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

Western Springs Annex

FINAL

July 2019

Prepared for:



Cook County
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Hazard Mitigation Point of Contact

Primary Point of Contact	Alternate Point of Contact
Patrick J. Kenny, Fire Chief	Matt Supert, Director of Municipal Services
4353 Wolf Rd	740 Hillgrove
Western Springs, IL 60558	Western Springs, IL 60558
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Jurisdiction Profile

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

- Date of Incorporation: 1886
- Current Population: 13,404 based on the 2018 US Census population estimate.
- Population Growth: The Village of Western Springs experienced a 4.9% population increase between 2000 and 2010. As of the 2010 census, the Village had a total population of 12,975. In 2017 the population was 13,479.
- Location and Description: Western Springs, a suburb located along the Chicago, Burlington & Quincy Railroad (now the Burlington Northern Santa Fe) between Western Springs and Aurora, encompasses roughly the area among Willow Springs Road (Gilbert Avenue), Ogden Avenue, Interstate 294, and West Plainfield Road. Suburbs adjacent to Western Springs include La Grange Park and Westchester to the north, Indian Head Park to the south, Countryside and McCook to the east, and Hinsdale and Willowbrook to the west. Named for local mineral springs on the southwest side of town, Western Springs originally consisted of flat prairie land with a swamp on its western border. According to the US Census Bureau, Western Springs has a total land area of 2.79 square miles
- **Brief History:** Western Springs was incorporated in 1886 and built services over time, including a fire department (1894), electric plant (1898), telephone services (1899), a park district (1923), and a library (1926). The Village expanded south of 47th Street, annexing the subdivisions of Forest Hills (1927), Springdale (1955), and Ridgewood (1973). On March 21, 2005, the Village of Western Springs annexed the former Timber Trails golf course which is now being developed into a new community of single-family homes and townhomes. The property added 105.9 acres (0.429 square kilometers) to the village.
- **Climate:** The climate of Western Springs and the Chicago area is classified as humid continental, with all four seasons distinctly represented: wet springs; hot and humid summers; pleasant autumns; and cold winters. Annual precipitation is average and reaches its lowest points in the months of January and February, and peaks in the months of May and June. Winter proves quite variable. Seasonal snowfall in the Village has ranged from 9 – 90 inches. The daily average temperature in January at Midway Airport is 24.8 °F (-4.0 °C), and temperatures often stay below freezing for several consecutive days or weeks in January and February. Temperatures drop to or below 0 °F (-18 °C) on 5.5 nights annually at Midway and 8.2 nights at O'Hare. Spring in the Chicago area is perhaps the area's wettest and unpredictable season. Winter-like conditions can persist well into April and even occasionally into May. Thunderstorms are especially prevalent in the springtime as the areas lakeside location makes it a center of conflicts between large volumes of warmer and colder air, triggering many kinds of severe weather. Temperatures vary tremendously in the springtime; March is the month with the greatest span between the record highs and lows. On a typical summer day, humidity is usually moderately high and temperatures ordinarily reach anywhere between 78 and 92 °F (26 and 33 °C). The extreme heat that the Chicago area is capable of experiencing during the height of the summer season can persist into the autumn season. Temperatures have reached 100 °F high and subzero

lows below −18 °C. Fall can bring heavy thunderstorms, many of which are capable of producing flooding. The average first accumulating snow occurs around November 19.

- Governing Body Format: Western Springs operates with a Council-Manager form of government. In Western Springs, the Village President and the Board of Trustees make policy decisions for the Village. Whereas the Village Manager and his/her staff see that those policies are implemented into the day-to-day activities of the Village. The Village President and Board are elected in April of odd-numbered years on four-year, staggered terms. The Village of Western Springs has officially employed a full-time Village Manager since the position was created by ordinance in 1948. The Village Manager is appointed by the President and Board of Trustees. The Manager works under their direction and serves as the chief administrative officer of the Village, providing public availability as well as administrative and financial management. The Manager is responsible for the direct and indirect supervision of all Village personnel. This body of Government will assume the responsibility for the adoption and implementation of this plan. Aside from the Village Manager and staff, the Village President and Board of Trustees are also assisted by the Village's boards and commissions. Boards and commissions are established to give a special review to specific types of issues (e.g. economic development, infrastructure, and appearance) and provide the Village Board with a recommended course of action.
- Development Trends: The development of Western Springs has primarily been residential
 development however the Village's downtown area is a mix of retail, commercial, service and
 institutional uses. Downtown is the core of the community and serves as a formal and informal
 gathering place. The Village has a Comprehensive Plan for future development which addresses
 commercial development in the downtown area.

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 & F	Requirements				
Building Code	Yes	No	No	Yes	BOCA International Code 1999. 11/26/2001
Zonings	Yes	No	No	No	Western Springs Municipal Code 10-5-1. 10/12/2009
Subdivisions	Yes	No	No	No	Western Springs Municipal Code 10-10-1. 12/14/1992
Stormwater Management	Yes	No	Yes	Yes	State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA. Western Springs Municipal Code 10-11-1. 8/11/2008
Post Disaster Recovery	No	No	No	No	

Real Estate Disclosure	No	No	Yes	Yes	(765 ILCS 77/) Residential Real Property Disclosure Act
Growth Management	Yes	No	No	No	Western Springs Municipal Code 10-8-1. 12-14- 1992
Site Plan Review	Yes	No	No	No	Western Springs Municipal Code 9-1A-1. 7/1/2004
Public Health and Safety	Yes	No	Yes	No	Cook County Board of Health. Western Springs Municipal Code Title 5. 1997
Environmental Protection	No	No	No	No	
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Village of Western Spring Comprehensive Land use Plan. 2/24/2003.
Is the plan equipped to provide linkage to this mitigation plan?					Yes, Plan includes land use element.
Floodplain or Basin Plan	No	No	No	No	
Stormwater Plan	Yes	No	Yes	No	Regional storm water impacts are managed by MWRD. The Village lies within the Lower DesPlaines River watershed planning area of MWRD's

					comprehensive Stormwater Master Planning Program
Capital Improvement Plan	Yes	No	No	No	
	Wha	t types of capital	facilities does the p	olan address?	Building & Equipment
		How of	ten is the plan revis	sed/updated?	Annually
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	Yes	No	Yes	Yes	The Economic Development Commission is charged with reviewing all economic development related programs and incentives including tax incentives offered through the Cook County 6b program. Western Springs Municipal Code. 6/22/2009
Shoreline Management Plan	No	No	No	No	
Response/Recovery PI	anning				
Comprehensive Emergency Management Plan	Yes	No	Yes	Yes	Village of Western Springs Emergency Operations Plan. 6/2013
Threat and Hazard Identification and Risk Assessment	No	No	Yes	No	Cook County DHSEM Preparing THIRA

Terrorism Plan	Yes	No	Yes	Yes	Village of Western Springs Emergency Operations Plan. 6/2013
Post-Disaster Recovery Plan	Yes	No	No	No	Village of Western Springs Emergency Operations Plan. 6/2013
Continuity of Operations Plan	Yes	No	No	No	Village of Western Springs Emergency Operations Plan 6/2013
Public Health Plans	yes	No	Yes	Yes	Cook County DPH Village of Western Springs Emergency Operations Plan. 6/2013

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	No		
User Fees for Water, Sewer, Gas or Electric Service	Yes (Water, Sewer)		
Incur Debt through General Obligation Bonds	Yes (Referendum)		
Incur Debt through Special Tax Bonds	No		
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
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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	Community Development/Village Engineer		
Engineers or professionals trained in building or infrastructure construction practices	Yes	Community Development/Village Engineer		
Planners or engineers with an understanding of natural hazards	Yes	Community Development/Village Engineer		
Staff with training in benefit/cost analysis	Yes	Finance Department/Director		
Surveyors	Yes	Community Development		
Personnel skilled or trained in GIS applications	Yes	Cook County GIS Consortium		
Scientist familiar with natural hazards in local area	No			
Emergency manager	Yes	Emergency Management/Director		
Grant writers	Yes	Fire & EMS/Municipal Services		

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE				
What department is responsible for floodplain management in your jurisdiction?	Community Development			
Who is your jurisdiction's floodplain administrator? (department/position)	Community Development/ Village Engineer			
Are there any certified floodplain managers on staff in your jurisdiction?	Yes			
What is the date of adoption of your flood damage prevention ordinance?	8/11/2008			
When was the most recent Community Assistance Visit or Community Assistance Contact?	9/06/2000			
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No			
Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)	Yes			

Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program?	No; Undecided

TABLE: COMMUNITY CLASSIFICATIONS					
Participating? Classification Date Classified					
Community Rating System	No	N/A	N/A		
Building Code Effectiveness Grading Schedule	Yes	10	12/20/2013		
Public Protection (ISO)	Yes	3	3/1/2013		
StormReady	Yes	Gold (countywide)	2014		
Tree City USA	Yes	29 years	4/2013		

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	of Event FEMA Disaster Number (if applicable)		Preliminary Damage Assessment	
Flash Flood	-	5/11/2014	-	
Severe Winter	-	12/2013 - 3/2014	Snow Removal, Emergency Measures and Water Main Repair	
Flood Event	-	11/17/2013	-	
Flood Event	-	4/18/2013	-	
Power Outage	-	11/27/2012	-	
Severe Weather	-	7/24/2012	-	
Severe Weather	-	7/11/2011	-	
Severe Weather	-	6/21/2011	Emergency Measures	
Severe Winter	DR-1960 IL	2/1/2011 - 2/3/2011	\$45,000 in Snow Removal and Emergency Measures	
Severe Weather/Flood	DR-1935	7/24/2010	\$9,500 in Emergency Measures and Drain Cleaning	
Severe Weather/Flood	-	6/23/2010	-	
Severe Weather	-	6/18/2010	-	
Severe Weather	-	6/19/2009	-	
Severe Weather	-	6/15/2008	-	

Severe Weather/Flood	-	10/2/2006	-
Severe Weather	-	5/10/2003	-

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: The southwest part of the Village - specifically Ridgewood and Forest Hills residents - is vulnerable to flooding. In 2010, very heavy rain fell across much of north central Cook County producing widespread flooding and flash flooding during the early morning hours of July 24th. Hundreds of streets and thousands of basements were flooded. Numerous homes were surrounded by flood waters with water damage on the first floor. Several hundred vehicles were submerged or floating in flood waters, many were a total loss. Areas that suffered some of the most widespread flooding and extensive damage included Western Springs.

High Winds: Previously, the Village has experienced loss of power due to high winds, exposing key Village operations (that do not have 24/7 generator power) to impacts. In 2013, winds were estimated to near 70 mph caused extensive tree damage in the communities of Western Springs, La Grange, and Riverside. Extensive tree damage was reported along the railroad. A six-inch diameter tree was blown down at 55th Street and La Grange Road. A six-inch diameter tree limb was blown down on the 2300 block of 1st Avenue. Multiple lanes were blocked.

Snow: The Village has experienced the impacts of snow at the major route to two hospitals. The heavy snow delays emergency vehicles to calls and ambulances to hospitals.

Blizzards: The Village's elderly population would likely be homebound in the event of a blizzard.

Extreme Cold: Similar to the impacts of high winds, previously, the Village has experienced loss of power due to extreme cold, exposing key Village operations (that do not have 24/7 generator power). In 2008, very cold air spread across northern Illinois starting on December 21st and continuing through December 25th. Low temperatures dropped to 5 below to 10 below zero on the 21st and 22nd, and were in the low single digits on the 23rd, 24th and 25th. One person died due to cold exposure in Western Springs.

Ice Storms: See High Winds narrative.

Tornado: Small-tightly built community so tornado would have huge impact on life safety as well as business interruption.

Earthquake: The tightly built nature of the community could yield extensive damage if an earthquake happens.

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	54		
3	Tornado	45		
4	Earthquake	32		
5	Flood	18		
6	Drought	6		
7	Dam	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 W2.1	L—Tornado an	d Severe Wea	ather Siren			
Ongoing	Tornado, Severe Weather	5, 6	Emergency Management	\$10,000, Low	Operating Budget and Grant Fun	Annual, Short-term
Action W2.2	2—Public Educ	ation				
Completed	Severe Weather hazards	2, 6	Emergency Management	Low	Operating Budget	Completed
Action W2.3	—Emergency	Power				
Ongoing	All	1, 2, 5	Fire Department	\$100,000, High	Grant Funding	Long-term
Action W2.4	Action W2.4—Snow Removal Equipment Enhancement					
Ongoing	Winter Weather	1, 3	Public Works	\$10,000, Low	Operating Budget	Annual, Long-term

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					and Grant Funding	
Action W2.	Action W2.5—Fire and Building Code					
Ongoing	All	3, 4, 10	Community Development and Fire Department	\$3,000, Low	Operating Budget	Short-term
Action W2.	6—Emergency	Notification				
Ongoing	All	5, 6	Law Enforcement	\$2,000, Low	Operating Budget	Annual, Short-term
Action W2.	7 —Village Wat	er Managem	ent Plans			
Ongoing	Flood	3, 4, 12, 13	TBD	Medium	TBD	TBD
Action W2.8	8 —Village Eme	ergency Opera	ations Plans			
Ongoing	All	1, 4	TBD	High	Grants	TBD
Action W2.	9 —Sewer Mair	ntenance and	Storm Preparat	tions		
Ongoing	Flood, Severe Weather	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13	TBD	Low	TBD	TBD
Action W2.	10 —Provide er	mergency gen	erators for the	Water Plant a	nd Headqua	rters Fire Station
New	Earthquake, Flood, High Wind, Snow, Blizzard, Extreme Cold, Ice Storms, Tornado, Widespread Power Outage	2	Municipal Services	\$1,500,000; High	Grants	2023
Action W2.	Action W2.11—Construct Old Town South Combined Sewer Separation					
New	Flood	2, 9	MWRD	\$1,000,000	MWRD	Unknown
(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	Yes	High
2	2	High	Low	Yes	Yes	Yes	High
3	3	High	HIgh	Yes	Yes	No	High
4	2	Medium	Medium	Yes	No	Yes	Medium
5	3	High	Low	Yes	No	Yes	High
6	2	High	Low	Yes	No	Yes	High
7	4	High	Medium	Yes	No	No	Medium
8	2	High	High	Yes	Yes	No	Medium
9	13	Medium	Low	Yes	No	Yes	High
10	1	High	High	Yes	Yes	Unknown	High
11	2	Medium	High	No	Yes	Unknown	Low

⁽a) See Chapter 1 for explanation of priorities.

New Mitigation Actions

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

Mitigation Action	Provide emergency generators for the Water Plant and Headquarters Fire Station
Year Initiated	2019
Applicable Jurisdiction	Village of Western Springs
Lead Agency/Organization	Municipal Services
Supporting Agencies/Organizations	Fire Department
Applicable Goal	 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.
Applicable Objective	Increase the resilience of (or protect and maintain) infrastructure and critical facilities.
Potential Funding Source	Grants
Estimated Cost	\$1,500,000
Benefits (loss avoided)	Both the Water Plant and Fire Department supply key public safety services. With the weather concerns in our area that lead to flooding, high winds, storms, blizzards and ice storms power outages are not unusual. As now a prolonged power outage
Projected Completion Date	2023
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 Both facilities will require an engineering study to determine power needs and whether or not, given the physical proximity of the two buildings if 1 generator might suffice. These generators would be designed to handle all the functions of both facilities for a prolonged outage period too be determined. Grants have been applied for in the past without success.

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

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

Mitigation Action	Construct Old Town South Combined Sewer Separation
Year Initiated	2019
Applicable Jurisdiction	Village of Western Springs
Lead Agency/Organization	MWRD
Supporting Agencies/Organizations	Village of Western Springs
Applicable Goal	 Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards.
Applicable Objective	 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.
Potential Funding Source	MWRD
Estimated Cost	\$1,000,000; MWRD Contribution: TBD
Benefits (loss avoided)	
Projected Completion Date	TBD
Priority and Level of Importance (Low, Medium, High)	Low
Benefit Analysis (Low, Medium, High)	Medium
Cost Analysis (Low, Medium, High)	High
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description				
Plan and Project Description:	ID: Western Springs Contract: 18-IGA-32 Watershed: Lower Des Plaines Location: Western Springs, IL Construction of new storm sewers and outfall to Flagg Creek			

	Mitigation Action and Project Maintenance			
Year	Status	Comments		
2019	New	Drafting intergovernmental agreement.		
2020				
2021				
2022				

2023	

	Mitigated Hazards	
	All Hazards	
	Dam/Levee Failure	
	Drought	
	Earthquake	
Х	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.

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-2.1	Tornado and Severe Weather Siren	
Status Description: Yes	Siren maintenance continues and will remain a priority. Two tornado sirens were replaced in 2017.	
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

TABLE: ACTION PLAN MATRIX			
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)	
# W-2.3 Emergency Power			
Status Description: No	Provide back up power for the Headquarters Fire Station which has limited emergency power during outages.		
C = Pr	Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-2.4	Snow Removal Equipment Enhancement	
Status Description: No	Provide a snow removal plan with includes acquisition of additional equipment to relocate snow piles from the business district.	х
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-2.5	Fire and Building Code	
Status Description: No	The Fire Code has been updated. The update of the building codes in still in progress	
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

	TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)	
# W-2.6 Emergency Notification			
Status Description: Yes	Maintain Code Red Emergency public notification systems for advanced warning and time sensitive notification of all Village residents of emergency measures.		
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken			

Action Item Description		
# W-2.7 Village Water Management Plans		
Status Description: Yes Regular updates and maintenance has been completed and will continue to be completed. A new plan was created for Ridgewood (subdivision) but has not been tested yet.		
Completion status legend: N = New O = Action Ongoing toward Completion		
F	Village Water Management Plans Regular updates and maintenance has been completed and will continue to be completed. A new plan was created for Ridgewood (subdivision) but has not been tested yet. Completion status legend:	

TABLE: ACTION PLAN MATRIX			
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)	
# W-2.8	Village Emergency Operations Plans		
Status Description: Yes	All Village Emergency Plans have been reviewed and updated but will be continually updated.		
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken			

TABLE: ACTION PLAN MATRIX			
Action Number Action Taken Y/N	Action Item Description		
# W-2.9	Sewer Maintenance and Storm Preparations		
Status Description: Yes	Clear storm drains and culverts on a regular basis and prior to predicted events to help control flood waters.		
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.

TABLE: ACTION PLAN MATRIX			
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)	
# W-2.2 Public Education			
Status Description: Yes	A video was created to educate the public on sewer maintenance and care. This was shared through social media and the Village Website.		
C = P	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

WESTERN SPRINGS EXISTING CONDITIONS		
2010 Population	12,975	
Total Assessed Value of Structures and Contents,	\$3,057,615,985	
Area in 100-Year Floodplain	51.19 acres	
Area in 500-Year Floodplain	118.82 acres	
Number of Critical Facilities	30	

HAZARD EXPOSURE IN WESTERN SPRINGS							
	Number Exposed		Value Exposed to Hazard			% of Total	
	Population	Buildings	Structure	Contents	Total	Assessed Value Exposed	
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	\$2,228,675	\$1,114,337	\$3,343,012	0.11%	

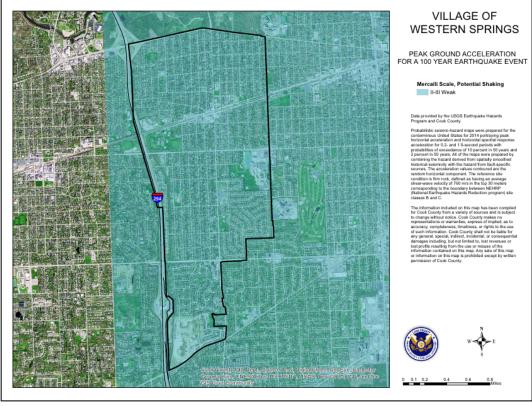
500-Year	143	44	\$17,343,317,	\$,	\$26,014,975	0.85%
Tornado						
100-Year	_	_	\$449,727,207	\$224,863,604	\$674,590,811	22.06%
500-Year	_	_	\$897,443,691	\$571,783,000	\$1,469,226,691	48.05%

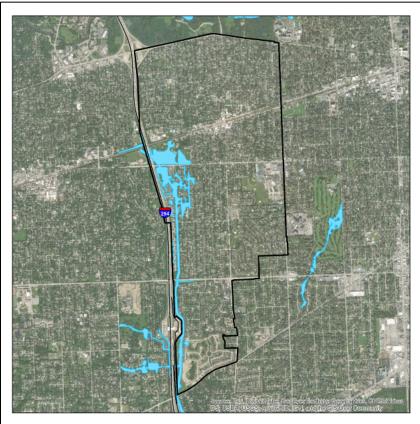
ESTIMATED PROPERTY DAMAGE VALUES IN WESTERN SPRINGS							
	Estim	% of Total Assessed					
	Building	Contents	Total	Value Damaged			
Dam Failure							
Buffalo Creek	\$0	\$0	\$0	0.00%			
U. Salt Cr. #2	\$0	\$0	\$0	0.00%			
Touhy	\$0	\$0	\$0	0.00%			
U. Salt Cr. #3	\$0	\$0	\$0	0.00%			
U. Salt Cr. #4	\$0	\$0	\$0	0.00%			
Earthquake							
1909 Historical Event	\$29,851,527	\$8,014,978	\$37,866,505	1.24%			
Flood							
10-Year	\$0	\$0	\$0	0.00%			
100-Year	\$0	\$0	\$0	0.00%			
500-Year	\$1,119,121	\$481,959	\$1,601,081	.0.05%			

Tornado						
100-Year	\$44,972,721	\$22,486,360	\$67,459,081	2.21%		
500-Year	\$131,026,779	\$83,480,318	\$214,507,097	7.02%		

Hazard Mapping







VILLAGE OF WESTERN SPRINGS

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 of implied, as to accuracy, completeness, timeliness, or rights to the use of such information. Cook County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of Cook County.

DISCI AIMER: The Cook County MIRES 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.









VILLAGE OF WESTERN SPRINGS

LIQUEFACTION SUSCEPTIBILITY

LIQUEFACTION SUSCEPTIBILITY

high

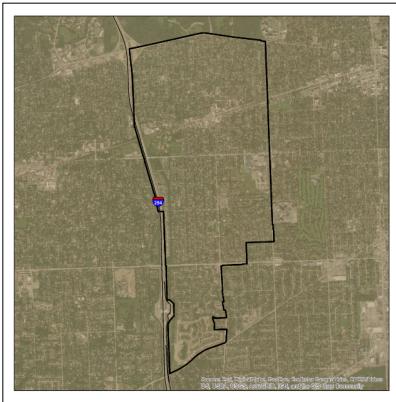
very low

usan provided by the likrois State Geological Survey and Cook County.

The Carried Minist States Earthquies Consortium (CUSEC) State Cookingsts produced a regional Soil State Class may (NEHRY Bot Profile Type May). a Usual State Class may (NEHRY Bot Profile Type May). a Usual Soil Response May Consortium (Network State Class Soil Response May Consortium (Network State Class Soil Response Modern (Network State May version of the Soil State Class and Lugaristica Modern (Network State May version of the Soil State Class and Lugaristica Modern (Network State May version of the Soil State Class and Lugaristica Modern (Network State May version (Networ







VILLAGE OF WESTERN SPRINGS

NATIONAL FARTHOUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL CLASSIFICATION

C - Very Dense Soil, Soft Rock

D - Stiff Soil

F- Site Specific Evaluation

Data provided by the Binois State Geological Sturvey and Cook Courty.

The Cernal United States Earthquake Consortium.

The Cernal United States Earthquake Consortium.

The Cernal United States Earthquake Consortium.

CUSEC) States Geological produced a regional Soli State Class map (ME-HPP Sol Profits Proje Mop). In Class map (ME-HPP Sol Profits Proje Mop).

Explained States States States States States and Consortium of Consortium









VILLAGE OF WESTERN SPRINGS

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.



