Hanover Park

Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact
Sarah Marcucci, Emergency Management	Eric Fors, Fire Chief
Coordinator	6850 Barrington Rd.
6850 Barrington Rd.	Hanover Park, IL 60133
Hanover Park, IL 60133	Telephone: 630-823-5811
Telephone: 630-823-5811	Email Address: efors@hpil.org
Email Address: smarcucci@hpil.org	

Jurisdiction Profile

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

Date of Incorporation: 1958

Current Population: The 2020 U.S. Census population was 37,463. The 2022 U.S. Census estimate indicated the population was 36,376.

Population Growth: The overall population has decreased 3.63 percent between 2018 and 2022.

Location and Description: Hanover Park is a suburban community located 30 miles northwest of Chicago with a land area of over 6.71 square miles. The Village is located in both Cook and DuPage Counties. Suburbs adjacent to Hanover Park include: Streamwood to the northwest, Schaumburg to the northwest, Carol Stream to the south, Bloomingdale to the southeast, Roselle to the east, and Bartlett to the west. Hanover Park is situated in the southwest portion of "The Golden Corridor." This corridor stretches northwest from Chicago along the Northwest Tollway (I-90). A major commuter rail facility, including a reconstructed station, is located in central Hanover Park. The Village is also situated at the western entrance to the Elgin-O'Hare Expressway and is only 17 miles from O'Hare International Airport. Nearby are some of the finest recreational areas in Chicagoland, where opportunities for hunting, fishing, water sports, and leisure activities are located.

Brief History: Hanover Park's roots as a settlement reach back into the 19th century, but the growth into a community of nearly 12,000 families started in the 1950s. Hanover Park was incorporated as a Village in 1958 with a population of 305 and a land area of less than one square mile. All of the land in the original boundaries was in Cook County. In its early stages, Hanover Park was primarily a "bedroom" community with residents commuting to Chicago. Some 750 acres of farmland in DuPage County were annexed in 1969, and this area of the Village dominated Hanover Park's population growth during the 1970s.

Climate: On average, there are 192 sunny days per year in Hanover Park. The July high is around 86 degrees and the January low is 12 degrees. The comfort index is 47 out of 100, slightly higher and more comfortable than the U.S. average of 44. Hanover Park gets 36 inches of rain and 33 inches of snow per year. The U.S. average is 37 inches of rain and 25 inches of snow. The number of days with any measurable precipitation is 126.

Governing Body Format: The Village of Hanover Park is governed by a Village President and a six-member Village Board of Trustees. This body of Government will assume the responsibility for the adoption and implementation of this plan. The Village consists of eight departments: Administration, Community Development, Finance, Fire, Human Resource, Informational Technology, Police and Public Works that are overseen by a Village Manager. The Village has six committees whose members are appointed by the Village President and who report to the Village Board of Trustees.

Development Trends: The Village has adopted a Redevelopment Plan for the Village Center, a mixed-use, planned development of over 22 acres at the major intersection of Barrington Road and West Lake Street, a focal point at the center of town. It is established as a Tax Increment Finance project. The Village Center plan will coordinate public and private investments in mixed use, transitoriented developments for living, working and shopping. This ambitious centerpiece development will take shape over the next five to ten years. In 2010, the Comprehensive Plan, which provides the long-range goals for land use and community facilities for the entire Village, was updated. While the Comprehensive Plan reflects many existing land uses, it also designates many of the remaining vacant portions of the Village for commercial and business park uses. Additionally, in 2012, a panel of 11 land use and development professionals examined the Irving Park Corridor area and conducted an extensive review. Goals were established to support existing businesses, attract new businesses and bring more people into the Village to shop. Specific steps for improvement were recommended and the next steps are being identified. There are numerous current and recently completed development projects in Hanover Park including a car wash, senior center and multiple new restaurants.

Changes in Community Priorities: The village has applied for a few BRIC/FMA grants but has yet to be approved. Our emergency management program discusses on investments that can mitigate disruptions on community lifelines.

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 *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, Ordinance	es & Requirem		· · · · · · · · · · · · · · · · · · ·		
Building Code	Yes	No	No	Yes	HPMC Chapter 18 Building and Building Regulations 05- 01-08 2006 International Building Code & 2006 International Residential Code
Zonings	Yes	No	No	Yes	HPMC Chapter 110 Zoning 1991 Revised 11-04-04
Subdivisions	Yes	No	No	No	HPMC. Chapter 90 Subdivision Regulations 05- 21-81 Revised 01-0595
Stormwater Management	Yes	No	Yes	Yes	HPMC Chapter 38 Engineering Standards and Specifications Article VII Stormwater and Floodplain Regulations 07- 19-12 HPMC Chapter 90 Subdivision Regulations Article IV General Provisions for Subdivision Approval Sect. 90-94 Stormwater Management 07-19-12 State regulates industrial activity from Construction sites 1 acre or larger under

					section 402
					CWA.
Post Disaster Recovery	Yes	No	No	No	HPMC Chapter 34 Emergency Services and Disaster Program 07- 181996
Real Estate Disclosure	No	No	Yes	Yes	(765 ILCS 77/) Residential Real Property Disclosure Act.
Growth Management	Yes	No	No	No	Boundary Agreements: Roselle 11/7/2013 Bloomingdale R-02-38, 11/7/2002
Site Plan Review	Yes	No	Yes	No	HPMC Chapter 110 Zoning Article IV Development Review Procedures Sect. 110-4.3 Site Plan Review County MWRD
Public Health and Safety	Yes	No	No	Yes	HPMC Chapter 54 Health and Sanitation Article III Health Officer & Article IV Contagious Disease
Environmental Protection	Yes	No	No	No	Comprehensive Plan including Green Plan Approved O-10- 13 5/20/2010
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Comprehensive Plan Approved O-1013 5/20/2010 Adopted Transit- Oriented Development

					Plan O-12-12 5/3/2012
Is the plan equipp	l ed to provide in	l Itegration to this m	l nitigation nlan?		N/A
Floodplain or Basin Plan	Yes	No	No	Yes	HPMC Chapter 38 Engineering Standards and Specifications Article III Floodplain Regulations (to meet 615 ILCS 5/4.9 et seq. 07-20-89 to 04- 03-08
Stormwater Plan	Yes	No	No	No	HPMC Chapter 38 Engineering Standards and Specifications Article VII Stormwater and Floodplain Regulations 07- 19-12
Capital Improvement Plan	Yes	No	No	No	HPMC Chapter 94 Taxation Article I Annual Budget Sect. 94-4 Capital Improvement, Repair, or Replacement Fund 11-19-81
What types of capital facilities does the plan address? How often is the plan revised/updated?				Village Owned Structures	
Habitat Conservation Plan	No	No	No	No	Yearly
Economic Development Plan	Yes	No	No	Yes	Comprehensive Plan, Annual Fiscal Year Budget, Tri- Annual Strategic Plan
Shoreline Management Plan	No	No	No	No	
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	No	No	No	Village Emergency Operations Plan 2024

Threat and Hazard Identification and Risk Assessment	Yes	No	Yes	No	2023
Terrorism Plan	Yes	No	No	No	Village Emergency Operation Plan 2024
Post-Disaster Recovery Plan	Yes	No	No	No	Village Emergency Operation Plan 2024
Continuity of Operations Plan	No	No	No	No	Will be developed in 2024
Public Health Plans	Yes	No	No	No	2024

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	No
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	Yes
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	Engineering & Public Works/ Director of Engineering & Public Works & Community & Economic Development/ Director of Community & Economic Development	
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering & Public Works/ Director of Engineering & Public Works & Fire Department/Chief of Inspectional Service	
Planners or engineers with an understanding of natural hazards	Yes	Engineering & Public Works/ Director of Engineering & Public Works & Fire Department/ Chief of Inspectional Services	
Staff with training in benefit/cost analysis	Yes	Finance Department/Finance Director	
Surveyors	No		
Personnel skilled or trained in GIS applications	Yes	Community & Economic Development/ Director of Community & Economic	

		Development& Cook County GIS Consortium
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Police Department/Chief of Police
Grant writers	Yes	Police Department/Accreditation and Grant Manager

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Public Works
Who is your jurisdiction's floodplain administrator? (department/position)	T. J. Moore, Director of Public Works
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	July 19, 2012
When was the most recent Community Assistance Visit or Community Assistance Contact?	Community Assistance Visit: 05/20/2004, Community Assistance Contact: 08/29/1997
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?	Yes – Training needed in floodplain management for newly hired employees
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; however, Hanover Park is interested in joining the CRS 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:

Sec. 38-231. - General; adoption by reference.

- a) Adoption by reference. The findings of section 15-3 and purposes of section 15-4 of article I and all subsequent Articles of DuPage County Ordinance SM-O-0028-19 adopted by the county board on May 14, 2019, "DuPage County Countywide Stormwater and Floodplain Ordinance," is hereby adopted by reference as a part of this chapter to regulate stormwater management within the corporate limits of the village in both Cook and DuPage Counties, with such addition or amendments as hereinafter stated.
- (b) Additions and penalties. Additions:
- (1) The oversight committee shall be the village president and board of trustees. The administrator shall be the village engineer.
- (2) Applicants for permits for special management areas on property in the Cook County portion of the village shall obtain floodplain review and approval from the administrator and wetland review and approval from the United States Army Corps of Engineers.
- (3) Whenever there is a conflict between the regulations contained in the DuPage County Stormwater and Floodplain Ordinance herein adopted by reference and any other regulation of this municipal Code, that regulation which is the most restrictive shall apply.
- (4) The DuPage County stormwater management general certifications, adopted by the county board on April 23, 2013 are hereby adopted by reference as a part of this chapter to regulate stormwater management within the corporate limits of the village in both Cook and DuPage Counties, and any and all amendments and additions thereto that may, from time to time, be adopted by the County of DuPage. Copies thereof shall be made available in the office of the public works department engineering division.
- (5) The following flood insurance studies and flood insurance rate maps listed in table 1 (located at https://library.municode.com/il/hanover_park/codes/code_of_ordinances?nodeId=CH38ENSTSP_ARTVIIISTFLRE) are hereby acknowledged as regulatory within the incorporated limits and those extra-territorial areas under the jurisdiction of Hanover Park.

TABLE: COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	4	Unknown
Public Protection/ISO	Yes	4	Unknown
StormReady	Yes	Gold (Countywide)	2014
Tree City USA	Yes		April 2013

Opportunities to Expand and Improve Capabilities

The village has interest in project that include flood management, surveys or analysis projects that show flood impacts, improve GIS capabilities, burying powerline underground to reduce impacts and disruptions. Opportunities to expand and improve capabilities include developing a strategy to identify and set aside municipal funds to assist with the 25% cost match for FEMA HMA mitigation grants. Due to the technical expertise needed to develop grant applications and benefit cost analyses for FEMA HMA grants, the municipality has a need for qualified grant writers to assist in the development and management of these 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 goals and actions of the Hazard Mitigation Plan will be considered in the next capital improvement planning process.
- The hazards, goals, and actions of the Hazard Mitigation Plan will be considered in the next update of the Comprehensive Plan.
- 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: 1 (1 Single Family)
- Number of FEMA-Identified Severe Repetitive Loss Properties: 1 (1 Single Family)
- 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 Storm, Winds, Flooding	DR-4116	4/26/2013	-	
Severe Winter Storm	DR-1960	1/31/2011	-	
Winter Storm		12/5/2010	Low temperatures ranged in the lower teens and single digits from December 5th through December 7th. and a 69 year old man died in Hanover Park	
Severe Storms, Flooding	DR-1935	7/19/2010	-	
Severe Storms, Flooding	DR-1800	9/13/2008	-	
Severe Storms, Flooding	DR-1729	8/20/2007	-	

Severe Storms, Flooding, and Tornado		5/16/2007	Strong thunderstorms formed over Streamwood and Hanover Park during the late afternoon hours of May 16th.
Severe Storms	-	8/17/2005	-
Severe Winter Storm	EM-3161	12/11/2000	-
Tornado		8/6/2000	Law enforcement sighted a funnel cloud at the intersection of Lake and Garfy streets in the community of Hanover Park.
Winter Snow Storm	EM-3068	1/1/1999	-

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: Flooding has been experienced at Anne Fox School Creek, Barrington/Irving Park Road, Highlands subdivision, and Schick Road.

Extreme Heat and Cold: Some of the elderly population, particularly those who are treated at Symphony of Hanover Park, are at risk of extreme-heat and cold related effects.

Tornado: Funnel clouds forming over the lake are a concern, especially during a severe weather event.

Indicator	Number	Percent
Families in poverty	1,410	6.8%
People with disabilities	6,804	8.1%
People over 65 years	10,166	12.1%
People under 5 years	4,506	5.4%
People of color	44,053	52.6%
Black	4,988	6%
Native American	789	0.9%
Hispanic	24,601	29.4%
Difficulty with English	4,873	6.1%
Households with no car	954	3.5%
Mobile homes	114	0.4%

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	
Drought	
Earthquake	Not Applicable
Flood (Riverine, Urban, Shoreline)	Increased
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	Increased
Severe Winter Weather (Ice Storms, Heavy Snow,	
Blizzards, Extreme Cold)	
Tornado	Increased
Wildfire (Wildfire Smoke)	Increased

Hazard	Vulnerability
Future Vulnerability	
Dam and Levee Failure	
Drought	Increase
Earthquake	Not Applicable
Flood (Riverine, Urban, Shoreline)	Increase
Severe Weather (Extreme Heat, Lightning, Hail,	Increase
Fog, High Wings)	morease
Severe Winter Weather (Ice Storms, Heavy Snow,	
Blizzards, Extreme Cold)	
Tornado	Increase
Wildfire (Wildfire Smoke)	Increase

<u>Jurisdiction-Specific Changes (or Expected Changes) in Development Trends in Hazard-Prone Areas</u>

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	
Drought	
Earthquake	
Flood (Riverine, Urban, Shoreline)	

Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	Increase
Severe Winter Weather (Ice Storms, Heavy Snow,	
Blizzards, Extreme Cold)	
Tornado	
Wildfire (Wildfire Smoke)	

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

Population and Development Trends

Increase in population, housing development, and economic growth with local businesses.

Assets Impacted by Hazardous Events

All municipal critical infrastructure will be at risk for all hazards and require additional mitigation measures.

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

New Mitigation Actions

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

Mitigation Action #H - 1.32	: Flood Plain Reassess	sment Project			
Lead	Supporting	Estimated	Potential	Estimated	Hazard(s) Mitigated:
Agency/Department	Agencies/	Cost:	Funding	Projected	Flood (Riverine,
Organization:	Organizations:	High	Source:	Completion	Urban,
Hanover Park Public			General Fund	Date:	Coastal/Shoreline)
Works- Engineering			Hazard	Short-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		2025			
			a a v Davile		
Applicable Jurisdiction		Village of Han	over Park		
Applicable Goal		1,2,3,4,5.6			
Applicable Objective		1,2,3,4,6,8,9,11,12,13			
	Cost Analysis (Low, Medium, High)		High		
_	Priority and Level of Importance (Low,		High		
Medium, High)		11.8.1			

Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)	High
Action/Implementation Plan and Project Description:	The Village would like to invest in a Flood Plain reassessment for the jurisdiction, with project management costs and a study or evaluation to be completed. Our jurisdiction has shown some recent residential and commercial areas with flooding after storms that may need a program to analyze our situation. The village would also like to start burying the power lines to reduce power disruptions after storms.
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

During the 2024 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.

Mitigation Action #H - 1.2: Develop and adopt a Continuity of Operation Plan.						
Lead Agency/Department Organization: Emergency Management	Supporting Agencies/ Organizations:	Estimated Cost: Low	Potential Funding Source: Staff Time, General Fund	Estimated Projected Completion Date: Short-term	Hazard(s) Mitigated: Earthquake, Flooding, Tornado	
Year Initiated		2014	Tunu			
Applicable Jurisdiction Village of Hanover Park						
Applicable Goal 1, 2, 3, 4						
Applicable Objective		1, 2, 5, 8				

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)	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; O = Ongoing Indefinitely; C = Project Completed; R = Want Removed from Annex; X = No Action Taken/Delayed	I - Currently updating in 2024

Mitigation Action #H - 1.14: Review and identification of critical facilities to determine if they are located in hazardous locations.							
Lead Agency/Department Organization: Public Works	Supporting Agencies/ Organizations:	Estimated Cost: Low	Potential Funding Source: IEMA Grants, BRIC, HMGP	Estimated Projected Completion Date: Long-term	Hazard(s) Mitigated: Flooding, Tornado Earthquake		
Year Initiated	Year Initiated		2014				
Applicable Jurisdiction		Village of Hanover Pa	ark				
Applicable Goal		1, 2, 3					
Applicable Objective		1, 2, 3, 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	Building a new fire station with severe weather mitigation strategies included in
Description:	the building plan, including hail damage reduction and a tornado-safe room.
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority	
Completion status legend:	
N = New; I = In Progress Toward Completion;	0
O = Ongoing Indefinitely; C = Project Completed;	O .
R = Want Removed from Annex; X = No Action	
Taken/Delayed	

	Mitigation Action #H - 1.16: Development of a Public Information Strategy covering safety issues, protecting property, understanding floods, and protecting watersheds.						
Lead	Supporting	Estimated	Potential	Estimated Projected	Hazard(s)		
Agency/Department	Agencies/	Cost:	Funding	Completion Date:	Mitigated:		
Organization:	Organizations:	Low	Source:	Completed/Ongoing	All		
Emergency Management			General				
			Fund				
Year Initiated		2021	·				
Applicable Jurisdiction		Village of Hano	ver Park				
Applicable Goal		1, 2, 3, 6					
Applicable Objective		1, 5, 6					
Cost Analysis (Low, Mediu	m, High)	Low					
Priority and Level of Impor Medium, High)	tance (Low,	Medium					
Benefits of the Mitigation F Avoided or Issue Being Mitig	Medium						
Action/Implementation Plant	Investing in public information programs to alert the public quickly of						
Description: impending severe weather and additional hazards.							
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

Mitigation Action #H - 1.17: Distribute and make available property protection references on insurance, emergency						
preparedness and property	y protection.					
Lead	Supporting	Estimated Cost:	Potential	Estimated	Hazard(s)	
Agency/Department	Agencies/	Low	Funding	Projected	Mitigated:	
Organization:	Organizations:		Source:	Completion	All	
Emergency Management			General	Date:		
			Fund	Short-term		
Year Initiated		2014		·		
Applicable Jurisdiction		Village of Hanover Pa	ark			
Applicable Goal		1, 2, 6				
Applicable Objective		5, 6				
Cost Analysis (Low, Mediu	m, High)	Low				
Priority and Level of Import	tance (Low,	Low				
Medium, High)		Low				
Benefits of the Mitigation P	roject (Loss	Low				
Avoided or Issue Being Mitig	ated)					
Action/Implementation Pla	an and Project	Emergency preparedness tactics by the village will be included into the				
Description:		Emergency Operations Center				
Actual Completion Date or	Ongoing Indefinite					
Project Status & Changes i	n Priority					
Completion status legend:						
N = New; I = In Progress Toward Completion;		0				
O = Ongoing Indefinitely; C = Project Completed;						
R = Want Removed from Annex; X = No Action						
Taken/Delayed	·					

Action H-1.20

Mitigation Action #H - 1.20: C	Mitigation Action #H - 1.20: Continue to support the countywide actions identified in this plan.					
Lead Agency/Department	Supporting	Estimated Cost:	Potential	Estimated	Hazard(s)	
Organization:	Agencies/	Low	Funding	Projected	Mitigated:	
Village of Hanover Park	Organizations:		Source:	Completion	All	
Administration			General	Date:		
			Fund	Short- and long-		
				term		
Year Initiated		2014				
Applicable Jurisdiction		Village of Hanover Pa	rk			
Applicable Goal		All				
Applicable Objective		All				
Cost Analysis (Low, Medium	, High)	Low				
Priority and Level of Importa	nce (Low,	High				
Medium, High)		i ligii				
Benefits of the Mitigation Pro	oject (Loss	Medium				
Avoided or Issue Being Mitigat	ed)	Medium				
Action/Implementation Plan	and Project					
Description:						
Actual Completion Date or C	Ingoing Indefinite					
Project Status & Changes in	Priority					
Completion status legend:	Completion status legend:					
N = New; I = In Progress Toward Completion;		0				
O = Ongoing Indefinitely; C = Project						
Completed; R = Want Removed from Annex; X =						
No Action Taken/Delayed						

Action H-1.21

Mitigation Action #H - 1.21: Actively participate in the plan maintenance strategy identified in this plan.

Lead Agency/Department	Supporting	Estimated Cost:	Potential	Estimated	Hazard(s)	
Organization:	Agencies/	Low	Funding	Projected	Mitigated:	
EMRS Village	Organizations:		Source:	Completion	All	
			General	Date:		
			Fund	Short-term		
Year Initiated		2014				
Applicable Jurisdiction		Village of Hanover Par	k			
Applicable Goal		1, 2, 6				
Applicable Objective		3, 4, 6				
Cost Analysis (Low, Medium,	High)	Low				
Priority and Level of Importa	nce (Low,					
Medium, High)		High				
Benefits of the Mitigation Pro	ject (Loss	Medium				
Avoided or Issue Being Mitigate	ed)	Medium				
Action/Implementation Plan	and Project					
Description:						
Actual Completion Date or O	ngoing Indefinite					
Project Status & Changes in	Priority					
Completion status legend:						
	N = New; I = In Progress Toward Completion;					
O = Ongoing Indefinitely; C = P	O = Ongoing Indefinitely; C = Project Completed;					
R = Want Removed from Annex; X = No Action						
Taken/Delayed						

Mitigation Action #H - 1.22: 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:	Organization: Agencies/ Low Funding Projected Mitigated:							
Public Works Organizations: Source: Completion Flooding								
	Date:							

		General	Short-term and	
Year Initiated	2014	Fund	Ongoing	
Applicable Jurisdiction	Village of Hanover P	ark		
Applicable Goal	1, 2, 3, 6			
Applicable Objective	4, 6, 9			
Cost Analysis (Low, Medium, High)	Low			
Priority and Level of Importance (Low,	High			
Medium, High)	High			
Benefits of the Mitigation Project (Loss	Medium			
Avoided or Issue Being Mitigated)	Mediam			
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	0		
O = Ongoing Indefinitely; C = Project Completed;				
R = Want Removed from Annex; X = No Action				
Taken/Delayed				

Mitigation Action #H - 1.23: Where feasible, implement a program to record high water marks following high-water events.					
Lead Agency/Department	Supporting	Estimated Cost:	Potential	Estimated	Hazard(s)
Organization:	Agencies/	Medium	Funding	Projected	Mitigated:
Village of Hanover Park	Organizations:		Source:	Completion	Flooding,
Administration			General Fund;	Date:	Severe
			FEMA Public	Long-term	Weather
			Assistance		
			(PA)		
Year Initiated 2014					
Applicable Jurisdiction Village of Hanover Park					

Applicable Goal	1, 2, 3, 6
Applicable Objective	3, 6, 9
Cost Analysis (Low, Medium, High)	Medium
Priority and Level of Importance (Low,	Medium
Medium, High)	Medium
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;	
O = Ongoing Indefinitely; C = Project Completed;	0
R = Want Removed from Annex; X = No Action	
Taken/Delayed	

Mitigation Action #H - 1.24: I or redevelopment.	ntegrate the hazard	mitigation plan into ot	her plans, progra	ms, or resources tha	nt dictate land use	
Lead Agency/Department Organization: Economic Development	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 Hanover Park				
Applicable Goal	Applicable Goal		1, 2, 3, 6			
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:	
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority	
Completion status legend:	
N = New; I = In Progress Toward Completion;	o
O = Ongoing Indefinitely; C = Project Completed;	
R = Want Removed from Annex; X = No Action	
Taken/Delayed	

Mitigation Action #H - 1.25: Partner with MWRD to provide floodwater relief by increasing capacity of storm sewer.							
Lead Agency/Department	Supporting	Estimated Cost:	Potential	Estimated	Hazard(s)		
Organization:	Agencies/	High	Funding Source:	Projected	Mitigated:		
Public Works	Organizations:		MWRD,BRIC,	Completion	Flooding,		
			HMGP	Date:	Severe		
				Long-term	Weather		
Year Initiated		2021					
Applicable Jurisdiction		Village of Hanover F	Park				
Applicable Goal	le Goal 1, 2, 3						
Applicable Objective		2, 8, 9					
Cost Analysis (Low, Medium	Cost Analysis (Low, Medium, High)		High				
Priority and Level of Importa	Priority and Level of Importance (Low,		High				
Medium, High)	Medium, High)		111811				
Benefits of the Mitigation Pr	oject (Loss	High					
Avoided or Issue Being Mitiga	Avoided or Issue Being Mitigated)		111611				
Action/Implementation Plan and Project		Improve the current floodwater/stormwater infrastructure in congruence with a					
Description:		regional upgrade.					
Actual Completion Date or 0	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

Mitigation Action #H - 1.26:Enforce the new MWRD Watershed Management Ordinance (WMO).					
Lead Agency/Department Organization:	Supporting Agencies/	Estimated Cost:	Potential Funding	Estimated Projected	Hazard(s) Mitigated:
Public Works	Organizations:		Source:	Completion	Flooding,
			General	Date:	Severe
			Fund	Short-term	Weather
Year Initiated		2014			
Applicable Jurisdiction		Village of Hanover Pa	nrk		
Applicable Goal		1, 2, 3			
Applicable Objective		2, 3, 4, 9, 10			
Cost Analysis (Low, Medium	High)	Low			
Priority and Level of Importa Medium, High)	Priority and Level of Importance (Low, Medium, High)		High		
Benefits of the Mitigation Pro Avoided or Issue Being Mitigat	Benefits of the Mitigation Project (Loss				
	Action/Implementation Plan and Project				
Actual Completion Date or O	ngoing Indefinite				
Project Status & Changes in	Priority				
Completion status legend:					
N = New; I = In Progress Toward Completion;O = Ongoing Indefinitely; C = Project Completed;		0			
R = Want Removed from Annex; X = No Action					
Taken/Delayed					

Action H-1.28

Mitigation Action #H - 1.28: Continue to enhance emergency preparedness information available to citizens and visitors					and visitors		
through the county/municip	through the county/municipality website and community outreach opportunities.						
Lead Agency/Department	Supporting	Estimated Cost:	Potential	Estimated	Hazard(s)		
Organization:	Agencies/	Low	Funding	Projected	Mitigated:		
Emergency Management	Organizations:		Source:	Completion	All		
			General	Date:			
			Fund	Ongoing			
Year Initiated		2019					
Applicable Jurisdiction		Village of Hanover Pa	ark				
Applicable Goal		6					
Applicable Objective		6					
Cost Analysis (Low, Medium	, High)	Low					
Priority and Level of Importance (Low,		High					
Medium, High)	Medium, High)		111911				
Benefits of the Mitigation Pro	oject (Loss	High	High				
Avoided or Issue Being Mitigat	red)	i ligii					
Action/Implementation Plan	and Project						
Description:							
Actual Completion Date or C	Ingoing Indefinite						
Project Status & Changes in	Project Status & Changes in Priority						
Completion status legend:							
N = New; I = In Progress Toward Completion;		0					
O = Ongoing Indefinitely; C = Project Completed;							
R = Want Removed from Annex; X = No Action							
Taken/Delayed							

Action H-1.29

Mitigation Action #H - 1.29: Develop a multi-faceted public awareness campaign to increase citizen enrollment in the jurisdiction's Emergency Notification System.

Lead Agency/Department	Supporting	Estimated Cost:	Potential	Estimated	Hazard(s)	
Organization:	Agencies/	Low	Funding	Projected	Mitigated:	
Emergency Management	Organizations:		Source:	Completion	All	
			BRIC, HMGP	Date:		
				Long-term		
Year Initiated		2019				
Applicable Jurisdiction		Village of Hanover Par	rk			
Applicable Goal		6				
Applicable Objective		6				
Cost Analysis (Low, Medium,	, High)	Low				
Priority and Level of Importa	nce (Low,	Llieb				
Medium, High)		High				
Benefits of the Mitigation Pro	Benefits of the Mitigation Project (Loss					
Avoided or Issue Being Mitigat	ed)	High				
Action/Implementation Plan	and Project					
Description:						
Actual Completion Date or O	ngoing Indefinite					
Project Status & Changes in	Priority					
Completion status legend:						
N = New; I = In Progress Toward Completion;O = Ongoing Indefinitely; C = Project Completed;		0				
R = Want Removed from Annex	R = Want Removed from Annex; X = No Action					
Taken/Delayed	·					

Mitigation Action #H - 1.30: U Cook County EMRS website.	•	Hanover Park Website	e with Emergency	Information or prov	ide links to the
Lead Agency/Department Organization: Emergency Management	Supporting Agencies/ Organizations:	Estimated Cost: Low	Potential Funding Source: General	Estimated Projected Completion Date:	Hazard(s) Mitigated: All
Year Initiated		2019	Fund	Long-term	

Applicable Jurisdiction	Village of Hanover Park
Applicable Goal	6
Applicable Objective	6
Cost Analysis (Low, Medium, High)	Low
Priority and Level of Importance (Low,	High
Medium, High)	High
Benefits of the Mitigation Project (Loss	High
Avoided or Issue Being Mitigated)	
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
O = Ongoing Indefinitely; C = Project Completed;	
R = Want Removed from Annex; X = No Action	
Taken/Delayed	

Completed Actions

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

Completed Action Items Update the Building Code and Building Regulations by adopting the 2012 International Residential Code and the 2012 International Building Code Training for newly hired staff in floodplain management Adoption of a new landscaping ordinance that would encourage appropriate planting near overhead power, cable, and phone lines Develop public education program on tornado warning protocol and sheltering facilities Update the 2008 Emergency Operations Plan

Update the Emergency Operation Center

Develop and adopt a Unified Development Ordinance for zoning, sign, and subdivisions

Participate in the Community Rating System

Establish and continue stream maintenance programs

Participate in the National Weather Service's StormReady program

Ensure that local communities have adequate shelter facilities with properly trained coordinators and/or managers that can address the needs of at-risk populations such as the elderly, the homeless, the disabled and families.

Future Needs to Better Understand Risk/Vulnerability

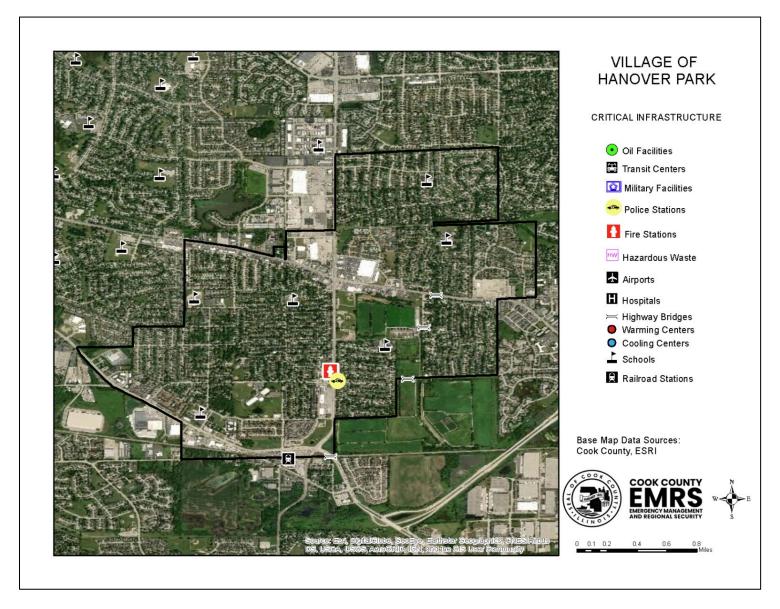
Village of Hanover Park could use county support for any resources used for Preliminary Damage Assessments after a significant severe weather event.

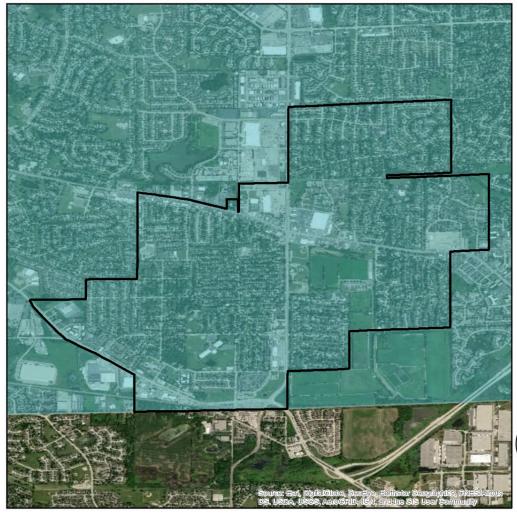
Village of Hanover Park could use any county support on a comprehensive Flood Plain mapping and a regional survey of flooding in our area. This would be used to focus future mitigation for flooding programs.

Additional Comments

No additional comments at this time.

Hazard Mapping





VILLAGE OF HANOVER PARK

PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

Mercalli Scale, Potential Shaking

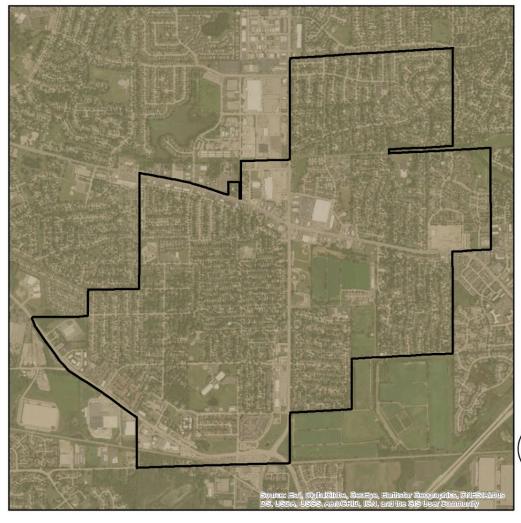
II-III Weak

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

Probabilistic seismic-haz ard maps were prepared for the conterminous United States for 2014 portraying peak hort contal acceleration and horticontal 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 conduced are the random hort contal component. The reference stecondition is firm cock, defined as having an average shear-wave velocity of 760 m/s in the top 30 meters corresponding to the boundary between NEHFP (National Earthquake Hazards Reduction program) ste classes B and Casses B.

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VILLAGE OF HANOVER PARK

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 may NIE-HPP Soil Profile Type Map), a Liquefaction Susceptibility Map and a Soil Response Map for the 8 states to be used in the FEMA New Maddid Catastrophic Planning Initiative Phase II work He USGS Geologic Investigation Series I-738 Map of Surficial Deposits and Materials in the Eastern and Central United State (East of 102 degrees/West Longitude) by David S. Fullerion, 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 NIE-HRP provisions (Building Seismic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2002) were followed to bedrock and off ont include any bedrock in the Calculation of the average shear ware velocity for the column, since it is the soil column and the difference in shear wave velocity for the soils in comparison to the bedrock which influences much of the amplication.

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COOK COUNTY EMRS EMERGENCY MANAGEMENT AND REGIONAL SECURITY

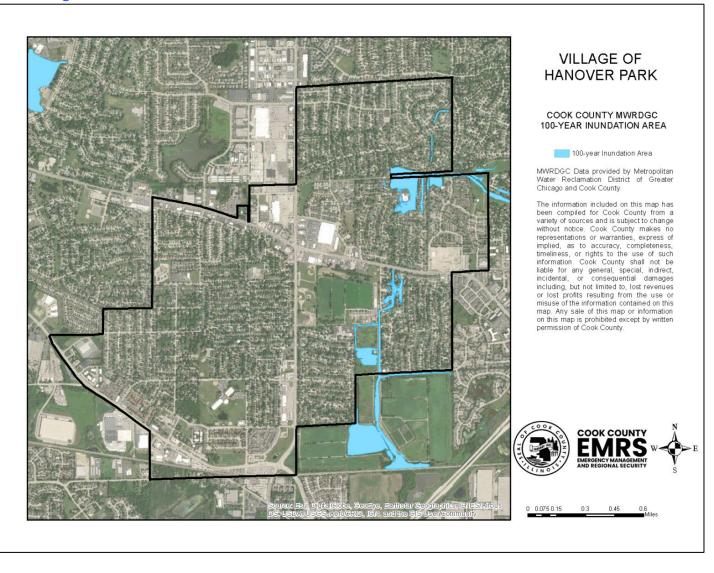


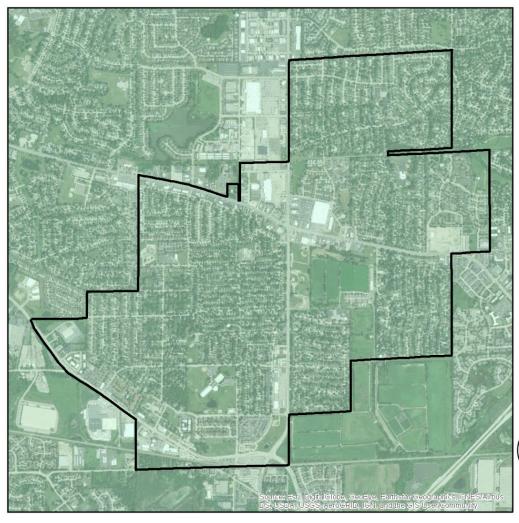
0 0.075 0.15

0.3

0.45 0.6 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 HANOVER PARK

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 Catagrophic Planning Initiative Priase II work. The USGS Geologic Investigation Series I-759 Map of Sufficial Deposits and Materials in the Eastern and Central United State (East of 102 degrees West Longitude) by David S. Fullerion, Charles A. Bush and Jean N. Pennell (2003) was the base map used for this Jean N. Pennell (2003) was the base map used for mis-work. Each State Geological Survey produced its own state map version of the Soil Site Class and Liquefaction Susceptibiting maps. The procedures outlined the NEHRP provisions (Building Seismic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2002) were followed to working the soil state places mans, CIISFC State 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.

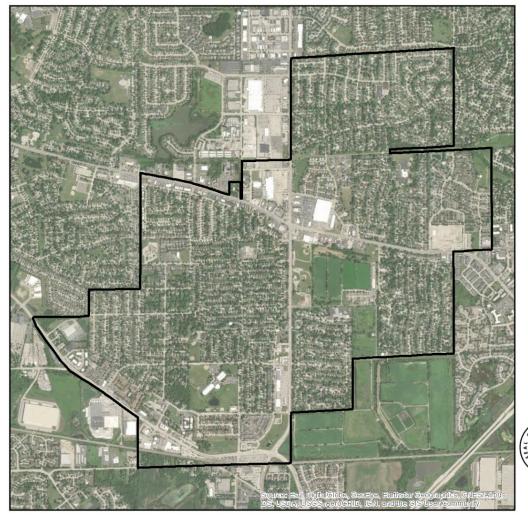
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0 0.075 0.15 0.3

0.45 0.6 Miles



VILLAGE OF HANOVER PARK

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.

