



## 9.5 BOROUGH OF CHATHAM

This section presents the jurisdictional annex for the Borough of Chatham. The annex includes a general overview of the Borough of Chatham; an assessment of the Borough of Chatham's risk, vulnerability, and mitigation capabilities; and a prioritized action plan to implement prior to a disaster to reduce future losses and achieve greater resilience to natural hazards.

### 9.5.1 Hazard Mitigation Planning Team

The following individuals are the Borough of Chatham's identified HMP update primary and alternate points of contact and NFIP Floodplain Administrator.

*Table 9.5-1. Hazard Mitigation Planning Team*

Primary Point of Contact	Alternate Point of Contact
Name / Title: Steven M. Davenport, Emergency Management Coordinator Address: 54 Fairmount Avenue, Chatham, New Jersey 07928 Phone Number: 862-214-4554 Email: oem@chathamborough.org	Name / Title: Samuel H. Francis, Senior Deputy Emergency Management Coordinator Address: 54 Fairmount Avenue, Chatham, New Jersey 07928 Phone Number: 973-417-3042 Email: oemdeputy@chathamborough.org
<b>NFIP Floodplain Administrator</b>	
Name / Title: Vince DeNave, Borough Engineer Address: 54 Fairmount Avenue, Chatham, New Jersey 07928 Phone Number: 908-370-4892 Email: vdenave@chathamborough.org	

### 9.5.2 Jurisdiction Profile

The Borough of Chatham is located in southeastern Morris County, just to the east of the Great Swamp Wildlife Refuge at the northeastern terminus of the third Watchung Mountain Ridge, where the Passaic River and several tributaries cut through the ridge and flow northeast through the Borough of Florham Park. The Borough has a total area of 2.425 square miles, of which 2.373 square miles is land and 0.052 square miles is water. The Borough of Chatham is bisected by NJ State Highway 124 and adjacent municipalities include the Borough Madison to the west, Chatham Township to the southwest, City of Summit to the south, Millburn Township to the east, and the Borough of Florham Park to the north.

According to the U.S. Census, the 2010 population for the Borough of Chatham was 8,962. The estimated 2017 population was 9,003, a 0.5 percent increase from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 6.2 percent of the population is 5 years of age or younger and 10.6 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

### 9.5.3 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction's overall risk to its hazards of concern. Table 9.5-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figures 9.5-1 and 9.5-2 at the end of this annex illustrate the geographically-delineated hazard areas and the location of potential new development.



**Table 9.5-2. Recent and Expected Future Development**

Type of Development	2015	2016	2017	2018	2019
<b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>					
Single Family	9	11	12	12	15
Multi-Family	2	1	0	0	0
Other (commercial, mixed-use, etc.)	0	0	0	0	0
Property or Development Name	Type of Development	# of Units / Structures	Location (address and/or block and lot)	Known Hazard Zone(s)	Description / Status of Development
<b>Recent Major Development and Infrastructure from 2015 to Present</b>					
None					
<b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b>					
None					

## 9.5.4 Capability Assessment

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

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Information on National Flood Insurance Program (NFIP) compliance.
- Classification under various community mitigation programs.
- The community's adaptive capacity for the impacts of climate change.

### PLANNING, LEGAL AND REGULATORY CAPABILITY

The table below summarizes the legal and regulatory tools that are available to the Borough of Chatham.

**Table 9.5-3. Planning, Legal and Regulatory Capability**

Legal and Regulatory Capability					
	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated/Allowed	Has this been integrated? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Codes, Ordinances, & Requirements					
Building Code	Yes	Local and State	Yes	No	No
Comment: State mandated on local level under NJAC 5:23-3.14. International Building Code – New Jersey Edition, 2018, NJAC 5:24-3.14 Adopted 9/3/2019. UCC in Borough of Chatham Chapter 111.					
Zoning Code	Yes	Local	Yes, if have planning board	No	No
Comment: State permissive on local level. [note local ordinance # and date of adoption]. Per State of NJ Municipal Land Use Law (MLUL) L. 1975, s. 2, eff Aug 1, 1976, 40-55D-62: 49. Power to zone, requires all jurisdictions to have current zoning and					



Legal and Regulatory Capability					
	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated/Allowed	Has this been integrated? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
other land development ordinances after the planning board has adopted the land use element and master plan. Borough of Chatham Chapter 165 Land Development Regulations.					
Subdivisions	Yes	Local	Yes, if have planning board	No	No
Comment: P.L.1975, c.291 (C.40:55D-47): 40:55D-37. Grant of power; referral of proposed ordinance; county planning board approval. Dictated by the Municipal Land Use Law. NJ Statute 40:27-6.2 The board of freeholders of any county having a county planning board shall provide for the review of all subdivisions of land within the county by said county planning board and for the approval of those subdivisions affecting county road or drainage facilities as set forth and limited hereinafter in this section. Borough of Chatham Chapter 165 Land Development Regulations.					
Stormwater Management	Yes	State and Local	Yes	No	No
Comment: See Title 7 of the NJ Administrative Code, N.J.A.C. 7:8. Borough of Chatham Engineering					
Post-Disaster Recovery	No	-	No	-	-
Comment:					
Real Estate Disclosure	Yes	State	Yes	No	No
Comment: Before signing a contract of sale, all purchasers must receive a New Jersey Public Offering Statement (POS) approved by the New Jersey Real Estate Commission. The POS provides information such as proximity to hospitals, schools, fire and police, as well as any hazards, risks or nuisances in or around the subdivision.					
Growth Management	No	-	Yes, if have planning board	No	No
Comment: State Mandated on a municipal level. See Zoning Ordinance. Plan Endorsement Process via the State Development & Redevelopment Plan provides for the delineation of Growth Areas and Environs; Use of the endorsed plans in the implementation of state environmental regulations makes the Plan Endorsement process a growth management strategy.					
Shoreline Development	No	-	Yes	-	-
Comment: NJ Coastal Area Facility Review Act (N.J.S.A. 13:19) or CAFRA regulates almost all development along the coast for activities including construction, relocation, and enlargement of buildings or structures, and excavation, grading, shore protection structures, and site preparation. This law is implemented through NJ's Coastal Zone Management Rules N.J.A.C. 7:7E-1 et seq.					
Site Plan Review	Yes	Local	Yes, if have planning board	No	No
Comment: Dictated by the Municipal Land Use Law which sets forth minimum requirements for plans, etc., timeframes for development review. NJ Statute 40:27-6.2: The board of freeholders of any county having a county planning board shall provide for the review of all subdivisions of land within the county by county planning board and for the approval of those subdivisions affecting county road or drainage facilities. 40:27-6.10: Each municipal clerk shall file with the county planning board a copy of the planning and zoning ordinances of the municipality and shall notify the county planning board of the introduction of any revision or amendment of such an ordinance which affects lands adjoining county roads or other county lands, or lands lying within 200 feet of a municipal boundary, or proposed facilities or public lands shown on the county master plan or official county map. Borough of Chatham Code subsection 165-157.					
Environmental Protection	No	-	Yes	-	-
Comment: The rules that are utilized by the NJ Department of Environmental Protection and other environmental agencies are codified at Title 7 of the NJ Municipal Administrative Code.					
Flood Damage Prevention	Yes	Local	No	No	No
Comment: The NJ State Law Flood Area Control Act (N.J.S.A. 58:16A-52) and the National Flood Control Act of 1968 (NFIP) are state and federal acts to support minimization of flood losses. They do not require local adoption but as enforced by the NJDEP, the floodplain ordinances of each municipality must be reviewed for compliance with these regulations. In addition, participation in the NFIP requires a floodplain ordinance.					



Legal and Regulatory Capability					
	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated/Allowed	Has this been integrated? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
<b>Wellhead Protection</b>	Yes	Local	No	No	No
<i>Comment: Delineation of well head protection areas (WHPAs) is part of the NJ-approved 1991 well head protection plan (WHPP) for public community water supply wells. These are priority areas for efforts to prevent and clean up ground water contamination. Municipalities are empowered to regulate land use, physical facilities and other activities within WHPAs areas, the potential for groundwater contamination can be reduced under the provisions of the New Jersey Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq., which authorizes each municipality to plan and regulate land use to secure a safe and adequate drinking water supply for its residents. Also refer to Safe Drinking Water Regulations (NJAC 7:10-11.7(b)1)). Borough of Chatham Code subsection 165-50.</i>					
<b>Emergency Management</b>	No	-I	Yes	-	-
<i>Comment: Per the NJ Civilian Defense and Disaster Control Act (App.A:9_43.2) Counties and municipalities must have written Emergency Operations Plans to be reviewed every 2 years. See Emergency Operations Plans below.</i>					
<b>Climate Change</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Recovery Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Disaster Reconstruction Ordinance</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Other: Tree Protection Ordinance</b>	Yes	Local	No	-	-
<i>Comment: Borough of Chatham Code Chapter 257.</i>					
<b>Planning Documents</b>					
<b>Master Plan</b>	Yes	Local	Yes	Yes	n/a
<i>Comment: Per NJSA: Yes, if planning board (40:55D-28) and must be re-examined every ten years (40:55D-89.1). Borough of Chatham Master Plan was updated by the planning board in 2016</i> <a href="https://www.chathamborough.org/chatham/Master%20Plan%20Update/">https://www.chathamborough.org/chatham/Master%20Plan%20Update/</a> . Objectives include to protect local natural resources that provide the Borough's water supply, prevent flooding and provide recreation opportunities. The Environmental Resource Inventory, adopted into the Master Plan in May 2012, provides to take steps to assure that the Borough's floodplains, woods, and natural vegetation areas be protected for both aesthetic and practical reasons.					
<b>Capital Improvement Plan</b>	Yes	Local	Yes	No	No
<i>Comment: Per NJSA 40:55D-29) the governing body is authorized to direct the planning board to prepare a CIP with at least a six-year planning horizon. Borough Strategic Financial Mgt Plan is updated annually by the Borough Administrator.</i>					
<b>Disaster Debris Management Plan</b>	No	-	No	-	-
<i>Comment:</i>					
<b>Floodplain or Watershed Plan</b>	No	-	No	-	-
<i>Comment: U.S. Army Corps of Engineers Regulatory Program Regulations (33 CFR 320-332)</i>					
<b>Stormwater Management Plan</b>	Yes	Local/State	Yes	No	No
<i>Comment: Per NJDEP Storm Water Management Rule (N.J.A.C. 7:8, et seq.). The Municipal Stormwater Regulation Program was developed in response to the U. S. Environmental Protection Agency's (USEPA) Phase II rules published in December 1999. The Department issued final stormwater rules on February 2, 2004 and four (4) NJPDES general permits authorizing stormwater discharges from Tier A and Tier B municipalities, as well as public complexes, and highway agencies that discharge stormwater from municipal separate storm sewers (MS4s). Borough Storm Water Management Plan. Borough of</i>					



Legal and Regulatory Capability					
	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated/Allowed	Has this been integrated? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
Chatham Stormwater Management Plan March 2005 <a href="http://www.zumu.com/zumu/chatham/Stormwater%20Management%20Plan.pdf">http://www.zumu.com/zumu/chatham/Stormwater%20Management%20Plan.pdf</a> .					
Stormwater Pollution Prevention Plan	Yes	Local/State	Yes	No	No
Comment: Per NJDEP Storm Water Management Rule (N.J.A.C. 7:8, et seq.). The Municipal Stormwater Regulation Program was developed in response to the U. S. Environmental Protection Agency's (USEPA) Phase II rules published in December 1999. The Department issued final stormwater rules on February 2, 2004 and four (4) NJPDES general permits authorizing stormwater discharges from Tier A and Tier B municipalities, as well as public complexes, and highway agencies that discharge stormwater from municipal separate storm sewers (MS4s). Borough of Chatham Storm Water Pollution Prevention Plan April 10, 2019.					
Urban Water Management Plan	No	-	No	-	-
Comment:					
Habitat Conservation Plan	No	-	No	-	-
Comment: May develop a conservation plan element in master plan per NJSA 40:5D-28b (8).					
Economic Development Plan	No	-	No	-	-
Comment: Per NJSA 40:55D-28b. (9) There can be a generic Economic Development Element of the County Comprehensive Plan. Municipality can establish Economic Development Commission that can facilitate incentive programs (façade programs, low-interest loans, etc.)					
Shoreline Management Plan	No	-	No	-	-
Comment:					
Community Wildfire Protection Plan	No	-	No	-	-
Comment:					
Community Forest Management Plan	No	-	No	-	-
Comment: Optional accreditation for county and municipalities for reduction of liability, New Jersey Urban and Community Forestry Program (NJUCF).					
Transportation Plan	No	-	No	-	-
Comment: May develop a circulation plan element in master plan per NJSA 40:55D-28b. (4).					
Agriculture Plan	No	-	No	-	-
Comment: May develop a farmland preservation plan element per NJSA 40:5D-28b (13).					
Climate Action Plan	No	-	No	-	-
Comment: May develop a green building and environmental sustainability plan element per NJSA 40:5D-28b (16).					
Tourism Plan	No	-	No	-	-
Comment:					
Business Development Plan	No	-	No	-	-
Comment:					
Other: Shade Tree commission	Yes	Local	Allowed	No	No
Comment: 40:37-5. Powers; regulations; trees on highways; parks: Except as hereinafter provided, the shade tree commission may exercise exclusive control over the regulation, planting and care of shade and ornamental trees and shrubbery now situate or which may hereafter be planted in any public highway, park or parkway of the county, including: a. The planting, trimming, spraying, care and protection thereof; b. The regulation and control of the use of the ground					



Legal and Regulatory Capability					
	Do you have this? (Yes/No)	Authority that enforces (Federal, State, Regional, County, Local)	State Mandated/Allowed	Has this been integrated? If yes- how?	
				If yes- how? Describe in comments	If no - can it be a mitigation action? If yes, add Mitigation Action #.
surrounding the same so far as may be necessary for their proper growth, care and protection; c. The moving or requiring the removal of any tree or part thereof, dangerous to public safety; d. The care and control of the parks and parkways; e. The encouragement of arboriculture. Amended by L.1958, c. 41, p. 132, s. 2, eff. May 20, 1958. Chatham Borough Shade Tree Commission was established in 1909.					
Other: Historic Preservation	Yes	Local	Allowed	No	No
Comment: 40:32-6. Acquisition and preservation of historical buildings and data - Any county may acquire, by gift or purchase, any real estate or any interests therein, together with any and all buildings thereon within the limits of the county for historical purposes, or for the purpose of preserving therein or thereon historical data and objects of historical interest. Borough of Chatham Historic Preservation Commission was formed in May 1989.					
Other: Open Space Plan	Yes	Local-	No	No	No
Comment: The Borough of Chatham Open Space Advisory Board published the Open Space and Recreation Plan in July 2010. <a href="https://www.chathamborough.org/chatham/Boards%20%26%20Commissions/Advisory%20Committees/Open%20Space%20Advisory%20Committee/">https://www.chathamborough.org/chatham/Boards%20%26%20Commissions/Advisory%20Committees/Open%20Space%20Advisory%20Committee/</a>					
Response/Recovery Planning					
Emergency Operations Plan (EOP)	Yes	Local	Yes	No	No
Comment: Per the NJ Civilian Defense and Disaster Control Act (App.A:9_43.2) Counties and municipalities must have written Emergency Operations Plans to be reviewed every 2 years.					
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes/No	-	No	-	-
Comment:					
Post-Disaster Recovery Plan	Yes/No	-	No	-	-
Comment:					
Continuity of Operations Plan	Yes/No	-	No	-	-
Comment:					
Public Health Plan	Yes/No	-	No	-	-
Comment:					
Other	Yes/No	-	Yes/No	-	-
Comment:					

**Table 9.5-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits?  - If no, who does? If yes, which department?	No  Building construction questions, permits and inspections will be carried out by the Borough of Madison Building Construction Office.  All zoning questions, land disturbance permits, tree removal permits, and CCO requests are addressed by the Office of the Borough Engineer.
Does your jurisdiction have the ability to track permits by hazard area?	No





Criterion	Response
Does your jurisdiction have a buildable lands inventory? -If yes, please describe briefly. -If no, please quantitatively describe the level of buildout in the jurisdiction.	No Borough is completely built out

### ADMINISTRATIVE AND TECHNICAL CAPABILITY

The table below summarizes potential staff and personnel resources available to the Borough of Chatham.

**Table 9.5-5. Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?	Department/Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Administrator
Mitigation Planning Committee	Yes	OEM, Engineering, Administration, DPW, Fire, Police, Finance
Environmental Board / Commission	Yes	Administrator
Open Space Board / Committee	Yes	Engineering
Economic Development Commission / Committee	Yes	Administrator
Warning Systems / Services (reverse 911, outdoor warning signals)	Yes	Police
Maintenance program to reduce risk	Yes	DPW
Mutual aid agreements	Yes	Police and Fire
<b>Technical/Staffing Capability</b>		
Planners or engineers with knowledge of land development and land management practices	Yes	Engineering
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering
Planners or engineers with an understanding of natural hazards	Yes	Engineering
Staff with training in benefit/cost analysis	Yes	Engineering
Staff with training in green infrastructure	Yes	Engineering
Staff with education/knowledge/training in low impact development	Yes	Engineering
Surveyor	Yes	Engineering
Stormwater engineer	Yes	Engineering
Personnel skilled or trained in GIS applications	Yes	Engineering
Local or state water quality professional	Yes	Engineering
Scientist familiar with natural hazards in local area	Yes	Engineering
Emergency manager	Yes	OEM Coordinator, OEM Deputy Coordinator
Grant writers	No	-
Resilience Officer	No	-
Watershed planner	Yes	Community Services
Environmental specialist	No	-
Other	No	-

### FISCAL CAPABILITY

The table below summarizes financial resources available to the Borough of Chatham.





Table 9.5-6. Fiscal Capabilities

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants (CDBG, CDBG-DR)	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes (Water/Sewer)
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
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Clean Water Act 319 Grants (Nonpoint Source Pollution)	Yes
Other	No

### EDUCATION AND OUTREACH CAPABILITY

The table below summarizes the education and outreach resources available to the Borough of Chatham.

Table 9.5-7. Education and Outreach Capabilities

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, briefly describe.	Yes, OEM site links to County HMP
Do you use social media for hazard mitigation education and outreach? • If yes, briefly describe.	Yes, Twitter @chathamNJOEM
Do you have any citizen boards or commissions that address issues related to hazard mitigation? • If yes, briefly describe.	Yes, Environmental Commission, Planning Board, Zoning Board
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, briefly describe.	No
Do you have any established warning systems for hazard events? • If yes, briefly describe.	Yes, AlertChathamBorough

### COMMUNITY CLASSIFICATIONS

The table below summarizes the classifications for community programs available to the Borough of Chatham.

Table 9.5-8. Community Classifications

Program	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (Fire ISO Protection Class)	Yes	3	2014
Storm Ready Certification	No	-	-
Firewise Community Classification	No	-	-
Sustainable Jersey	Silver		







### ADAPTIVE CAPACITY

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of local capacity for adapting to current and future risks and changing conditions.

The Borough does not have access to resources to determine the possible impacts of climate change upon the municipality; however, the administration supports integration of climate change in policies or actions. Climate change is not currently integrated into current policies, plans, or actions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

**Table 9.5-9. Adaptive Capacity**

Hazard	Adaptive Capacity (Capabilities) - High/Medium/Low
Dam Failure	Low
Disease Outbreak ( <i>WNV, Lyme, RMSF, Human Ehrlichiosis, flu, Enterovirus D68, Hep C, foodborne, ebola, measles, MRSA</i> )	High
Drought	High (Ordinance for water usage.)
Earthquake	Medium
Extreme Temperature	Medium
Flood ( <i>riverine / flash flood, SLR</i> )	Medium
Geological Hazards ( <i>landslides and subsidence/sinkholes</i> )	Low
Harmful Algal Bloom	Low
Hazardous Materials	High
Infestations ( <i>Gypsy Moth, White Tailed Deer, and Rodents</i> )	Medium
Severe Weather ( <i>high wind, tornado, TSTM, and hail</i> )	High
Severe Winter Weather ( <i>heavy snow, blizzards, and ice storms</i> )	High
Wildfire	Low

Notes:

High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;

Low = Capacity does not exist or could use substantial improvement; Unsure = Not enough information is known to assign a rating.

### NATIONAL FLOOD INSURANCE PROGRAM

This section provides specific information on the management and regulation of the regulatory floodplain.

**Table 9.5-10. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Engineering
Who is your floodplain administrator? (department/position)	Engineering/Engineer
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	July 9, 2001
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets



Criterion	Response
When was the most recent Community Assistance Visit or Community Assistance Contact?	n/a
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, state what they are.	No
Are any RiskMAP projects currently underway in your jurisdiction? • If so, state what they are.	No, updated in 2019
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<input type="checkbox"/> If so, what type of assistance/training is needed?	N/a
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving its CRS Classification? • If no, is your jurisdiction interested in joining the CRS program?	No
How many flood insurance policies are in force in your jurisdiction?*	47
• What is the insurance in force?	\$12,853,100
• What is the premium in force?	\$32,224
How many total loss claims have been filed in your jurisdiction?*	7
• How many claims are still open or were closed without payment?	0 open, 4 closed without payment
• What were the total payments for losses?	\$2,753
Do you maintain a list of properties that have been damaged by flooding?	No
Do you maintain a list of property owners interested in flood mitigation?	No

Policies and Claims from <https://bsa.nfipstat.fema.gov/reports/1011.htm> and <https://bsa.nfipstat.fema.gov/reports/1040.htm> as of 09/30/2018.

#### ADDITIONAL AREAS OF EXISTING INTEGRATION

In the performance period since adoption of the 2015 HMP, the Borough of Chatham did not make progress on integrating hazard mitigation into additional initiatives.

#### 9.5.5 Hazard Event History Specific to the Jurisdiction

Morris County has a history of hazard events, as detailed in Section 4 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles in Section 4.4 (Hazard Profiles) and includes a chronology of events that affected Morris County and its jurisdictions. The Borough of Chatham's history of federally declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Morris County. Table 9.5-11 provides details regarding municipal-specific loss and damages the Borough experienced during hazard events. Information provided in the table below is based on reference material or local sources.



Table 9.5-11. Hazard Event History

Date(s) of Event	Event Type (disaster declaration if applicable)	Morris County Designated?	Summary of Event	Summary of Local Damages and Losses
January 21-24, 2016	Severe Winter Storm and Snowstorm (DR-4264)	Yes	An impulse from the west coast traversed the midsection of the country, then developed into a low-pressure system as it tracked across the Gulf States before intensifying along the Carolina coast into a major nor'easter, producing record snowfall in parts of New Jersey on January 23rd. It then moved out to sea after passing by the mid-Atlantic coast early on January 24th. Wind gusts up to 60 MPH produced blizzard conditions as visibilities dropped to one-quarter mile or less in spots. Snowfall totals included 21.0 inches in Chatham.	Snow removal efforts, including road closures, traffic detours, and man-hours to operate fire apparatus (\$72,022.30).
March 6-7, 2018	Severe Winter Storm and Snowstorm (DR-4368)	Yes	Precipitation gradually overspread the region during the overnight hours of March 6th to the 7th. 12 to 24 inches were observed across large parts of Morris County. 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, especially where the heaviest snow was reported.	Debris removal (\$136,829.43), snow removal (\$47,194.93), repair curbing damaged in snow removal (\$6,410.99), and protective measures (\$27,019.77).

### 9.5.6 Jurisdiction-Specific Vulnerabilities and Hazard ranking

The hazard profiles in Section 4 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. The following summarizes the hazards of greatest concern and risk to the Borough of Chatham.

In an attempt to summarize the confidence level regarding the input utilized to populate the hazard ranking, a gradient of certainty was developed. A certainty factor of high, medium or low was selected and assigned to each hazard to provide a level of transparency and increased understanding of the data utilized to support the resulting ranking. The following scale was used to assign a certainty factor to each hazard:

- High—Defined scenario/event to evaluate; probability calculated; evidenced-based/quantitative assessment to estimate potential impacts through hazard modeling.
- Moderate—Defined scenario/event or only a hazard area to evaluate; estimated probability; combination of quantitative (exposure analysis, no hazard modeling) and qualitative data to estimate potential impacts.
- Low—Scenario or hazard area is undefined; there is a degree of uncertainty regarding event probability; majority of potential impacts are qualitative.



Table 9.5-12. Summary of Risk Assessment Results

Hazard of Concern	Hazard/ Scenario Area Evaluated	Population		Buildings		Economy (Loss)		Certainty Factor
<b>Dam Failure</b>	Partial or complete failure of a dam  There are 0 dams in the Borough, according to NJDEP.	Population impacted is dependent on the capacity of the dam, the extent of the dam failure inundation area and the severity of the failure.		The number of building impacted is dependent on the capacity of the dam, the extent of the dam failure inundation area and the severity of the failure.		Economic impacts include dam/building/infrastructure repairs; debris removal/disposal; utility impacts.		Low
<b>Disease Outbreak</b>	Disease Outbreaks which include: Mosquito-Borne Diseases, Tick-Borne Diseases, Coronavirus, Campylobacteriosis, Influenza, Mumps, Ebola	Population impacted is dependent on the disease and severity of the outbreak; in some cases immuno-compromised persons are more vulnerable.		Structural impacts due to disease outbreak would be limited.		Economic losses can include County financial impacts to monitor/address outbreaks; lost wages or commercial interruptions; depends on the severity and type of disease outbreak.		Low
<b>Drought</b>	Prolonged drought event - The County is serviced by water supplies who primarily get water from groundwater sources; some surface water sources.	Entire population exposed. Population on surface water supplies may be impacted first; water restrictions/contamination; increased wildfire risk.		Droughts are not expected to cause direct damage to buildings.		Losses include aesthetic, landscape/nursery/agricultural industry impacts.		Low
<b>Earthquake</b>	"100, 500-, 2,500-Year Mean Return Period (MRP) Events evaluated  NEHRP Soils D&E (soft soils that amplify ground shaking are present in the County"	NEHRP D&E:	7,682	NEHRP D&E:	2,820	100-year Loss:	\$0	High
		Liquefaction Class 4:	49	Liquefaction Class 4:	29	500-year Loss:	\$1,890,778	
						2,500-year Loss:	\$27,916,813	
<b>Extreme Temperature</b>	Extreme temperature event (heat or cold)	Over 65 Population:	954	Physical impacts due to extreme temperatures would be limited.		Loss of business function is possible due to unexpected repairs (i.e. pipes bursting) or power failures.		Low
		Population Below Poverty Level:	135					
<b>Flood</b>	100- and 500-Year Mean Return Period Event	100-year	14	100-year	22	100-year Loss:	\$40,149,387	High
		500-year	89	500-year	52			
<b>Geological</b>		Class A:	0	Class A:	0	Class A:	0	Moderate



Hazard of Concern	Hazard/ Scenario Area Evaluated	Population		Buildings		Economy (Loss)		Certainty Factor
	High Landslide Susceptibility Areas and Areas developed over carbonate rock	Class B:	32	Class B:	11	Class B:	\$6,678,513	
		Carbonate Bedrock:	0	Carbonate Bedrock:	0	Carbonate Bedrock:	\$0	
<b>Harmful Algal Bloom</b>	Any body of water or area adjacent that is susceptible to harmful algal bloom.	Population in contact (e.g., swimming) or drinking water from surface water impacted can result in a range of health effects		General building stock impacts due to harmful algal bloom are not anticipated. Critical facilities (i.e., water treatment plants) could lead to plant closures.		Economic impacts range from recreational closure of impacted waterbodies; cost to sample/monitor/remediate.		Low
<b>Hazardous Substance</b>	Release of a hazardous substance from a fixed site.	Population impacted will depend on the type of material and scale of the incident. May include population within small radii of site.		The degree of damages to a building depends on the scale of the incident.		The degree of damages depends on the scale of the incident.		Low
<b>Infestation</b>	Infestation including: Insects [e.g. Gypsy Moth, Mosquitoes, Spotted Lanternfly, Emerald Ash Borer], White-Tailed Deer, Rodents	Population impacted will depend on the type and severity of infestation and may cause an increased risk for disease outbreak.		Physical impacts will be limited to indirect impacts from invasive species which affect crops and vegetation.		Economic impact will depend on the type and severity of infestation and may cause an increased risk for disease outbreak.		Low
<b>Severe Weather</b>	Severe Weather Event	Entire population exposed; The degree of impact to the population depends on the scale of the incident.		Entire building stock is exposed; The degree of impact depends on the scale of the incident.		Annualized Loss:	\$43,308	High
						100 -Year Loss:	\$531,113	
						500-year Loss:	\$2,423,318	
<b>Severe Winter Weather</b>	Severe Winter Weather Event	All residents/commuters/visitors are exposed; socially-vulnerable populations may be at increased risk.		All buildings are exposed; the degree of impact depends on the scale of the incident.		The cost of snow and ice removal and repair of roads/infrastructure can impact operating budgets.		Low
<b>Wildfire</b>	Wildfire Fuel Hazard areas (High, Very High, Extreme)	Wildfire:	0	Wildfire:	0	Wildfire:	\$0	Moderate



### REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Borough of Chatham.

- Number of repetitive loss (RL) properties: 0
- Number of severe repetitive loss (SRL) properties: 0
- Number of RL/SRL properties that have been mitigated: 0

Source: FEMA BureauNet, 2019

Note: RL and SRL as of 04/26/2019; The number of SRL properties excludes RL properties and includes properties that have been verified only (SRL\_Indicator = V).

### CRITICAL FACILITIES

The following table summarizes the critical facilities in the community located in the 1-percent and 0.2-percent floodplain.

**Table 9.5-13. Potential Flood Losses to Critical Facilities and Lifelines**

Name	Type	Exposure		Status of Mitigation
		1% Event	0.2% Event	
Molitor Water Pollution Control Facility*	Wastewater Treatment	x	x	Proposed Mitigation Action Chatham B-001

\*Lifeline

### ADDITIONAL IDENTIFIED VULNERABILITIES

Flooding in the Borough is typically caused by the Passaic River as a result of heavy rains generally associated with thunderstorms and hurricanes during the summer and fall (FEMA FIS 2010).

Additionally, the Borough of Chatham has two areas which parallel the Passaic River which flood during heavy rains and hurricanes. The first is south of the Route 124 bridge on the west side of the Passaic River. Approximately 500 feet of the Passaic River floods the eastern part of Shepard Kollock Park. This area drains as soon as the level of the river recedes. The second location is north of the Route 124 Bridge. 200 feet of the banks of the west side of the Passaic River floods into the Parking Lot behind number 26 Main Street. This location drains quickly when the Passaic River recedes. These are the only two locations in Chatham Borough that floods due to the Passaic River. Neither of these two locations contain residential housing and there have been no reported losses reported due to the flooding in these locations.

The jurisdiction has identified the following vulnerabilities within their community:

- The Molitor Water Pollution Control Facility is in the SFHA and floods due the Passaic River. This facility flooded during Sandy, but it does not flood regularly.
- The library is to be used as a sheltering, cooling, and warning facility and does not have backup power.
- There is an inadequate stockpile of personal protective equipment for first responders in case of an epidemic.



### HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps were generated for the Borough of Chatham that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps have been generated only for those hazards that can be clearly identified using mapping techniques and technologies and for which the Borough of Chatham has significant exposure. Refer to Figures 9.5-1 and 9.5-2.

### HAZARD RANKING

This section includes the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; its potential impacts on people, property, and the economy; and community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 4.3 (Hazard Ranking), each plan participant may have differing degrees of risk exposure and vulnerability compared to Morris County as a whole. Therefore, each jurisdiction 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 Borough of Chatham. The Borough of Chatham has reviewed the Morris County hazard ranking table, as well as its individual results, to reflect the relative risk of the hazards of concern to the community. During the review of the hazard ranking, the Borough agreed with the calculated 2020 hazard rankings.

**Table 9.5-14. Borough of Chatham Hazard Ranking Input**

Dam Failure	Disease Outbreak	Drought	Earthquake	Extreme Temperature	Flood	Geological Hazard
Low	High	Medium	Medium	Medium	Medium	Low

Harmful Algal Bloom	Hazardous Substances	Infestation	Severe Weather	Severe Winter Weather	Wildfire
Low	High	Medium	High	High	Low

### 9.5.7 Mitigation Strategy and Prioritization

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

#### PAST MITIGATION INITIATIVE STATUS

The following table summarizes the jurisdiction's progress on their mitigation strategy identified in the 2015 HMP. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and can also be found under 'Capability Assessment' presented previously in this annex.



**Table 9.5-15. Status of Previous HMP Mitigation Actions**

2015 Action Number Action Description	Responsible Party	Status (In Progress, No Progress, Ongoing Capability, or Completed)	Include in the 2020 HMP Update?	
			Check if Yes	Enter 2020 HMP Action #
BCHM-1 Stream Bank Stabilization of Days Brook (retention project completed but did not mitigate flooding).	Borough of Chatham Engineering	Completed – Capital improvement	No	-

The Borough of Chatham identified the following mitigation projects/activities that were completed but not identified in the 2015 HMP mitigation strategy:

- Municipality has contacted the Minisink Swimclub to discuss that the facility is located in the floodplain and that any improvements must be above the BFE.

#### PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE

The Borough of Chatham participated in a risk assessment workshop in November 2019 in which detailed information was provided about assets exposed and vulnerable to the identified hazards of concern. The Borough of Chatham participated in a mitigation action workshop in March 2020 and was provided a Mitigation Toolbox that included a mitigation catalog developed specifically for Morris County and its hazards of concerns; challenges and opportunities identified during the capability and risk assessments; and the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 *Selecting Appropriate Mitigation Measures for Floodprone Structures* (March 2007) and FEMA *Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards* (January 2013). Section 6 (Mitigation Strategy) and Appendix F (Mitigation Strategy Supplement) provide a more complete description of the Mitigation Toolbox and its resources.

Table 9.5-16 summarizes the comprehensive range of specific mitigation initiatives the Borough of Chatham would like to pursue in the future to reduce the effects of hazards. Some of these initiatives might be previous actions carried forward for this HMP update. Initiatives are dependent upon available funding (grants and local match availability) and can be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 criteria were used to evaluate each action, including an evaluation of the benefits and costs. For each new mitigation action, a numeric rank was assigned (-1, 0, or 1) for each of the 14 evaluation criteria. The results of this evaluation, in addition to input from the jurisdiction, were then used to prioritize the mitigation initiatives as ‘High’, ‘Medium’, or ‘Low.’ Table 9.5-17 summarizes the evaluation of each mitigation initiative and the resulting priority, listed by Action Number.



Table 9.5-16. Proposed Hazard Mitigation Initiatives and Associated Priority

Initiative Number	Mitigation Initiative Name	Description of the Solution	New or Existing Assets?	Hazard(s) to be Mitigated	Goals Met	Lead and Support Agencies	Potential Funding Sources	Estimated Benefits	Estimated Cost	Timeline	Priority	Mitigation Category	CRS Category
2020-Chatham B-001	Molitor Water Pollution Control Facility	<b>Problem:</b> Loss of operation and property damage to this critical lifeline in the floodplain.	Existing	Flood	1, 4	Engineerin g	Capital, HMGP, PDM	High	Medium	Medium	Medium	SIP	PR, PP
		<b>Solution:</b> Investigate floodproofing options											
2020-Chatham B-002	Library Generator	<b>Problem:</b> Lack of backup power to lifeline facility for both Borough and Township.	New	All	1, 4	Engineerin g	HMGP, PDM	High	Medium	Medium	High	SIP	PR, PP
		<b>Solution:</b> Install backup generator											
2020-Chatham B-003	Personal Protective Equipment	<b>Problem:</b> Inadequate stockpile of PPE in case of an epidemic. <b>Solution:</b> Procure and stockpile PPE such as masks, gloves, gowns, Tyvek suits, goggles, face shields. Procure and stockpile supplies for disinfecting, such as hand sanitizers and liquid/spray disinfectants. Procure and store equipment for decontamination, such as UV light disinfection systems and electrostatic disinfecting sprayers. Procure protective shields to protect customer-service representatives, as at the Library.	New	Health	1, 4	OEM, Police, EMS	HMGP, PDM	High	Medium	Short	High	PR	ES

Notes:

Acronyms and Abbreviations:

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

Potential FEMA HMA Funding Sources:

FMA	Flood Mitigation Assistance Grant Program
HMGP	Hazard Mitigation Grant Program
PDM	Pre-Disaster Mitigation Grant Program

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

Benefits:

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

Mitigation Category:

- Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.



- **Structure and Infrastructure Project (SIP)** - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- **Natural Systems Protection (NSP)** – These are actions that minimize damage and losses and preserve or restore the functions of natural systems.
- **Preparedness and Response (PR)** – These are actions that prepare responding agencies for future hazardous incidents.
- **Education and Awareness Programs (EAP)** – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

**CRS Category:**

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

**Table 9.5-17. Summary of Evaluation and Action Priorities**

Initiative Number	Mitigation Initiative Name	Life Safety	Property Protection	Cost Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
2020-Chatham B-001	Molitor Water Pollution Control Facility	1	1	0	1	0	0	0	1	1	0	1	0	0	0	6	Medium
2020-Chatham B-002	Library Generator	0	0	1	0	1	0	1	1	1	1	1	1	1	0	9	High
2020-Chatham B-003	Personal Protective Equipment	1	0	1	1	0	0	0	1	1	0	1	1	1	0	8	High

Notes: Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions.



Table 9.5-18. Analysis of Mitigation Actions by Hazard and Category

Hazard	Prevention	Property Protection	Public Education and Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
<b>Dam Failure</b>	-	-	-	-	2020-Chatham B-002	-	-	-
<b>Disease Outbreak</b>	Chatham B-003	-	Chatham B-003-	-	2020-Chatham B-002, 2020-Chatham B-003	-	-	Chatham B-003-
<b>Drought</b>	-	-	-	-	2020-Chatham B-002	-	-	-
<b>Earthquake</b>	-	-	-	-	2020-Chatham B-002	-	-	-
<b>Extreme Temperature</b>	-	-	-	-	2020-Chatham B-002	-	-	-
<b>Flood</b>	2020-Chatham B-001	2020-Chatham B-001	2020-Chatham B-001	2020-Chatham B-001	2020-Chatham B-001, 2020-Chatham B-002	2020-Chatham B-001	2020-Chatham B-001	2020-Chatham B-001
<b>Geological</b>	-	-	-	-	2020-Chatham B-002	-	-	-
<b>Harmful Algal Bloom</b>	-	-	-	-	2020-Chatham B-002	-	-	-
<b>Hazardous Substance</b>	-	-	-	-	2020-Chatham B-002	-	-	-
<b>Infestation</b>	-	-	-	-	2020-Chatham B-002	-	-	-
<b>Severe Weather</b>	2020-Chatham B-001	2020-Chatham B-001	2020-Chatham B-001	2020-Chatham B-001	2020-Chatham B-001, 2020-Chatham B-002	2020-Chatham B-001	2020-Chatham B-001	2020-Chatham B-001
<b>Severe Winter Weather</b>	2020-Chatham B-001	2020-Chatham B-001	2020-Chatham B-001	2020-Chatham B-001	2020-Chatham B-001, 2020-Chatham B-002	2020-Chatham B-001	2020-Chatham B-001	2020-Chatham B-001
<b>Wildfire</b>	-	-	-	-	2020-Chatham B-002	-	-	-

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

**RED** = high ranked hazard

**ORANGE** = medium ranked hazard

**YELLOW** = low ranked hazard



### 9.5.8 Staff and Local Stakeholder Involvement in Annex Development

The Borough of Chatham followed the planning process described in Section 2 (Planning Process). This annex was developed over the course of several months with input from many jurisdiction representatives. 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 who participated and in what capacity. Additional documentation on the municipality's planning process through Planning Partnership meetings is included in Section 2 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.5-19. Contributors to the Annex**

Entity	Title	Method of Participation
Mike Bochniak	PD Executive Administrative Assistant	Attended first annex meeting
Steve Davenport	OEM Coordinator	Attended first annex meeting
Vince DeNave	Borough Engineer	Attended first annex meeting, attended hazard mitigation workshop
Sam Francis	Senior Deputy Emergency Management Coordinator, Alternate POC	Attended first annex meeting, developed annex, attended hazard mitigation workshop
Jeff Fricke	Fire Chief	Attended first annex meeting
Dave Hollberg	Interim Finance Officer	Attended first annex meeting
Tony Torello	Public Works Director	Attended first annex meeting
Steve Williams	Administrator	Attended first annex meeting



Figure 9.5-1. Borough of Chatham Hazard Area Extent and Location Map 1

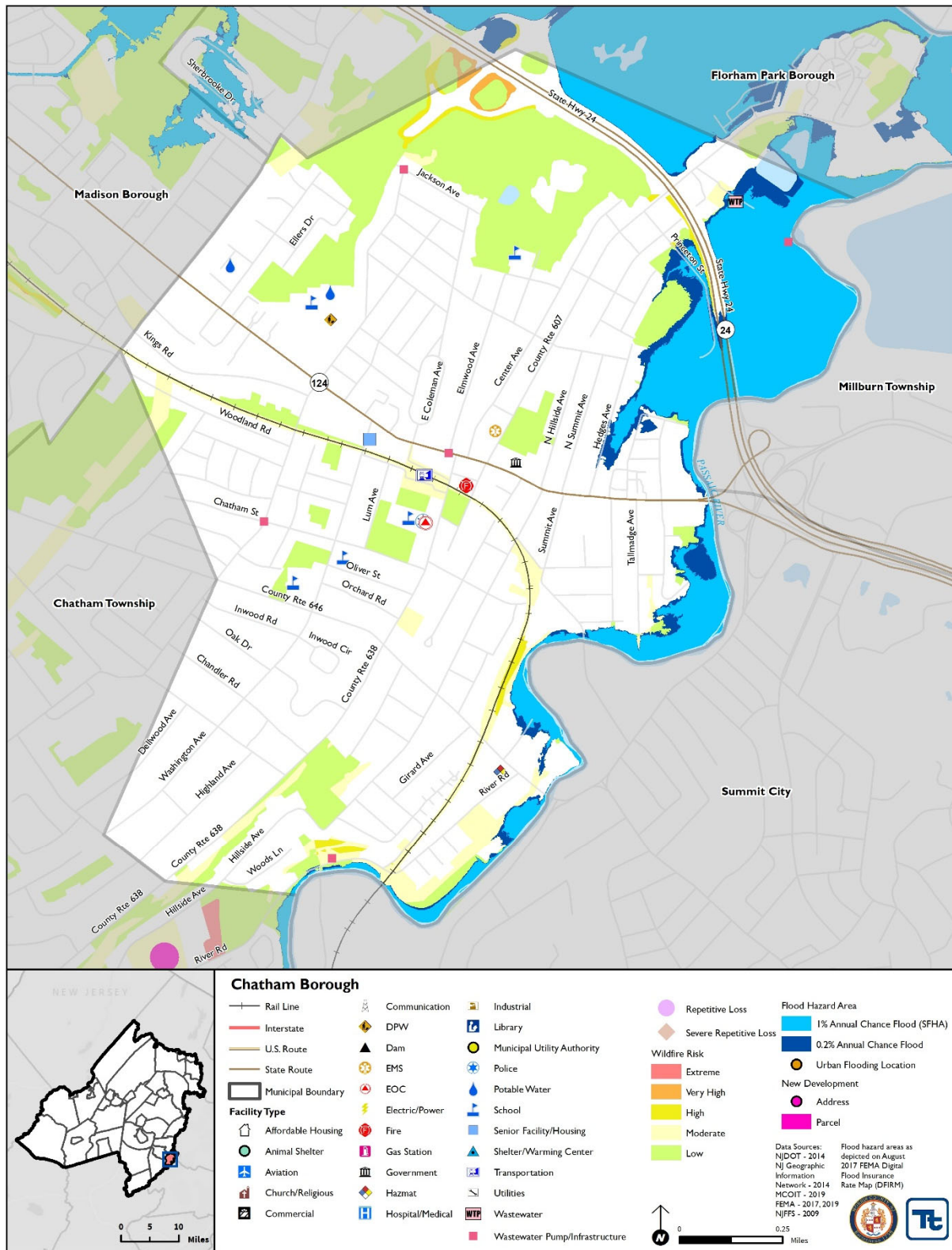
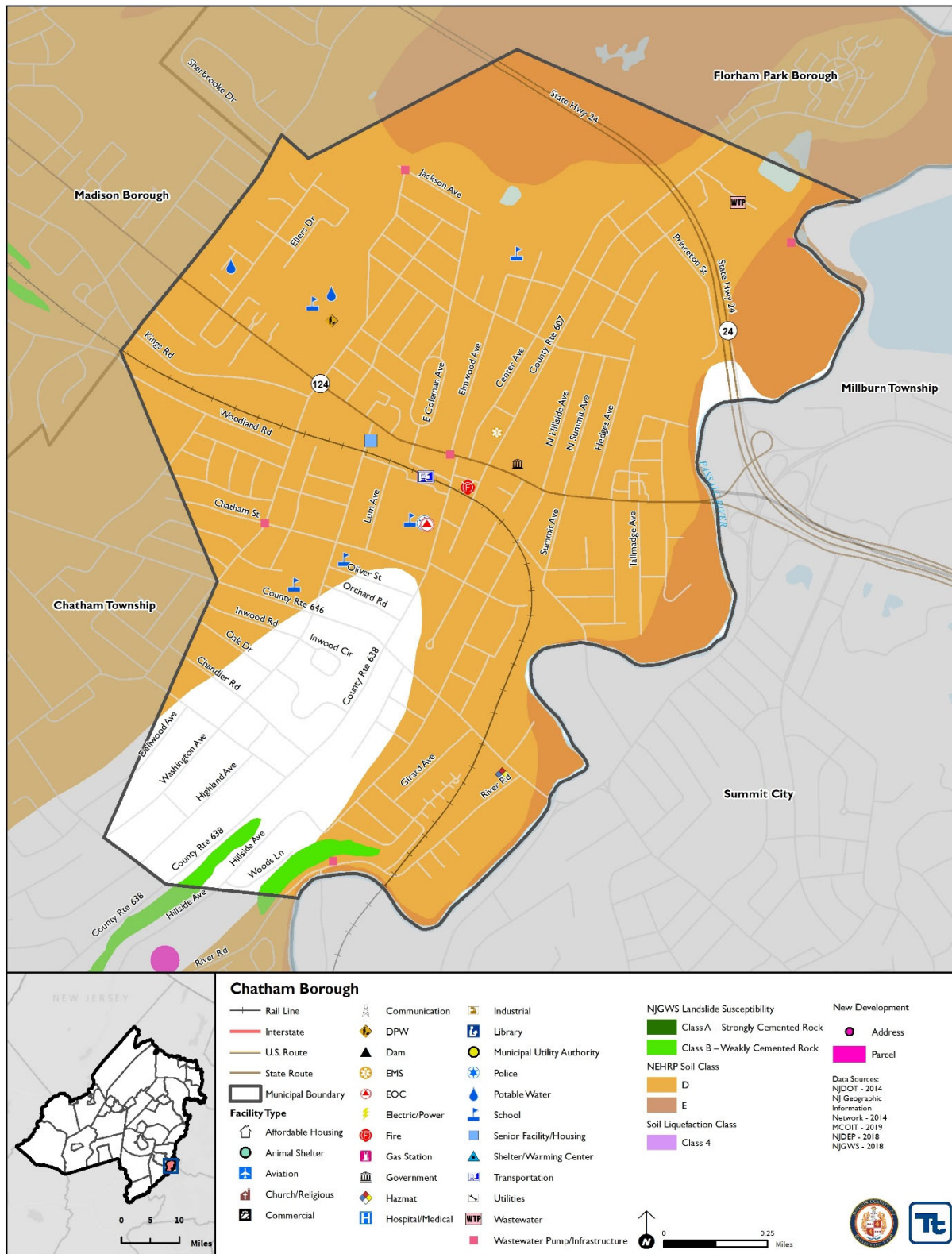






Figure 9.5-2. Borough of Chatham Hazard Area Extent and Location Map 2





**HAZARD MITIGATION PLAN UPDATE**  
**Mitigation Action Worksheet**

Name of Jurisdiction:

Chatham Borough

Name and Title Completing Worksheet:

Vince DeNave, Borough Engineer

Action Worksheet			
Project Name:	Molitor Water Pollution Control Facility		
Project Number:	2020-Chatham B-001		
Risk / Vulnerability			
Hazard(s) of Concern:	Utility Failure, Flooding		
Description of the Problem:	Loss of operation and property damage due to flooding.		
Action or Project Intended for Implementation			
Description of the Solution:	Investigate flood-proofing options.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	High	Estimated Benefits (losses avoided):	High
Useful Life:	n/a	Goals Met:	1, 4
Estimated Cost:	\$100K	Mitigation Action Type:	PP
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	202
Estimated Time Required for Project Implementation:	Short	Potential Funding Sources:	Capital, grant
Responsible Organization:	Engineering	Local Planning Mechanisms to be Used in Implementation if any:	n/a
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Perform study with alternatives for implementation.	\$100K	Could yield solutions for floodproofing.
	Relocate facility	High	Not feasible.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

**HAZARD MITIGATION PLAN UPDATE**  
***Mitigation Action Worksheet***

Name of Jurisdiction:

Chatham Borough

Name and Title Completing Worksheet:

Vince DeNave, Borough Engineer

Action Worksheet		
Project Name:	Molitor Water Pollution Control Facility	
Project Number:	2020-Chatham B-001	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	1	
Cost-Effectiveness	0	
Technical	1	
Political	0	
Legal	0	
Fiscal	0	
Environmental	1	
Social	1	
Administrative	0	
Multi-Hazard	1	
Timeline	0	
Agency Champion	0	
Other Community Objectives	0	
Total	6	
Priority (High/Med/Low)	Med	

**HAZARD MITIGATION PLAN UPDATE**  
**Mitigation Action Worksheet**

Name of Jurisdiction:

Chatham Borough

Name and Title Completing Worksheet:

S.H. Francis, Deputy OEM

Action Worksheet			
Project Name:	Library Generator		
Project Number:	2020-Chatham B-002		
Risk / Vulnerability			
Hazard(s) of Concern:	Utility Failure		
Description of the Problem:	Lack of backup generator available during power outages for lifeline facility used for sheltering, warming, and cooling for both the Borough of Chatham and the Township of Chatham.		
Action or Project Intended for Implementation			
Description of the Solution:	Investigate funding, design, and installation of new generator.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	n/a	Estimated Benefits (losses avoided):	Medium
Useful Life:	30 years	Goals Met:	1, 4
Estimated Cost:	\$40K	Mitigation Action Type:	PP
Plan for Implementation			
Prioritization:	Medium	Desired Timeframe for Implementation:	Medium
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	PDM, HMGP
Responsible Organization:	Engineer	Local Planning Mechanisms to be Used in Implementation if any:	n/a
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No Action	\$0	Current problem continues
	Install natural gas generator	\$40K	Comparable with other fuel sources.
	Install solar microgrid	High	More expensive than other sources.
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

**HAZARD MITIGATION PLAN UPDATE**  
***Mitigation Action Worksheet*****Name of Jurisdiction:**

Chatham Borough

**Name and Title Completing Worksheet:**

S.H. Francis, Deputy OEM

Action Worksheet		
<b>Project Name:</b>	Library Generator	
<b>Project Number:</b>	2020-Chatham B-002	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	0	
Cost-Effectiveness	1	
Technical	0	
Political	1	
Legal	0	
Fiscal	1	
Environmental	1	
Social	1	
Administrative	1	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
<b>Total</b>	9	
<b>Priority (High/Med/Low)</b>	Med	

**HAZARD MITIGATION PLAN UPDATE**  
**Mitigation Action Worksheet**

Name of Jurisdiction:

Chatham Borough

Name and Title Completing Worksheet:

S.H. Francis, Deputy OEM

Action Worksheet			
Project Name:	Personal Protective Equipment		
Project Number:	2020-Chatham B-003		
Risk / Vulnerability			
Hazard(s) of Concern:	Health epidemics		
Description of the Problem:	During an infectious disease epidemic, unavailability of PPE through normal supply channels may threaten the viability of Chatham Borough's emergency services. During the coronavirus epidemic of 2020, State and Federal stockpiles proved inadequate.		
Action or Project Intended for Implementation			
Description of the Solution:	Procure and stockpile PPE such as masks, gloves, gowns, Tyvek suits, goggles, face shields. Also procure and stockpile supplies for disinfecting, such as hand sanitizers and liquid/spray disinfectants. Also procure and store equipment for decontamination, such as UV light disinfection systems and electrostatic disinfecting sprayers. Procure protective shields to protect customer-service representatives, as at the Library.		
Is this project related to a Critical Facility or Lifeline?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Level of Protection:	High	Estimated Benefits (losses avoided):	High
Useful Life:	5-year shelf life	Goals Met:	1, 4
Estimated Cost:	\$40K	Mitigation Action Type:	PR
Plan for Implementation			
Prioritization:	High	Desired Timeframe for Implementation:	Short
Estimated Time Required for Project Implementation:	3 months	Potential Funding Sources:	PDM, HMGP
Responsible Organization:	OEM	Local Planning Mechanisms to be Used in Implementation if any:	n/a
Three Alternatives Considered (including No Action)			
Alternatives:	Action	Estimated Cost	Evaluation
	No action	\$0	Health of first responders in jeopardy
	Create stockpile	\$40K	Viability of first-responder agencies assured
Progress Report (for plan maintenance)			
Date of Status Report:			
Report of Progress:			
Update Evaluation of the Problem and/or Solution:			

**HAZARD MITIGATION PLAN UPDATE**  
***Mitigation Action Worksheet***

Name of Jurisdiction:

Chatham Borough

Name and Title Completing Worksheet:

S.H. Francis, Deputy OEM

Action Worksheet		
Project Name:	Personal Protective Equipment	
Project Number:	2020-Chatham B-003	
Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	
Property Protection	0	
Cost-Effectiveness	1	
Technical	1	
Political	0	
Legal	0	
Fiscal	0	
Environmental	1	
Social	1	
Administrative	0	
Multi-Hazard	1	
Timeline	1	
Agency Champion	1	
Other Community Objectives	0	
Total	8	
Priority (High/Med/Low)	High	