

## 9.15 City of Gloucester

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

### 9.15.1 Hazard Mitigation Planning Team

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

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

*Table 9.15-1. Hazard Mitigation Planning Team*

Primary Point of Contact	Alternate Point of Contact
<b>Name/Title:</b> Michael Hagan, Fire Chief/OEM Coordinator <b>Address:</b> 512 Monmouth Street Gloucester City, NJ <b>Phone Number:</b> 856-816-0306 <b>Email:</b> <a href="mailto:Michael.hagan@gloucestercityfd.org">Michael.hagan@gloucestercityfd.org</a>	<b>Name/Title:</b> Robert Saunders, Jr., Deputy OEM Coordinator <b>Address:</b> 512 Monmouth Street Gloucester City, NJ <b>Phone Number:</b> 856-776-0927 <b>Email:</b> <a href="mailto:gloucestercityoem@gmail.com">gloucestercityoem@gmail.com</a>
<b>NFIP Floodplain Administrator</b>	
<b>Name/Title:</b> William Ackley, Chief Housing Inspector and Zoning Officer <b>Address:</b> 512 Monmouth Street Gloucester City, NJ <b>Phone Number:</b> 856-456-7689 x 404 <b>Email:</b> <a href="mailto:williamackley@cityofgloucester.org">williamackley@cityofgloucester.org</a>	
<b>Additional Contributors</b>	
<b>Name/Title:</b> Chief Michael Hagan–Emergency Management Coordinator <b>Method of Participation:</b> Submitted hazard event history, provided data for capability assessments, completed mitigation action review, contributed to mitigation strategy	
<b>Name/Title:</b> William Ackley – Zoning Officer (Designated to Administer Flood Damage Prevention Ordinance #O19-2016)	

<b>Method of Participation:</b> Submitted flood damage ordinance, contributed to mitigation strategy
<b>Name/Title:</b> Alex Tedesco, Superintendent of Public Works
<b>Method of Participation:</b> Contributed to mitigation strategy
<b>Name/Title:</b> Edward Gorman – Construction Official
<b>Method of Participation:</b> Provided building permits
<b>Name/Title:</b> Robert Saunders, Jr., Deputy OEM Coordinator
<b>Method of Participation:</b> Contributed to mitigation strategy
<b>Name/Title:</b> Pat Keating, City Council
<b>Method of Participation:</b> Contributed to mitigation strategy

### 9.15.2 Municipal Profile

Gloucester City is located in the northwest corner of Camden County along the Delaware River. Gloucester City is an urban residential community. Major water courses include Delaware River and Newton Creek. Major transportation routes include Interstate 76 and U.S. Highway 130. The land is predominantly flat.

According to the U.S. Census, the 2010 population for the City of Gloucester was 11,456. The estimated 2019 population was 11,248, a 1.8 percent decrease from the 2010 Census. Data from the 2019 U.S. Census American Community Survey indicate that 9.1 percent of the population is 5 years of age or younger and 11.1 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

### 9.15.3 Jurisdictional Capability Assessment and Integration

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

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

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. Annex development included reviewing planning and policy documents and surveying each jurisdiction to obtain a better understanding of their progress in plan integration and how risk reduction is supported. Areas with current mitigation integration are summarized in this jurisdictional Capability Assessment (Section 9.15.3). The updated mitigation strategy includes opportunities the City of Gloucester identified for integration of mitigation concepts to be incorporated into municipal procedures.

9.15.3.1 Planning, Legal, and Regulatory Capability

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

Table 9.15-2. Planning, Legal, and Regulatory Capability

	Do you have this? (Yes/No)	Required by State? (Yes/No)	Citation and Date (code chapter and enactment date or name of plan and date of plan)	Authority (local, City, state, federal)	Individual / Department / Agency Responsible
<b>Codes, Ordinances, &amp; Regulations</b>					
<b>Building Code</b>	Yes	Yes	Chapter 37, Construction Codes, Uniform 01/17/1977	State and Local	Edward Gorman, Construction Official/Building and Housing Department
<b>Zoning/Land Use Code</b>	Yes	Yes, if the jurisdiction has a planning board	Ordinance 36-96 01/02/1997	Local	William Ackley, Zoning Officer/Building and Housing Department
<b>Subdivision Ordinance</b>	Yes	Yes, if the jurisdiction has a planning board	Ordinance 36-96 01/02/1997	Local	Adrienne Moore, Secretary/Gloucester City Planning and Zoning Board
<b>Stormwater Management Ordinance</b>	Yes	Yes	Chapter 8 Stormwater Program Coordinator; Chapter 71, Sewers, Article III: Stormwater Regulations; Ordinance 05-02021 02/25/2021 Stormwater Control	Local	Superintendent of Utilities
<b>Post-Disaster Recovery/ Reconstruction Ordinance</b>	No	No	-	-	-
<b>Real Estate Disclosure</b>	Yes	Yes	N.J.A.C. 13:45A-29.1	State	State, Division of Consumer Affairs
<b>Growth Management</b>	Yes	Yes, if the jurisdiction has a planning board	Ordinance 36-96 01/02/1997	Local	Adrienne Moore, Secretary/Gloucester City Planning and Zoning Board

<b>Site Plan Ordinance</b>	Yes	Yes, if the jurisdiction has a planning board	Ordinance 36-96 01/02/1997	Local and County	Adrienne Moore, Secretary/Gloucester City Planning and Zoning Board
<b>Environmental Protection Ordinance</b>	Yes	Yes, depends on type of environmental areas	Through site plan review, land use requirements, etc.	Local	Adrienne Moore, Secretary/Gloucester City Planning and Zoning Board
<b>Flood Damage Prevention Ordinance</b>	Yes	Yes	Chapter 48A Flood Damage Prevention 08/11/2016	Federal, State, County and Local	William Ackley, Zoning Officer/Building and Housing Department
<b>Wellhead Protection</b>	Yes	Yes	SWAP	State and Local	Superintendent of Utilities
<b>Emergency Management Ordinance</b>	Yes	No	Chapter 4 Administrative Code, Article IX Fire Department, Article X Police Department	Local	Michael Hagan Emergency Management Coordinator
<b>Climate Change Ordinance</b>	No	No	-	-	-
<b>Disaster Recovery Ordinance</b>	No	No	-	-	-
<b>Disaster Reconstruction Ordinance</b>	No	No	-	-	-
<b>Other</b>	No	-	-	-	-

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

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

- Building Code:
  - The State of New Jersey has adopted the 2018 International Building Code (IBC). Flood design provisions are found in the Building Subcode (Section 1612), Residential Subcode, Rehabilitation Subcode, and Plumbing, Mechanical, and Fuel Gas subcodes. The flood provisions are deemed by FEMA to meet or exceed NFIP requirements for buildings and structures.
  - The IBC includes design requirements for structural wind resistance. Design wind speeds in New Jersey vary based on structure type and location, with higher wind design speeds required in coastal areas.
- Flood Damage Prevention Ordinance:
  - A local flood damage prevention ordinance sets design standards for reducing flood losses and is required for participation in the National Flood Insurance Program.
  - The local flood damage prevention ordinance requires permits for floodplain development, adopts and enforces flood maps, requires new and substantially improved structures be elevated above the base flood elevation, among other standards.
  - In the State of New Jersey, all new and substantially improved structures are required to be elevated at least one foot above the base flood elevation.
- Stormwater Ordinance
  - New Jersey municipalities enact stormwater management ordinances to regulate runoff quantity and quality, groundwater recharge, and erosion control. Municipalities are required to update their municipal stormwater control ordinance to reflect amendments to the Stormwater Management rules at N.J.A.C. 7:8, adopted March 2, 2020 and should use [NJ DEP's Model Stormwater Control Ordinance for Municipalities](#).
  - Stormwater ordinances for major development require mitigating runoff by requiring that peak runoff rates for the 2, 10, and 100-year storms be below pre-construction conditions and not increase flood damage downstream of the site.

**Prior to zoning changes or development approvals, does the jurisdiction review the hazard mitigation plan and other hazard analyses to ensure consistent and compatible land use?** Yes

**Does the zoning ordinance discourage development or redevelopment within natural areas including wetlands, floodways, and floodplains?** No. This is addressed in Chapter 48A, Flood Damage Prevention.

**Does the ordinance require developers to take additional actions to mitigate natural hazard risk?** No. This is addressed in Chapter 48A, Flood Damage Prevention

**Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?** This is accomplished during the review/revision of the Master Plan.

**Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?** No

**Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?** No.

**Do the regulations allow density/development transfers where hazard areas exist?** No

**Planning Documents**

<b>Master Plan</b>	Yes	Yes	Master Plan 04/05/2018	Local	Planning
<b>Capital Improvement Plan</b>	Yes	Allowed	Annual Budget	Local	CFO/ Finance Dept
<b>Disaster Debris Management Plan</b>	No	No	-	-	-
<b>Floodplain Management or Watershed Plan</b>	No	No	-	-	-
<b>Stormwater Management Plan</b>	Yes	All but Boroughs of Pine Valley and Tavistock	SCO updated 5/21 ord. No. 05-02021	Local	Superintendent of Utilities
<b>Stormwater Pollution Prevention Plan</b>	Yes	All but Boroughs of Pine Valley and Tavistock	SPPP updated 10/16/18, 3/28/21	Local	Superintendent of Utilities
<b>Urban Water Management Plan</b>	No	No	-	-	-
<b>Habitat Conservation Plan</b>	No	No	-	-	-
<b>Economic Development Plan</b>	No	No	-	-	-

<b>Shoreline Management Plan</b>	No	No	-	-	-
<b>Community Wildfire Protection Plan</b>	No	No	-	-	-
<b>Community Forestry Management Plan</b>	Yes	No	Community Forestry Management Plan, 2019	Local	Shade Tree Commission
<b>Transportation Plan</b>	No	No	-	-	-
<b>Agriculture Plan</b>	No	No	-	-	-
<b>Climate Action/ Resiliency Plan</b>	No	No	-	-	-
<b>Tourism Plan</b>	No	No	-	-	-
<b>Business/ Downtown Development Plan</b>	Yes	No	Part of Master Plan 04/05/2018	Local	Lori Ryan Community Development Coordinator
<b>Other</b>	No	-	-	-	-

**Planning Connection to Mitigation and Safe Growth**

*How are your plans contributing to risk reduction in your community?*

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

*Do the land use policies discourage development or redevelopment within natural hazard areas? Yes*

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

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

*Are transportation systems designed to function under disaster conditions (e.g. evacuation)? N/A*

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

*Do environmental policies maintain and restore protective ecosystems? Yes*

**Response/Recovery Planning**

<b>Emergency Operations Plan</b>	Yes	Yes	Emergency Operations Plan, Revised 08/03/2020	Local	Michael Hagan Emergency Management Coordinator
<b>Strategic Recovery Planning Report</b>	Yes	No	Part of Emergency Operations Plan, Revised 08/03/2020	Local	Michael Hagan Emergency Management Coordinator
<b>Threat &amp; Hazard Identification</b>	Yes	No	Part of Emergency Operations Plan, Revised 08/03/2020	Local	Michael Hagan Emergency Management Coordinator

<b>&amp; Risk Assessment (THIRA)</b>					
<b>Post-Disaster Recovery Plan</b>	Yes	No	Part of Emergency Operations Plan, Revised 08/03/2020	Local	Michael Hagan Emergency Management Coordinator
<b>Continuity of Operations Plan</b>	Yes	No	Part of Emergency Operations Plan, Revised 08/03/2020	Local	Michael Hagan Emergency Management Coordinator
<b>Public Health Plan</b>	Yes	No	Public Health Plan, Revised 08/03/2020	County	County Department of Health
<b>Other</b>	No	-	-	-	-

**Response/Recovery Planning Connection to Mitigation and Safe Growth**

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

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

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

9.15.3.2

**Development and Permitting Capability**

The table below summarizes the capabilities of the City of Gloucester to oversee and track development.

*Table 9.15-3. Development and Permitting Capability*

Indicate if your jurisdiction implements the following	Yes/No	Comment
Do you issue development permits? - If yes, what department is responsible? - If no, what is your process for development?	Yes	Approval of Zoning Officer and then Construction Official/Building and Housing Department
Are permits tracked by hazard area? (For example, floodplain development permits.)	No	-
Do you have a buildable land inventory? - If yes, describe. - If no, quantitatively describe the level of buildout in the jurisdiction.	No	Near built out, aside from redevelopment

9.15.3.3 Administrative and Technical Capability

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

Table 95-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
<b>Administrative Capability</b>		
Planning Board	Yes	Planning and Zoning Board
Zoning Board of Adjustments	Yes	Planning and Zoning Board
Planning Department	See Board	
Mitigation Planning Committee	Yes	All department heads, etc.
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	Yes	Member assigned by City Administration
Public Works/Highway Department	Yes	Member on HMP Group
Construction/Building/Code Enforcement Department	Yes	<p>The responsibility of the Building and Housing Department to:</p> <ul style="list-style-type: none"> <li>• Issue Building, Electrical, Plumbing and Fire Permits.</li> <li>• Inspect for Building, Electrical, Plumbing and Fire Permits.</li> <li>• To insure that all construction is in accordance with the Uniform Construction Code (UCC) of New Jersey and its adopted codes.</li> <li>• Issue UCC violations and/or fines, Certificates of Approval, and Certificates of Occupancy when warranted.</li> <li>• Issue Rental Registration and Licensing Certificates (Code 55-14).</li> <li>• Issue violations of the Property Maintenance Code of Gloucester City, (Codes 55 and/or 66 and/or fines).</li> <li>• Inspect and issue Certificates of Occupancy. Issue violations of the Certificates of Occupancy (Code 55-13).</li> </ul> <p>The Department includes four fulltime Code Enforcement officers.</p>
Emergency Management/Public Safety Department	Yes	Office of Emergency Management (OEM). Member on HMP Group
Warning Systems / Services (mass notification system, outdoor warning signals)	Yes	Outdoor Warning System via City and Mass Notification via County
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	Street Sweeping, tree trimming, culvert cleaning, etc
Mutual aid agreements	Yes	Via County

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Human Resources Manual - Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?	Yes	OEM
Other	Yes	<p>The Gloucester City Shade Tree Committee is an advisory committee to the Mayor and Council on all public trees and trees which pose a hazard to public safety. The mission of the Gloucester City Shade Tree Committee is to:</p> <ul style="list-style-type: none"> <li>• Nurture and safeguard the population off all street, park and municipally owned trees.</li> <li>• Preserve the tree canopy within the City in a manner that is consistent with public safety.</li> <li>• Implement proactive plans for tree and site assessment, tree planting and young tree care.</li> <li>• Advise and assist in the implementation of tree maintenance and removal.</li> <li>• Develop programs for community awareness and education.</li> </ul>
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Contracted
Engineers or professionals trained in building or infrastructure construction practices	Yes	Contracted
Planners or engineers with an understanding of natural hazards	Yes	Contracted
Staff with expertise or training in benefit/cost analysis	Yes	Contracted
Professionals trained in conducting damage assessments	Yes	Contracted Engineer and City Construction Code and Housing
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	Various but contracted as well
Scientist familiar with natural hazards	Yes	Contracted
Surveyor(s)	Yes	Contracted
Emergency Manager	Yes	OEM
Grant writer(s)	Yes	Are data and maps from the HMP used to support documentation in grant applications?
Resilience Officer	Yes	Part of OEM
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Contracted
<p><b>How do your administrative/technical capabilities contribute to risk reduction in your community?</b> Identifying opportunities to mitigate risk and/or increase resilience for those risk that cannot be adequately mitigated.</p>		

9.15.3.4 Fiscal Capability

The table below summarizes financial resources available to the City of Gloucester.

Table 9.15-5. Fiscal Capabilities

Financial Resources	Are these accessible or eligible to use for mitigation? (Yes/No) If yes, please describe. If no, can this be used to support in the future?
Community development Block Grants (CDBG, CDBG-DR)	No-potentially
Capital improvements project funding	No-potentially
Authority to levy taxes for specific purposes	No-potentially
User fees for water, sewer, gas or electric service	No-potentially
Impact fees for homebuyers or developers of new development/homes	No-potentially
Stormwater utility fee	No-potentially
Incur debt through general obligation bonds	No-potentially
Incur debt through special tax bonds	No-potentially
Incur debt through private activity bonds	No-potentially
Withhold public expenditures in hazard-prone areas	No-potentially
Other federal or state funding programs	No-potentially
Open Space Acquisition funding programs	No-potentially
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	No-potentially

**Fiscal Connection to Mitigation and Safe Growth**

**How do your fiscal capabilities contribute to risk reduction in your community?** While the City has dedicated personnel due to socioeconomic status, it must rely on taking advantage of grant funding whenever possible. Collectively the City uses HVA, HMP, etc., and prioritize mitigation and/or increased resiliency based on their ranking and funds available.

**When constructing upcoming budgets, hazard mitigation actions will be funded as budget allows. Construction projects will be evaluated to see if they meet the hazard mitigation goals.** This has been and remains the City's collective strategy.

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

**Do budgets limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?** Unless the risk can be mitigated or sufficient resiliency can be put in place, they would be severely limited if permitted at all. Having said that the City is a peninsula along the Delaware River to the West, Big Timber Creek to the South and Newton Creek to the North.

**Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?** Unless the risk can be mitigated or sufficient resiliency can be put in place, they would be severely limited if permitted at all. Having said that the City is a peninsula along the Delaware River to the West, Big Timber Creek to the South and Newton Creek to the North.

<b>Financial Resources</b>	<b>Are these accessible or eligible to use for mitigation?</b> (Yes/No) If yes, please describe. If no, can this be used to support in the future?
<b><i>Do budgets provide funding for hazard mitigation projects identified in the County HMP?</i></b> Whenever possible.	

### 9.15.3.5 Education and Outreach Capability

The table below summarizes the education and outreach resources available to the City of Gloucester.

*Table 9.15-6. Education and Outreach Capabilities*

Outreach Resources	Available? (Yes/No)	Does the jurisdiction have any public outreach mechanisms / programs in place to inform citizens on natural hazards, risk, and ways to protect themselves during such events? If yes, please describe.
Public information officer or communications office	Yes	Via City Website/s and meetings
Personnel skilled or trained in website development	Yes	See above
Hazard mitigation information available on your website	Yes	See above
Social media for hazard mitigation education and outreach	Yes	See above and departmental social media as well.
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Other programs already in place that could be used to communicate hazard-related information	Yes	Local weekly newspaper, school systems, etc.
Warning systems for hazard events	Yes	Outdoor Warning System
Natural disaster/safety programs in place for schools	Yes	Red Cross and ReadyNJ info provided
Other	No	-

### 9.15.3.6 Community Classifications

The table below summarizes classifications for community programs available to the City of Gloucester.

*Table 9.15-7. Community Classifications*

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	3	11/19/2018
Sustainable Jersey	Yes	Bronze	November 4, 2019

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
StormReady Certification	No	NWS Mt. Holly had stalled program for a bit. The City meets requirements and plans to apply in the future as the program restarts.	-
Firewise Communities classification	No	-	-

Note:

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

The City of Gloucester participates in the Sustainable Jersey program. The following actions relating to hazard mitigation contributed to the City’s bronze certification:

- *Green Team:* The City has an established Green Team. The goal of the Green Team is to pursue environmental projects and to engage the public on environmental issues, especially relating to but not limited to Combined Sewer Overflow issues.
- *Community Education and Outreach:* Members of the Green Team and Rutgers Extension have completed outreach, especially in regards to CSO issues and to seek feedback from the community. Informational material about the Green Team and CSO issues were distributed along with materials from Rutgers and the NJ DEP. The brochure "Stormwater, Combined Sewer Overflows & Green Infrastructure" was handed out in order to inform citizens on CSO.
- *Community Forestry Management Plan:* The City updated the Community Forestry Management Plan in 2019. The Plan assesses the condition of trees in the City and implements plans to maintain trees in a safe condition. A hazardous tree inventory has been completed.

### 9.15.3.7 Adaptive Capacity

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current capabilities to adjust to, protect from, or withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each hazard of concern and the jurisdiction’s rating.

Table 9.15-8. Adaptive Capacity

Hazard	Adaptive Capacity - Strong/Moderate/Weak*
Coastal Erosion/Sea Level Rise	Moderate
Dam Failure/Levee Failure	Weak/ N/A
Disease Outbreak/Pandemic	Moderate
Drought	Moderate
Earthquake	Moderate

Hazard	Adaptive Capacity - Strong/Moderate/Weak*
Extreme Temperatures	Moderate
Flood	Moderate
Geological Hazards	Weak/ N/A
High Wind	Moderate
Invasive Species/Harmful Algal Bloom	Moderate (would include feral cats and Canadian geese as well)
Severe Summer Weather	Moderate
Severe Winter Weather	Moderate
Wildfire	Moderate

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

### 9.15.4 National Flood Insurance Program (NFIP) Compliance

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

Table 9.15-9. NFIP Summary

NFIP Topic	Comments
<b>Flood Vulnerability Summary</b>	
<ul style="list-style-type: none"> <li># NFIP Policies: 78</li> <li># RL properties: 1</li> <li># SRL properties: 0</li> <li># RL/SRL mitigated: 0</li> </ul>	<ul style="list-style-type: none"> <li>Total premium in force: \$117,505</li> <li># claims filed: 27</li> <li>Total loss payments: \$704,342</li> </ul>
Describe areas prone to flooding in your jurisdiction.	Multiple areas subject to riverine flooding.
Do you maintain a list of properties that have been damaged by flooding?	There is not a formal list.
Do you maintain a list of property owners interested in flood mitigation, and if so, how many are interested in (elevation or acquisition)?	No
How do you make Substantial Damage determinations? <ul style="list-style-type: none"> <li>How many were declared for recent flood events in your jurisdiction?</li> </ul>	This assessment would be ordered by the UCC building inspector. None were declared for recent flood events.
Detail any RiskMAP projects currently underway in your jurisdiction.	None
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> <li>If not, state why.</li> </ul>	No. There are multiple areas prone to flooding which are not located in a designated area of special flood hazard which are identified on the applicable FIRMs.
<b>NFIP Administration</b>	
What local department is responsible for floodplain management?	Zoning
Are any staff certified floodplain managers (CFMs) or is a consultant retained?	No
Provide an explanation of who in your municipality provides NFIP administration services (permit review, GIS, education/outreach, inspections, engineering capability).	Permit review is accomplished by the Zoning Officer.

NFIP Topic	Comments
What specific training or support does your floodplain management staff need to support its floodplain management program?	Flood mitigation training.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	This would include any rehabilitation or addition or a structure where the cost equals or exceeds 50% of the market value of the structure before construction begins.
Do you have access to resources to determine possible future flooding conditions from climate change?	The City has had FEMA presentations regarding riverine flooding projections until 2050.
<b>NFIP Compliance</b>	
List any outstanding NFIP compliance violations.	None
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	March 20, 1991
What is the local law number or municipal code of your flood damage prevention ordinance? What is the date that your flood damage prevention ordinance was last amended?	Gloucester Ordinance #O19-2016 which was adopted August 11, 2016.
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets
Are there other local ordinances, plans, or programs (site plan review, consideration of flood risk reduction when granting height variances) that support floodplain management and meeting the NFIP requirements?	No
Does your jurisdiction participate in CRS? • If yes, is your jurisdiction interested in improving its CRS Classification? • If no, is your jurisdiction interested in joining the CRS program?	No

Source:

Notes:

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

### 9.15.5 Growth/Development Trends

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

Table 9.15-10. Recent and Expected Future Development

Type of Development	2016		2017		2018		2019		2020		2021	
<b>Number of Building Permits for New Construction Issued Since the Previous HMP* (within regulatory floodplain/ outside regulatory floodplain)</b>												
	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA	Total	Within SFHA
<b>Single Family</b>	1	0	0	0	0	0	1	0	0	0	0	0
<b>Multi-Family</b>	0	0	0	0	0	0	0	0	0	0	0	0
<b>Other</b>	0	0	1	0	0	0	0	0	1	0	0	0
<b>Total Permits Issued</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>
Property or Development Name	Type of Development	# of Units / Structures		Location (address and/or block and lot)		Known Hazard Zone(s)*		Description / Status of Development				
<b>Recent Major Development and Infrastructure from 2015 to Present</b>												
None identified												
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>												
None anticipated												

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

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

### 9.15.6 Jurisdictional Risk Assessment

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

Hazard area extent and location maps provided below illustrate the probable areas impacted within the jurisdiction. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps were only generated for those hazards that can be clearly identified using mapping techniques and technologies and for which the City of Gloucester has significant exposure. The maps also show the location of potential new development, where available.

Figure 9.15-1. City of Gloucester Hazard Area Extent and Location Map 1

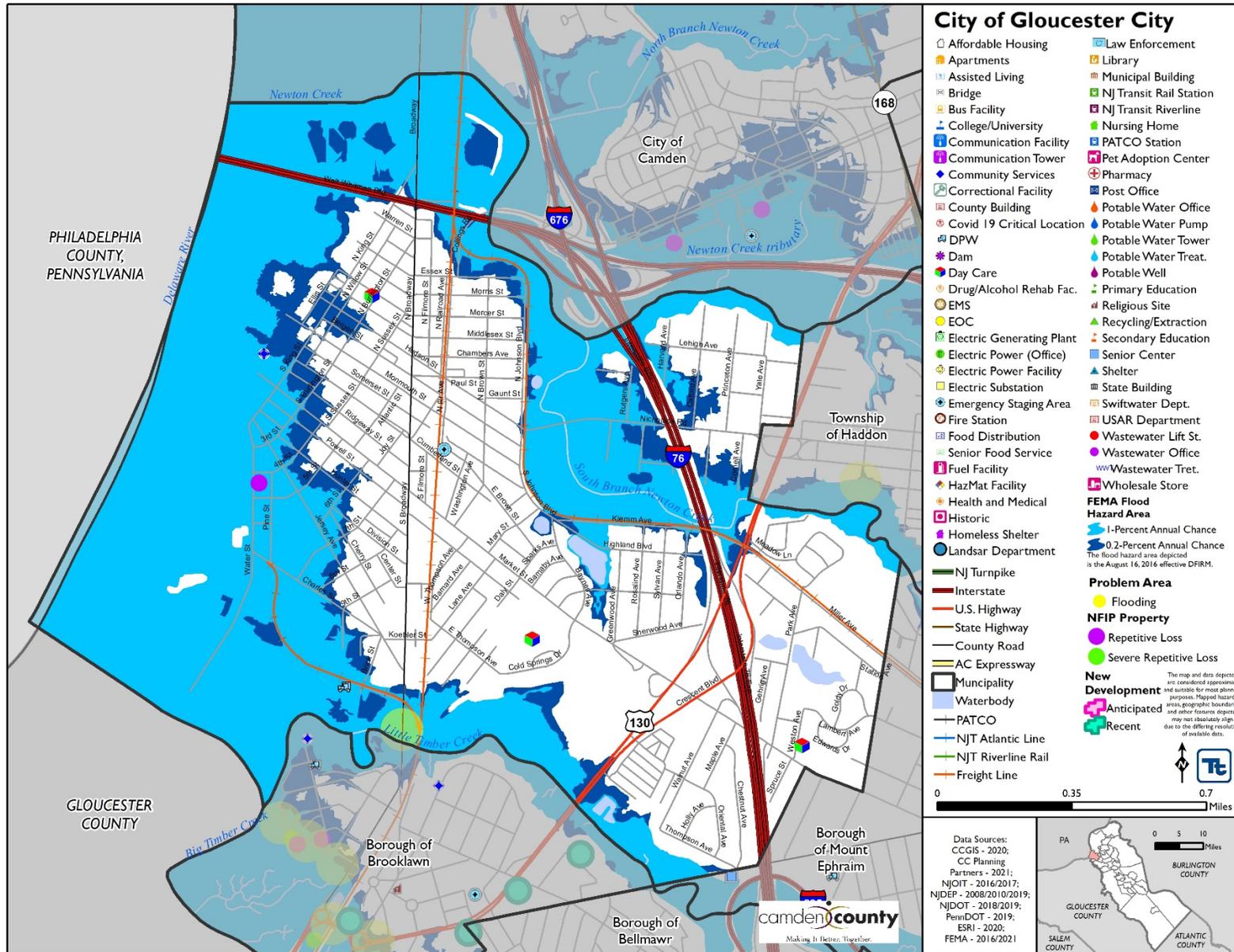


Figure 9.15-2. City of Gloucester Hazard Area Extent and Location Map 2

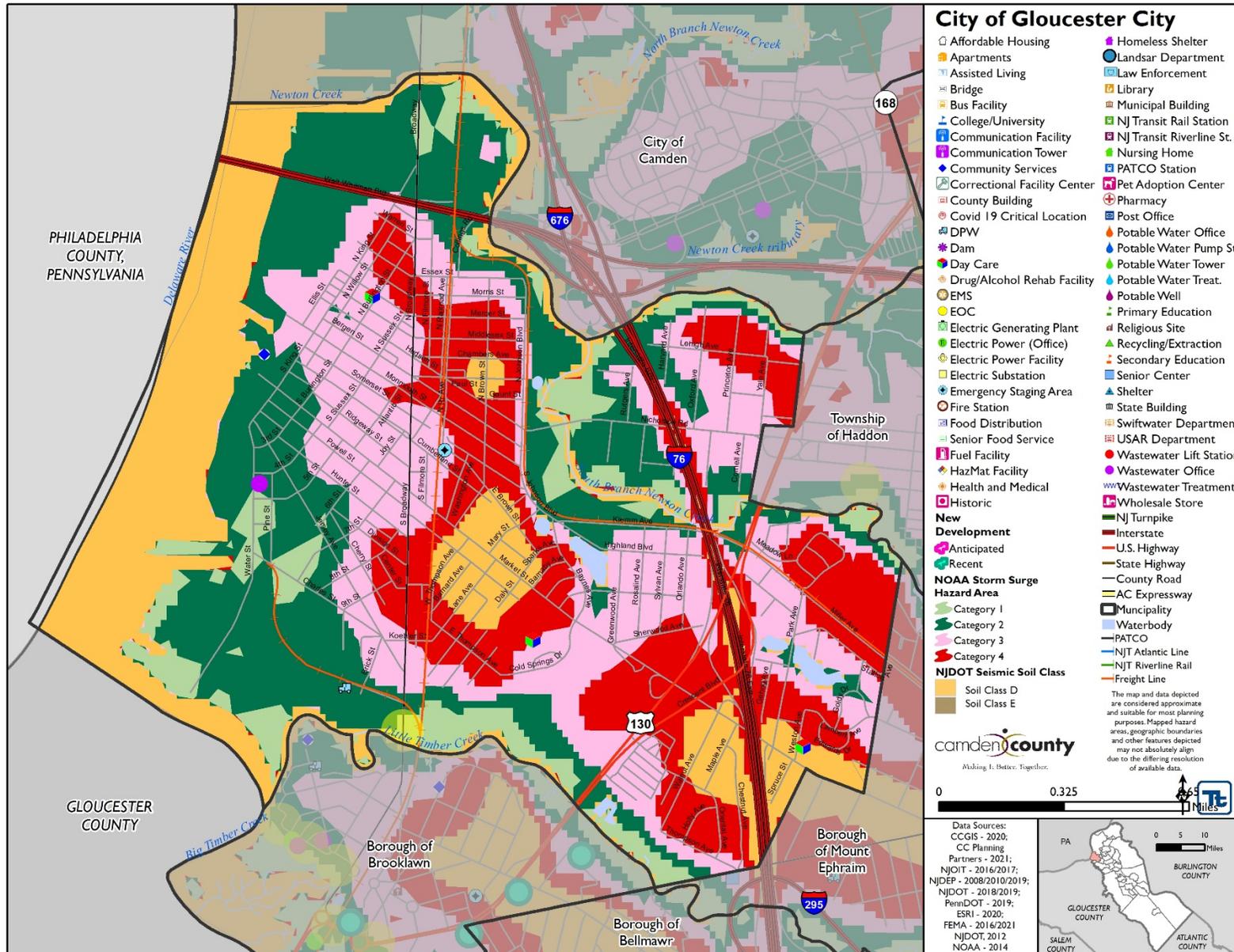


Figure 9.15-3. City of Gloucester Hazard Area Extent and Location Map 3

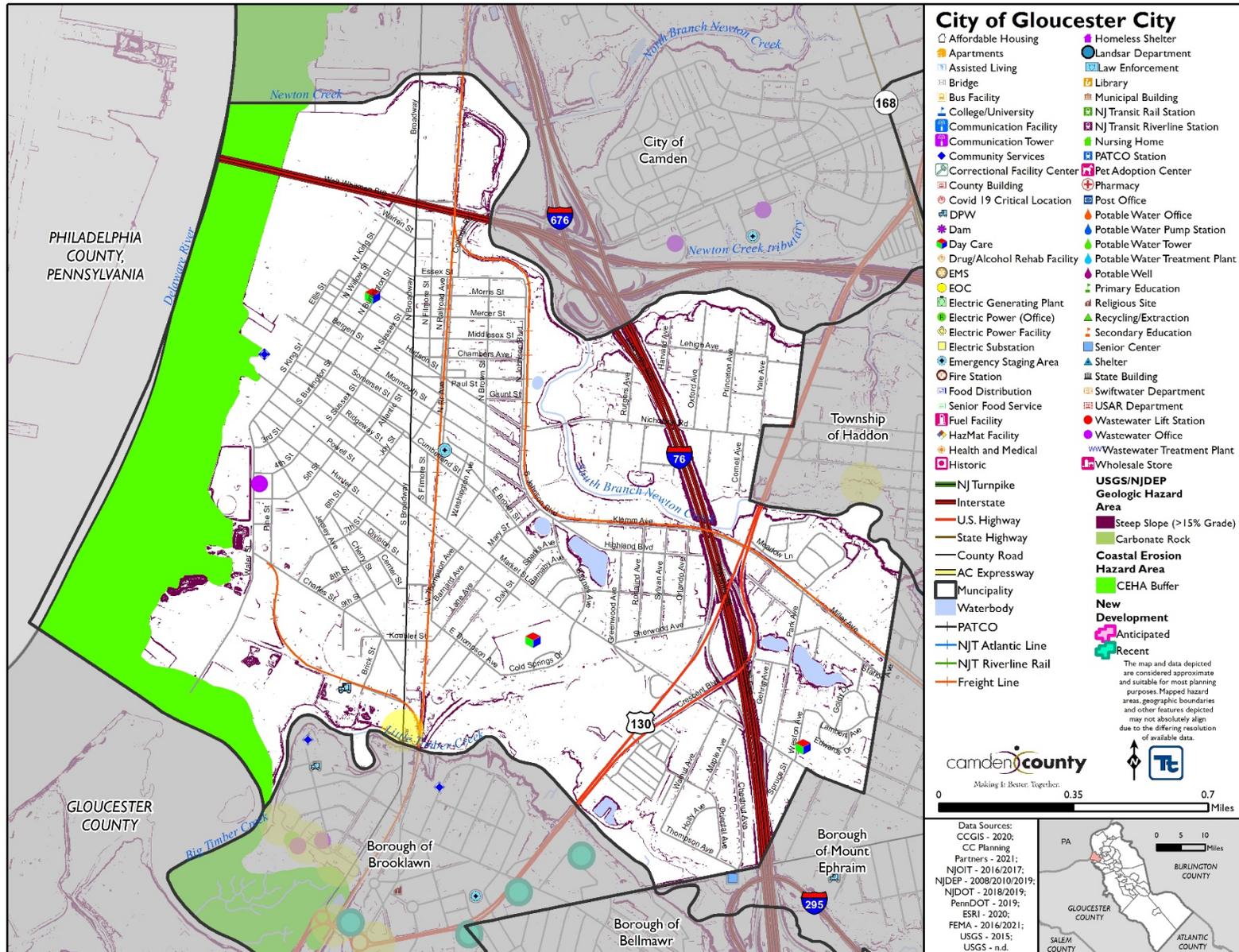
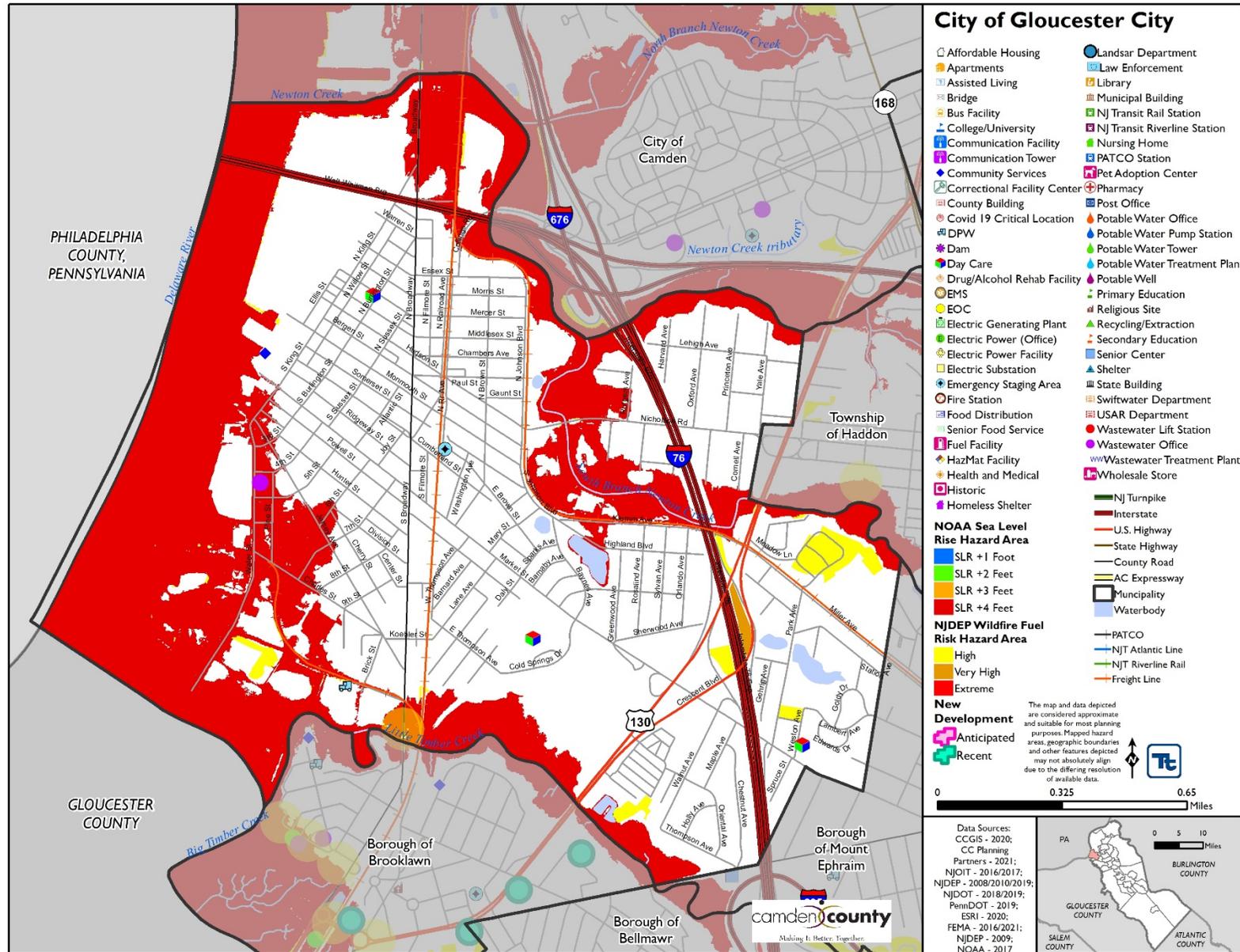


Figure 9.15-4. City of Gloucester Hazard Area Extent and Location Map 4

Section 9.15: City of Gloucester



### 9.15.6.1 Hazard Event History

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

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

Table 9.15-11. Hazard Event History

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

Dates of Event	Event Type (Disaster Declaration if applicable)	City Designated?	Summary of Event	Municipal Summary of Damages and Losses
March 6, 2018	Winter Storm	No	A low pressure system moved northeast across Delaware and New Jersey bringing a wintery snow/rain mix overnight on March 6. Across the state, snowfall totals ranged from 6 to 24 inches. Heavy, wet snow downed trees and limbs leaving 350,000 customers state-wide without power.	Snowfall totals in Camden County reached 9 inches in some areas near the Delaware River.
January 20, 2020 – Present	Covid-19 Pandemic (EM-3451-NJ) (DR-4488-NJ)	Yes	Beginning on January 20, 2020, the pandemic resulting from the Coronavirus Disease (COVID-19) created conditions of sufficient severity and magnitude to warrant a disaster declaration in the State of New Jersey.	Between March 1, 2020 and February 18, 2021, Camden County reported 38,352 confirmed cases of COVID-19, and 1,023 total fatalities.

Source: NOAA NCEI 2021

### 9.15.6.2 Hazard Ranking and Vulnerabilities

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

#### Hazard Ranking

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

As discussed in Section 4.4 (Hazard Ranking), each participating jurisdiction can have differing degrees of risk exposure and vulnerability compared with City of Gloucester as a whole. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the City of Gloucester. The City of Gloucester reviewed the City’s hazard risk/vulnerability risk ranking table, including municipal-specific results, to reflect the relative risk of the hazards of concern to the community.

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

- The Dam/Levee Failure hazard is a Low risk for the City due to limited-to-no impact for most locales in the event of failure, and recent updates to the previously at-risk dam.
- While Flood is still a High risk for the City, the NFIP statistics are not reflective of repetitive losses within the community due to a lack of residents not acquiring flood insurance.
- Due to the number of power outages that occur during Summer Weather events, the risk for the City is considered High, especially considering how many residents are dependent on life safety technologies in the home setting
- While there is the potential for impact of Wildfires, there are not many critical facilities or infrastructure that would be impacted by these events, therefore the risk to the City is Low.

Table 9.15-12. Hazard Ranking Input

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

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

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

### Critical Facilities

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

Table 9.15-13. Potential Flood Losses to Critical Facilities

Name	Type	Exposure		Potential Loss from 1% Flood Event	
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage
Public Works Department	DPW	X	X	-	-
Senior Housing Complex – Gloucester Towne	Community Services	X	X	-	2%
Well #42	Potable Well	X	X	1%	-
Essex Street Pump Station	Wastewater Lift Station	X	X	-	-
Nicholson Road Pump Station	Wastewater Lift Station	X	X	12%	-

Name	Type	Exposure		Potential Loss from 1% Flood Event	
		1% Event	0.2% Event	Percent Structure Damage	Percent Content Damage
Public Service Electric & Gas Co.	Hazardous Material Facility	X	X	-	-
BKEP Materials, LLC	Hazardous Material Facility	X	X	-	-
Gloucester City Pump Station	Wastewater Lift Station	X	X	16%	-
Blue Knight Energy Partners	Hazardous Material Facility	X	X	-	-
PSE&G Substation	Electric Substation	X	X	13%	19%
Environmental Utilities \ Water & Sewer Department	Potable Water Office	-	X	-	-
Well #40	Potable Well	-	X	-	-
Well #41	Potable Well	-	X	-	-
Well #43	Potable Well	-	X	-	-
Klemm Avenue Pump Station	Wastewater Lift Station	-	X	-	-
Gloucester High Pump Station	Wastewater Lift Station	-	X	-	-

Source: FEMA DFIRM – 2016

### 9.15.6.3 Identified Issues

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

- The City experiences urban flooding as a result of the CSO system.
- Various critical facilities lack backup power.
- Various critical facilities require floodproofing.
- A regional study of flooding is taking place to identify mitigation to flooding along Big Timber Creek.
- The City has one repetitive loss property but has experienced extensive flood damages to residential properties outside the floodplain.
- PSE&G has a substation that is slated for removal from the floodplain.
- The City needs expanded continuity of operations planning.
- The City needs to increase in IT capacity and infrastructure to meet demand.
- The City lacks a Disaster Debris Management Plan.
- The City’s flood damage prevention ordinance requires update.
- Participation in the StormReady Certification Program is stalled.

Specific areas of concern based on resident response to the citizen survey include:

- “Storms that cause power outages; transformer issues that cause power outages. Our [Police Department] building has no generator and we’ve been without power and the ability to function for several hours at a time.”
- “Recurrent impacts from flooding, high winds and associated primary power utility loss.”

### 9.15.7 Mitigation Strategy and Prioritization

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

#### 9.15.7.1 Past Mitigation Initiative Status

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

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Table 9.15-14. Status of Previous Mitigation Actions

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
M-1	Identify and pursue outreach and education opportunities.	Municipal OEM	Ongoing Capability. This will be an ongoing capability for the foreseeable future due to new residents and businesses as well as when HVA changes, etc., occur	No	-	-
M-2	Prioritize critical facilities and complete site and facility surveys to identify vulnerabilities and potential mitigation measures.	Municipal OEM and Facility Managers	Ongoing Capability. Due to financial hardships and some aging infrastructure much in the way of mitigation is driven by grant opportunities. A strategic plan has been delayed due to principals retiring and/or leaving employment and not completing assigned tasks and needed metrics towards making informed decisions. Most issues involve aging facilities, infrastructure, lack of redundant power, resiliency, lack of hardened IT infrastructure, etc.	No	-	-
M-3	Prioritize recurrent drainage problem areas and initiate data collection to track unreimbursed damages and related response and recovery expenses.	Municipal OEM and others (e.g., Municipal Public Works)	Ongoing Capability	Yes	Due to the age of some of the infrastructure, (Pre-Civil War), and nature of the	OEM and Environmental Utilities (Water, Sewer, DPW)

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
					combined sewer outlets storm damage to the system is not realized until there is a collapse or failure months after the primary cause event. In the past the standard we were held to was a need to have pre and post video of the impacted system. This would require taking video multiple times a year for 63 curb miles of the combined sewer system	
M-4	Conduct regular Municipal Working Group meetings.	Municipal OEM and Municipal Working Group	Ongoing Capability. Due to some recent retirements and changes of employment of various primary administration positions department head meetings were curtailed. They will be starting once more in the near term with all while a	No.	-	-

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
			smaller group continues to meet			
M-5	Install back-up emergency generator at the Police.	Municipal OEM	In Progress	Yes	There is no e-power for this critical infrastructure as the old, outdated system can no longer be maintained nor did it have sufficient capacity to supply same. The infrastructure servicing the facility is old and aerial in nature and subject to impact from fallen trees, branches, arching in high winds, etc.	OEM, GCPD and City Administration
M-6	Install back-up emergency generator at the Municipal Building.	Municipal OEM	In Progress	Yes	There is no e-power for this critical infrastructure and the only resiliency is some degree of UPS for IT systems in place. The infrastructure servicing the facility is old and aerial in	OEM and City Administration

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
					nature and subject to impact from fallen trees, branches, arching in high winds, etc.	
M-7	Install back-up emergency generator at the Public Works Department.	Municipal OEM	In Progress	Yes	There is no e-power for this critical infrastructure and the only resiliency is a small, undersized, portable generator for just in time service to operate the fuel pumps. The infrastructure servicing the facility is old and aerial in nature and subject to impact from fallen trees, branches, arching in high winds, etc.	OEM, DPW and City Administration
M-8	Retrofit Public Works Department located at 615 Brick Street (CF-2) to alleviate flooding.	Municipal OEM	In Progress	Yes	Public Works building is exposed to flooding.	OEM, DPW and City Administration
M-9	Install back-up emergency generator at the Public Library located at 50 Railroad Avenue (CF-4).	Municipal OEM	In Progress	Yes	There is no e-power for this critical infrastructure and the only resiliency is some degree of UPS	OEM and City Administration

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
					for IT systems in place. The infrastructure servicing the facility is old and aerial in nature and subject to impact from fallen trees, branches, arching in high winds, etc.	
M-10	Install back-up emergency generator at the Knights of Columbus Hall.	Municipal OEM	In Progress	Yes	The facility serves as a back up, expedient shelter and alternate EOC if/when needed. There is no e-power for this critical infrastructure and the only resiliency is some degree of UPS for IT systems in place. The infrastructure servicing the facility is old and aerial in nature and subject to impact from fallen trees, branches, arching in high winds, etc.	OEM and City Administration

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
M-11	Install back-up emergency generator at the Cold Springs Elementary School.	Municipal OEM	In Progress	Yes	The current e-power is only capable of providing back up to emergency lighting and elevator use. It is insufficient for its shelter use. The infrastructure servicing the facility is old and aerial in nature and subject to impact from fallen trees, branches, arching in high winds, etc.	OEM and City Administration
M-12	Install back-up emergency generator at the Gloucester City Junior / Senior High School.	Municipal OEM	In Progress	Yes	The current e-power is only capable of providing back up to emergency lighting and elevator use. It is insufficient for its shelter use. The infrastructure servicing the facility is old and aerial in nature and subject to impact from fallen trees, branches, arching in high winds, etc.	OEM and City Administration

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
M-13	Install back-up emergency generator at the Gloucester Catholic Junior High School located at 333 Ridgeway Street (CF-13).	Municipal OEM	In Progress	Yes	The current e-power is only capable of providing back up to emergency lighting. It is insufficient for its shelter use. The infrastructure servicing the facility is old and aerial in nature and subject to impact from fallen trees, branches, arching in high winds, etc.	OEM and City Administration
M-14	Retrofit Police Building located at 313 Monmouth Street (CF-7) to alleviate flooding.	Municipal OEM	In Progress	Yes	The City is a Peninsula and while we maintain set backs from all streams, creeks and waterways, upstream development and removal of wetlands in other municipalities creates increases volume and rate of flow which exacerbates and contributes to increased area of	OEM, GCPD and City Administration

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
					impact from flooding events	
M-15	Retrofit Municipal Building located at 512 Monmouth Street (CF-1) to alleviate flooding.	Municipal OEM	In Progress	Yes	The City is a Peninsula and while we maintain set backs from all streams, creeks and waterways, upstream development and removal of wetlands in other municipalities creates increases volume and rate of flow which exacerbates and contributes to increased area of impact from flooding events	OEM and City Administration
M-16	Determine mitigation option(s) to reduce vulnerability to flooding for wellheads and pump stations (CF-19 through CF-23 and CF-26 through CF-32).	Municipal OEM	In Progress	Yes	The City is a Peninsula and while we maintain set backs from all streams, creeks and waterways, upstream development and removal of wetlands in other municipalities	OEM, Water, Sewer and City Administration

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
					creates increases volume and rate of flow which exacerbates and contributes to increased area of impact from flooding events	
MJ-17	Address identified Repetitive Flood Loss Properties.	Floodplain Administrator	In Progress	Yes	The City is a Peninsula and while we maintain set backs from all streams, creeks and waterways, upstream development and removal of wetlands in other municipalities creates increases volume and rate of flow which exacerbates and contributes to increased area of impact from flooding events	OEM and City Administration
MJ-1	Alleviate combined sewer overflows	Municipal OEM, Camden County DPW	In Progress	Yes	This requires a multi-million dollar solution. There is an additional health	OEM, City Administration, Water, Sewer and DPW

#	2017 Action Description	Responsible Party	What is the status? (e.g., In Progress, No Progress, Ongoing Capability, or Completed) If in progress or completed, please describe the funding source, cost and who is implementing.	If you did not complete the action, should the action be included in the 2022 HMP (i.e., there is still a need, this is still a priority)?		
				Yes/No	If Yes, please describe the original problem (i.e., hazard, location, historic losses)	If Yes, identify the responsible department/person to implement the project.
					and safety issue as any time there is a flood from the system the contents of the sanitary sewer is discharged into the streets via the culverts, etc.	

**9.15.7.2 Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy**

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

- None Identified

**9.15.7.3 Proposed Hazard Mitigation Initiatives for the HMP Update**

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

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

*Table 9.15-15. Analysis of Mitigation Actions by Hazard and Category*

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

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

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

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

Table 9.15-17 provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

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Table 9.15-16. Proposed Hazard Mitigation Initiatives and Associated Priority

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets ?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
2022-C. Gloucester-001	Address CSO Infrastructure	<p><b>Problem:</b> Camden and Gloucester City have remaining areas of their communities that still have Combined Sewer Outlets. Contributing to the flooding conditions realized by these communities is the development in the County upstream of these two riverfront communities. The upstream developments associated loss of wetlands, loss of percolating buffer areas on nearby creeks, increased demand from same has contributed to and worsened the downstream affect on these two riverfront communities.</p> <p>While there are numerous health and safety concerns associated with any flood waters the combined sewer outlets contain both the sanitary and storm water contents. Contributing to the sanitary sewer concerns are that the CCMUA treatment facility, it's main sanitary distribution line terminations as well as lift stations, etc., all meet in these two communities, concentrated within about a single square mile of one another. The treatment plant must be sensitive to maintaining their microbe bed as part of the treatment and high volumes of flow degrade and disturb the capabilities for treatment. This external burden on the system significantly increases the negative impact and contributes greatly to the</p>	Existing	Flood, Severe Summer Weather	1, 2	CCMUA, Engineering, Public Works	CCMUA, HMGP, BRIC	Reduction in flood risk, stormwater flood damage, maintains emergency access	TBD by developed actions. Anticipated High.	Within 5 years	High	SIP	SP, PP

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets ?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		<p>release of untreated sewage into the waterways and streets of both communities during storm events.</p> <p><b>Solution:</b> The City will partner with CCMUA to address stormwater and CSO related flooding of streets. The objective is to establish a framework for a comprehensive program to reduce the occurrences of and mitigate the impacts street flooding. The program will establish the empirical basis for street flooding mitigation and assign responsibilities for the prevention of and response to street flooding events. It is anticipated that a detailed program plan will be completed early in the initial (2021 – 2026) NJPDES permit cycle following the approval of this SIAR.</p> <p>Potential projects include:</p> <ul style="list-style-type: none"> <li>• Increasing capacity of stormwater components</li> <li>• Increased CSO pump capacity</li> <li>• Reduction of impervious surfaces</li> <li>• Increased stormwater and CSO storage/ retention/ detention</li> <li>• Green infrastructure techniques</li> </ul>											
2022-C. Gloucester-002	Generators for Lifeline Facilities	<b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. Lifeline facilities serve an even greater function than critical facilities and must remain functional through hazard events. The following	Existing	Severe Summer Weather, Severe Winter Weather,	1, 6	Engineer, Department of Public Works, OEM	FEMA HMGP and BRIC, USDA Community Facilities	Ensures continuity of operations	\$50,000-75,000 per generator	Within 5 years	High	SIP	ES

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets ?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		<p>lifeline facilities lack a backup power source:</p> <ul style="list-style-type: none"> <li>• Police Station (313 Monmouth Street)                             <ul style="list-style-type: none"> <li>○ Provides critical emergency response functions.</li> </ul> </li> <li>• Municipal Building (512 Monmouth Street)                             <ul style="list-style-type: none"> <li>○ Center of municipal government operations.</li> </ul> </li> <li>• Public Works Department (615 Brick Street)                             <ul style="list-style-type: none"> <li>○ Provides response and emergency repairs, fuel for City vehicles.</li> </ul> </li> <li>• Public Library (50 Railroad)                             <ul style="list-style-type: none"> <li>○ Serves as rapid response shelter, warming and cooling shelter.</li> </ul> </li> <li>• Knights of Columbus Hall (605 Monmouth Street)                             <ul style="list-style-type: none"> <li>○ Privately owned. Memorandum of agreement in place with the City for rapid response sheltering.</li> </ul> </li> <li>• Senior Building and Community Center                             <ul style="list-style-type: none"> <li>○ Privately owned. Serves as rapid response shelter and</li> </ul> </li> </ul>		High Winds, Extreme Temperatures			Grant Program, Emergency Management Performance Grants (EMPG) Program, City Budget						

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets ?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		shelter for vulnerable population.  <b>Solution:</b> The Engineer will research what size generator is needed to power each lifeline facility. The City will then purchase and install the selected generator and necessary electrical components to supply backup power to the facilities. Public Works will be responsible for maintenance. OEM will oversee regular testing of each generator.											
2022-C. Gloucester-003	Generators for School Sheltering	<b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. Schools in the City provide immediate sheltering for students in the event of a hazard event. Current emergency power for the schools are limited and not enough to provide adequate power for sheltering. The following schools lack backup power sources: <ul style="list-style-type: none"> <li>•Cold Springs Elementary School</li> <li>•Gloucester City Junior / Senior High School</li> <li>•Gloucester City Middle School</li> <li>•Gloucester Catholic Junior High School located at 333 Ridgeway Street</li> </ul> <b>Solution:</b> The Engineer will work with the Boards of Education to research what size generators are needed to supply backup power to each school. The City will then provide guidance and support during the purchase and installation of the selected	Existing	Severe Summer Weather, Severe Winter Weather, High Winds, Extreme Temperatures	1, 6	Boards of Education, Engineer	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Board of Education Budget	Ensures continuity of operations of sheltering capabilities for schools	\$100,000 per generator	Within 5 years	High	SIP	ES

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets ?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		generators and necessary electrical components to supply backup power to the schools.											
2022-C. Gloucester-004	Portable Generators to Maintain Post Disaster Capabilities	<p><b>Problem:</b> Backup power sources are necessary to maintain critical services for critical facilities. Several critical services in the City require mobile deployment or are located at sites where a fixed site generator is not possible (Housing Office).</p> <p><b>Solution:</b> The Engineer will research what size portable generators are needed to provide power support for critical services. The City will then purchase the portable generators and install the necessary electrical components to supply backup power to the City's critical services.</p>	Existing	Severe Summer Weather, Severe Winter Weather, High Winds, Extreme Temperatures	6	Engineer, Department of Public Works, OEM	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, City Budget	Ensures continuity of operations	\$40,000 per generator	Within 5 years	High	SIP	ES
2022-C. Gloucester-005	Retrofit Critical Facilities to Provide Flood Protection	<p><b>Problem:</b> Numerous critical facilities in the City are flood prone. Some facilities are located in the Special Flood Hazard Area but the City experiences urban flooding in locations outside of the SFHA due to urban flooding related to the CSO system. Flood damage would interrupt critical services. The following critical facilities require mitigation to protect from flooding:</p> <ul style="list-style-type: none"> <li>Public Works Department (615 Brick Street)</li> <li>Police Building (313 Monmouth Street)</li> </ul>	Existing	Flood	1, 2, 6	Engineer, Department of Public Works	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants	Ensures continuity of operations of critical facilities	TBD by feasibility assessment	Within 5 years	High	SIP	PP

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets ?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		<ul style="list-style-type: none"> <li>Municipal Building (512 Monmouth Street)</li> <li>Wellheads</li> <li>Pump Stations</li> </ul> <p><b>Solution:</b> The City will conduct a feasibility assessment to determine what additional floodproofing measures are needed at each facility to protect to the 500-year (0.2%) flood level. Options include:</p> <ul style="list-style-type: none"> <li>Elevation of facility</li> <li>Floodproofing of facility</li> <li>Mobile flood barriers</li> </ul> <p>Once the most cost-effective option is identified, the City will carry out the option.</p>					(EMPG) Program, City Budget						
2022-C. Gloucester-006	Multi-Jurisdictional Flood Study	<p><b>Problem:</b> The City is partnered with multiple municipalities to analyze flooding issues along Big Timber Creek. The flooding issues are being analyzed to determine what measures can be taken.</p> <p><b>Solution:</b> The City and partnering municipalities will continue the flood study and begin working the United States Army Corps of Engineers (USACE) to identify potential mitigation actions to reduce the occurrence of flooding and flood risk when floods do occur. Once identified, cost-effective actions will be carried out.</p>	Existing	Flood	1, 2, 4	Engineer, partnering municipalities, USACE	HMGP, BRIC, USACE, City budget	Reduction in flood risk in selected areas	TBD by flood study	Within 5 years	High	NSP, SIP	NR, SP, PP

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets ?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
2022-C. Gloucester-007	Repetitive Loss Mitigation	<p><b>Problem:</b> Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The City has 1 repetitive loss property but many properties have received damages and not had claims due to lack of flood insurance. A recent flooding event in 2019 impacted roughly 80 properties, most of which were located outside the Special Flood Hazard Area.</p> <p><b>Solution:</b> Conduct outreach to 100 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating/retrofitting residential homes in the flood prone areas that experience frequent flooding (high risk areas).</p>	Existing	Flood, Severe Summer Weather, Coastal Erosion/Sea Level Rise	1, 2	NFIP Floodplain Administrator, supported by homeowners	FEMA HMGP and FMA, local cost share by residents	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.	\$3M	3 years	High	SIP	PP
2022-C. Gloucester-008	Substation Removal and Restoration	<p><b>Problem:</b> PSE&amp;G has a substation located within the SFHA. The facility is slated to be removed.</p> <p><b>Solution:</b> The City will encourage PSE&amp;G to restore the site to natural floodplain function and potentially preserve the location as open space.</p>	Existing	Flood, Severe Summer Weather, Severe Winter Weather	2, 3	PSE&G, Administration	PSE&G for facility removal	Reduction in flood risk to critical facilities, increase in natural floodplain function	High	Within 5 years	High	SIP, NSP	PP, NR

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets ?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
2022-C. Gloucester-009	Continuity of Operations and Government Planning	<p><b>Problem:</b> The City lacks a Continuity of Operations/Continuity of Government Plan. Because of the variety of hazards that face the City and the need to be flexible with how to address them safely, it is important that alternate evacuation routes and shelters and secondary locations for critical departments are identified.</p> <p><b>Solution:</b> The City will develop a COOP/COG plan which will identify various redundancies for emergency response, evacuation and sheltering, and secondary locations for City Departments to work from if relocation from primary locations is necessary. The Plan will also identify the decision-making structure responsible for the selection of appropriate actions in each hazard event.</p>	Existing	All Hazards	1, 2, 3, 5, 6	OEM, Administration	City budget	Increased emergency preparedness, continuity of operations	Low	Within 5 years	High	LPR	ES
2022-C. Gloucester-010	Increase IT Capabilities for Emergency Response and Outreach	<p><b>Problem:</b> IT capabilities at all levels of the municipal government are limited. These limitations present limitations to the City's critical services, emergency response, and outreach capabilities.</p> <p><b>Solution:</b> The City will work to increase IT capabilities in order to:</p> <ul style="list-style-type: none"> <li>• Increase technology capabilities for emergency response;</li> <li>• Prioritize recurrent drainage problem areas and initiate data collection to track unreimbursed damages and</li> </ul>	N/A	All Hazards	3, 4, 5	Administration	City budget	Increase emergency response and outreach capabilities. Protect continuity of operations.	Medium	Within 5 years	High	LPR, EAP	ES, PI

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets ?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
		<p>related response and recovery expenses;</p> <ul style="list-style-type: none"> <li>• Provide redundancies for access to vital files during and following disaster events;</li> <li>• Increase outreach capabilities;</li> <li>• Increase emergency notification capabilities.</li> </ul>											
2022-C. Gloucester-011	Disaster Debris Management Plan	<p><b>Problem:</b> The City's Disaster Debris Management Plan requires update to meet new state standards for level of detail.</p> <p><b>Solution:</b> The City will update and adopt a new Disaster Debris Management Plan.</p>	Existing	All Hazards	5	Public Works, OEM	City budget	Increased planning for post-disaster response and cleanup.	Staff time	6 months	High	LPR	ES
2022-C. Gloucester-012	Flood Damage Prevention Ordinance Update	<p><b>Problem:</b> The current flood damage prevention ordinance does not meet the state's recommendation for a code-coordinated flood damage prevention ordinance.</p> <p><b>Solution:</b> The City will update the flood damage prevention ordinance using the NJ DEP's model code coordinated ordinance to create better coordination between NFIP implementation by the floodplain administrator, the New Jersey Flood Hazard Area Control Act (FHACA) implemented at the State level by the NJDEP, and the Uniform Construction Code (UCC) implemented by the Construction Official.</p>	New	Flood	2	Floodplain Administrator, Administration	City budget	Meet state and FEMA standards for flood damage prevention, reduce flood risk on new development	Staff time	6 months	Medium	LPR	PR

Project Number	Mitigation Initiative Name	Description of Problem and Solution	New or Existing Assets ?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Costs	Timeline	Priority	Mitigation Category	CRS Category
2022-C. Gloucester-013	NWS StormReady program	<p><b>Problem:</b> The City seeks to join the StormReady program offered by the NWS. The program has been on hold for the Mount Holly office but is likely to start again in the near future.</p> <p><b>Solution:</b> The City will apply to join the StormReady program.</p>	N/A	Severe Summer Weather, Severe Winter Weather, High Wind, Extreme Temperature	3	OEM	City budget	Increased storm awareness and emergency capabilities	Staff time	Within 5 years	High	LPR	ES

Notes:

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

Acronyms and Abbreviations:

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

Potential FEMA HMA Funding Sources:

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

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

Benefits:

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

Mitigation Category:

- Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP) - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.

- *Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.*

*CRS Category:*

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

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Table 9.15-17. Summary Evaluation and Action Priority

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2022-C. Gloucester-001	Address CSO Infrastructure	1	1	0	1	1	0	0	1	1	0	1	0	1	1	9	High 
2022-C. Gloucester-002	Generators for Lifeline Facilities	1	1	1	1	1	1	0	1	1	1	1	0	1	1	12	High
2022-C. Gloucester-003	Generators for School Sheltering	1	1	1	1	1	0	0	1	1	1	1	0	1	1	11	High
2022-C. Gloucester-004	Portable Generators to Maintain Post Disaster Capabilities	1	0	1	1	1	1	0	1	1	1	1	0	1	1	11	High
2022-C. Gloucester-005	Retrofit Critical Facilities to Provide Flood Protection	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	High
2022-C. Gloucester-006	Multi-Jurisdictional Flood Study	1	1	0	1	1	1	0	1	0	1	0	1	1	1	9	High
2022-C. Gloucester-007	Repetitive Loss Mitigation	1	1	1	1	1	1	0	1	0	0	1	0	1	1	10	High
2022-C. Gloucester-008	Substation Removal and Restoration	0	1	1	1	1	0	0	1	1	1	1	0	1	1	10	High
2022-C. Gloucester-009	Continuity of Operations and Government Planning	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	
2022-C. Gloucester-010	Increase IT Capabilities for Emergency Response and Outreach	1	1	1	1	1	1	0	1	1	0	1	0	1	1	11	High
2022-C. Gloucester-011	Disaster Debris Management Plan	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13	High
2022-C. Gloucester-012	Flood Damage Prevention Ordinance Update	0	1	1	1	1	1	1	1	1	1	0	1	1	1	12	High

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2022-C. Gloucester-013	NWS StormReady program	1	1	1	1	1	1	1	1	1	1	1	0	1	1	13	

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

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

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### 9.15.8 Action Worksheets

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

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Action Worksheet			
<b>Project Name:</b>	Address CSO Infrastructure		
<b>Project Number:</b>	2022-C. Gloucester-001		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Summer Weather, Severe Winter Weather, Sea Level Rise		
<b>Description of the Problem:</b>	<p>Camden and Gloucester City have remaining areas of their communities that still have Combined Sewer Outlets. Contributing to the flooding conditions realized by these communities is the development in the County upstream of these two riverfront communities. The upstream developments associated loss of wetlands, loss of percolating buffer areas on nearby creeks, increased demand from same has contributed to and worsened the downstream affect on these two riverfront communities.</p> <p>While there are numerous health and safety concerns associated with any flood waters the combined sewer outlets contain both the sanitary and storm water contents. Contributing to the sanitary sewer concerns are that the CCMUA treatment facility, it's main sanitary distribution line terminations as well as lift stations, etc., all meet in these two communities, concentrated within about a single square mile of one another. The treatment plant must be sensitive to maintaining their microbe bed as part of the treatment and high volumes of flow degrade and disturb the capabilities for treatment. This external burden on the system significantly increases the negative impact and contributes greatly to the release of untreated sewage into the waterways and streets of both communities during storm events.</p>		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	<p>The City will partner with CCMUA to address stormwater and CSO related flooding of streets. The objective is to establish a framework for a comprehensive program to reduce the occurrences of and mitigate the impacts street flooding. The program will establish the empirical basis for street flooding mitigation and assign responsibilities for the prevention of and response to street flooding events. It is anticipated that a detailed program plan will be completed early in the initial (2021 - 2026) NJPDES permit cycle following the approval of this SIAR.</p> <p>Potential projects include:</p> <ul style="list-style-type: none"> <li>• Increasing capacity of stormwater components</li> <li>• Increased CSO pump capacity</li> <li>• Reduction of impervious surfaces</li> <li>• Increased stormwater and CSO storage/ retention/ detention</li> <li>• Green infrastructure techniques</li> </ul>		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by developed actions	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk, stormwater flood damage, maintains emergency access
<b>Useful Life:</b>	30 years	<b>Goals Met:</b>	
<b>Estimated Cost:</b>	TBD by developed actions. Anticipated High.	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects, Local Plans and Regulations, Natural Systems Protection
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	6 months	<b>Potential Funding Sources:</b>	CCMUA, HMGP, BRIC

<b>Responsible Organization:</b>	CCMUA, Engineering, Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Elevate homes	Very High	Costly and would not solve roadway flooding
	Buyout homes	Very High	Costly and would not solve roadway flooding
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			

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Action Worksheet		
<b>Project Name:</b>	Address CSO Infrastructure	
<b>Project Number:</b>	2022-C. Gloucester-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Protects life from flooding and maintains emergency access.
<b>Property Protection</b>	1	Protects buildings from flood damage
<b>Cost-Effectiveness</b>	0	
<b>Technical</b>	1	Technically feasible project
<b>Political</b>	1	
<b>Legal</b>	0	Cooperation with CCMUA is required.
<b>Fiscal</b>	0	Project will require grant funding.
<b>Environmental</b>	1	
<b>Social</b>	1	Project would reduce flooding impacts
<b>Administrative</b>	0	
<b>Multi-Hazard</b>	1	Flood, Severe Summer Weather, Severe Winter Weather, Sea Level Rise
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	CCMUA, Engineering, Public Works
<b>Other Community Objectives</b>	1	
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	High	

Action Worksheet			
<b>Project Name:</b>	Generators for Lifeline Facilities		
<b>Project Number:</b>	2022-C. Gloucester-002		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Summer Weather, Severe Winter Weather, High Winds, Extreme Temperatures		
<b>Description of the Problem:</b>	<p>Backup power sources are necessary to maintain critical services for critical facilities. Lifeline facilities serve an even greater function than critical facilities and must remain functional through hazard events. The following lifeline facilities lack a backup power source:</p> <ul style="list-style-type: none"> <li>• Police Station (313 Monmouth Street)               <ul style="list-style-type: none"> <li>○ Provides critical emergency response functions.</li> </ul> </li> <li>• Municipal Building (512 Monmouth Street)               <ul style="list-style-type: none"> <li>○ Center of municipal government operations.</li> </ul> </li> <li>• Public Works Department (615 Brick Street)               <ul style="list-style-type: none"> <li>○ Provides response and emergency repairs, fuel for City vehicles.</li> </ul> </li> <li>• Public Library (50 Railroad)               <ul style="list-style-type: none"> <li>○ Serves as rapid response shelter, warming and cooling shelter.</li> </ul> </li> <li>• Knights of Columbus Hall (605 Monmouth Street)               <ul style="list-style-type: none"> <li>○ Privately owned. Memorandum of agreement in place with the City for rapid response sheltering.</li> </ul> </li> <li>• Senior Building and Community Center               <ul style="list-style-type: none"> <li>○ Privately owned. Serves as rapid response shelter and shelter for vulnerable population.</li> </ul> </li> </ul>		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will research what size generator is needed to power each lifeline facility. The City will then purchase and install the selected generator and necessary electrical components to supply backup power to the facilities. Public Works will be responsible for maintenance. OEM will oversee regular testing of each generator.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 6
<b>Estimated Cost:</b>	\$50,000-75,000 per generator	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, City Budget
<b>Responsible Organization:</b>	Engineer, Public Works, OEM	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed

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

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Action Worksheet		
<b>Project Name:</b>	Generators for Lifeline Facilities	
<b>Project Number:</b>	2022-C. Gloucester-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical lifesaving services
Property Protection	1	Project protects facilities from power loss
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The City has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Summer Weather, Severe Winter Weather, High Winds, Extreme Temperatures
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Public Works, OEM
Other Community Objectives	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	

Action Worksheet			
<b>Project Name:</b>	Generators for School Sheltering		
<b>Project Number:</b>	2022-C. Gloucester-003		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Summer Weather, Severe Winter Weather, High Winds, Extreme Temperatures		
<b>Description of the Problem:</b>	<p>Backup power sources are necessary to maintain critical services for critical facilities. Schools in the City provide immediate sheltering for students in the event of a hazard event. Current emergency power for the schools are limited and not enough to provide adequate power for sheltering. The following schools lack backup power sources:</p> <ul style="list-style-type: none"> <li>• Cold Springs Elementary School</li> <li>• Gloucester City Junior / Senior High School</li> <li>• Gloucester City Middle School</li> <li>• Gloucester Catholic Junior High School located at 333 Ridgeway Street</li> </ul>		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will work with the Boards of Education to research what size generators are needed to supply backup power to each school. The City will then provide guidance and support during the purchase and installation of the selected generators and necessary electrical components to supply backup power to the schools.		
<b>Is this project related to a Critical Facility?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of sheltering capabilities for schools
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	1, 6
<b>Estimated Cost:</b>	\$100,000 per generator	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Board of Education Budget
<b>Responsible Organization:</b>	Board of Education, Engineer	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			

Action Worksheet		
<b>Project Name:</b>	Generators for School Sheltering	
<b>Project Number:</b>	2022-C. Gloucester-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Project will protect critical services of schools as shelters for students
<b>Property Protection</b>	1	Project will protect school buildings from power loss.
<b>Cost-Effectiveness</b>	1	
<b>Technical</b>	1	
<b>Political</b>	1	
<b>Legal</b>	0	The legal authority to complete the project rests with the Boards of Education
<b>Fiscal</b>	0	Project requires funding support.
<b>Environmental</b>	1	
<b>Social</b>	1	
<b>Administrative</b>	1	
<b>Multi-Hazard</b>	1	Severe Summer Weather, Severe Winter Weather, High Winds, Extreme Temperatures
<b>Timeline</b>	0	Within 5 years
<b>Agency Champion</b>	1	Board of Education, Engineer
<b>Other Community Objectives</b>	1	
<b>Total</b>	12	
<b>Priority (High/Med/Low)</b>	High	

Action Worksheet			
<b>Project Name:</b>	Portable Generators to Maintain Post Disaster Capabilities		
<b>Project Number:</b>	2022-C. Gloucester-004		
<b>Risk / Vulnerability</b>			
<b>Hazard(s) of Concern:</b>	Severe Summer Weather, Severe Winter Weather, High Winds, Extreme Temperatures		
<b>Description of the Problem:</b>	Backup power sources are necessary to maintain critical services for critical facilities. Several critical services in the City require mobile deployment or are located at sites where a fixed site generator is not possible (Housing Office).		
<b>Action or Project Intended for Implementation</b>			
<b>Description of the Solution:</b>	The Engineer will research what size portable generators are needed to provide power support for critical services. The City will then purchase the portable generators and install the necessary electrical components to supply backup power to the City's critical services.		
<b>Is this project related to a Critical Facility?</b>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<b>Level of Protection:</b>	N/A	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations
<b>Useful Life:</b>	20 years	<b>Goals Met:</b>	6
<b>Estimated Cost:</b>	\$40,000 per generator	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
<b>Plan for Implementation</b>			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget
<b>Responsible Organization:</b>	Engineer, Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
<b>Three Alternatives Considered (including No Action)</b>			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Install solar panels	\$100,000	Weather dependent; need large amount of space for installation; expensive if repairs needed
	Install wind turbine	\$100,000	Weather dependent; poses a threat to wildlife; expensive repairs if needed
<b>Progress Report (for plan maintenance)</b>			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			

Action Worksheet		
<b>Project Name:</b>	Portable Generators to Maintain Post Disaster Capabilities	
<b>Project Number:</b>	2022-C. Gloucester-004	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services
Property Protection	0	
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The City has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	Severe Summer Weather, Severe Winter Weather, High Winds, Extreme Temperatures
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Public Works
Other Community Objectives	1	
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	

Action Worksheet			
<b>Project Name:</b>	Retrofit Critical Facilities to Provide Flood Protection		
<b>Project Number:</b>	2022-C. Gloucester-005		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood		
<b>Description of the Problem:</b>	<p>Numerous critical facilities in the City are flood prone. Some facilities are located in the Special Flood Hazard Area but the City experiences urban flooding in locations outside of the SFHA due to urban flooding related to the CSO system. Flood damage would interrupt critical services. The following critical facilities require mitigation to protect from flooding:</p> <ul style="list-style-type: none"> <li>• Public Works Department (615 Brick Street)</li> <li>• Police Building (313 Monmouth Street)</li> <li>• Municipal Building (512 Monmouth Street)</li> <li>• Well heads</li> <li>• Pump Stations</li> </ul>		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	<p>The City will conduct a feasibility assessment to determine what additional floodproofing measures are needed at each facility to protect to the 500-year (0.2%) flood level. Options include:</p> <ul style="list-style-type: none"> <li>• Elevation of facility</li> <li>• Floodproofing of facility</li> <li>• Mobile flood barriers</li> </ul> <p>Once the most cost-effective option is identified, the City will carry out the option.</p>		
<b>Is this project related to a Critical Facility?</b>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<b>Level of Protection:</b>	500-year flood level	<b>Estimated Benefits (losses avoided):</b>	Ensures continuity of operations of critical facilities
<b>Useful Life:</b>	TBD by feasibility assessment	<b>Goals Met:</b>	1, 2, 6
<b>Estimated Cost:</b>	TBD by feasibility assessment	<b>Mitigation Action Type:</b>	Structure and Infrastructure Projects (SIP)
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	1 year	<b>Potential Funding Sources:</b>	FEMA HMGP and PDM, BRIC, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, City Budget
<b>Responsible Organization:</b>	Engineer, Department of Public Works	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation, Emergency Management
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Problem continues.
	Relocate facilities	N/A	Not possible, facilities need to be located in current locations
	Address CSO flooding	Very High	This remains the main action to alleviate flooding in the City but is a long term mitigation measure (20 years to implement). Protections are needed in the short term.
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			

<b>Update Evaluation of the Problem and/or Solution:</b>	
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Action Worksheet		
<b>Project Name:</b>	Retrofit Critical Facilities to Provide Flood Protection	
<b>Project Number:</b>	2022-C. Gloucester-005	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Project will protect critical services of critical facilities
Property Protection	1	Project will protect critical facilities from flood damage.
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	The City has the legal authority to complete the project.
Fiscal	0	Project requires funding support.
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	0	Flood
Timeline	0	Within 5 years
Agency Champion	1	Engineer, Department of Public Works
Other Community Objectives	1	Protection of critical services
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	

Action Worksheet			
<b>Project Name:</b>	Multi-Jurisdictional Flood Study		
<b>Project Number:</b>	2022-C. Gloucester-006		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood		
<b>Description of the Problem:</b>	The City is partnered with multiple municipalities to analyze flooding issues along Big Timber Creek. The flooding issues are being analyzed to determine what measures can be taken.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	The City and partnering municipalities will continue the flood study and begin working the United States Army Corps of Engineers (USACE) to identify potential mitigation actions to reduce the occurrence of flooding and flood risk when floods do occur. Once identified, cost-effective actions will be carried out.		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	TBD by flood study	<b>Estimated Benefits (losses avoided):</b>	Reduction in flood risk in selected areas
<b>Useful Life:</b>	TBD by flood study	<b>Goals Met:</b>	1, 2, 4
<b>Estimated Cost:</b>	TBD by flood study	<b>Mitigation Action Type:</b>	Natural Systems Protection, Structure and Infrastructure Projects
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	Within 5 years
<b>Estimated Time Required for Project Implementation:</b>	5 years	<b>Potential Funding Sources:</b>	HMGP, BRIC, USACE, City budget
<b>Responsible Organization:</b>	Engineer, partnering municipalities, USACE	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard mitigation planning, stormwater planning
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Elevate roadways	\$500,000	Costly and may not solve problem
	Buyout homes	High	Costly, negative social impacts
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			

Action Worksheet	
<b>Project Name:</b>	Multi-Jurisdictional Flood Study
<b>Project Number:</b>	2022-C. Gloucester-006

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Protects lives from flooding
Property Protection	1	Reduction in flooding risk to properties
Cost-Effectiveness	0	
Technical	1	Technically feasible project
Political	1	
Legal	1	The City has the legal authority to conduct the project.
Fiscal	0	Project will require grant funding.
Environmental	1	
Social	0	Project would reduce flooding impacts.
Administrative	1	This is a multi-jurisdictional effort
Multi-Hazard	0	Flood
Timeline	0	
Agency Champion	1	Engineer, partnering municipalities, USACE
Other Community Objectives	1	
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	High	

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Action Worksheet			
<b>Project Name:</b>	Repetitive Loss Mitigation		
<b>Project Number:</b>	2022-C. Gloucester-007		
Risk / Vulnerability			
<b>Hazard(s) of Concern:</b>	Flood, Severe Summer Weather, Coastal Erosion and Sea Level Rise		
<b>Description of the Problem:</b>	Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The City has 1 repetitive loss property but many properties have received damages and not had claims due to lack of flood insurance. A recent flooding event in 2019 impacted roughly 80 properties, most of which were located outside the Special Flood Hazard Area.		
Action or Project Intended for Implementation			
<b>Description of the Solution:</b>	Conduct outreach to 100 flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition/purchase/moving/elevating/retrofitting residential homes in the flood prone areas that experience frequent flooding (high risk areas).		
<b>Is this project related to a Critical Facility or Lifeline?</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Level of Protection:</b>	1% annual chance flood event + freeboard (in accordance with flood ordinance)	<b>Estimated Benefits (losses avoided):</b>	Eliminates flood damage to homes and residents, creates open space for the municipality increasing flood storage.
<b>Useful Life:</b>	Acquisition: Lifetime Elevation: 30 years (residential)	<b>Goals Met:</b>	1, 2
<b>Estimated Cost:</b>	\$3Million	<b>Mitigation Action Type:</b>	Structure and Infrastructure Project
Plan for Implementation			
<b>Prioritization:</b>	High	<b>Desired Timeframe for Implementation:</b>	6-12 months
<b>Estimated Time Required for Project Implementation:</b>	Three years	<b>Potential Funding Sources:</b>	FEMA HMGP and FMA, local cost share by residents
<b>Responsible Organization:</b>	NFIP Floodplain Administrator, supported by homeowners	<b>Local Planning Mechanisms to be Used in Implementation if any:</b>	Hazard Mitigation
Three Alternatives Considered (including No Action)			
<b>Alternatives:</b>	<b>Action</b>	<b>Estimated Cost</b>	<b>Evaluation</b>
	No Action	\$0	Current problem continues
	Elevate homes	\$500,000	When this area floods, the entire area is impacted; elevating homes would not eliminate the problem and still lead to road closures and impassable roads
	Elevate roads	\$500,000	Elevated roadways would not protect the homes from flood damages
Progress Report (for plan maintenance)			
<b>Date of Status Report:</b>			
<b>Report of Progress:</b>			
<b>Update Evaluation of the Problem and/or Solution:</b>			

Action Worksheet		
<b>Project Name:</b>	Repetitive Loss Mitigation	
<b>Project Number:</b>	2022-C. Gloucester-007	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
<b>Life Safety</b>	1	Families moved out of high-risk flood areas.
<b>Property Protection</b>	1	Properties removed from high-risk flood areas.
<b>Cost-Effectiveness</b>	1	Cost-effective project
<b>Technical</b>	1	Technically feasible project
<b>Political</b>	1	
<b>Legal</b>	1	The City has the legal authority to conduct the project.
<b>Fiscal</b>	0	Project will require grant funding.
<b>Environmental</b>	1	
<b>Social</b>	0	Project would remove families from the flood prone areas of the City.
<b>Administrative</b>	0	
<b>Multi-Hazard</b>	1	Flood, Severe Summer Weather, Coastal Erosion and Sea Level Rise
<b>Timeline</b>	0	
<b>Agency Champion</b>	1	NFIP Floodplain Administrator, supported by homeowners
<b>Other Community Objectives</b>	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	