

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

La Grange 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
Terrence Vavra, Fire Chief 300 W. Burlington Avenue La Grange, IL 60525 Telephone: 708-579-2300 x 650 Email Address: tvavra@villageoflagrange.com	Andri Peterson, Village Manager 53 South La Grange Road La Grange, IL 60525 Telephone: 708-579-2300 x 550 Email Address: apeterson@villageoflagrange.com

Jurisdiction Profile

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

- **Date of Incorporation:** 1897
- **Current Population:** 15,440 as of 2018 US Census population estimates.
- **Population Growth:** Based on the data tracked by the Chicago Metropolitan Agency for Planning, the population will remain relatively flat and has been consistent over the past 8 years.
- **Location and Description:** The Village La Grange is located 14 miles west of Chicago in Cook County and covers approximately 2.5 square miles. Four State highways cross our boundaries on two major routes: Route 12/20/45 and Route 34. The Village is bisected by two major railroads, Burlington Northern Santa Fe railroad and the Indiana Harbor Belt railroad. The Burlington Northern Santa Fe runs a high volume of freight, Amtrak and Metra commuter trains to Chicago from the Western suburbs transporting 65,000 commuters daily. The Indiana Harbor Belt Railroad handles strictly freight with an average 2,905 freight cars per day. Within the Village boundaries, we have a level II trauma center hospital, two nursing homes and a regional high school. The Village is bordered by La Grange Park to the north, Brookfield and McCook to the east, Countryside and unincorporated La Grange Highlands to the south and Western Springs to the west.
- **Brief History:** Rich in history, the Village of La Grange offers the modern conveniences of an urban community while preserving much of the authenticity of character originally envisioned by its founding father, F. D. Cossitt, back in 1879. La Grange retains a strong sense of community, with historic homes, traditional downtown business district, schools, parks, and public transportation, all of which contribute to the community's character, quality of life and economic vibrancy.
- **Climate:** Typical weather for the Great Lakes region with four distinct seasons, spring, summer, fall and winter. 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. A wide range of temperatures from below zero at times to higher temperatures with high heat indexes in the summer.
- **Governing Body Format:** The President and Village Board of Trustees constitute the legislative body of the Village with the Village President serving as Chief Executive Officer. The President and Village Board oversee the following areas: Adoption of ordinances and resolutions, Adoption of an annual Budget, Approval of payment for expenses and liabilities, Determination of policy under which the Village operates, and appointment of personnel. The Village consists of the following Departments: Administration, Finance, Public Works, Community Development, Fire and Police. The Fire Chief who is the assigned as the Emergency Management Coordinator will oversee the adoption and implementation of the plan. The Village Board will adopt the plan by a resolution.
- **Development Trends:** Over the next twenty years, La Grange will remain a community with diverse housing, strong community services, and a reputation for civic involvement and

volunteerism. Downtown La Grange remains strong, and revitalization of the West End will unify the entire BNSF Railroad Corridor. We will have experienced redevelopment, revitalization and change community-wide. Much of our housing stock will have been upgraded, but the Village will sustain a mix of housing to meet various lifestyle needs. They have invested in and safeguarded our quality education, recreation, open space, and municipal service systems – all of which are important to our family-oriented community. There is a Community Development Department responsible for economic development information and programs throughout the Village of La Grange and is available to assist with locating business in La Grange. As a progressive community, they offer many opportunities for retailers, services, industries, and offices. In 2017 a 254 unit luxury apartment complex was completed and some additional residential properties are being built.

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	BOCA 12/97, SBOC 1996
Zoning	Yes	No	No	Yes	(65 ILCS 5/) <i>Illinois Municipal Code</i> . 1/91
Subdivisions	Yes	No	Yes	No	Subdivision Code Chapter 52 1969 and as amended
Stormwater Management	Yes	No	Yes	Yes	State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA. Local Ordinances, IEPA MS4 permit, MWRD WMO
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	Zoning Code Article 14
Public Health and Safety	Yes	No	Yes	Yes	Cook County Board of Health. In addition applicable local ordinances.
Environmental Protection	Yes	No	Yes	Yes	Local, state and federal requirements.
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Ordinance 0-05-07. May 9, 2005
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>					Yes - Land Use
Floodplain or Basin Plan	Yes	No		No	NFIP Participant
Stormwater Plan	Yes	No	Yes	No	Local Ordinances, IEPA MS4 permit, MWRD sewer regulations.
Capital Improvement Plan	Yes	No	No	No	Most recent 05/01/2019
<i>What types of capital facilities does the plan address?</i>					All Village assets including roadways, water mains, sewer mains, street lighting, buildings, trees, drainage, and pedestrian safety, and other capital improvement projects.
<i>How often is the plan revised/updated?</i>					Annually
Habitat Conservation Plan	No	No		No	
Economic Development Plan	Yes	No	Yes	Yes	Village Ord. 0-05-07 May 9, 2005
Shoreline Management Plan	No	No	No	No	
Response/Recovery Planning					

Comprehensive Emergency Management Plan	Yes	No	Yes	Yes	Village of La Grange, May 2005
Threat and Hazard Identification and Risk Assessment	Yes	No	Yes	No	Village of La Grange October 25, 1993
Terrorism Plan	No	No	Yes	Yes	Cook County DHSEM
Post-Disaster Recovery Plan	Yes	No	Yes	Yes	Village of La Grange, October 25, 1999
Continuity of Operations Plan	No	No	Yes	No	Village of La Grange, October 25, 1999
Public Health Plans	No	No	Yes	No	Cook County DPH

TABLE: FISCAL CAPABILITY	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes (Water & Sewer)
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes
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	
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works/ Director of Public Works/ Illinois Licensed Professional Engineer
Planners or engineers with an understanding of natural hazards	Yes	Public Works/ Director of Public Works
Staff with training in benefit/cost analysis	Yes	Public Works/ Director of Public Works
Surveyors	Yes	Consultants are hired on as needed basis
Personnel skilled or trained in GIS applications	Yes	GIS Consortium
Scientist familiar with natural hazards in local area	Yes	Public Works/ Director of Public Works
Emergency manager	Yes	Fire Chief
Grant writers	Yes	Department Staff

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Public Works/ Community Development
Who is your jurisdiction’s floodplain administrator? (department/position)	Community Development/ Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	March 12, 2001
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Yes, general NFIP training

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
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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	3	07/2013
StormReady	Yes	Gold (Countywide)	2014
Tree City USA	Yes	N/A	Tree City USA for 36 years

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 # (if applicable)	Date	Preliminary Damage Assessment
Severe Weather/Cold	-	1/29/2019 - 1/31/2019	-
Severe Storms/Flooding	-	10/14/2017 - 10/15/2017	-
Severe Storms/Flooding	-	8/22/2014	-
Severe Storms/Flooding	-	6/30/2014	-
Severe Storms/Flooding	-	6/24/2014	-
Severe Snow Event	-	1/4/2014 - 1/7/2014	\$38,541
Severe Storms/Winds	-	4/2013	-
Severe Storms/Wind	-	7/21/2001	-
Severe Storms/Wind	-	7/11/2011	-
Blizzard/Snow Storm	DR-1960	1/31/2011	\$72,000
Severe Storms/Flooding	DR-1935	7/2010	-
Severe Storms/Flooding	DR-1800	9/2008	-

Severe Storms/Flooding	DR-1729	8/2007	-
Snow Storm	EM-3134	1/1/1999	-
Severe Storms/Flooding	DR-1129	7/7/1996	-
Severe Storms	DR-997	4/13/1993	-
Blizzard/Snow Storm	EM-3068	1/1979	-

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.

Flooding: In 2006, flash/urban flooding was caused by very heavy rain fell across parts of south central Cook County during the evening of August 10th. 1.80 inches of rain was measured in 75 minutes in La Grange from 630 pm to 745 pm. Eight to fourteen inches of standing water was reported on La Grange Road between Plainfield Road and 55th Street in La Grange.

Severe Winter Weather: In 2010, a winter storm moved across northern Illinois on January 7th. Snow began falling late in the evening on January 6th and continued into the morning hours of January 8th. Storm total snowfall amounts included 7.6 inches in La Grange.

Drought: Drinkable water supply is of concern to the community and drought would limit the supply.

Dam/Levee Failure: Plainfield Road from Willow Springs Road to East Avenue is particularly susceptible to overtopping and failure.

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 Storms/Wind	54
2	Severe Winter Storms	54
3	Tornado	54
4	Flood	24
5	Earthquake	12
6	Drought	6
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 #L1.1 —Maintain Warning Siren and Code Red Notification for early warning to residents						
Ongoing	All	1, 2, 5	Fire	\$700; Low	General Fund	Annual
Action #L1.2 —Continue to support mutual aid assistance from local jurisdictions to ensure response readiness during all hazards and disasters.						
Ongoing	All Hazards	1, 2, 8, 13	Fire, Police, Public Works	Low	General Fund	Ongoing
Action #L1.3 —Continue to research and amend building and fire codes that improve all around public safety.						
Ongoing	All Hazards	1, 2, 4, 10	Fire, Community Development	\$100,000; High	Grants/General Fund	Short-term
Action #L1.4 —Ensure new developments large and small are designed to reduce or eliminate flooding, as required by Village code, including providing on-site water retention capabilities.						

Ongoing	Floods	1, 2, 3, 4, 9, 10	Community Development/ Public Works	Low	Plan Review Code Adoption	On-going
Action #L1.5 —Continue to expand the Maple Ave. (MARS) sewer west of La Grange Road						
Ongoing	Severe/Flood Weather	1, 2, 9, 11	Public Works	\$10M plus; Very High	Capital Improvements	Long-term MARS Project
Action #L1.6 —Storm Hardening of public utilities						
Ongoing	Severe Weather	1, 2, 3, 8	Fire, Emergency Management Agency (EMA) Utilities	High	Private Funding	Long-term
Action #L1.7 —Public Works Facility Replacement due to old failing structure that houses all the Public Works equipment.						
Ongoing	All Hazards	1, 2	Public Works	High	Capital Improvements	Short-term
Action #L1.8 —Continue to support the implementation of the Hazard Plan and updating						
Ongoing	All	All	Fire, EMA	Low	General Fund	Short-term
Action #L1.9 —Consider participation in the Community Rating System						
Removed	Flood	3, 4, 5, 6, 7, 9, 10, 11, 13	Community Development	Low	General Fund	Removed
Action #L1.10 —The Fire Department/EMA to conduct a mass care and shelter drill, which will involve the Village, Mutual Aid Box Alarm System (MABAS), County, MABAS Readiness Center volunteers and non-government agencies.						
Ongoing	All Hazards	All	Fire, Police, Public Works	\$20,000; Medium	Grant Funding	Bi-Annual, short-term
Action #L1.11 —Increase efforts on water conservation						
Ongoing	Drought	1, 2, 8, 10	Public Works, Community Development	Low	General Fund	1-3 years
Action #L1.12 —Maple Ave relief sewer project, Preliminary study complete, Combined Sewer						
Removed	Severe Storms/ Floods	1, 2, 9, 11	Public Works	High	General Fund/Grants	Removed

Action #L1.13 —Reduce flooding and improve drainage in the area south of 47th Street by installing relief storm sewers.						
Ongoing	Severe Weather, Floods	1, 2, 9, 11	Public Works	High	General Fund/Grants	Long-term
Action #L1.14 —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.						
Removed	All	7, 13	Public Works/Community Development	High	FEMA Hazard Mitigation Grants	Removed
Action #L1.15 —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	Public Works/Community Development	Low	General Fund	Short-term and ongoing
Action #L1.16 —Integrate the Hazard Mitigation Plan into other plans, programs, or resources that dictate land use or redevelopment.						
Ongoing	All	3, 4, 6, 10, 13	Community Development	Low	General Fund	Short-term
Action #L1.17 —Continue to support the county-wide actions identified in this plan.						
Ongoing	All	All	La Grange	Low	General Fund	Short- and long-term
Action #L1.18 —South of 47th Street Drainage Basin, install a relief storm sewer to improve drainage in depression area that flood during large rain events.						
Removed						
Action #L1.19 —Community Development will look into developing new plans and/or update existing plans as this has not been done since the adoption of the Hazard Mitigation Plan.						
Removed						
Action #L1.20 —Extend the completed phase of Maple Avenue Relief Sewer (MARS) west of La Grange Road.						
Removed						

Action #L1.21 —Reduce flooding and improve drainage along Plainfield Road from Willow Springs Road to East Avenue.						
New	Dam/levee failure, Flooding	2, 3, 9, 12, 13	CCDTH	High	CCDTH, MWRD, Grants	TBD
Action #L1.22 —Reduce flooding and improve drainage within La Grange Central Business District.						
New	Flooding	2, 3, 9, 13	La Grange	\$500,000; Low	La Grange and MWRD green infrastructure partnership program	2019
Action #L1.23 —Install Plainfield Road flood control.						
New	Flooding	2, 3, 9, 13	MWRD	High	MWRD	High
Action #L1.24 —La Grange Parking Lots Green Infrastructure Retrofit.						
New	Flooding	7, 13	MWRD	High	MWRD	Medium
(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.						

Action 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	3	High	Low	Yes	Yes	Yes	High
2	4	High	Low	Yes	No	Yes	High
3	4	Medium	High	Yes	Yes	No	Medium
4	6	High	Medium	Yes	Yes	No	Medium
5	4	High	High	Yes	Yes	No	High
6	4	High	Medium	Yes	No	No	High
7	2	High	High	Yes	Yes	No	High

8	All	High	Low	Yes	No	Yes	High	
9	All	High	Low	Yes	No	Yes	Medium	
10	All	High	Medium	Yes	Yes	Yes	High	
11	4	High	Low	Yes	Yes	No	Medium	
12	4	High	High	Yes	Yes	No	High	
13	4	High	High	Yes	Yes	No	High	
14	2	High	High	Yes	Yes	No	Medium	
15	3	Medium	Low	Yes	No	Yes	High	
16	5	Medium	Low	Yes	No	Yes	High	
17	13	Medium	Low	Yes	No	Yes	High	
18	-	-	-	-	-	-	-	
19	-	-	-	-	-	-	-	
20	-	-	-	-	-	-	-	
21	5	High	High	Yes	Yes	Yes	Medium	
22	4	High	Low	Yes	Yes	Yes	High	
23	4	High	High	Yes	Yes	Yes	High	
24	2	Medium	Medium	Yes	Yes	Yes	Medium	

(a) See Chapter 1 for explanation of priorities.

New Mitigation Actions

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

Action L-1.21

Mitigation Action	Reduce flooding and improve drainage along Plainfield Road from Willow Springs Road to East Avenue
Year Initiated	2019
Applicable Jurisdiction	La Grange, MWRD, CCDTH
Lead Agency/Organization	CCDTH
Supporting Agencies/Organizations	La Grange, MWRD
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. • 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.
Applicable Objective	<ul style="list-style-type: none"> • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. • Reduce natural hazard-related risks and vulnerability to potentially isolated populations within the planning area. • Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes.
Potential Funding Source	CCDTH, MWRD, Grants
Estimated Cost	TBD
Benefits (loss avoided)	Reduce street flooding, reduce structure flooding and damage
Projected Completion Date	TBD

Priority and Level of Importance (Low, Medium, High)	Medium 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:	CCDTH 4 Contract: 14-112-5C, Watershed: Lower Des Plaines Location: LaGrange, Countryside, McCook, and Lyons Township. May include construction of a new trunk sewer along portions of Plainfield Road, 55th Street and East Avenue and stormwater improvements to the McCook Ditch, McCook Ditch overflow, and McCook levee.

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

Mitigated Hazards	
	All Hazards
X	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 L-1.22

Mitigation Action	Reduce flooding and improve drainage within La Grange Central Business District
Year Initiated	2019
Applicable Jurisdiction	La Grange, MWRD
Lead Agency/Organization	La Grange
Supporting Agencies/Organizations	MWRD
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. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • 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	La Grange and MWRD green infrastructure partnership program
Estimated Cost	\$500,000
Benefits (loss avoided)	Green infrastructure project designed to reduce flooding and improve capacity of combined sewer system resulting in a reduction in structure

	damage and flood streets during severe rain events
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)	Low—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	The Village and MWRD partnered to reconstruct two surface parking lots in the central business district with permeable pavers. The purpose of the project is to reduce the volume of storm water entering the combined sewer system by redirecting the water through a infiltration system. The project is currently under construction and is anticipated to be completed in 2019.

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

Action L-1.23

Mitigation Action	Install Plainfield Road flood control.
Year Initiated	2019
Applicable Jurisdiction	La Grange, MWRD
Lead Agency/Organization	MWRD
Supporting Agencies/Organizations	LaGrange
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. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • 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	MWRD
Estimated Cost	TBD
Benefits (loss avoided)	TBD
Projected Completion Date	TBD
Priority and Level of Importance (Low, Medium, High)	High

Benefit Analysis (Low, Medium, High)	High
Cost Analysis (Low, Medium, High)	High
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	May include construction of a new trunk sewer along portions of Planfield Road, 55th Street and East Avenue and stormwater improvements to the McCook Ditch, McCook Ditch Overflow, and McCook Levee.

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

Action L-1.24

Mitigation Action	La Grange Parking Lots Green Infrastructure Retrofit.
Year Initiated	2019
Applicable Jurisdiction	La Grange, MWRD
Lead Agency/Organization	MWRD
Supporting Agencies/Organizations	La Grange
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.
Applicable Objective	<ul style="list-style-type: none"> • Retrofit, purchase, or relocate structures in high hazard areas, including those known to be repetitively damaged. • Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes.
Potential Funding Source	La Grange and MWRD green infrastructure partnership program
Estimated Cost	TBD
Benefits (loss avoided)	Green infrastructure project designed to reduce flooding and improve the capacity of combined sewer system resulting in a reduction in structure damage and flood streets during severe rain events
Projected Completion Date	TBD
Priority and Level of Importance (Low, Medium, High)	Medium
Benefit Analysis (Low, Medium, High)	Medium
Cost Analysis (Low, Medium, High)	Medium
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	

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 L-1.1

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.1	Maintain Warning Sirens and Code Red notification for early warning to residents.	
Status Description: Yes	The warning siren is maintained annually. The amount necessary is budgeted annually. Code Red is maintained and is also budgeted for annually. The Public Safety Departments are reviewing options to the Code Red system or alternatives to the system.	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 L-1.2

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.2	Continue to support mutual aid from local jurisdictions to ensure response readiness during all hazards and disasters.	
Status Description: Yes	La Grange along with our neighboring villages of La Grange Park and Western Springs have completed our consolidated dispatch center project. The center handles the dispatching for both the Fire and Police agencies for the three communities. While the center is open and operational, the center continues to evolve and improve the services it offers by implementing Emergency Medical Dispatching. The Public Safety Departments continue to support and participate in MABAS and ILEAS efforts for readiness. Both Police and Fire are actively involved with Active Shooter training with neighboring communities.	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 L-1.3

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.3	Continue to research and amend building and fire codes that improve all around public safety.	
Status Description: Yes	As the village continues to operate in a conservative manner, the objective remains to identify and amend the codes in fiscal year 2020-21 as budgeted.	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 L-1.4

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.4	Ensure new development large and small are designed to reduce or eliminate flooding as required by Village code, including providing on-site water retention capabilities.	
Status Description: Yes	As part of new development the Village requires that storm water management improvements be incorporated into the design. This includes residential, commercial, and industrial, for both small and large properties. Several recent large projects include the Uptown Development, 40 S. Ashland, BEDS, La Grange Country Club, Mason Home Development and Pathway Development. The Village applies both local storm water management regulations and MWRD's WMO.	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 L-1.1

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.5	Continue to expand the Maple Ave (MARS) sewer west of La Grange road.	
Status Description: Yes	The Village completed preliminary plans for the remainder of the project and continues to seek funding for the next stages of the work.	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 L-1.6

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.6	Storm Hardening of Public Utilities	
Status Description: Yes	Common Wealth Edison and NICOR have made significant upgrades to their specific utilities throughout the village. Nicor has replaced more than 50% of its infrastructure over the past four years. Similarly, ComEd has replaced poles and wires based on assessments of outage locations and age of infrastructure. This work continues as the utilities upgrade their facilities in coordination with the Village.	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 L-1.7

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.7	Public Works Facility Replacement due to old failing structure that houses all the Public Works equipment.	
Status Description: Yes	The Village has budgeted for a facilities assessment to determine the cost of replacing the existing facility.	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 L-1.8

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.8	Continue to support the implementation of the Hazard plan and update.	
Status Description: Yes	The Village of La Grange has met every request for updated reports.	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 L-1.10

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.10	The Fire Department/EMA to conduct a mass care and shelter drill which will involve the Village, mutual aid Box Alarm System (MABAS), County MABAS Readiness Center volunteers and non-governmental agencies	
Status Description: Yes	Department has participated in a number of Active Shooter trainings locally with neighboring departments. Attempts continue to be made to schedule a drill as listed in the Action Item Description.	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 L-1.11

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.11	Increase efforts on water conservation	
Status Description: Yes	The Village has reduced non-revenue significantly through repair of water main leaks and leak locating. The Village continues to advocate and provide educational materials on best water conservation practices in an effort to reduce potable water consumption.	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 L-1.13

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.13	Reduce flooding and improve drainage in the area south of 47th Street by installing relief storm sewers.	
Status Description: Yes	In 2015, Village residents approved a \$15 million bond referendum to construct a new storm sewer on 50th Street to address overland flooding in the area south of 47th Street. The Village is partnering with MWRD, Hanson Quarry, IDOT, Village of McCook, and other stakeholders on the construction of a new detention facility and relief sewer that will reduce flooding in depressional areas south of 47th Street. The Village's 50th Street storm will eventually connect into the connecting storm sewer and detention facility. Improvements to the McCook Ditch are also being planned as part of this project. The project may also include drainage improvements in the 47th Street and East Avenue intersection that are being planned by IDOT.	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 L-1.15

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.15	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: Yes	The Village continues to participate in the NFIP.	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 L-1.16

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.16	Integrate the Hazard Mitigation Plan into other plans, programs or resources that dictate land use or redevelopment.	
Status Description:	As part of new development the Village requires that storm water management improvements be incorporated into the design. This includes residential, commercial, and industrial, for both small and large properties. Several recent large projects include the Uptown Development, 40 S. Ashland, BEDS, La Grange Country Club, Mason Home Development, and Pathway Development. Also, the Village continues to require drainage improvements for single family homes when redevelopment occurs as part of local storm water management requirements.	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 L-1.17

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.17	Continue to support the county-wide actions identified in this plan.	
Status Description: Yes	The Village continues to support ongoing projects as we seek funding opportunities to help reduce flooding impacts in the community.	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>		

Completed Mitigation Actions

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

Action L-1.9

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# L-1.9	Consider participation in the Community Rating System	
Status Description: No	The Community Development department suggests that this item be removed as there are only two properties in a mapped floodplain.	R
<p align="center">Completion status legend:</p> <p align="center"> N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken </p>		

Future Needs to Better Understand Risk/Vulnerability

As a result of severe rain events, flooding and the resulting damage to structures continues to be a significant risk to the Village and its residents. The action items identified in this report to address flooding are the result of engineering drainage studies that have been completed and supported by the Village.

In addition to flooding, aging infrastructure is another significant risk to the Village. This includes water mains, sewers, roadways and buildings. Specifically, the Public Works facility is aging and needs to be replaced, as this facility houses the entire public works department. The original garage is over 100 years old. Estimated cost to replace the existing building is 5 million dollars.

Also, the Fire Station apparatus floor is another area of concern and without a funding mechanism it continues to be pushed back. Sections of the apparatus floor have been replaced, however there is more work yet to be completed. This is the only fire station in the Village.

Public Safety has a multitude of natural and manmade situations that can cause severe disruption of essential services. The Public Safety Departments continue to plan and train to address and mitigate those situations. The situations include, but are not limited to: weather events (snow, rain, hot/cold extremes, tornadoes), active shooter, roadway incidents, railway incidents, and building collapse.

Additional Comments

The Village of La Grange is over 140 years old. Aging infrastructure, including aged combined brick sewers, water mains, roadways and buildings need replacement. Due to the economic climate many of the improvement projects have been postponed due to funding limitations.

In order to plan for the future the Village has completed preliminary engineering studies for all drainage basins, which highlight the improvements necessary to address flooding. These projects are identified in the action items contained within this hazard mitigation plan.

HAZUS-MH Risk Assessment Results

LA GRANGE EXISTING CONDITIONS	
2010 Population	15,550
Total Assessed Value of Structures and Contents	\$4,325,016,310
Area in 100-Year Floodplain	0.42 acres
Area in 500-Year Floodplain	0.42 acres
Number of Critical Facilities	45

HAZARD EXPOSURE IN LA GRANGE						
	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	0	0	\$0	\$0	\$0	0.00%

500-Year	0	0	\$0	\$0	\$0	0.0%
Tornado						
100-Year	—	—	\$741,685,568	\$596,649,1250	\$1,338,334,728	30.94%
500-Year	—	—	\$1,391,865,821	\$1,127,761,167	\$2,519,626,989	58.26%

ESTIMATED PROPERTY DAMAGE VALUES IN LA GRANGE				
	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	\$38,576,098	\$11,622,034	\$50,198,132	1.16%
Flood				
10-Year	\$0	\$0	\$0	0.00%
100-Year	\$332,661	\$158,094	\$490,754	0.01%
500-Year	\$0	\$0	\$0	0.00%

Tornado				
100-Year	\$74,168,557	\$59,664,915	\$133,833,472	3.09%
500-Year	\$203,212,410	\$164,653,130	\$367,865,540	8.51%

Hazard Mapping





