



Mitigation Plan for Four New Jersey Counties
Gloucester County Appendices

Appendix GC.21
West Deptford Township, New Jersey

April 8, 2016

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Part 1: Overview

Part 1.1: Mitigation Plan for Four New Jersey Counties

The Mitigation Plan for Four New Jersey Counties (NJ4 HMP) incorporates input from approximately ninety (90) participating municipalities in Camden, Cumberland, Gloucester, and Salem Counties. The NJ4 HMP is an update and expansion of the South Delaware Valley Region Multi-jurisdictional Hazard Mitigation Plans that were adopted by all four counties and approved by the Federal Emergency Management Agency in 2010 and 2011.

The NJ4 HMP has two main parts:

- Regional Hazard Mitigation Plan
- County and Municipal Appendices

The Regional Hazard Mitigation Plan includes descriptions and information that is common to all participating NJ4 HMP jurisdictions organized according to the following three main focus areas:

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

The Regional Hazard Mitigation Plan also includes Annexes that contain detailed background information for these three focus areas and additional reference materials for the implementation of the NJ4 HMP.

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

Part 1.2: West Deptford Township (Gloucester County) Municipal Appendix

This Municipal Appendix is focused on West Deptford Township in Gloucester County, New Jersey.

The West Deptford Township Municipal Working Group recommended the West Deptford Township (Gloucester County) Municipal Appendix for adoption to the West Deptford Township Committee.

The West Deptford Township Committee adopted the Municipal Appendix by resolution (see Attachment B: Adoption Resolution).

Region II of the Federal Emergency Management Agency subsequently approved 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 GC.9-1 identifies the Municipal Working Group members. As explained in *Section 2: Planning Process* of the Mitigation Plan for Four New Jersey Counties (NJ4 HMP) Regional Hazard Mitigation 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. The Working Group will also continue to stay involved during the implementation and maintenance of the NJ4 HMP.

Table GC.21-1: West Deptford Township (Gloucester County) Working Group

First Name	Last Name	Department	Position	Round 1 Work Session ¹	Round 2 Work Session ²	Contribution ³
Joe	Gill	West Deptford Township OEM	Emergency Management Coordinator	<input checked="" type="checkbox"/>		Organized Working Group and Work Sessions.
Raymond	Chintall	West Deptford Township Administration	Mayor	<input checked="" type="checkbox"/>		
Brandon	Umba	West Deptford Township Administration	Administrator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Provided municipal documents for review.
Sandi	Rost	West Deptford Township Zoning Office	Zoning Officer / Floodplain Administrator	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Provided municipal documents for review.
Ronald	Snyder	Construction Office	Construction Official		<input checked="" type="checkbox"/>	
Joseph S.	Augustyn	Township Engineer	Township Planner / Land Use Board		<input checked="" type="checkbox"/>	

¹ Round 1 Work Session was held on July 8, 2014.

² Round 2 Work Session was held on October 16, 2014.

³ Municipal Working Group members reviewed briefing materials in advance of Work Sessions, contributed during Work Sessions, and reviewed the preliminary Mitigation Plan for Four New Jersey Counties. Additional or unusual contributions are noted in the far right hand column of Table GC.21-1.

Part 2: Participation

The following lists candidate positions and organizations within the community that were extended invitations but could not 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.⁴

- Public Works
- Police
- Fire
- Community / Faith-Based Organizations
- Critical Infrastructure and Key Resources
- Major Employers and Businesses
- Healthcare Institutions
- School Board

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
- Transportation Department Directors / Supervisors
- Emergency Medical Services
- Business Associations
- Environmental Organizations
- Non-Governmental Organizations

⁴ See *Section 4: Mitigation Measures* of the NJ4 HMP Regional Hazard Mitigation Plan.

Part 2: Participation

Part 2.2: Public Participation

Part 2.2 includes opportunities provided to the public and interested parties in the municipality to participate during the plan update process.

Table GC.21-2 identifies the date, type, and location (where applicable) for opportunities provided to the public and interested parties to participate in the development of the plan update.

Table GC.21-2: Public Participation

Date	Type of Involvement	Location
July 15, 2014	Flyers posted	Municipal Building
August 15, 2014	Link to Project Website (http://nj4hmp.com) established	West Deptford ⁵
September 6, 2014	Flyers distributed	Distributed during West Deptford Day
December 17, 2014	Public notice regarding public hearing with West Deptford Township Committee	South Jersey Times
December 18, 2014	Public hearing included on West Deptford Township Committee agenda providing for open discussion, and public comment regarding the Preliminary Municipal Appendix	West Deptford Township Municipal Building

Public comments and input received for the Preliminary Municipal Appendix were considered by the Municipal Working Group and incorporated into the Draft Municipal Appendix where appropriate. Public comments received during the review of the Preliminary Municipal Appendix were included in Attachment A to the Municipal Appendix along with a brief explanation of how the comments were addressed in the Draft Municipal Appendix.

In addition, the Municipal Appendix was 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.⁶ In addition, public participation will continue to be encouraged during subsequent plan implementation and maintenance activities.⁷

⁵ <http://www.westdeptford.com/>

⁶ See Mitigation Measure M-1 in Part 4 of the Municipal Appendix.

⁷ See *Section 4: Mitigation Measures* of the NJ4 HMP Regional Hazard Mitigation Plan.

Part 3: Hazard Identification and Risk Assessment

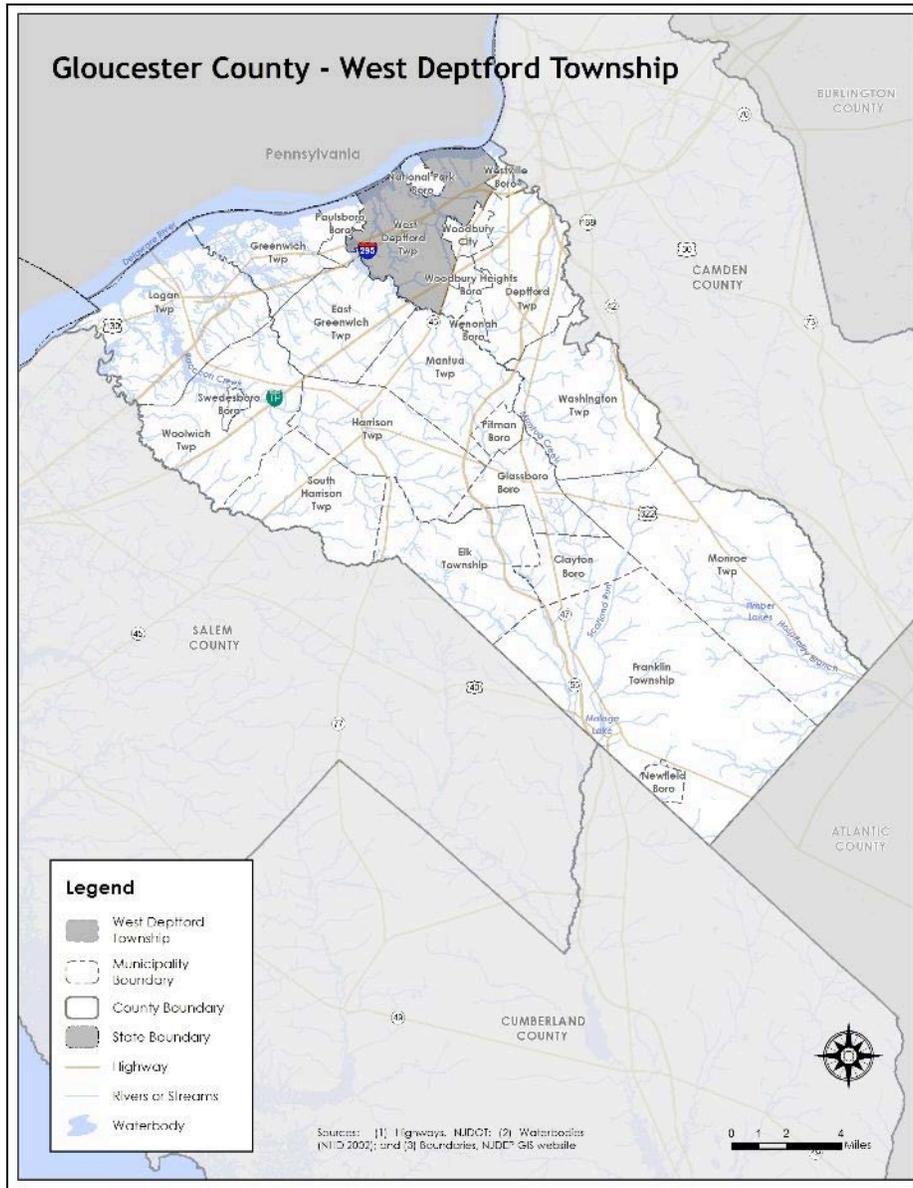
Part 3.1: Municipal Profile

Part 3.1 includes:

- Selected data and information about the municipality that is generally relevant for emergency management planning and specifically for hazard mitigation
- A brief character sketch for the municipality that is only intended to portray a few of the most basic elements

West Deptford Township is located in the northeastern corner of Gloucester County (See Figure GC.21-1).

Figure GC.21-1: West Deptford Township (Gloucester County) Location Map

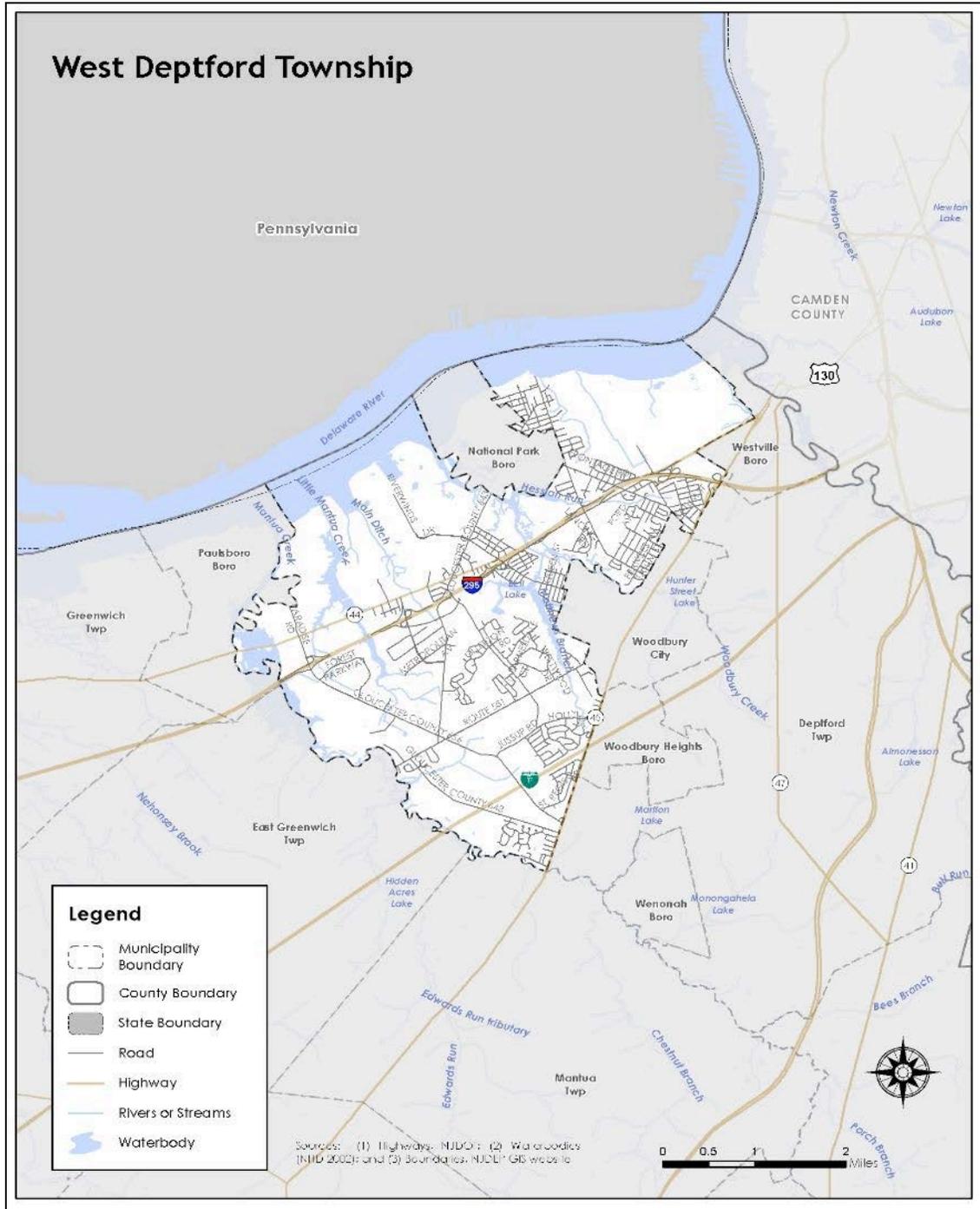


Part 3: Hazard Identification and Risk Assessment

West Deptford Township is an urban area based on the Delaware River. The Township is home to a variety of industries and leading companies. Unincorporated communities in the municipality include Colonial Manor, Greenfields Village, Red Bank, and Thorofare.

Per Figure GC.21-2, the major water courses include the Delaware River and Mantua Creek. Major transportation routes include Interstate 295 and the New Jersey Turnpike. The land is predominantly flat.

Figure GC.21-2: West Deptford Township Base Map



Part 3: Hazard Identification and Risk Assessment

In addition, Table GC.21-3 is a compilation of demographic information for the municipality and comparison with the county, the four county region, and State of New Jersey.

Table GC.21-3: West Deptford Township Demographics
(Source: Census DP-1, 2010 ACS 5 Year Estimates, DP 3, 4)

	West Deptford Township	Gloucester County	Region	New Jersey
2000 Population	19,368	254,673	974,328	8,414,350
2010 Population	21,677	288,288	1,024,926	8,791,894
Percent Change	11.92%	13.2%	5.19%	4.49%
Population Density	1,406.6 / sq. mile	895.3 / sq. mile	754.25 / sq. mile	1,195.5 / sq. mile
Land Area	15.41 sq. miles	322.00 sq. miles	1,358.86 sq. miles	7,354.22 sq. miles
% of Population 18 and younger	21.6	24.4	24.1	23.5
% of Population 18 - 64	64.0	63.2	62.7	63
% of Population 65 and over	14.4	12.4	13.2	13.5

Table GC.21-4 illustrates how West Deptford Township ranks in the county, the four county region, and New Jersey.

Table GC.21-4: West Deptford Township Demographic Rankings

	Gloucester County (total of 24)	Region (total of 90]	New Jersey (total of 565)
Population Rank	4	13	118
Land Area Rank	11	37	168
Population Density Rank	12	48	345
Population Change Rank	10	17	-

Table GC.21-5 includes information related to economic and housing statistics for West Deptford Township, Gloucester County, the four county region, and New Jersey.

Table GC.21-5: West Deptford Township Economics and Housing
(Source: USDA ERS, Census DP-1, 2010 ACS 5 Year Estimates, DP 3, 4; NJ LWD 2010)

	West Deptford Township	Gloucester County	Region	New Jersey
Date Incorporated	March 1, 1871	1686	-	-
Rural / Urban Status	Urban	Urban	Urban	Urban
Median Household Income	\$69,316	\$72,664	\$60,933	\$69,811
Total Number of Housing Units	9,441	109,796	397,990	3,529,033
Occupied Housing Units	8,829	104,271	372,472	3,176,069
Vacant Housing Units	612	5,525	25,518	352,964
Owner Occupied Housing Units	6,387	83,525	266,593	2,126,279

Part 3: Hazard Identification and Risk Assessment

	West Deptford Township	Gloucester County	Region	New Jersey
Renter Occupied Housing Units	2,442	20,746	105,879	1,049,790
Building Permits	6	716	1,554	13,535
Largest Industry	Educational Services; health care and social assistance; mining, quarrying, and oil and gas extraction; and manufacturing	Educational Services, and health care and social assistance	Educational services, and health care and social assistance	Educational services, and health care and social assistance

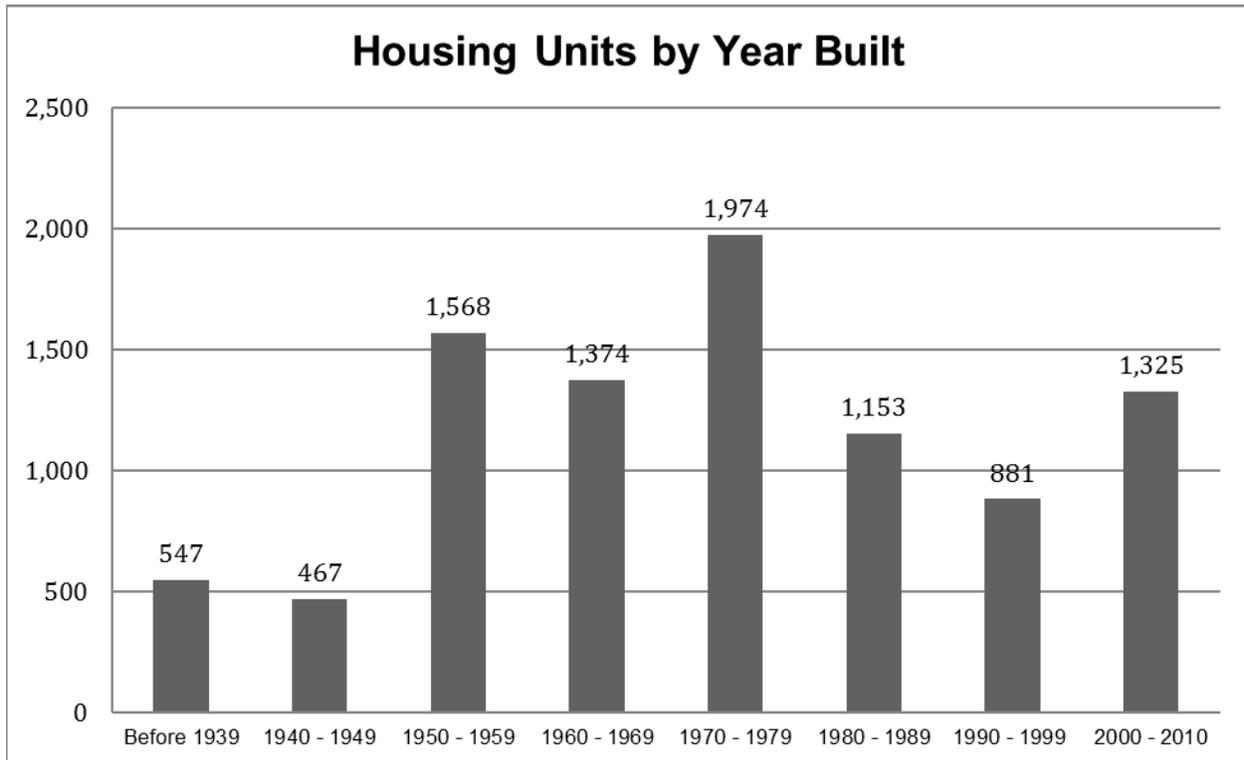
Table GC.21-6 illustrates how West Deptford Township ranks in the county and the four county region.

Table GC.21-6: West Deptford Township Ranking (Economics and Housing)

	Gloucester County (total of 24)	Region (total of 90)
Median Household Income Rank	12	30
Vacant Housing Rank	2	12
Renter Occupied Housing Rank	3	14
Building Permits	12	38

Figure GC.21-3 4 illustrates development patterns in West Deptford Township by examining housing units by year built. Nearly 21% of homes in West Deptford Township were built during the 1970s.

Figure GC.21-3: West Deptford Township Housing Units by Year Built
(Source: 2010 ACS 5 Year Estimates, DP 4)



Part 3: Hazard Identification and Risk Assessment

Part 3.2: Hazard Priorities

Part 3.2 includes hazard priority determinations per the Municipal Working Group.

As a key step in the Hazard Identification and Risk Assessment (HIRA) process, the twelve (12) natural hazards identified in the NJ4 HMP¹ were discussed during the Municipal Working Group Work Sessions and the relative priority of these hazards was identified. The Municipal Working Group rated the hazards as follows:

High Priority

- Flood

Moderate Priority

- Severe Weather – Winter

Low Priority

- Coastal Erosion & Sea Level Rise
- Dam Failure
- Drought
- Earthquake
- Extreme Temperature: Cold & Hot
- High Wind
- Levee Failure
- Severe Weather – Summer
- Wildfire

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

- Geologic Hazards

¹ See *Section 3: Hazard Identification and Risk Assessment*.

Part 3: Hazard Identification and Risk Assessment

Part 3.3: Hazard Mapping

Part 3.3 includes cross references to hazard inventory and risk assessment mapping included in the NJ4 HMP Regional Hazard Mitigation Plan.

Table GC.21-7 provides information regarding hazard inventory mapping included in *Annex D: Hazard Profiles and Risk Assessments* of the NJ4 HMP that support the Hazard Identification and Risk Assessment (HIRA) for the Municipal Appendix. The indicated maps and exhibits correspond to the hazards identified by the Municipal Working Group in Part 3.2. The information represented by these maps will be used in the Critical Facilities Hazard Exposure Assessment described in Part 3.4.

Table GC.21-7: Supporting Mapping and Exhibits

Figure #	Hazard	Map	HIRA Contribution
Figure RP.D-11	Dam Failure	Dam Locations and Hazard Classification	Identify areas in proximity to rated dams
Figure RP.D-46	Flood	FEMA Flood Hazard Zones Preliminary FIRM (PFIRM)	Identify areas subject to periodic flooding (work-in-progress for revisions to effective FIRM)
Figure RP.D-54	Flood (Storm Surge)	Coastal Flood Loss Atlas – SLOSH Model Maximum of Maximum	Identify areas where inundation due to storm surge may occur
Table RP.D-81	Levee Failure	Levee Inventory	Provide information about levee configuration
Figure RP.D-85	Levee Failure	Levee Locations	Identify locations of levees in and around the municipality
Figure RP.D-99	Wildfire	Wildland Fuel Hazard Risk	Identify areas subject to wildfire
Figure RP.D-106	Wildfire	Wildland Urban Interface (WUI)	Identify areas subject to wildfire

The following hazards are not referenced as these hazards occur uniformly across the municipality and have the same potential impact on all properties and assets:

- Drought
- Earthquake
- Extreme Temperatures – Cold and Hot
- High Wind
- Severe Weather – Summer
- Severe Weather – Winter

Part 3: Hazard Identification and Risk Assessment

Part 3.4: Critical Facilities Inventory and Hazard Exposure Assessment

Part 3.4 includes:

- *Inventory information for municipal critical facilities*
- *Hazard exposure analysis results for municipal critical facilities*

Consistent with the process described in Section 3 of the NJ4 HMP Regional Hazard Mitigation Plan, Table GC.21-8 contains updated inventory information for municipal critical facilities including cross-references to related mitigation measures identified in Part 4 of the Municipal Appendix.

Note: Shaded cells (if any) will be completed as part of follow-up efforts to be conducted as part of Mitigation Measure M-2 (see Part 4 of the Municipal Appendix).

Table GC.21-9 provides the means to record results of overlaying critical facility locations with hazard mapping identified in Part 3.3. The results will indicate critical facilities that are potentially exposed to specific hazards.

Note: This information will be used in critical site and facility assessments to be conducted as part of Mitigation Measure M-2 (see Part 4 of the Municipal Appendix).

Hazards that apply to all critical facilities in the NJ4 region and will automatically be included in the proposed critical site and facility assessment process include:

- Earthquake
- High Wind
- Severe Weather – Summer
- Severe Weather – Winter

Hazards that do not relate to the proposed critical site and facility assessment process include:

- Drought
- Extreme Temperatures – Cold and Hot

As a result, these six (6) hazards are not included in the critical facility exposure assessment in Section 3 of the NJ4 HMP Regional Hazard Mitigation Plan.

Part 3: Hazard Identification and Risk Assessment

Table GC.21-8: West Deptford Township (Gloucester County) 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	400 Crown Point Road, Thorofare		Y ²	Y ³		M-5 / M-10
CF-2	Emergency Operations Center	EOC	Co-located Facility	400 Crown Point Road, Thorofare	CF-1	Y	Y		
CF-3	Police Station	Law Enforcement Facilities	Stations	400 Crown Point Road, Thorofare	CF-1	Y	Y	Includes a holding cell	
CF-4	Greenfields Fire Association	FireStation	Stations	31 Budd Boulevard , Woodbury		Y	Y		
CF-5	Colonial Manor Fire Association	FireStation	Stations	611 Academy Avenue, Woodbury		Y	Y		M-6
CF-6	Thorofare Volunteer Fire Company	FireStation	Stations	61 Firehouse Lane, Thorofare		Y	Y		M-7
CF-7	Verga Fire Company	FireStation	Stations	1415 Crown Point Road, Westville		Y			
CF-8	Public Works	Public Works	Combined Administrative Office, Maintenance / Work Area, Equipment / Material Storage, and Fueling Station	120 Grove Road, Thorofare		N	Y	Alternate EOC location	M-8
CF-9	Well #3	Utilities – Water	Wellheads	999 Jessup Road, West Deptford	CF-18	N/A	Y ⁴		
CF-10	Well #4	Utilities – Water	Wellheads	112 Parkville Station Road, West Deptford		N/A	Y ⁴		
CF-11	Well #5	Utilities – Water	Wellheads	962 Kings Highway, West Deptford		N/A	Y ⁴		
CF-12	Well #6	Utilities – Water	Wellheads	840 West Red Bank Avenue, Woodbury	CF-15	N/A	Y ⁴		

² Shelter of last resort.

³ Back-up generator provides partial building coverage for emergency lighting.

⁴ All West Deptford Township utility critical facilities have either direct back-up emergency power capabilities or the hook-up configuration for portable generators.

Part 3: Hazard Identification and Risk Assessment

CF #	Name	Type	Sub-Type	Address	Co-located CF #	Shelter (Y/N)	Generator (Y/N)	Comments	Mitigation Measure #
CF-13	Well #7	Utilities – Water	Wellheads	621 Academy Avenue, Westville		N/A	Y ⁴		
CF-14	Well #8	Utilities – Water	Wellheads	Parkville Station Road		N/A	Y ⁴		
CF-15	.5 MG Water Tank	Utilities – Water	Water Towers	840 West Red Bank Avenue, Woodbury		N/A	Y ⁴		
CF-16	2.0 MG Water Tank	Utilities – Water	Water Towers	261 Jessup Road West Deptford		N/A	Y ⁴		
CF-17	.5 MG Water Tank	Utilities – Water	Water Towers	690 Mantua Grove Road, West Deptford		N/A	Y ⁴		
CF-18	MG Water Tank	Utilities – Water	Water Towers	999 Jessup Road, West Deptford		N/A	Y ⁴		
CF-19	Sewer Pump Station #1	Utilities – Wastewater	Pump Stations / Lift Stations	167 Grove Avenue, West Deptford		N/A	Y ⁴		
CF-20	Sewer Pump Station #2	Utilities – Wastewater	Pump Stations / Lift Stations	1501 Red Bank Avenue, West Deptford		N/A	Y ⁴		
CF-21	Sewer Pump Station #3	Utilities – Wastewater	Pump Stations / Lift Stations	184 Philadelphia Avenue, West Deptford		N/A	Y ⁴		
CF-22	Sewer Pump Station #4	Utilities – Wastewater	Pump Stations / Lift Stations	1660 Crown Point Road, West Deptford		N/A	Y ⁴		
CF-23	Sewer Pump Station #5	Utilities – Wastewater	Pump Stations / Lift Stations	1 Ford Avenue, West Deptford		N/A	Y ⁴		
CF-24	Sewer Pump Station #6	Utilities – Wastewater	Pump Stations / Lift Stations	603 Prince Street, Woodbury		N/A	Y ⁴		
CF-25	Sewer Pump Station #7	Utilities – Wastewater	Pump Stations / Lift Stations	St. Regis Drive, Woodbury		N/A	Y ⁴		
CF-26	Sewer Pump Station #8	Utilities – Wastewater	Pump Stations / Lift Stations	46 West First Avenue, Runnemede		N/A	Y ⁴		
CF-27	Sewer Pump Station #9	Utilities – Wastewater	Pump Stations / Lift Stations	Locksley Lane, Woodbury		N/A	Y ⁴		
CF-28	Sewer Pump Station #10	Utilities – Wastewater	Pump Stations / Lift Stations	238 Crown Point Road, West Deptford		N/A	Y ⁴		

Part 3: Hazard Identification and Risk Assessment

CF #	Name	Type	Sub-Type	Address	Co-located CF #	Shelter (Y/N)	Generator (Y/N)	Comments	Mitigation Measure #
CF-29	Sewer Pump Station #11	Utilities – Wastewater	Pump Stations / Lift Stations	1735 Route 295 / Crown Point Road, West Deptford		N/A	Y ⁴		
CF-30	Sewer Pump Station #12	Utilities – Wastewater	Pump Stations / Lift Stations	151 Parkville Road, West Deptford		N/A	Y ⁴		
CF-31	Sewer Pump Station #13	Utilities – Wastewater	Pump Stations / Lift Stations	1751 Imperial Way, Paulsboro		N/A	Y ⁴		
CF-32	Sewer Pump Station #14	Utilities – Wastewater	Pump Stations / Lift Stations	1449 Metropolitan Avenue, West Deptford		N/A	Y ⁴		
CF-33	Sewer Pump Station #15	Utilities – Wastewater	Pump Stations / Lift Stations	1204 Forest Parkway, Paulsboro		N/A	Y ⁴		
CF-34	Sewer Pump Station #16	Utilities – Wastewater	Pump Stations / Lift Stations	1316 Barnesdale Road, Woodbury		N/A	Y ⁴		
CF-35	Sewer Pump Station #17	Utilities – Wastewater	Pump Stations / Lift Stations	1228 Royal Lane, West Deptford		N/A	Y ⁴		
CF-36	Sewer Pump Station #18	Utilities – Wastewater	Pump Stations / Lift Stations	1123 Parliament Way, West Deptford		N/A	Y ⁴		
CF-37	Sewer Pump Station #19	Utilities – Wastewater	Pump Stations / Lift Stations	1621 Pennfield Drive, West Deptford		N/A	Y ⁴		
CF-38	Sewer Pump Station #20	Utilities – Wastewater	Pump Stations / Lift Stations	37 Phoenix Drive Plant, West Deptford		N/A	Y ⁴		
CF-39	Sewer Pump Station #21	Utilities – Wastewater	Pump Stations / Lift Stations	103 Jobstown Road, West Deptford		N/A	Y ⁴		
CF-40	Sewer Pump Station #22	Utilities – Wastewater	Pump Stations / Lift Stations	900 Riverwinds Drive, West Deptford		N/A	Y ⁴		
CF-41	Sewer Pump Station #23	Utilities – Wastewater	Pump Stations / Lift Stations	River Drive Road (Kings Crossing), West Deptford		N/A	Y ⁴		
CF-42	Sewer Pump Station #24	Utilities – Wastewater	Pump Stations / Lift Stations	791 Grove Road (Grande), West Deptford		N/A	Y ⁴		

Part 3: Hazard Identification and Risk Assessment

CF #	Name	Type	Sub-Type	Address	Co-located CF #	Shelter (Y/N)	Generator (Y/N)	Comments	Mitigation Measure #
CF-43	Green-Fields Elementary School	Schools	Public Schools	15 Hill Lane, Woodbury		N	Y ⁵		
CF-44	Red Bank Elementary School	Schools	Public Schools	192 Philadelphia Avenue, Thorofare		Y	Y ⁵		
CF-45	Oakview Elementary School	Schools	Public Schools	350 Dubois Avenue, Woodbury		Y	Y ⁵		
CF-46	West Deptford Middle School	Schools	Public Schools	675 Grove Road, West Deptford		N	Y ⁵		
CF-47	West Deptford High School	Schools	Public Schools	1600 Old Crown Point Road, Westville		Y	Y		
CF-48	Children Montessori School	Schools	Private Schools	730 Barlow Avenue, Woodbury		N	Y ⁵		
CF-49	ManorCare Health Services – West Deptford	Health Care Facilities	Private Rehabilitation Centers	550 Jessup Road, West Deptford		N ⁶	Y		
CF-50	Community Center	Other Municipal	Community Center	1000 Riverwinds Drive, West Deptford		Y ²	Y		
CF-51	West Deptford Public Library	Emergency Staging Areas	Equipment Mobilization	420 Crown Point Road, West Deptford		Y	Y		

⁵ All West Deptford Township schools have back-up emergency power generators that are capable of powering sections and critical equipment during power outages.

⁶ Shelter in place.

Part 3: Hazard Identification and Risk Assessment

Table GC.21-9: West Deptford Township (Gloucester County) Critical Facilities Hazard Exposure

CF #	Name	Increased Inundation +1 Foot	Increased Inundation +2 Foot	Increased Inundation +3 Foot	Dam Failure	Flood – FIRM Zone V	Flood – FIRM Zone A	Flood – FIRM Zone 0.2%	Storm Surge – Category 1	Storm Surge – Category 2	Storm Surge – Category 3	Storm Surge – Category 4	Levee Failure	Wildfire Wildland High Density Urban Interface	Wildfire Extreme / High Fuel Level Risk
CF-1	Township Hall	N/A	N/A	N/A											
CF-2	Emergency Operations Center	N/A	N/A	N/A											
CF-3	Police Station	N/A	N/A	N/A											
CF-4	Greenfields Fire Association	N/A	N/A	N/A											
CF-5	Colonial Manor Fire Association	N/A	N/A	N/A											
CF-6	Thorofare Volunteer Fire Company	N/A	N/A	N/A											
CF-7	Verga Fire Company	N/A	N/A	N/A											
CF-8	Public Works	N/A	N/A	N/A											
CF-9	Well #3	N/A	N/A	N/A											
CF-10	Well #4	N/A	N/A	N/A											
CF-11	Well #5	N/A	N/A	N/A											
CF-12	Well #6	N/A	N/A	N/A											
CF-13	Well #7	N/A	N/A	N/A											
CF-14	Well #8	N/A	N/A	N/A											
CF-15	.5 MG Water Tank	N/A	N/A	N/A											
CF-16	2.0 MG Water Tank	N/A	N/A	N/A											
CF-17	.5 MG Water Tank	N/A	N/A	N/A											
CF-18	MG Water Tank	N/A	N/A	N/A											
CF-19	Sewer Pump Station #1	N/A	N/A	N/A											
CF-20	Sewer Pump Station #2	N/A	N/A	N/A											
CF-21	Sewer Pump Station #3	N/A	N/A	N/A											
CF-22	Sewer Pump Station #4	N/A	N/A	N/A											
CF-23	Sewer Pump Station #5	N/A	N/A	N/A											
CF-24	Sewer Pump Station #6	N/A	N/A	N/A											

Part 3: Hazard Identification and Risk Assessment

CF #	Name	Increased Inundation +1 Foot	Increased Inundation +2 Foot	Increased Inundation +3 Foot	Dam Failure	Flood – FIRM Zone V	Flood – FIRM Zone A	Flood – FIRM Zone 0.2%	Storm Surge – Category 1	Storm Surge – Category 2	Storm Surge – Category 3	Storm Surge – Category 4	Levee Failure	Wildfire Wildland High Density Urban Interface	Wildfire Extreme / High Fuel Level Risk
CF-25	Sewer Pump Station #7	N/A	N/A	N/A											
CF-26	Sewer Pump Station #8	N/A	N/A	N/A											
CF-27	Sewer Pump Station #9	N/A	N/A	N/A											
CF-28	Sewer Pump Station #10	N/A	N/A	N/A											
CF-29	Sewer Pump Station #11	N/A	N/A	N/A											
CF-30	Sewer Pump Station #12	N/A	N/A	N/A											
CF-31	Sewer Pump Station #13	N/A	N/A	N/A											
CF-32	Sewer Pump Station #14	N/A	N/A	N/A											
CF-33	Sewer Pump Station #15	N/A	N/A	N/A											
CF-34	Sewer Pump Station #16	N/A	N/A	N/A											
CF-35	Sewer Pump Station #17	N/A	N/A	N/A											
CF-36	Sewer Pump Station #18	N/A	N/A	N/A											
CF-37	Sewer Pump Station #19	N/A	N/A	N/A											
CF-38	Sewer Pump Station #20	N/A	N/A	N/A											
CF-39	Sewer Pump Station #21	N/A	N/A	N/A											
CF-40	Sewer Pump Station #22	N/A	N/A	N/A											
CF-41	Sewer Pump Station #23	N/A	N/A	N/A											
CF-42	Sewer Pump Station #24	N/A	N/A	N/A											

Part 3: Hazard Identification and Risk Assessment

CF #	Name	Increased Inundation +1 Foot	Increased Inundation +2 Foot	Increased Inundation +3 Foot	Dam Failure	Flood – FIRM Zone V	Flood – FIRM Zone A	Flood – FIRM Zone 0.2%	Storm Surge – Category 1	Storm Surge – Category 2	Storm Surge – Category 3	Storm Surge – Category 4	Levee Failure	Wildfire Wildland High Density Urban Interface	Wildfire Extreme / High Fuel Level Risk
CF-43	Green-Fields Elementary School	N/A	N/A	N/A											
CF-44	Red Bank Elementary School	N/A	N/A	N/A											
CF-45	Oakview Elementary School	N/A	N/A	N/A											
CF1-46	West Deptford Middle School	N/A	N/A	N/A											
CF-47	West Deptford High School	N/A	N/A	N/A											
CF-48	Children Montessori School	N/A	N/A	N/A											
CF-49	ManorCare Health Services – West Deptford	N/A	N/A	N/A											
CF-50	Community Center	N/A	N/A	N/A											
CF-51	West Deptford Public Library	N/A	N/A	N/A											

Part 4: Mitigation Measures

Part 4.1: Mitigation Goals and Strategy

Part 4.1 includes:

- *Goal statements reviewed and approved by the Municipal Working Group based on goals included in the Southern Delaware Valley Region (New Jersey) Multi-Jurisdictional Hazard Mitigation Plans (SDVR HMPs) approved by FEMA in 2010 and 2011 for Camden, Cumberland, Gloucester, and Salem Counties*
- *Overarching strategy for the municipality's mitigation program*

Goals were originally established by the Southern Delaware Valley Region 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 plan update process, these goals were reviewed and edited by the Municipal Working Group for use in the Municipal Appendix. 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 NJ4 HMP Regional Hazard Mitigation Plan HIRA, and experience of participants in the plan update process, the Municipal Working Group identified an overarching strategy for mitigation:

- Focus on projects to address known problems or areas of concern for critical facilities and vulnerable populations as additional initial risk reduction efforts
- Provide opportunities for residents and property owners to access available information about risk reduction and mitigation measures, in particular for Repetitive and Severe Repetitive Flood Loss Properties
- Identify additional areas of concern for critical facilities and vulnerable populations for future plan updates
- Institutionalize hazard mitigation into municipal activities and programs through regular interactions of the Municipal Working Group and better 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 described in Parts 4.3 through 4.5 of the Municipal Appendix reflect this strategy.

Part 4: Mitigation Measures

Part 4.2: SDVR HMP Mitigation Measures

Part 4.2 includes the status of mitigation measures identified for the municipality in the SDVR HMP.

Known problems and areas of concern were the basis for mitigation measures identified in the SDVR HMP. In cases where these problems and concerns still existed at the time of the plan update, the related SDVR HMP mitigation measures were candidates for inclusion in the Municipal Appendix.

Table GC.21-10 identifies the status of mitigation measures included in the SDVR HMP. These entries were based on information provided by the Municipal Working Group. In some cases, the SDVR HMP mitigation measures were carried over as part of the Municipal Appendix as indicated in the “Comments” column and the far right-hand column of Table GC.21-10.

Table GC.21-10: Status of West Deptford Township (Gloucester County) SDVR HMP Mitigation Measures

Mitigation Action, Program, or Project	Status	Comments	Mitigation Measure # (Notes A & B)
West Deptford 1: Elevation of private trailers and improvements to berm around Willow Wood Trailer Park located off of Crown Point Road.	Completed	Issue was resolved through funds provided by private company managing Willow Wood Trailer Park. Therefore, mitigation measure is not included in updated Municipal Appendix.	N/A
West Deptford 2: Elevation and easements on West 1st Avenue between Mantua and West Deptford municipalities.	Completed	Issue was resolved through capital improvement funds and special bonds. Therefore, mitigation measure is not included in updated Municipal Appendix.	N/A

Table GC.21-10 Notes:

- A. See Tables GC.21-11 and GC.21-12 for municipal (M-#) mitigation measures
- B. See Table GC.21-13 for multi-jurisdictional (MJ-#) mitigation measures

Part 4: Mitigation Measures

Part 4.3: Municipal Mitigation Measures – Identification

Part 4.3 includes brief descriptions of mitigation measures that are considered the sole responsibility of the municipality.

Table GC.21-11 includes 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 SDVR HMPs 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)¹ if applicable

Table GC.21-11 includes:

- 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 are shown in Figure GC.21-4.

Table GC.21-11: West Deptford Township (Gloucester County) Municipal Mitigation Measures Identification

#	Mitigation Action, Program, or Project	Hazard(s)	Goal (s)	Existing or New Structures
M-1	Identify and pursue outreach and education opportunities to inform municipal residents, businesses, and property owners regarding: <ul style="list-style-type: none"> • Current hazards and risks • Changing conditions and actions that may reduce / increase risk • Best practices for hazard mitigation at the individual or property level.² 	All	Goal #1	Both
M-2	Prioritize critical facilities and complete site and facility surveys to identify vulnerabilities and potential mitigation measures.	All	Goal #2	Existing
M-3	Prioritize recurrent drainage problem areas and initiate data collection to track unreimbursed damages and related response and recovery expenses.	All	Goal #2	Existing
M-4	Conduct regular Municipal Working Group meetings consistent with the plan maintenance program and the Municipal Adoption Resolution.	All	Goal #3	Both

¹ See Section 3: Hazard Identification and Risk Assessment and related portions of Annex D of the NJ4 HMP Regional Hazard Mitigation Plan for a description of RL and SRL properties.

² For example, individual property owners can be informed about back-up power alternatives such as initial battery back-up for power disruptions.

Part 4: Mitigation Measures

#	Mitigation Action, Program, or Project	Hazard(s)	Goal (s)	Existing or New Structures
M-5	Upgrade permanent back-up emergency power generator at Municipal Hall on 400 Crown Point Road (CF-1).	All	Goal #4	Both
M-6	Upgrade permanent back-up emergency power generator at Colonial Manor Fire Association (CF-5).	All	Goal #4	Both
M-7	Upgrade permanent back-up emergency power generator at Thorofare Fire Association (CF-6).	All	Goal #4	Both
M-8	Upgrade permanent back-up emergency power generator at Public Works facility (CF-8).	All	Goal #4	Both
M-9	Address identified Repetitive Flood Loss / Severe Repetitive Flood Loss Properties.	Flood	Goal #4	Both
M-10	Harden / retrofit Municipal Hall located on 400 Crown Point Road, to include upgrading doors & roof (CF-1).	High Wind	Goal #4	Both

Part 4.4: Municipal Mitigation Measures – Implementation

Part 4.4 includes a tabulation of relevant aspects related to the implementation of the municipal mitigation measures.

Table GC.21-12 includes 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 criteria³
- Project Type to help determine funding options and implementation mechanisms at the municipal level⁴
- 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 GC.21-12: West Deptford Township (Gloucester County) Municipal Mitigation Measures Implementation

#	Mitigation Action, Program, or Project	Responsible Part(ies)	Priority	Project Type	Estimated Cost (\$)	Target Date	Next Step(s)
M-1	Identify and pursue outreach and education opportunities.	Municipal OEM	Low	Public Outreach and Education	Staff time commitment	On-going	<ul style="list-style-type: none"> ▪ Work with County Working Group to identify resource needs and availability. ▪ Identify target audience(s).

³ See *Section 4: Mitigation Measures* and related portions of Annex E of the NJ4 HMP Regional Hazard Mitigation Plan for a description of evaluation criteria considered by the Municipal Working Group.

⁴ See *Section 4: Mitigation Measures* and related portions of Annex F of the NJ4 HMP Regional Hazard Mitigation Plan for a description of project types and related information regarding funding options and implementation mechanisms.

Part 4: Mitigation Measures

#	Mitigation Action, Program, or Project	Responsible Part(ies)	Priority	Project Type	Estimated Cost (\$)	Target Date	Next Step(s)
M-2	Prioritize critical facilities and complete site and facility surveys to identify vulnerabilities and potential mitigation measures.	Municipal OEM and Facility Managers	Moderate	Data Acquisition and Management	Staff time commitment	On-going	Review critical facility list and establish priorities, procedures, and tentative time schedule for conducting site and facility surveys.
M-3	Prioritize recurrent drainage problem areas and initiate data collection to track unreimbursed damages and related response and recovery expenses.	Municipal OEM and Municipal Working Group	High	Capabilities and Coordination	Staff time commitment	On-going	Identify recurrent drainage problem areas, establish priorities, and identify data collection procedures.
M-4	Conduct regular Municipal Working Group meetings.	Municipal OEM and Municipal Working Group	Moderate	Capabilities and Coordination	Staff time commitment	On-going	Establish regular Municipal Working Group membership, reporting requirements, and meeting / work session schedule.
M-5	Upgrade permanent back-up emergency power generator at Municipal Hall on 400 Crown Point Road (CF-1).	Municipal OEM and Public Works Department	High	Back-up Emergency Power Generator	< \$100K	One to three years	Conduct project scoping.
M-6	Upgrade permanent back-up emergency power generator at Colonial Manor Fire Association (CF-5).	Municipal OEM, Public Works Department, and Fire Department	High	Back-up Emergency Power Generator	< \$100K	One to three years	Conduct project scoping.
M-7	Upgrade permanent back-up emergency power generator at Thorofare Fire Association (CF-6).	Municipal OEM, Public Works Department, and Fire Department	High	Back-up Emergency Power Generator	< \$100K	One to three years	Conduct project scoping.
M-8	Upgrade permanent back-up emergency power generator at Public Works facility (CF-8).	Municipal OEM and Public Works Department	High	Back-up Emergency Power Generator	< \$100K	Three to five years	Conduct project scoping.
M-9	Address identified Repetitive Flood Loss / Severe Repetitive Flood Loss Properties.	Floodplain Administrator	High	Private Property Flood Mitigation	Staff time	On going	Identify mitigation options include eligible activities per FEMA HMA programs.
M-10	Harden / retrofit Municipal Hall located on 400 Crown Point Road, to include upgrading doors & roof (CF-1).	Municipal OEM and Public Works Department	High	Building Retrofit	\$100K - \$500K	One to three years	Conduct project scoping.

Part 4: Mitigation Measures

Part 4.5: Multi-Jurisdictional Mitigation Measures

Part 4.5 includes brief descriptions of mitigation measures that require multiple jurisdictions to implement.

During the Municipal Working Group Work Sessions, some SDVR HMP mitigation measures as well as new areas of concern were identified where implementation required participation or leadership from other levels of government, including county, state, and federal agencies.

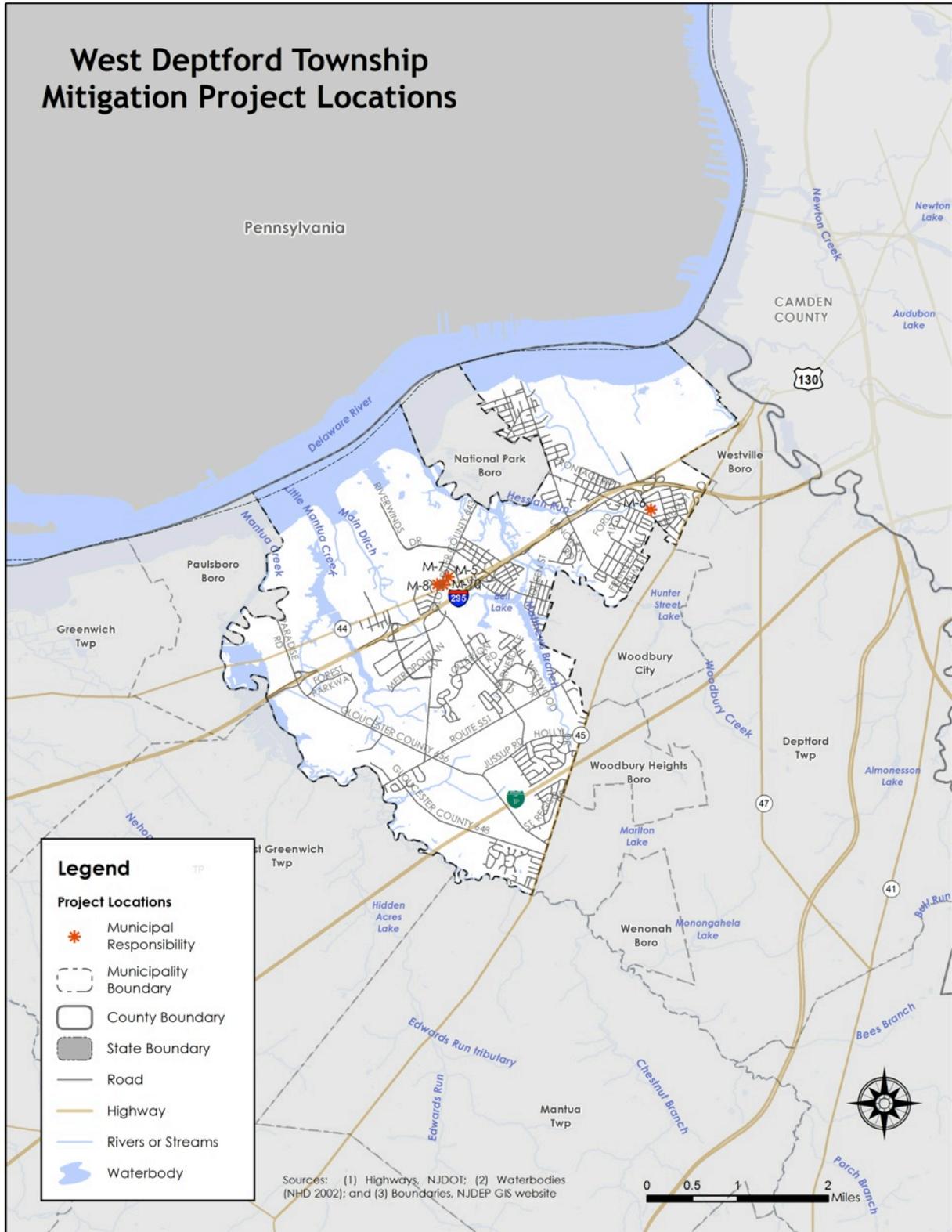
Section 4: Mitigation Measures of the NJ4 HMP Regional Hazard Mitigation Plan describes multi-jurisdictional implementation strategies in detail. Section 4 identifies multi-jurisdictional mitigation measures that Municipal Working Groups believe are partly or wholly the responsibility of County agencies. These measures have been 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: West Deptford Township did not identify any multi-jurisdictional mitigation measures.

Part 4: Mitigation Measures

Figure GC.21-4: West Deptford Township Mitigation Project Locations



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 NJ4 HMP Regional Hazard Mitigation 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 NJ4 HMP Regional Hazard Mitigation 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 NJ4 HMP Regional Hazard Mitigation Plan

Authorities, Policies, and Programs

Section 1.3: *Existing Authorities, Policies, Programs, and Resources* of the NJ4 HMP Regional Hazard Mitigation Plan summarizes relevant authorities, policies, and programs related to hazard mitigation in the region including the NFIP.

Continuing municipal participation in the NFIP as part of the implementation of the NJ4 HMP by the municipality, includes:

- Involvement of Floodplain Manager / Administrator during the NJ4 HMP implementation process
- Commitment to adopt updated FIRMs and evaluate / update the municipality's Flood Management Plan and/or Ordinance as appropriate per recommendations in Section 4.6 of the NJ4 HMP Regional Hazard Mitigation Plan

Capabilities and Coordination

The update of the SDVR HMP included reexamining municipal hazard mitigation capabilities; potential for improving capabilities and coordination within and between jurisdictions; and, plan integration considerations. Section 1.3: *Existing Authorities, Policies, Programs, and Resources* of the NJ4 HMP Regional Hazard Mitigation Plan includes summary statements regarding regional resources and the impact of resource limitations on the overall approach to the NJ4 HMP mitigation strategies. Section 4: *Mitigation Measures* and related portions of Annex F of the NJ4 HMP Regional Hazard Mitigation Plan include summary observations and recommendations concerning:

- Hazard mitigation planning and mitigation measure implementation capabilities and coordination at the regional, 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

Plan Review and Integration

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

- Emergency Operations Plan (2008)
- Master Plan (2009)
- Land Use Development Ordinance⁹
- Floodplain Control Ordinance⁵
- Stormwater Control Ordinance
- Stormwater Control Procedures

Table RP.4-4 in *Section 4.6: Plan Review and Integration* of the NJ4 HMP Regional Hazard Mitigation Plan identifies the primary plans and documents collected from each of the participating municipalities. In addition, Annex E.2 provides a complete list of all the plans and documents collected from the participating municipalities.

Section 4.6 also includes 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. In addition, Section 4.6 includes recommendations for integrating the results of the NJ4 HMP, 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 includes 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.

⁵ <http://clerkshq.com/default.ashx?clientsite=WestDeptford-nj>

Attachment A: Public Review Comments

The following comments were received during the public review of the West Deptford Township Municipal Appendix:

Table GC.21.A-1: Public Review Comments

Comment Date and Time	Comment	Response

Note: As of May 29, 2015, no public review comments were received for the West Deptford Township Municipal Appendix.

Attachment B: Adoption Resolution

Following this page is the Adoption Resolution for the West Deptford Township Municipal Appendix as approved by the West Deptford Township Committee.

Attachment C: Approval Letter

Following this page is the Approval Letter for the West Deptford Township Municipal Appendix.