## Robbins

### Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact
Emani Hollingsworth, Water	Darren Bryant, Mayor
Superintendent	3323 W. 137th Street
3327 W. 137th Street	Robbins, IL 60472
Robbins, IL 60472	708-833-0018
708-270-8180	
ehollingsworth@robbins-il.com	

### **Jurisdiction Profile**

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

#### Date of Incorporation: 1917

**Current Population:** The 2020 U.S. Census population was 4,629. The 2022 U.S. Census estimate indicated the population was 4,521.

**Population Growth:** The overall population has decreased by 17.26% between 2018 and 2022.

**Location and Description:** The Village of Robbins, Illinois is located in southern Cook County, approximately 20 miles southwest of downtown Chicago. The Village of Robbins occupies approximately 1.5 square miles of land within Bremen Township. Neighboring communities include Crestwood, Midlothian, Blue Island, Alsip, and Posen.

**Brief History:** The Village of Robbins was incorporated in 1917. The village's first mayor was Thomas J. Kellar. The citizens of the unincorporated area of Cook County sought to protect their property from the citizens of surrounding towns and also to provide the necessary public services required by a growing settlement. Thomas J. Kellar, having worked at the Markham court house, was tasked with investigating the procedures of incorporation. The Village of Robbins was incorporated and was named after the original realtor and subdivider, Eugene Robbins. Robbins is one of the oldest African American governed towns in the northern United States.

**Climate:** The climate of the Village of Robbins 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 city 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 city's 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 city's 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 Robbins is governed by a Village Mayor, six members Board of Trustees with a Village Clerk, elected and a Village Administrator appointed by the Mayor and approved by the Board of Trustee. This body will assume responsibility for the adoption of this plan and the Chief of Operations and Personal Safety will oversee its implementation.

**Development Trends:** The Village was awarded a \$259,000 Department of Commerce Economic Opportunity (DCEO) grant for the completion of water meter installation. In addition, the Village was awarded a \$150,000 DCEO matching grant for roadway improvements along Claire Boulevard. Next, the Village received \$34,000 in grant funding to provide safety equipment for both the police department and fire station. In 2019, Tyrone Ward, village president of Robbins, IL welcomed a full cast of major African American entrepreneurs from throughout Cook County as well as city/suburban elected officials at a groundbreaking Business Summit The Summit was titled the Minority Entrepreneur Interactive Solution Symposium (MEISS).

**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	In accordance with Public Act 096-0704, Illinois has adopted the

					IBC as its state
					Building Code
Zonings	Yes	No	No	Yes	(65 ILCS 5/) Illinois Municipal Code.
Subdivisions	No	No	No	No	
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	No	No	No	No	
Public Health and Safety	No	No	Yes	Yes	Cook County Board of Health.
Environmental Protection	No	No	No	No	
Planning Docume	nts	-		-	
General or Comprehensive Plan	No	No	No	No	
	the plan equip	ped to provide int	egration to this mit	igation plan?	No
Floodplain or Basin Plan	No	No	No	No	
Stormwater Plan	No	No	No	No	Regional stormwater impacts are managed by MWRD. The Village lies within the Calumet- Sag Channel watershed planning area of MWRD's comprehensive Stormwater Master Planning Program

Capital					
Improvement	No	No	No	No	
Plan					
	What		acilities does the p		N/A
	1	How oft	en is the plan revis	ed/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/Recove	ry 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	No	No	
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	Yes
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	Yes	Robinson Engineering	
and land management practices			
Engineers or professionals trained			
in building or infrastructure	Yes	Robinson Engineering	
construction practices			
Planners or engineers with an	Yes	Robinson Engineering	
understanding of natural hazards	165	Robinson Engineering	
Staff with training in benefit/cost	Yes		
analysis	165		
Surveyors	Yes	Contracted Out	
Personnel skilled or trained in GIS	Yes	Cook County GIS Consortium	
applications	163	Cook County Clo Consolitum	
Scientist familiar with natural	Yes	Contracted Out	
hazards in local area	163		
Emergency manager	Yes	Police & Fire Chief's	
Grant writers	Yes	Village Administration	

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Village Administrator
Who is your jurisdiction's floodplain administrator? (department/position)	Village Administrator
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	
When was the most recent Community Assistance Visit or Community Assistance Contact?	1/27/2000
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	Yes
Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)	No, Anticipating resource funding through MWRD, IDNR
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?	Yes, Please refer to above
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

#### **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.

The following are NFIP-related activities completed by our community:

- Our staff provide the following services: permit reviews, GIS, inspections, engineering capability.
- Our community teaches property owners or other stakeholders about the importance of flood insurance through public outreach events, workshops, and/or seminars.
- Our community enforces local floodplain regulations and monitors compliance.
- Our floodplain development regulations meet or exceed Federal Emergency Management Agency (FEMA) or State minimum requirements.

#### 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:

Their ordinance did not include substantial damage rule provisions; future updates will consider inclusion of these rules as applicable and as appropriate.

#### Sec. 8-2 Definitions

Substantial improvement means any repair, reconstruction, rehabilitation, addition or improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the market value of the structure either, (i) before the improvement or repair is started, or (ii) if the structure has been damaged from any source, and is being restored, before the damage occurred. This term includes structures which were damaged whereby the cost of restoring the structure to its predamaged condition would equal or exceed fifty (50) percent of the market value before the damage occurred, regardless of the actual repair work performed. For the purpose of this definition "substantial

improvement" is considered to occur when the first alteration of any wall, ceiling, floor or other structural parts of a building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either, any project for improvement of a structure to comply with any existing state or local health, sanitary or safety code specifications which are solely necessary to assure safe living conditions or any alteration of a historic structure provided that the alterations will not preclude the structures continued designations as a historic structure.

#### Sec. 8-4 Duties of the Enforcement Official

The building official shall be responsible for the general administration and enforcement of this chapter which shall include the following:

(1) Determining the floodplain designation. Check all new development sites to determine whether they are in a special flood hazard area (SFHA). If they are in an SFHA, determine whether they are in a floodway, flood fringe or a floodplain on which a detailed study has not been conducted which drains more than one (1) square mile.

(2) Professional engineer review. If the development site is within a floodway or in a floodplain on which a detailed study has not been conducted which drains more than one (1) square mile then the permit shall be referred to a registered professional engineer (P.E.) under the employ of the village for review to ensure that the development meets the requirements of section  $8 \cdot 7$ . In the case of an appropriate use, the P.E. shall state in writing that the development meets the requirements of section  $8 \cdot 7$ .

Sec. 8-9. Permitting requirements applicable to all floodplain areas. In addition to the requirements found in sections 8-6, 8-7 and 8-8 for development in flood fringes, regulatory floodways, and SFHA or floodplains where no floodways have been identified (zones A, AO, AH, AE, A1-A30, A99, VO, V1-30, VE, V, M or E), the following requirements shall be met:

#### (3) Protecting buildings.

a. All buildings located within a 100- year flood plain also known as SFHA, shall be protected from flood damage below the flood protection elevation. However, existing buildings located within a regulatory floodway shall also meet the more restrictive appropriate use standards included in section 8-7. The building protection criteria applies to the following situations:

1. Construction or placement of a new building;

2. A structural alteration to an existing building that either increases the first floor area by more than twenty (20) percent or the building's market value by more than fifty (50) percent. This alteration shall be figured cumulatively, beginning with any alteration which bas taken place subsequent to April 1, 1990;

3. Installing a manufactured home on a new site or a new manufactured home on an existing site. This building protection requirement does not apply to returning a mobile home to the same site it lawfully occupied before it was removed to avoid flood damage; and

4. Installing a travel trailer on a site for more than one hundred eighty (180) days.

b. This building protection requirement may be met by one of the following methods.

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

(i) The building or improvements shall be elevated on crawl space, stilts, piles, walls, or other foundation that is permanently open to floodwaters and not subject to damage by hydrostatic pressures of the base flood or 100 -year frequency flood. The permanent openings shall be no more than one (1) foot above grade, and consist of a minimum of two (2) openings. The openings must have a total net area of not less than one (1) square inch for every one (1) square foot of enclosed area subject to flooding below the base flood elevation.

(ii) 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.

(iii) Ali areas below the flood protection elevation shall be constructed of materials resistant to flood damage. The lowest floor (including basement) and ail electrical, heating, ventilating, plumbing and air conditioning equipment and utility meters shall be located at or above the flood protection elevation. Water and sewer pipes, electrical and telephone lines, submersible pumps and other waterproofed service facilities may be located below the flood protection elevation.

(iv) No area below the flood protection elevation shall be used for storage of items or materials.

(v) Manufactured homes 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. Adm. Code 870. In addition, all manufactured homes shall meet the following elevation requirements:

A. In the case of manufactured homes placed or substantially improved outside of a new 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 bas 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 (36) inches in height above grade and supported by reinforced piers or other foundations of equivalent strength, whichever is less.

TABLE: COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A

Building Code Effectiveness Grading Schedule	Unknown	Unknown	Unknown
Public Protection/ISO	Yes	ISO 5	2013
StormReady	Yes	Gold (countywide)	2014
Tree City USA	No	N/A	N/A

#### **Opportunities to Expand and Improve Capabilities**

Opportunities to expand and improve capabilities includes continual engineering support. The village needs the ability to fund local match for mitigation grants.

#### **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: 4
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0

#### **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	High Wind, Tornadoes, Torrential Rain
5/25/2011	
4/18/2013	Severe Storms, Heavy Rainfall, Flooding, Straight-line Winds
4/20/2013	
4/21/2013	

4/25/2013	
4/30/2013	
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	COVID-19
monthly)	
2/16/2021	Winter Storms
2/1/2022	Winter Storms
8/1/2022	Monkeypox
(reissued monthly through	
10/28/2022)	

TABLE: NATURAL HAZARD EVENTS			
Type of Event	FEMA Disaster Number (if applicable)	Date	Preliminary Damage Assessment/ Event Narrative
Severe Storms	DR-4116	2013	-
Severe Winter Storms	DR-1960	2011	-
Severe Storms/Flooding	DR-1935	2010	-
Severe Storms/Flooding	DR-1800	2008	-
Severe Storms/Flooding	DR-1729	2007	-
Severe Winter Storm	EM-3161	2000	-
Winter Snow Storm	EM-3134	1999	-
Flooding	DR-1188	1997	-
Flooding	DR-1129	1996	-
Severe Storms/Flooding	DR-997	1993	-
Severe Storms/Flooding	DR-798	1987	-
Severe Storms/Flooding	DR-776	1986	-

#### 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:* There is overbank flooding during almost every rain or melt event that impacts the three blocks east of Kedzie (to Utica) between 137th and 139th streets. During extreme events there is also overbank flooding along Reeves and Maxey Ct. A planned project with the MWRD will do a lot to address this problem. There is urban flooding in most areas of the Village. Areas of the Village that are currently vacant and forested would likely flood more if built out without substantial grey/green infrastructure improvements. The storm infrastructure in the Village is incomplete and existing infrastructure is outdated. Flooding was captured well in the current narrative of the Jurisdiction-specific analysis.

*Extreme Heat:* These events particularly impact elderly residents and residents squatting in abandoned homes. Establishing a cooling center, connecting residents to cooling centers in neighboring communities, and setting up a check in the system are all potential actions steps, as extreme heat could adversely affect specifically the elderly subset of our community which is uniquely vulnerable.

*High Winds:* Electrical lines are impacted during high winds. ComEd needs to do better with their infrastructure in the Village. We need to investigate if we can pass ordinances that impose more rigorous requirements on them. Private homes are also impacted during high winds, particularly those that are in poor repair. A program to help with maintenance would help mitigate the impacts of high winds.

**Snow/Blizzards:** The Village is challenged with keeping up with snow removal during extreme events and motorists do not drive with needed caution given conditions. Homeowners are also challenged - the fire department supports many homeowners and shovels them out, particularly some elderly residents.

*Extreme Cold:* This especially impacts the Village's aging drinking water infrastructure. During extreme cold, 1-3 water mains break each day. Some residents also are challenged with extreme cold, especially those squatting in abandoned homes; fires become a problem as these residents take extreme measures to stay warm.

**Severe Weather:** Extreme heat could adversely impact our elderly population. This subset of our community is uniquely vulnerable.

**Severe Winter Weather:** See Extreme Cold: The infrastructure in Robbins is prone to extreme cold, specifically the freezing of pipes and other conduits of water.

Indicator	Number	Percent
Families in poverty	304	17.7%
People with disabilities	1,661	19.1%
People over 65 years	1,604	17.6%
People under 5 years	431	4.7%
People of color	7,647	84%
Black	5,864	64.4%
Native American	3	0%
Hispanic	1,652	18.1%
Difficulty with English	319	3.7%
Households with no car	470	16.8%
Mobile homes	52	1.9%

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 hazardprone 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)	Increase	
Severe Weather (Extreme Heat, Lightning, Hail,	il, Increase	
Fog, High Wings)	Increase	
Severe Winter Weather (Ice Storms, Heavy Snow,	ow, Increase	
Blizzards, Extreme Cold)	Inclease	
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)	Increased	
Severe Weather (Extreme Heat, Lightning, Hail,	Hail, Remained the Same	
Fog, High Wings)	Nemained the barrie	
Severe Winter Weather (Ice Storms, Heavy Snow,	torms, Heavy Snow,	
Blizzards, Extreme Cold)	mereased	
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)	Increase
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	No Change is Anticipated
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Increase
Tornado	No Change is Anticipated
Wildfire (Wildfire Smoke)	No Change is Anticipated

Robbins is removing abandoned structure and buildings. The Village is also undergoing a significant flood control project with MWRD which will be done in 2025.

### **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	Flood	
3	Severe Winter Weather	
4	Tornado	
5	Earthquake	
6	Drought	
7	Dam Failure	

## **New Mitigation Actions**

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

Mitigation Action #17: Rev	Mitigation Action #17: Revitalize the Claire BLVD pump station.					
Lead	Supporting	Estimated	Potential	Estimated	Hazard(s) Mitigated:	
Agency/Department	Agencies/	Cost:	Funding	Projected	Flood (Riverine,	
Organization:	Organizations:	High	Source:	Completion	Urban,	
Public Works and Water Department			General Fund Hazard Mitigation Grant Program (HMGP) Building Resilient Infrastructure and Communities (BRIC) Flood Mitigation Assistance (FMA) Program	Date: Long-term	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 Robi	bins			
Applicable Goal	• •		1,2,3			
Applicable Objective			1,2,7			
Cost Analysis (Low, Medium, High)		High				
Priority and Level of Impo Medium, High)		High				
Benefits of the Mitigation Avoided or Issue Being Mitig		High				

Action/Implementation Plan and Project Description:	Revitalize the Claire BLVD pump station.
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority	
Completion status legend:	
N = New; I = In Progress Toward Completion;	Ν
<b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;	
<b>R</b> = Want Removed from Annex; <b>X</b> = No Action	
Taken/Delayed	

Mitigation Action #17: Replace and improve the water mains in the Village to be more resilient to extreme cold.					
Lead	Supporting	Estimated	Potential	Estimated	Hazard(s) Mitigated:
Agency/Department	Agencies/	Cost:	Funding	Projected	Flood (Riverine,
Organization:	Organizations:	High	Source:	Completion	Urban,
Public Works and Water			General Fund	Date:	Coastal/Shoreline)
Department			Hazard	Long-term	Severe Weather
			Mitigation Grant		(Extreme Heat,
			Program		Lightning. Hail, Fog,
			(HMGP)		High Winds)
			Building		Severe Winter
			Resilient		Weather (Ice Storm,
			Infrastructure		Heavy Snow,
			and		Blizzards, Extreme
			Communities		Cold)
			(BRIC)		
			Flood Mitigation		
			Assistance		
			(FMA) Program		
Year Initiated		2024			
Applicable Jurisdiction		Village of Robbins			
Applicable Goal		1,2,3			

Applicable Objective	1,2,7
Cost Analysis (Low, Medium, High)	High
Priority and Level of Importance (Low,	High
Medium, High)	
Benefits of the Mitigation Project (Loss	High
Avoided or Issue Being Mitigated)	Figi
Action/Implementation Plan and Project	Replace and improve the water mains in the Village to be more resilient to
Description:	extreme cold.
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority	
Completion status legend:	
N = New; I = In Progress Toward Completion;	Ν
<b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;	
<b>R</b> = Want Removed from Annex; <b>X</b> = No Action	
Taken/Delayed	

### **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.

Mitigation Action #2: 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 Robbins					
Applicable Goal		1,5					

Applicable Objective	All
Cost Analysis (Low, Medium, High)	Low
Priority and Level of Importance (Low,	High
Medium, High)	
Benefits of the Mitigation Project (Loss	Medium
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;	0
<b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;	0
<b>R</b> = Want Removed from Annex; <b>X</b> = No Action	
Taken/Delayed	

#### Action R-6.5

Mitigation Action #5: Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.

Lead Agency/Department	Supporting	Estimated Cost:	Potential	Estimated	Hazard(s)
Organization:	Agencies/	Low	Funding	Projected	Mitigated:
Village Administration	Organizations:		Source:	Completion	Flooding
			General Fund	Date:	
				Short-term and	
				Ongoing	
Year Initiated		2014			
Applicable Jurisdiction		Village of Robbins			
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
<b>Benefits of the Mitigation Project</b> (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;	0
<b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;	0
<b>R</b> = Want Removed from Annex; <b>X</b> = No Action	
Taken/Delayed	

Mitigation Action #8: 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.							
<b>Lead Agency/Department</b> <b>Organization:</b> Public Works	Supporting Agencies/ Organizations:	<b>Estimated Cost:</b> High	Potential Funding Source: CIP Component of General Fund (if implemented)	Estimated Projected Completion Date: Long-term and Ongoing	Hazard(s) Mitigated: All		
Year Initiated		2014					
Applicable Jurisdiction		Village of Robb	ins				
Applicable Goal		1,5					
Applicable Objective		1,2,7					
Cost Analysis (Low, Medium	n, High)	High					
Priority and Level of Importance (Low, Medium, High)		Medium					
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		High					

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;	0
<b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;	0
<b>R</b> = Want Removed from Annex; <b>X</b> = No Action	
Taken/Delayed	

Lead	Supporting Agencies/	Estimated Cost:	Potential	Estimated	Hazard(s)
Agency/Department	Organizations:	\$12,000,000; High	Funding	Projected	Mitigated:
Organization:	MWRD; other		Source:	Completion	Flooding
Robbins/MWRD	watershed		MWRD;	Date:	
	communities (Tinley		BRIC,	Long-term	
	Park, Orland Hills,		HMGP, FMA		
	Orland Park, Oak				
	Forest, Midlothian,				
	Posen, Crestwood,				
	Country Club Hills,				
	Blue Island)				
Year Initiated		2019			
<b>Applicable Jurisdiction</b>	1	Village of Robbins			
Applicable Goal		1,2,3			
Applicable Objective		1,2,3			
Cost Analysis (Low, Me	edium, High)	High			
Priority and Level of Importance (Low, Medium,		Llisch			
High)		High			
Benefits of the Mitigati	on Project (Loss Avoided	Remove more than 200 acres from flood plain, making redevelopment			
or Issue Being Mitigated	)	possible			

	High
Action/Implementation Plan and Project	Address overbank flooding through the construction of a Stormwater Park and
Description:	stream bank repair
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority	
Completion status legend:	
N = New; I = In Progress Toward Completion;	' This project is ongoing and as started. Projected completion of this project is
<b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;	2025.
<b>R</b> = Want Removed from Annex; <b>X</b> = No Action	2025.
Taken/Delayed	

Lead Agency/Department	Supporting	Estimated Cost:	Potential	Estimated	Hazard(s)	
Organization:	Agencies/	High	Funding	Projected	Mitigated:	
Village Administration and	Organizations:		Source:	Completion	Flooding	
Water Superintendent			BRIC, HMGP,	Date:		
			FMA	Short-term		
Year Initiated		2019				
Applicable Jurisdiction		Village of Robbins				
Applicable Goal		1,2,3				
Applicable Objective		1, 2, 3, 13				
Cost Analysis (Low, Medium	, High)	High				
Priority and Level of Importa High)	nce (Low, Medium,	High				
Benefits of the Mitigation Pro or Issue Being Mitigated)	<b>oject</b> (Loss Avoided	High				
Action/Implementation Plan and Project Description:		Extend storm sewer network to include incomplete portions of Village; Asses fitness of existing storm sewer network, develop repair and replace plan, begin to implement plan; continue to build out green infrastructure program			replace plan,	
Actual Completion Date or C	)ngoing Indefinite					
Project Status & Changes in		0				

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

Mitigation Action #11: Remo		-					
Lead Agency/Department Organization:	Supporting Agencies/	Estimated Cost: High	Potential Funding	Estimated Projected	Hazard(s) Mitigated:		
Village Administration and	Organizations:		Source:	Completion	Flooding		
Public Works			BRIC, HMGP,	Date:			
			FMA	Long-term			
Year Initiated		2019					
Applicable Jurisdiction		Village of Robbins					
Applicable Goal		1,2					
Applicable Objective		3,7					
Cost Analysis (Low, Medium	, High)	High					
Priority and Level of Importance (Low, Medium, High)		High					
	nefits of the Mitigation Project (Loss Avoided		High				
Action/Implementation Plan Description:	and Project	Remove abandoned structures from flood prone areas					
Actual Completion Date or C	Ongoing Indefinite						
<b>Project Status &amp; Changes in</b>	Priority						
Completion status legend:							
<ul> <li>N = New; I = In Progress Toward Completion;</li> <li>O = Ongoing Indefinitely; C = Project Completed;</li> </ul>							
<b>R</b> = Want Removed from Anne	ex; <b>X</b> = No Action						
Taken/Delayed							

Mitigation Action #12: Engage in comprehensive planning that includes land use and flood management planning						
Lead Agency/Department	Supporting	Estimated Cost:	Potential	Estimated	Hazard(s)	
Organization:	Agencies/	Medium	Funding	Projected	Mitigated:	
Village Administration	Organizations:		Source:	Completion	Flooding	
	Chicago		Foundation	Date:		
	Metropolitan		Grants	Short-term		
	Agency for					
	Planning;					
	Metropolitan					
	Planning Council					
Year Initiated		2019				
Applicable Jurisdiction		Village of Robbins				
Applicable Goal		1,2,3				
Applicable Objective		1, 2, 3, 4, 10				
Cost Analysis (Low, Medium	, High)	Medium				
Priority and Level of Importa High)	nce (Low, Medium,	Medium				
Benefits of the Mitigation Pro	inat (Loss Avoidad					
or Issue Being Mitigated)	Ject (LOSS Avolued	Medium				
Action/Implementation Plan	and Project	Engage in comprehensive planning that includes land use and flood				
Description:		management planning				
Actual Completion Date or C	Ingoing Indefinite					
Project Status & Changes in	Priority					
Completion status legend:						
N = New; I = In Progress Toward Completion;		0				
<b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;						
<b>R</b> = Want Removed from Anne	x; <b>X</b> = No Action					
Taken/Delayed						

Mitigation Action #13: Conne	ect with neighboring o	communities with cool	ing centers, deve	lop plan for first res	sponders to check		
on vulnerable residents and	connect them to coo	ling centers if needed					
Lead Agency/Department Organization: Village Administration	Supporting Agencies/ Organizations: Crestwood, other neighboring communities with cooling centers	Estimated Cost: Medium	Potential Funding Source: General Fund, HMGP	Estimated Projected Completion Date: Short-term	Hazard(s) Mitigated: Extreme Heat		
Year Initiated		2019					
Applicable Jurisdiction		Village of Robbins					
Applicable Goal		1,2,3					
Applicable Objective		8,12					
Cost Analysis (Low, Medium)	Cost Analysis (Low, Medium, High)		Medium				
Priority and Level of Importance (Low, Medium, High)		Medium					
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Medium					
Action/Implementation Plan and Project Description:		Connect with neighboring communities with cooling centers, develop plan for first responders to check on vulnerable residents and connect them to cooling centers if needed					
Actual Completion Date or O	ngoing Indefinite						
Project Status & Changes in	Priority						
<ul> <li>Completion status legend:</li> <li>N = New; I = In Progress Toward Completion;</li> <li>O = Ongoing Indefinitely; C = Project Completed;</li> <li>R = Want Removed from Annex; X = No Action Taken/Delayed</li> </ul>		0					

#### Action R-6.14

Lead Agency/Department	Supporting	Estimated Cost:	Potential	Estimated	Hazard(s)		
Organization:	Agencies/	Medium	Funding	Projected	Mitigated:		
Village Administration	Organizations:		Source:	Completion	High Wind		
	ComEd		HMGP, BRIC	Date:			
				Short-term			
Year Initiated		2019					
Applicable Jurisdiction		Village of Robbins					
Applicable Goal		2,3,4	2,3,4				
Applicable Objective		1,8					
Cost Analysis (Low, Medium, High)		Medium					
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		Meet with ComEd to push for more robust infrastructure in Village; consider					
Description:		enhancing local regulatory framework of ComEd					
Actual Completion Date or C	ngoing Indefinite						
Project Status & Changes in	Priority						
Completion status legend:	-						
<b>N</b> = New; <b>I</b> = In Progress Toward Completion;		0					
<b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;							
R = Want Removed from Anne	x; <b>X</b> = No Action						
Taken/Delayed							

Mitigation Action #15: Explore service sharing with other municipalities for snow removal						
Lead	Supporting Agencies/	Estimated Cost:	Potential	Estimated	Hazard(s)	
Agency/Department	Organizations:	Medium	Funding	Projected	Mitigated:	
Organization:			Source:			

Public Works	Nearby communities that might want to engage in service sharing or joint contracting/procureme nt		General Fund	Completion Date: Short-term	Severe Winter Weather		
Year Initiated	1	2019					
Applicable Jurisdi	ction	Village of Robbins					
Applicable Goal		1,4					
Applicable Object	Applicable Objective		8				
Cost Analysis (Low	Cost Analysis (Low, Medium, High)		Medium				
Priority and Level of Importance (Low, Medium, High)		Medium					
	<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		High				
Action/Implementation Plan and Project Description:		Explore service sharing with other municipalities for snow removal.					
Actual Completion	n Date or Ongoing Indefinite						
<b>O</b> = Ongoing Indefin		0					

Mitigation Action #16: Flood Control on Midlothian Creek						
Lead Agency/Department Organization: MWRD	Supporting Agencies/ Organizations:	Estimated Cost: \$11,000,000; High	Potential Funding Source: BRIC, HMGP, FMA	Estimated Projected Completion Date: Long-term	Hazard(s) Mitigated: Flooding	

Year Initiated	2019
Applicable Jurisdiction	Village of Robbins
Applicable Goal	1,2,3
Applicable Objective	2, 3, 4, 9, 10, 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)	Medium
Action/Implementation Plan and Project Description:	ID: Robbins 2 Contract: 14-253-5F / 17-IGA-02 Watershed: Little Cal River Location: Robbins, IL Creation of a naturalized wetland detention area along with channel improvements to resemble a park setting. The project will reduce flood damages for over 92 structures. The actual MWRD cost share will be determined based upon funding being sought from various local and regional agencies as well as grants.
Actual Completion Date or Ongoing Indefinite	
<ul> <li>Project Status &amp; Changes in Priority</li> <li>Completion status legend:</li> <li>N = New; I = In Progress Toward Completion;</li> <li>O = Ongoing Indefinitely; C = Project Completed;</li> <li>R = Want Removed from Annex; X = No Action</li> <li>Taken/Delayed</li> </ul>	1

## **Completed Actions**

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

Completed Action Items	
No completed items at this time.	

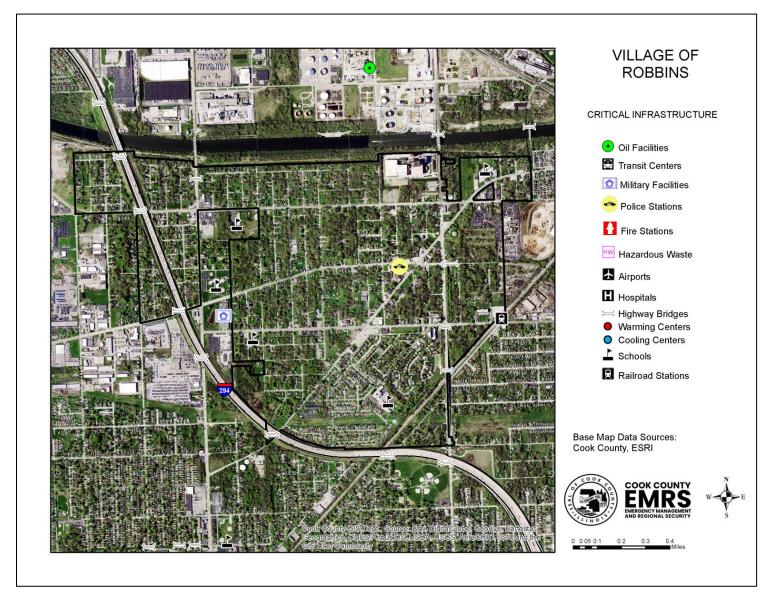
### Future Needs to Better Understand Risk/Vulnerability

No needs have been identified at this time.

### **Additional Comments**

No additional comments at this time.

### **Hazard Mapping**





#### VILLAGE OF ROBBINS

#### PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

Mercalli Scale, Potential Shaking

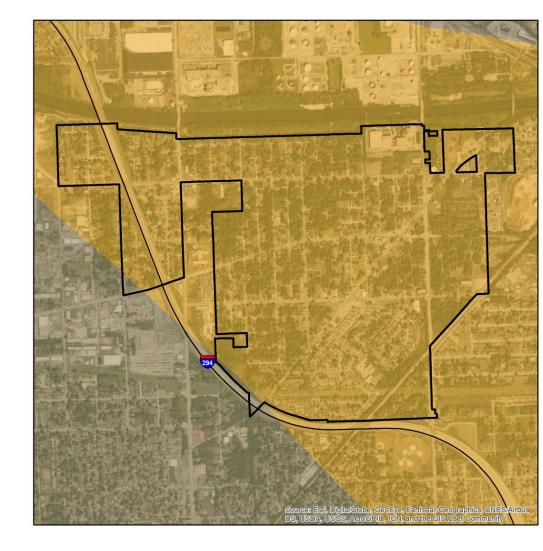
#### Data provided by the USGS Earthquake Hazards Program and Cook County.

Probabilistic estimic-hazard maps were prepared for the conterminous United States for 2014 portraying peak horizontal acceleration and horizontal special response acceleration for 0.2 and 1.0-second periods with probabilities of exceedance of 10 percent in 60 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 hauk-specific sources. The acceleration values contourced are the random horizontal component. The reference site condition is firm cod, defined as having an average shear-wave velocity of 780 m/s in the top 30 meters corresponding to the boundary between NEHRPR (National Earthquake Hazards Reduction program) site classes B and C.

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0 0.05 0.1 0.2 0.3 0.4 Miles



#### VILLAGE OF ROBBINS

NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL CLASSIFICATION

#### TYPE

C - Very Dense Soil, Soft Rock

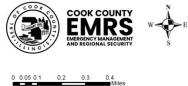
D - Stiff Soil

F- Site Specific Evaluation

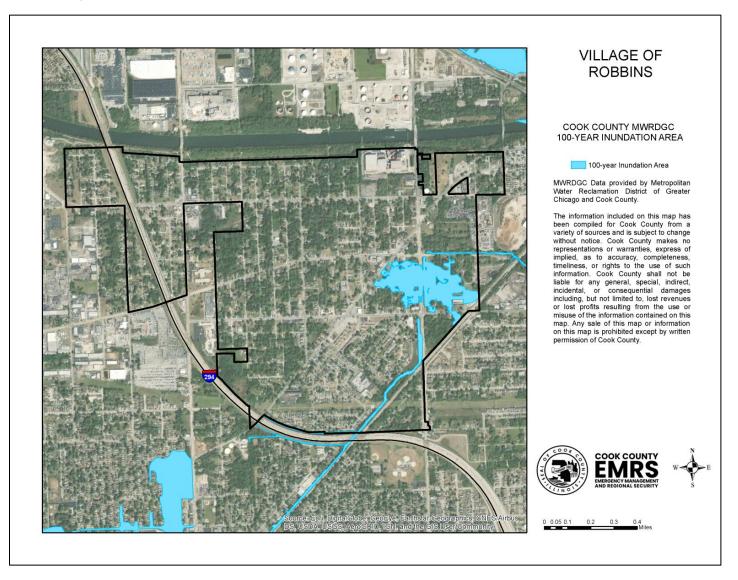
Data provided by the Illinois State Geological Survey and Cook County.

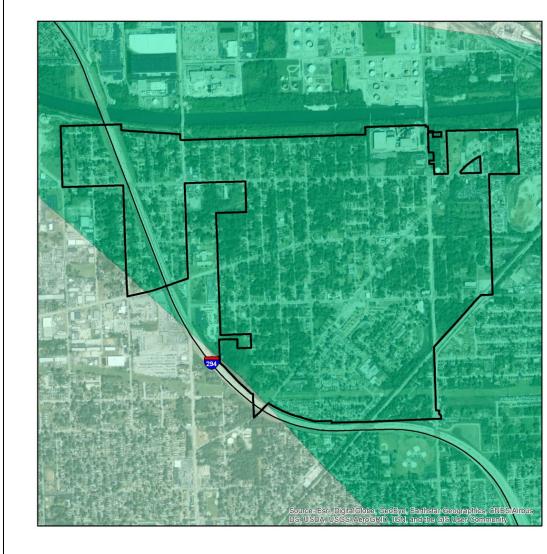
The Central United States Earthquake Consortium (CUSEC) State Geologies produced a regional Soil Ste Classes map (NEHRP Soil Profile Type Map), a Liquetaction Succeptibility Map and a Soil Response Map for the 8 states to be used in the FEMA New Madrid Catastrophel Janning Initiative Phase II work. The USGS Geologic Investigation Series I-2789 Map of Sufficial Deposits and Materials in the Eastern and Central United State (East of 102 degrees West Longitude) by David S. Fulleron, Charles A. Bush and Jean N. Pennell (2003) was the base map used for this work. Each State Geological Survey produced its wom 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 map. CUSEC State Geologists used the entire column and the difference in shear wave velocity of the soils in comparison to the bedrock which Influences much of the amplification.

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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 <a href="http://www.fema.gov">http://www.fema.gov</a>.





#### VILLAGE OF ROBBINS

#### LIQUEFACTION SUSCEPTIBILITY

#### LIQUEFACTION SUSCEPTIBILITY



very low

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

The Central United States Earthquake Consortium (CUSEC) State Geolgists produced a regional Soil Stell Class map (NEHRP Soil Profile Type Map), a Liquefaction Susceptibility Map and a Soil Response Map for the States to be used in the FEMA New Madrid Construction of the Soil And New Madrid USBS characteristic and the Soil State States Sufficial Deposite and Materials in the Estaten 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 Stel Class and Liquefaction Susceptibility maps. The procedures outlined in the NEHRP provisions (Building Setsmic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2002) were followed to produce the soil site class may. CUSEC State Geologists used the entire column of soils material down to bedrock and id 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 ampfication.

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0 0.05 0.1 0.2 0.3 0.4 Miles

