SECTION 9. JURISDICTIONAL ANNEXES

9.6 CITY OF BURLINGTON

This section presents the jurisdictional annex for the City of Burlington that provides resources and information to assist public and private sectors to reduce losses from future hazard events. This annex is not guidance of what to do when a disaster occurs. Rather, this annex concentrates on actions to reduce or eliminate damage to property and people that can be implemented prior to a disaster. Information presented includes a general overview of the municipality, who in the City of Burlington participated in the planning process, an assessment of the City of Burlington's risk and vulnerability, the different capabilities used in the City of Burlington, and an action plan that will be implemented to achieve a more resilient community.

9.6.1 Hazard Mitigation Planning Team

The City of Burlington identified the hazard mitigation plan primary and alternate points of contact and developed this plan over the course of several months with input from many City of Burlington departments, including Emergency Management and Engineering. The Emergency Management Coordinator represented the community on the Burlington County Hazard Mitigation 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. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Volume 1, Section 2 (Planning Process) and Appendix C (Meeting Documentation).

Table 9.6-1. Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name/Title:	Frank Caruso, EMC	Name/Title:	Kenneth Shine, Engineer
Address:	525 High Street, Burlington, NJ 08016	Address:	525 High Street, Burlington, NJ 08016
Phone Number:	(609) 284-3105	Phone Number:	(856) 656-2890
Email:	fcaruso@burlingtonnj.us	Email:	kshine@pennoni.com
NFIP Floodplain Administrator			
Name/Title:	Allison S Iannaccone, FPA		
Address:	443 Atlantic City Blvd., Beachwood, NJ 08722		
Phone Number:	732-244-1090		
Email:	aiannaccone@owenlittle.com		
Additional Contributors:			
Name/Title: Method of Participation:	William Harris, Director of Housing and Economic Development, CRS Coordinator		

	Provided information on capabilities, prevents events, previous actions. Contributed to mitigation strategy.
Name/Title: Method of Participation:	Jody Mazeall, Construction Official Provided information on building permits
Name/Title: Method of Participation:	Frank Caruso, EMC Attended the Planning Partnership Risk Assessment Meeting and Mitigation Strategy Workshop. Contributed to mitigation strategy.
Name/Title: Method of Participation:	Kenneth Shine, Engineer Attended the Planning Partnership Risk Assessment Meeting and Mitigation Strategy Workshop. Contributed to mitigation strategy.
Name/Title: Method of Participation:	Allison S Iannaccone, Floodplain Administrator Provided information on capabilities, Reviewed draft annex
Name/Title: Method of Participation:	Barry W. Conaway, Mayor Reviewed draft annex
Name/Title: Method of Participation:	William Curry, Director of Public Works Provided information on capabilities. Reviewed draft annex.
Name/Title: Method of Participation:	Ryan Elbertson, Police Chief Reviewed draft annex
Name/Title: Method of Participation:	Bill Kirschner, Asst. Engineer Reviewed draft annex
Name/Title: Method of Participation:	Jody Mazeall, Construction Official Reviewed draft annex
Name/Title: Method of Participation:	Cindy Crivaro, Municipal Clerk Reviewed draft annex

9.6.2 Municipal Profile

The City of Burlington is located in northern Burlington County, New Jersey. The City is bordered by the Delaware River to the north and surrounded by the Township of Burlington to the west, east, and south. The City's location on the Delaware River and close proximity to Pennsylvania makes it a suburb of Philadelphia, Pennsylvania. The City of Burlington is comprised of approximately 4 square miles, with nearly ¾ of a square mile of water.

The Mayor is elected by the City voters and performs under the Mayor-Council form of government authorized in the Optional Municipal Charter Law NJSA 40:69A. This form provides for the direct election of the mayor, who serves a four-year term. This form is designed for a mayor to be independent of council, in charge of the administration of the municipality.

The mayor is the chief executive of the municipality and has the enforcement responsibility for all ordinances, charter provisions and prepares the budget of the municipality. The mayor, with the advice and consent of the council, appoints and removes department heads, including a business administrator. The mayor has the right to speak at council meeting but has no vote and does not need to attend. The Council is the legislative body of the municipality. The Council consists of seven (7) members who are elected to 4-year terms. Three (3) Council members are "At-large", and four (4) Council members are ward representatives. The Council is generally limited to legislative functions but has investigative power and may remove municipal officers for cause. The Council can reduce items in the Mayor's budget by a majority vote, but it needs a two-thirds majority to increase any item in the budget.

According to the U.S. Census, the 2020 population for the City of Burlington was 9,743, a 1.7 percent decrease from the 2010 Census. Data from the 2021 American Community Survey 5-Year Population Estimates indicate that 13.4 percent is 65 years of age or older, 6.8 percent of the population is 5 years of age or younger, 2.1 percent is non-English speaking, 12.8 percent have a disability, and 14.6 percent is below the poverty level.

The Steering Committee also identified households that are above the Federal Poverty Level, but earn less than the basic cost of living as socially vulnerable. For the City of Burlington, 41 percent of households earn less than the basic cost of living and are considered socially vulnerable.

Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

9.6.3 Jurisdictional Capability Assessment and Integration

The City of Burlington performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Volume 1, Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. The jurisdictional assessment includes the following analyses:

- An assessment of 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. As part of the hazard mitigation analysis, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress toward plan integration. The updated mitigation strategy provided an opportunity for the City of Burlington to identify opportunities for integration of mitigation concepts that can be incorporated into municipal procedures.

Planning, Legal, and Regulatory Capability and Integration

The table below summarizes the regulatory tools that are available to the City of Burlington. The comment field provides information as to how the capability integrates hazard mitigation and risk reduction.

Table 9.6-2. Planning, Legal, and Regulatory Capability and Integration

	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Codes, Ordinances, & Regulations				
Building Code	Yes	Chapter 125 Construction Codes, Uniform	State and Local	Construction Division
How does this reduce risk? All permit applications are screened for location in AE Zone and compliance with Storm Damage Prevention Ordinance.				
Zoning/Land Use Code	Yes	Chapter 207 Land Development, Article VII Zoning	Local	Zoning Officer, Land Use Board
How does this reduce risk? The code enables where appropriate, flexibility of design and development of land in such a manner as to preserve its natural and scenic qualities, protect areas of meaningful ecological value, reduce flood hazards, facilitate the adequate and economical provision of streets and utilities, minimize negative environmental impacts, improve the aesthetic quality of new residential developments, encourage the conservation of energy, increase recreational opportunities, and otherwise promote the planned and environmentally desirable use of land.				
Subdivision Ordinance	Yes	Chapter 207 Land Development, Article V Subdivision and Site Plan Review Procedures and Plat Details	Local	Zoning Officer, Land Use Board
How does this reduce risk? Land Use Board engineer reviews applications for stormwater management compliance.				
Site Plan Ordinance	Yes	Chapter 207 Land Development, Article V Subdivision and Site Plan Review Procedures and Plat Details	Local	Zoning Officer, Land Use Board
How does this reduce risk? Land Use Board engineer reviews applications for stormwater management compliance.				
Stormwater Management Ordinance	Yes	Chapter 207 Land Development, Article VI Stormwater Management	Local	Public Works
How does this reduce risk? The purpose of the ordinance is to establish stormwater management requirements and controls for "major developments" as defined by Section207-54 of the ordinance. The Stormwater Management Ordinance is expected to be adopted in 2024 that will provide for more effective runoff control.				
Post-Disaster Recovery/ Reconstruction Ordinance	No	-	-	-
How does this reduce risk?				
Real Estate Disclosure	Yes	Senate Bill 3110; P. L. 2023, c. 93, July 3, 2023	State	Sellers and Landlords of commercial or residential property
How does this reduce risk? For leases, the law amends the New Jersey Truth-in-Renting Act, N.J.S.A. 46:8-43 et seq., to require every landlord to notify in writing each of the landlord's tenants, prior to lease signing or renewal, whether the property is located in the Federal Emergency Management Agency (FEMA) Special Flood Hazard Area ("100-year floodplain") or Moderate Risk Flood Hazard Area ("500-year floodplain") and if the landlord has actual knowledge that the rental premises or any portion of the parking areas of the real property containing the rental premises has been subjected to flooding. The law does not apply to (1) landlords who lease commercial space or residential dwellings for less than one				

	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
month, (2) residential dwellings in a premises containing not more than two units, (3) owner-occupied premises containing not more than three units, or (4) hotels, motels, or other guest houses serving transient or seasonal guests for a period of less than 120 days. The model notice is to contain the heading "Flood Risk" and questions for the landlord to answer regarding the landlord's actual knowledge of past flooding of the property. The questions regarding the property being in a FEMA Special or Moderate Risk Flood Hazard Area shall not contain the option for "unknown." To determine how the questions are to be answered, FEMA's current flood insurance rate maps for the leased premises area must be consulted. The landlord will be required to answer whether the rental premises or any portions of the parking areas of the real property containing the rental premises ever experienced any flood damage, water seepage, or pooled water due to a natural flood event and, if so, the number of times that has occurred. The notice to residential tenants must also indicate that flood insurance may be available to renters through FEMA's National Flood Insurance Program to cover their personal property and contents in the event of a flood and that standard renter's insurance does not typically cover flood damage. For sales, the law also amends the New Jersey Consumer Fraud Act, N.J.S.A. 56:8-1 et seq., to require sellers of real property to disclose, on the property condition disclosure statement, whether the property is located in the FEMA Special or Moderate Risk Flood Hazard Area and any actual knowledge of the seller concerning flood risks of the property to the purchaser before the purchaser becomes obligated under any contract for the purchase of the property. The disclosure statement must contain the heading "Flood Risk" and ask the seller the following questions: • Is any or all of the property in the Special Flood Hazard Area ("100-year floodplain") or a Moderate Risk Flood Hazard Area ("500-year floodplain") according to FEMA's current flood insurance rate maps? • Is the property subject to any requirement under federal law to obtain and maintain flood insurance on the property? Properties in the Special Flood Hazard Area with mortgages from federally regulated or insured lenders are required to obtain and maintain flood insurance. • Have you ever received assistance from, or are you aware of any previous owners receiving assistance from FEMA, the U.S. Small Business Administration, or any other federal disaster flood assistance for flood damage on the property? For properties that have received flood disaster assistance, the requirement to obtain flood insurance passes down to all future owners. • Is there flood insurance on the property? A standard homeowner's insurance policy typically does not cover flood damage. • Is there a FEMA elevation certificate available for the property? If so, it must be shared with the buyer. An elevation certificate is a FEMA form, completed by a licensed surveyor or engineer, that provides critical information about the flood risk of the property and is used by flood insurance providers to determine the appropriate insurance rating for the property. • Have you ever filed a claim for flood damage to the property with any insurance provider? If the claim was approved, what was the amount received? • Has the property experienced any flood damage, water seepage, or pooled water due to a natural flood event, such as heavy rainfall, coastal storm surge, tidal inundation, or river overflow? If so, how many times? Not all provisions of this law have become effective at the time of the writing of this plan.				
Growth Management	No	-	-	-
How does this reduce risk?				
Environmental Protection Ordinance	No	-	-	-
How does this reduce risk?				
Flood Damage Prevention Ordinance	Yes	Chapter 170 Flood Damage Prevention	Local	Building Inspector
How does this reduce risk? Flood mitigation measures are required for all Sis and New Construction projects in an AE Zone. It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to: (1) Protect human life and health; (2) Minimize expenditure of public money for costly flood control projects;				

	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
(3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; (4) Minimize prolonged business interruptions; (5) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, bridges located in areas of special flood hazard; (6) Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas; (7) Ensure that potential buyers are notified that property is in an area of special flood hazard; and (8) Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. The ordinance requires update to the new model Code Coordinated Ordinance.				
Wellhead Protection	No	-	-	-
How does this reduce risk?				
Emergency Management Ordinance	No	-	-	-
How does this reduce risk?				
Climate Change Ordinance	No	-	-	-
How does this reduce risk?				
Other	No	-	-	-
How does this reduce risk?				
Planning Documents				
Comprehensive/Master Plan	Yes	City of Burlington Master Plan, June 2010	Local	Housing & Community Development
How does this reduce risk? The Master Plan identified the extensive impact of the 1987 FIRM on future development and especially the impact on the first floor of buildings in an AE Zone where the BFE was 11.1'.				
Capital Improvement Plan	Yes	Approved Municipal Budget	Local	Various
How does this reduce risk? The CIP is a tool which can fund storm drainage improvements and flood mitigation measures such as the repair and raising of the Assiscunk Creek Levees and the Delaware River bulkhead.				
Disaster Debris Management Plan	No	-	-	-
How does this reduce risk?				
Floodplain Management or Watershed Plan	No	-	-	-
How does this reduce risk? A Watershed Plan will be developed for the Kennedy Lake system using DEP grant funds and a City-wide Watershed Plan will be developed and completed by 2028 as required by the City's Tier A Stormwater Discharge Permit.				
Stormwater Management Plan	Yes	Burlington City Municipal Stormwater Management Plan, August 2006	Local	Public Works
How does this reduce risk? The Stormwater Management Plan reduces risk by establishing guidelines for responsible development and redevelopment. A new Stormwater Control Ordinance is expected to be adopted in 2024 that will provide for more effective runoff control.				
Stormwater Pollution Prevention Plan	Yes	Burlington City Stormwater Pollution Prevention Plan, September 2018	Local	Public Works

	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
How does this reduce risk? The Stormwater Pollution Prevention Plan reduces risk by providing Public Works employees with guidance to ensure proper maintenance of City-owned stormwater facilities.				
Open Space Plan	No	-	-	-
How does this reduce risk?				
Urban Water Management Plan	No	-	-	-
How does this reduce risk?				
Habitat Conservation Plan	No	-	-	-
How does this reduce risk?				
Economic Development Plan	Yes	City of Burlington Master Plan, Land Use Element, June 2010	Local	Housing & Community Development
How does this reduce risk? Redevelopment projects in AE Zones must also comply with the City's Storm Damage Prevention Ordinance on new construction or for the substantial improvement of existing structures.				
Shoreline Management Plan	No	-	-	-
How does this reduce risk?				
Community Wildfire Protection Plan	No	-	-	-
How does this reduce risk?				
Community Forest Management Plan	No	-	-	-
How does this reduce risk?				
Transportation Plan	Yes	City of Burlington Master Plan, Circulation Element, June 2010	Local	Housing & Community Development
How does this reduce risk? The Circulation Element of the Master Plan provides a description and analysis of the transportation system that serves the City, including the street network, streetscape, sidewalks, and pathways.				
Agriculture Plan	No	-	-	-
How does this reduce risk?				
Climate Action/ Resiliency/Sustainability Plan	No	-	-	-
How does this reduce risk? Currently, the City does not have such a Plan. However, the DEP recently announced that Burlington will be the beneficiary of a State-funded "NJ Resilient Municipal Assistance Program" grant to comply with a recent amendment to the Municipal Land Use Law.				
Tourism Plan	No	-	-	-
How does this reduce risk?				
Business/ Downtown Development Plan	No	-	-	-
How does this reduce risk?				
Other	No	-	-	-
How does this reduce risk?				
Response/Recovery Planning				

	Jurisdiction has this? (Yes/No)	Code Citation and Date (code chapter, name of plan, date of plan)	Authority (local, county, state, federal)	Individual / Department / Agency Responsible
Emergency Operations Plan	Yes	Burlington City Emergency Operations Plan, 2023	Local	OEM
How does this reduce risk? The current EOP outlines Plans and Procedures for each Department or Agency and is broken down into a Basic Plan and 16 Annexes. It also consists of a Snow/Ice Emergency Plan and a Flood Early Warning System Plan.				
Continuity of Operations Plan	Yes	Continuity of Operations Plan /Continuity of Government Plans	Local	All Departments
How does this reduce risk? Each department was tasked during COVID to refine and update their COOP/COG plans in the event of a mass absence due to sickness.				
Strategic Recovery Planning Report	No	-	-	-
How does this reduce risk?				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	-	-	-
How does this reduce risk?				
Post-Disaster Recovery Plan	No	-	-	-
How does this reduce risk?				
Public Health Plan	No	-	-	-
How does this reduce risk?				
Other	No	-	-	-
How does this reduce risk?				

Development and Permitting Capability

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

Table 9.6-3. 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?	Yes	Construction Division
If you do not issue development permits, what is your process for tracking new development?	N/A	-
Are permits tracked by hazard area? (For example, floodplain development permits.)	Yes	All permit applications are screened for location in an AE Zone and for compliance with the Flood Damage Prevention Ordinance.
Do you have a buildable land inventory? • If yes, please describe	No	-
Describe the level of build-out in your jurisdiction.	N/A	According to the City's Master Plan, approximately 6.7% of the land in the City has been identified as vacant. Vacant lands within the City present opportunities for development or opportunities for consolidation of lots to adjacent land owners.

Administrative and Technical Capability

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

Table 9.6-4. Administrative and Technical Capabilities

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
Administrative Capability		
Land Use Board (Combined Planning Board and Zoning Board of Adjustment)	Yes	The Land Use Board, under the auspices of the Housing & Community Development Department performs all appropriate functions with respect to City planning and zoning, including: determine property use suitability with regard to City Plan; maintain Zoning Map and data by parcel and subdivision; provide zoning information on specific lots parcels or subdivisions; pre-screen requests for applications through Screening Committee; review Applications for conformance with, or variance from, City Ordinance; consider Applications for positive and negative criteria; determine impact on neighborhoods; pass on or reject Applications.
Zoning Board of Adjustment	No	-
Planning Department	No	-
Mitigation Planning Committee	No	-
Environmental Board/Commission	No	-
Open Space Board/Committee	No	-
Economic Development Commission/Committee	No	-
Public Works/Highway Department	Yes	The Department of Public Works, headed by the Public Works Director, is responsible for street, and drainage system maintenance, street sweeping, trash collection, maintenance of various public grounds, maintenance of City vehicles, equipment, and related functions. Public Works houses the Water Utility, Sewer, and Building Maintenance Divisions.
Construction/Building/Code Enforcement Department	Yes	The City has a Construction Division and a Code Enforcement/Zoning Division. The Construction Division performs all duties and responsibilities as required by the Uniform Construction Code, including issuing permits, and scheduling and performing inspections. The Code Enforcement/Zoning Division ensures the land development codes are being followed throughout the City and sorts through zoning applications. Those which need variances or other permittances are referred to the Land Use Board.
Emergency Management/Public Safety Department	Yes	The Department of Public Safety is operated by a Director – the Mayor, and according to City Ordinance

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		and State regulations, performing all appropriate functions to provide for the operations of those Divisions engaged in protecting and preserving the safety of City life and property. The Public Safety divisions include Police, Fire, Fire Prevention, and Emergency Management.
Warning Systems / Services (mass notification system, outdoor warning signals, etc.)	Yes	Nixle, Civic Ready (reverse 911)
Maintenance programs to reduce risk (stormwater maintenance, tree trimming, etc.)	Yes	The Department of Public Works, headed by the Public Works Director, is responsible for street and drainage system maintenance, street sweeping, trash collection, maintenance of various public grounds, maintenance of City vehicles, equipment, and related functions.
Mutual aid agreements	Yes	Agreements with Fire and Emergency Services
Human Resources Manual *e.g., Do any job descriptions specifically include identifying or implementing mitigation projects or other efforts to reduce natural hazard risk?*	Yes	Qualified consultants for drainage and sewer
Other: Historical Preservation Commission	Yes	The Historic Preservation Commission is primarily charged with safeguarding the important architecture and historic heritage of the City. The Planning & Zoning Board relies on Commission advice on these matters.
Technical/Staffing Capability		
Planners or engineers with knowledge of land development and land management practices	Yes	Environmental Resolutions, Inc., William Harris, P.P. and Allison Iannacone, P.E., CFM
Engineers or professionals trained in building or infrastructure construction practices	Yes	Environmental Resolutions, Inc., (City and LUB engineers); Pennoni Associates (Sewer and Drainage Engineer)
Planners or engineers with an understanding of natural hazards	Yes	Environmental Resolutions, Inc., and Pennoni Associates
Staff with expertise or training in benefit/cost analysis	Yes	ERI, Pennoni, Bowman & Company, Phoenix Advisors
Professionals trained in conducting damage assessments	Yes	OEM, DPW, CERT, PD, FD, drone operators
Personnel skilled or trained in GIS and/or Hazards United States (HAZUS) – Multi-Hazards (MH) applications	Yes	DPW, Pennoni
Environmental scientist familiar with natural hazards	Yes	Pennoni
Surveyor(s)	Yes	Environmental Resolutions, Inc.
Emergency Manager	Yes	The Emergency Management Coordinator operates this Division under the supervision of the Department of Safety and performs all appropriate functions regarding

Resources	Available? (Yes/No)	Comments (available staff, responsibilities, support of hazard mitigation)
		emergency preparedness (Mitigation, Preparedness, Response and Recovery). The City's Emergency Manager is Frank Caruso.
Grant writer(s) *Consider the following - Are data and maps from the HMP used to support documentation in grant applications?*	Yes	Pennoni, Triad, Environmental Resolutions, Inc.
Resilience Officer	Yes	PSD, OEM
Other (this could include stormwater engineer, environmental specialist, etc.)	Yes	Drone operators
How do your administrative/technical capabilities contribute to risk reduction in your community? Risk reduction and resiliency are the common thread between every department in the City. The administrative and technical capabilities stay current with potential risks that allow the OEM to alert others as needed when disaster nears, and they along with the other departments are constantly planning mitigation projects and seeking funding opportunities to implement projects on the 5-Year capital plans.		

Fiscal Capability

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

Table 9.6-5. Fiscal Capabilities

Financial Resources	Accessible or Eligible to Use? (Yes/No)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	No
User fees for water, sewer, gas, or electric service	Yes
Impact fees for homebuyers or developers of new development/homes	No
Stormwater utility fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	No
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	No
Other federal or state Funding Programs	Yes
Open Space Acquisition funding programs	Yes
Other (for example, Clean Water Act 319 Grants [Nonpoint Source Pollution])	Yes

Education and Outreach Capability

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

Table 9.6-6. Education and Outreach Capabilities

Outreach Resources	Available? (Yes/No)	Comment:
Public information officer or communications office	Yes	Information on flood hazards is disseminated to residents and businesses by the Director of Public Affairs.
Personnel skilled or trained in website development	Yes	Contracted
Hazard mitigation information available on your website	Yes	Information on flood insurance and emergency notification lists is available on the Emergency Management webpage
Social media for hazard mitigation education and outreach	Yes	Facebook, City Website, Nixle, Civic Ready
Citizen boards or commissions that address issues related to hazard mitigation	No	-
Warning systems for hazard events	Yes	Nixle, Facebook, Civic Ready, Siren
Natural disaster/safety programs in place for schools	Yes	Board of Education has a published Emergency Action Plan.
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.	Yes	Ongoing public presentations, National Night Out

Community Classifications

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

Table 9.6-7. Community Classifications

Program	Participating? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	Yes	7	October 1, 2018
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4	2017
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes	3	2017
StormReady Certification	Yes	Certified	January 2017
Firewise Communities classification	No	-	-
New Jersey Sustainable Jersey Community	Yes	None	October 19, 2010
Other	No	-	-

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

Adaptive Capacity

Adaptive capacity is defined as "the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences" (IPCC 2014). Each

jurisdiction has a unique combination of capabilities to adjust to, protect from, and withstand a future hazard event, future conditions, and changing risk. The table below summarizes the adaptive capacity for each identified hazard of concern and the jurisdiction's capability to address related actions using the following classifications:

- Strong: Capacity exists and is in use.
- Moderate: Capacity might exist; but is not used or could use some improvement.
- Weak: Capacity does not exist or could use substantial improvement.

Table 9.6-8. Adaptive Capacity

Hazard	Adaptive Capacity – Strong/Moderate/Weak
Dam Failure	Weak
Disease Outbreak	Strong
Drought	Moderate
Earthquake	Moderate
Extreme Temperatures	Strong
Flood	Weak
Severe Weather	Moderate
Severe Winter Weather	Strong
Wildfire	Moderate

During the review of the adaptive capacity ranking, the City of Burlington indicated the following:

- The rankings for Dam Failure (Sylvan Lake Dam and the Assiscunk Creek Levee) and Flood should be lowered from 'Moderate' to 'Weak'. Burlington City is particularly vulnerable, being 75 percent in the floodplain and positioned below the Burlington Township Sylvan Lake Dam. The City has many projects that need to be completed and more that need to be planned to make sure resiliency is maintained and enhanced with the coming sea level rise projections.

9.6.4 National Flood Insurance Program (NFIP) Compliance

This section provides specific information on the management and regulation of the regulatory floodplain, including current and future compliance with the NFIP.

NFIP Floodplain Administrator (FPA)

Allison S. Iannaccone, FPA

National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the City of Burlington.

Table 9.6-9. NFIP Summary

Active Policies	Total Premium + Policy Fee	Number of Losses	Total Net Payment	Repetitive Loss Properties
736	$1,113,805	276	$687,096.10	14

Source: NFIP 2023

Notes:	*Data current as of October 2023*
RL	*Repetitive Loss*
SRL	*Severe Repetitive Loss*
RL FMA Definition	*Any insurable building that has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event.*
RL NFIP Definition	*Any insurable building for which two or more claims of more than $1,000 were paid by the National Flood Insurance Program (NFIP) within any rolling ten-year period, since 1978.*

Flood Vulnerability Summary

The following table provides a summary of the NFIP program in the City of Burlington.

Table 9.6-10. NFIP Summary

NFIP Topic	Comments
Flood Vulnerability Summary	
Describe areas prone to flooding in your jurisdiction. • Do you maintain a list of properties that have been damaged by flooding?	The City maintains a list of repetitive loss properties and annually informs such residents of flood mitigations measures to them.
Do you maintain a list of property owners interested in flood mitigation? • How many homeowners and/or business owners are interested in mitigation (elevation or acquisition)?	The City does not maintain a list. However, we have offered technical assistance to property owners who are interested in flood mitigation.
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what projects are underway.	N/A
How do you make Substantial Damage determinations? • How many were declared for recent flood events in your jurisdiction?	The CRS officer checks construction permits.
How many properties have been mitigated (elevation or acquisition) in your jurisdiction? • If there are mitigated properties, how were the projects funded?	No properties were elevated or acquired, but six Substantial Improvement properties were the subject of other measures such as flood vents and filling of basements.
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If not, state why.	Yes
NFIP Compliance	
What local department is responsible for floodplain management?	Housing & Community Development
Are any certified floodplain managers on staff in your jurisdiction?	The City contracts with a Certified Floodplain Manager.
Do you have access to resources to determine possible future flooding conditions from climate change?	Yes. FEMA website, DVRPC Vulnerability Assessment
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	How to obtain funding for low-income homeowners to contract for flood mitigation measures to lower their flood insurance cost.
Provide an explanation of NFIP administration services you provide (e.g. permit review, GIS, education/outreach, inspections, engineering capability)	Construction permit review, inspections and technical assistance to residents and businesses on flood mitigation measures.
How do you determine if proposed development on an existing structure would qualify as a substantial improvement?	Compare the cost of work on the construction permit to the tax assess improved value/the tax equalization

NFIP Topic	Comments
	ratio. The CRS Officer reviews all construction permit applications for location in AE Zone and compliance with Storm Damage Prevention Ordinance. If the project is a SI and is in an AE Zone, flood mitigation measures are prescribed by the City's CFM.
What are the barriers to running an effective NFIP program in the community, if any?	Limited financial resources, the type of homes (many are row-type, wood frame homes with basements), cost of flood insurance.
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state the violations.	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	October 7, 1993 was most recent CAV.
What is the local law number or municipal code of your flood damage prevention ordinance? • Have you adopted NJDEP's Model Code Coordinated Ordinance? • What is the date that your flood damage prevention ordinance was last amended?	Chapter 170 of the City ordinances No December 21, 2017
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets minimum requirement
Are there other local ordinances, plans or programs (e.g., site plan review) that support floodplain management and meeting the NFIP requirements? For instance, does the planning board or zoning board consider efforts to reduce flood risk when reviewing variances such as height restrictions?	Yes
Does your community plan to join the CRS program or is your community interested in improving your CRS classification?	The City is interested in finding low-cost ways to improve our CRS Class 7 rating.

9.6.5 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 appreciating 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 9.6-11. Number of Building Permits for New Construction

Type of Development	2021		2022		2023		2024		2025	
Number of Building Permits for New Construction Issued Since the previous HMP* (total/within regulatory floodplain)										
	Total	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**	**Total**	**Within SFHA**
Single Family	2	0	0	0	0	0	1	1	0	0
Multi-Family	0	0	1	1	1	1	0	0	0	0

Type of Development	2021		2022		2023		2024		2025	
Other (commercial, mixed-use, etc.)	0	0	0	0	0	0	0	0	0	0
Total Permits Issued	2	0	1	1	1	1	1	1	0	0

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

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

Table 9.6-12. Recent and Expected Future Development

Property or Development Name	Type (e.g., Res., Comm.)	# of Units / Structures	Address and Parcel ID	Known Hazard Zone(s)	Description/Status of Development
Recent Major Development from 2019 to Present					
Pearl Pointe Apartments	Apartments	2	1 & 2 East Pearl St.	AE Zone	Project Completed
Known or Anticipated Major Development in the Next Five (5) Years					
New Yorkshire Senior Housing	Apartments	1	Clarkson & Linden Streets	AE Zone	Third RFP to developers to be issued by 10-31-23
U.S Pipe Site	Mixed Use	TBD	East Pearl Street	AE Zone	-

9.6.6 Jurisdictional Risk Assessment

The hazard profiles in Volume 1, Section 4 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Section 4.2 (Methodology) and Section 4.4 (Hazard Ranking) provide detailed summaries for the City of Burlington's risk assessment results and data used to determine the hazard ranking discussed later in this section.

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

Figure 9.6-1. City of Burlington Flood and Sea Level Rise Hazard Area Extent and Location Map

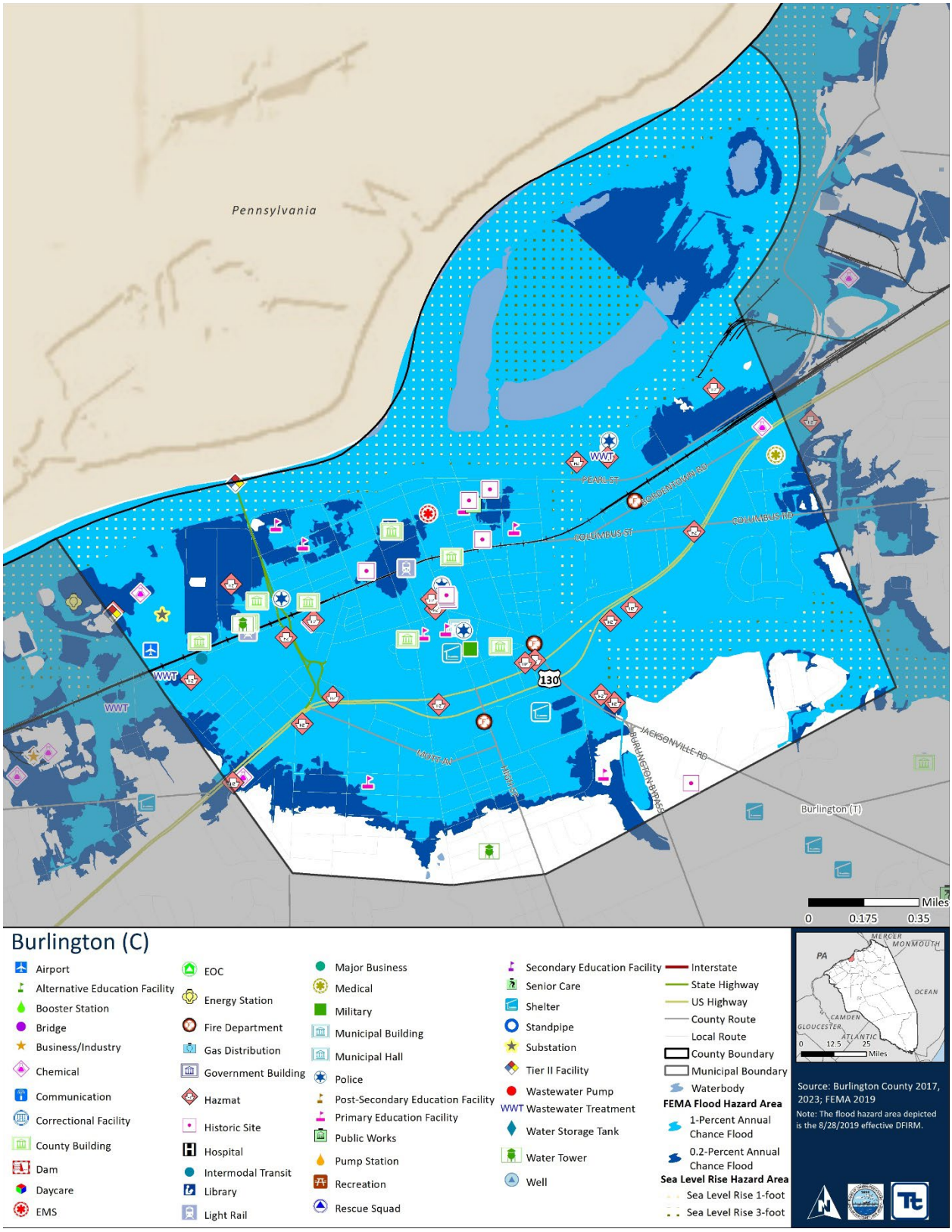
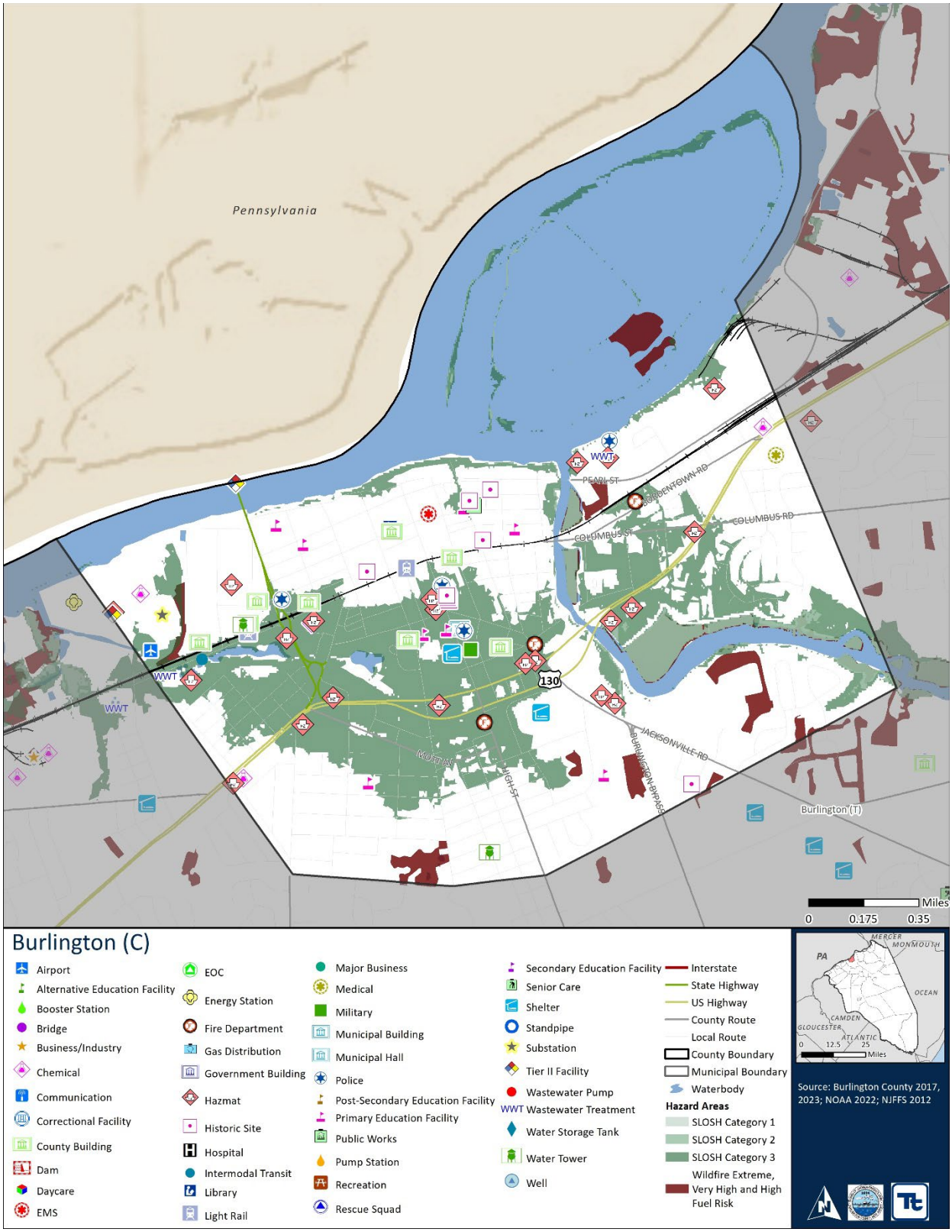


Figure 9.6-2. City of Burlington SLOSH and Wildfire Hazard Area Extent and Location Map



Hazard Event History

Burlington County has a history of natural and non-natural hazard events, as detailed in Volume I, Section 4 (Risk Assessment). A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities.

The City of Burlington's history of federally declared (as presented by FEMA) and significant hazard events [as presented in NOAA-National Centers for Environmental Information (NCEI)] is consistent with that of the County. The table below provides details regarding municipal-specific loss and damages the City of Burlington 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 9.6-13. Hazard Event History Since 2019

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Closures, Damages, and Losses
March 6-7, 2018	Severe Winter Storm (DR-4368)	Yes	Banding and thundersnow produced pockets of heavier snow in the western sections of the area, closer to the Delaware River. The snow contained large amounts of liquid, making it heavy and wet. This resulted in downed trees, limbs, and wires, leading to numerous power outages across portions of New Jersey.	During the incident period, snow created an immediate threat to the health and safety of the general public requiring emergency response and protective measures. All city departments (PD, FD, DPW, OEM and Administration) provided proactive measures for the winter storm that caused major roads to be blocked due to downed power lines and excessive debris in Burlington City. FEMA reimbursed the City for all eligible expenses. The Emergency Operations Center (EOC) was activated and manned for both days 24 hours a day.
June 19-20, 2019	Flash Flood	No	Showers and thunderstorms produced heavy rainfall and flash flooding. Rainfall amounts of 3 to near 6 inches were reported, causing significant flash flooding. Widespread roadway flooding occurred in Burlington City, Burlington Township, Pemberton	On 19 JUN approximately five and half inches of rain fell in 45 minutes flooding many parts of the City's roadways and buildings. The EOC was activated for 12 hours, and all departments were mobilized to assist stranded motorists

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Closures, Damages, and Losses
			Township, Southampton, Medford, Evesham, Maple Shade, and Moorestown, resulting in several road closures.	and homeowners that experienced flooding. The Fire Department conducted many pump-outs the day after the pop-up storm passed. NO emergency declaration was made.
January 20, 2020 – May 11, 2023	Covid-19 Pandemic (EM-3451-NJ, DR-4488-NJ)	Yes	Burlington County accounted for 115,985 positive cases of COVID-19 in the State of New Jersey, and 1,265 of the reported deaths. A total of 991,269 vaccinations were delivered in the County to both residents and non-residents.	As of April 28, 2022, the City experienced 1845 positive cases with another 349 probable cases and 21 deaths from the Covid-19 outbreak. Reports from the County Health Department were discontinued after that date. Meetings were initially held daily with the Administration, Council, and all departments conducted by OEM and overseen by the Mayor, followed by weekly briefings for updates. OEM Coordinator issued an Emergency Declaration on 18 MAR 2020 which remained in place and was rescinded on 11 MAY 2023 after the Public Health Emergency was declared over. An Incident Action Plan (IAP) was developed by OEM and mandated safety procedures and the closing of City Hall to the public. A plan was developed to open City Hall once again as the pandemic subsided. The EOC was temporarily sealed to maintain a sterile environment in the event of a full-blown incident. A claim was filed with FEMA and a reimbursement of 100% of

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Closures, Damages, and Losses
				eligible expenses was recovered. City OEM worked very closely with the County OEM and the County Health Department to procure a supply of Personal Protective Equipment (PPE) for employees and hand sanitizer and test kits for the public. Vaccine clinics were conducted in the City on at least two occasions for initial shots and boosters. Also test sites were set up and administered by the County Health Department.
June 3-4, 2020	Thunderstorm Wind	No	A derecho developed then moved rapidly. Wind gust reports between 60 and 70 MPH were common. Numerous trees were downed in Willingboro, Beverly, Delran, Riverside, Westampton, Burlington City, and Moorestown.	The City experienced minimal damage and debris was cleared by DPW. No major damage was reported.
July 30, 2020	Thunderstorm Wind	No	Scattered thunderstorms, some of which became strong to severe, produced several reports of damaging winds. Wires were downed in Riverside, Burlington City, Mansfield, and Bordentown.	The City experienced minimal damage and debris was cleared by DPW. No major damage was reported.
August 4, 2020	Tropical Storm Isaias (DR-4574-NJ)	Yes	Tropical Storm Isaias brought high winds and heavy rain to Burlington County; some areas of the County reported more than 6 inches over several hours. Burlington County Central Communications fielded over 400 emergency calls and 1,400 non-emergency calls, many for flooded basements and residences.	High winds and heavy rain caused major debris issues and some flooding within the City. DPW conducted debris removal for several days following the storm and the Fire Department conducted pump-outs. A claim was filed with FEMA and a 75% reimbursement of all eligible expenses was procured.
July 12, 2021	Flash Flood	No	Thunderstorms brought locally heavy rain; rainfall totals up to 5 to 8 inches occurred prompting	Heavy rains caused extensive flooding of local streets and low-lying areas. Water

Dates of Event	Event Type (Disaster Declaration if applicable)	County Designated?	Summary of Event	Municipal Summary of Closures, Damages, and Losses
			the issuance of a Flash Flood Emergency. Widespread roadway flooding occurred in Florence Township, Burlington City, Burlington Township, Edgewater Park, Beverly, Palmyra, Delanco, and Riverside causing numerous road closures. There were several water rescues.	rescues of stranded motorists occurred along Route 130 and downtown Burlington. Some streets were closed temporarily and the EOC was activated until the water subsided.
September 1-3, 2021	Remnants of Hurricane Ida (EM-3573-NJ, DR-4614-NJ)	Yes	The remnants of Hurricane Ida produced heavy rainfall, flash floods, and a tornado (EF-1) that moved through Edgewater Park, Beverly, Burlington Township and Burlington City. Rainfall totals exceed 3 inches in parts of County; 4 water rescues occurred due to flash flooding.	Remnants of Hurricane IDA caused excessive rainfall and an EF-1 Tornado within the City. The entire 200 block of York Street was inundated with water. Pump-outs occurred at several locations. Roadways and streets were flooded and had to be closed to traffic with barricades. Both the river and the creek overflowed its banks significantly. The river was full of heavy debris such as trees and other large items swept from the riverbanks. No visible damage occurred as the tornado clipped the corner of the City limits in the vicinity of the Burlington Bristol Bridge. The EOC was activated during this period.

Source: *FEMA 2023, NOAA NCEI 2023*
Notes:
DR *Major Disaster Declaration (FEMA)*
EM *Emergency Declaration (FEMA)*
FEMA *Federal Emergency Management Agency*
N/A *Not applicable*

Hazard Ranking and Vulnerabilities

The hazard profiles in Volume 1, Section 4 (Risk Assessment) have detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the City of Burlington'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 Volume 1, Section 4 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; the potential impacts of the hazard on people, property, and the economy; and community capabilities to address the hazard and changing future climate conditions. Mitigation action development uses the inputs from the evaluation to target those hazards with highest level of concern.

As discussed in Volume 1, Section 4.4 (Hazard Ranking), each participating jurisdiction has differing degrees of risk exposure and vulnerability compared with the County as a whole. Therefore, each municipality ranked the degree of risk to each hazard as it pertains to their community. The table below summarizes the hazard risk/vulnerability rankings of potential natural hazards for the City of Burlington. The City of Burlington reviewed the County hazard risk/vulnerability risk ranking table and individual 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 of Burlington indicated the following:

- Dam Failure should be increased from "Low" to 'Medium'. The older Sylvan Lake Dam gets, and the longer Assiscunk Creek Levee goes without proper improvements, the more likely catastrophic failures become.
- The City agreed with the remainder of the calculated hazard rankings.

Table 9.6-14. Hazard Ranking Input

Hazard	Hazard Ranking – High/Medium/Low
Dam Failure	Medium
Disease Outbreak	Medium
Drought	Low
Earthquake	Low
Extreme Temperatures	Medium
Flood	High
Severe Weather	High
Severe Winter Weather	Medium
Wildfire	Low

Critical Facilities

The table below identifies critical facilities and lifelines in the community located in the 1-percent and 0.2-percent.

Table 9.6-15. Potential Flood Exposure of Critical Facilities and Community Lifelines

Name	Type	Exposure	
		1% Event	0.2% Event
166 - Dr Philson's Office-Burlington FPC	County Building	Yes	Yes
170 - Heureka Center-Burlington WIC	County Building	Yes	Yes

Name	Type	Exposure	
		1% Event	0.2% Event
241 - Sr. Citizens Nutrition Program-Burlington	County Building	Yes	Yes
255 - Sr. Citizens Nutrition Program - Burlington	County Building	Yes	Yes
477 - Communications Equipment - Burlington City	County Building	Yes	Yes
Agaway	Hazmat	Yes	Yes
All Saints Parochial School	Primary Education Facility	Yes	Yes
Burlington City Fire Department	Fire Department	Yes	Yes
Burlington Board of Education	Primary Education Facility	Yes	Yes
Burlington Bristol Bridge	Tier II Facility	Yes	Yes
Burlington Bristol Bridge Police Department	Police	Yes	Yes
Burlington City High School	Secondary Education Facility / Shelter	Yes	Yes
Burlington City Municipal Building	Municipal Hall	Yes	Yes
Burlington City Police	Police	Yes	Yes
Burlington City Sewerage Authority	Wastewater Treatment	Yes	Yes
Burlington Generating Station Heliport (PSE&G)	Airport	Yes	Yes
Burlington South	Intermodal Transit	Yes	Yes
Burlington South Light Rail Station	Light Rail	Yes	Yes
Burlington Towne Centre	Intermodal Transit	Yes	Yes
Burlington Towne Ctr. Light Rail Station	Light Rail	Yes	Yes
Captain James Lawrence School	Primary Education Facility	Yes	Yes
Cementex Production	Hazmat	Yes	Yes
Cenco Heating Oil	Hazmat	Yes	Yes
Central Safety Equipment	Hazmat	Yes	Yes
Central Safety Equipment Co.	Chemical	Yes	Yes
City Sewer Plant	Hazmat	Yes	Yes
Common Council Burlington City	Wastewater Treatment	Yes	Yes
Cooper House	Historic Site	Yes	Yes
Curtin Marina	Hazmat	Yes	Yes
DaVita Burlington North	Medical	Yes	Yes
Endeavor Emergency Squad	EMS	Yes	Yes
Gasko Oil Company	Hazmat	Yes	Yes
Holy Light Christian Academy	Primary Education Facility	Yes	Yes
Home For Aged Women	Senior Care	Yes	Yes
Isaac Collins House	Historic Site	Yes	Yes
Lawrence House	Historic Site	Yes	Yes
Library Company of Burlington	Library	Yes	Yes
Lukoil	Hazmat	Yes	Yes
MALWA Enterprises Inc	Hazmat	Yes	Yes
Martin L Steinmann	Hazmat	Yes	Yes
Mitchell Fire Co #3	Fire Department	Yes	Yes

Name	Type	Exposure	
		1% Event	0.2% Event
Municipal	EOC	Yes	Yes
National Guard Armory	Military	Yes	Yes
Neptune Hose Co #5	Fire Department	Yes	Yes
Niagara Hose Co 6	Fire Department	Yes	Yes
NJSP Marine Police	Police	Yes	Yes
Pearson-How House	Historic Site	Yes	Yes
PSE&G Substation	Substation	Yes	Yes
Quaker School	Historic Site	Yes	Yes
Samuel Smith Elementary School	Primary Education Facility	Yes	Yes
SLF INC	Hazmat	Yes	Yes
Sunco	Hazmat	Yes	Yes
Tedan Inc	Hazmat	Yes	Yes
TEDAN INC.	Chemical	Yes	Yes
US Pipe & Foundry Co.	Hazmat	Yes	Yes
Verizon	Hazmat	Yes	Yes
Verizon NJ Inc	Hazmat	Yes	Yes
Water Plant	Hazmat	Yes	Yes
Wilbur Watts Intermediate School	Primary Education Facility	Yes	Yes
Wilbur Watts Middle School	Shelter	Yes	Yes

Source: Burlington County 2023; Burlington County Planning Partnership 2023; FEMA 2019

Identified Issues

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

- A recent audit of New Jersey's model ordinances by FEMA for conformance with NFIP, resulted in a review of existing local flood damage prevention ordinances. Based upon FEMA's review, specific language related to NFIP regulations was not consistent. Additionally, it was determined that better coordination was needed between the three sets of regulations that regulate development and construction in the floodplain. These regulations are: the NFIP implemented by local floodplain administrators, 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 local Construction Official. NJDEP used this feedback to develop a model Code Coordinated Ordinance and continues to work with municipalities to update flood damage prevention ordinances to the Code Coordinated Ordinance.
- Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The municipality does not have a disaster debris management plan in place. During a disaster that results in debris, the municipality A plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations.

- The municipality does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The municipality is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.
- The Assiscunk Creek levee side slopes and interior drainage pipes on levee are degraded.
- Storm surges cause failure of pump station.
- Kennedy Lake is filled with silt, lowering possible stormwater storage capability.
- Critical facilities in the City do not have backup power.
- Pipes throughout the City require replacement and should be upgraded.
- The current elevation for the Assiscunk Creek Levee is below the 500-year flood level.
- Critical facilities and community lifelines located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.
- 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 14 repetitive loss properties, but other properties may be impacted by flooding as well.
- The municipalities along the U.S. Route 130 corridor in Burlington County are impacted primarily by riverine flooding that may be worsened by climate change. These communities along the Delaware River and its tributaries, including the Rancocas, Assiscunk, and Pompeston creeks, are frequently impacted by severe flooding events. A joint regional climate change resilience planning effort is needed to assess future risks and identify local and regional solutions.
- The City's Stormwater Management Ordinance has not yet been adopted.
- The City does not have a watershed plan.

9.6.7 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritizes actions to address over the next five years.

Past Mitigation Initiative Status

The following table indicates progress on the community's mitigation strategy identified in the 2019 HMP. Actions that are in progress are carried forward and combined with new actions as part of this plan update and are included in the tables with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such and previously presented in the 'Capability Assessment' earlier in this annex.

Table 9.6-16. Status of Previous Mitigation Actions

Project #	Project	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 2024 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.
C. Burlington - 1 (former BTC-1)	WWTP Stormwater Pump Upgrades - Replace aging 60hp and 100 hp pumps with two new 150 hp pumps.	Public Works with support from Sewer and Drainage Department / NJOEM	Complete	No	-	-
C. Burlington - 2 (former BTC-2)	Tide gate Mitigation - Install tide gate units on outfall pipes that do not have existing tide gates installed.	Public Works with support from Sewer and Drainage Department / NJOEM	Ongoing Capability	No	-	-
C. Burlington - 3 (former BTC-3)	PHASE 1 Assiscunk Creek Levee Improvements Phase 1 - including Columbus Park Storm Pipe tide gate replacement - Tide gate replacement and creek-side clearing	Public Works with support from Engineering	Complete	No	-	-
C. Burlington - 4 (former BTC-4)	PHASE 2 Assiscunk Creek Levee Mitigation - Armor the river side slopes and upgrade interior drainage pipes.	Public Works with support from Sewer and Drainage Department / NJOEM	In Progress	Yes	River side slopes and interior drainage pipes on levee are degraded	Public Works with support from Sewer and Drainage Department / NJOEM
C. Burlington - 5 (former BTC-5)	Riverbank near Watkins Alley - Replace inlet and pipes, install a tidal shock valve and restore curbs and sidewalks.	Public Works with support from Sewer and Drainage Department / NJOEM	No Progress	No	-	-

Project #	Project	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 2024 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.
C. Burlington - 6 (former BTC-6)	Riverbank and Wood Street - Replace inlet and pipes, and restore curbs, pavement and sidewalks	Public Works with support from Sewer and Drainage Department / NJOEM	No Progress	No	-	-
C. Burlington - 7 (former BTC-7)	Mitchell Court Outfalls (west side of Assiscunk Creek). Replace pipe, install tideflex check valves and restore disturbed areas.	Public Works with support from Sewer and Drainage Department / NJOEM	No Progress	No	-	-
C. Burlington - 8 (former BTC-8)	Mitchell Avenue Outfalls (east side of Assiscunk Creek) - Replace pipe, install tideflex check valves and restore disturbed areas.	Public Works with support from Sewer and Drainage Department / NJOEM	No Progress	No	-	-
C. Burlington - 9 (former BTC-9)	Mitchell Avenue Pump Station Storm Event Bypass System - Provide bypass pumping to handle storm surges	Public Works with support from Sewer and Drainage Department / NJOEM	In Progress Waiting for funding	Yes	Storm surges cause failure of pump station	Public Works with support from Sewer and Drainage Department / NJOEM
C. Burlington - 10 (former BTC-10)	Kennedy Lake Dredging - Dredge the lake at the low-end of the drainage area to maximize stormwater storage.	Public Works with support from Sewer and Drainage Department / NJOEM	In Progress Waiting for funding	Yes	Lake is filled with silt, lowering possible stormwater storage capability	Public Works with support from Sewer and Drainage Department / NJOEM

Project #	Project	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 2024 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.
C. Burlington 11 - (former BTC-11)	Upgrade to various outfalls along the Delaware River and Assiscunk Creek - Replace aging flapper tide gates with tideflex check valves.	Public Works with support from Sewer and Drainage Department / NJOEM	Ongoing Capability	No	-	-
C. Burlington - 12 (former BTC-12)	Mobile Emergency Bypass Pump System - Purchase a 12" pump with trailer with associated hoses and piping.	Public Works with support from Sewer and Drainage Department / NJOEM	Complete	No	-	-
C. Burlington - 13 (former BTC-13)	Scott, Pine, McNeill Streets and Route 130 Drainage Improvements - Replace inlets and pipe including undersized pipe under Route 130 and restore curbs, sidewalks and pavement.	Public Works with support from Sewer and Drainage Department / NJOEM	No Progress	No	-	-
C. Burlington - 14(former BTC-14)	Conduct and facilitate community and public education and outreach for residents and businesses to promote natural hazard risk reduction to include: • Disaster preparedness • Hazard mitigation High water marks	Municipality with support from Planning Partners, County Planning, NJOEM, FEMA	Ongoing Capability	No	-	-
C. Burlington - 15 (former BTC-16)	Obtain and install backup power sources at all critical facilities to include shelters.	Municipality engineering with support from OEM, County, NJOEM and FEMA	No Progress	Yes	Critical facilities do not have backup power.	Municipality engineering with support from OEM, County, NJOEM and FEMA

Project #	Project	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 2024 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.
C. Burlington - 17 (former BTC-20)	Enhance resilience to severe storms by joining the NOAA "StormReady" program.	OEM with support from County, NJOEM and FEMA	Complete	No	-	-
C. Burlington - 18 (former BTC-21)	Provide public education and outreach on proper installation and/or use of backup power	Municipal Clerk with support from OEM and government	No Progress	No	-	-
C. Burlington - 19 (former BTC-23)	Develop study for identifying specific vulnerabilities associated with vulnerable critical facilities noted in Section 9.6.6.2 of this annex	Lead: Twp. OEM Support: Twp. Engineer	No Progress	No	-	-
C. Burlington - 20 (former BTC-24)	Appoint a committee of relevant stakeholders (e.g., police, fire, etc.) to explore feasible mitigation activities for the City's identified vulnerable critical facilities	Lead: Twp. OEM Support: Twp. PD, Fire, Schools	No Progress	No	-	-
C. Burlington - 21 (former BTC-25)	Kennedy Lake Outfall Pipe Upgrades	Public Works with support from Sewer and Drainage Department / NJOEM	No Progress	No	-	-
C. Burlington - 22 (former BTC-26)	Columbus Street Drainage Pipe and Outfall Upgrades	Public Works with support from Sewer and Drainage	No Progress	No	-	-

Project #	Project	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 2024 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.
		Department / NJOEM				
C. Burlington - 23 (former BTC-27)	Corrugated Metal Pipe (CMP) Drainage Pipe Upgrades (City-wide)	Public Works with support from Sewer and Drainage Department / NJOEM	In Progress Waiting for funding	Yes	Pipes throughout the City should be upgraded	Public Works with support from Sewer and Drainage Department / NJOEM
C. Burlington - 24 (former BTC-28)	Assiscunk Creek Levee Upgrades to 500-Year Flood Level Elevation	Public Works with support with Sewer and Drainage Department / NJOEM	No Progress	Yes	The current elevation for the Assiscunk Creek Levee is below the 500-year flood level	Public Works with support with Sewer and Drainage Department / NJOEM
C. Burlington - 25	Coordinate with the facilities managers at County Buildings in the City of Burlington to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Municipality with support from County	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from County
C. Burlington - 26	Coordinate with the facilities managers at Municipal buildings (EOC, Municipal Hall) to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation	Municipality	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary	Municipality

Project #	Project	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 2024 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.
	to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.				complications for the municipality during an emergency event and post-disaster recovery.	
C. Burlington - 27	Coordinate with the facilities manager at the City of Burlington schools to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Municipality with support from schools	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from schools
C. Burlington - 28	Coordinate with the facilities managers at the City of Burlington Haz Mat facilities to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on	Municipality with support from Haz Mat site operators	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from Haz Mat site operators

Project #	Project	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 2024 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.
	available funding and local match ability.					
C. Burlington - 29	Coordinate with the facilities managers at the City of Burlington Emergency Response Facilities (Police Station, Fire Station, EMS Station) to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Municipality with support from Emergency Response Facilities	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from Emergency Response Facilities
C. Burlington - 30	Coordinate with the facilities managers at the Medical and Senior Care Facilities in the City of Burlington to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Municipality with support from Medical and Senior Care Facilities	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from Medical and Senior Care Facilities

Project #	Project	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 2024 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.
C. Burlington - 31	Coordinate with the facilities managers at the City of Burlington Water and Wastewater facilities to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Municipality with support from Water and Wastewater facilities	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from Water and Wastewater facilities
C. Burlington - 32	Coordinate with the facilities managers at the City of Burlington transportation (light rail, intermodal transit, airport) facilities to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Municipality with support from Transportation facilities	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from Transportation facilities
C. Burlington - 33	Coordinate with the facilities managers at the City of Burlington Historic sites to support the mitigation of vulnerable structures via retrofit (e.g. elevation,	Municipality with support from Historic site managers.	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also	Municipality with support from Historic site managers.

Project #	Project	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 2024 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.
	flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.				create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	
C. Burlington - 34	Coordinate with the facilities managers at the City of Burlington chemical and Tier II facilities to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Municipality with support from Chemical and tier facilities	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from Chemical and tier facilities
C. Burlington - 35	Coordinate with the facilities managers at the City of Burlington substations to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on	Municipality with support from substation operators	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from substation operators

Project #	Project	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 2024 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.
	available funding and local match ability.					
C. Burlington - 36	Coordinate with the facilities manager at the City of Burlington shelter to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.	Municipality with support from shelter operators	No Progress	Yes	Critical facilities located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.	Municipality with support from shelter operators
C. Burlington - 37	Require new developments to provide mitigation to ensure that the cumulative rate of peak runoff is maintained at pre-development levels	Municipality	Ongoing Capability	No	-	-
C. Burlington - 38	The City will continue to promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL), such as acquisition/relocation or elevation depending on feasibility. The parameters for this initiative would be: funding, benefits versus cost, and willing participation of property owners	Municipality	No Progress	No	-	-

Project #	Project	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 2024 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.
C. Burlington - 39	Repair compromised bulkhead and sidewalk on Burlington City Promenade.	City of Burlington Department of Housing and Community Development	Complete	No	-	-

Additional Mitigation Efforts

In addition to the mitigation initiatives completed in the table above, the City of Burlington identified the following mitigation efforts completed since the last HMP:

- Completed Ellis Street drainage pipe replacement.
- Completed Mitchell Court and Mitchell Avenue flood mitigation study.
- Completed clearing one section of Assiscunk Creek Levee.

Since the adoption of the County's first HMP, the City of Burlington has made significant mitigation progress in the following areas:

- Awareness and outreach
- Planning

Proposed Hazard Mitigation Initiatives for the HMP Update

The City of Burlington participated in a mitigation action workshop in October 2023 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 Flood prone 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. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table to further demonstrate the wide range of activities and mitigation measures selected.

Table 9.6-17. Analysis of Mitigation Actions by Hazard and Category

Hazard	FEMA				CRS					
	LPR	SIP	NSP	EAP	PR	PP	PI	NR	SP	ES
Dam Failure	X	X			X					X
Disease Outbreak		X			X					X
Drought	X	X			X					X
Earthquake	X	X			X					X
Extreme Temperatures	X	X			X					X
Flood	X	X			X	X			X	X
Severe Weather	X	X			X	X			X	X
Severe Winter Weather	X	X			X					X
Wildfire	X	X			X					X

Note: Mitigation categories are described below the Mitigation Initiatives.

The following pages list the specific mitigation initiatives City of Burlington would like to pursue in the future to reduce the effects of hazards. The 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 Burlington priorities.

Action 2024-BurlingtonC-01. Code Coordinated Ordinance

Lead Agency:	Floodplain Administrator
Supporting Agencies:	Construction Official, Administration, NFIP State Coordinator, FEMA Regional Office
Hazard(s) of Concern:	Flood
Description of the Problem:	A recent audit of New Jersey's model ordinances by FEMA for conformance with NFIP, resulted in a review of existing local flood damage prevention ordinances. Based upon FEMA's review, specific language related to NFIP regulations was not consistent. Additionally, it was determined that better coordination was needed between the three sets of regulations that regulate development and construction in the floodplain. These regulations are: the NFIP implemented by local floodplain administrators, 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 local Construction Official. NJDEP used this feedback to develop a model Code Coordinated Ordinance and continues to work with municipalities to update flood damage prevention ordinances to the Code Coordinated Ordinance.
Description of the Solution:	After obtaining the appropriate review and concurrence by the NFIP State Coordinator and the FEMA Regional Office, the municipality will update and adopt the Code Coordinated Ordinance.
Estimated Cost:	Staff time
Potential Funding Sources:	Municipal budget
Implementation Timeline:	Within 5 years
Goals Met:	1, 2, 5, 7
Benefits:	The updated ordinance will improve floodplain management, meet NFIP requirements, and increase resilience of new and substantially improved structures in the floodplain.
Impact on Socially Vulnerable Populations:	The action will result in better regulation of construction standards within the Special Flood Hazard Area where significant risk to socially vulnerable populations exists.
Impact on Future Development:	The action will result in stronger regulation of construction standards for future development in the Special Flood Hazard Area.
Impact on Critical Facilities/Lifelines:	Critical facilities and lifelines located in the Special Flood Hazard Area will be required to meet the same requirements as general building construction that are set forth in the ordinance.
Impact on Capabilities:	This action will improve floodplain management capabilities through better outlining of responsibilities and administrative procedures.
Climate Change Considerations:	The updated ordinance includes the State's higher standards that are in place to address heightened flood risk due to climate change such as

	those for floodway rise and mandatory freeboard have been incorporated in these new model ordinances.	
Mitigation Category:	Local Plans and Regulations	
CRS Category:	Preventative	
Priority:	High	
Alternatives:	**Action**	**Evaluation**
	No Action	Current problem exists
	Modify existing flood damage prevention ordinance	Time intensive
	Leave NFIP	Residents lose flood insurance coverage

Action 2024-BurlingtonC-02. Disaster Debris Management Plan

Lead Agency:	Public Works	
Supporting Agencies:	OEM	
Hazard(s) of Concern:	Dam Failure, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire	
Description of the Problem:	Major disaster events can result in large amounts of debris that overwhelm normal trash collection operations. Depending on the amount generated, temporary staging areas for debris collection may be needed. The municipality does not have a disaster debris management plan in place. During a disaster that results in debris, the municipality needs a plan with outlined responsibilities is needed to adequately address post-disaster cleanup operations. For example, the estimated debris generated from the 1-percent annual chance flood hazard for the City of Burlington is 18,102 tons.	
Description of the Solution:	The municipality will develop a disaster debris management plan. This plan will establish procedures and guidelines for managing disaster debris in a coordinated, environmentally responsible, and cost-effective manner. The plan will identify responsibilities for execution of the plan. The plan will align with permitted temporary collection areas.	
Estimated Cost:	Staff time	
Potential Funding Sources:	Municipal budget	
Implementation Timeline:	Within 5 years	
Goals:	5, 6	
Benefits:	The action will result in increased quicker and more efficient cleanup after disaster events.	
Impact on Socially Vulnerable Populations:	N/A	
Impact on Future Development:	N/A	
Impact on Critical Facilities/Lifelines:	N/A	
Impact on Capabilities:	The action will result in increased post disaster capabilities.	
Climate Change Considerations:	Climate change may result in an increase in the frequency and severity of weather-related disaster events. This action will increase the capabilities to respond to these events.	
Mitigation Category:	Local Plans and Regulations	
CRS Category:	Emergency Services	
Priority:	Medium	
Alternatives:	**Action**	**Evaluation**

	No Action	-
	Rely on federal cleanup	These services may or may not be available
	Rely on state cleanup	These services may or may not be available

Action 2024-BurlingtonC-03. Substantial Damage Management Plan

Lead Agency:	Floodplain Administrator
Supporting Agencies:	Public Works, OEM, Construction Department
Hazard(s) of Concern:	Dam Failure, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire
Description of the Problem:	Officials in NFIP-participating communities are responsible for regulating all development in SFHAs by issuing permits and enforcing local floodplain requirements, including Substantial Damage, for the repairs of damaged buildings. After any disaster event, they must: • Determine where the damage occurred within the community and if the damaged structures are in an SFHA. • Determine what to use for "market value" and cost to repair; uniformly applying regulations will protect against liability and promote equitable administration. • Determine if repairing plus improving the damaged structure equals or exceeds 50% of the structure's pre-damage value. • Require permits for floodplain development. The municipality does not have a Substantial Damage Management Plan in place, nor do they have a formal process in place when conducting substantial damage determinations. The municipality is in need of a formal process and plan to provide a framework for conducting such inspections and determinations.
Description of the Solution:	The municipality will develop a Substantial Damage Management Plan, following the six step planning process in 2021 *Developing a Substantial Damage Management Plan* (https://crsresources.org/files/500/developing_subst_damge_mgmt_plan.pdf). This plan will outline responsibilities for Substantial Damage determinations, determining market value, and permit approval processes following a disaster event.
Estimated Cost:	Low
Potential Funding Sources:	Municipal budget
Implementation Timeline:	Within 5 years to develop the plan; ongoing to maintain and update the plan
Goals Met:	1, 2 5, 7
Benefits:	This plan will provide a process in making Substantial Damage Determinations and allow the municipality to make these determinations and meet NFIP requirements more quickly.
Impact on Socially Vulnerable Populations:	Substantially damaged structures are required to be rebuilt to be compliance with current codes. Socially vulnerable populations may not have the financial means to make these improvements. This action may allow for the identification of potential resources to address substantial damages to structures owned by socially vulnerable populations.

Impact on Future Development:	A Substantial Damage Management Plan would include all existing, current, and future development in the municipality.	
Impact on Critical Facilities/Lifelines:	A Substantial Damage Management Plan would include all critical facilities and lifelines in the municipality.	
Impact on Capabilities:	This action improves disaster recovery capabilities.	
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events. This action provides additional planning for disaster recovery.	
Mitigation Category:	Local Plans and Regulations	
CRS Category:	Emergency Services, Preventative	
Priority:	High	
Alternatives:	**Action**	**Evaluation**
	No Action	-
	Rely on state or federal resources following disaster events	Resources may not be available during major widespread events
	Establish MOUs with outside agencies to conduct Substantial Damage Determinations	A plan outlining responsibilities is still necessary to prevent missing important requirements

Action 2024-BurlingtonC-04. Assiscunk Creek Levee Mitigation

Lead Agency:	Public Works	
Supporting Agencies:	Sewer and Drainage Department, NJOEM	
Hazard(s) of Concern:	Flood, Severe Weather	
Description of the Problem:	The Assiscunk Creek levee side slopes and interior drainage pipes on levee are degraded.	
Description of the Solution:	Rehabilitate and armor the side slopes of the Assiscunk Creek levee using rip rap and other hardening techniques. Interior drainage pipes will be replaced with modern pipes.	
Estimated Cost:	High ($2,171,735)	
Potential Funding Sources:	FEMA BRIC, HMGP, NJEIT	
Implementation Timeline:	5 years	
Goals Met:	2	
Benefits:	This action will reduce the Assiscunk Creek's vulnerability to erosion caused by flooding and severe storms, ultimately strengthening both the Creek and levee.	
Impact on Socially Vulnerable Populations:	N/A	
Impact on Future Development:	N/A	
Impact on Critical Facilities/Lifelines:	This action will harden the Assiscunk levee, a critical facility, and provide a reduction in erosion.	
Impact on Capabilities:	N/A	
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. As sea level rises due to climate change, the area of the flood hazard may expand.	
Mitigation Category	Structure and Infrastructure Project	
CRS Category	Structural Flood Control Projects	
Priority	High	
Alternatives:	**Action**	**Evaluation**
	No action	Current problem continues
	Rebuild levee	Cost prohibitive
	Remove levee and institute green infrastructure	May not be entirely effective in reducing flood risk

Action 2024-BurlingtonC-05. Mitchell Avenue Pump Station Storm Event Bypass System

Lead Agency:	Public Works
Supporting Agencies:	Sewer and Drainage Department, NJOEM
Hazard(s) of Concern:	Flood
Description of the Problem:	Storm surges cause failure of pump station.
Description of the Solution:	A Storm Event bypass system at the Mitchell Avenue Pump Station will be installed. This bypass system will be designed to allow continued function of the pump station during flood events.
Estimated Cost:	High ($260,000)
Potential Funding Sources:	FEMA BRIC, HMGP
Implementation Timeline:	2 years
Goals Met:	2
Benefits:	This action permit the continued use of the Mitchell Avenue Pump Station during flood events.
Impact on Socially Vulnerable Populations:	N/A
Impact on Future Development:	N/A
Impact on Critical Facilities/Lifelines:	This bypass system will be designed to allow continued function of the pump station during flood events.
Impact on Capabilities:	N/A
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. As sea level rises due to climate change, the area of the flood hazard may expand.
Mitigation Category	Structure and Infrastructure Project
CRS Category	Structural Flood Control Projects
Priority	High

Alternatives:

Action	Evaluation
No action	Current problem continues
Purchase mobile pump station	Cost prohibitive
Construct floodwall around pump station to prevent facility flooding	Cost prohibitive

Action 2024-BurlingtonC-06. Kennedy Lake Dredging

Lead Agency:	Public Works	
Supporting Agencies:	Sewer and Drainage Department, NJOEM	
Hazard(s) of Concern:	Flood	
Description of the Problem:	Kennedy Lake is filled with silt, lowering possible stormwater storage capability.	
Description of the Solution:	Kennedy Lake will be dredged, targeting the low end of the drainage area in order to maximize stormwater storage. Debris will also be removed where possible.	
Estimated Cost:	High ($4,000,000)	
Potential Funding Sources:	FEMA BRIC, HMGP	
Implementation Timeline:	5 years	
Goals Met:	2	
Benefits:	This action will result in Kennedy Lake increasing its stormwater storage, reducing the flood risk in the areas surrounding the lake.	
Impact on Socially Vulnerable Populations:	N/A	
Impact on Future Development:	N/A	
Impact on Critical Facilities/Lifelines:	N/A	
Impact on Capabilities:	N/A	
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events.	
Mitigation Category	Structure and Infrastructure Project	
CRS Category	Structural Flood Control Projects	
Priority	Medium	
Alternatives:	**Action**	**Evaluation**
	No action	Current problem continues
	Raise banks of lake to increase storage capacity	Cost prohibitive
	Expand lake	Cost prohibitive

Action 2024-BurlingtonC-07. Generators at Critical Facilities

Lead Agency:	Engineering
Supporting Agencies:	OEM, County, NJOEM and FEMA
Hazard(s) of Concern:	Dam Failure, Disease Outbreak, Drought, Earthquake, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire
Description of the Problem:	Critical facilities in the City do not have backup power.
Description of the Solution:	Obtain and install backup power sources at all critical facilities, including the City's Point of Distribution and warming/cooling locations.
Estimated Cost:	High
Potential Funding Sources:	FEMA BRIC, HMGP, Municipal Budget
Implementation Timeline:	5 years
Goals Met:	1, 6, 7
Benefits:	The City will be able to provide a continued safe, local location for residents to cool or warm themselves during extreme temperature or severe winter weather events.
Impact on Socially Vulnerable Populations:	Socially vulnerable populations in need of warming or cooling will utilize the centers; furthermore, those with needs tied into power consumption (oxygen tanks, dialysis, etc.) will require a power source. Socially vulnerable populations also may be reliant on points of distribution for resources before, during, or after a hazard event.
Impact on Future Development:	N/A
Impact on Critical Facilities/Lifelines:	Locations identified in this action are critical facilities. These facilities may need an emergency generator to provide continued assistance to vulnerable populations.
Impact on Capabilities:	The action would create a new capability for the City.
Climate Change Considerations:	Climate change is likely to increase the intensity and frequency of many climate related disaster events. This action provides a safe location with air conditioning and heat for residents and visitors to locate to during hazard events.
Mitigation Category	Structure and Infrastructure Project
CRS Category	Emergency Services
Priority	Medium

Alternatives:

Action	Evaluation
No Action	Current problem continues
Solar Panels	Weather dependent and costly
Mobile Generator	May lack sufficient power supply or run time

Action 2024-BurlingtonC-08. Corrugated Metal Pipe (CMP) Drainage Pipe Upgrades

Lead Agency:	Public Works
Supporting Agencies:	Sewer and Drainage Department, NJOEM
Hazard(s) of Concern:	Flood, Severe Weather
Description of the Problem:	Pipes throughout the City require replacement and should be upgraded.
Description of the Solution:	Throughout the City, based on available funding, drainage pipes will be replaced with Corrugated Metal Pipes (CMP).
Estimated Cost:	High
Potential Funding Sources:	FEMA BRIC, HMGP, Municipal Budget
Implementation Timeline:	4 years
Goals Met:	2
Benefits:	Replacing old pipes with CMP will offer structural strength and increase the allowable flow of water through the piping, reducing flood risk.
Impact on Socially Vulnerable Populations:	N/A
Impact on Future Development:	N/A
Impact on Critical Facilities/Lifelines:	N/A
Impact on Capabilities:	N/A
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. As sea level rises due to climate change, the area of the flood hazard may expand.
Mitigation Category	Structure and Infrastructure Project
CRS Category	Structural Flood Control Projects
Priority	Medium

Alternatives:

Action	Evaluation
No action	Drainage pipes continue to degrade
Replace drainage pipes with non-corrugated piping	Piping not as strong
Install green infrastructure/flood storage	Sufficient space may not be available to meet storage

Action 2024-BurlingtonC-09. Assiscunk Creek Levee Upgrades to 500-Year Flood Level Elevation

Lead Agency:	Public Works
Supporting Agencies:	Sewer and Drainage Department, NJOEM
Hazard(s) of Concern:	Flood, Severe Weather
Description of the Problem:	The current elevation for the Assiscunk Creek Levee is below the 500-year flood level.
Description of the Solution:	The Assiscunk Creek Levee will be lifted to the 500-year flood level elevation with necessary upgrades to components to support the increased protection level.
Estimated Cost:	High
Potential Funding Sources:	FEMA BRIC, HMGP, Municipal Budget
Implementation Timeline:	4 years
Goals Met:	2
Benefits:	This action will improve the protection of the Assiscunk Creek Levee and the populations which leave area the levee.
Impact on Socially Vulnerable Populations:	The action will improve the safety and security of those within inundation areas where significant risk to socially vulnerable populations exists.
Impact on Future Development:	The strengthening and increase in protection levels may influence how the City chooses to develop the areas surrounding the levee.
Impact on Critical Facilities/Lifelines:	Levees are considered a critical facility. This action will strengthen and further protect the levee.
Impact on Capabilities:	N/A
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. As sea level rises due to climate change, the area of the 500-year flood hazard may expand.
Mitigation Category	Structure and Infrastructure Project
CRS Category	Structural Flood Control Projects
Priority	Medium

Alternatives:

Action	Evaluation
No Action	Problem continues
Rebuild Levee	Cost prohibitive
Remove levee and institute green infrastructure	May not be entirely effective in reducing flood risk

Action 2024-BurlingtonC-10. Critical Facilities and Community Lifelines in the Floodplain

Lead Agency:	City Administration
Supporting Agencies:	OEM, facility managers
Hazard(s) of Concern:	Flood
Description of the Problem:	Critical facilities and community lifelines located in the floodplain are not only susceptible to flood damage but also create unnecessary complications for the municipality during an emergency event and post-disaster recovery.
Description of the Solution:	Coordinate with the facilities managers at the City of Burlington shelter, County Buildings, Municipal buildings, City of Burlington schools, City of Burlington Haz Mat facilities, City of Burlington Emergency Response Facilities, Medical and Senior Care Facilities, City of Burlington Water and Wastewater facilities, City of Burlington transportation (light rail, intermodal transit, airport) facilities, City of Burlington Historic sites, City of Burlington chemical and Tier II facilities, and City of Burlington substations to support the mitigation of vulnerable structures via retrofit (e.g. elevation, flood-proofing) or relocation to protect structures from future damage. Phase 1: Identify most cost-effective mitigation option Phase 2: Work with facility manager to implement selected action based on available funding and local match ability.
Estimated Cost:	High
Potential Funding Sources:	FEMA BRIC, HMGP, Municipal Budget
Implementation Timeline:	5 years
Goals Met:	2
Benefits:	This action will remove or reduce critical facility and community lifeline vulnerability to the flood hazard and remove or reduce safety risks for first responders.
Impact on Socially Vulnerable Populations:	Retrofitting or relocating the identified structures will benefit socially vulnerable populations, as individuals within these populations rely on resources from various government facilities, transportation facilities, and medical and senior care facilities.
Impact on Future Development:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.
Impact on Critical Facilities/Lifelines:	Noting the number of facilities located within the flood hazard area may encourage the consideration of relocating critical facilities and lifelines from the flood hazard area and deter the development of any additional facilities in the flood hazard area.

Impact on Capabilities:	N/A	
Climate Change Considerations:	A warmer atmosphere means storms have the potential to be more intense and occur more often, including increased periods of intense rain events. As sea level rises due to climate change, the area of the flood hazard may expand.	
Mitigation Category	Structure and Infrastructure Project	
CRS Category	Structural Flood Control Projects	
Priority	Medium	
Alternatives:	**Action**	**Evaluation**
	No action	Current problem continues
	Floodproof existing structures	May not necessarily reduce risk
	Construct floodwalls to stop flood issues	Will most likely interrupt natural floodplain function

Action 2024-BurlingtonC-11. Repetitive Loss Mitigation

Lead Agency:	Floodplain Administrator
Supporting Agencies:	-
Hazard(s) of Concern:	Severe Weather, Flood
Description of the Problem:	Frequent flooding events have resulted in damages to residential properties. These properties have been repetitively flooded as documented by paid NFIP claims. The City has 14 repetitive loss properties, but other properties may be impacted by flooding as well.
Description of the Solution:	Conduct outreach to 25 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 residential homes in the flood prone areas that experience frequent flooding (high risk areas).
Estimated Cost:	Low for outreach, cost for implementation dependent on approaches taken and number of properties
Potential Funding Sources:	BRIC, FMA, HMGP, match from property owners
Implementation Timeline:	Within 5 years
Goals Met:	1, 2
Benefits:	Eliminates flood damage to homes and residences, which creating an open space for the municipality and increasing flood storage.
Impact on Socially Vulnerable Populations:	• Collecting data regarding homeowners that reside within flood prone areas provides an opportunity to introduce location-specific opportunities for assistance. • Removing homes from the floodplain immediately removes the risk to life and property.
Impact on Future Development:	• Increased outreach to homeowners within a flood prone area will limit construction in areas that are prone to hazard events. • Homes may be acquired, which will remove those structures from the floodplain and prevent future development on those sites.
Impact on Critical Facilities/Lifelines:	Removing structures from the floodplain decreases the demand on utilities and emergency services including health and medical, law enforcement, and search and rescue.
Impact on Capabilities:	Removing the risk from the immediate floodplain via acquisition of properties will free up resources for search and rescue and other emergency operations as needed.
Climate Change Considerations:	Climate change is likely to increase the frequency and severity of severe rainfall, flash flooding, riverine flooding, and coastal flooding from sea level rise and storm surge events. Removing structures from the floodplain will reduce the response and recovery costs as a result of these events and

	decrease the loss of human life as a result of these events. Elevating structures will reduce the recovery costs as a result of these events.	
Mitigation Category	Structure and Infrastructure Project	
CRS Category	Property Protection	
Priority	High	
Alternatives:	**Action**	**Evaluation**
	No Action	-
	Levee around floodplain	Costly, not enough room
	Deployable flood barriers	Requires deployment. Residents may not have adequate time to deploy, especially those who are elderly or disabled.

Action 2024-BurlingtonC-12. Stormwater Pump Intake Upgrades

Lead Agency:	City Department of Public Works
Supporting Agencies:	Engineering
Hazard(s) of Concern:	Severe Weather, Flood
Description of the Problem:	The Stormwater Pumps located at the City's Wastewater Treatment Plant (901 West Broad Street, Burlington City, NJ 08016) cannot be used to their full capacity because of inadequate, aging infrastructure between the Kennedy Lake system and the pumps. The Kennedy Lake system collects over 1,200 acres of drainage area including Sylvan Lakes in neighboring Burlington Township. The limited pump capacity has led to flooding on N.J. State Highway Route 130 (flooding which could be mitigated by this project).
Description of the Solution:	The City proposes to replace the existing 72" RCP and bladder dam between the Kennedy Lake system and the pumps with a concrete drainage channel with mechanical bar screen and steel grate decking. The channel size will be designed to maximize the capacity of the two (2) 150 HP stormwater pumps and control the lake level during flood events.
Estimated Cost:	High
Potential Funding Sources:	BRIC, HMGP, Municipal Budget
Implementation Timeline:	Within 5 years
Goals Met:	2
Benefits:	Eliminates flood damage to homes and residences, which creating an open space for the municipality and increasing flood storage.
Impact on Socially Vulnerable Populations:	Socially vulnerable populations who live in the vicinity of the pump station will have property further protected from the flood hazard by the pump station's increased capacity.
Impact on Future Development:	This action will enhance the protection of future development from flood hazard by increasing the pump's capacity.
Impact on Critical Facilities/Lifelines:	The increase in capacity will allow continued function of the pump station during flood events.
Impact on Capabilities:	This action will permit an already existing capability to function and an increased capacity.
Climate Change Considerations:	Climate change is likely to increase the frequency and severity of severe rainfall, flash flooding, riverine flooding, and coastal flooding from sea level rise and storm surge events. Increased the pump's capacity will alleviate flooding impacts.
Mitigation Category	Structure and Infrastructure Project
CRS Category	Structural Flood Control Projects
Priority	High

	Action	Evaluation
Alternatives:	No Action	-
	Purchase mobile pump station	Cost prohibitive
	Construct floodwall around pump station to prevent facility flooding	Cost prohibitive

Action 2024-BurlingtonC-13. Burlington County – U.S. Route 130 Corridor Climate Change-Related Hazard Vulnerability Assessment

Lead Agency:	City of Burlington Administration
Supporting Agencies:	Burlington County Department of Public Works, NJDEP Office of Climate Resilience Resilient NJ: Municipal Assistance Program, Beverly City, Burlington Township, Cinnaminson Township, Delran Township, Edgewater Park Township, Florence Township, Palmyra Borough, Riverton Borough, Riverside Township, and Willingboro Township.
Hazard(s) of Concern:	Drought, Extreme Temperature, Flood, Severe Weather, Severe Winter Weather, Wildfire
Description of the Problem:	The municipalities along the U.S. Route 130 corridor in Burlington County are impacted primarily by riverine flooding that may be worsened by climate change. These communities along the Delaware River and its tributaries, including the Rancocas, Assiscunk, and Pompeston creeks, are frequently impacted by severe flooding events. A joint regional climate change resilience planning effort is needed to assess future risks and identify local and regional solutions.
Description of the Solution:	The NJ DEP will engage consultants on behalf of the communities to complete this work. The resilience planning process to develop the Climate Change-Related Hazard Vulnerability Assessment (CCRHVA) involves the following: • Community engagement and outreach to plan for each municipality; • Examination of current local conditions through research and review of data, reports, plans, and other information that have shaped the community's and the region's character; • Assessments to understand the current and future local impacts of climate change; and • Identification and prioritization of appropriate strategies, design standards and other resilience actions that address and/or minimize the impacts of climate change and other natural hazards assessed in the CCRHVA. In response to the vulnerabilities identified in the vulnerability assessment, potential strategies, regulations, and design standards that could be implemented to reduce, mitigate, or avoid risks, as well as increase resilience will be identified. Considerations include land use strategies, design standards/ building codes, zoning ordinances, and programming. Resilience actions appropriate for the county or other state/regional entities, and those where cooperation/ coordination by multiple municipalities, if necessary, will be identified in addition to municipal-specific actions. For each action, responsible parties, estimated rough costs for implementation (if applicable), possible sources of funding, and the estimated timelines will be identified.
Estimated Cost:	$760,000 for full region
Potential Funding Sources:	NOAA through the New Jersey Coastal Management Program
Implementation Timeline:	Within 3 years
Goals Met:	1, 2, 3, 4, 5, 6, 7
Benefits:	This effort will result in the following benefits: • Current and future threats to, and vulnerabilities of, each municipality associated with climate-related hazards, including, but not limited to, increased temperatures, drought, all types of

	flooding, hurricanes, increased risk of fire, and sea-level rise will be analyzed. • Assess the threats to, and vulnerabilities of, socially vulnerable populations will be assessed and actions to address the impacts will be identified. • A buildout analysis of future residential, commercial, industrial, and other development in each municipality, and an assessment of the threats and vulnerabilities to that development will be developed • Critical facilities, utilities, roadways, and infrastructure necessary for evacuation purposes and sustaining quality of life during a natural disaster and immediately thereafter will be identified. • Potential impacts of natural hazards on the relevant elements of each individual master plan will be analyzed. Considerations include community facilities plans, open space, housing, economic development, circulation/ transportation, sustainability, health, capital improvements, redevelopment, etc. • Potential strategies and design standards that could be implemented to reduce or avoid risks associated with natural hazards will be identified.
Impact on Socially Vulnerable Populations:	This effort will assess the potential risks and impacts of hazards on socially vulnerable and underserved populations and describe how they may exacerbate disadvantages. Actions will be developed to reduce risks for these populations.
Impact on Future Development:	The assessments will include a geographically based build-out analysis of current and future residential, commercial, industrial, and other development in each municipality on developed, underdeveloped, and undeveloped land, to inform an assessment of the exposure and vulnerabilities of those land uses in relation to the hazards identified.
Impact on Critical Facilities/Lifelines:	The assessments will identify and assess the exposure and vulnerability of critical facilities, systems, utilities, roadways, and other infrastructure necessary for evacuation purposes and sustaining quality of life during and immediately after a natural disaster. The assessments will also identify and assess the exposure and vulnerability of community assets important to community character, regional significance, and sustaining daily quality of life (e.g. neighborhood centers, gas stations, and grocery stores). This includes but is not limited to natural resources and systems, economic assets, social, cultural, government, or professional services, and other community priorities be assessed. Access to important and critical assets and services located outside of the municipalities should also be evaluated as well as community liabilities that have the potential to cause harm, such as contaminated sites.
Impact on Capabilities:	This effort will allow for incorporation of climate resilience into municipal master plans to enhance planning and regulatory capabilities.
Climate Change Considerations:	Climate change is likely to increase the frequency and severity of climate related events. This project will include a comprehensive assessment of the vulnerability to current and future climate change-related hazards of the entire multi-municipal region as well as for each of the individual municipalities. The vulnerability assessment will consider all climate change impacts through 2100.
Mitigation Category	Local Plans and Regulations
CRS Category	Preventative Measures
Priority	High

	Action	Evaluation
Alternatives:	No Action	-
	Elect not to participate in program but develop municipal specific CCRHVA	Costly and lacking regional coordination
	Elect not to participate in program but develop municipal specific assessment without climate change impacts	Costly, lacking regional coordination, and not meeting state requirements

Action 2024-BurlingtonC-14. Stormwater Management Ordinance

Lead Agency:	Public Works
Supporting Agencies:	Engineering, Administration, Land Use Board, Housing & Community Development
Hazard(s) of Concern:	Flood, Severe Weather
Description of the Problem:	The City's Stormwater Management Ordinance has not yet been adopted.
Description of the Solution:	The City will adopt its Stormwater Management Ordinance in 2024 to provide for more effective runoff control.
Estimated Cost:	Staff Time
Potential Funding Sources:	City Budget
Implementation Timeline:	Within 1 year
Goals Met:	1, 2, 5, 7
Benefits:	The adoption of a stormwater management ordinance will strengthen the City's maintenance requirements. Furthermore, the ordinance will allow the City to manage stormwater more effectively to improve water quality, promote more widespread use of green infrastructure, reduce local flood risks and better water management.
Impact on Socially Vulnerable Populations:	Populations located within areas which experience flooding from runoff will be better protected from negative impacts.
Impact on Future Development:	The adoption of this ordinance will protect areas of future development from impacts of floods by implementing effective runoff control.
Impact on Critical Facilities/Lifelines:	This action will assist in the protection of critical facilities and lifelines from the impacts of floods and severe weather.
Impact on Capabilities:	This effort will strengthen the City's already existing stormwater management programs by introducing a new ordinance.
Climate Change Considerations:	Climate change is likely to increase the frequency and severity of climate related events. Flooding events may impact a larger area of the City.
Mitigation Category	Local Plans and Regulations
CRS Category	Preventative Measures
Priority	High
Alternatives:	**Action** / **Evaluation**
	No Action / -
	Construct retention basins / May not collect all runoff
	Implement green infrastructure / May not fully reduce runoff

Action 2024-BurlingtonC-15. City Watershed Plans

Lead Agency:	Public Works
Supporting Agencies:	Engineering, Administration, Land Use Board, Housing & Community Development
Hazard(s) of Concern:	Drought, Extreme Temperature, Flood, Severe Weather
Description of the Problem:	The City does not have a Watershed Plan.
Description of the Solution:	A Watershed Plan will be developed for the Kennedy Lake system using DEP grant funds and a City-wide Watershed Plan will be developed and completed by 2028 as required by the City's Tier A Stormwater Discharge Permit.
Estimated Cost:	Medium
Potential Funding Sources:	City Budget, NJDEP Grants
Implementation Timeline:	Within 5 years
Goals Met:	1, 2, 5, 7
Benefits:	The watershed plans will assist the City in meeting clean water goals and represents a comprehensive and integrated way to protect all water resources, including uplands, drainage basins, wetlands, surface water, and groundwater.
Impact on Socially Vulnerable Populations:	This action will work to ensure potable water is protected for use of all populations, including socially vulnerable populations, in the City. Furthermore, it will ensure there is clean water available throughout the City for other personal use.
Impact on Future Development:	Future development will have access to water sources through the development of the two watershed plans and will ensure future development does not encroach on lands to impact those water sources.
Impact on Critical Facilities/Lifelines:	This action will identify how locations of critical facilities and lifelines may be impacting current water quality problems and how to improve the relationship between the structures and water systems.
Impact on Capabilities:	Capabilities in the City will be strengthened by the development of these watershed plans, as the plans will work to protect the water sources in the City.
Climate Change Considerations:	Climate change is likely to increase the frequency and severity of climate related events. Flooding events may impact a larger area of the City.
Mitigation Category	Local Plans and Regulations
CRS Category	Preventative Measures
Priority	High

Alternatives:

Action	Evaluation
No Action	-
Develop watershed plan for Kennedy Lake System only	Portions of the County may not be accounted for
Develop city-wide watershed plan only	Specialized area of the County may not be accounted for

The prioritization criteria provided in Volume 1, Section 6 (Mitigation Strategy) identify 14 evaluation/prioritization criteria 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 actions as 'High', 'Medium', or 'Low.' The table below provides a summary of the prioritization of all proposed mitigation initiatives for the HMP update.

Table 9.6-18. Summary of Prioritization of Actions

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Community Objectives	Total	High / Medium / Low
2024-BurlingtonC-01	Code Coordinated Ordinance	1	1	1	1	1	1	1	1	1	0	1	1	0	0	11	High
2024-BurlingtonC-02	Disaster Debris Management Plan	0	0	1	1	1	1	0	0	1	1	1	1	0	1	9	Medium
2024-BurlingtonC-03	Substantial Damage Management Plan	0	1	1	1	1	1	0	1	1	1	1	1	1	0	11	High
2024-BurlingtonC-04	Assiscunk Creek Levee Mitigation	0	1	1	1	1	0	0	1	1	1	1	1	1	0	10	High
2024-BurlingtonC-05	Mitchell Avenue Pump Station Storm Event Bypass System	0	1	1	1	1	0	0	1	1	1	1	1	1	0	10	High
2024-BurlingtonC-06	Kennedy Lake Dredging	0	1	1	0	1	0	0	1	1	0	1	1	0	0	7	Medium
2024-BurlingtonC-07	Generators at Critical Facilities	1	0	1	1	1	0	0	1	1	1	0	1	1	0	9	Medium
2024-BurlingtonC-08	Corrugated Metal Pipe (CMP) Drainage Pipe Upgrades	0	1	1	1	1	0	0	1	1	1	1	1	0	0	9	Medium
2024-BurlingtonC-09	Assiscunk Creek Levee Upgrades to 500-Year Flood Level Elevation	0	1	1	1	1	0	0	1	1	1	1	1	1	0	10	Medium
2024-BurlingtonC-10	Critical Facilities and Community Lifelines in the Floodplain	0	1	1	1	1	0	0	1	1	0	1	1	1	0	9	Medium

Project Number	Project Name	Life Safety	Property Protection	Cost-Effectiveness	Political	Legal	Fiscal	Environmental	Social Vulnerability	Administrative	Hazards of Concern	Climate Change	Timeline	Community Lifelines	Other Community Objectives	Total	High / Medium / Low
2024-BurlingtonC-11	Repetitive Loss Mitigation	1	1	1	0	1	0	1	1	0	1	1	0	0	1	9	Medium
2024-BurlingtonC-12	Stormwater Pump Intake Upgrades	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High
Action 2024-BurlingtonC-13	Burlington County – U.S. Route 130 Corridor Climate Change-Related Hazard Vulnerability Assessment	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
Action 2024-BurlingtonC-14	Stormwater Management Ordinance	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
Action 2024-BurlingtonC-15	City Watershed Plans	1	1	1	1	1	0	1	1	1	1	1	1	1	0	12	High

Note: Volume 1, Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions. Low (0-6), Medium (7-10), High (11-14).