

City of Cohoes

This section presents the jurisdictional annex for the City of Cohoes for the 2024 Albany County Hazard Mitigation Plan (HMP). It includes information and guidance intended to assist public and private entities in reducing losses from future natural hazard events. This jurisdictional annex focuses on actions that can be implemented prior to a natural hazard event to reduce adverse impacts to people and property; it is not intended to serve as guidance for what to do when a natural hazard event occurs or how to recover following a natural hazard event. This jurisdictional annex provides an overview of the community and its critical facilities, evaluates the community's vulnerability to various natural hazards, assesses the community's existing capability to mitigate natural hazards, and identifies actions that could be implemented to mitigate natural hazard risks and, ultimately, reduce damages to people and property resulting from natural hazard events.

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1 CONTACT INFORMATION

The primary contacts for Albany County regarding this Jurisdictional Annex are identified as follows:

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2 COMMUNITY SNAPSHOT

2.1 Demographics

The 2020 Census estimated that 18,147 people live in the City of Cohoes. City of Cohoes' population has increased by 12.2% since the 2010 Census (16,168). The median age in the City of Cohoes is 43.9 years, and 16.4% of the population is over the age of 65. The median household income in the City of Cohoes is \$55,266.

2.2 Location & Land Characteristics

The City of Cohoes is located in the northeastern corner of Albany County, to the east of the Town of Colonie. The City of Cohoes covers approximately 4.2 square miles. The properties within the City of Cohoes have a total assessed value of approximately \$590,987,191, which is distributed across a variety of property classes.

Major transportation corridors in the City of Cohoes include I-787, which runs through the City, connecting it to the City of Albany via the Town of Colonie, City of Watervliet, and Village of Menands. State Routes 32 and 470 also run through the City. Key water features within the City of Cohoes include the Hudson River and the Mohawk River.

2.3 Governing Body

A mayor and six council members govern the City of Cohoes.

2.4 Recent and Anticipated Future Development

According to a review of 239 Referrals since the last County HMP (2018), several new developments have been approved or proposed within the City. The proposals that the City received are summarized in Table 2-1 below. Some of the proposals for the City may be located in the 0.1% or 0.2% annual chance flood event area, but this was not specified in the proposal. Additionally, building permits that have been issued for the City between 2018 to 2023 are summarized in Table 2-2 below, based on data provided by the City of Cohoes. These developments may affect the City's vulnerability to the hazards identified in this HMP.

Table 2-1. Developments from 2018 to 2023

Project Name	Project Location	Consideration	Date
Harmony Mills - Powerhouse Project	1A North Mohawk Street	Site plan amendment and lot line adjustment of the property to include additional green area and patio area at proposed pool.	9/21/2023
787 Break In Access	35 Niver Street	Site plan review to construct an access driveway from Cohoes Boulevard to Credit Union.	9/21/2023
Patio Construction - Water View Apartments	100 Waters View Circle	Site plan review for the construction of lower patio with fire pit, stone dust pathway in a dog pack and a kayak launch.	1/19/2023
2124 Railroad Drive - Special Use Permit	2124 Railroad Drive	Special use permit to build a two-family house in the proposed location.	12/21/2023
Faisal's Auto Repair Garage	640 Saratoga Street	Site plan review and special use permit to construct 30'x50' one-story auto repair garage with office/customer space, three (3) service bays and on-site parking for 12 vehicles. Area variance is also requested for the proposed action to meet lot size and lot width requirements.	5/19/2022
The Residence at Lexington Hills	St Agnes Hwy	Subdivision of the existing parcel into two lots. Lot 1A is to be 17.121 acres and Lot 1B is to be 27.560 acres.	10/20/2022
Retail Location at 10.13-1-5	NYS Route 470 - Tax ID 10.13-1-5	A use variance to enable the subdivision of a parcel and eventual contraction of a 9,100 SF retail store.	4/16/2020
15 St. Agnes Highway - Contractors Yard	15 St. Agnes Highway	A use variance to enable purchaser to maintain a contractors garage as is. Parcel has been re-zoned and the former use is no longer conforming.	4/16/2020
15 St. Agnes Highway - Contractors Yard	15 St. Agnes Highway	A use variance to enable purchaser to maintain a contractors garage as is. Parcel has been re-zoned and the former use is no longer conforming.	7/16/2020
Zoning Map Update	City-Wide; City of Cohoes	Update to the Cohoes Zoning Map to include a parcel at the intersection of Dyke Avenue and Saratoga Street that was previously omitted as a result of being owned by the Canal Corporation. Parcel would be zoned MV-1 (consistent with neighborhood).	4/18/2019

Project Name	Project Location	Consideration	Date
Private Swimming Pools Rezone	City-Wide; City of Cohoes	The City of Cohoes is proposing to update its zoning code to remove the requirement of a special use permit for private swimming pools and also to allow swimming pads in all residential use parcels. Swimming pools will still require a building permit.	4/18/2019
Furever Friends	151 Saratoga Street	Repurposing of part of building primarily used for storage to host a "doggie daycare" business where pets will be groomed and/or kenneled for the workday or overnight	4/18/2019
70 Delaware Avenue	70 Delaware Avenue	Mixed-use development with two multi-family buildings (one with 44 units, the other with 48 units), one retail drive-thru building, and a waterfront park with public access, and a canoe/kayak launch	4/18/2019
70 Delaware Avenue	70 Delaware Avenue	Mixed-use development with two multi-family buildings (one with 44 units, the other with 48 units), one retail drive-thru building, and a waterfront park with public access, and a canoe/kayak launch	4/18/2019
416 N. Mohawk Street	416 N. Mohawk Street	The proposal includes a resident requesting to open a home occupation entailing gun repair and maintenance.	6/20/2019
Erie Point Variance	385 Saratoga St.	Request to allow the following variances for a proposed 40-unit multifamily residential building: 1. 8.5' and 24' front yard setback variances (the building will be angled with 13.5' in NW corner and 29' in SW corner); 2. A 30-unit variance, where 10 units are permitted and 40 dwelling units are proposed; and 3. 48 parking spaces, where 40 are allowed (1 space per unit; these spaces will be banked). *ACPB reviewed previous site plans and variances for this project in July 2018.	9/20/2018

Project Name	Project Location	Consideration	Date
Norlite Equipment Upgrades	628 Saratoga St.	Height variance request for a structural component of the manufacturing process for Norlite, LLC that will promote energy efficiency. The new structure will have a footprint similar to a building already located on the property, but would be 80' tall. The maximum height for buildings and structures in the Industrial District is 45' and therefore the applicant is seeking a 35' height variance.	9/20/2018
Erie Point Site Plan Updates	385 Saratoga St.	Site plan review for a 39 unit multi-family residence on a vacant property. *ACPB reviewed previous site plans and variances for this project in July 2018.	9/20/2018
Kellman's Warehouse Addition	41 Euclid St.	Site plan review for a 12,000 sq. ft. warehouse structure to enclose pre-existing operations at an existing metal recycling facility.	11/15/2018
218 Columbia St. Neighborhood Gasoline Station Site Plan & Special Use Permit	218 Columbia St.	The applicant proposes to demolish an existing gas station/auto repair shop and construct a gasoline station with three pumps and a small convenience store.	11/15/2018
218 Columbia St. Neighborhood Gasoline Station Area Variance	218 Columbia St.	The applicant proposes to demolish an existing gas station/auto repair shop and construct a gasoline station with three pumps and a small convenience store. The proposed sign for this site will require variances to allow reduction of the height and required setback of the sign from the front property line.	11/15/2018
Prime Properties	70 Delaware Ave.	Site plan review and area variances for a mixed-use development including two (2), 4-story apartment buildings totaling 98 units and a 4,000 sq. ft. retail building. The proposal includes 152 ancillary surface parking spaces. The site abuts the 50' easement line from the Hudson River reserved for a waterfront public access park.	3/15/2018

Project Name	Project Location	Consideration	Date
3 Willowbrook Ln. Shed Variance	3 Willowbrook Ln.	Area variance to install an 8'x12' shed located 1 ft. from the side and rear property lines, where a 10 ft. setback is required for accessory uses. The shed will be screened by a fence along the rear and side of the property.	7/19/2018
JUNCTA Subdivision	229-401 Saratoga St.	The Cohoes Industrial Development Agency proposes to subdivide a vacant parcel on the south side of the city into 4 lots.	7/19/2018
JUNCTA Subdivision Area Variance	229-401 Saratoga St.	The Cohoes Industrial Development Agency proposes to subdivide a vacant parcel on the south side of the city into 4 lots. A variance is requested for Lot 3, which does not have any frontage.	7/19/2018
Erie Point Multi-Family Residence	401 Saratoga St.	Site plan review for a 39-unit multi-family residence on a vacant property.	7/19/2018
Erie Point Multi-Family Residence Area Variance	401 Saratoga St.	Area variance for the front yard setback of a proposed 39-unit multi-family residence. The proposed setback is 29' from the front of the property, where setback requirements are 0'-5' in the UC-1 District.	7/19/2018
Cohoes Zoning Code Update	City of Cohoes (city-wide)	Amendments to Chapter 285 of the City of Cohoes' Zoning Ordinance, reflecting the recommendations identified in the recently updated Comprehensive Plan (adopted in August 2017). The amendments include a new form-based code policy for the downtown and major corridors of the City, updated definitions, historic preservation regulations, site plan processes, and other minor amendments.	4/19/2018

Table 2-2. Building Permit Issuance (2018 to 2023)

Year	Type of Building	Number of Permits Issued
2018	Commercial Buildings	1

Year	Type of Building	Number of Permits Issued
	Condominiums	1
	Multiple Residence	2
	Single Family Residential	1
	Town House	1
	Accessory Structures	15
2019	Commercial Buildings	1
	Single Family Residential	2
	Two Unit Building	1
	Accessory Structures	12
2020	Commercial Buildings	4
	Multiple Residence	2
	Single Family Residential	2
	Town House	1
	Two Unit Building	6
	Carport	1
	Accessory Structures	26
2021	Multiple Residence	8
	Single Family Residential	2
	Two Unit Building	1
	Accessory Structures	9
2022	Commercial Buildings	1
	Multiple Residence	3
	Single Family Residential	3

Year	Type of Building	Number of Permits Issued
2023	Two Unit Building	1
	Accessory Structures	5
	Multiple Residence	9
	Single Family Residential	1
	Accessory Structures	8
Total		130

Data Source: Data provided by City of Cohoes, March 2024

3 CAPABILITIES ASSESSMENT

3.1 Planning Mechanisms and Capabilities

The City of Cohoes identified the following planning mechanisms and capabilities that can support the City in hazard mitigation efforts. These capabilities can be used to support the mitigation strategy in several ways. For example, administrative capabilities can assist in implementing the mitigation actions as identified in the mitigation strategy. Existing building codes and land use regulations provide a foundation for mitigation planning and provide guidelines for infrastructure repair, new developments, and other actions. Educational programs may be developed further in order to more fully incorporate hazard mitigation. Table 3-1 elaborates on existing building codes, land use and development ordinances/regulations, and many other capabilities which can support hazard mitigation.

Table 3-1. Planning Mechanisms & Capabilities

Planning Mechanism	In Place? (Yes/No)	Notes (Does the plan address hazards? Can the capability be used to implement mitigation actions? When was it last updated?)
Administration		
Maintenance Programs	Yes	Clean catch basins yearly, check on manholes, sewer lines. Sewer and raw water pump stations are checked daily.
Mitigation Planning Committee	No	
Mutual Aid or Shared Services Agreements	Yes	Agreements with Watervliet, Green Island, Cohoes and other adjacent communities (e.g. supply drinking water to some of them). Fire department has mutual aid agreements with all surrounding fire departments.
Planning Board	Yes	
Zoning Board	Yes	
Other	Yes	Historic Board
Development Approvals		

Planning Mechanism	In Place? (Yes/No)	Notes
		(Does the plan address hazards? Can the capability be used to implement mitigation actions? When was it last updated?)
Building Code	Yes	NYS Building Code 2020
Fire Department ISO Rating	Yes	4
Site Plan Review Requirements	Yes	Zoning/Planning. For downtown areas, Historic Board has input as well.
Other		
Funding Resources		
Authority to Levy Taxes	Yes	
Capital Improvement Project Funds	No	City may use small funds for capital improvement
Federal Funding Programs (i.e., USDA, FEMA, others)	Yes	Various portals for accessing federal funds
General Obligation Bonds and/or Special Tax Bonds	Yes	Has general obligation bonds
Impact Fees for New Development	No	
State Funding Programs (i.e., NYSEFC, NYSOGR, NYSEDC, others)	Yes	CHIPS funding and DOT funding SFS system (statewide financial system)
Utility Fees (i.e., water, sewer, stormwater, gas, electric)	Yes	Has stormwater fees (all communities have this)
Other		
Land Use Regulations		
Density Controls	Yes	
Flood Insurance Rate Maps	Yes	
NFIP Participant / Floodplain Ordinance	Yes	See "Floodplain Administrator" row below (under "Staff Positions")
Hillside Development Regulations	Yes	Steep slope regulations (see Urban Forestry / Landscape Management below)
Open Space Preservation	Yes	Would like waterfront park (in process of getting approval and funding)

		Notes
Planning Mechanism	In Place? (Yes/No)	(Does the plan address hazards? Can the capability be used to implement mitigation actions? When was it last updated?)
Stormwater Management Regulations	Yes	Signatory on Intermunicipal Agreement for Storm Water Management (part of Albany County Stormwater Coalition)
Streambank Setback Regulations	No	
Subdivision Regulations	Yes	
Zoning Ordinance	Yes	Includes a Floodplain District (Chapter 285-45) and Historic Overlay District (Chapter 285-44), and Land Conservation District (Chapter 285-42)
Other		
Natural Resources		
Forest/Vegetation Management	No	
Stream Corridor Management	No	
Stream Dumping Regulations	No	
Urban Forestry and Landscape Management	Yes	Grading permits (for steep slopes >15% or >30 cubic yards of fill)
Watershed Management	Yes	Mohawk Watershed Alliance
Wetland Regulations	Yes	Chapter 159: Freshwater Wetlands
Other	Yes	Chapter 285-177: Lighting Standards
Plans		
Capital Improvement Plan	No	
Comprehensive Emergency Management Plan	Yes	City emergency response plan
Comprehensive Plan	Yes	2017
Continuity of Operations Plan	No	
Economic Development Plan	No	
Other		
Programs/Organizations		
Climate Smart Community	Yes	Registered - 2009

		Notes
Planning Mechanism	In Place? (Yes/No)	(Does the plan address hazards? Can the capability be used to implement mitigation actions? When was it last updated?)
Local Emergency Preparedness/Disaster Response Organizations	Yes	Mutual aid fire departments
Local Environmental Protection Organizations	Yes	Member of Albany CSO Pool Communities, member of Albany County Stormwater Coalition
National Weather Service StormReady Certification	Yes	Weather safety and preparedness
Outreach Programs	Yes	Brochures and presentations
Partnerships with private entities addressing mitigation or disaster response	Yes	Norlite
School Programs or Adult Educational Programs	Yes	Fire department does some drills and inspections with schools
Other		
Staff Positions		
Civil Engineer	Yes	Full time; Garry Nathan
Code Enforcement Officer	Yes	Fred Laughlin, Ed Francesconi, Ken Kruszeski
Emergency Manager	Yes	Fulltime; Chief Joseph Fahd
Floodplain Administrator	Yes	Fulltime; Garry Nathan
Planner/GIS Coordinator	Yes	Sharon Butler (Commissioner of Building and Planning), John Dicocco (GIS Coordinator)
Other		Steve Hennessey: Commissioner of Public Works
Technical Abilities		
Grant Writing	Yes	Has been awarded several grants as listed at https://www.ci.cohoes.ny.us/435/Grants-Awards
Hazard Information Centers	No	Norlite has permit violation notifications for stormwater and hazardous spill (needs to notify public)
Hazard Warning Systems	Yes	Reverse 911-calls zones or city-wide; case by case
Other: Res. 3 and Water Filtration Emergency Action Plans	Yes	

One project that will expand the City's capabilities related to hazard mitigation is upgrading to the existing water treatment plant on 319 Vliet Street, as well as the water

pump station. The City is currently awaiting funding from state or EFC for these upgrades.

In addition, the City's HMP update will be incorporated into and referenced by future updates of the plans, policies, ordinances, programs, studies, and reports listed in Table 3-1. In particular, the City should review Table 3-1 when completing updates to the Comprehensive Plan and amendments to the Zoning Code. As part of this review, the City may strategize opportunities for building the hazard mitigation mechanisms and capabilities currently marked "No" in the table (where feasible) by designating lead agencies in charge of closing such gaps, connecting with partners and technical support resources, establishing a timeline and next steps, estimating costs, and applying for grant funding when necessary. In an update to the Comprehensive Plan, this process may result in the development and inclusion of detailed proposed action items and implementation frameworks that address gaps in hazard mitigation mechanisms and capabilities. In an amendment to the Zoning Code, this process may result in the modification of existing laws or the drafting and adoption of new laws to address gaps in hazard mitigation mechanisms and capabilities.

Additional strategies to expand and improve hazard mitigation capabilities are detailed in Section 10 of the main body of the HMP.

3.2 Integration of Planning Efforts

The City of Cohoes understands the importance of considering an integrated approach when developing municipal plans, policies, programs, and regulations. The City intends to reference the 2024 Albany County HMP as part of the process for future updates to the plans, policies, programs, and regulations listed in Table 3-1, above, and for creating new regulations as applicable. This may include adding hazard mitigation as an agenda item at Common Council meetings where local laws are being developed or updated, including hazard mitigation considerations in any templates used to make new laws, adopting an ordinance that all new local laws need to consider hazard mitigation if applicable, or simply making local officials aware of the need to consider hazard mitigation in any plan updates. Additionally, the City may use the local laws assessment (included in Section 4 of the main body of the HMP) to reference hazard mitigation related regulations that other jurisdictions in the County have adopted, and consider implementing similar regulations if desired.

All of these actions will help expand and improve upon these existing capabilities so that they reduce risk and better support hazard mitigation.

4 HAZARD IDENTIFICATION AND RISK ASSESSMENT

4.1 Profiled Hazards

In this HMP Update, the County reviewed multiple natural hazards, and determined to profile five natural hazards: flooding, severe storm, drought, extreme temperatures, and landslide. Descriptions of each of these hazards are included in Section 6 of the main body of the HMP.

The City of Cohoes has opted to exclude the following hazards from their annex. City representatives gave the following reasons for this exclusion:

- Drought: Excluded because the City of Cohoes is by a river, and is not worried about water running out. The City obtains water from the Mohawk River through a power canal.
- Extreme Temperatures: Excluded because the City has air conditioning and heaters, and National Grid responds promptly when an electrical outage.
- Landslide: Excluded because the City does not have a history of landslides, and has stable geology.

Aside from the exceptions listed above, the City of Cohoes profiled the same hazards as Albany County. The hazard analysis criteria used to evaluate the City's vulnerability to each natural hazard are summarized in Table 4-1, and the results are presented in Table 4-2. All rankings were completed subjectively, with the guidelines detailed in Table 4-1.

Table 4-1. Hazard Analysis Criteria

Score	Impact (Damage to property, crops, people)	Frequency*	Extent	Level of Preparedness	Total Score	Overall Vulnerability
1	Minor	Rare	One or two problem areas within the jurisdiction	Well Prepared	4 to 5	Low
2	Moderate	Infrequent	A significant portion of the jurisdiction	Moderately Prepared	6 to 8	Moderate
3	Major	Regular	The entire jurisdiction	Not Prepared	9 to 12	High

*Frequency is defined roughly as follows:

- Rare – Every 15 years or less
- Infrequent: Less than once a year but greater than once every 15 years
- Regular: Approximately yearly or multiple times a year

Table 4-2. Hazard Vulnerability by Event

Hazard Event	Impact (Damage to property, crops, people, etc.)	Frequency of Occurrence	Extent of Impacts	Level of Preparedness	Overall Vulnerability	Jurisdiction Rank	Notes (Anticipated Future Changes)
Flooding (Riverine, Coastal*, Urban, Flash, Ice Jam, Dam or Levee Break, Other)	2	2	1	2	7 – Moderate	2	See below
Drought	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Severe Storm (Hail, Ice Storms, Wind, Thunderstorms and Lightning, Winter Storms, Hurricane, Tropical Storms, Tornado, Power Outage)	2	2	3	1	8 – Moderate	1	See below

Hazard Event	Impact (Damage to property, crops, people, etc.)	Frequency of Occurrence	Extent of Impacts	Level of Preparedness	Overall Vulnerability	Jurisdiction Rank	Notes (Anticipated Future Changes)
Extreme Temperatures (Cold Wave, Heat Wave, Air Pollution Effects)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Landslide	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Coastal Flooding includes impacts from sea level rise.

4.2 Hazard Event History

A complete history of natural hazard events within the County – based on NOAA's Severe Storm Database – is included in Section 6 of the main body of the HMP. The following is a subset of events that occurred specifically within the City. These records informed the development of mitigation actions by demonstrating which hazards have historically had the greatest impact on the City.

Table 4-3. Hazard Event Records, 2018-2023

Event Type	Date	Magnitude	Estimated Property Damage	Estimated Crop Damage
Thunderstorm/Wind	8/4/2018	50	0	0
Hail	8/21/2019	1	0	0
Thunderstorm/Wind	8/21/2019	50	0	0
Flood	8/21/2019	-	0	0
Thunderstorm/Wind	5/15/2020	50	0	0
Thunderstorm/Wind	7/2/2020	50	0	0
Thunderstorm/Wind	7/27/2021	50	0	0
Flood	7/13/2023	-	0	0
Total			\$0	\$0

Note: The table above lists only the hazard events that were recorded as occurring specifically within the City. For records of County-wide hazard events, see the Albany County Annex. Units for magnitude are expressed as the following: Hail: inches, High Wind: knots, Thunderstorm Wind: knots.

4.3 Floodplain Statistics

Key water features in the City are described in Section 2.2 of this annex. FEMA provides flood insurance rate maps for the municipality and GIS data on the spatial location of floodplains. The 1% annual chance (100-year) flood event area generally corresponds with areas that are at high risk of flooding, and the 0.2% annual chance (500-year) flood event area generally corresponds with areas that are at moderate risk of flooding. Out of the 4.3 square miles in the City, approximately 17.80% are located within the 1% annual chance flood event area and approximately 20.54% are located within 0.2% annual chance flood event area (inclusive of the 1% flood event area). The estimated number and structure value of parcels in the municipality that intersect mapped floodplains are summarized in Table 4-5. There are 302 parcels in the City located within the 1% annual chance flood event area, with an estimated total structure value of \$117,018,235. Inclusive of these parcels in the 1% annual chance flood event area, there are 410 parcels in the City located within the 0.2% annual chance flood event area, with an estimated total structure value of \$130,615,113.

Table 4-4. Summary of Areas in Floodplains*

Total Area (square miles)	Percent of Total Area in 1% Annual Chance Floodplain	Percent of Total Area in 0.2% Annual Chance Floodplain
4.3	17.80%	20.54%

* Calculated areas and percentages are informational estimates only and are not to be used for official purposes. The 0.2% annual chance floodplain in this table includes the area in the 1% annual chance floodplain.

Table 4-5. Estimated Number and Structure Value of Parcels within Mapped Floodplains

Property Class	Number of Parcels in 1% Annual Chance Floodplain	Approx. Structure Value* in 1% Annual Chance Floodplain	Number of Parcels in 0.2% Annual Chance Floodplain**	Approx. Structure Value* in 0.2% Annual Chance Floodplain**
Unclassified	8	\$0	10	\$0
Agricultural	1	\$0	1	\$0
Residential	113	\$7,628,280	140	\$9,101,830
Vacant	84	\$81,100	97	\$103,300
Commercial	57	\$54,592,518	122	\$66,644,296
Recreation and Entertainment	4	\$576,000	4	\$576,000
Community Services	17	\$15,968,959	18	\$16,018,309
Industrial	5	\$5,089,287	5	\$5,089,287
Public Services	6	\$32,601,991	6	\$32,601,991
Parks and Open Space	7	\$480,100	7	\$480,100
Total	302	\$117,018,235	410	\$130,615,113

*Structure Value for each parcel was estimated by subtracting Land Assessed Value from Total Assessed Value. If the entire parcel or a subset of the parcel was contained within the floodplain, the structure on that parcel was included regardless of the structure's location on the parcel.

** The 0.2% Annual Chance Floodplain in this table includes the area in the 1% Annual Chance Floodplain.

4.4 National Flood Insurance Program

Long-term mitigation of potential flood impacts can be best achieved through comprehensive floodplain management regulations and enforcement at a local level. The National Flood Insurance Program (NFIP), regulated by FEMA, aims to reduce the impact of flooding on private and public structures by providing affordable insurance for property owners. The program encourages local jurisdictions to adopt and enforce floodplain management regulations in order to mitigate the potential effects of flooding on new and existing infrastructure (<https://www.fema.gov/flood-insurance>).

Communities that participate in the NFIP adopt floodplain ordinances. If an insured structure incurs damage costs that are over 50% of its market value, the owner must comply with the local floodplain regulations when repairing or rebuilding the structure. A structure could be rebuilt at a higher elevation, or it could be acquired and demolished by the municipality or relocated outside of the floodplain. Insured structures that are located within floodplains identified on FEMA's Flood Insurance Rate Maps (FIRMs) may receive payments for structure and content losses if impacted by a flood event.

The NFIP and other flood mitigation actions are important for the protection of public and private property and public safety. Flood mitigation is valuable to communities because it:

1. Creates safer environments by reducing loss of life and decreasing property damage;
2. Allows individuals to minimize post-flood disaster disruptions and to recover quicker (homes built to NFIP standards generally experience less damage from flood events, and when damage does occur, the flood insurance program protects the homeowner's investment); and
3. Lessens the financial impacts on individuals, communities, and other involved parties (<https://www.fema.gov/flood-insurance>).

The City of Cohoes currently participates in the NFIP (community ID 360006A), and its current FIRM(s) became effective on 03/16/15. FIRMs are available via FEMA's Flood Map Service Center (<https://msc.fema.gov/portal/home>). Digital FIRM data is also available for Albany County via FEMA's National Flood Hazard Layer Viewer, which was referenced during the development of this annex. Information from this digital FIRM data was incorporated into this Hazard Mitigation Plan where appropriate (for example, when identifying which critical facilities are located in the floodplain).

The City's local law governing floodplain development and NFIP compliance is located in Chapter 285, Article VI, Section 285-45. The City will continue to comply with the NFIP by enforcing floodplain management requirements and regulating new development in special flood hazard areas, among other required duties. Staff capabilities to implement the NFIP and local floodplain regulations are listed in Table 3-1 of this annex.

According to NFIP claims data provided by FEMA, there is 1 repetitive loss **property** in the City of Cohoes. Repetitive loss properties are properties that have had at least two paid flood losses of more than \$1,000 each in any 10-year period since 1978.

4.5 Considerations for Future Hazards

No concerns about future changes in hazard impacts specific to the City were identified during the hazard mitigation planning process. The effects of climate change and other factors on future hazard events in Albany County are covered in more detail in Section 6 of the main body of the HMP.

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5 ASSETS AND VULNERABILITIES

5.1 Critical Facilities

FEMA defines a critical facility as one that provides services and functions essential to a community, especially during and after a disaster. Critical facilities should remain accessible and functional before, during and after disasters. Additionally, critical facilities include those that requires a special emergency response in the event of hazardous incidents, such as buildings that store hazardous materials. Examples of critical facilities include community lifelines, such as fire departments, EMS services, police stations, water and wastewater services, medical facilities, highway garages, and hazardous materials. They also include facilities such as Town halls, schools, and senior centers. In the hazard mitigation planning process, each jurisdiction ultimately decided which facilities they consider to be critical facilities for their community.

Table 5-1 denotes the name, type, and location of the critical facilities within the City of Cohoes, and any particular vulnerabilities of note. More information about hazard vulnerability, including the vulnerability of community assets to natural hazard events, is included in Section 8 of the main body of the HMP. Additional vulnerabilities by location are assessed in the HAZUS analysis, included in the appendices of the HMP.

Table 5-1. Critical Facilities*

[Table redacted due to sensitive content]

Per 2022 NYS Hazard Mitigation Planning Standards, jurisdictions must identify all of their critical facilities, determine the facilities' exposure to a 1% and 0.2% annual chance flood event, and document if the facilities are protected to a 0.2% annual chance flood event or previous worst case flood event (whichever is greater). For facilities that do not meet this level of protection, the jurisdiction must either include an action to meet or exceed this criterion or explain why it is not feasible to do so.

As indicated in Table 5-1, it is unknown whether several of the City's critical facilities are protected to a 0.2% annual chance (500-year) flood event or previous worst case flood event (whichever is greater). The City has included an action in Section 7.2: New Mitigation Actions related to these critical facilities. Section 9 of the main body of the HMP provides additional detail on how the County and local municipalities may assess critical facilities' level of protection to the 1% and 0.2% annual chance flood event.

5.2 High Hazard Potential Dams

According to the NYSDEC Division of Water Bureau and Flood Protection and Dam Safety, there are four hazard classifications of dams in New York State. A High Hazard Potential Dam is a dam located in an area where dam failure may cause loss of human life; serious damage to homes, industrial, or commercial buildings; essential public utilities; main highways or railroads; and will cause extensive economic loss.

The City of Cohoes has one (1) high hazard potential dam located in the municipality: Cohoes Reservoir #3 Dam. Information on this dam is included in Table 5-2. High Hazard Potential Dams can be an asset as well as pose risks to the jurisdiction and neighboring jurisdictions. Additional information about high hazard potential dams and their impacts is included in Sections 6 and 7 of the main body of the HMP.

Table 5-2. High Hazard Potential Dams in the City of Cohoes

Dam Name	Federal ID	Owner	Year Completed	Construction Type	Primary Purpose	Date of Last EAP Revision
Cohoes Reservoir #3 Dam	NY01314	CITY OF COHOES	1885	Earth	Water Supply	2/24/2023

Source: National Inventory of Dams (U.S. Army Corps of Engineers, 2023), NYSDEC Foil Request (NYS Department of Environmental Conservation, 2024)

5.3 Additional Jurisdiction/Public Identified Vulnerabilities

In addition to critical facilities, it is important to take a holistic approach to identifying assets in the jurisdiction and how they may be vulnerable to the hazards identified in the HMP. Examples of other assets considered include:

- People (residents, workers, visiting populations, and socially vulnerable populations like seniors, individuals with disabilities, lower-income individuals, etc.)
- Other structures (community centers, historic places, planned capital improvement)
- Economic assets (major employers, primary economic sectors, key infrastructure like telecommunications networks)
- Natural, historic and cultural resources (areas of conservation, beaches, parks, critical habitats)
- Critical facilities and infrastructure (hospitals, law enforcement, water, power)
- Community activities (major local events such as festivals or economic events like farming or fishing)

Aside from critical facilities listed in Table 5-1, the City of Cohoes has identified the following additional assets for consideration in hazard mitigation planning and included the following notes:

Additional Assets:

[Information redacted due to sensitive content]

6 SUMMARY OF HAZARD IMPACTS AND VULNERABILITIES

6.1 Flood

The City of Cohoes has ranked their overall vulnerability to flood events as moderate, as indicated in Table 4-2. According to City representatives, flood events occur infrequently in the jurisdiction and affect one or two problem areas within the jurisdiction, causing moderate damage. The City feels they moderately prepared for flood events.

Information on flood event records (Section 4.2 of this annex), high hazard potential dams (Section 5.2), floodplain statistics (Section 4.3), and participation in the NFIP (Section 4.4) are described above, illustrating the impact of flooding on critical facilities and other structures. The City is particularly concerned about road closures on Route 32, infrastructure damage, and debris in the power canal (the source of the City's water supply) from flooding upstream of the City on the Mohawk River.

Future vulnerability to flood events is determined by many factors, such as climate change, land use, and population changes, as well as the implementation of mitigation and adaptation strategies. Climate change is expected to increase the City's future vulnerability to flood events. These trends are further described in Section 4.1 of this annex and in Section 6 of the main body of the HMP.

6.2 Severe Storm

The City of Cohoes has ranked their overall vulnerability to severe storm events as moderate, as indicated in Table 4-2. According to City representatives, severe storms occur infrequently in the jurisdiction and affect the entire jurisdiction, causing moderate damage. The City feels they are not prepared for severe storm events.

Records of severe storm events are described in Section 4.2 of this annex. The City is particularly concerned about the impacts of severe storm events on flooding, as well as impacts on low-income residents and people with disabilities. Additional impacts to the City from severe storm events include fallen trees from severe winds, which can damage overhead utility lines, resulting in power outages. These events are likely to result in damages to private and public infrastructure and property. In addition, during severe winter storm events, roadway safety is a primary concern and impacts the safety of residents and operation of critical facilities. Damages to the City's critical infrastructure or primary transportation routes would be particularly impactful to residents.

Future vulnerability to severe storm events is determined by many factors, such as climate change, land use, and population changes, as well as the implementation of mitigation and adaptation strategies. Climate change is expected to change the types of severe storm events that the City is vulnerable to, likely making the City more vulnerable to severe thunderstorm, windstorm, and hail events and less vulnerable to heavy snow, ice storms, winter storms and winter weather. These trends are further described in Section 4.1 of this annex and in Section 6 of the main body of the HMP.

6.3 Jurisdictional Priorities

Taking into account the identified natural hazards, potential impacts, assets, and vulnerabilities identified above, key vulnerabilities and priorities to be addressed in this HMP were identified for the City.

Top concerns about hazard mitigation in the City included:

- Flooding, both stormwater and riverine. This includes streams overflowing, insufficiency of culverts on Route 32 (consequently, flooding shuts down road temporarily and leads to damage to infrastructure).
- Storms and/or flooding upstream on Mohawk brings debris down into power canal, which is where the City's water supply comes from.

The following populations and geographic locations were identified as being particularly vulnerable to hazards:

- Low-income residents & residents with disabilities
- Certain roadways (e.g. Route 32, Delaware Ave, 2 islands, bridges when water is high)

The plan was revised to reflect the following changes in community priorities since the 2018 HMP Update:

- The culvert bridge on Route 32 has deteriorated somewhat since 2018. The City feels they are not highly affected by extreme temperatures, landslides, drought, and some storm events. Otherwise, the City has not identified any changes in priorities since the 2018 HMP Update.

Additional concerns that the City would like addressed in the plan include:

- The City experiences challenges related to receiving revenue. For example, the culvert in Saratoga Street near Route 32 has deteriorated since 2018, leading to more significant flooding. The City of Cohoes applies to NYS Culvert and Bridge Repair Funds, which allowed City to fund 2 other culverts but not the one on Saratoga Street. A September 2023 emergency situation led the City to apply for FEMA funds, and DOT attempted to access federal highway emergency repair funds. The roadway was washed away and City did temporary repairs using their own funds. At the time of the jurisdictional meeting (March 2024), the City was reapplying for NYS bridge and culvert funds.

6.4 Additional Impacts

Additional impacts of the hazards are summarized in the problem descriptions in the City's past and new mitigation actions, as described in the following sections.

7 MITIGATION STRATEGY AND IMPLEMENTATION

7.1 Past, Completed, and Ongoing Initiatives

The City had proposed four (4) mitigation actions in the 2018 Albany County HMP Update. The status of each action is summarized below, along with the City's decision about whether to include the action in the 2024 HMP Update. Any revisions to actions proposed in 2018 are indicated below.

Table 7-1. Status of 2018 Mitigation Actions

Name	Description	Hazard(s) Mitigated	Lead Agency	Status (Completed, In Progress, No Progress, Discontinued)	Carried into 2024 HMP Update? (Yes/No)	Notes
James Street Culvert Upgrade	60-inch CMP culvert that is near capacity. With more storms that have higher/shorter rain events, the line with be overtopped and road damage will occur	Flood Damage	Cohoes Dept of Public Works Superintendent, City Engineer	Completed (Fall 2023)	No	
Columbia Street (Route 470) Culvert Upgrade	A3' x5' concrete box culvert on upper Columbia. This culvert is undersized for the 25 yr storm. If not replaced road damage will occur – Tier 2	Flood Damage	Cohoes Dept of Public Works Superintendent, City Engineer	Completed	No	

Name	Description	Hazard(s) Mitigated	Lead Agency	Status		Notes
				(Completed, In Progress, No Progress, Discontinued)	Carried into 2024 HMP Update? (Yes/No)	
Saratoga Street Culvert Upgrade	Complete culvert replacement, upgrades and road reconstruction.	Flood	City of Cohoes Dept of Engineering	No Progress (seeking funding)	Yes	The culvert has deteriorated since 2018, causing more significant flooding. The new culverts will have more carrying capacity to convey floodwaters. The City has implemented temporary repairs and applied for funding but it has not been awarded. Phase 1 will cost approximately \$1.6 million. Potential funding sources may include NYS Culvert and Bridge Repair Funds, federal highway emergency repair funds, US CDBG-MIT, US HMGP, US Flood Mitigation Assistance, NYS HM RLF, EDA Disaster Recovery, EPA CWSRF, and NYS CSC (PE7).
Hazard Mitigation Procedure Plan-City-wide Emergency Response Plan	N/A	Multiple Hazards	Not specified	Completed as revised	No	The City has a city-wide emergency response plan, which is updated annually.

7.2 New Mitigation Actions

In addition to the actions carried over from the 2018 HMP, the City of Cohoes identified new mitigation actions for inclusion in the 2024 HMP Update, in conjunction with the project team. First, a list of actions was brainstormed based on the capabilities, hazard identification, impacts, and vulnerabilities described above. This included consideration to the ways that the City could expand and improve the identified capabilities to achieve mitigation, as described in Section 3 of this annex. Then, a more comprehensive range of actions were evaluated as described in Section 9 of the main body of the HMP. Finally, actions that tied in most closely with the vulnerabilities identified by the City were selected for inclusion in the HMP. These actions are included in the table below. (Note that in the table, CF = Critical Facility, EHP = Environmental and Historic Preservation.) The actions also help address climate change in the City, since many of the hazards profiled in this HMP may be worsened by climate change. The effects of climate change on these hazards are described in Section 4.1 and Section 6 of this annex, as well as in Section 6 of the main body of the HMP.

Table 7-2. New Mitigation Actions*

Project #	Project Name	Goal/Objective being Met	Hazard to be Mitigated	Description of the Problem	Description of the Solution	Related to CF?	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority
C Cohoes F1	Engineering Analysis and Flood Protection for Utilities near Bridges	G2, G5, G6	Flood	Multiple bridges within the City are in danger of flooding when waters are high. The City usually blocks off traffic from bridges when water is high and prepares to shut the water main down if necessary. However, this poses an inconvenience, and utilities near bridges are at risk.	Conduct an engineering analysis to determine whether there are additional ways to protect utilities under bridge decks (e.g. water and sewer lines, electric) from flooding. This includes but is not limited to Reevey Bridge and St. Michael's Bridge on Ontario Street. If feasible, flood protection measures may include utilizing water storage areas upstream of the City via inter-municipal agreements, as described in the "Cohoes Case Study" section of the Albany County Climate Analysis (https://arcg.is/1PObHP).	No	Potentially	1-3 years	Engineering	Medium	This action would reduce the vulnerability of utilities to flooding.	US CDBG-MIT, US HMGP, US Flood Mitigation Assistance, NYS HM RLF, US BRIC, DOT BIL Grants	High
C Cohoes S1	Generator Acquisition	G1, G5, G6	Severe Storm	Some generators at the sewage pump stations are old and need replacement. Additionally, the City garage provides essential services such as gasoline and diesel fuel storage for use during emergencies, but the lack of a generator at the City garage hinders the smooth functioning of these services during power outages that occur with severe storms.	Acquire emergency generators for the City garage. Replace some generators at sewage pump stations that are outdated.	No	Potentially	1-3 years	DPW	Medium	This action would reduce the vulnerability of the City to severe storms, by allowing the City to continue to provide essential services such as sewage and fuel provision.	US CDBG-MIT, US HMGP, NYS HM RLF, WQIP, NYS CWSRF	Medium

Project #	Project Name	Goal/Objective being Met	Hazard to be Mitigated	Description of the Problem	Description of the Solution	Related to CF?	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority
C Cohoes MH1	Water Treatment Plant and Water Pump Station Upgrades	G1, G2, G5, G6	Flood, Severe Storms	The water treatment plant is from 1911 and is in need of upgrades. For example, only 6 of 10 filter beds work; there are problems with sediment tanks; the PLC is not updated; the mixing room is in need of upgrades; the building needs windows, a ceiling, a new HVAC system, and new Scada system; sediment tanks need visual inspection; and more. Additionally, the water pump station is in need of upgrades. Both of these facilities' outdatedness hinders their ability to provide essential services during floods and severe storms, and makes them more vulnerable to these events.	Upgrade the water treatment plant (319 Vliet Street) and water pump station, based on the recent Comprehensive Water Treatment Engineering Report. Conduct phase 1 and phase 2 upgrades.	No	Potentially	3-5 years	Engineering	High	This action would increase the City's ability to provide essential services, such as water provision and water treatment, during flood and severe storm events. It would also reduce the vulnerability of these facilities to floods and storms.	US CDBG-MIT, US HMGP, US Flood Mitigation Assistance, NYS HM RLF, US BRIC, DOT BIL Grants	Medium

Project #	Project Name	Goal/Objective being Met	Hazard to be Mitigated	Description of the Problem	Description of the Solution	Related to CF?	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority
C Cohoes F2	Vulnerability Assessment and Flood Protection for Critical Facilities	G1, G2, G5, G6	Flood	Some of the City's critical facilities may not be protected against the 0.2% chance flood event or previous worst case flood event. This leaves these facilities vulnerable to becoming inoperable during flood events.	Conduct vulnerability assessments for the critical facilities identified in the City's annex to this HMP update, to determine their level of protection against a 0.2% chance flood event (or previous worst case flood, if greater than the 0.2% chance flood), where unknown. If/when funding is available, protect any unprotected facilities to an 0.2% chance flood event (or previous worst case flood event, if applicable), through engineering design, building retrofits, or other measures, as necessary and feasible. These facilities are identified in Table 5-1 of the jurisdictional annex.	Yes	Potentially	3-5 years	Building Department	High	This action would reduce the vulnerability of critical facilities to flood events.	DASNY State and Municipal Facilities Program, US HMGP, US BRIC, US Flood Mitigation Assistance, US HUD CDBG-MIT, NYS HM RLF, NYS CSC, FEMA EOC Grant Program	Medium
C Cohoes MH2	Increase Resilience at Municipal Facilities and Key Assets	G1, G2, G5, G6	Multiple Hazards (Flood, Severe Storm)	According to Albany County's Climate Resiliency Plan, several municipal facilities throughout the County are vulnerable to natural hazards such as flooding and severe storms, especially older buildings and buildings that serve vulnerable populations. Some City of Cohoes facilities may fall into this category.	Partner with Albany County to assess additional opportunities to increase resilience at critical facilities and other key assets. This may include, but is not limited to, action items detailed in the Albany County Climate Resiliency Plan page 180-197, such as: 1) Assess municipal buildings for resilient retrofit opportunities, 2) Assess municipal properties for resilient site improvements, and 3) Assess climate risks and identify proactive solutions for climate resilience at a local level. Particular facilities of interest may include, but are not limited to, the ones listed in the Climate Resiliency Plan (Chapter 3 and pages 180-197), as well as the ones listed in the Critical Facilities section of the jurisdictional annex.	Yes	Potentially	3-5 years	Building Department	High	This action would reduce the vulnerability of the community's critical facilities to natural hazards including floods and severe storms.	DASNY State and Municipal Facilities Program, US HMGP, US BRIC, US Flood Mitigation Assistance, US HUD CDBG-MIT, NYS HM RLF, NYS CSC, FEMA EOC Grant Program	Medium

*Note: CF = Critical Facility, EHP = Environmental and Historic Preservation.

7.3 Mitigation Action Prioritization

Each of the City's proposed mitigation actions were evaluated and prioritized according to the criteria listed in Section 9 of the main body of the HMP. This includes a cost-benefit review of the proposed actions. The results are included in Table 7-3.

Table 7-3. New Mitigation Action Prioritization

Mitigation Action ID	Mitigation Action Name	Ability to Increase Resilience	Economic Feasibility	Low Environmental Impact	Ability to Implement	Total Score	Priority
C Cohoes F1	Engineering Analysis and Flood Protection for Utilities near Bridges	3	2	3	3	11	High
C Cohoes S1	Generator Acquisition	3	2	2	2	9	Medium
C Cohoes MH1	Water Treatment Plant and Water Pump Station Upgrades	3	1	2	3	9	Medium
C Cohoes F2	Vulnerability Assessment and Flood Protection for Critical Facilities	2	1	2	2	7	Medium
C Cohoes MH2	Increase Resilience at Municipal Facilities and Key Assets	2	1	2	2	7	Medium

Note: Feasibility/effectiveness is rated as follows: 1 = Poor, 2 = Moderate, 3 = Good. Priority is determined as follows based on total score: 4-6 = Low, 7-9 = Medium, 10-12 = High.

7.4 Mitigation Action Implementation and Administration

The City's new mitigation actions will be implemented and administered via the lead agencies listed in Table 7-2 of this annex, using the timeframes, prioritization, and funding sources in Sections 7.2 and 7.3 as a guide. Further details about implementation of mitigation actions for all jurisdictions in Albany County, as well as a description of funding sources, are described in Sections 9 and 10 of the main body of the HMP.

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8 ADDITIONAL PUBLIC INVOLVEMENT

Public input was solicited to guide the development of the HMP through two public information meetings and a community survey. A summary of the findings of these outreach activities can be found in Section 3 of the main body of the HMP. The City of Cohoes may continue to seek public participation in hazard mitigation planning after HMP approval by including discussion of the HMP as an agenda item at public Common Council meetings and by offering opportunities for members of the public to participate in the implementation of relevant mitigation actions.

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