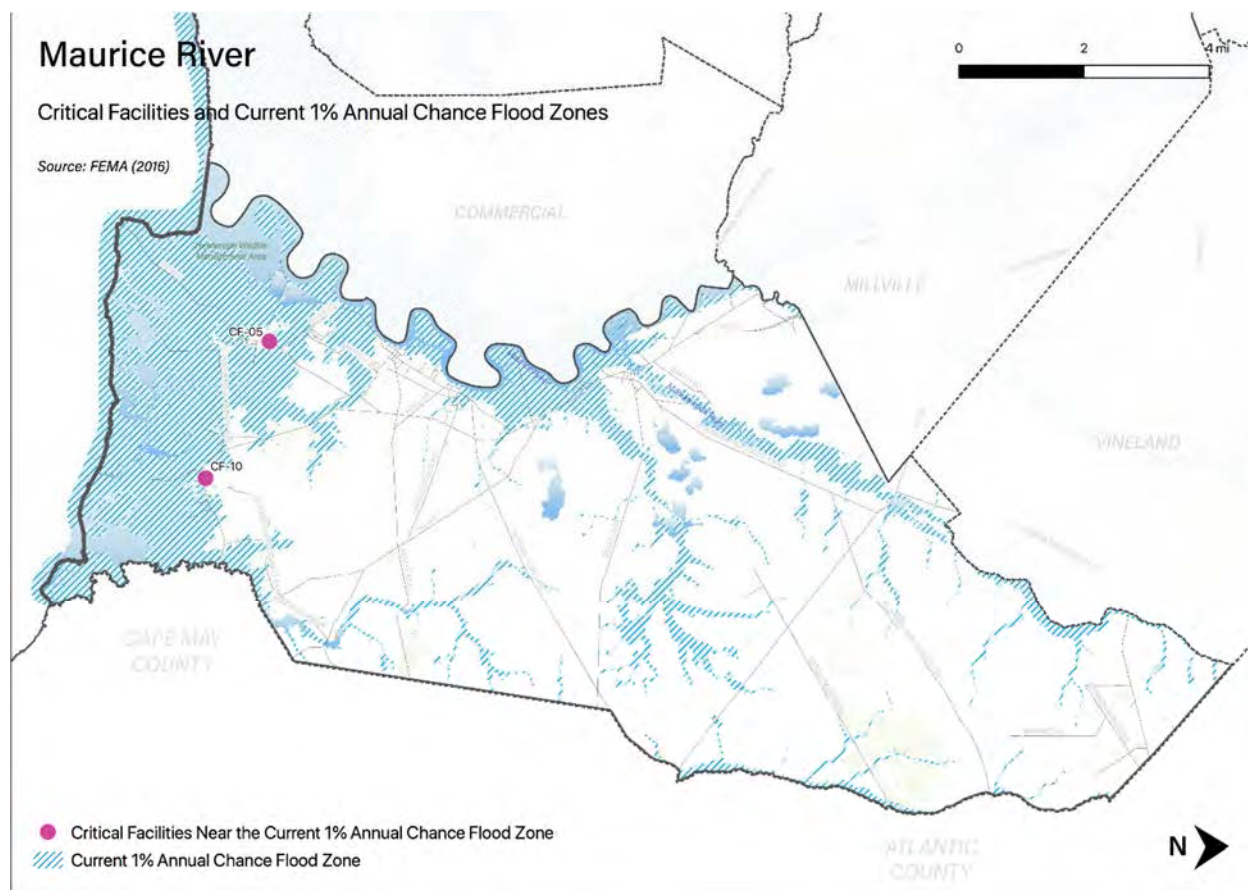
Key results for Maurice River Township are depicted in the following.

Mapping: Figure 10-5 is illustrative of the type of mapping available as a result of the hazard exposure assessment. This figure shows critical facilities that are located in or near (i.e., within 500 feet) the 1% annual flood zone on FEMA's Flood Insurance Rate Maps (FIRMs) or within a potential future 1% annual chance flood zone (i.e., within 1,000 feet).

¹⁶ Hazard profiles **will be** included for all twelve natural hazards in *Section 3: Hazard Identification and Risk Assessment* of the CC HMPU Base Plan.

Part 3: Hazard Identification and Risk Assessment

Figure 10-5: Maurice River Township Critical Facilities and 1% Annual Chance Flood Zone



Mapping results are available for the following hazards (where applicable for individual jurisdictions):

- Coastal Erosion & Sea Level Rise
- Dam Failure [pending data from NJDEP]
- Earthquake
- Extreme High Temperature
- Flood – per FEMA FIRM mapping
- Flood - per National Flood Insurance Program data [pending data from FEMA Region II]
- Geologic Hazards
- High Wind and Severe Weather (heavy summer rains and winter snow loads)
- Levee Failure [pending data from NJDEP]
- Wildfire

Tabulations: Selected data culled from the hazard exposure assessment process is displayed in the following tables:

- Table 10-5 indicates hazard exposure for general building stock
- Table 10-6 indicates hazard exposure for critical facilities

Part 3: Hazard Identification and Risk Assessment

Table 10-5: Maurice River Township General Building Stock Hazard Exposure

Hazard	Number of Exposed Buildings	Percent of Total Buildings in the Jurisdiction	Value of Exposed Buildings	Percent of Total Value in the Jurisdiction
Coastal Erosion ¹⁷	2	-	\$80,800	-
Sea Level Rise - 3 feet increase	239	8.66%	\$21,920,363	5.63%
Flood - Within 1 % Annual Chance Zone	461	17%	\$43,852,155	11%
Flood - Near (within 500 feet) of 1% Annual Chance Zone	1,456	53%	\$170,875,936	44%
Earthquake – Structure built before 1927 ¹⁸	586	28%	\$70,824,400	26%
High Winds / Severe Weather – Structure built before 1975	1,387	67%	\$165,237,100	62%
Wildfire – Composite score > 2.5 ¹⁹	12	-	\$967,600	0.25%

Table 10-6: Maurice River Township Critical Facilities Hazard Exposure²⁰

Hazard	Number of Critical Facilities	CF #s
Coastal Erosion	None	N/A
Sea Level Rise	None	N/A
Flood - Within 1 % Annual Chance Zone	None	N/A
Flood - Near (within 500 feet) of 1% Annual Chance Zone	2	CF-5, CF-10
Flood – Future potential (within 1,000 feet) 1% Annual Chance Zone	4	CF-01, CF-02, CF-08, CF-09
Wildfire	6	CF-01, CF-02, CF-04, CF-06 CF-07, CF-09

In addition, all critical facilities in Cumberland County are exposed to the following hazards and potentially subject to power outages, and structural and/or contents damage:

- Earthquake
- Extreme Temperatures
- Severe Weather – Summer (including heavy rains)
- Severe Weather – Winter (including heavy snow loads)

¹⁷ All supporting data for Coastal Erosion, Sea Level Rise (3-foot rise), Flood (all) can be viewed at https://docs.google.com/spreadsheets/d/1fcN5hL3Jz4X7mldFyKs6wol6J6IAR9bSsvJPiQE_A0Q/edit?usp=sharing

¹⁸ All supporting data for Earthquake, High Winds, and Severe Weather can be viewed at <https://docs.google.com/spreadsheets/d/1Zx1LZwKQ8esqdv4c9hbbSZurtMjH4UITQWJY1LrZezc/edit?usp=sharing>

¹⁹ All supporting data for Wildfire can be viewed at https://docs.google.com/spreadsheets/d/1JAbfd3A-eCHI93pZFaPVuM_H2yvuUzeHCmoijv-oxsw/edit?usp=sharing

²⁰ All supporting data for critical facility hazard exposure can be viewed at <https://docs.google.com/spreadsheets/d/1MPLiOANm7fHoyKuxyWqyang26LTSPayTxJvLmK5IGPg/edit?usp=sharing>

Part 3: Hazard Identification and Risk Assessment

For Maurice River Township, Table 10-8 includes selected metrics where social vulnerability considerations are notably higher when compared with all national census tracts:

Table 10-8: Maurice River Township Social Vulnerability Considerations²³

Metric	Percentile ²⁴
Percentage of persons: With a disability	83 rd
Percentage of persons: Older than 65 years of age	83 rd

In addition, the percentage of residents earning below poverty level = 4.2% (compared with the average in New Jersey of 10.4%).

Part 3.6: Observations

- Outreach and guidance should be provided for residents, business owners, and property owners for:
 - Properties in or near coastal erosion, sea level rise, flood zones, or wildfire hazard areas.
 - Older buildings to help evaluate potential risk of damage due to hazards such as Earthquake, High Winds, and Severe Winter Weather (i.e., heavy snow loads).
- All critical facilities are potentially vulnerable to Earthquake, High Winds, and Severe Weather (heavy rains in summer and snow loads in winter).
- A few critical facilities are potentially vulnerable to Flood and Wildfire and will be identified as priorities for follow-up critical facility field evaluations.
- Priority for follow-up should also be focused on critical facilities housing vulnerable populations related to Extreme Temperature and Severe Weather hazards. For example, determining and documenting (cross referencing EOP) how residents will be moved to facilities providing shelter including cooling and warming centers (all of which would need adequate back-up power and hardening).

²³ All supporting data for SVI can be viewed at https://docs.google.com/spreadsheets/d/10zb_Qlg2CgGxb45_fcKiP46swaC16-fORxYTIOiAkP0/edit#gid=1481479799

²⁴ Results are only for Maurice River Township census tract not including New Jersey State correctional Institutions.

Part 3: Hazard Identification and Risk Assessment

Part 3.7: Hazard Priorities [review / confirm or revise highlighted entries]

As a key step in the Hazard Identification and Risk Assessment (HIRA) process, the twelve (12) natural hazards identified in the CC HMPU Base Plan were discussed during the Municipal Working Group Work Sessions and the relative priority of these hazards was identified.

Based on their personal experience as well as the results of the HIRA, the Municipal Working Group rated the hazards as follows:

High Priority

- Coastal Erosion and Sea Level Rise
- Flood (ditches functioning as drainage systems but subject to sediment, vegetation, e.g., Brooksborough)
- High Wind
- Levee Failure
- Wildfire

Moderate Priority

- Dam Failure
- Extreme Temperature
- Severe Weather – Summer
- Severe Weather – Winter

Low Priority

- Drought
- Earthquake

One additional hazard was considered but was not considered applicable to the municipality:

- Geologic Hazards

Other hazards or conditions of concern for the Working Group included:

- Tornadoes – due to recent occurrences
- Sequence of events leading to high ground water creating issues for tree fall (and related issues with downed trees on roadways and power lines), septic system failure, etc.

Part 4: Mitigation Measures

Part 4: Mitigation Measures

Part 4 includes six subparts:

- *Part 4.1: Mitigation Goals and Strategy*
- *Part 4.2: NJ4 HMP Mitigation Measures*
- *Part 4.3: Municipal Mitigation Measures – Identification*
- *Part 4.4: Municipal Mitigation Measures – Implementation*
- *Part 4.5: Multi-Jurisdictional Mitigation Measures*
- *Part 4.6: Authorities, Policies, Programs, Resources, and Plan Integration*

Part 4.1: Mitigation Goals and Strategy [review / confirm or revise highlighted entries]

Goals were originally established by the SDVR Hazard Mitigation Steering Committee and validated by the four County Hazard Mitigation Working Groups in response to risk and capability assessment results.

As part of the NJ4 HMP plan update process, these goals were reviewed and edited by the Municipal Working Groups for use in the Municipal Appendices. In addition, the Municipal Working Groups for the CC HMPU reviewed and [reaffirmed/edited] these goals for continued use in the Appendices.

All mitigation measures in the Municipal Appendix are related to at least one of these four goal statements.

- **Goal 1: Improve education and outreach efforts** regarding potential risk of natural hazards and appropriate mitigation measures that can be used to reduce risk (including programs, activities, and projects)
- **Goal 2: Improve data collection, use, and sharing** to reduce the risk of natural hazards
- **Goal 3: Improve capabilities and coordination** at municipal, county, and state levels to plan and implement hazard mitigation measures
- **Goal 4: Plan and implement projects** to mitigate identified natural hazards, known problems, and areas of concern

Based on these goals, the results of the HIRA, and experience of participants in the plan update process, the Municipal Working Group identified an overarching strategy for mitigation:

- Identify and address known problems or areas of concern for critical facilities and vulnerable populations
- Provide opportunities for residents and property owners to access available information about risk reduction and mitigation measures, in particular for Repetitive Flood Loss properties
- Institutionalize hazard mitigation into municipal activities and programs through regular interactions of the Municipal Working Group and integration of related regulatory programs and planning initiatives
- Stay informed regarding changing conditions and related improvements in hazard and risk data due to future natural hazard events and increasing understanding of the effects of climate change and use the information as part of periodic evaluations of and refinements or additions to the municipality's mitigation program

The mitigation measures [to be] described in Parts 4.3 through 4.5 of the Municipal Appendix reflect this strategy.

Part 4: Mitigation Measures

Part 4.2: NJ4 HMP Mitigation Measures

Known problems and areas of concern were the basis for mitigation measures identified in the NJ4 HMP. In cases where these problems and concerns still exist at the time of the CC HMPU, the related NJ4 HMP mitigation measures **[will be]** candidates for inclusion in the Municipal Appendix.

Table 10-9 identifies the status of mitigation measures included in the NJ4 HMP. These entries were based on information provided by the Municipal Working Group. In some cases, the NJ4 HMP mitigation measures **[will be]** carried over as part of the Municipal Appendix as **[will be]** indicated in the “Comments” column and the far right-hand column of Table 10-9.

In addition to reviewing all entries for accuracy, need to provide confirmation and/or information for all highlighted entries.

Table 10-9: Status of Maurice River Township NJ4 HMP Mitigation Measures

Mitigation Action, Program, or Project	Status	Comments	Mitigation Measure # ²⁵²⁶
M-1: Identify and pursue outreach and education opportunities to inform municipal residents, businesses, and property owners.	Work-in-progress	Work-in-progress included [identify any work-in-progress for these four mitigation measures, e.g., use of Township website for emergency or hazard information dissemination, follow-up with facilities regarding projects, informal discussions among Township officials, etc.]	To be carried over as part of M-1
M-2: Prioritize critical facilities and complete site and facility surveys to identify vulnerabilities and potential mitigation measures.			
M-3: Prioritize recurrent drainage problem areas and initiate data collection to track unreimbursed damages and related response and recovery expenses.			
M-4: Conduct regular Municipal Working Group meetings.			
M-5: Install 85 kV backup emergency power generator at Maurice River Township Hall (CF-1).	Completed	Completed in 2018 using HMGP from Superstorm Sandy ²⁷	
M-6: Install 125 kV backup emergency power generator at Maurice River Township Elementary School (CF-9).	No progress, lack of funding		To be carried over as [# TBD]
M-7: Install backup emergency power generator at Heislerville Fire Station (CF-5).	Work-in-progress	Township is seeking quotes.	To be carried over as [# TBD]
M-8: Install backup emergency power generator at Cumberland Fire Station (CF-7).	Completed	Completed in 2019 using HMGP from Superstorm Sandy ³	

²⁵ Detailed information for identification and implementation of municipal (M-#) mitigation measures **[will be included]** in Tables 10-10 and 8-11.

²⁶ Detailed information for identification and implementation of multi-jurisdictional (MJ-#) mitigation measures **[will be included]** in Table 10-12.

²⁷ Cumberland County Round 1 Generator Program.

Part 4: Mitigation Measures

Mitigation Action, Program, or Project	Status	Comments	Mitigation Measure # ²⁵²⁶
M-9: Install backup emergency power generator at Port Elizabeth Fire Station (CF-8).	No progress, lack of funding		To be carried over as [# TBD]
M-10: Require backup emergency power generator at communications towers (CF-3).	Completed	[identify completion date, responsible party(ies), and funding source]	
M-11: Address identified Repetitive Flood Loss Properties.	[identify status]		To be carried over as [# TBD pending receipt of RL list from FEMA RII]
M-12: Create safety zones around critical facilities in or near wildfire risk areas including Cumberland Fire Station (CF-7).	[identify status]		To be carried over as [# TBD]
MJ-1: Alleviate flooding at Main Street, Dorchester at Crowder Run (CR 616).	No progress, lack of funding and permitting with NJ Department of Environmental Protection (NJDEP) issues	On-going and recent discussions have been held with NJDEP about how to proceed... considering rules specific to Delaware River communities	To be carried over as multi-jurisdictional mitigation measure [# TBD]
MJ-2: Alleviate flooding at Glade Road, between Heislerville and Delmont (CR 616).		Same as MJ-1	
MJ-3: Alleviate flooding at NJ 47 (State Evacuation Route) in Bricksboro.			
MJ-4: Alleviate flooding at Mauricetown Causeway (CR 670).			
MJ-5: Alleviate flooding at East Point Road.			
MJ-6: Alleviate flooding at River Road.			
MJ-7: Alleviate flooding at Newell Road (CR 616).			
MJ-8: Alleviate flooding at NJ 47 (State Evacuation Route) & Whitney Point.			
MJ-9: Alleviate flooding at Carlisle Place Road at Crowder Run Branch Crossing in Dorchester (CR 709).			

Part 4: Mitigation Measures

Mitigation Action, Program, or Project	Status	Comments	Mitigation Measure # ²⁵²⁶
<p>MJ-10: Improvement of dike network in Heislerville at Matt's Landing. This network protects Delmont and Heislerville from flooding.</p>	<p>Work-in-Progress</p>	<p>2017 NJDEP elevated and fortified edge of dike but work was compromised in August 2020 – waiting on FEMA Public Assistance program funding for repairs</p> <p>American Littoral Society has received a \$4.2M grant to address conditions at the mouth of the Maurice River put dredge material in front of dike.</p>	<p>To be carried over as multi-jurisdictional mitigation measure # TBD</p>
<p>MJ-11: Impact of Sea Level Rise on septic systems and cess pools.</p>	<p>[identify status]</p>		<p>To be carried over as multi-jurisdictional mitigation measure # TBD</p>

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Part 4: Mitigation Measures

Part 4.3: Municipal Mitigation Measures – Identification

Table 10-10 **[will include]** the list of mitigation measures that are considered the responsibility of the municipality. These mitigation measures:

- Reflect the goals and strategy identified in Part 4.1
- Include projects carried over from NJ4 HMP as detailed in Part 4.2
- Include new projects, programs or activities identified by the Municipal Working Groups including measures to address known problems or areas of concern for critical facilities and vulnerable populations
- Address Repetitive Flood Loss (RL) and Severe Repetitive Flood Loss Properties (SRL)²⁸ if applicable

Table 10-10 **[will include]**:

- Brief description of the mitigation action, program, or project
- Hazard(s) addressed by the measure
- Relevant goal(s) addressed by the measure
- Whether the measure pertains to existing or new structures or both

*Note: Mitigation measures with discrete locations **[will be]** shown in Figure 10-7.*

Table 10-10: Maurice River Township Municipal Mitigation Measures Identification

#	Mitigation Action, Program, or Project	Hazard(s)	Goal (s)	Existing or New Structures
M-1	<p><u>Municipal Mitigation Program</u> – including sustained efforts in cooperation with Cumberland County Office of Emergency Management (CC OEM) to:</p> <ul style="list-style-type: none"> ▪ Conduct outreach and education for residents, businesses, and property owners ▪ Complete critical facility field evaluations to identify potential vulnerabilities and mitigation measures ▪ Compile relevant data regarding hazard impacts ▪ Support regular interactions of the Municipal Working Group ▪ Seek integration of hazard mitigation with other parallel planning initiatives 	All	All	All

[provide details regarding two new mitigation measures identified by the Working Group in August:

- Coastal erosion a.) at lighthouse, b.) at bayfront
- NJ project/Coast Guard to establish anchoring / mooring points for absorption booms (also potentially relevant for Commercial Township (habitat issues) et al]

²⁸ Section 3: Hazard Identification and Risk Assessment of the CC HMPU Base Plan **[will include]** a description of RL and SRL properties.

Part 4: Mitigation Measures

Part 4.4: Municipal Mitigation Measures – Implementation

Table 10-11 [will include] information identified by the Municipal Working Group:

- Part(ies) responsible for following up with implementation of the measure
- Priority for implementation considering a range of criteria²⁹
- Project Type to help determine funding options and implementation mechanisms at the municipal level³⁰
- Estimated Cost, including estimates provided by the Municipal Working Group or approximate ranges for projects that are in early stages of development
- Target Date, indicating desired completion dates assuming availability of funding
- Next step(s) anticipated to implement the identified mitigation measures at the municipal level

Table 10-11: Maurice River Township Municipal Mitigation Measures Implementation

#	Mitigation Action, Program, or Project	Responsible Part(ies)	Priority	Project Type	Estimated Cost (\$)	Target Date	Next Step(s)
M-1	Municipal Mitigation Program	Office of Emergency Management	High	Program	Staff Time	On-going, sustained effort	<ul style="list-style-type: none"> ▪ Identify outreach and education objectives and methods (working with CC OEM) ▪ Set priorities (if necessary) and initiate critical facility field assessments ▪ Identify schedule for plan updates (for plan integration efforts)

²⁹ Section 4: Mitigation Measures of the CC HMPU Base Plan [will include] a description of evaluation criteria considered by the Municipal Working Group.

³⁰ Section 4: Mitigation Measures of the CC HMPU Base Plan [will include] a description of project types and related information regarding funding options and implementation mechanisms.

Part 4: Mitigation Measures

Part 4.5: Multi-Jurisdictional Mitigation Measures

During the Municipal Working Group Work Sessions, the Municipal Working Group [will identify] some NJ4 HMP mitigation measures that need to be carried over, as well as new areas of concern, as mitigation measures where implementation requires participation or leadership from other levels of government, including county, state, and federal agencies. These multi-jurisdictional mitigation measures [will be] included in Table 10-12.

Section 4: *Mitigation Measures* of the CC HMPU Base Plan [will describe] multi-jurisdictional implementation strategies in detail. Section 4 [will identify] multi-jurisdictional mitigation measures that Municipal Working Groups believe are partly or wholly the responsibility of County agencies. These measures [will be] referred to the County Working Group for consideration. As part of the mitigation measures in the County Appendix to the NJ4 HMP Regional Hazard Mitigation Plan, the County Working Group will be working with the municipalities to identify:

- Specific responsibilities amongst different level(s) of government to address these problem areas
- Mitigation measures or related projects which may address the described problem areas that are already acknowledged as County responsibilities including identifying the appropriate County agency or department taking the lead role and status of implementing these mitigation measures
- Which, if any, additional mitigation measures the member agencies of the County Working Group will assume responsibility to implement

Note: Multi-jurisdictional mitigation measures with discrete locations [will be] shown in Figure 10-7.

Table 10-12: Maurice River Township Multi-Jurisdictional Mitigation Measures

#	Problem Description	Hazard(s) Addressed	Goal Addressed	Applies to Existing or New Structures	Potential Partners	Priority

Figure 10-7: Maurice River Township Mitigation Project Locations

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Part 4: Mitigation Measures

Part 4.6: Authorities, Policies, Programs, Resources, and Plan Integration

Part 4.6 includes three (3) subparts:

- Authorities, Policies, and Programs - Cross referencing relevant information and recommendations in the CC HMPU Base Plan regarding existing authorities, policies, and programs in the region and specific information about the jurisdiction's participation and continued compliance in the National Flood Insurance Program (NFIP)
- Capabilities and Coordination - Cross referencing relevant information and recommendations in the CC HMPU Base Plan regarding improving capabilities and coordination at the municipal level and specific information about the jurisdiction's available resources
- Plan Review and Integration – Identifying plans and programs included in the development of Plan Integration recommendations in the CC HMPU Base Plan

Authorities, Policies, and Programs

Section 1.3: Existing Authorities, Policies, Programs, and Resources of the CC HMPU Base Plan **will summarize** relevant authorities, policies, and programs related to hazard mitigation in the County including the NFIP.

Continuing municipal participation in the NFIP as part of the implementation of the CC HMPU by the municipality, includes:

- Involvement of Floodplain Manager / Administrator during the CC HMPU implementation process
- Commitment to adopt updated FIRMs and evaluate / update the municipality's Flood Management Plan and/or Ordinance as appropriate per recommendations **to be included** in Section 4.6 of the CC HMPU Base Plan

Capabilities and Coordination

The update of the NJ4 HMP **will include** reexamining municipal hazard mitigation capabilities; potential for improving capabilities and coordination within and between jurisdictions; and plan integration considerations, including:

- *Section 1.3: Existing Authorities, Policies, Programs, and Resources* of the CC HMPU Base Plan **will include** summary statements regarding county and municipal resources and the impact of resource limitations on the overall approach to the CC HMPU mitigation strategies.
- *Section 4: Mitigation Measures* of the CC HMPU Base Plan **will include** summary observations and recommendations concerning:
 - Hazard mitigation planning and mitigation measure implementation capabilities and coordination at the county and municipal levels
 - Coordination within municipal governments, between municipal governments and their communities, and between municipal, county, and state agencies responsible for hazard mitigation

Part 4: Mitigation Measures

Plan Review and Integration

Specific documents obtained during the plan update process from the Municipal Working Group include:

- Maurice River Township Emergency Operations Plan (2017) – update in progress for completion 2021
- Maurice River Township Ordinance 336: Flood Damage Prevention (1987)
- Maurice River Township Wildland Fire Management Plan (2012)
- Maurice River Township Master Plan (2000)
- Maurice River Township Master Plan Reexamination Report (2006)
- Maurice River Township Master Plan Amendment re: Municipal Stormwater Management Plan (2008) Ordinance amended 2021 – will be revised again for Pinelands-related process, likely in 2022
- Maurice River Township Master Plan Reexamination Report (2012)
- Maurice River Township Master Plan Amendment (2013)
- Maurice River Township Zoning Map (2005) (per www.mauricrivertwp.org)
- Maurice River Township Land Development Regulations Supplementary District Regulations 35-8.4: Floodplain Delineation and Management (2002)
- Maurice River Township 2014 Capital Improvement Budget and Capital Improvement Program
- Cumberland County Delaware Bayshore Recovery Plan (2013)
- NJDEP Coastal Community Resilience Evaluation for Maurice River Township

For highlighted entries, need to identify:

- ✓ *Plans that have been “updated”, and if so, when was the update completed?*
- ✓ *Plans where “no update” has occurred, and if so, is an updated scheduled, and if so, when and who is the responsible party?*

Table BP.4-4 in Section 4.6: *Plan Review and Integration* of the CC HMPU Base Plan:

- [Will identify] the primary plans and documents collected from each of the participating municipalities.
- [Will include] the results of reviewing the primary plans and documents to determine the extent to which these documents reflect up-to-date hazard risk and mitigation.
- [Will include] recommendations for integrating the results of the CC HMPU, including hazard mitigation data, goals, measures, and/or recommendations with existing plans and programs at the municipal level that are relevant to all participating municipalities and incorporated by reference in each of the jurisdiction-specific Appendices including:
 - Hazard Assessments
 - Emergency Operations Plans
 - Floodplain Management Ordinances
 - Master Plans and Reexamination Reports
 - Other plans and documents

The plan maintenance process [will articulate and specify] a commitment to review and follow these recommendations during future scheduled updates of these various documents as considered appropriate by the Working Group and the governing body of the municipality.

Attachment A: Public Review Comments

Public review comments [will be] recorded during the public review of the Maurice River Township Preliminary Draft and Draft versions of the Municipal Appendix on [dates to be determined]:

Table 10.A-1: Public Review Comments

Comment Date and Time	Comment	Response

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Attachment B: Adoption Resolution

Following this page [will be] the Adoption Resolution for the Maurice River Township Municipal Appendix as approved by the Maurice River Township Committee.

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Attachment C: Approval Letter

Following this page [will be] the Approval Letter for the Maurice River Township Municipal Appendix.

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