City of Rensselaer Jurisdictional Annex to the

MULTIJURISDICTIONAL HAZARD MITIGATION PLAN

2025

RENSSELAER COUNTY | NY

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City of Rensselaer Annex

This is the jurisdictional annex for the City of Rensselaer. The jurisdiction's governing body passed a formal resolution to participate in updating this multi-jurisdictional hazard mitigation plan (HMP). A copy of its resolution is maintained at the local government offices and at the Rensselaer County Bureau of Public Safety.

Contact Information

Table 1: Contact Information for the City of Rensselaer

Name	Title	Contact Information
Thomas E. Hulihan	Planning Director	Phone: 518-462-4839 Email: thomas.hulihan@rensselaerny.gov

Introduction

City of Rensselaer has a fully integrated approach to hazard mitigation planning and program implementation. Table 2 lists the participants in the 2024 process for updating the HMP.

Table 2: Participants in the Hazard Mitigation Plan Update for the City of Rensselaer

Name	Title	Jurisdiction
Thomas E. Hulihan	Planning Director	City of Rensselaer
Michael Stammel	Mayor	City of Rensselaer
Bill Smart	City Engineer	City of Rensselaer
Jim Brady	Commissioner of Public Works	City of Rensselaer
Tim Lippert	Building and Zoning Administrator and Floodplain Manager and MS4 Coordinator	City of Rensselaer
Amy Lolik	Assistant Planning Director	City of Rensselaer
Bill Brooking	Fire Chief	City of Rensselaer
Warren Famiglietti	Police Chief	City of Rensselaer
Ray Stevens	Planning Commission Chair	City of Rensselaer
William Bulnes	Zoning Board Chair	City of Rensselaer
Marianne Ogren	Executive Director	Rensselaer Housing Authority

Jurisdiction Profile

Location and Land Area

The City of Rensselaer is in west Rensselaer County, in the eastern part of New York State. It shares a border with North Greenbush to the north, East Greenbush to the south, North and East Greenbush to the east, and Albany County to the west.

According to the 2020 U.S. Census, Rensselaer County has a total area of 665 square miles (1,720 km^2), of which 652 square miles (1,690 km^2) is land and 13 square miles (34 km^2) (1.9%) is water. Of that, the City of Rensselaer has a total area of 3.50 square miles (9.08 km^2), of which 3.17 square miles (8.21 km^2) is land and 0.33 square miles (0.87 km^2) is water.

Population

According to the 2022 U.S. Census Bureau's American Community Survey Five-Year Estimates, the population of the City of Rensselaer is estimated to be 9,252 persons. The July 1, 2023 U.S Census population count shows an increase in population to 9,310.

Demographics

The population of the City of Rensselaer includes 98.9 males per 100 females (all ages). Persons under 18 years old make up 19.4% of the population, and persons 65 years old and older make up 17.0%.[1] Young and old subsets of the population might have unique requirements for care and potential cognitive and/or mobility limitations before, during, and after a disaster.

The portion of the population who speak a language other than English is 12.0%. Persons not speaking English well might have trouble understanding instructions regarding disaster preparation, response, and recovery.

Of those 25 years old and older, 89.4% are high school graduates or higher, and 27.9% have received their bachelor's degree or higher.[2] Higher education can help enhance skills associated with cognition and evaluation of risk. Higher education can, therefore, foster an overall improved perception of risk, particularly where individuals might not have prior direct experience preparing for, responding to, or recovering from a particular hazard in their daily lives.

From 2018 to 2022 there were 4,344 households with 2.98 persons per household. Persons living alone sometimes have less of a direct social circle for support before, during, and after a disaster.

[1] U.S. Census Bureau. "U.S. Census Bureau QuickFacts: Rensselaer County, New York." 2022. https://www.census.gov/quickfacts/fact/table/rensselaercitynewyork,rensselaercountynewyork/BPS030223.
[2] Ibid.

The Census Bureau classifies all people not living in housing units (house, apartment, mobile home, rented rooms) as living in group quarters. Group quarters may be institutional (correctional facilities, nursing homes, mental hospitals) and non-institutional (college dormitories, military barracks, group homes, missions, shelters). The Census Bureau maintains no information on group quarters for this municipality. The needs of persons living in group quarters are unique, and residents are likely to have access and functional needs and unique care requirements before, during, and after a disaster.

According to the 2022 American Community Survey, the median household income of the City of Rensselaer was $68,284, and the percentage of persons in poverty was 19.9%. Lower-income people have limited financial resources to draw from in both pre- and post-disaster scenarios and are likely to require support as they prepare for and recover from hazard events.

Noninstitutionalized civilians with a disability accounted for 19.3%, and people over 65 with a disability accounted for 29.9%. Persons (civilian, noninstitutionalized) without health insurance were 3.7% of the population. Persons with disabilities have access and functional needs, such as cognitive or mobility limitations that may put them at greater risk before, during, and after a hazard event.

Brief History

The area that is now Rensselaer County was inhabited by the Algonquian-speaking Mohican Indian tribe at the time of European encounter. Kiliaen van Rensselaer, a Dutch jeweler and merchant, purchased the area in 1630 as part of the Dutch colony New Netherland. The land passed from English rule (1664) to Dutch control (1673), then back to English rule (1674), until American independence in 1776. Rensselaer County was created in the 1790s from an area that was originally part of the very large Albany County. In 1807 the county reorganized.

The City of Rensselaer was at one time three villages: Greenbush, East Albany, and Bath. The Dutch claimed the land in 1609 based on Henry Hudson's exploration of the Hudson River. Settlement occurred at least as early as 1628. By 1642 there was a brewery and many farms, and a ferry established by Hendrick Albertsen ran from the mouth of Beaver Creek in Beverwyck (Albany) to the future City of Rensselaer. Greenbush (originally t'Greyn Bos in Dutch) was the earliest settlement from Dutch times, the hamlet of East Albany was part of the village of Greenbush, and Bath (also Bath-on-Hudson) was laid out in 1795 and incorporated as a village before 1874. In 1897, Greenbush was chartered as a city, its name was changed to Rensselaer, and its limits were extended in 1902 by the annexation of the village of Bath and the western part of the town of East Greenbush.

Governing Body

The Rensselaer Common Council represents the residents of the City of Rensselaer as the legislative body responsible for setting the governing policies of the city. The Council adopts the city budget and passes laws, policies and regulations that govern the city. It is made up of six elected officials, one representing each ward, and is chaired by the Common Council President, who is elected citywide. Its leadership includes the President Pro Tempore and the Majority Leader. The Council works cooperatively with the

Mayor and the city administration to ensure that tax dollars are responsibly spent and that all residents have access to the services and programs that make urban living safe, affordable, and desirable.

Growth and Development Trends

Performing an assessment of growth and development trends is one step of a hazard mitigation plan update. This look into the future is important because development in hazard areas could put more people and property in harm's way and, in turn, could increase potential disaster-related damage and losses at a time when the mitigation plan's purpose is to reduce the potential for damage from natural disasters.

An evaluation of growth and development trends was undertaken by each participating jurisdiction as part of the development of the initial plan in 2011. As part of this plan update, the City of Rensselaer reviewed and updated its prior feedback to reflect current conditions in the community as of early 2019. The City of Rensselaer has reported no changes in development that would affect the hazard areas since the last plan update.

The City of Rensselaer enforces local laws to protect new development from the effects of natural hazards. They include Rensselaer Codes: 101:1 the New York State (NYS) Fire Prevention and Building Code, 105:1-17 Flood Damage Prevention, 145:2 Stormwater Management (F-Watercourse Management, G-Flood Control), 179 Zoning -9 Flood hazard zones, -26 & -27 Development near streams and Wetlands, -37 to -47 Site Plan Review, and -81 Subdivision Design Standards.

Hazard Identification

The Calculated Priority Risk Index (CPRI) is a comprehensive assessment tool used to evaluate and prioritize risks in a given context. It considers various factors, such as probability, impact, and urgency, to determine the level of risk associated with particular events or situations. By considering these variables, the CPRI helps organizations and individuals make informed decisions about risk management and mitigation strategies. It provides a systematic approach to identifying and addressing potential issues, allowing for more efficient allocation of resources and proactive risk prevention. With the CPRI, stakeholders can prioritize their focus on the most critical risks, leading to more effective risk management and, ultimately, better outcomes. Table 3 shows the factors for calculating the CPRI.

Table 3: Factors in the Calculated Priority Risk Index

Risk Index Factor	Degree of Risk Level		Criteria	Factor Weight for Degree of Risk Level
Probability **What is the likelihood of the hazard occurring?**	1	Unlikely	Less than 1% probability of occurrence in the next year or a recurrence interval of greater than every 100 years.	30%
	2	Occasional	1%–10% probability of occurrence in the next year or a recurrence interval of 11–100 years.	
	3	Likely	11%–90% probability of occurrence in the next year or a recurrence interval of 1–10 years.	
	4	Highly Likely	91%–100% probability of occurrence in the next year or a recurrence interval of less than 1 year.	
Potential Consequences **What will be the overall impact in terms of injuries, damage, death, continuity of operations, and environmental and economic impacts?**	1	Negligible	Very few injuries, if any. Only minor property damage and minimal disruption of quality of life. Temporary shutdown of critical facilities.	30%
	2	Limited	Minor injuries only. More than 10% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for more than one day.	
	3	Critical	Multiple deaths/injuries possible. More than 25% of property in affected area damaged or destroyed. Complete shutdown of critical facilities more than one week.	
	4	Catastrophic	High number of deaths/injuries possible. More than 50% of property in affected area damaged or destroyed. Complete shutdown of critical facilities for 30 days or more.	
Warning Time	1	Self-defined	More than 24 hours	10%
	2	Self-defined	12–24 hours	

Risk Index Factor	Degree of Risk Level		Criteria	Factor Weight for Degree of Risk Level
How long between when it is recognized the hazard is approaching and when the hazard will begin to affect the community?	3	Self-defined	6–12 hours	
	4	Self-defined	Less than 6 hours	
Duration What is the length of time the hazard will remain active, including how long emergency operations will need to continue after the hazard event?	1	Brief	Up to 6 hours	10%
	2	Intermediate	Up to one day	
	3	Extended	Up to one week	
	4	Prolonged	More than one week	
Spatial Extent How large of an area could be impacted by a hazard event? Are impacts localized or regional?	1	Negligible	Less than 1% of area affected	20%
	2	Small	1%–25% of area affected	
	3	Moderate	25%–50% of area affected	
	4	Large	Greater than 50% of area affected	

RISK FACTOR EQUATION

RF Value = [(Probability x .30) + (Magnitude x .30) + (Onset x .10) + (Duration x .10) + (Frequency x .20)]

Table 4 presents the CPRI for the City of Rensselaer with respect to the different hazards the jurisdiction might experience.

Table 4: Types of Hazard Events with Calculated Priority Risk Index for the City of Rensselaer

Type of Hazard Event	Probability	Potential Consequences	Warning Time	Duration	Spatial Extent	Risk Factor Value
Drought	1	1	1	1	1	1
Earthquake	1	1	1	1	1	1
Extreme Temperature	1	1	1	1	1	1

Type of Hazard Event	Probability	Potential Consequences	Warning Time	Duration	Spatial Extent	Risk Factor Value
Flooding (Including Dam Failure and Ice Jams)	2	1	1	1	2	1.5
Hazardous Materials	1	1	1	1	1	1
High Wind	3	1	1	1	3	2
Hurricane or Tropical Storm	1	1	1	1	1	1
Landslide	3	1	1	1	1	1.6
Lightning	4	1	4	1	3	2.6
Terrorism	1	1	4	1	1	1.3
Tornado	1	1	2	1	1	1.1
Utility or Infrastructure Failure	2	1	2	2	2	1.7
Wildfire	3	1	2	1	2	1.9
Winter Storm (Including Ice Storm and Snowstorm)	4	1	1	2	3	2.4

Hazard Event History

Understanding hazard event histories is crucial for effective risk management. Analyzing past events allows us to identify trends, patterns, and recurring risk factors. This knowledge enables us to better prepare for and mitigate the impact of future hazards. Examining hazard event histories provides valuable insights to inform decision-making and help prioritize resources for risk prevention and response efforts. Table 5 lists some of the more notable events in the City of Rensselaer since 2003.

Table 5: Notable Hazard Events in the City of Rensselaer Since 2003

Type of Hazard Event	FEMA Disaster # (If Applicable)	Date(s)	Damage or Impacts	Description
Drought	None	None	None	None
Earthquake	None	04/05/2024	No reported impacts	Earthquake with epicenter in NJ, felt in some parts of the county
Extreme Temperature	None	07/21/2011	Heat indices of 100°F–104°F degrees across the Capital District, mid-Hudson Valley.	Extreme Heat
	None	07/1/2018	Combined with dewpoints in the mid-70s, heat indices reached near 110°F degrees in the warmest valleys.	Extreme Heat
	None	07/20/2019	Heat index values of 100°F–110°F in the warmest spots of the Hudson Valley.	Extreme Heat
	None	08/12/2021	Heat indices reached 95°F–104°F across parts of the Hudson River from Albany, and points southward reached 105°F–110°F.	Extreme Heat
	None	01/07/2015	Warming Centers opened	Extreme Cold: Behind an arctic cold front, bitter cold air, winds chill values to be as low as -40°F degrees
Extreme Temperature (cont.)	None	02/15/2015	Warming Centers opened, many reports of bursts water mains and pipes due to the frigid temperatures penetrating deep into the ground. This was especially true in areas where the infrastructure was older.	Extreme Cold: some temperatures were as cold as -30°F.

Type of Hazard Event	FEMA Disaster # (If Applicable)	Date(s)	Damage or Impacts	Description
	None	02/13/2016	Several water main breaks across the region. About 60 residents of an elderly care facility in Hoosick had to spend the night at a fire station as a result of a burst water pipe.	Extreme Cold: wind chill values reached -15°F to -45°F.
	None	01/01/2018–01/05/2018	Many warming shelters were opened across the state.	Extreme Cold: wind chills fell as low as -15°F to -35°F in many locations across the region.
	None	01/20/2019	Cold weather prompted the closing of schools and the opening of warming shelters across the region.	Extreme Cold: wind chills falling to -20°F to -40°F across most of the region.
	None	01/30/2019	The wind chills prompted many schools to close or delay opening, and there were several reports of water main breaks due to the cold.	Extreme Cold: wind chills fell to -15°F to -35°F.
	None	02/03/2023–02/04/2023	Warming centers were opened.	Arctic Cold: with extreme wind chills some squalls, temperatures ranging from -18°F in Castleton to -39°F in Grafton, wind gusts up to 44 mph in Stephentown.
Flooding (Including Dam Failure, and Ice Jams)	None	07/01/2017	$300,000 in property damage	Flash Flood: a nearby rain gauge reported 1.63 inches of rain in an hour, and an additional 1.23 inches in the next 2 hours.
	None	07/14/2021	Many roads and bridges washed out and minor damage to many homes and businesses, damage estimates in the millions	Heavy Flash Flooding: 2–5 in fell in 2 hrs.
Hazardous Materials	None	None	None	None

Type of Hazard Event	FEMA Disaster # (If Applicable)	Date(s)	Damage or Impacts	Description
High Wind	None	03/02/2016 and 04/03/2016	$15,000 in property damage. Winds frequently gusted over 40 mph during the day, resulting in some downed trees, blocking roadways and downed power lines. As a result of the downed trees, several thousand power outages occurred.	Strong Wind: A few gusts reached around 50 mph, including Albany International Airport, which reached 51 mph.
	None	02/17/2022–02/18/2022	Downed tree branches and power lines, some power outages	High Wind Event with Icing
	None	03/07/2022–03/08/2022	National grid power outages throughout the county	High Wind Event
Hurricane or Tropical Storm	DR#4020	08/26/2011–09/5/2011	Catastrophic and flash flooding in some areas.	Hurricane Irene
	None	08/04/2020	Flooding/flash flooding in flood-prone areas	Tropical Storm Isaias
Landslide	None	None	None	None
Lightning	None	None	None	None
Terrorism	None	None	None	None
Tornado	None	None	None	None
Utility or Infrastructure Failure	None	01/11/2022–01/13/2022	Evacuation of 107 residents and pets, evacuated employees; housing provided for residents at hotel	Van Rensselaer Heights Senior Housing experienced multi-day power outage issue.
	None	01/17/2022	Over 70 residents and pets evacuated; housing provided at hotel	Renwyck Place Senior Housing: sprinkler pipe burst, causing extensive flooding.
Wildfire	None	None	None	None

Type of Hazard Event	FEMA Disaster # (If Applicable)	Date(s)	Damage or Impacts	Description
Winter Storm (Including Ice Storm and Snowstorm)	DR#4322	03/14/2017–03/15/2017	Numerous power outages and transportation delays	Blizzard conditions and high winds brought considerable blowing and drifting of snow.
	None	12/16/2020–12/17/2020	Downed trees and power lines from weight of snow	Snowfall in Rensselaer County ranging from 17.3 in to 26 in
	None	12/15/2022–12/17/2022		Nor'easter, snowfall ranging from 1 in to 12 in across the region
	None	03/13/2023–03/15/2023	Downed trees and power lines with widespread power outages	Nor'easter, heavy wet snow, accumulations from 12 in to 31 in across the region
	None	03/22/2024–03/23/2024	State of Emergency declared due to significant power outages throughout the county; many trees and powerlines down, leading to many road closures in the county	Long period of rain, followed but freezing rain and sleet and then freezing temperatures and up to 0.5 in ice and snow accumulations ranging from 4 in to 11.5 in

According to the National Centers for Environmental Information (NCEI)[3] at the National Oceanic and Atmospheric Administration (NOAA), the notable events in the City of Rensselaer since 2011 include the following:

- **August 28, 2011** – The remnants of Hurricane Irene brought heavy to extreme rainfall to all of Rensselaer County.
- **October 29–30, 2012** – Rainfall in Rensselaer County related to Hurricane Sandy was not excessively heavy and did not cause notable flooding, thanks to dry antecedent conditions. Wind gusts of 40–60 mph were common from the afternoon of Oct 29 until the early morning hours of Oct 30.
- **June 24, 2013** – Thunderstorm Winds: A National Weather Service storm survey team determined that straight line winds (microburst) impacted the City of Rensselaer. Based on the damage assessment, mainly trees, the team estimated the maximum wind speeds at 90–100 mph. Several trees fell on homes, causing minor structural damage. One tree fell on a porch resulting in minor injuries to a man.
- **June 30, 2017–July 1, 2017** – Severe Storms and Flooding: Numerous strong to severe thunderstorms occurred across Rensselaer County. Thunderstorm winds caused extensive damage in the county, downing trees and power lines, and heavy rains caused flooding in many areas of the county.
- **February 26, 2019** – Wind gusts in excess of 50 mph were common across the area, with several sites recording gusts in excess of 60 mph. Numerous power outages and downed trees occurred in the Capital District as a result of the winds, and some structural damage to barns and houses was reported as well. In the City of Rensselaer, part of the roof of a concession stand at the Rensselaer Little League Field blew off, and bricks were reported blown off the side of an auto parts store.

[3] National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI). 01/01/2011–09/30/2024. "Rensselaer County, New York." https://www.ncdc.noaa.gov/stormevents/listevents.jsp?eventType=ALL&beginDate_mm=01&beginDate_dd=01&beginDate_yyyy=2011&endDate_mm=09&endDate_dd=30&endDate_yyyy=2024&county=RENSSELAER%3A83&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submitbutton=Search&statefips=36%2CNEW+YORK.

Bricks were blown off of the side of an auto parts store in the City of Rensselaer, February 25, 2019 (CBS6 News photo)

The roof of the Rensselaer Little League concession stand was blown off in the City of Rensselaer, February 25, 2019 (CBS6 News photo)

Figure 1: Previous Damage in the City of Rensselaer

National Flood Insurance Program (NFIP) Summary

The National Flood Insurance Program (NFIP) is a Federal Emergency Management Agency (FEMA) program that provides flood insurance to millions of policyholders across the country. The following information is provided to meet federal standards. The City of Rensselaer answered the NFIP questions in Table 6 through Table 8 to the best of its ability.

Table 6: Responses on Floodplain Management from the City of Rensselaer

Question	Response
Who is the floodplain manager? Is this their primary or secondary role?	Building and Zoning Administrator. This is his secondary role. Several city staff recently joined the New York State Floodplain and Stormwater Managers Association (NYSFSMA) with access to training and other resources.
Does the floodplain manager have adequate training and capacity for their role? If not, what else is needed?	Yes. Several city staff recently joined the NYSFSMA with access to training and other resources.
How does the community enforce its floodplain rules? Does enforcement include monitoring compliance and acting to correct violations?	Article 4 "Flood Damage Prevention" and § 179-56 of the City Code addresses "Development within Flood Fringe." This is considered for all new development and enforced by the Building and Zoning Administrator.
When was the community's most recent Community Assistance Visit (CAV)?	Unknown
Were any violations noted on the community's most recent CAV?	N/A
Is there an upcoming CAV? If no, is one needed?	Likely

Question	Response
When was the most recent floodplain management ordinance adopted?	4/4/2012
Does your community participate in the Community Rating System (CRS)? If so, describe the steps the community has taken to achieve the CRS goals.	No, but in the Open Spaces Plan (March 2024) it was suggested that through enhanced floodplain management initiatives, the City of Rensselaer could become a Community Rating System (CRS) community. We are presently looking into participating in the CRS.
Does the community's floodplain management ordinance include any higher standards? If so, please list.	Article 4 "Flood Damage Prevention" and § 179-56 of the City Code "Development within Flood Fringe" adhere to current standards.
Who is responsible for permitting?	Building and Zoning Administrator and Planning Commission
How does the community issue development permits in the special flood hazard area?	The Building and Zoning Administrator assists the Planning Commission in reviewing all permit applications to ensure that the requirements of Article IV of the City Code have been satisfied.
Does the community maintain elevation certificates?	No
Does the community track the number of buildings in the special flood hazard area? If yes, are there any trends?	No
How many repetitive loss (RL) structures does the community have? (List number and type of structure.)	8 structures (4 single family homes, 3 single units in multi-unit buildings or mobile homes and 1 multi-unit (2–4) building. Of these structures only one had a recent loss (12-18-2023). For the others, the most recent loss was between 2006 and 2014. Data were pulled from Open FEMA Data Set NFIP Multi-loss Properties v 1. Found at https://www.fema.gov/openfema-data-page/nfip-multiple-loss-properties-v1
How many severe repetitive loss (SRL) structures does the community have? (List number and type of structure.)	0
Have any RL/SRL properties been mitigated since the last plan update?	0
Who is responsible for making substantial damage/substantial improvement determinations?	Tim Lippert, Building and Zoning Administrator/ Floodplain Administrator and MS4 Coordinator

Question	Response
How does the substantial damage/substantial improvement process work in your community?	Inspection in conjunction with City Engineer or other consultants as needed.
Is there sufficient staff and training to make substantial damage/substantial improvement determinations?	No, staff time is limited.
How are substantial damage/substantial improvement requirements messaged to the public before and after an event?	Through written communication
Have any substantially damaged/substantially improved structures been mitigated since the last plan update?	No. However, Barnet Mills (identified as Bath Springs in 2019 Plan is being redeveloped in the floodplain.
How will the community remain in compliance with the NFIP moving forward? (Simply stating "the community will continue to comply with the NFIP" will not meet FEMA's planning requirements.)	Several city staff recently joined the NYSFSMA with access to training and other resources. Joining NYSFSMA occurred in 2024 and has made greater resources available to staff.

Table 7: Responses on Floodplain Mapping from the City of Rensselaer

Question	Response
How does the community support map change requests? This could be requested during the Risk MAP process or through Letters of Map Amendment or Revision.	Yes, as needed.
When did the latest Flood Insurance Rate Map (FIRM) become effective?	03/18/1980
When was the latest FIRM adopted?	03/18/1980
Is the FIRM and Flood Insurance Study (FIS) report in an accessible location? How would the public get access to their flood map information?	Easily accessible as needed at https://www.fema.gov/flood-maps
Does the community use any Risk MAP products? If so, describe.	Yes, when considering or reviewing development activity in the floodplain and flood fringe
Does the community collect updated floodplain data or modeling? Is this shared with partners and with FEMA?	No
Other comments?	None

Table 8: Responses on Flood Insurance and Outreach from the City of Rensselaer

Question	Response
How does the community educate the public on floodplain management and the availability of flood insurance, in and out of the floodplain?	Presently limited information is on our website. We will obtain relevant flyers and post them on our website and at City Hall and the Public Library.
How does the community engage with insurance agents on flood insurance?	Independently
Does the community (or state) have flood hazard disclosure laws?	As announced on September 22, 2023, NYS Legislation (A.1967/S.5400) Requires Flooding Disclosure When Buying Homes
How familiar is the public with their flood insurance options?	Limited awareness
How many properties have flood insurance in the community?	Rensselaer, City of (361032) 102 Policies in Force, $20,927,000 in Total Coverage, $245,362 in written premium + FPF
Are there any areas where flood insurance is lacking?	Likely
Other comments?	None

Critical Facilities Information

The following information is provided to meet standard F1. Identifying critical facilities in flood-prone areas is crucial for effective emergency planning and risk management. By understanding the potential impact of flooding on these facilities, local authorities can develop proactive strategies to mitigate risks and ensure the safety and functionality of these important assets during flood events. This information is valuable for decision-making and prioritizing resources for emergency response and preparedness efforts. Table 9 lists the critical facilities (emergency facilities, critical infrastructure and utilities, and other key facilities, as presented in Risk Assessment) that are in the floodplain in the City of Rensselaer.

Table 9: Critical Facilities Located in the Floodplain in the City of Rensselaer

Critical Facility	Type of Facility	Jurisdiction	1% Chance? Zone AE	0.2% Chance? Zone X (Shaded)	How has this facility been protected from flooding?	Feasibility of Mitigating Flood Risk
Albany/Rensselaer, New York	Rail	City of Rensselaer	No	Yes	Observation	Limited
Amtrak Police Department	Police Station	City of Rensselaer	No	Yes	Observation	Limited
Bray Terminals Wharf	Port	City of Rensselaer	Yes	No	Observation	Limited
Cenex Rensselaer Terminal, LLC	Port	City of Rensselaer	Yes	No	Observation	Limited
Cenex Terminals	Wastewater	City of Rensselaer	Yes	No	Observation	Limited
Combined Sewer Overflows	Wastewater	City of Rensselaer	Yes	No	Observation	Limited
Doane Stuart School (The)	School	City of Rensselaer	No	No	N/A	N/A
Empire Generating Co LLC	Electric Power	City of Rensselaer	Yes	No	Observation	Limited
Empire Power Plant	Wastewater	City of Rensselaer	Yes	No	Observation	Limited
Getty Terminals Corporation	Oil	City of Rensselaer	No	Yes	Observation	Limited
Petroleum Fuel & Terminal Company	Oil	City of Rensselaer	Yes	No	Observation	Limited
Port of Albany Rensselaer Wharf	Port	City of Rensselaer	Yes	No	Observation	Limited
Rensselaer City Police Department	Police Station	City of Rensselaer	Yes	No	Observation	Limited

Critical Facility	Type of Facility	Jurisdiction	1% Chance? Zone AE	0.2% Chance? Zone X (Shaded)	How has this facility been protected from flooding?	Feasibility of Mitigating Flood Risk
Rensselaer Cogen	Electric Power	City of Rensselaer	Yes	No	Observation	Limited
Rensselaer Cogen Facility	Wastewater	City of Rensselaer	Yes	No	Observation	Limited
Rensselaer Fire Department Gs Mink T	Fire Station	City of Rensselaer	No	No	N/A	N/A
Rensselaer Fire Department North Station	Fire Station	City of Rensselaer	No	No	N/A	N/A
Rensselaer Junior/Senior High School	School	City of Rensselaer	No	No	N/A	N/A
Sprague Operating Resources LLC - Ren..	Port	City of Rensselaer	Yes	No	Observation	Limited
St. Peter's Rensselaer Health Center	Medical Care	City of Rensselaer	Yes	No	Observation	Limited
Van Rensselaer Elementary School	School	City of Rensselaer	No	No	N/A	N/A

Jurisdiction/Public Identified Vulnerabilities

Table 10 provides crucial information on critical facilities in the City of Rensselaer, highlighting the city's vulnerability to identified hazards. It outlines the susceptibility of assets to damage from the identified hazards, offering valuable insights into their potential impact on these essential facilities. By understanding the risks to these assets, local authorities can develop proactive strategies to mitigate the vulnerabilities and ensure the safety and functionality of these important assets during hazard events. This data is invaluable for decision-making and prioritizing resources for emergency response and preparedness efforts, ultimately contributing to more effective risk management and building the resilience of the community.

Table 10: Vulnerable Assets in the City of Rensselaer

Vulnerable Asset	What makes this group/asset vulnerable during hazards? Have there ever been issues with recovery after an event?
People (residents, workers, visiting populations, and socially vulnerable populations like seniors, individuals with disabilities, lower-income individuals, etc.)	
All residents and visitors in the floodplain	Location in the floodplain.
Structures (residential, commercial, industrial, government-owned, planned capital improvement, etc.)	
Structures in the floodplain include the Rensselaer Police Station where the basement is frequented by personnel and used for equipment and records storage.	Location in the floodplain.
Economic Assets (major employers, primary economic sectors, key infrastructure like telecommunications networks, etc.)	
Economic assets in the floodplain include much of the commercial downtown and several historic structures.	Location in the floodplain.
Natural, Historic, and Cultural Resources (areas of conservation, beaches, parks, critical habitats, community centers, historic places, etc.)	
Natural, historic and cultural resources in the floodplain include Crailo Historic Site, Clark-Dearstyne Inn, Riverfront Park, the Esplanade, and Hilton Park and Boat Launch.	Location in the floodplain
Critical Facilities and Infrastructure (hospitals, law enforcement, water, power, transportation systems, etc.)	
Critical facilities and infrastructure in the floodplain include the Police Station and City Hall.	Location in the floodplain.

Vulnerable Asset	What makes this group/asset vulnerable during hazards? Have there ever been issues with recovery after an event?
Community Activities (major local events, such as festivals, or economic events, like farming or fishing)	
Community activities may occur at Riverfront Park and Crailo Park, which are in the floodplain.	Location in the floodplain, although this has not been an issue for many years.
Are there any other assets that you can think to include?	
No	

Additional Public Involvement

As part of this 2025 plan update, the City of Rensselaer undertook various activities to (a) alert the public and other stakeholders to the fact that the HMP Planning Committee was developing the update and (b) provide the public and other stakeholders with a forum to ask questions and submit comments and suggestions on the process. Table 11presents the outreach activities undertaken by the City of Rensselaer for the 2025 plan update.

Table 11: Outreach Activities Undertaken by the City of Rensselaer

Activity Date	Type of Activity	Activity Details	Department and/or Staff Member
July 2024	Survey Promotion	RC survey posted on city website with QR code	Rensselaer City Clerk and Planning Department

Capabilities Assessment

Local mitigation capabilities are essential for reducing the impact of hazards on communities. Local authorities can effectively mitigate hazards by leveraging existing authorities, policies, programs, and resources. These capabilities encompass a range of strategies, such as land use planning, building codes and enforcement, public education and outreach, infrastructure protection, and natural resource protection. Through collaboration with various stakeholders, including emergency management agencies, public works departments, and environmental organizations, local communities can implement comprehensive mitigation efforts to minimize the impact of disasters. Table 12 through Table 15 provide the capabilities of the City of Rensselaer.

Planning and Regulatory

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

Table 12: Planning and Regulatory Capabilities of the City of Rensselaer

Regulatory Tool (Code, Ordinance, Plan)	In Place (Y or N)	How has or could this resource be used for hazard mitigation?
Building code	Y	Building and Zoning Code has various sections that address hazards. Examples include: § 179-56 Development within Flood Fringe and § 179-57 Stormwater regulations.
Zoning ordinance	Y	Outlines development in the flood fringe and stormwater regulations
Subdivision ordinance or regulation	Y	Article VII "Subdivision of Land" has the following provisions: Other requirements. Such other certificates, affidavits, endorsements or other agreements as may be required by the Planning Commission in the enforcement of these regulations. In special cases where there are potential hazards of flooding, landslides or other hazards in the opinion of the City Engineer, the City may require the services of an independent engineer or expert to recommend conditions under which the subdivision may be approved. The expense of such engineer or expert shall be borne by the subdivider. Land subject to flooding. Land subject to flooding shall not be platted for residential occupancy nor for such other uses as may increase danger to life or property or aggravate the flooding hazard. See Chapter 105, Flood Damage Prevention.
Special purpose ordinance (floodplain management, stormwater management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	Y	The Common Council of the City of Rensselaer finds that the potential and/or actual damage from flooding and erosion may be a problem to the residents of the City of Rensselaer and that such damage may include destruction or loss of private and public housing, damage to public facilities, both publicly and privately owned, and injury to and loss of human life. To minimize the threat of such damage the Common Council has adopted Chapter 105: Flood Damage Prevention. The purpose of the City of Rensselaer's stormwater regulations is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing in watersheds in the City of Rensselaer. All development in the City shall be in accordance with City's Chapter 145, Stormwater Management.
Growth management ordinances (also called "smart growth" or anti-sprawl programs)	N	N/A

Regulatory Tool (Code, Ordinance, Plan)	In Place (Y or N)	How has or could this resource be used for hazard mitigation?
Site plan review requirements	Y	§ 179-73 Purpose and applicability. ... The site plan review process intends to: ... To protect the health, safety and general welfare of the City and its citizens.
General, comprehensive, or master plan	Y	The City of Rensselaer Comprehensive Plan proposes to eliminate hazardous contamination from past land uses by the following: 1. Work with local, state, and federal agencies and organizations to remediate and reuse brownfield sites for future development. 2. Identify potential funding sources available to conduct site assessment and develop concept and master plans for future development. 3. Develop a plan for remediation and redevelopment of brownfield sites. The plan should inventory contaminated site and prioritize critical sites. Priority should be given to the cleanup of brownfield sites with the highest potential economic development value. 4. Pursue funding to remediate contaminated sites in the city.
Capital improvements plan	N	N/A
Economic development plan	N	N/A
Emergency response plan	Y	Flood Preparedness Guide for Residents and Businesses in the City of Rensselaer developed in 2024 with Cornell Cooperative Extension and Rensselaer County
Post-disaster recovery plan	N	N/A
Post-disaster recovery ordinance	N	N/A
Real estate disclosure requirements	N	N/A
Other	None	None

Administrative and Technical

Administrative and technical capabilities include staff and their skills.

Table 13: Administrative Capabilities of the City of Rensselaer

Staff/Personnel Resource	Available (Y or N)	How has or could this resource be used for hazard mitigation?
Planner(s) or engineer(s) with knowledge of land development and land management practices	Y	Planner(s) or engineer(s) could draft policies and plans to prevent and mitigate hazards.
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Design standards could be developed to mitigate hazardous situations.
Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	Y	Planner(s) or engineer(s) could draft policies and plans to prevent and mitigate hazards.
Floodplain manager	Y	Planner(s) or engineer(s) could draft policies and plans to prevent and mitigate hazards.
Surveyors	N	N/A
Staff with education or expertise to assess the community's vulnerability to hazards	Y	Staff can evaluate potential hazardous situations on an ongoing basis.
Personnel skilled in GIS and/or HAZUS	Y	Staff can evaluate potential hazardous situations on an ongoing basis.
Scientists familiar with the hazards of the community	N	N/A
Emergency manager	N	N/A
Grant writers	Y	Grant writers can secure funding to address hazardous and potentially hazardous situations.
Staff with expertise or training in benefit/cost analysis	Y	Staff can train other staff and the community and promote the benefits of hazard mitigation.

Financial

Financial capabilities are the resources to fund mitigation actions.

Table 14: Financial Capabilities of the City of Rensselaer

Financial Resource	Accessible or Eligible to Use (Yes/No/Don't Know)	How has or could this resource be used for hazard mitigation?
Community Development Block Grant (CDBG)	Yes	Helps with funding to address potentially hazardous situations
Capital improvements project funding	Yes	Helps with funding to address potentially hazardous situations
Authority to levy taxes for specific purposes	Yes	Can be used as needed to fund vital infrastructure projects.
Fees for water, sewer, gas, or electric service	Yes (Water and Sewer)	Can be used as needed to fund vital infrastructure projects.
Impact fees for homebuyers or developers for new developments/ homes	Yes, for developers and probably homebuyers	Can be used as needed to fund vital infrastructure projects.
Debt through general obligation bonds	Yes	Can be used as needed to fund vital infrastructure projects.
Debt through special tax and revenue bonds	Yes	Can be used as needed to fund vital infrastructure projects.
Debt through private activity bonds	Unknown	Unknown
Withholding spending in hazard-prone areas	No	N/A
State mitigation grant program	Yes	Can be used as needed to fund vital infrastructure projects.
Other state and federal grants	Yes	Can be used as needed to fund vital infrastructure projects.

Education and Outreach

Education and outreach capabilities are programs and methods that could communicate about and encourage risk reduction.

Table 15: Education and Outreach Capabilities of the City of Rensselaer

Education and Outreach Capability	In Place (Y/N)	Does this resource currently incorporate hazard mitigation?	Notes
Community Newsletter(s)	Y	Yes, on an occasional basis.	None
Hazard awareness campaigns (such as Firewise, Storm Ready, Severe Weather Awareness Week, school programs)	N	N/A	None
Public meetings/events (Please describe.)	Y	Yes, on an occasional basis.	None
Emergency management listserv	N	N/A	None
Local news	Y	Yes, on an occasional basis.	None
Hard copies of notices (e.g., public libraries, door-to-door outreach)	Y	Yes, as available. Typically at City Hall and Local Library	None
Insurance disclosures/ outreach	N	N/A	None
Organizations that Represent, advocate for, or interact with underserved and vulnerable communities (Please describe.)	Y	ARC of Rensselaer, Senior Center, Boys and Girls Club	None
Social media (Please describe.)	Y	Facebook and website	None
Other? (Please describe.)	None	N/A	None

Opportunities to Expand and/or Improve Capabilities

Table 16 presents opportunities for the City of Rensselaer to expand or improve capabilities.

Table 16: Opportunities to Expand and/or Improve the Capabilities of the City of Rensselaer

Capability Type	Opportunity to Expand and/or Improve
Planning and Regulations	• Better written standard operating procedures for job titles and department operations, including communication and cooperation between departments. • Update the Comprehensive Plan including hazard mitigation policies. • Join CRS.
Administrative and Technical	• Increased training and GIS proficiency for building/planning personnel.
Financial	• Higher awareness of hazard mitigation for grant writing staff to help secure more funding to address potentially hazardous situations.
Education and Outreach	• More awareness of flood insurance program.

Mitigation Strategy

Table 17 presents details about the 2019 mitigation actions. Table 18 presents the actions in the 2025 update, and Table 19 shows the prioritization of the mitigation actions.

Table 17: Status of Actions for the City of Rensselaer in 2019[4]

Initiative Number	Initiative Name	Description of the Problem	Description of the Solution	Project Lead/ Department and Position Title	Status Update
1	Hollow Slope – Code Review and Upgrade (2011 R-5)	Current code has no section for green practices, which can reduce and treat urban stormwater runoff; Language in the current code has made enforcement difficult in some instances.	Review current code and upgrade it to improve enforcement, add green practices to the stormwater section of code to encourage green infrastructure in the city.	Building/Planning	Several green practices were included in the Open Spaces Plan (March 2024) and will be incorporated in Comprehensive Plan updates (next year).
2	Valley View – Slope Stabilization Valley View (2011 R-6)	Storm drainage undermining slopes between Valley View and Falcon Chase.	Extend existing storm drainage system beyond bend in draw between Valley View and Falcon Chase and stabilize slopes.	Engineering	Continue to monitor. Remains stable. No issues noted.
3	Mill Creek Second Ave. Bridge Removal (2011 R-7)	Obsolete, failing unused bridge structure creates a flood chokepoint on Mill Creek and has erosion issues.	Remove bridge and abutments, lay back and stabilize slope, redirect utilities.	Planning/ Engineering	Funding has been sought but not secured for this project.

[4] NYSFSMA = New York State Floodplain and Stormwater Managers Association, CFM = Certified Floodplain Manager. NFIP = National Flood Insurance Program, CRS = Community Rating System

Initiative Number	Initiative Name	Description of the Problem	Description of the Solution	Project Lead/ Department and Position Title	Status Update
4	Slope Stabilization Quackenderry Creek	Erosion along Quackenderry Creek course in hollow undermines steep slopes.	Install additional stream bank stabilization and stabilize slopes that are showing signs of potential failure.	Planning/ Engineering	Continue to monitor. Remains stable. No issues noted.
5	Killean's Landing GEIS Environmental Recommendation Implementation	Proposed Killean's Landing development will impact approximately half of Rensselaer's riverfront, making it imperative that the highest standards for riverfront development be implemented.	Using recommendations from GEIS and additional environmental best practices, develop a stringent set of specifications and practices for developers.	Planning/ Engineering	Killean's Landing GEIS (April 2018) and § 179-14 of City Code, Waterfront Mixed-Use, set the standard for development along the waterfront.
6	Stream Overlay District	Development of buildings and structures too close to streams in the city	Survey and Create a Stream Zoning Overlay District for Mill, Quackenderry, and un-named creek	Planning	This will be incorporated in the Comprehensive Plan Updates (next year).
7	Harrison Street Culvert Replacement	Replace obsolete, aging culvert in Quackenderry Creek that is a flow restriction point in hollow.	Replace culvert with new larger culvert that will allow additional flow through neighborhood in hollow.	Planning/ Engineering	Still seeking funding. Was submitted in 2 recent Bridge NY application packages.
8	Floodplain Management Training	Ensure that proper training is provided for the individual designated floodplain manager to perform duties in a competent manner.	Mandatory floodplain management training within first year of hire for Building and Zoning Administrator and annual refresher training	Planning	Several city staff recently joined the NYSFSMA with access to training and other resources.
9	Partition Street Culvert Replacement	Failing culvert with low-hanging utilities creates choke point for high water flow, and	Replace culvert with new structure redirect utilities.	Planning/ Engineering	Project completed as of May 2024.

Initiative Number	Initiative Name	Description of the Problem	Description of the Solution	Project Lead/ Department and Position Title	Status Update
		debris catcher, further adding to flooding threat.			
10	Participate in County-Led Hazard Mitigation Outreach (2011 R-CL-1)	Residents could benefit from additional information on hazards, risks, and hazard mitigation measures they can take on their own properties to reduce damage and increase resident safety before, during, and after a hazard event.	Public awareness program on hazards, prevention, and mitigation: County will maintain a hazard mitigation and mitigation planning web presence (local municipal websites to link up to this site, if they haven't already done so); all participating jurisdictions to support preparation of a joint annual hazard mitigation and mitigation planning fact sheet and its distribution; periodic discussion of hazard mitigation and the mitigation plan at other regular local meetings; use of annual flyers, newsletters, advertisements, or radio/TV announcements, etc. at the discretion of each jurisdiction (incorporating as much free information as possible from the FEMA Publications Warehouse and other appropriate sources) (public education).	Planning	Information material is available at city hall and periodically posted on our website and Facebook page and in our newsletter.

Initiative Number	Initiative Name	Description of the Problem	Description of the Solution	Project Lead/ Department and Position Title	Status Update
11	Request code/ ordinance review by County as needed (2011 R-CL-2)	Communities are safer and more resilient when new construction and substantial improvements take into account the latest information on hazard vulnerabilities and measures to reduce risk.	Code update: Review existing local codes and ordinances against the identified hazards to determine whether there should be any amendments to address identified hazards and, where a need is identified, modify/amend the codes/ ordinances as applicable prevention.	Building/ Planning	This will be incorporated in an updated Comprehensive Plan Updates (next year).
12	Send CEO to County- Led Training (2011 R-CL-3)	There can be a loss of institutional knowledge with staff changes. Even when the staff is the same, continual training increases local capabilities and allows officials to better regulate activities in hazard areas to protect lives and property.	Code enforcement: Enforcement of NYS and Local Building Codes with Continual CEO training (prevention).	Building Dept.	Building Department and Code Enforcement staff attend training as available.
13	Send Comprehensive Plan Update for Review by County Planning (2011 R-CL-4)	A long-term vision for the community that does not take into account hazard areas can put lives and property at risk. Taking into account natural hazards and hazard mitigation measures can make the community more resilient.	Ensure that local comprehensive plans incorporate natural disaster mitigation techniques through a courtesy review of draft plans by the County Planning Department (prevention).	Planning	This will be incorporated in the Comprehensive Plan Updates (next year).
14	Attend County-Led Workshops on	When municipal staff aren't armed with information on	Hold periodic workshops for municipalities regarding	Building/Planning	Building and planning staff and

Initiative Number	Initiative Name	Description of the Problem	Description of the Solution	Project Lead/ Department and Position Title	Status Update
	Natural Hazards and Hazard Mitigation (2011 R-CL-5)	zoning and planning issues that sometimes arise regarding natural hazards and hazard mitigation, they may make decisions that do not foster community resilience.	zoning and planning issues that arise regarding natural hazards and hazard mitigation (prevention).		Planning Commission and Zoning Board members attend training as available.
15	Update Floodplain Management Ordinance per New FEMA Regulations (as needed) (2011 R-NFIP-1)	Outdated ordinances mean that a community is not regulating to the latest codes and standards or hazard information, and that does not foster community resilience.	Update/revise floodplain management ordinance to comply with latest FEMA regulations.	Planning	This will be incorporated in the Comprehensive Plan Updates (next year).
16	Update Floodplain Management Ordinance when New FIRMs are Issued (2011 R-NFIP-4)	Outdated ordinances mean that a community is not regulating to the latest codes and standards or hazard information, and that does not foster community resilience.	Update/revise floodplain management ordinance to be consistent with potential new FIRMs.	Building/Planning	This will be incorporated in the Comprehensive Plan Updates (next year).
17	Floodplain Manager CFM Certification (2011 R-NFIP-5)	As a community participating in the NFIP, our Floodplain Manager must enforce local floodplain management ordinances. To do so effectively, he/she must be very familiar with the FEMA-480 document. CFMs receive their certification after passing	Require staff involved in floodplain management and ordinance enforcement to become CFMs.	Building/Planning	Several city staff recently joined the NYSFSMA with access to training and other resources.

Initiative Number	Initiative Name	Description of the Problem	Description of the Solution	Project Lead/ Department and Position Title	Status Update
		an exam which tests their knowledge of FEMA-480. An unknowledgeable floodplain manager may not implement the ordinance or the FEMA requirements properly. In turn, lives/property can be put at risk and the community's eligibility to participate in the NFIP could be jeopardized if we do not undertake floodplain management activities in accordance with NFIP requirements (as spelled out in FEMA-480).			
18	Join the CRS (2011 R-NFIP-6)	Policy premiums could be reduced if the city pursues CRS certification and class increases.	Join the CRS.	Building/Planning	This will be explored.
19	Mitigation of RLPs *NEW*	The City of Rensselaer has six NFIP Repetitive Loss Properties	The city will support property owners who wish to undertake flood mitigation on private property.	Mayor and Floodplain Manager	We will work with property owners as needed.

Table 18: Proposed 2025 Mitigation Actions for the City of Rensselaer[5]

Project #	Project Name	Action Worksheet (Yes/No)	Goal/ Objective Being Met	Hazard to Be Mitigated	Description of the Problem	Description of the Solution	Lead Agency	Related to CF?	EHP Issue	Estimated Timeline	Estimated Cost	Estimated Benefit	Potential Funding Sources	Priority
1	Hollow Slope Code Review	No	Increase public awareness. Improve capabilities. Protect existing assets.	Landslide, Flooding	Current Code still has no section for Green Practices, which can reduce and treat urban runoff; dumping language needs to be strengthened.	Add Green Code section; strengthen dumping language pertaining to material fill and storm water out letting.	Building/Planning Engineering	No	No	1 year	$20,000	Excess runoff, uncontrolled runoff leading to erosion leading to erosion, landslides and flooding	DEC	High
2	Valley View Slope Stabilization	Yes	Protect existing assets.	Landslide	Storm Drainage undermines slopes between Valley View and Falcon Chase.	Extend existing storm system beyond bend in draw between Valley View and Falcon Chase; stabilize slopes.	Engineering	Yes	No	1–3 years	$500,000	Reduce threat of property damage from slope failure	DEC	High
3	Mill Creek – Second Ave Bridge	No	Protect existing assets.	Flooding	Obsolete, failing unused bridge creates a chokepoint on Mill Creek.	Remove Bridge and abutments, lay back and stabilize slopes, redirect utilities.	Engineering	Yes	No	3–5 years	$1,500,000	Reduce the risk of flooding in the Ring Street area	NYSDOT, DEC	High
4	Harrison St. Culvert Replacement	No	Protect existing assets.	Flooding	Replace obsolete, aging culvert in Quackenderry Creek that creates a flow restriction in the Hollow.	Replace culvert with new larger culvert that will allow additional flow through the neighborhood.	Engineering	Yes	No	1 year	$775,000	Increase stream flow through area reducing the chance of flooding	Bridge NY	Medium

[5] BRIC = Building Resilient Infrastructure and Communities, DEC = Department of Environmental Conservation, FMA = Flood Mitigation Assistance, HMGP = Hazard Mitigation Grant Program, NYSDOT = New York State Department of Transportation

Project #	Project Name	Action Worksheet (Yes/No)	Goal/ Objective Being Met	Hazard to Be Mitigated	Description of the Problem	Description of the Solution	Lead Agency	Related to CF?	EHP Issue	Estimated Timeline	Estimated Cost	Estimated Benefit	Potential Funding Sources	Priority
5	South St. Culvert Replacement	N	Protect existing assets.	Flooding	Replace existing undersized culvert that periodically floods due to insufficient flow during heavy rainfall events.	Replace existing culvert with larger culvert, remove downstream pipe in adjacent brown field.	Engineering	Yes	No	1 year	$250,000	Increase flow capacity of area reducing the chance of Flooding across South St. and Amtrak	Bridge NY	High
6	New Public Safety Bld – combined Fire/Police	N	Increase public awareness. Improve capabilities. Protect existing assets. Promote resilient new devel-opment.	Flooding, Wildfire	Replace existing aged Police and Fire Stations in Central Rensselaer vulnerable to flood damage (police) and meet modern building codes.	Move existing fire/police stations in Central Rensselaer to new state-of-the-art combined facility both centrally located and out of flood zone.	Police/Fire, Planning	No	No	1–3 years	$27,000,000	Create and centralize location to improve responses to natural and other disasters	Homeland Security	High
7	Join CRS	N	Improve capabilities.	Flooding	Policy Premiums could be reduced if City pursues CRS Certification and class increased.	Community Rating System	Building/ Planning	No	No	1 year	$1,500	Membership could reduce City's premiums and increase natural disaster readiness	Local Budget	High
8	Mitigation of RLPs	N	Increase public awareness.	Flooding	The City of Rensselaer has 6 repetitive loss properties.	Support Join the property owners who undertake flood mitigation efforts on their private property.	Floodplain Manager	TBD	No	3-5 years	$1,000,000	Eliminate repetitive damage to certain at risk properties	HMGP, BRIC, FMA	High

Project #	Project Name	Action Worksheet (Yes/No)	Goal/ Objective Being Met	Hazard to Be Mitigated	Description of the Problem	Description of the Solution	Lead Agency	Related to CF?	EHP Issue	Estimated Timeline	Estimated Cost	Estimated Benefit	Potential Funding Sources	Priority
9	John Street Culvert Replacement	N	Protect existing assets.	Flooding	Same issue as Harrison Street, next block North: Aging culvert with substandard hydraulic capacity with overhanging sewer line.	Replace with new larger orifice box culvert, directional bore sewer line under creek.	Engineering	Yes	No	1 year	$950,000	Will increase hydraulic capacity and eliminate issue of overhanging utility	Bridge NY	High
10	Participate in County- Led Hazard Mitigation Outreach	N	Increase public awareness.	Drought, Earthquake, Extreme Temperatures, Flooding, Hazardous Materials, High Winds, Hurricane/Tropical Storms, Landslide, Lightning, Terrorism, Tornado, Utility, and Infrastructure Failure, Wildfire, Winter Storms	Lack of public awareness on prevention and mitigation	Increasing public aware ness	County-led action item. City of Rensselaer	No	No	2 years	<$100,000	Education of the public	HMGP	Low

Table 19: Prioritization of Mitigation Actions for the City of Rensselaer

#	Social	Technical	Administrative	Political	Legal	Economic	Environmental	Priority
1	4	4	2	2	2	4	4	Medium
2	4	4	3	3	3	2	4	High
3	3	4	2	2	2	2	4	High
4	4	4	4	4	4	4	4	Medium
5	2	2	2	2	2	2	4	High
6	3	3	3	3	3	3	3	High
7	4	4	4	4	4	4	4	High
8	4	2	2	2	2	2	4	High
9	4	2	2	4	2	3	3	High
10	4	3	3	3	3	3	4	Low