

**COOK COUNTY
MULTI-JURISDICTIONAL
HAZARD MITIGATION PLAN
VOLUME 2 - Municipal Annexes**

Alsip Annex

FINAL

July 2019

Prepared for:



Cook County
Department of Homeland Security and Emergency Management
69 W. Washington St., Suite 2600
Chicago, Illinois 60602

Toni Preckwinkle
President
Cook County Board of Commissioners

William Barnes
Executive Director
Cook County Department of Homeland
Security & Emergency Management

Table of Contents

Hazard Mitigation Point of Contact	2
Jurisdiction Profile	3
Capability Assessment	4
Jurisdiction-Specific Natural Hazard Event	9
Hazard Risk Ranking.....	11
Mitigation Strategies and Actions.....	12
New Mitigation Actions	15
Ongoing Mitigation Actions	28
Completed Mitigation Actions.....	33
Future Needs to Better Understand Risk/Vulnerability	35
Additional Comments	36
HAZUS-MH Risk Assessment Results	37
Hazard Mapping	40

Hazard Mitigation Point of Contact

Primary Point of Contact	Alternate Point of Contact
Charles Geraci, DEP Director 4500 W 123rd Street Alsip, IL 60803 Telephone: 708-254-2900 Email Address: cgeraci@villageofalsip.org	Thomas Styczynski, Fire Chief 12600 S Pulaski Road Alsip, IL 60803 Telephone: 708-280-7594 Email Address: tstyczynski@villageofalsip.org

Jurisdiction Profile

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

- **Date of Incorporation:** 1927
- **Current Population:** The US Census 2016 estimated the population of Alsip to be 19,158.
- **Population Growth:** The Village of Alsip has experienced a relative flat rate of population growth since the mid-1980s. This is due in part by being landlocked. There is very little property to build upon especially in the residential areas. The population change from 2010 to 2016 was - 0.59 percent with a decrease of 113 residents.
- **Location and Description:** The Village of Alsip is located in the south suburbs of the City of Chicago. The village is approximately 20 miles from Downtown Chicago. Alsip is also located approximately 15 miles from the border of the State of Indiana. Alsip is located in the County of Cook and covers an approximate area of 6.79 square miles. The Illinois Tollway (I-294) passes through the village as well as the Calumet Sag Channel which is used for barge traffic to travel from the Mississippi River to Lake Michigan. Alsip is about 60% residential and 40% commercial/ industrial.
- **Brief History:** Alsip was settled in the 1830s by German and Dutch farmers. The village is named after Frank Alsip, the owner of a brickyard that opened there in 1885. The village began to grow after the Tri-State Tollway was built there in 1959.
- **Climate:** The climate in Alsip is classified as humid continental, with all four seasons distinctly represented: wet springs; hot/often humid summers; pleasant autumns; and cold winters. The average rainfall is 35 inches, and the average precipitation days are 118. Annual precipitation is average reaching its lowest points in the months of January and February and peaks in the months of May and June.
- **Governing Body Format:** The Village of Alsip is governed by the village president and a board of six trustees. This body will assume responsibility for adoption and implementation of this plan. Within the Village of Alsip is the Building Dept. Clerk's Office, Finance Department, Fire Department, Police Department, Public Works, and the Water Department.
- **Development Trends:** There has not been a high rate of development in over a decade, since most of the land has been used up. The only development that the village has seen is some old buildings that have been demolished and replaced by newer, more modern specific buildings. Alsip is home to the international headquarters of Griffith Laboratories. One of the two Chicago area Coca-Cola bottling plants is located in Alsip. Alsip is home to Alsip MiniMill, a producer of corrugating medium using Old Corrugated Containers (OCC) as the primary raw material.

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 Ord. #2007-10-4 10/1/2007
Zonings	Yes	No	No	Yes	(65 ILCS 5/) Illinois Municipal Code. 90-11-152-1 Unknown date
Subdivisions	Yes	No	No	No	Ord. #163 65 ILCS 5/11-12-4
Stormwater Management	Yes	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 Documents					
General or Comprehensive Plan	No	No	No	No	
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>					N/A
Floodplain or Basin Plan	N/A	No	No	No	
Stormwater Plan	No	No	Yes	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 Plan	No	No	No	No	
<i>What types of capital facilities does the plan address?</i>					N/A
<i>How often is the plan revised/updated?</i>					N/A
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	No	No	No	Yes	The Economic Development Commission is charged with reviewing all economic development related programs and incentives including tax incentives offered through the Cook County 6b program.
Shoreline Management Plan	No	No	No	No	
Response/Recovery Planning					

Comprehensive Emergency Management Plan	No	No	Yes	Yes	Cook County DHSEM
Threat and Hazard Identification and Risk Assessment	No	No	Yes	No	Cook County DHSEM Preparing THIRA
Terrorism Plan	No	No	Yes	Yes	Cook County DHSEM
Post-Disaster Recovery Plan	No	No	No	No	
Continuity of Operations Plan	No	No	Yes	No	Cook County DHSEM
Public Health Plans	Yes	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	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes

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	Robinson Engineering
Engineers or professionals trained in building or infrastructure construction practices	Yes	Robinson Engineering
Planners or engineers with an understanding of natural hazards	Yes	Robinson Engineering
Staff with training in benefit/cost analysis	Yes	Finance Director
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Cook County GIS Consortium
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Cook County DHSEM
Grant writers	No	

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Building
Who is your jurisdiction’s floodplain administrator? (department/position)	Building Commissioner by ordinance
What is the date of adoption of your flood damage prevention ordinance?	7/21/2008
When was the most recent Community Assistance Visit or Community Assistance Contact?	07/27/2006
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	According to IDNR, the Village does have potential violations.
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, assistance in dealing with the potential violations would be most appreciated.

<p>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?</p>	<p>Not at this time.</p>
--	--------------------------

<p>TABLE: COMMUNITY CLASSIFICATIONS</p>			
	<p>Participating?</p>	<p>Classification</p>	<p>Date Classified</p>
<p>Community Rating System</p>	<p>No</p>	<p>N/A</p>	<p>N/A</p>
<p>Building Code Effectiveness Grading Schedule</p>	<p>Yes</p>	<p>Unknown</p>	<p>Unknown</p>
<p>Public Protection/ISO</p>	<p>Yes</p>	<p>3</p>	<p>2006</p>
<p>StormReady</p>	<p>Yes</p>	<p>Gold (countywide)</p>	<p>2014</p>
<p>Tree City USA</p>	<p>No</p>	<p>N/A</p>	<p>N/A</p>

Jurisdiction-Specific Natural Hazard Event

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: 0
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: N/A

TABLE: NATURAL HAZARD EVENTS			
Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment / Event Narrative
Hail	-	2/28/2017	-
Severe Weather	-	7/6/2016	-
Severe Weather	-	11/2013	-
Severe Heat	-	7/2012	-
Severe Weather	-	8/2011	-
Severe Winter Weather	DR-1960	2/2011	-
Severe Storm/ Flooding	-	6/2011	-
Flooding	-	8/2010	-
Flash Flooding	-	5/22/2004	Several viaducts on the south side of Chicago were flooded. Street flooding occurred in Alsip where one and a half inches of rain fell in an hour.

Jurisdiction-Specific Hazards and Impacts

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 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: Areas prone to urban flooding in the community are the following: 114th and Mather, Lombard Ave. south of 123rd Street, and 115th Street between 44th (4400 West) and Kedvale (4130 West).

Extreme Heat: Senior citizens in the community are especially vulnerable to extreme heat. Specifically, the housing areas of Heritage 1 and Heritage 2 represent at-risk locations.

High Winds: High winds have historically affected residential areas, causing downed trees and downed electrical lines.

Snow: Senior citizens and individuals with functional and access needs in the community have historically had issues when there is a large amount of snow or severe winter weather.

Extreme Cold: Senior citizen complexes/housing, and those that reside in those facilities are especially vulnerable during extreme cold incidents.

Water Supply: A water main extension is needed on the east side of Pulaski. The needs related to water supply include, but are not limited to: fire protection, improved water supply to protect residents, additional hydrants, and to support/protect future developments.

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	Risk Rating Score (Probability x Impact)
1	Severe Weather	54
2	Severe Winter Weather	54
3	Tornado	51
4	Earthquake	16
5	Flood	15
6	Drought	2
7	Dam Failure	0

Mitigation Strategies and Actions

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- New Mitigation Actions - New actions identified during this 2019 update process
- Ongoing Mitigation Actions - Ongoing actions with no definitive end or that are still in progress. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- Completed Mitigation Actions - An archive of all identified and completed projects, including completed actions since 2014.

The *Hazard Mitigation Action Plan Matrix Table* below lists the actions that make up the jurisdiction’s hazard mitigation plan. The *Mitigation Strategy Priority Schedule Table* identifies the priority for each action.

TABLE: HAZARD MITIGATION ACTION PLAN MATRIX						
Status	Hazards Mitigated	Objectives Met	Lead Agencies	Estimated Cost	Sources of Funding	Timeline/Projected Completion Date (a)
Action A1.1 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.						
Ongoing	All	7, 13	Village of Alsip	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action A1.2 —Continue to support the countywide actions identified in this plan.						
Ongoing	All	All	Village of Alsip	Low	General Fund	Short and long-term
Action A1.3 —Actively participate in the plan maintenance strategy identified in this plan.						
Ongoing	All	3, 4, 6	DHSEM, Village of Alsip	Low	General Fund	Short-term
Action A1.4 —Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						

Ongoing	All	3, 4, 5, 6, 7, 9, 10,11, 13	Village of Alsip	Low	General Fund	Long-term
Action A1.5 —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.						
Ongoing	Flooding	4, 6, 9	Village of Alsip	Low	General Fund	Short-term and ongoing
Action A1.6 —Where feasible, implement a program to record high water marks following high-water events.						
Ongoing	Flooding, Severe Weather	3, 6, 9	Village of Alsip	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action A1.7 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
Ongoing	All	3, 4, 6, 10, 13	Robinson Engineering	Low	General Fund	Short-term
Action A1.8 —Reinforce lifting stations.						
Ongoing	Earthquake, Flood, Severe Weather	1, 2, 7	Village of Alsip	\$375,000; High	Bonds, FEMA Grants	Short-term
Action A1.9 —Reduce flooding impact between 113th and 114th on Mather Avenue						
New	All	2, 3, 4, 6, 9	Village of Alsip	\$120,000; Medium	General Fund, Possible FEMA Grants	2021
Action A1.10 —Reduce flooding impact on Lombard Lane just south of 123rd Street						
New	All	2, 3, 4, 6, 9	Village of Alsip	\$175,000; Medium	General Fund, Possible FEMA Grants	2021
Action A1.11 —Install storm water lift station at 115th Street and Lawler Avenue						
New	All	2, 3, 4, 6, 8, 9	Village of Alsip	\$400,000; High	General Fund, Possible FEMA Grants	2024
Action A1.12 —Install water main extension and additional hydrants on the east side of Pulaski from 119th street to 121st street and eliminate dead end water main extension on Harding.						

New	All	1, 3, 4, 5, 13	Village of Alsip	\$400,000; High	General Fund	2019
-----	-----	----------------	------------------	-----------------	--------------	------

(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years.

TABLE: MITIGATION STRATEGY PRIORITY SCHEDULE

Action Number	Number of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority (a)
1	2	High	High	Yes	Yes	No	Medium
2	13	Medium	Low	Yes	No	Yes	High
3	3	Medium	Low	Yes	Yes	Yes	High
4	9	Medium	Low	Yes	No	Yes	Medium
5	3	Medium	Low	Yes	No	Yes	High
6	3	Medium	Medium	Yes	Yes	No	Medium
7	5	Medium	Low	Yes	No	Yes	High
8	3	High	High	Yes	Yes	No	Medium
9	5	High	Medium	Yes	Yes	Yes	High
10	5	Medium	Medium	Yes	Yes	Yes	High
11	6	High	High	Yes	Yes	Yes	High
12	5	High	Medium	Yes	No	Yes	High

(a) See Chapter 1 for explanation of priorities.

New Mitigation Actions

The following are new mitigation actions created during the 2019 update.

Action A - 1.9

Mitigation Action	Reduce flooding impact between 113th and 114th on Mather Avenue
Year Initiated	2019
Applicable Jurisdiction	Village of Alsip
Lead Agency/Organization	Village of Alsip
Supporting Agencies/Organizations	Village of Alsip
Applicable Goal	<ul style="list-style-type: none"> • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects. • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. • Develop, promote, and integrate mitigation action plans. • Promote public understanding of and support for hazard mitigation.
Applicable Objective	<ul style="list-style-type: none"> • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • Integrate hazard mitigation policies into land use plans in the planning area. • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Use the best available data, science and technologies to educate the public and to improve understanding of the location and potential impacts of natural hazards, the vulnerability of building types and community development patterns, and the measures needed to protect life safety.
Potential Funding Source	General Fund, Possible FEMA Grants
Estimated Cost	\$120,000
Benefits (loss avoided)	Eliminate or reduce flooding in this residential neighborhood for safety reasons and to alleviate the obvious concerns in relation to the health and safety of the residents.
Projected Completion Date	2021
Priority and Level of Importance (Low, Medium, High)	High Priority
Benefit Analysis (Low, Medium, High)	High—Project will provide an immediate reduction of risk exposure for life and property.

Cost Analysis (Low, Medium, High)	Medium—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	The village public works director would oversee this project. A careful review of the problem areas will take place including a determination of the primary causes of the flooding. Drawbacks pertaining to drainage from higher level areas will be studied and enhancements to the existing storm water drainage system will be considered. After the review (assessment) is complete and necessary mitigation actions are identified, work will begin to eliminate or reduce the flooding.

Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
X	Flood
	Extreme Heat
	Lightning
	Hail
	Fog
	High Wind
	Snow
	Blizzard
	Extreme Cold
	Ice Storms
	Tornado
	Epidemic or pandemic
	Nuclear Power Plant Incident

	Widespread Power Outage
	Coastal Erosion
	Secondary Impacts from Mass Influx of Evacuees
	Hazardous Materials Incident

Action A - 1.10

Mitigation Action	Reduce flooding impact on Lombard Lane just south of 123rd Street
Year Initiated	2019
Applicable Jurisdiction	Village of Alsip
Lead Agency/Organization	Village of Alsip
Supporting Agencies/Organizations	Village of Alsip
Applicable Goal	<ul style="list-style-type: none"> • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. • Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events. • Develop, promote, and integrate mitigation action plans. • Promote public understanding of and support for hazard mitigation.
Applicable Objective	<ul style="list-style-type: none"> • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • Integrate hazard mitigation policies into land use plans in the planning area. • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Use the best available data, science and technologies to educate the public and to improve understanding of the location and potential impacts of natural hazards, the vulnerability of building types and community development patterns, and the measures needed to protect life safety.
Potential Funding Source	General Fund, Possible FEMA Grants
Estimated Cost	\$175,000
Benefits (loss avoided)	Reduce the flooding affecting the roadways and businesses in this very busy industrial area of the village.
Projected Completion Date	2021
Priority and Level of Importance (Low, Medium, High)	High Priority
Benefit Analysis (Low, Medium, High)	Medium—Project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for property.

Cost Analysis (Low, Medium, High)	Medium—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	The village public works director would oversee this project. A careful review of the problem area will take place including a determination of the primary causes of the flooding. Drawbacks pertaining to drainage from and possible enhancements to the existing storm water drainage system will be considered. After the review (assessment) is complete and necessary mitigation actions are identified, work will begin to eliminate or reduce the flooding.

Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
X	Flood
	Extreme Heat
	Lightning
	Hail
	Fog
	High Wind
	Snow
	Blizzard
	Extreme Cold
	Ice Storms
	Tornado
	Epidemic or pandemic
	Nuclear Power Plant Incident

	Widespread Power Outage
	Coastal Erosion
	Secondary Impacts from Mass Influx of Evacuees
	Hazardous Materials Incident

Action A - 1.11

Mitigation Action	Install storm water lift station at 115th Street and Lawler Avenue
Year Initiated	2020
Applicable Jurisdiction	Village of Alsip
Lead Agency/Organization	Village of Alsip
Supporting Agencies/Organizations	Village of Alsip
Applicable Goal	<ul style="list-style-type: none"> • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects. • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. • Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events. • Develop, promote, and integrate mitigation action plans. • Promote public understanding of and support for hazard mitigation.
Applicable Objective	<ul style="list-style-type: none"> • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • Integrate hazard mitigation policies into land use plans in the planning area. • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Use the best available data, science and technologies to educate the public and to improve understanding of the location and potential impacts of natural hazards, the vulnerability of building types and community development patterns, and the measures needed to protect life safety. • Establish partnerships among all levels of local government, the private sector, and/or nongovernmental organizations to improve and implement methods to protect people and property.
Potential Funding Source	General Fund, Possible FEMA Grants
Estimated Cost	\$400,000
Benefits (loss avoided)	The lift station would correct the drainage for the entire area between 115th Street & 111th Street, Lamon Ave. to Laramie. This is also known as North Hazelgreen.

Projected Completion Date	2024
Priority and Level of Importance (Low, Medium, High)	High Priority
Benefit Analysis (Low, Medium, High)	High—Project will provide an immediate reduction of risk exposure for life and property.
Cost Analysis (Low, Medium, High)	High—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	The village public works director would oversee this project. A careful review of the scope of the problem and mitigation actions will be evaluated. If necessary other departments will be involved including the village's engineering firm. After the review (assessment) is complete and necessary mitigation actions are identified, work pertaining to the lift station to correct the drainage problems would begin.

Mitigation Action and Project Maintenance					
Year	Status	Comments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2019	New				
2020					
2021					
2022					
2023					

Mitigated Hazards	
X	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
X	Flood
	Extreme Heat
	Lightning
	Hail
	Fog
	High Wind
	Snow
	Blizzard
	Extreme Cold

	Ice Storms
	Tornado
	Epidemic or pandemic
	Nuclear Power Plant Incident
	Widespread Power Outage
	Coastal Erosion
	Secondary Impacts from Mass Influx of Evacuees
	Hazardous Materials Incident

Action A - 1.12

Mitigation Action	Install water main extension and additional hydrants on the east side of Pulaski from 119th street to 121st street and
Year Initiated	2019
Applicable Jurisdiction	Village of Alsip
Lead Agency/Organization	Village of Alsip
Supporting Agencies/Organizations	Fire Department, Water and Public Works, Building Department
Applicable Goal	<ul style="list-style-type: none"> • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. • Protect public services and critical facilities, including infrastructure, from loss of use • Develop, promote, and integrate mitigation action plans. • Promote public understanding of and support for hazard mitigation
Applicable Objective	<ul style="list-style-type: none"> • Reduce natural hazard-related risks and vulnerability to potentially isolated populations within the planning area. • Eliminate or minimize disruption of local government operations caused by natural hazards through all phases of emergency management. • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Integrate hazard mitigation policies into land use plans in the planning area. • Develop, improve, and protect systems that provide early warnings, emergency response communications, and evacuation procedures.
Potential Funding Source	General Fund
Estimated Cost	\$400,000
Benefits (loss avoided)	Fire Protection and water supply for developments and residential area, improved water availability
Projected Completion Date	2019
Priority and Level of Importance (Low, Medium, High)	High Priority
Benefit Analysis (Low, Medium, High)	High—Project will provide an immediate reduction of risk exposure for life and property.
Cost Analysis (Low, Medium, High)	Medium—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description

Action/Implementation Plan and Project Description:	<ul style="list-style-type: none"> • Extend Water Main On Pulaski from 119th Street to 120th Street • Extend main east to Harding to eliminate the dead end main. • Elimination of Dead End Main to reduce freezing and improve water quality. Increased protection for residents. • All Hazards Category • Fire Protection Needs • Additional Water Supply Needs • Water supply provided for future development. Example, two out lots in front of Jewel.
--	---

Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
	Flood
	Extreme Heat
	Lightning
	Hail
	Fog
	High Wind
	Snow
	Blizzard
	Extreme Cold
	Ice Storms
	Tornado
	Epidemic or pandemic
	Nuclear Power Plant Incident
	Widespread Power Outage
	Coastal Erosion
	Secondary Impacts from Mass Influx of Evacuees
	Hazardous Materials Incident

Ongoing Mitigation Actions

The following are ongoing actions with no definitive end or that are still in progress. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.

Action A - 1.1

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A—1.1	Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.	
Status Description: No	No action has been taken yet.	X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A - 1.2

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A—1.2	Continue to support the county wide actions identified in this plan.	
Status Description: Yes	The village will continue to support the county wide actions for this plan.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A - 1.3

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A—1.3	Actively participate in the plan maintenance strategy identified in this plan.	
Status Description: Yes	The department heads will continue to work on the maintenance of this plan on a regular basis.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A - 1.4

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A—1.4	Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.	
Status Description: Yes	The village is currently participating in various programs. The village was named as a Tree City in 2015.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A - 1.5

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A—1.5	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.	
Status Description: No	Still working on through our public works department.	X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A - 1.6

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A—1.6	Where feasible, implement a program to record high water marks following high-water events.	
Status Description: No	This is in the planning stage.	X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A - 1.7

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A—1.7	Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.	
Status Description: No	This is in the planning stages.	X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A - 1.8

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A—1.8	Reinforce lifting stations.	
Status Description: Yes	The water department has been working on this objective.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Completed Mitigation Actions

Alsip has no completed actions 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.

HAZUS-MH Risk Assessment Results

ALSIP EXISTING CONDITIONS	
2010 Population	19,277
Total Assessed Value of Structures and Contents	\$4,094,137,396
Area in 100-Year Floodplain	178.37 acres
Area in 500-Year Floodplain	184.57 acres
Number of Critical Facilities	88

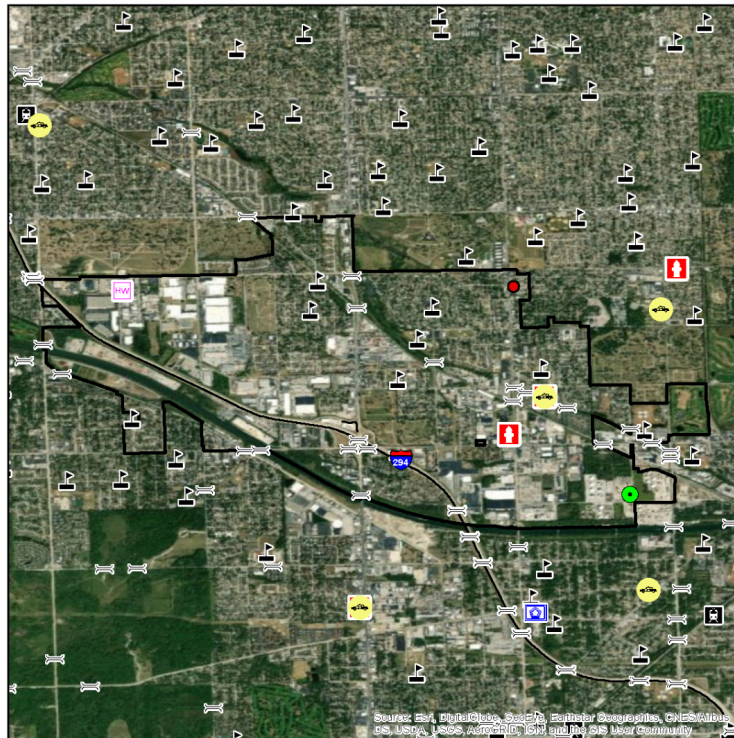
HAZARD EXPOSURE IN ALSIP						
	Number Exposed		Value Exposed to Hazard		Total	% of Total Assessed Value Exposed
	Population	Buildings	Structure	Contents		
Dam Failure						
Buffalo Creek	0	0	\$0	\$0	\$0	0.00%
U. Salt Cr. #2	0	0	\$0	\$0	\$0	0.00%
Touhy	0	0	\$0	\$0	\$0	0.00%
U. Salt Cr. #3	0	0	\$0	\$0	\$0	0.00%
U. Salt Cr. #4	0	0	\$0	\$0	\$0	0.00%
Flood						
100-Year	16	5	\$311,441	\$373,345	\$684,786	0.02%

500-Year	23	7	\$678,511	\$556,880	\$1,235,391	0.03%
Tornado						
100-Year	—	—	\$539,197,319	\$435,369,012	\$974,566,331	23.80%
500-Year	—	—	\$917,502,747	\$743,123,320	\$1,660,626,067	40.56%

ESTIMATED PROPERTY DAMAGE VALUES IN ALSIP				
	Estimated Damage Associated with Hazard			% of Total Assessed Value Damaged
	Building	Contents	Total	
Dam Failure				
Buffalo Creek	\$0	\$0	\$0	0.00%
U. Salt Cr. #2	\$0	\$0	\$0	0.00%
Touhy	\$0	\$0	\$0	0.00%
U. Salt Cr. #3	\$0	\$0	\$0	0.00%
U. Salt Cr. #4	\$0	\$0	\$0	0.00%
Earthquake				
1909 Historical Event	\$42,889,983	\$14,695,436	\$57,585,419	1.41%
Flood				
10-Year	\$0	\$0	\$0	0.00%
100-Year	\$0	\$0	\$0	0.00%
500-Year	\$6,929	\$4,170	\$11,099	0.00%

Tornado				
100-Year	\$53,919,732	\$43,536,901	\$97,456,633	2.38%
500-Year	\$133,955,401	\$108,496,005	\$242,451,406	5.92%

Hazard Mapping

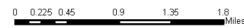


VILLAGE OF ALSIP

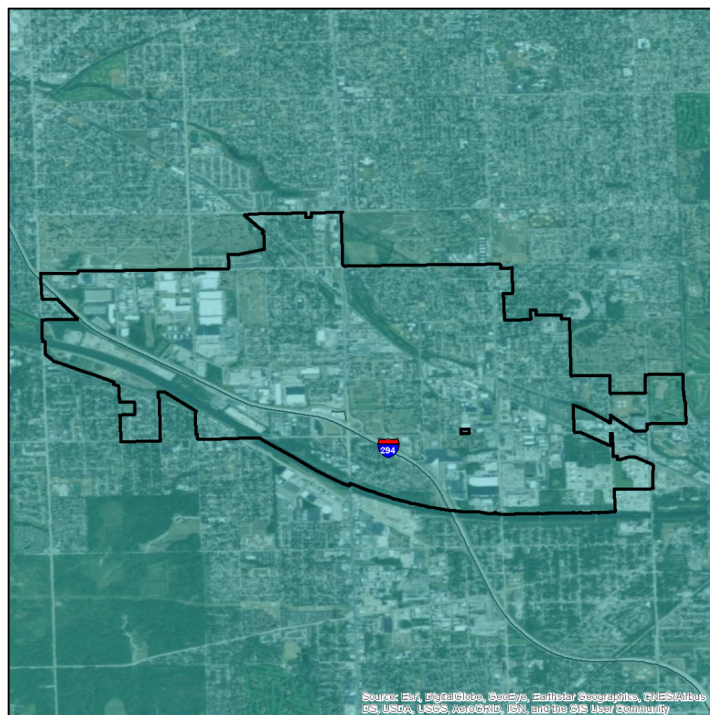
CRITICAL INFRASTRUCTURE

- Oil Facilities
- Transit Centers
- Military Facilities
- Police Stations
- Fire Stations
- Hazardous Waste
- Airports
- Hospitals
- Highway Bridges
- Warming Centers
- Cooling Centers
- Schools
- Railroad Stations

Base Map Data Sources:
Cook County, ESRI



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



VILLAGE OF ALSIP

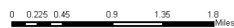
PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

Mercalli Scale, Potential Shaking
II-III Weak

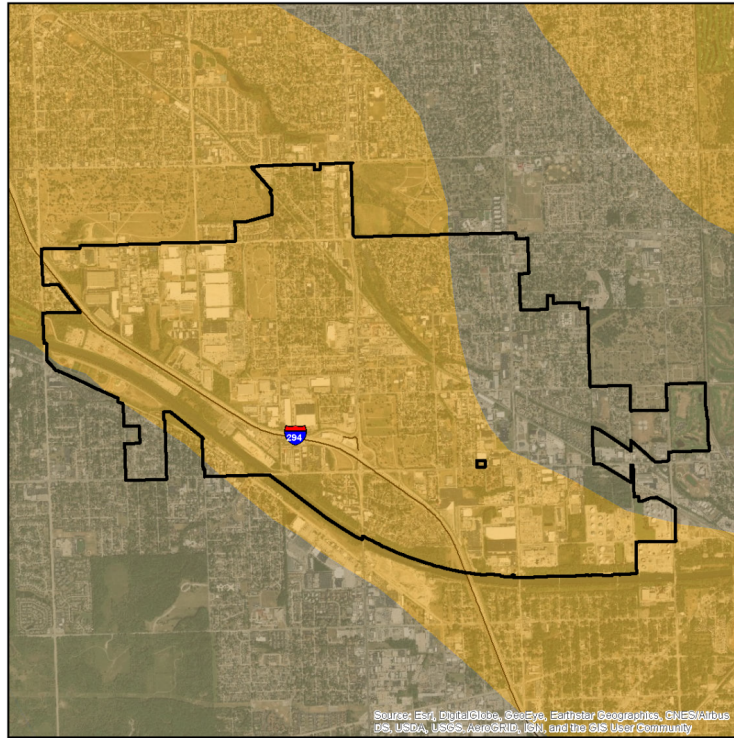
Data provided by the USGS Earthquake Hazards Program and Cook County.

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

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



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



VILLAGE OF ALSIP

NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL CLASSIFICATION

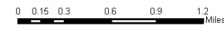
TYPE

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

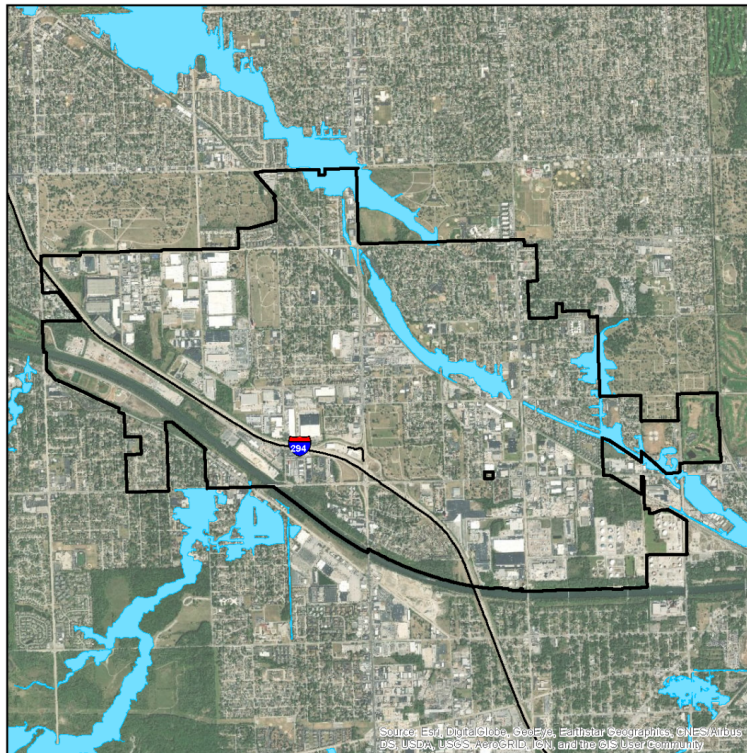
Data provided by the Illinois State Geological Survey and Cook County.

The Central United States Earthquake Consortium (CUSEC) State Geologists produced a regional Soil Class map (NEHRP Soil Profile Type Map), a Liquefaction Susceptibility Map and a Soil Response Map for the 9 states to be used in the FEMA New Madrid Catastrophic Planning Initiative Phase II work. The USGS Geologic Investigation Series I-2789 Map of Surficial Deposits and Materials in the Eastern and Central United States (East of 102 degrees West Longitude) by David S. Fullerton, Charles A. Bush and Jean N. Pennell (2003) was the base map used for this work. Each State Geological Survey produced its own state map version of the Soil Site Class and Liquefaction Susceptibility maps. The procedures outlined in the NEHRP provisions (Building Seismic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2002) were followed to produce the soil site class maps. CUSEC State Geologists used the entire column of soils material down to bedrock and did not include any bedrock in the calculation of the average shear wave velocity for the column, since it is the soil column and the difference in shear wave velocity of the soils in comparison to the bedrock which influences much of the amplification.

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



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



VILLAGE OF ALSIP

COOK COUNTY MWRDGC 100-YEAR INUNDATION AREA

- 100-year Inundation Area

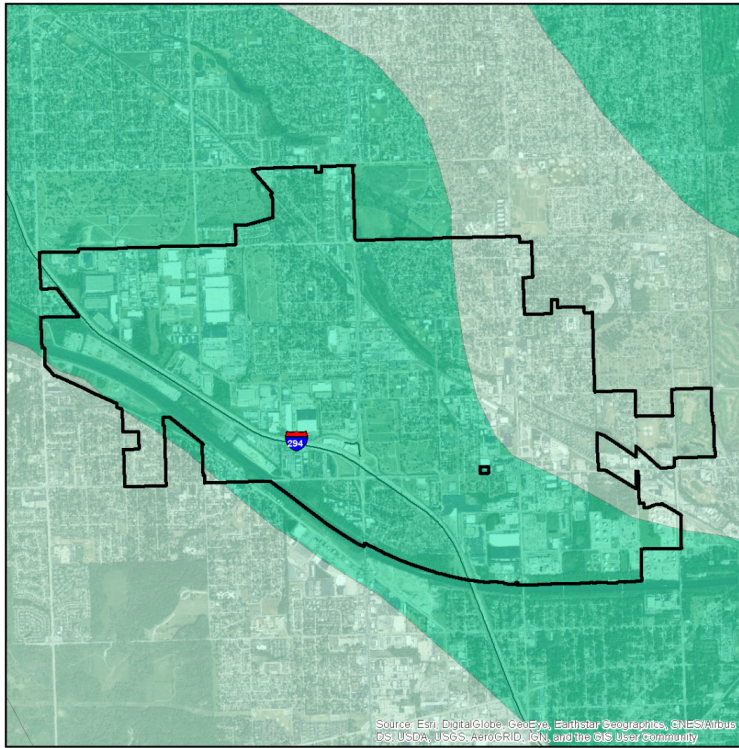
MWRDGC Data provided by Metropolitan Water Reclamation District of Greater Chicago and Cook County.

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

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>.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



VILLAGE OF ALSIP

LIQUEFACTION SUSCEPTIBILITY

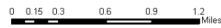
LIQUEFACTION SUSCEPTIBILITY

- high
- low
- very low

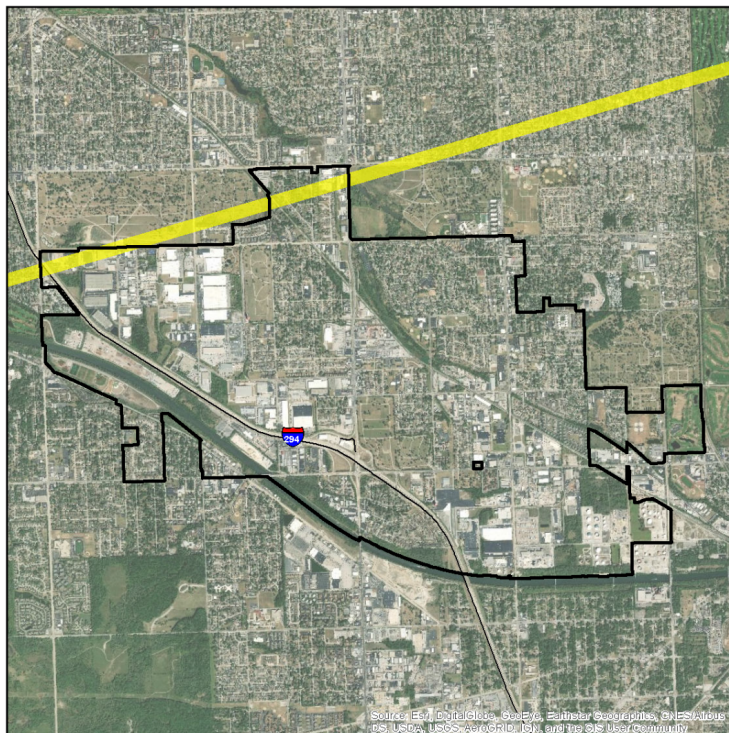
Data provided by the Illinois State Geological Survey and Cook County.

The Central United States Earthquake Consortium (CUSEC) State Geologists produced a regional Soil Site Class map (NEHRP Soil Profile Type Map), a Liquefaction Susceptibility Map and a Soil Response Map for the 8 states to be used in the FEMA New Madrid Catastrophic Planning Initiative Phase II work. The USGS Geologic Investigation Series 12789 Map of Surficial Deposits and Materials in the Eastern and Central United States (East of 102 degrees West Longitude) by David S. Fullerton, Charles A. Buft and Jean N. Pennell (2003) was the base map used for this work. Each State Geological Survey produced its own state map version of the Soil Site Class and Liquefaction Susceptibility maps. The procedures outlined in the NEHRP provisions (Building Seismic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2003) were followed to produce the soil site class maps. CUSEC State Geologists used the entire column of soils material down to bedrock and did not include any bedrock in the calculation of the average shear wave velocity for the column, since it is the soil column and the difference in shear wave velocity of the soils in comparison to the bedrock which influences much of the amplification.

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



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



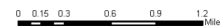
VILLAGE OF ALSIP

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.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community