Riverdale

Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact
Jon Bruce, Fire Chief 725 W 138th St Riverdale, IL 60827 708-849-2122; (708) 849-2122 jbruce@villageofriverdale.net	Todd Henning, Director of Public Works 14101 S Halsted St Riverdale, IL 60827 708-932-6359 thenning@villageofriverdale.net

Jurisdiction Profile

The following is a summary of key information about the jurisdiction and its history:

Date of Incorporation: 1892.

Current Population: The 2020 U.S. Census population was 10,663. The 2022 U.S. Census estimate indicated the population was 10,266.

Population Growth: The overall population has decreased by 22.26% between 2018 and 2022.

Location and Description: The Village of Riverdale is located along the southern border of the City of Chicago, 21 miles south of the Chicago Loop. Riverdale is located within Southeast Cook County, and is situated between Blue Island to the north and west, Harvey to the south, and Dolton to the east and has close proximity to both I-57 and I-94. The total square mileage of the village is 3.7.

Brief History: The first setters came to the area in 1835, and the areas of Riverdale and Dolton were practically one community until each incorporated in 1892. Riverdale was developed as a farming community by the 1850s and industries of distilleries, lumber yards, ice houses, cattle pens, barrel makers, and sugar refineries followed. Acme Steel Company became a major force in the local economy in 1918. After World War II, many of the soldiers came to Riverdale, which played a role in the expansion of the village. The railroads became a big part of the village's progression into the mid-1900s. Today the CSX and IHB make up two of the village's largest railroad yards.

Climate: The climate of Riverdale and the Chicago area is classified as humid continental, with all four seasons distinctly represented: wet springs; hot and humid summers; pleasant autumns; and cold winters. Annual precipitation is average, and reaches its lowest points in the months of January and February, and peaks in the months of May and June. Winter proves quite variable. Seasonal snowfall in the village has ranged from 9 – 90 inches. The daily average temperature in January at Midway Airport is 24.8 °F (−4.0 °C), and temperatures often stay below freezing for several consecutive days or even weeks in January and February. Temperatures drop to or below 0 °F (−18 °C) on 5.5 nights annually at Midway and 8.2 nights at O'Hare. Spring in the Chicago area is perhaps the areas wettest and unpredictable season. Winter like conditions can persist well into April and even occasionally into May. Thunderstorms are especially prevalent in the spring time as the areas

lakeside location makes it a center of conflicts between large volumes of warmer and colder air, triggering many kinds of severe weather. Temperatures vary tremendously in the springtime; March is the month with the greatest span between the record highs and lows. On a typical summer day, humidity is usually moderately high and temperatures ordinarily reach anywhere between 78 and 92 °F (26 and 33 °C). The extreme heat that the Chicago area is capable of experiencing during the height of the summer season can persist into the autumn season. Temperatures have reached 100 degrees high and subzero lows below −18 °C. Fall can bring heavy thunderstorms, many of which are capable of producing flooding. The average first accumulating snow occurs around Nov 19.

Governing Body Format: The Village of Riverdale is governed by a Mayor and Board of Trustees. The Board of Trustees is made up of 6 members elected on a 4 year cycle. This body of Government will assume the responsibility for the adoption and implementation of this plan. There are several departments that make up the Village of Riverdale. These include; Fire Department, Police Department, Public Works, Inspectional Services, Clerk and Administration Offices, and the Resource Center.

Development Trends: The Village of Riverdale anticipates a low level of development for the future and has seen a downward trend with the housing market. The village relies heavy on property taxes, being a mostly industrial land locked village. In recent years, tax collections have fallen short of the levy due to foreclosures, reductions through appeals and other reasons. Internally, decline in commercial businesses, housing values, and heavy industry has caused challenges within the community that was further exacerbated by the lingering effects of the recession, flooding from Hurricane Ike in 2008, and high property taxes. In 2013 Riverdale sought to reverse these trends and strategize for community revitalization. Riverdale developed a Comprehensive Plan focusing on positioning the community for success by providing the community with implementable, market-based strategies such as the reorganization of the TIF districts, concentration of density around TOD sites, and assembling and marketing available rail industrial sites.

Changes in Community Priorities: There have been no significant changes in priority regarding the hazards that could potentially impact the community or changes in priority regarding resilience.

Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in the *Legal and Regulatory Capability Table* below. The assessment of the jurisdiction's fiscal capabilities is presented in the *Fiscal Capability Table* below. The assessment of the jurisdiction's administrative and technical capabilities is presented in the *Administrative and Technical Capability Table* below. Information on the community's National Flood Insurance Program (NFIP) compliance is presented in the *National Flood Insurance Program Compliance Table* below. Classifications under various community mitigation programs are presented in the *Community Classifications Table* below.

TABLE: LEGAL AND REGULATORY CAPABILITY					
	Local Authority	**State or Federal Prohibitions**	**Other Jurisdictional Authority**	**State Mandated**	**Comments**
Codes, Ordinances & Requirements					

Building Code	Yes	No	No	Yes	2012 ed. ICC 10/8/2013
Zonings	Yes	No	No	Yes	Chapter 17.01.010: 1980
Subdivisions	Yes	No	No	Yes	1994, last update 2009
Stormwater Management	No	No	Yes	Yes	State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA.
Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	No	No	Yes	Yes	(765 ILCS 77/) Residential Real Property Disclosure Act.
Growth Management	No	No	No	No	
Site Plan Review	Yes	No	No	No	Chapter 17.03.120: 1980
Public Health and Safety	Yes	No	Yes	No	Cook County Board of Health. Ord. 86-11,12§1: 1986
Environmental Protection	No	No	No	No	
Planning Documents					
General or Comprehensive Plan	No	No	No	No	In development stage
Is the plan equipped to provide integration to this mitigation plan?					No
Floodplain or Basin Plan	Yes	No	No	No	Updated 2008
Stormwater Plan	No	No	Yes	No	Regional stormwater impacts are managed by MWRD. The Village lies within the Little Calumet River watershed planning area of MWRD's comprehensive Stormwater Master Planning Program

Capital Improvement Plan	No	No	No	No	
What types of capital facilities does the plan address?					N/A
How often is the plan revised/updated?					N/A
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	No	No	Yes	Yes	The Economic Development Commission is charged with reviewing all economic development related programs and incentives including tax incentives offered through the Cook County 6b program.
Shoreline Management Plan	No	No	No	No	
Response/Recovery Planning					
Comprehensive Emergency Management Plan	No	No	Yes	Yes	Cook County EMRS
Threat and Hazard Identification and Risk Assessment	No	No	Yes	No	Cook County EMRS Preparing THIRA
Terrorism Plan	No	No	Yes	Yes	Cook County EMRS
Post-Disaster Recovery Plan	No	No	Yes	Yes	Cook County EMRS
Continuity of Operations Plan	No	No	Yes	No	Cook County EMRS
Public Health Plans	No	No	Yes	No	Cook County DPH

TABLE: FISCAL CAPABILITY	
Financial Resources	**Accessible or Eligible to Use?**
Community Development Block Grants	Yes
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	Yes

User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	

TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	**Available?**	**Department/Agency/Position**
Planners or engineers with knowledge of land development and land management practices	Yes	Municipal Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Municipal Engineer
Planners or engineers with an understanding of natural hazards	Yes	Municipal Engineer
Staff with training in benefit/cost analysis	Yes	Municipal Engineer
Surveyors	Yes	Municipal Engineer
Personnel skilled or trained in GIS applications	Yes	Cook County GIS Consortium
Scientist familiar with natural hazards in local area	No	
Emergency manager	No	Cook County EMRS
Grant writers	Yes	Municipal Engineer and Village Staff

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Building and Zoning
Who is your jurisdiction's floodplain administrator? (department/position)	Director of Building and Zoning
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	2008
When was the most recent Community Assistance Visit or Community Assistance Contact?	4/06/2004
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program?	No, Yes we would be interested in the program.

NFIP Participation Activities

Maintaining compliance under the NFIP is an important component of flood risk reduction. All planning partners that participate in the NFIP have identified actions to maintain their compliance and good standing. Cook County entered the NFIP on April 15, 1981. Structures permitted or built in the County before then are called "pre-FIRM" structures, and structures built afterwards are called "post-FIRM." The insurance rate is different for the two types of structures. The effective date for the current countywide FIRM is August 19, 2008. This map is a DFIRM (digital flood insurance rate map). The communities in Cook County that participate in the NFIP are shown in ***Table: NFIP Participating Communities in Cook County*** in **Volume I** of the Cook County MJ-HMP.

The NFIP makes federally-backed flood insurance available to homeowners, renters, and business owners in participating communities. The communities in Cook County that participate in the NFIP and their "Policies in Force," "Total Coverage," and "Total Written Premiums" are shown in ***Table: Cook County Flood Insurance Policies*** in **Volume I** of the Cook County MJ-HMP.

Substantial Improvement Rule and the Substantial Damage Rule

The IDNR/OWR has developed a model ordinance for floodplain management, which has been adopted by most communities in Illinois. The ordinance includes the minimum requirements an NFIP participating jurisdiction must adopt and enforce, as well as additional higher regulatory requirements. The optional, higher regulatory standards include a minimum one foot of freeboard above the base flood elevation and cumulative tracking of damage repairs and improvements to establish substantial damage and substantial improvement compliance. Some jurisdictions have chosen to exceed the requirements of the model ordinance and have adopted more restrictive ordinances. This is most common in the communities in northeastern Illinois.

Existing Municipal Code:

14.08.010 Definitions

"**Substantial damage**" means **damage** of any origin sustained by a structure whereby the cumulative percentage of **damage** during the life of the building equals or exceeds fifty percent of the market value of the structure before the **damage** occurred regardless of actual repair work performed. Volunteer labor and materials must be included in this determination. The term includes repetitive loss buildings. See "Repetitive loss."

"**Substantial** improvement" means any reconstruction, rehabilitation, addition, or improvement of a structure taking place during the life of the building in which the cumulative percentage of improvements equals or exceeds fifty percent of the market value of the structure before the improvement or repair is started.

1. "**Substantial** improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. This term includes structures which have incurred repetitive loss or **substantial damage**, regardless of the actual work done.

2. The term does not, however, include either:

a. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions; or

b. Any alteration of a "historic structure" listed on the National Register of Historic Places or the Illinois Register of Historic Places; provided, that the alteration will not preclude the structure's continued designation as a historic structure.

14.16.010 Duties of the Enforcement Official

A. Determining the Floodplain Designation.

1. Check all new development sites to determine whether they are in a special flood hazard area (SFHA).

2. If they are in a SFHA, determine whether they are in a floodway, flood fringe or in a floodplain for which a detailed study has not been conducted and which drains more than one square mile.

3. Check whether the development is potentially within an extended SFHA (with a drainage area less than one square mile), indicating that the development would have adverse impacts regarding storage, conveyance, or inundation which would be the basis for the applicant being required to delineate the floodplain and floodway and be subject to the remaining sections of this title.

B. Professional Engineer Review.

1. If the development site is within a floodway or in a floodplain for which a detailed study has not been conducted and which drains more than one square mile, the permit shall be referred to a licensed professional engineer under the employ or contract of the village for review to ensure that the development meets Chapter 14.28 or 14.32 RMC.

2. In the case of an appropriate use, the P.E. shall state in writing that the development meets the requirements of Chapter 14.28 RMC.

G. Damage Determinations. Make damage determinations of all damaged buildings in the SFHA after a flood to determine substantially damaged structures which must comply with RMC 14.36.040(C).

14.36.040 Protecting Buildings

A. All buildings located within a one-hundred-year floodplain, also known as a SFHA, shall be protected from flood damage below the flood protection elevation. This building protection criteria applies to the following situations:

1. Construction or placement of a new building or alteration or addition to an existing building valued at more than one thousand dollars or seventy square feet;

2. Substantial improvements or structural alterations made to an existing building that increase the floor area by more than twenty percent or equal or exceed the market value by fifty percent. Alteration shall be figured cumulatively during the life of the building. If substantially improved, the existing structure and the addition must meet the flood protection standards of this section;

3. Repairs made to a substantially damaged building. These repairs shall be figured cumulatively during the life of the building. If substantially damaged the entire structure must meet the flood protection standards of this section;

4. Installing a manufactured home on a new site or a new manufactured home on an existing site (the building protection requirements do not apply to returning a manufactured home to the same site it lawfully occupied before it was removed to avoid flood damage);
5. Installing a travel trailer or recreational vehicle on a site for more than one hundred eighty days per year; and
6. Repetitive loss to an existing building as defined in RMC 14.08.010. This building protection requirement may be met by one of the following methods.

B. A residential or nonresidential building, when allowed, may be constructed on permanent land fill in accordance with the following:

1. The lowest floor (including basement) shall be at or above the flood protection elevation; and
2. Fill Requirements.
    a. The fill shall be placed in layers no greater than six inches deep before compaction and should extend at least ten feet beyond the foundation of the building before sloping below the flood protection elevation; and
    b. The top of the fill shall be above the flood protection elevation. However, the ten-foot minimum may be waived if a structural engineer certifies an alternative method to protect the building from damages due to hydrostatic pressures; and
    c. The fill shall be protected against erosion and scour during flooding by vegetative cover, riprap or other structural measure; and
    d. The fill shall be composed of rock or soil and not incorporate debris or refuse materials; and
    e. The fill shall not adversely affect the flow or surface drainage from or onto neighboring properties, and when necessary, storm water management techniques such as swales or basins shall be incorporated.

C. A residential or nonresidential building may be elevated in accordance with the following:

1. The building or improvements shall be elevated on crawl space, stilts, piles, walls, or other foundation that is permanently open to flood waters and not subject to damage by hydrostatic pressures of the base flood or one-hundred-year frequency flood. Designs must either be certified by a licensed professional engineer or architect or the permanent openings, one on each wall, shall be no more than one foot above existing grade, and consist of a minimum of two openings. The openings must have a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding below the base flood elevation; and
2. The foundation and supporting members shall be anchored and aligned in relation to flood flows and adjoining structures so as to minimize exposure to known hydrodynamic forces such as current, waves, ice and floating debris; and
3. All areas below the flood protection elevation shall be constructed of materials resistant to flood damage; and
    a. The lowest floor (including basement) and all electrical, heating, ventilating, plumbing, and air-conditioning equipment and utility meters shall be located at or above the flood protection elevation; and
    b. Water and sewer pipes, electrical and telephone lines, submersible pumps, and other waterproofed service facilities may be located below the flood protection elevation provided they are waterproofed; and

4. The areas below the flood protection elevation may only be used for the parking of vehicles, building access or storage in an area other than a basement and not later modified or occupied as habitable space; and

5. In lieu of the above criteria, the design methods to comply with these requirements may be certified by licensed professional engineer or architect.

6. Manufactured homes, and travel trailers to be installed on a site for more than one hundred eighty days, shall be elevated to or above the flood protection elevation; and, shall be anchored to resist flotation, collapse, or lateral movement by being tied down in accordance with the Rules and Regulations for the Illinois Mobile Home Tie-Down Act issued pursuant to 77 Ill. Admin. Code 870. In addition, all manufactured homes shall meet the following elevation requirements:

a. In the case of manufactured homes placed or substantially improved (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred substantial damage from a flood, the top of the lowest floor shall be elevated to or above the flood protection elevation.

b. In the case of manufactured homes placed or substantially improved in an existing manufactured home park or subdivision, the manufactured home shall be elevated so that either the top of the lowest floor is above the base flood elevation or the chassis is at least thirty-six inches in height above grade and supported by reinforced piers or other foundations of equivalent strength, whichever is less.

F. Construction of new or substantially improved critical facilities shall be located outside the limits of the floodplain. Construction of new critical facilities shall be permissible within the floodplain if no feasible alternative site is available. Critical facilities constructed within the SFHA shall have the lowest floor (including basement) elevated or structurally dry floodproofed to the five-hundred-year flood frequency elevation or three feet above the level of the one-hundred-year flood frequency elevation, whichever is greater. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities.

TABLE: COMMUNITY CLASSIFICATIONS

	Participating?	**Classification**	**Date Classified**
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	5	10/08/2013
Public Protection/ISO	Yes	5	7/29/2013
StormReady	Yes	Gold (Countywide)	2014
Tree City USA	Yes	2012	Have been awarded each year since 2000

Opportunities to Expand and Improve Capabilities

At this time, the Village of Riverdale has not identified opportunities to expand or improve our current capabilities. Should such opportunities be identified in the future, this Capability Assessment will be updated accordingly.

Plan Integration

The capability assessment describes opportunities to "link" or integrate the mitigation plan into other planning mechanisms. The process and mechanism to identify opportunities to integrate the Cook County MJ-HMP into other planning mechanisms will occur during the Annual Update Process and be reflected in the Jurisdictional Annual Report each year. Specific plan integration opportunities will include:

- The hazards, goals, and actions of the Hazard Mitigation Plan will be considered in the next update of the jurisdiction's land use plans, zoning, and subdivision codes.

Emergency Plan Integration:

Cook County EMRS is supporting communities to develop and update their respective Emergency Operations Plans, Continuity of Operations Plan/Continuity of Government Plan, and Recovery Plan in 2024. This is an ongoing countywide initiative and is being implemented in all municipalities.

Emergency Operations Plan (EOP)

An EOP template was created for all municipalities. The 2019 Cook County MJ-HMP and the hazards in the mitigation plan have been integrated into the Situation and Assumptions section of the EOP. Within that section, the natural hazards based on the 2019 MJ-HMP were added in the Initial Analysis and Assessment and Identification of Hazards section of the EOP. The hazards in the 2019 plan and the 2024 MJ-HMP did not change apart from adding wildfires for the Forest Preserve and unincorporated areas of the County. Future updates of the EOP will take into consideration any additional new natural hazards that are added to subsequent updates to the MJ-HMP.

Continuity of Operations Plan (COOP)

The Continuity of Operations Plan (COOP) for the municipality includes a Situation section that is based on the 2019 Cook County MJ-HMP jurisdictional annex, and specifically the hazards identified in the annex. The COOP-specific risk assessment is hazard-specific and based on likelihood of occurrence and severity of impact.

Recovery Plan

The goals of the Recovery Plan were developed to align with the 2019 Cook County MJ-HMP, and specifically prioritizes the responsibility of officials under this plan to save lives, protect property, relieve human suffering, sustain survivors, repair essential facilities, restore services, and protect the environment. The plan acknowledges that hazard mitigation is an important priority and consideration during the rebuilding process.

Jurisdiction-Specific Natural Hazard Event History

The information provided below was solicited from the jurisdiction and supported by NOAA and other relevant data sources.

The *Natural Hazard Events Table* lists all past occurrences of natural hazards within the jurisdiction. Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: None
- Number of FEMA-Identified Severe Repetitive Loss Properties: None
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: None

Federal Disasters Declared

Disaster Declaration Number	Date Declared	Event
DR-227	4/25/1967	Tornado
DR-351	9/4/1972	Flood
DR-373	4/26/1973	Flood
DR-509	6/18/1976	Severe Storm(s)
DR-643	6/30/1981	Severe Storm(s)
DR-776	10/7/1986	Flood
DR-798	8/21/1987	Flood
DR-997	7/9/1993	Flood
DR-1129	7/25/1996	Severe Storm(s)
DR-1188	9/17/1997	Severe Storm(s)
DR-1729	9/25/2007	Severe Storm(s)
DR-1800	10/3/2008	Severe Storm(s)
DR-1935	8/19/2010	Severe Storm(s)
DR-1960	3/17/2011	Snow
EM-3068	1/16/1979	Snow
EM-3134	1/8/1999	Snow
EM-3161	1/17/2001	Snow
EM-3230	9/7/2005	Hurricane – Katrina Evacuation
EM-3435	3/13/2020	Biological
DR-4116	5/10/2013	Flood
DR-4489	3/26/2020	Biological
DR-4728	8/15/2023	Severe Storm(s)
DR-4749	11/20/2023	Flood

State Disaster Declarations

Date Declared	Event
7/26/2010	Severe Storms, High Winds, Torrential Rain
1/31/2011	Winter Weather
4/25/2011 5/25/2011	High Wind, Tornadoes, Torrential Rain
4/18/2013 4/20/2013 4/21/2013 4/25/2013 4/30/2013	Severe Storms, Heavy Rainfall, Flooding, Straight-line Winds
1/6/2014	Heavy Snowfall, Frigid Temperatures
7/12/2017	Thunderstorms, Heavy Rainfall, Flooding

7/14/2017	
1/29/2019	Winter Storm
2/6/2020	Severe Storms
3/12/2020 – present (reissued monthly)	COVID-19
2/16/2021	Winter Storms
2/1/2022	Winter Storms
8/1/2022 (reissued monthly through 10/28/2022)	Monkeypox

TABLE: NATURAL HAZARD EVENTS			
Type of Event	**FEMA Disaster Number (if applicable)**	**Date**	**Preliminary Damage Assessment/ Event Narrative**
Winter Weather	-	2/2014	-
Winter Weather	-	1/2014	-
Extreme Cold	-	1/2014	-
Severe Weather	-	11/2013	-
Flooding	-	4/2013	-
Heat Wave	-	6/2012	-
Flooding	-	5/2012	-
Blizzard	-	2/2011	-
Severe Weather	-	8/2010	-
Winter Weather	-	1/2008	-
Blizzard	-	1/1999	-
Extreme Heat	-	6/1995	-

Jurisdiction-Specific Hazards: Vulnerabilities and Impacts

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are **relevant** and **unique** to the municipality.

Flood: In the Village, areas north of 138th St. and east of School St. have flooding issues. There is also seepage/sewage in basements. In addition, homes in the northeast side of Town experience sewage backups.

High Winds: The Village of Riverdale has many trees; the majority are old, diseased, and fall over during high winds.

Snow: One of the factors of the Village's vulnerability to snow is that the Halsted Street Bridges are difficult to clear.

Ice Storms: Similar to the challenges snow poses to the Halsted Street Bridges, these bridges are also vulnerable to ice accumulations.

Indicator	**Number**	**Percent**
Families in poverty	1,044	26.7%
People with disabilities	1,869	10.4%
People over 65 years	1,616	9%
People under 5 years	2,159	12%
People of color	16,986	94.5%
Black	12,886	71.7%

Native American	43	0.2%
Hispanic	3,747	20.9%
Difficulty with English	422	2.7%
Households with no car	1,045	16.9%
Mobile homes	743	12%

Data are from the U.S. Census Bureau, American Community Survey. See methods for more information.

The community evaluated whether vulnerability, and subsequently the potential impacts, in hazard-prone areas had increased, decreased, or remained the same for each natural hazard identified in this Hazard Mitigation Plan. Climate change, infrastructure expansion, and economic shifts that can affect vulnerability were considered. For example, if planned development is in an identified hazard area or is not built to the updated building codes, it may increase the community's vulnerability to future hazards and disasters. On the other hand, if development occurred with mitigation practices in place, the vulnerability may have remained the same or decreased. Additionally, shifting demographics were taken into consideration when assessing development trends.

Jurisdiction-Specific Climate Change Vulnerability and Impacts

The table below outlines if climate change, as assessed by the local planning team, has increased or decreased the municipality's vulnerability/exposure, and thereby the potential impacts, to each natural hazard over the past five (5) years (**Current Vulnerability**), and the effect of climate change in the future probability of occurrence and impacts (**Future Vulnerability**) from each natural hazard.

Future studies are needed to better understand the impact of climate change on the community's assets.

Hazard	Vulnerability
Current Vulnerability	
Dam and Levee Failure	Remained the Same
Drought	Remained the Same
Earthquake	Remained the Same
Flood (Riverine, Urban, Shoreline)	Remained the Same
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	Remained the Same
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Remained the Same
Tornado	Remained the Same
Wildfire (Wildfire Smoke)	Remained the Same

Hazard	Vulnerability
Future Vulnerability	
Dam and Levee Failure	No Change is Anticipated
Drought	No Change is Anticipated
Earthquake	No Change is Anticipated
Flood (Riverine, Urban, Shoreline)	No Change is Anticipated
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	No Change is Anticipated
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	No Change is Anticipated

Tornado	No Change is Anticipated
Wildfire (Wildfire Smoke)	No Change is Anticipated

Jurisdiction-Specific Changes (or Expected Changes) in Development Trends in Hazard-Prone Areas

The table below outlines if development, as assessed by the local planning team, over the past five (5) years (**Current Vulnerability**) has increased or decreased the jurisdiction's vulnerability / exposure, and thereby the potential impacts, to these natural hazards, and the anticipated effects changes in development may have on the future probability of occurrence and impacts (**Future Vulnerability**) from these natural hazards.

Hazard	Vulnerability
Current Vulnerability	
Dam and Levee Failure	Remained the Same
Drought	Remained the Same
Earthquake	Remained the Same
Flood (Riverine, Urban, Shoreline)	Remained the Same
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	Remained the Same
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Remained the Same
Tornado	Remained the Same
Wildfire (Wildfire Smoke)	Remained the Same

Hazard	Vulnerability
Future Vulnerability	
Dam and Levee Failure	No Change is Anticipated
Drought	No Change is Anticipated
Earthquake	No Change is Anticipated
Flood (Riverine, Urban, Shoreline)	No Change is Anticipated
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	No Change is Anticipated
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	No Change is Anticipated
Tornado	No Change is Anticipated
Wildfire (Wildfire Smoke)	No Change is Anticipated

Our community does not anticipate future major assets may be exposed or vulnerable to any of the natural hazards identified in this Hazard Mitigation Plan. Any new assets (e.g., new construction in hazard prone areas) will be constructed to adhere to the latest building codes and standards, and mitigation to protect them from identified and anticipated hazards, especially those that are expected to increase due to climate change.

Hazard Risk Ranking

The *Hazard Risk Ranking Table* below presents the ranking of the hazards of concern. Hazard area extent and location maps are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

TABLE: HAZARD RISK RANKING	
Rank	**Hazard Type**
1	Severe Weather
2	Severe Winter Weather
3	Earthquake
4	Tornado
5	Flood
6	Drought
7	Dam Failure

New Mitigation Actions

The following are new mitigation actions created during the 2024 update.

Action R-2.15

Mitigation Action #15: Sewer Project					
Lead Agency/Department Organization: Riverdale Inspection Services	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** General Fund Building Resilient Infrastructure and Communities (BRIC)	**Estimated Projected Completion Date:** Long-term	**Hazard(s) Mitigated:** Flood (Riverine, Urban, Coastal/Shoreline) Severe Weather (Extreme Heat, Lightning. Hail, Fog, High Winds) Severe Winter Weather (Ice Storm, Heavy Snow, Blizzards, Extreme Cold)
Year Initiated	2024				
Applicable Jurisdiction	Village of Riverdale				
Applicable Goal	1,2				
Applicable Objective	7,10				
Cost Analysis (Low, Medium, High)	High				
Priority and Level of Importance (Low, Medium, High)	Medium				
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	High				
Action/Implementation Plan and Project Description:	The Northeast sewer project has been completed and reduced flooding.				
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority	N				

Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	

Action R-2.16

Mitigation Action #16: Update Building Codes					
Lead Agency/Department Organization: Riverdale Inspection Services	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** General Fund Building Resilient Infrastructure and Communities (BRIC)	**Estimated Projected Completion Date:** Long-term	**Hazard(s) Mitigated:** Flood (Riverine, Urban, Coastal/Shoreline) Severe Weather (Extreme Heat, Lightning. Hail, Fog, High Winds) Severe Winter Weather (Ice Storm, Heavy Snow, Blizzards, Extreme Cold)
Year Initiated		2024			
Applicable Jurisdiction		Village of Riverdale			
Applicable Goal		1,2			
Applicable Objective		7,10			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:		The building codes have been updated to the ICC 2021 edition as of November. 2023			
Actual Completion Date or Ongoing Indefinite					

Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	N

Ongoing Mitigation Actions

The following are ongoing actions with no definitive end or that are still in progress. During the 2024 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.

Action R-2.1

Mitigation Action #1: Northeast sewer separation project					
Lead Agency/Department Organization: Public Works	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** HMGP, BRIC, FMA	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** Flooding
Year Initiated		2014			
Applicable Jurisdiction		Village of Riverdale			
Applicable Goal		1,2,3,			
Applicable Objective		1, 3, 4, 5, 6, 8, 10, 12, 13			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:		This project is 90% complete.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority		O			

Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	

Action R-2.3

Mitigation Action #3: Retrofit above ground water storage tank					
Lead Agency/Department Organization: Public Works	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** HMGP, BRIC, FMA	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** Earthquake, Severe Weather, Tornado
Year Initiated		2014			
Applicable Jurisdiction		Village of Riverdale			
Applicable Goal		1,2,3			
Applicable Objective		1, 2, 7			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:		Looking at funding sources including grants to complete project.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action R-2.4

Mitigation Action #4: Additional weather alert siren					
Lead Agency/Department Organization: Police Dept.	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** HMGP, BRIC	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Riverdale			
Applicable Goal		1,2,3			
Applicable Objective		1, 8, 12			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		High			
Action/Implementation Plan and Project Description:		Looking at funding sources including grants to complete project.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action R-2.5

Mitigation Action #5: Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:**	**Estimated Projected**	**Hazard(s) Mitigated:** All

			General Fund	**Completion Date:** Long-term	
Year Initiated		2014			
Applicable Jurisdiction		Village of Riverdale			
Applicable Goal		1,2,3,5,6			
Applicable Objective		3, 4, 5, 6, 7, 9, 10, 11, 13			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			
Action/Implementation Plan and Project Description:		We are currently a Tree City USA village.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action R-2.6

Mitigation Action #6: Staff training on disaster response and post damage assessments.					
Lead Agency/Department Organization: All Departments	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Medium	**Potential Funding Source:** General Fund, SHSP	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Riverdale			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		1, 4, 6, 8, 10			

Cost Analysis (Low, Medium, High)	Medium
Priority and Level of Importance (Low, Medium, High)	High
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	Medium
Action/Implementation Plan and Project Description:	All new employees are conducting their required NIMS training as set forth by job classifications. Review with existing employees to make sure they have the required trainings.
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Action R-2.7

Mitigation Action #7: Where appropriate, support retrofitting, purchasing, or relocating structures in hazard-prone areas to prevent future damage. Give priority to properties with exposure to repetitive losses.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** FEMA Hazard Mitigation Grants, HMGP, BRIC, FMA	**Estimated Projected Completion Date:** Long-term (depending on funding)	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Riverdale			
Applicable Goal		1,2,3			
Applicable Objective		7,13			
Cost Analysis (Low, Medium, High)		High			

Priority and Level of Importance (Low, Medium, High)	Medium
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	High
Action/Implementation Plan and Project Description:	The sewer separation project has prevented sewer backups from heavy rain. This project was completed in October of 2017.
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Action R-2.8

Mitigation Action #8: Continue to support the countywide actions identified in this plan.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short- and Long-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Riverdale			
Applicable Goal		1,5			
Applicable Objective		All			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			
Action/Implementation Plan and Project Description:		We will continue to support the actions of the plan.			

Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Action R-2.9

Mitigation Action #9: Actively participate in the plan maintenance strategy identified in this plan.					
Lead Agency/Department Organization: EMRS, Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated	2014				
Applicable Jurisdiction	Village of Riverdale				
Applicable Goal	1,5				
Applicable Objective	3,4,6				
Cost Analysis (Low, Medium, High)	Low				
Priority and Level of Importance (Low, Medium, High)	High				
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	Medium				
Action/Implementation Plan and Project Description:	We have been working towards meeting all of the objectives and the completion of the required reports.				
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O				

Action R-2.10

Mitigation Action #10: Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements.					
Lead Agency/Department Organization: Building and Zoning	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term and Ongoing	**Hazard(s) Mitigated:** Flooding
Year Initiated		2014			
Applicable Jurisdiction		Village of Riverdale			
Applicable Goal		1,2,5			
Applicable Objective		4,6,9			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action R-2.12

Mitigation Action #12: Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.

Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term and ongoing	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Riverdale			
Applicable Goal		1,5			
Applicable Objective		3,4,6,10,13			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			
Action/Implementation Plan and Project Description:		We have a comprehensive plan and zoning code that the village follows when it comes to land use.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action R-2.13

Mitigation Action #13: Consider the development and implementation of a Capital Improvements Program (CIP) to increase the Village's regulatory, financial and technical capability to implement mitigation actions.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** CIP Component of General Fund (if implemented)	**Estimated Projected Completion Date:**	**Hazard(s) Mitigated:** All

				Long-term and Ongoing	
Year Initiated	2014				
Applicable Jurisdiction	Village of Riverdale				
Applicable Goal	1,5				
Applicable Objective	1,2,7				
Cost Analysis (Low, Medium, High)	High				
Priority and Level of Importance (Low, Medium, High)	Medium				
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	High				
Action/Implementation Plan and Project Description:	This is a long term plan for the village.				
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O				

Action R-2.14

Mitigation Action #14: Stormwater/Sewer Assessment					
Lead Agency/Department Organization: Riverdale Public Works	**Supporting Agencies/ Organizations:** Riverdale Fire Department	**Estimated Cost:** Estimated $300,000; High	**Potential Funding Source:** HMGP, BRIC, FMA	**Estimated Projected Completion Date:** 12 months from the award of the contract	**Hazard(s) Mitigated:** Flooding, Severe Winter Weather
Year Initiated	2019				
Applicable Jurisdiction	Village of Riverdale				
Applicable Goal	1,2,3,4,5,6				

Applicable Objective	1
Cost Analysis (Low, Medium, High)	High—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
Priority and Level of Importance (Low, Medium, High)	High
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	Capacity is in question, ongoing issue High—Project will provide an immediate reduction of risk exposure for life and property.
Action/Implementation Plan and Project Description:	Based on increased service demand and responses we need to assess our current infrastructure
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Completed Actions

Completed Mitigation Actions - An archive of all identified and completed projects, including completed actions since 2014.

Completed Action Items
The Northeast sewer project has been completed and reduced flooding.
The building codes have been updated to the ICC 2021 edition as of November. 2023
Replacement of roof over the Michigan Ave. pumping station

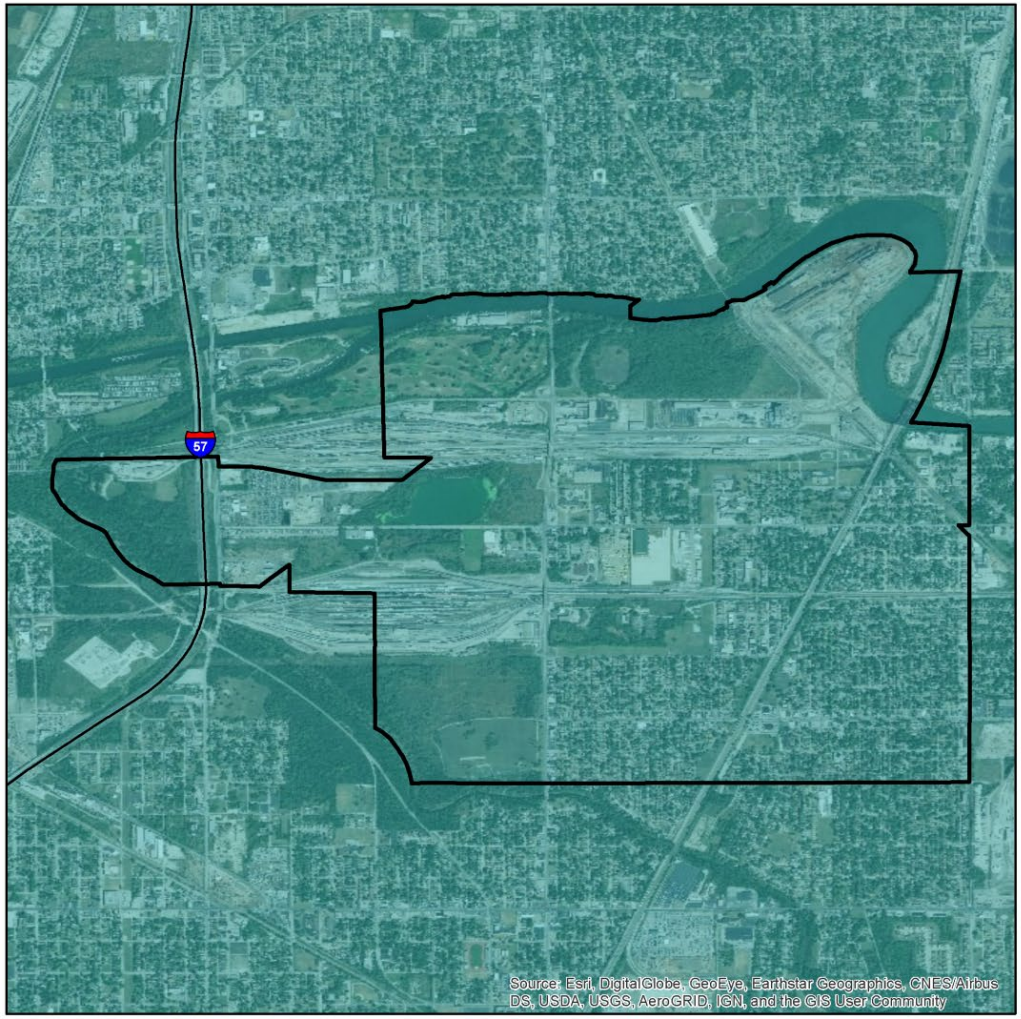
Future Needs to Better Understand Risk/Vulnerability

Education and equipment.

Additional Comments

No additional comments at this time.

Hazard Mapping



VILLAGE OF RIVERDALE

PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

Mercalli Scale, Potential Shaking

II-III Weak

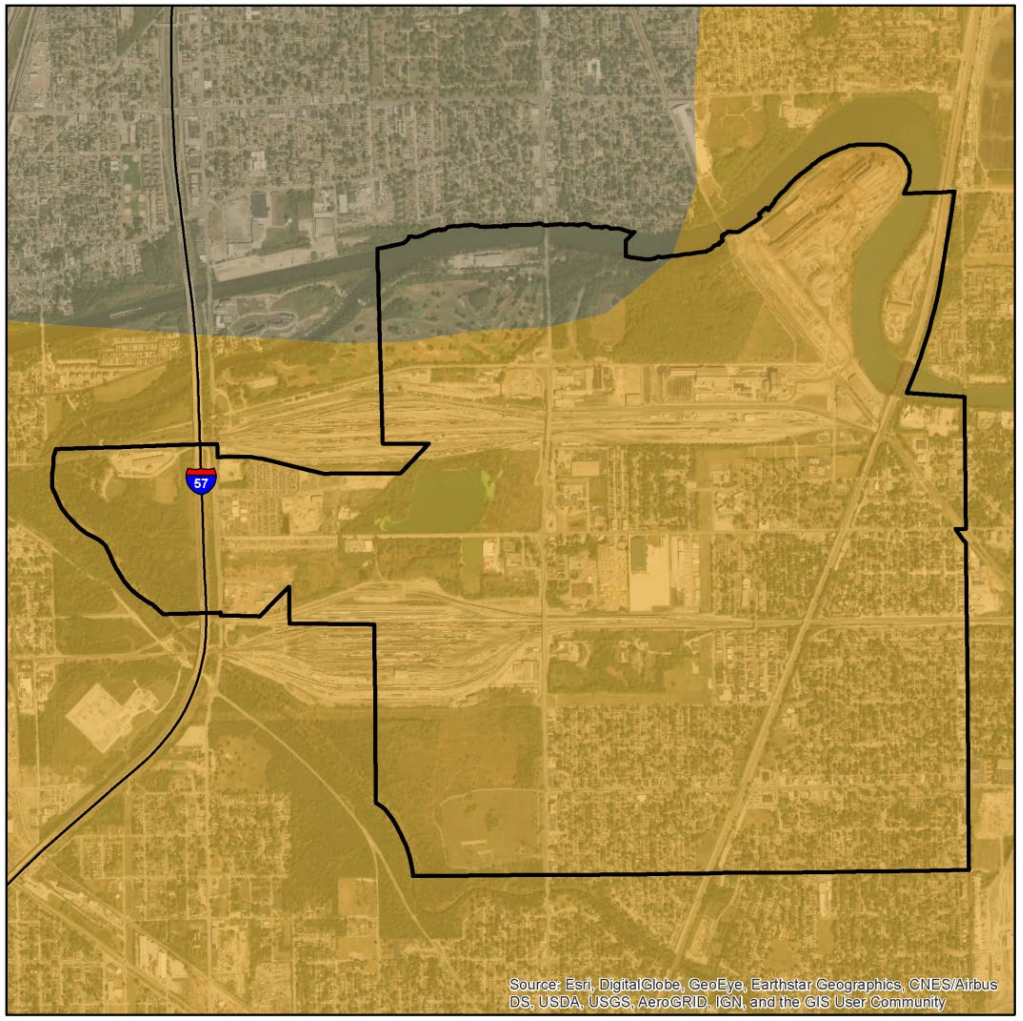
Data provided by the USGS Earthquake Hazards Program and Cook County.

Probabilistic seismic-hazard maps were prepared for the conterminous United States for 2014 portraying peak horizontal acceleration and horizontal spectral response acceleration for 0.2- and 1.0-second periods with probabilities of exceedance of 10 percent in 50 years and 2 percent in 50 years. All of the maps were prepared by combining the hazard derived from spatially smoothed historical seismicity with the hazard from fault-specific sources. The acceleration values contoured are the random horizontal component. The reference site condition is firm rock, defined as having an average shear-wave velocity of 760 m/s in the top 30 meters corresponding to the boundary between NEHRP (National Earthquake Hazards Reduction program) site classes B and C.

COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

N W E S

0 0.125 0.25 0.5 0.75 1 Miles



VILLAGE OF RIVERDALE

NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL CLASSIFICATION

TYPE

- C - Very Dense Soil, Soft Rock
- D - Stiff Soil
- F- Site Specific Evaluation

Data provided by the Illinois State Geological Survey and Cook County.

The Central United States Earthquake Consortium (CUSEC) State Geologists produced a regional Soil Site Class map (NEHRP Soil Profile Type Map), a Liquefaction Susceptibility Map and a Soil Response Map for the 8 states to be used in the FEMA New Madrid Catastrophic Planning Initiative Phase II work. The USGS Geologic Investigation Series I-2789 Map of Surficial Deposits and Materials in the Eastern and Central United State (East of 102 degrees West Longitude) by David S. Fullerton, Charles A. Bush and Jean N. Pennell (2003) was the base map used for this work. Each State Geological Survey produced its own state map version of the Soil Site Class and Liquefaction Susceptibility maps. The procedures outlined in the NEHRP provisions (Building Seismic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2002) were followed to produce the soil site class maps. CUSEC State Geologists used the entire column of soils material down to bedrock and did not include any bedrock in the calculation of the average shear wave velocity for the column, since it is the soil column and the difference in shear wave velocity of the soils in comparison to the bedrock which influences much of the amplification.

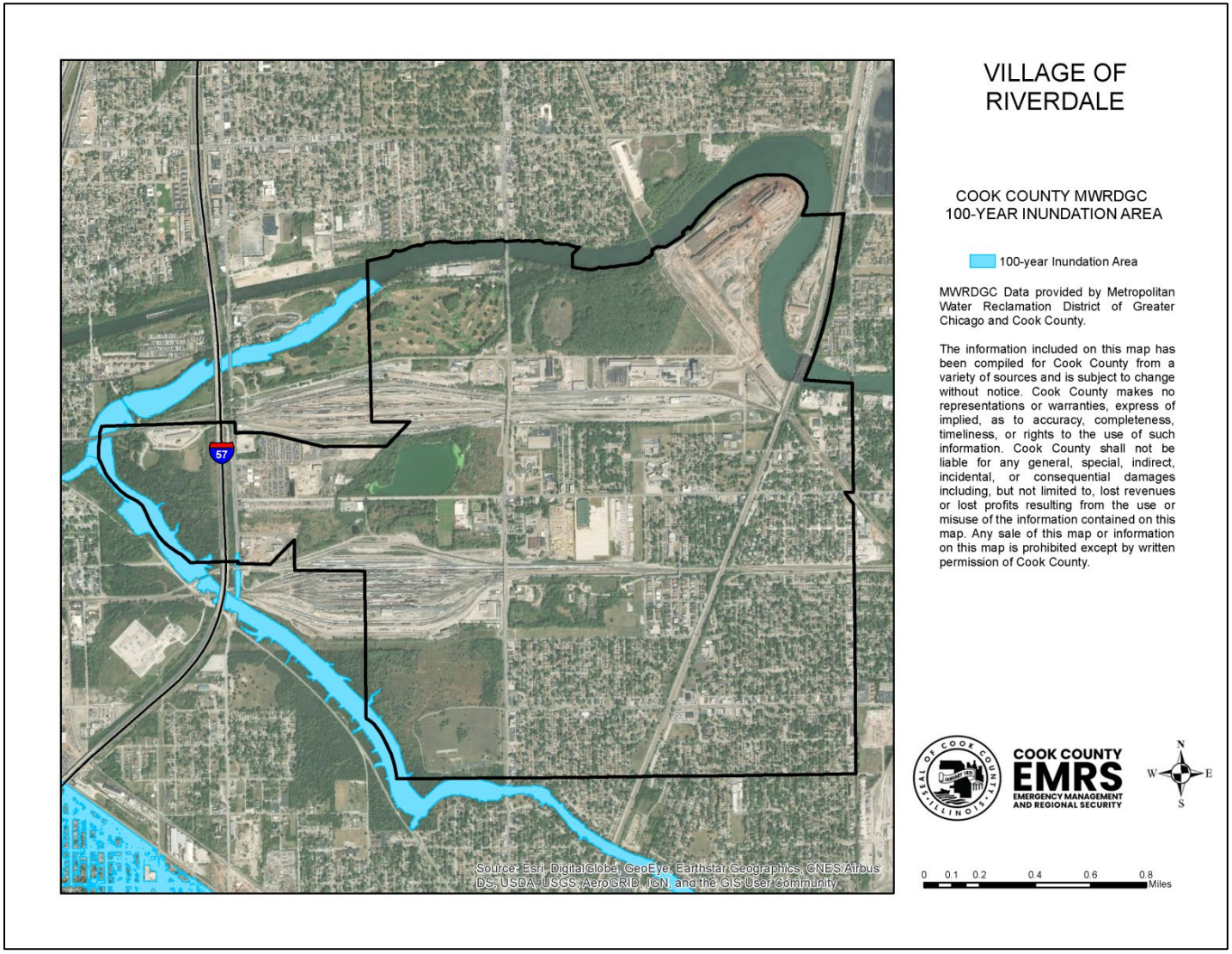
The information included on this map has been compiled for Cook County from a variety of sources and is subject to change without notice. Cook County makes no representations or warranties, express of implied, as to accuracy, completeness, timeliness, or rights to the use of such information. Cook County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of Cook County.

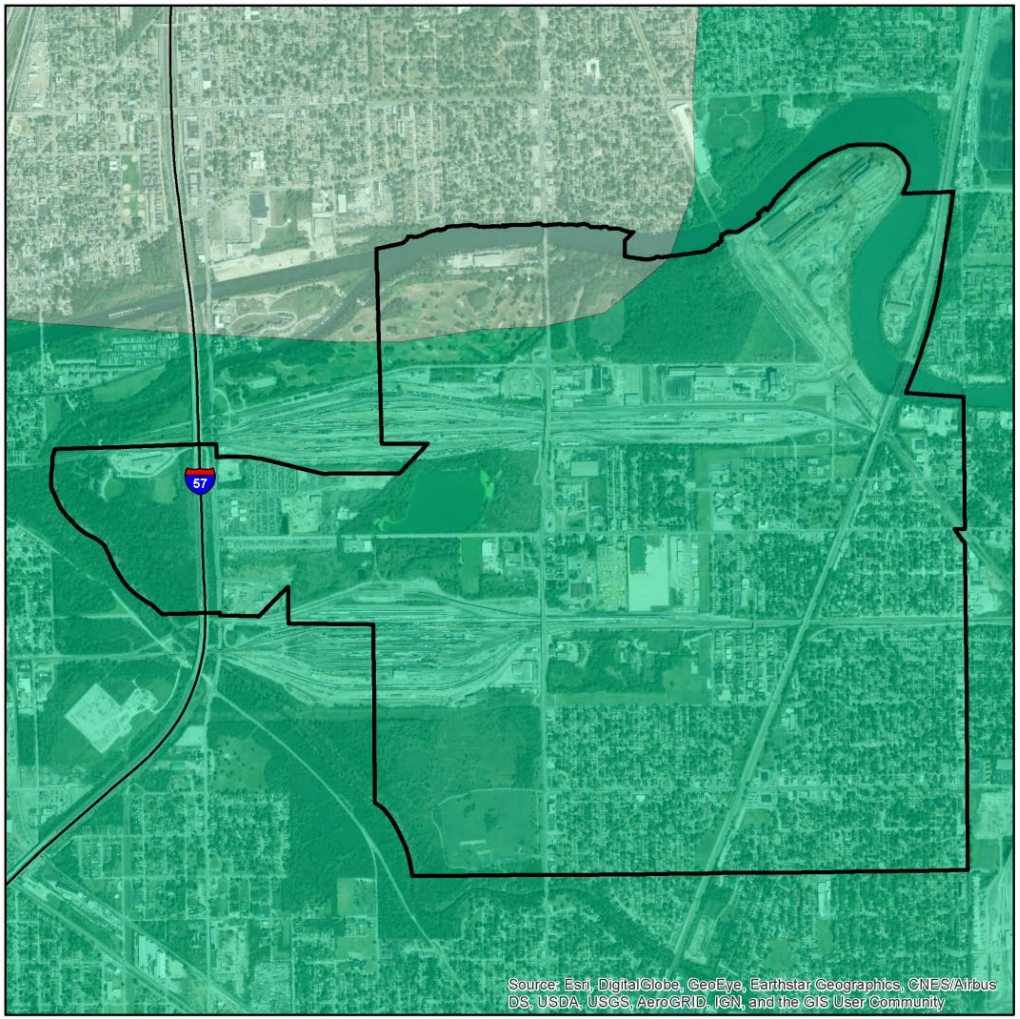
COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

N W E S

0 0.1 0.2 0.4 0.6 0.8 Miles

DISCLAIMER: The Cook County MWRDGC 100-year Inundation Map is provided to show general flood risk information regarding floodplains and inundation areas. This map is not regulatory. Official FEMA Flood Insurance Study information and regulatory maps can be obtained from http://www.fema.gov.





VILLAGE OF RIVERDALE

LIQUEFACTION SUSCEPTIBILITY

LIQUEFACTION SUSCEPTIBILITY

- high
- low
- very low

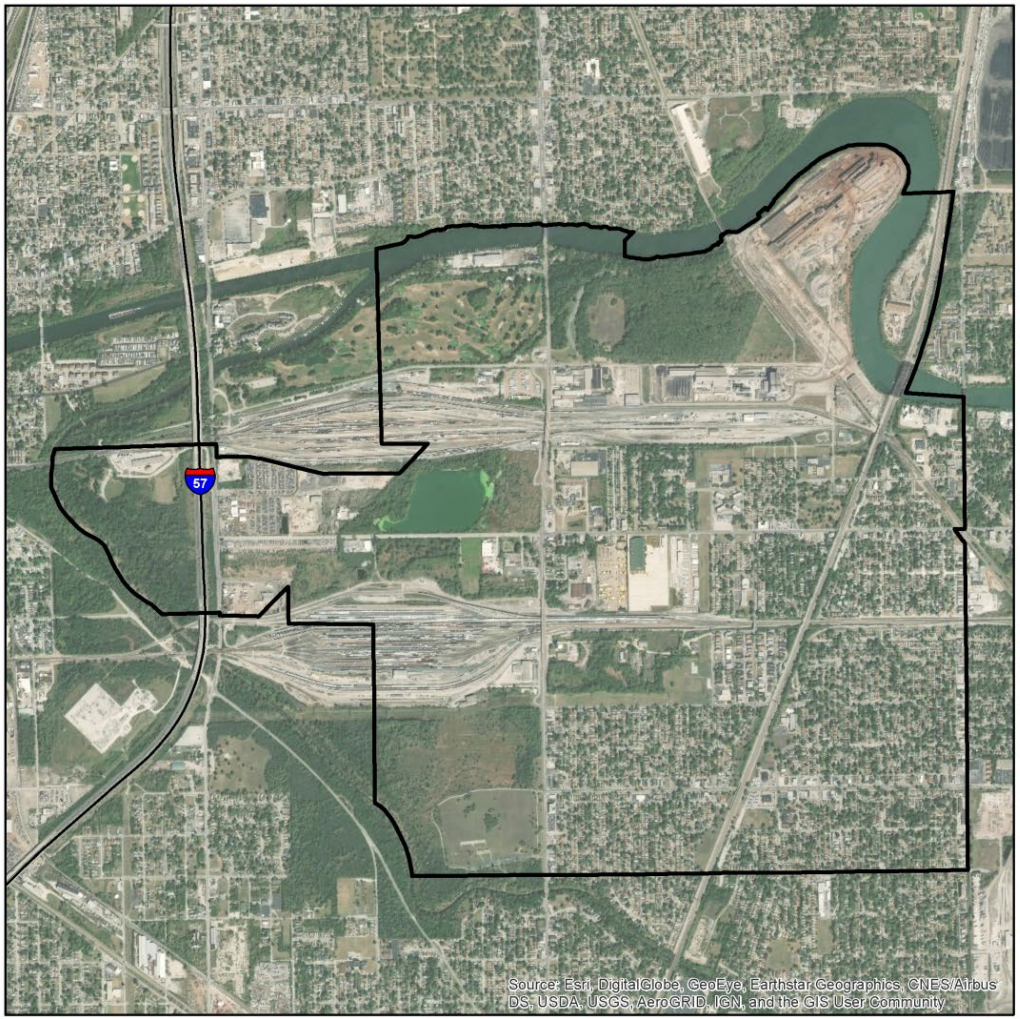
Data provided by the Illinois State Geological Survey and Cook County.

The Central United States Earthquake Consortium (CUSEC) State Geologists produced a regional Soil Site Class map (NEHRP Soil Profile Type Map), a Liquefaction Susceptibility Map and a Soil Response Map for the 8 states to be used in the FEMA New Madrid Catastrophic Planning Initiative Phase II work. The USGS Geologic Investigation Series I-2789 Map of Surficial Deposits and Materials in the Eastern and Central United State (East of 102 degrees West Longitude) by David S. Fullerton, Charles A. Bush and Jean N. Pennell (2003) was the base map used for this work. Each State Geological Survey produced its own state map version of the Soil Site Class and Liquefaction Susceptibility maps. The procedures outlined in the NEHRP provisions (Building Seismic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2002) were followed to produce the soil site class maps. CUSEC State Geologists used the entire column of soils material down to bedrock and did not include any bedrock in the calculation of the average shear wave velocity for the column, since it is the soil column and the difference in shear wave velocity of the soils in comparison to the bedrock which influences much of the amplification.

COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

N
W E
S

0 0.1 0.2 0.4 0.6 0.8 Miles



VILLAGE OF RIVERDALE

100- AND 500- YEAR TORNADO EVENTS

Magnitude

4 (100 year event)

5 (500 year event)

Historic tornado data provided by NOAA/NWS showing the initial points and paths of all F4 and F5 events observed from 1950 to 2017.

COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

N W E S

0 0.1 0.2 0.4 0.6 0.8 Miles