

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

Steger Annex

FINAL

July 2019

Prepared for:



Cook County
Department of Homeland Security and Emergency Management
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Hazard Mitigation Point of Contact

Primary Point of Contact	Alternate Point of Contact
Thomas Johnston, Chief EMA 3035 Lewis Steger, IL 60475 708-359-8028 tjohnston@villageofsteger.org	Mary Jo Seehausen, Village Administrator 35 W 34th St Steger, IL 60475 Telephone: 708-754-3395 mseehausen@villageofsteger.org

Jurisdiction Profile

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

- **Date of Incorporation:** December 1896
- **Current Population:** The 2016 U.S Census estimate was 9,456.
- **Population Growth:** The Village of Steger has experienced a minor reduction of -1.16% in population from 2010 to 2016.
- **Location and Description:** Steger is a far south suburb of Chicago that lies in two counties; Cook and Will, and is 35 miles south of Chicago city limits. The Village is surrounded by the following three Villages: South Chicago Heights to the north, Sauk Village to the east, and Crete to the south. The West Side Village limits are Cook County Forest preserve property and unincorporated Will County areas. According to the 2010 census, the Village has a total area of 4 square miles; 2 square miles are considered rural (well & septic) and the other 2 are provided for by Village water and sewer services.
- **Brief History:** In 1893, John Valentine Steger opened a piano factory on 20 acres (81,000 square meters) of land alongside the railroad south of Chicago Heights. When the Village grew to 324 residents, the village incorporated in 1896. John Steger agreed to pay \$400 toward incorporation costs to ensure that the name of the town be dubbed "Steger" rather than "Columbia Heights." Steger and Son pianos were made in the village until 1926. By 1920, Steger was considered by some as the "piano capital of the world" producing more than a hundred pianos a day. Steger & Sons built exceptionally high quality, expensive pianos from 1893-1956 in the village of Steger.
- **Climate:** The climate of Steger and the Chicago area is classified as humid continental, with all four seasons distinctly represented; wet springs; hot and humid summers; pleasant autumns; and cold winters. Annual precipitation is average, and reaches its lowest points in the months of January and February, and peaks in the months of May and June. Winter proves quite variable as seasonal snowfall in the Village has ranged from 9-90 inches. The daily average temperature in January at Midway Airport is 24.8 F (-4.0 C), and temperatures often stay below freezing for several consecutive days or even weeks in January and February. Temperatures drop to or below 0 degrees F (-18 degrees C) on 5.5 nights annually at Midway and 8.2 nights at O'Hare. Spring in the Chicago area is perhaps the areas wettest and unpredictable season. Winter like conditions can persist well into April and even occasionally.
- **Governing Body:** The Village of Steger is Home-Rule and operates under the Village President/Trustee form of government. The legislative body consists of the Village President, Board of six Trustees and Village Clerk. The Village President and Board of Trustees serve a term of four years. The Village of Steger is divided between two congressional districts. The area in Cook County is in Illinois' 2nd congressional district, while the area in Will County is in the 11th district.
- **Developmental Trends:** The Village has a strategic plan from 2006 focusing on a downtown redevelopment. Steger will have limited residential development within the Village limits due to

the Village being mostly landlocked. However, the Village of Steger has a Housing and Community Development Committee. The HCDC is a member of the South Suburban Land Bank & Development Authority (SSLBDA), which was formed in 2012. The HCDC is continually working on identifying properties for rehabilitation & demolition in order to increase value for homeowners in the Village. Within the Village limits is a 90 acre parcel for sale located at Route 394 & Steger Road. The Village is pursuing development in this area with either retail or warehousing/storage facility. There are no permanent plans for this development as of this time. Additionally, in December 2014, HCDC applied for the Illinois Housing Development Authority's (IDHA's) Blight Reduction Program which partners with South Suburban Land Bank & Development Authority, Park Forest, City of Joliet & Village of Robbins. The Blight Reduction Program is an IDHA program to decrease preventable foreclosure and stabilize neighborhoods by supporting Illinois units of government and Not-For-Profit Partners as we target blighted, vacant residential properties in our communities for demolition, greening and eventual reuse or redevelopment. On August 29, 2017, Steger hosted a panel discussion with the focus on "Homes For A Changing Region".

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. Municipal Code adopted: 2003
Zonings	Yes	No	No	Yes	(65 ILCS 5/) Illinois Municipal Code. Municipal Code adopted: 1963
Subdivisions	Yes	No	No	No	Municipal Code adopted: 1962
Stormwater Management	Yes	No	Yes	Yes	State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA. Municipal Code adopted: 1995

Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	No	No	Yes	Yes	(765 ILCS 77/) Residential Real Property Disclosure Act.
Growth Management	No	No	No	No	
Site Plan Review	Yes	No	No	No	Municipal Code adopted: 2003
Public Health and Safety	Yes	No	Yes	Yes	Cook County Board of Health. Municipal Code adopted: 1969
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? N/A</i>					
Floodplain or Basin Plan	Yes	No	No	No	
Stormwater Plan	Yes	No	Yes	No	MWRD-Deer Creek Detailed Watershed Plan
Capital Improvement Plan	No	No	No	No	
<i>What types of capital facilities does the plan address?</i>					
<i>How often is the plan revised/updated?</i>					
Habitat Conservation Plan	No	No		No	
Economic Development Plan	Yes	No	Yes	Yes	Steger Economic Development Board
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	No	No	Yes	No	Cook County DPH

TABLE: FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No

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	Bowman Engineering
Engineers or professionals trained in building or infrastructure construction practices	Yes	Bowman Engineering
Planners or engineers with an understanding of natural hazards	Yes	Joe Schudt Engineering
Staff with training in benefit/cost analysis	Yes	Village Treasurer
Surveyors	Yes	Joe Schudt Engineering
Personnel skilled or trained in GIS applications	Yes	Cook County GIS Consortium
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Fire Chief
Grant writers	Yes	Fire Chief/Village Administrator

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)	PW Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	2003
When was the most recent Community Assistance Visit or Community Assistance Contact?	5/21/2001
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	Not according to last Community Assistant visit.
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, all that apply
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; Undecided

TABLE: COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection/ISO	Yes	ISO 6	03/13
StormReady	Yes	Gold (Countywide)	2014
Tree City USA	No	N/A	N/A

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: 1
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0

TABLE: NATURAL HAZARD EVENTS			
Type of Event	FEMA Disaster Number (if applicable)	Date	Preliminary Damage Assessment
Extreme Cold	-	2/26/2014	-
Extreme Cold	-	2/25/2014	-
Flooding	-	2/19/2014	-
Blizzard Conditions Heavy Snow and High winds	-	2/17/2014	-
Blizzard Conditions Heavy Snow and High winds	DR 4116	4/26/2013	-
Blizzard	DR 4116	1/31/2011	-
Severe Storms Flooding	DR 1935	7/19/2010	-
Severe Storms Flooding	DR 1800	9/13/2008	-
Severe Weather	-	7/23/2003	-
Blizzard	EM 3068	1/16/1979	-

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.

Severe Weather: In 2003, several trees, large tree limbs and power lines were blown due to severe thunderstorms and wind gusts. The large tree limbs also resulted in a house being damaged.

Flooding: As recent (2019) the northwest segment of town area is in flood condition and has previously flooded the last 12 months. Residential area with school, police, and fire departments HQs impacted. Flood mitigation/drainage northwest segment of town.

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 Weather	54
3	Tornado	48
4	Flood	26
5	Earthquake	18
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 S8.1 —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 Steger	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action S8.2 —Continue to support the countywide actions identified in this plan.						
Ongoing	All	All	Village of Steger	Low	General Fund	Short-term and Long-term
Action S8.3 —Actively participate in the plan maintenance strategy identified in this plan.						
Ongoing	All	3, 4, 6	DHSEM, Village of Steger	Low	General Fund	Short-term
Action S8.4 —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 Steger	Low	General Fund	Long-term
Action S8.5 —Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements.						
Ongoing	Flooding	4, 6, 9	Village of Steger	Low	General Fund	Short-term and Ongoing
Action S8.6 —Where feasible, implement a program to record high water marks following high-water events.						
Complete	Flooding, Severe Weather	3, 6, 9	Village of Steger	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Completed
Action S8.7 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
Ongoing	All	3, 4, 6, 10, 13	Bowman Engineering	Low	General Fund	Short-term
Action S8.8 —Consider the development and implementation of a Capital Improvements Program (CIP) to increase the Village’s regulatory, financial and technical capability to implement mitigation actions.						
Ongoing	All	1, 2, 7	Public Works	High	CIP component of general fund (if implemented)	Long-term
Action S8.9 —Mitigate Flooding issues on Northwest side of town.						
Ongoing	Flooding	2, 9, 13	MWRD	Unknown	MWRD	Ongoing
Action S8.10 —Flood mitigation/drainage northwest segment of town.						
New	Flooding	2, 9, 13	Steger Public Works	High	Local to Date	Current work will terminate in 2019 and project will be less than 20% funded
(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	No	No	Medium
9	3	High	Unknown	Yes	Yes	Yes	High
10	3	High	High	Yes	Unknown	Unknown	High

(a) See Chapter 1 for explanation of priorities.

New Mitigation Actions

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

Action S8.10

Mitigation Action	Flood mitigation/drainage northwest segment of town
Year Initiated	2019
Applicable Jurisdiction	Village of Steger
Lead Agency/Organization	Steger Public Works
Supporting Agencies/Organizations	EMA, private engineering firm knight engineering
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. • Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to 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"> • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. • Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes.
Potential Funding Source	Local to date
Estimated Cost	N/A
Benefits (loss avoided)	As recent today the area is in flood condition and has previously flooded last 12 months. Dence residential area with school both police and fire departments Hqs impacted.

Projected Completion Date	Current work will terminate in 2019 and project will be less than 20% funded
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 current engineering firm has a detail plan to mitigate completely. However, funding is 75% short.
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Mitigation Action and Project Maintenance

Year	Status	Comments
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards

	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

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 S8.1

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# S8.1	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: Yes	Ongoing as funds allow	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action S8.2

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# S8.2	Continue to support the countywide actions identified in this plan.	
Status Description: Yes	Ongoing as funds allow.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action S8.3

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# S8.3	Actively participate in the the plan maintenance strategy identified in this plan	
Status Description: Yes	Continually working to improve infrastructure and preparedness	O
<p align="center">Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken</p>		

Action S8.4

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# S8.4	Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady	
Status Description: No		X
<p align="center">Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken</p>		

Action S8.5

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# S8.5	Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements.	
Status Description: Yes		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action S8.7

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# S8.7	Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.	
Status Description: Yes		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action S8.8

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# S8.8	Consider the development and implementation of a Capital Improvements Program to increase the Village's regulatory, financial, and technical capability to implement mitigation actions.	
Status Description: No		X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action S8.9

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# S8.9	Mitigate Flooding issues on Northwest side of town.	
Status Description: Yes	Working with MWRD; 30% complete.	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

The following section represents completed mitigation actions, and serves as an archive of identified and completed projects.

Action S8.6

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# S8.6	Where feasible, implement a program to record high water marks following high-water events.	
Status Description: Yes		C
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

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

STEGER EXISTING CONDITIONS	
2010 Population	9,570
Total Assessed Value of Structures and Contents	\$3,709,188,720
Area in 100-Year Floodplain	160.04 acres
Area in 500-Year Floodplain	168.27 acres
Number of Critical Facilities	16

HAZARD EXPOSURE IN STEGER						
	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	868	267	\$154,590,449	\$153,585,979	\$308,176,428	8.31%

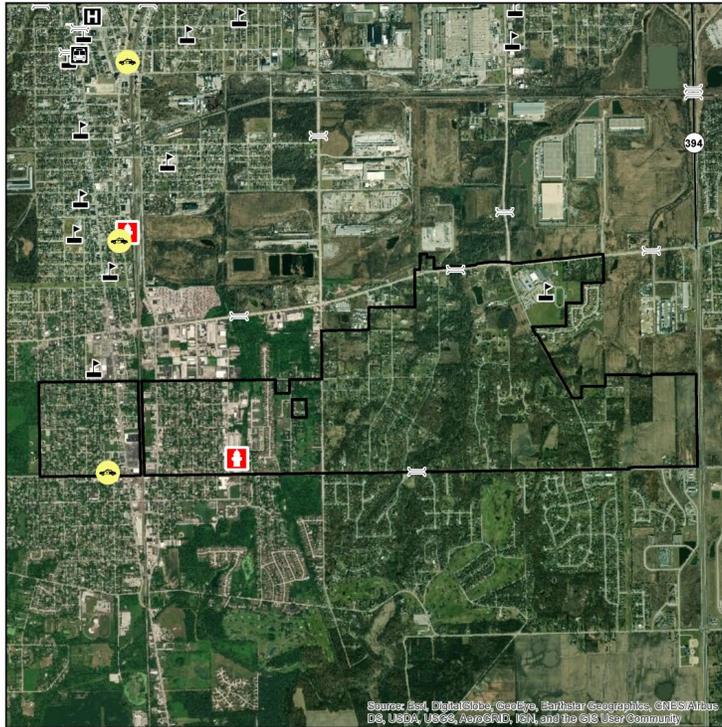
500-Year	868	267	\$154,590,449	\$153,585,979	\$308,176,428	8.31%
Tornado						
100-Year	—	—	\$40,810,370	\$20,405,185	\$61,215,555	1.65%
500-Year	—	—	\$1,392,324,764	\$1,355,919,885	\$2,748,244,649	74.09%

ESTIMATED PROPERTY DAMAGE VALUES IN STEGER

	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	\$9,858,822	\$2,828,763	\$12,687,585	0.34%
Flood				
10-Year	\$353,000	\$505,947	\$858,947	0.02%
100-Year	\$1,880,050	\$3,075,806	\$4,955,856	0.13%
500-Year	\$1,880,050	\$3,075,806	\$4,955,856	0.13%

Tornado				
100-Year	\$4,081,037	\$2,040,519	\$6,121,556	0.17%
500-Year	\$203,279,415	\$197,964,303	\$401,243,719	10.82%

Hazard Mapping



VILLAGE OF STEGER

CRITICAL INFRASTRUCTURE

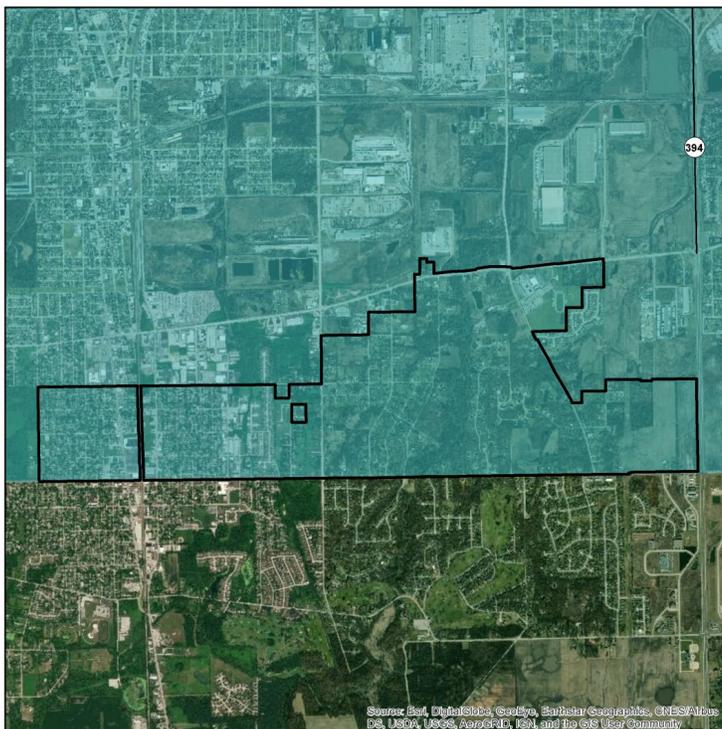
- Oil Facilities
- Transit Centers
- Military Facilities
- Police Stations
- Fire Stations
- Hazardous Waste
- Airports
- Hospitals
- Highway Bridges
- Warming Centers
- Cooling Centers
- Schools
- Railroad Stations

Base Map Data Sources:
Cook County, ESRI



0 0.125 0.25 0.5 0.75 1 Miles

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



VILLAGE OF STEGER

PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

- Mercalli Scale, Potential Shaking**
- II-III Weak

Data provided by the USGS Earthquake Hazards Program and Cook County

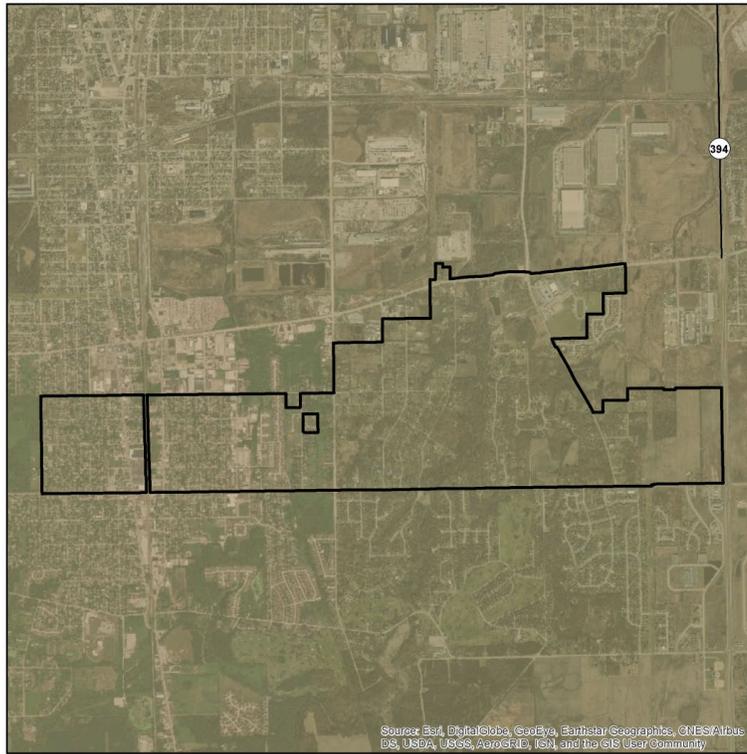
Probabilistic seismic-hazard maps were prepared for the conterminous United States for 2014 portraying peak horizontal acceleration and horizontal spectral response acceleration for 0.2- and 1.0-second periods with probabilities of exceedance of 10 percent in 50 years and 2 percent in 50 years. All of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

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0 0.125 0.25 0.5 0.75 1 Miles

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



VILLAGE OF STEGER

NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL CLASSIFICATION

TYPE

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

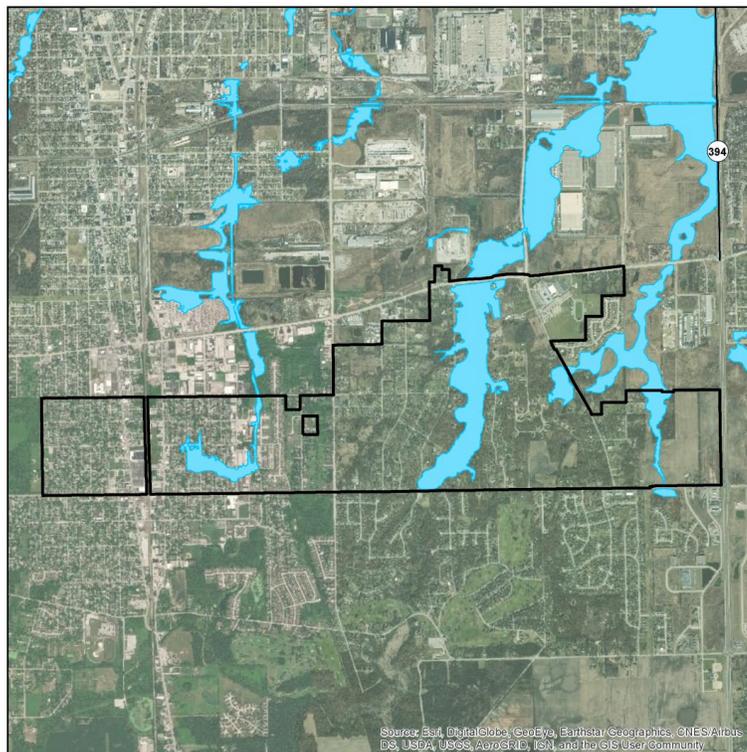
Data provided by the Illinois State Geological Survey and Cook County

The Central United States Earthquake Consortium (CUSEC) State Geologists produced a regional Soil Site Class map (NEHRP Soil Profile Type Map), a Liquefaction Susceptibility Map and a Soil Response Map for the 8 states to be used in the FEMA New Madrid Catastrophic Planning Initiative Phase II work. The USGS Geologic Investigation Series I-2789 Map of Surficial Deposits and Materials in the Eastern and Central United State (East of 102 degrees West Longitude) by David S. Fullerton, Charles A. Bush and Jean N. Pennell (2002) 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.

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VILLAGE OF STEGER

COOK COUNTY MWRDGC 100-YEAR INUNDATION AREA

- 100-year Inundation Area

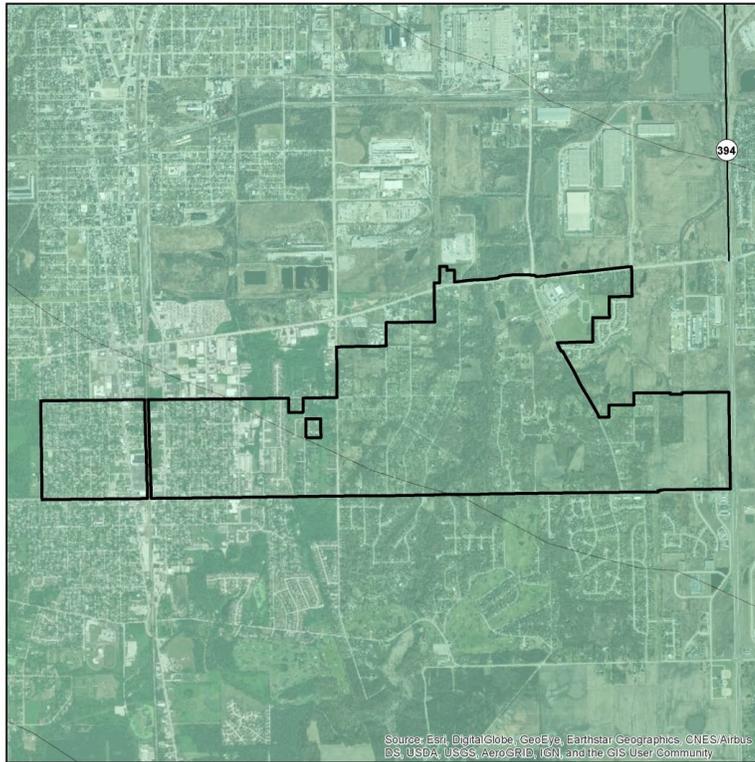
MWRDGC Data provided by Metropolitan Water Reclamation District of Greater Chicago and Cook County.

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

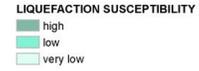


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



VILLAGE OF STEGER

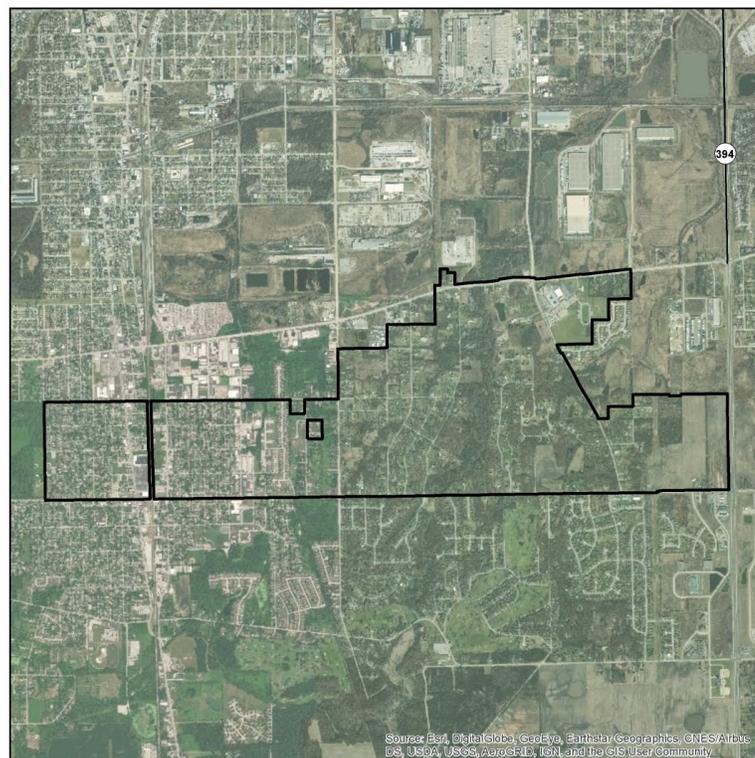
LIQUEFACTION SUSCEPTIBILITY



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

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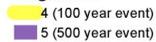
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100- AND 500- YEAR TORNADO EVENTS

Magnitude



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

