Lyons

Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact
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Jurisdiction Profile

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

Date of Incorporation: 1888

Current Population: The 2020 U.S. Census population was 10,816. The 2022 U.S. Census estimate indicated the population was 10,411.

Population Growth: The overall population has decreased .55 percent between 2018 and 2022.

Location and Description: The Village of Lyons is located in Cook County. Three major arterial roads (Harlem Avenue (Rt. 43), 1st Avenue (Rt. 171), and Ogden Avenue (Rt. 34)) run through the Village as well as historic Route 66 (Joliet Avenue). Utilizing these three major arterial roads, businesses can easily access Interstates 55 or 290/88. In addition, the Village is a 10-minute drive from Midway Airport and a 30-minute drive from O'Hare Airport. The Village is also close to rail facilities in the cities of Chicago and Cicero. The village is also located approximately 12 miles southwest of the Chicago loop. The Village of Lyons has a total land area of 2.18 square miles.

Brief History: Incorporated in 1888, Lyons is steeped in earlier historical roots. In 1673 French Explorer Louis Joliet and Jesuit missionary Father Pierre Marquette left Green Bay, Wisconsin, by canoe in search of a western passage to the Pacific. As they traveled into the Spanish controlled area of Louisiana, they realized that the mighty Mississippi River drained into the already well known Gulf of Mexico. With winter approaching, they headed north as quickly as possible. To save time, the Potawatomi Indians who were with them encouraged changing their route to the Illinois River. The short cut led to the Des Plaines River and caused the French travelers to discover "Le Portage." This half-mile-wide area of land connecting the Chicago River and the Des Plaines River, over which they could carry their canoes and supplies, was to become the discovery for which they would both become famous. Later known as the Chicago Portage, this small area became the "Gateway to the West" and was used by thousands of early settlers and traders traveling both east and west. The discovery of "Le Portage" was part of the impetus that led to Chicago becoming a center for the world

trade. Hofmann Tower is one of the most impressive historical sites in the suburban area. This eight-story castle-like concrete structure was built in 1908 by George Hofmann, Jr. The tower was the centerpiece of a large recreational area.

Climate: The climate of the Village of Lyons 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 city 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 °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 city'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 city's 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 degrees 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 Nov 19.

Governing Body Format: The Village of Lyons is governed by a Village President and six members Board of Trustees, all of whom are elected for four-year staggered terms. The Board is the legislative body of the Village government. This body of government will assume the responsibility and adoption for this plan. All administrative work is performed under the direction of the Village Manager, who is appointed by the Village President and Board of Trustees. The village operates 6 departments including: Village Administration, Building and Planning, Police Department, Fire Department, Public Works, and the Parks and Recreation Department.

Development Trends: The Village of Lyons is embarking on an interactive, community-based process to develop a new comprehensive plan. The comprehensive plan will provide a framework to make informed investment decisions, address current community issues, and realize the community's long-term goals. Together, the Village of Lyons, community stakeholders, and the Chicago Metropolitan Agency for Planning (CMAP) will explore opportunities in land-use planning, residential and commercial development, transportation, parks and open space, and numerous other aspects important to the Village's prosperity. Lyons also provides direct fire protection services to Riverside Lawn (unincorporated), as well as direct Fire/EMS services to support extensive Cook County forest preserve areas.

Changes in Community Priorities: There have been no significant changes in priority regarding the hazards that could potentially impact the community or changes in priority regarding resilience.

Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in the *Legal and Regulatory Capability Table* below. The assessment of the jurisdiction's fiscal capabilities is presented in the *Fiscal Capability Table* below. The assessment of the jurisdiction's administrative and technical capabilities is presented in *Administrative and Technical Capability Table* below. Information on the community's National Flood Insurance Program (NFIP) compliance is presented in the *National Flood Insurance Program Compliance Table* below. Classifications under various community mitigation programs are presented in the *Community Classifications Table* below.

TABLE: LEGAL AND REGULATORY CAPABILITY					
	Local Authority	**State or Federal Prohibitions**	**Other Jurisdictional Authority**	**State Mandated**	**Comments**
Codes, 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 Adopted: 2009
Zonings	Yes	No	No	Yes	Title 13 Lyons Zoning Ordinance. Adopted: 2009
Subdivisions	No	No	No	No	
Stormwater Management	Yes	No	Yes	Yes	Title 14-2 Stormwater Detention. Adopted: 2009
Post Disaster Recovery	Yes	No	No	No	2-3-9 Local Code 2009
Real Estate Disclosure	Yes	No	Yes	Yes	12-1-4 Real Estate Inspections 2009
Growth Management	No	No	No	No	Working with CMAP
Site Plan Review	No	No	No	No	
Public Health and Safety	No	No	Yes	Yes	Cook County Board of Health.
Environmental Protection	No	No	No	No	

Planning Documents					
General or Comprehensive Plan	No	No	No	No	
Is the plan equipped to provide integration to this mitigation plan?					NA
Floodplain or Basin Plan	No	No	No	No	
Stormwater Plan	No	No	Yes	No	Regional stormwater impacts are managed by MWRD. The Village lies within the Des Plaines River/Salt Creek watershed planning area of MWRD's comprehensive Stormwater Master Planning Program.
Capital Improvement Plan	No	No	No	No	
What types of capital facilities does the plan address?					N/A
How often is the plan revised/updated?					N/A
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	No	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
Shoreline Management Plan	No	No	No	No	

Response/Recovery Planning					
Comprehensive Emergency Management Plan	No	No	Yes	Yes	Work In Progress
Threat and Hazard Identification and Risk Assessment	Yes	No	Yes	No	Police identified soft targets Fire identified hazardous locations
Terrorism Plan	No	No	Yes	Yes	Cook County EMRS
Post-Disaster Recovery Plan	No	No	No	No	
Continuity of Operations Plan	Yes	No	Yes	No	Cook County EMRS
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	Yes
State Sponsored Grant Programs	No
Development Impact Fees for Homebuyers or Developers	Yes
Other	

TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	**Available?**	**Department/Agency/Position**
Planners or engineers with knowledge of land development and land management practices	Yes	Building Department – Director
Engineers or professionals trained in building or infrastructure construction practices	Yes	Novotny & Associates – Village Engineer
Planners or engineers with an understanding of natural hazards	Yes	Novotny & Associates – Village Engineer
Staff with training in benefit/cost analysis	No	
Surveyors	Yes	Novotny & Associates – Village Engineer
Personnel skilled or trained in GIS applications	Yes	Novotny & Associates – Village Engineer

Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Fire Department – Fire Chief
Grant writers	No	

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Engineering
Who is your jurisdiction's floodplain administrator? (department/position)	Engineering Dept. Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	No
When was the most recent Community Assistance Visit or Community Assistance Contact?	4/9/07 12/09/05
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?	Continued training is always welcomed.
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; No

NFIP Participation Activities

Maintaining compliance under the NFIP is an important component of flood risk reduction. All planning partners that participate in the NFIP have identified actions to maintain their compliance and good standing. Cook County entered the NFIP on April 15, 1981. Structures permitted or built in the County before then are called "pre-FIRM" structures, and structures built afterwards are called "post-FIRM." The insurance rate is different for the two types of structures. The effective date for the current countywide FIRM is August 19, 2008. This map is a DFIRM (digital flood insurance rate map). The communities in Cook County that participate in the NFIP are shown in ***Table: NFIP Participating Communities in Cook County*** in **Volume I** of the Cook County MJ-HMP.

The NFIP makes federally-backed flood insurance available to homeowners, renters, and business owners in participating communities. The communities in Cook County that participate in the NFIP and their "Policies in Force," "Total Coverage," and "Total Written Premiums" are shown in ***Table: Cook County Flood Insurance Policies*** in **Volume I** of the Cook County MJ-HMP.

Substantial Improvement Rule and the Substantial Damage Rule

The IDNR/OWR has developed a model ordinance for floodplain management, which has been adopted by most communities in Illinois. The ordinance includes the minimum requirements an NFIP participating jurisdiction must adopt and enforce, as well as additional higher regulatory requirements. The optional, higher regulatory standards include a minimum one foot of freeboard above the base flood elevation and cumulative tracking of damage repairs and improvements to establish substantial damage and substantial improvement compliance. Some jurisdictions have

chosen to exceed the requirements of the model ordinance and have adopted more restrictive ordinances. This is most common in the communities in northeastern Illinois.

Existing Municipal Code:

14-1-2 Definitions

SUBSTANTIAL IMPROVEMENT:

A. Any repair, reconstruction, or improvement of the structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either:

1. Before the improvement or repair is started; or

2. If the structure has been damaged, and is being restored, before the damage occurred.

B. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not the alteration affects the external dimensions of the structure.

C. The term does not, however, include either:

1. Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions; or

2. Any alteration of a historic structure; provided, that the alteration will not preclude the structure's continued designation as a historic structure.

14-1-3 Duties of Building Director

A. The village building director shall be responsible for the general administration and enforcement of this chapter which shall include the following:

1. Determining Floodplain Designation: Check all new development sites to determine whether they are in a special flood hazard area (SFHA) and, if so, determine whether they are in a floodway, flood fringe, or a floodplain on which a detailed study has not been conducted which drains more than one square mile.

2. Professional Engineering Review: If the development site is within a floodway or in a floodplain on which a detailed study has not been conducted which drains more than one square mile, then the permit shall be referred to a registered professional engineer (PE) employed by the village or under contract by the village for review to ensure that the development meets the requirements of section 14-1-6 of this chapter. In the case of an appropriate use, the PE shall state in writing that the development meets the requirements of section 14-1-6 of this chapter.

Their ordinance did not include substantial improvement / substantial damage rule provisions; future updates will consider inclusion of these rules as applicable and as appropriate.

TABLE: COMMUNITY CLASSIFICATIONS

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

Opportunities to Expand and Improve Capabilities

The building is over 100 years old and is in the process of updating codes; Hydrants and the only GIS computers for the Village. The Village is working with CMAP to create a Comprehensive Plan and a Capital Improvement Plan.

Plan Integration

The capability assessment describes opportunities to "link" or integrate the mitigation plan into other planning mechanisms. The process and mechanism to identify opportunities to integrate the Cook County MJ-HMP into other planning mechanisms will occur during the Annual Update Process and be reflected in the Jurisdictional Annual Report each year. Specific plan integration opportunities will include:

- The hazards, goals, and actions of the Hazard Mitigation Plan will be considered in the next update of the jurisdiction's land use plans, zoning, and subdivision codes.

We have begun to buy out housing in flood prone areas in our village and unincorporated areas we service. Joint project with MWRD.

Emergency Plan Integration:

Cook County EMRS is supporting communities to develop and update their respective Emergency Operations Plans, Continuity of Operations Plan/Continuity of Government Plan, and Recovery Plan in 2024. This is an ongoing countywide initiative and is being implemented in all municipalities.

Emergency Operations Plan (EOP)

An EOP template was created for all municipalities. The 2019 Cook County MJ-HMP and the hazards in the mitigation plan have been integrated into the Situation and Assumptions section of the EOP. Within that section, the natural hazards based on the 2019 MJ-HMP were added in the Initial Analysis and Assessment and Identification of Hazards section of the EOP. The hazards in the 2019 plan and the 2024 MJ-HMP did not change apart from adding wildfires for the Forest Preserve and unincorporated areas of the County. Future updates of the EOP will take into consideration any additional new natural hazards that are added to subsequent updates to the MJ-HMP.

Continuity of Operations Plan (COOP)

The Continuity of Operations Plan (COOP) for the municipality includes a Situation section that is based on the 2019 Cook County MJ-HMP jurisdictional annex, and specifically the hazards identified in the annex. The COOP-specific risk assessment is hazard-specific and based on likelihood of occurrence and severity of impact.

Recovery Plan

The goals of the Recovery Plan were developed to align with the 2019 Cook County MJ-HMP, and specifically prioritizes the responsibility of officials under this plan to save lives, protect property, relieve human suffering, sustain survivors, repair essential facilities, restore services, and protect the environment. The plan acknowledges that hazard mitigation is an important priority and consideration during the rebuilding process.

Jurisdiction-Specific Natural Hazard Event History

The information provided below was solicited from the jurisdiction and supported by NOAA and other relevant data sources.

The *Natural Hazard Events Table* lists all past occurrences of natural hazards within the jurisdiction. Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 12 (8 Single Family, 4 Two-Four Family Residence)
- Number of FEMA-Identified Severe Repetitive Loss Properties: 4 (2 Single Family, 2 Two-Four Family Residence)
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0

Federal Disasters Declared

Disaster Declaration Number	Date Declared	Event
DR-227	4/25/1967	Tornado
DR-351	9/4/1972	Flood
DR-373	4/26/1973	Flood
DR-509	6/18/1976	Severe Storm(s)
DR-643	6/30/1981	Severe Storm(s)
DR-776	10/7/1986	Flood
DR-798	8/21/1987	Flood
DR-997	7/9/1993	Flood
DR-1129	7/25/1996	Severe Storm(s)
DR-1188	9/17/1997	Severe Storm(s)
DR-1729	9/25/2007	Severe Storm(s)
DR-1800	10/3/2008	Severe Storm(s)
DR-1935	8/19/2010	Severe Storm(s)
DR-1960	3/17/2011	Snow
EM-3068	1/16/1979	Snow
EM-3134	1/8/1999	Snow
EM-3161	1/17/2001	Snow
EM-3230	9/7/2005	Hurricane – Katrina Evacuation
EM-3435	3/13/2020	Biological
DR-4116	5/10/2013	Flood
DR-4489	3/26/2020	Biological
DR-4728	8/15/2023	Severe Storm(s)

DR-4749	11/20/2023	Flood

State Disaster Declarations

Date Declared	Event
7/26/2010	Severe Storms, High Winds, Torrential Rain
1/31/2011	Winter Weather
4/25/2011 5/25/2011	High Wind, Tornadoes, Torrential Rain
4/18/2013 4/20/2013 4/21/2013 4/25/2013 4/30/2013	Severe Storms, Heavy Rainfall, Flooding, Straight-line Winds
1/6/2014	Heavy Snowfall, Frigid Temperatures
7/12/2017 7/14/2017	Thunderstorms, Heavy Rainfall, Flooding
1/29/2019	Winter Storm
2/6/2020	Severe Storms
3/12/2020 – present (reissued monthly)	COVID-19
2/16/2021	Winter Storms
2/1/2022	Winter Storms
8/1/2022 (reissued monthly through 10/28/2022)	Monkeypox

TABLE: NATURAL HAZARD EVENTS			
Type of Event	**FEMA Disaster Number (if applicable)**	**Date**	**Preliminary Damage Assessment/ Event Narrative**
Flood *Southview and Circle Dr./Residential (Des Plaines River)*	-	2019	-
Severe Weather/Wind		3/16/2016	A tree was uprooted and fell onto a home in Lyons.
Severe Snow/Temps	-	12/2013 - 3/2014	-
Severe Storm/Wind	-	11/2013	-
Severe Storm/Wind	-	6/2013	-
Severe Heat	-	6/2013	-
Severe Flooding	DR-4116	4/2013	-
Severe Storm/Wind/Blizzard	-	6/2011	A 58 year old man from Lyons died of a heart attack late in the evening of February 1st while shoveling snow.
Severe Snow	DR-1960	1/2011 - 3/2011	-
Severe Flooding	DR-1935	8/2010	-

Severe Weather/Wind	-	6/2010	-
Severe Flooding	DR-1800	9/2008	-
Severe Weather/Wind		8/23/2007	A large tree was blown down onto a vehicle near Lyons School. Numerous other trees, tree limbs and power lines were blown down.
Severe Weather/Wind		8/2/2006	Tree and power line damage throughout Lyons

Jurisdiction-Specific Hazards: Vulnerabilities and Impacts

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2024 Cook County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are **relevant** and **unique** to the municipality.

Dam/Levee Failure: Our area has had a dam removed. However, we do suffer from flooding frequently. Our village is surrounded by water on three sides. Flooding and ice dam flows could impact us greatly along the banks of the Des Plaines River, Salt Creek, and the Sanitary canal., Ogden Ave, 1st Ave., 47th St. could be impacted by this event.

Drought: The village is surrounded by forest preserves and drought can greatly increase the potential for fires. In addition, the water systems can be adversely affected. Our village water main infrastructure is old very fragile. A drought would impact water usage greatly, impacting the water systems components and during.

Earthquake: Historic information shows that earthquakes have occurred or might happen. However, earthquakes have not caused substantial damage as of yet. An earthquake would impact our village greatly as we have many older structures still present in our village. Additionally, we have buildings at Olden Joliet that exceed 6 stories, the Hoffman Tower, Condos on the Forest at 40 Haas, and at least six bridges overpasses that would be impacted in addition to our water system power grid.

Flooding: Outdated sewer systems and areas in the village have old infrastructure. These areas and systems overflow quickly during storms and rain events.

Severe Weather: We are extremely vulnerable. Historic data shows we have experienced micro bursts and tornadoes in recent years. We have several senior centers in our village that would be affected by these events, one of them being a 6 story structure, located at 8019 Ogden, Canr Court, and Golden Years. Our public works department on 39th st. has no back-up power generator and is impacted by these events. In addition, the villages hall, and library (warming center) have no backup generators and is need of upgrades to assure power is not lost. In 2016, a strong area of low pressure moved across the Western Great Lakes on March 16th, producing wind gusts between 50 and 60 mph. Numerous trees and tree limbs were blown down. A tree was uprooted and fell onto a home in Lyons.

Severe Winter Weather: We are extremely vulnerable. We have several senior centers in our village that would be affected by these events, one of them being a 6 story structure. Our public works has no back-up power generator and is impacted by these events. In addition, the village has issues with ice dams forming in the river and several creek areas. Our four schools senior centers could be greatly impacted. The Village Hall, Public Works, Garage, and Library need to have backup generators

to remain operational during the time of these events. In 2011, A 58-year-old man from Lyons died of a heart attack late in the evening of February 1st while shoveling snow during a blizzard.

Levee Failure: A failure in the Lyons Levee could flood the area.

Tornado and High Winds: We are extremely vulnerable. Historic data shows we have experienced micro bursts and tornadoes in recent years. We have several senior centers in our village that would be affected by these events, one of them being a 6 story structure. Our public works has no back-up power generator and is impacted by these events. Above-ground power lines are impacted during these events, which lead to power outages. The elderly community (12.2% of the population is 65 or older) is especially vulnerable during extended outages. Items listed in Severe Weather also pertain to this event.

Public works, fire, and police are in need of additional supplies should an event occur. This includes generators, saws, portable lighting, and traffic control devices. Cameras throughout the village would assist greatly in Hazard Assessment. As we were hit last year by a tornado, it took considerable time to assess damages due to blocked streets. The four schools in our village could also be impacted directly depending on the date/time of the event.

2022 Events: Significant storm/wind event with numerous trees uprooted and roofs blown off buildings from 06/13/22-06/14/22.

Wildfire (Wildfire Smoke): A large portion of the village is surrounded by forest preserves and wildfires are a major concern. the five forest preserve areas in our villages could greatly impact our community if on fire. All areas are adjacent to residential and commercial properties that could be ignited during such an event. Although the fire department has floating ramps, access to get into the wooded areas is difficult as there is no all-wheel drive trucks, ATVs within the fire department.

Indicator	Number	Percent
Families in poverty	285	5.2%
People with disabilities	2,268	10.2%
People over 65 years	3,835	17.2%
People under 5 years	1,492	6.7%
People of color	10,232	45.9%
Black	520	2.3%
Native American	136	0.6%
Hispanic	8,989	40.3%
Difficulty with English	983	4.7%
Households with no car	577	7%
Mobile homes	526	6.4%

Data are from the U.S. Census Bureau, American Community Survey. See methods for more information.

The community evaluated whether vulnerability, and subsequently the potential impacts, in hazard-prone areas had increased, decreased, or remained the same for each natural hazard identified in this Hazard Mitigation Plan. Climate change, infrastructure expansion, and economic shifts that can affect vulnerability were considered. For example, if planned development is in an identified hazard area or is not built to the updated building codes, it may increase the community's vulnerability to future hazards and disasters. On the other hand, if development occurred with mitigation practices in place, the vulnerability may have remained the same or decreased. Additionally, shifting demographics were taken into consideration when assessing development trends.

Jurisdiction-Specific Climate Change Vulnerability and Impacts

The table below outlines if climate change, as assessed by the local planning team, has increased or decreased the municipality's vulnerability/exposure, and thereby the potential impacts, to each natural hazard over the past five (5) years (**Current Vulnerability**), and the effect of climate change in the future probability of occurrence and impacts (**Future Vulnerability**) from each natural hazard.

Future studies are needed to better understand the impact of climate change on the community's assets.

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

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

Jurisdiction-Specific Changes (or Expected Changes) in Development Trends in Hazard-Prone Areas

The table below outlines if development, as assessed by the local planning team, over the past five (5) years (**Current Vulnerability**) has increased or decreased the jurisdiction's vulnerability/exposure, and thereby the potential impacts, to these natural hazards, and the anticipated effects changes in development may have on the future probability of occurrence and impacts (**Future Vulnerability**) from these natural hazards.

Hazard	Vulnerability
Current Vulnerability	
Dam and Levee Failure	Increased
Drought	Increased
Earthquake	Increased
Flood (Riverine, Urban, Shoreline)	Increased

Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Wings)	Increased
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Remained the Same
Tornado	Increased
Wildfire (Wildfire Smoke)	Decreased

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

A large quarry in our village is starting to be developed, in addition to new developments that are in process in large areas.

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**
1	Severe Weather
2	Severe Winter Weather
3	Flood
4	Tornado
5	Earthquake
6	Drought
7	Dam Failure

New Mitigation Actions

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

Action L-7.19

Mitigation Action #19: Upgrade water infrastructure, sewers, water main and shut off valves					
Lead Agency/Department Organization: Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** Hazard Mitigation Grant Program (HMGP) Building Resilient Infrastructure and Communities (BRIC) Flood Mitigation Assistance (FMA) Program Community Development Block Grant (CDBG) FEMA Public Assistance (PA)	**Estimated Projected Completion Date:** Ongoing	**Hazard(s) Mitigated:** All
Year Initiated	2024				
Applicable Jurisdiction	Village of Lyons				
Applicable Goal	1, 2, 3, 4, 5, 6				
Applicable Objective	4,6,9				
Cost Analysis (Low, Medium, High)	High				
Priority and Level of Importance (Low, Medium, High)	High				

Benefits of the Mitigation Project	High
Action/Implementation Plan and Project Description	Upgrade water infrastructure, sewers, water main and shut off valves
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	N

Action L-7.20

Mitigation Action #20: Full cutting and trimming of Village Trees					
Lead Agency/Department Organization: Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** Hazard Mitigation Grant Program (HMGP) Building Resilient Infrastructure and Communities (BRIC) Flood Mitigation Assistance (FMA) Program Community Development Block Grant	**Estimated Projected Completion Date:** Ongoing	**Hazard(s) Mitigated:** Earthquake, Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds), Severe Winter Weather (Ice Storm, Heavy Snow, Blizzards, Extreme Cold),Tornado

			(CDBG) FEMA Public Assistance (PA)		
Year Initiated		2024			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		1, 2, 3, 4, 5, 6			
Applicable Objective		4,6,9			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project		High			
Action/Implementation Plan and Project Description		Full cutting and trimming of Village Trees			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		N			

Action L-7.21

Mitigation Action #21: Dredging of Des Plaines River and Salt Creek					
Lead Agency/Department Organization: Administration	**Supporting Agencies/ Organizations:** Cook County	**Estimated Cost:** High	**Potential Funding Source:** Hazard Mitigation Grant Program (HMGP) Building	**Estimated Projected Completion Date:** Ongoing	**Hazard(s) Mitigated:** Dam and Levee Failure, Drought, Flood (Riverine, Urban, Coastal/Shoreline), Severe Weather (Extreme Heat,

			Resilient Infrastructure and Communities (BRIC) Flood Mitigation Assistance (FMA) Program Community Development Block Grant (CDBG) FEMA Public Assistance (PA)		Lightning, Hail, Fog, High Winds), Severe Winter Weather (Ice Storm, Heavy Snow, Blizzards, Extreme Cold), Tornado

Year Initiated	2024
Applicable Jurisdiction	Village of Lyons
Applicable Goal	1, 2, 3, 4, 5, 6
Applicable Objective	4,6,9
Cost Analysis (Low, Medium, High)	High
Priority and Level of Importance (Low, Medium, High)	High
Benefits of the Mitigation Project	High
Action/Implementation Plan and Project Description	Dredging of Des Plaines River and Salt Creek
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	N

Action L-7.22

Mitigation Action #22: Installation of Back Up Generators					
Lead Agency/Department Organization: Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** Hazard Mitigation Grant Program (HMGP) Building Resilient Infrastructure and Communities (BRIC) Flood Mitigation Assistance (FMA) Program Community Development Block Grant (CDBG) FEMA Public Assistance (PA)	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated	2024				
Applicable Jurisdiction	Village of Lyons				
Applicable Goal	1, 2, 3, 4, 5, 6				
Applicable Objective	4,6,9				
Cost Analysis (Low, Medium, High)	High				
Priority and Level of Importance (Low, Medium, High)	High				
Benefits of the Mitigation Project	High				
Action/Implementation Plan and Project Description	Installation of Back Up Generators - Village Hall - DPW - Library				

Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	N

Action L-7.23

Mitigation Action #23: Fire Department ATV Purchase for Wild Fires and Disasters					
Lead Agency/Department Organization: Lyons Fire Department	**Supporting Agencies/ Organizations:** MABAS	**Estimated Cost:** Medium	**Potential Funding Source:** Hazard Mitigation Grant Program (HMGP) Building Resilient Infrastructure and Communities (BRIC) Flood Mitigation Assistance (FMA) Program Community Development Block Grant (CDBG) FEMA Public Assistance (PA)	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated		2024			
Applicable Jurisdiction		Village of Lyons			

Applicable Goal	2,3,4
Applicable Objective	2,3,8
Cost Analysis (Low, Medium, High)	Medium
Priority and Level of Importance (Low, Medium, High)	Medium
Benefits of the Mitigation Project	High
Action/Implementation Plan and Project Description	Fire Department ATV Purchase for Wild Fires and Disasters
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	N

Action L-7.24

Mitigation Action #24: Purchase and Maintain an effective Drone Program					
Lead Agency/Department Organization: Lyons Police Department	**Supporting Agencies/ Organizations:** Lyons Fire Department	**Estimated Cost:** Medium	**Potential Funding Source:** Hazard Mitigation Grant Program (HMGP) Building Resilient Infrastructure and Communities (BRIC) Flood Mitigation Assistance (FMA) Program Community	**Estimated Projected Completion Date:** Ongoing	**Hazard(s) Mitigated:** All

			Development Block Grant (CDBG) FEMA Public Assistance (PA)		
Year Initiated		2024			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		1, 2, 3, 4, 5, 6			
Applicable Objective		4,6,9			
Cost Analysis (Low, Medium, High)		Medium			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project		High			
Action/Implementation Plan and Project Description		Purchase and Maintain an effective Drone Program			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		N			

Action L-7.25

Mitigation Action #24: Purchase of 4 Police/Fire 3' x 5' LED Message Boards					
Lead Agency/Department Organization: Lyons Police Department	**Supporting Agencies/ Organizations:** Lyons Fire Department	**Estimated Cost:** High	**Potential Funding Source:** Hazard Mitigation Grant Program (HMGP) Building Resilient	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All

			Infrastructure and Communities (BRIC) Flood Mitigation Assistance (FMA) Program Community Development Block Grant (CDBG) FEMA Public Assistance (PA)		

Year Initiated	2024
Applicable Jurisdiction	Village of Lyons
Applicable Goal	1, 2, 3, 4, 5, 6
Applicable Objective	2,3,4,6,8,13
Cost Analysis (Low, Medium, High)	High
Priority and Level of Importance (Low, Medium, High)	High
Benefits of the Mitigation Project	High
Action/Implementation Plan and Project Description	Purchase of 4 Police/Fire 3' x 5' LED Message Boards
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	N

Ongoing Mitigation Actions

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

Action L-7.2

<table>
<tr><th colspan="6">Mitigation Action #2: 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.</th></tr>
<tr><td colspan="2">Lead Agency/Department Organization:
Fire, Police</td><td>Supporting Agencies/ Organizations:</td><td>Estimated Cost:
$500,000 or more</td><td>Potential Funding Source:
BRIC, FMA, HMGP</td><td>Estimated Projected Completion Date:
Long-term (depending on funding)</td><td>Hazard(s) Mitigated:
Flooding</td></tr>
<tr><td colspan="3">Year Initiated</td><td colspan="4">2014</td></tr>
<tr><td colspan="3">Applicable Jurisdiction</td><td colspan="4">Village of Lyons</td></tr>
<tr><td colspan="3">Applicable Goal</td><td colspan="4">1, 2, 3</td></tr>
<tr><td colspan="3">Applicable Objective</td><td colspan="4">7, 13</td></tr>
<tr><td colspan="3">Cost Analysis (Low, Medium, High)</td><td colspan="4">High</td></tr>
<tr><td colspan="3">Priority and Level of Importance (Low, Medium, High)</td><td colspan="4">Medium</td></tr>
<tr><td colspan="3">Benefits of the Mitigation Project</td><td colspan="4">High</td></tr>
<tr><td colspan="3">Action/Implementation Plan and Project Description</td><td colspan="4"></td></tr>
<tr><td colspan="3">Actual Completion Date or Ongoing Indefinite</td><td colspan="4"></td></tr>
<tr><td colspan="3">Project Status & Changes in Priority
Completion status legend:
N = New; I = In Progress Toward Completion;
O = Ongoing Indefinitely; C = Project Completed;
R = Want Removed from Annex; X = No Action Taken/Delayed</td><td colspan="4">I</td></tr>
</table>

Action L-7.3

Mitigation Action #3: Perform a survey of the village to determine building stock inventory. Knowing where unreinforced masonry buildings are would provide valuable information to first responders if an earthquake was to occur.					
Lead Agency/Department Organization: Building Department	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** Earthquake
Year Initiated	2014				
Applicable Jurisdiction	Village of Lyons				
Applicable Goal	1, 2, 3				
Applicable Objective	2,6,7				
Cost Analysis (Low, Medium, High)	Low				
Priority and Level of Importance (Low, Medium, High)	High				
Benefits of the Mitigation Project	Medium				
Action/Implementation Plan and Project Description					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	I				

Action L-7.4

Mitigation Action #4: Enhance capabilities of the village's emergency operations center. This will include dedicated room, furniture, equipment, operating supplies and software.

Lead Agency/Department Organization: Fire, Police	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		1, 2, 3, 5			
Applicable Objective		1,5			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project		High			
Action/Implementation Plan and Project Description		FD moved to oak lawn dispatch and PD moved to Cook County Dispatch			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		I			

Action L-7.5

Mitigation Action #5: Participate and become a national weather service storm ready community.					
Lead Agency/Department Organization: Fire, Police	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Long-term	**Hazard(s) Mitigated:** Flooding, Severe weather
Year Initiated		2014			

Applicable Jurisdiction	Village of Lyons
Applicable Goal	1, 2, 3, 5
Applicable Objective	3, 4, 5, 6, 7, 9, 10, 11, 13
Cost Analysis (Low, Medium, High)	Low
Priority and Level of Importance (Low, Medium, High)	High
Benefits of the Mitigation Project	Medium
Action/Implementation Plan and Project Description	
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	I

Action L-7.7

Mitigation Action #7: Clear Village storm drains for effective storm water management.					
Lead Agency/Department Organization: Public Works Contractor	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Ongoing	**Hazard(s) Mitigated:** Flooding, Severe Weather
Year Initiated		2014			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		1, 2, 3			
Applicable Objective		1,2			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project		Medium			

Action/Implementation Plan and Project Description	
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O Public Works has begun clearing out drainage in the village. Approximately 50 locations have been completed from Harlem Ave to Gage Ave. Work is to be continued in 2023, moving West.

Action L-7.8

Mitigation Action #8: Improve and repair Village infrastructure to improve resilience to natural disasters.					
Lead Agency/Department Organization: Public Works	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** General Fund, HMGP, BRIC	**Estimated Projected Completion Date:** Long-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		1, 2, 3			
Applicable Objective		2,6,7			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project		High			
Action/Implementation Plan and Project Description					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project		I			

Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	

Action L-7.9

Mitigation Action #9: Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.					
Lead Agency/Department Organization: Building Department	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Staff Time	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** Flooding
Year Initiated		2014			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		1, 3			
Applicable Objective		4, 6, 9			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project		Medium			
Action/Implementation Plan and Project Description:					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action L-7.10

Mitigation Action #10: Where feasible, implement a program to record high watermarks following high water events.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Medium	**Potential Funding Source:** General Fund, FEMA Public Assistance (PA)	**Estimated Projected Completion Date:** Long-term	**Hazard(s) Mitigated:** Flooding, Severe Weather
Year Initiated		2014			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		1,2,3,5			
Applicable Objective		3,6,9			
Cost Analysis (Low, Medium, High)		Medium			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)		Medium			
Action/Implementation Plan and Project Description:		Program in place to record the quantity of rainfall with monitors in the sewer to record the flow characteristics during storms.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action L-7.11

Mitigation Action #11: 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.

Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** CIP component of general fund (if implemented)	**Estimated Projected Completion Date:** Long-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Maywood			
Applicable Goal		5			
Applicable Objective		1, 2, 7			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		Medium			
Benefits of the Mitigation Project		High			
Action/Implementation Plan and Project Description					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		O			

Action L-7.12

Mitigation Action #12: Continue to support the countywide actions identified in this plan.					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term and Long-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Lyons			

Applicable Goal	2, 3, 4
Applicable Objective	All
Cost Analysis (Low, Medium, High)	Low
Priority and Level of Importance (Low, Medium, High)	High
Benefits of the Mitigation Project	Medium
Action/Implementation Plan and Project Description	
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Action L-7.13

Mitigation Action #13: Actively participate in the plan maintenance strategy identified in this plan.					
Lead Agency/Department Organization: EMRS, Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** Low	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** All
Year Initiated		2014			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		2, 3, 4			
Applicable Objective		3, 4, 6			
Cost Analysis (Low, Medium, High)		Low			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project		Medium			
Action/Implementation Plan and Project Description					

Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	O

Action L-7.14

Mitigation Action #14: Flood Mitigation for repeatedly flooded areas.					
Lead Agency/Department Organization: Lyons FD	**Supporting Agencies/ Organizations:** Lyons DPW	**Estimated Cost:** High	**Potential Funding Source:** HMGP, BRIC	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** Flooding
Year Initiated		2019			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		1, 2, 3, 4, 12, 13			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project		High: This area floods repeatedly over the past few years			
Action/Implementation Plan and Project Description					
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed		I The Village has started an Intergovernmental Agreement with the MWRD district to buy dwelling units in the flood zone area of the Village. As of 2022, the Village successfully purchased the first property, 8723 Southview. Per the agreement, 25 properties can be purchased from the Village. The project will continue into 2023; another closing is scheduled for another property in January. The Village plans to buy one home a month.			

Action L-7.15

Mitigation Action #15: Support flood mitigation through generator installation to enhance Lyons DPW operations					
Lead Agency/Department Organization: Village Administration	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High	**Potential Funding Source:** HMGP, BRIC	**Estimated Projected Completion Date:** Est 12/18 months from funding for mitigation/3 months for generation	**Hazard(s) Mitigated:** Flooding, Widespread Power Outage
Year Initiated		2019			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		1, 2, 3, 4, 12, 13			
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			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project		Lyons DPW is directly impacted by this and impacts service delivery, and life safety/loss of power has resulted at DPW during flooding High—Project will provide an immediate reduction of risk exposure for life and property.			
Action/Implementation Plan and Project Description		39th street at Stanley 1. Emergency Generator to support Lyons DPW operations during severe weather and flooding (note these are highest risks) 2. FD and other Lyons resources are drained and reduce critical service delivery during flooding 3. The residential area is impacted by accessing and living with homes.			
Actual Completion Date or Ongoing Indefinite					
Project Status & Changes in Priority		I			

Completion status legend: **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	

Action L-7.16

Mitigation Action #16: Enhance flooding reduction through property buy-outs					
Lead Agency/Department Organization: Lyons FD	**Supporting Agencies/ Organizations:** Lyons DPW	**Estimated Cost:** High	**Potential Funding Source:** Salt Creek/Circle Drive, HMGP, BRIC	**Estimated Projected Completion Date:** Option 1: Pump Option 2. Buy out / time unknown house 12 months	**Hazard(s) Mitigated:** Flooding
Year Initiated		2019			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		1, 2, 7, 12, 13			
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)			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project		Residential Area / citizens unable to access or remain during flooding/ FD relocates residents via boats High—Project will provide an immediate reduction of risk exposure for life and property.			
Action/Implementation Plan and Project Description		Option 1: area has flooded repeatedly and suggest a pump house be constructed to deflect waters to safe areas			

	Currently FD deploys men and uses portable pumps during lesser rainfalls to maintain integrity Option 2: suggest property buy out/this is supported by Lyons elected officials
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	I The Village has started an Intergovernmental Agreement with the MWRD district to buy dwelling units in the flood zone area of the Village. As of 2022, the Village successfully purchased the first property, 8723 Southview. Per the agreement, 25 properties can be purchased from the Village. The project will continue into 2023; another closing is scheduled for another property in January. The Village plans to buy one home a month.

Action L-7.18

Mitigation Action #18: Implement Lyons Levee Flood Control Improvements					
Lead Agency/Department Organization: MWRD	**Supporting Agencies/ Organizations:**	**Estimated Cost:** $7,285,000	**Potential Funding Source:** MWRD	**Estimated Projected Completion Date:** Short-term	**Hazard(s) Mitigated:** Dam/Levee Failure, Flooding
Year Initiated		2014			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		1, 2, 3			
Applicable Objective		1, 2, 3, 7, 9, 13			
Cost Analysis (Low, Medium, High)		High			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project		High			
Action/Implementation Plan and Project Description		ID: DPR-14D Contract: 13-199-3F, Watershed: Lower Des Plaines Location: Lyons, IL			

	Restoration and improvement of the levee to a condition that will elevate the levee to modern design standards, provide flood protection, and prevent overtopping by events up to a 100-year design flood.
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	I

Action L-7.17

Mitigation Action #17: Conduct a Stormwater Assessment Study					
Lead Agency/Department Organization: Lyons DPW	**Supporting Agencies/ Organizations:**	**Estimated Cost:** High, $200,000	**Potential Funding Source:** General Fund	**Estimated Projected Completion Date:** 3-6 months	**Hazard(s) Mitigated:** Flooding
Year Initiated		2014			
Applicable Jurisdiction		Village of Lyons			
Applicable Goal		1,2,3,4,5,6			
Applicable Objective		3, 4, 12			
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).			
Priority and Level of Importance (Low, Medium, High)		High			
Benefits of the Mitigation Project		During significant rainfalls and documented flooding direct impacts to our storm water drains / Study is required to determine capacity and cause of excessive sediment High—Project will provide an immediate reduction of risk exposure for life and property.			

Action/Implementation Plan and Project Description	Hire an engineering firm to conduct a study of the storm water system to determine both capacity and impacts of normal weather issues/goal is to develop a strategy to mitigate actions draining required resources.
Actual Completion Date or Ongoing Indefinite	
Project Status & Changes in Priority **Completion status legend:** **N** = New; **I** = In Progress Toward Completion; **O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed	I

Completed Actions

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

Completed Action Items
Maintain the municipality's tornado warning system and enhance system capabilities.
Maintain and upgrade the Village's reverse 911 communication system.

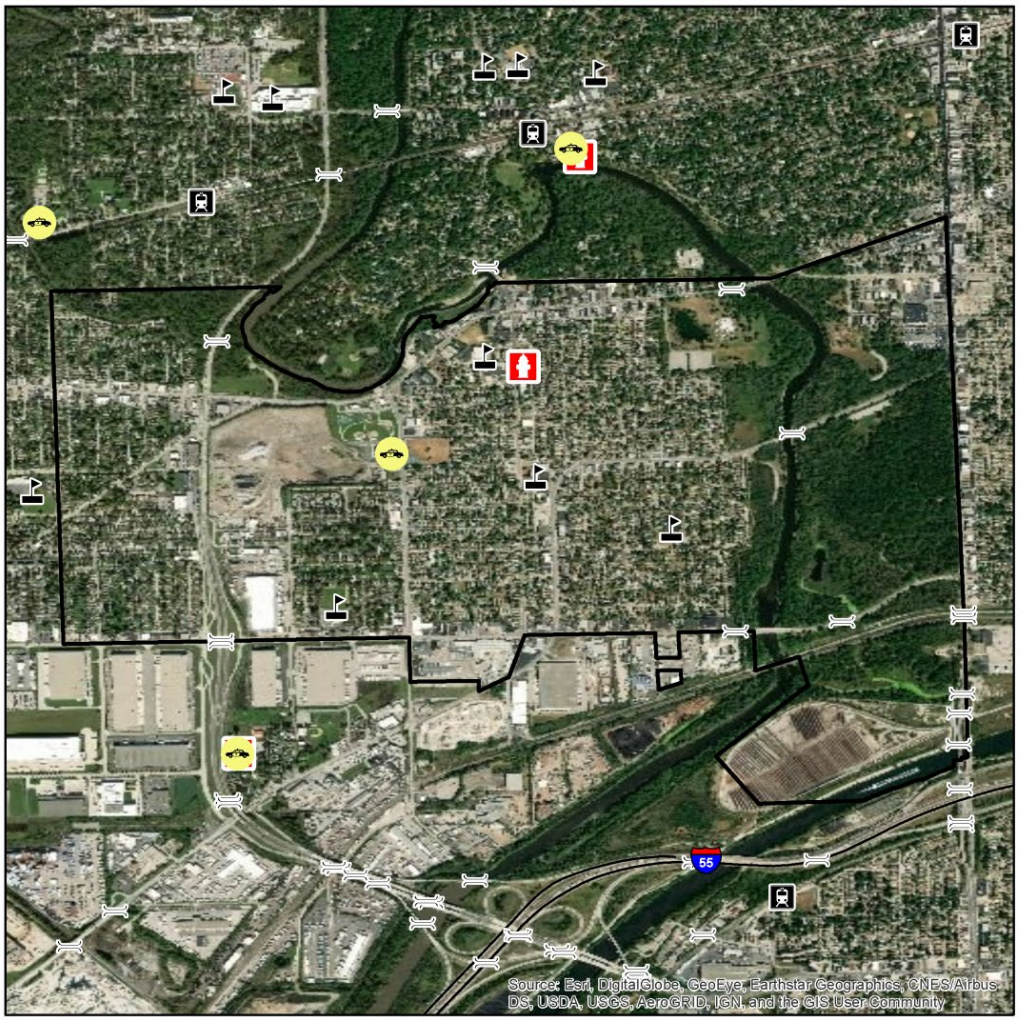
Future Needs to Better Understand Risk/Vulnerability

No future needs identified at this time.

Additional Comments

No additional comments at this time.

Hazard Mapping



VILLAGE OF LYONS

CRITICAL INFRASTRUCTURE

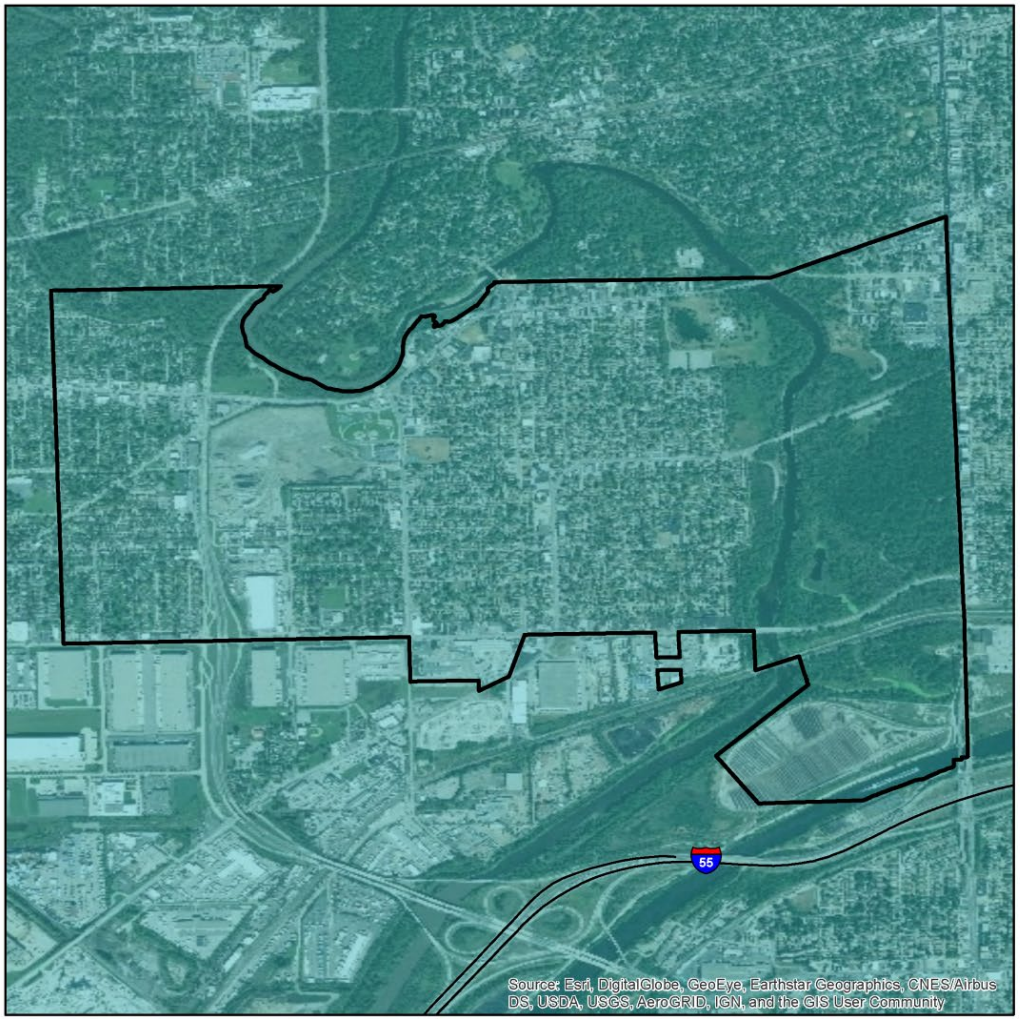
- Oil Facilities
- Transit Centers
- Military Facilities
- Police Stations
- Fire Stations
- Hazardous Waste
- Airports
- Hospitals
- Highway Bridges
- Warming Centers
- Cooling Centers
- Schools
- Railroad Stations

Base Map Data Sources:
Cook County, ESRI

COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

N W E S

0 0.1 0.2 0.4 0.6 0.8 Miles



VILLAGE OF LYONS

PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

Mercalli Scale, Potential Shaking

II-III Weak

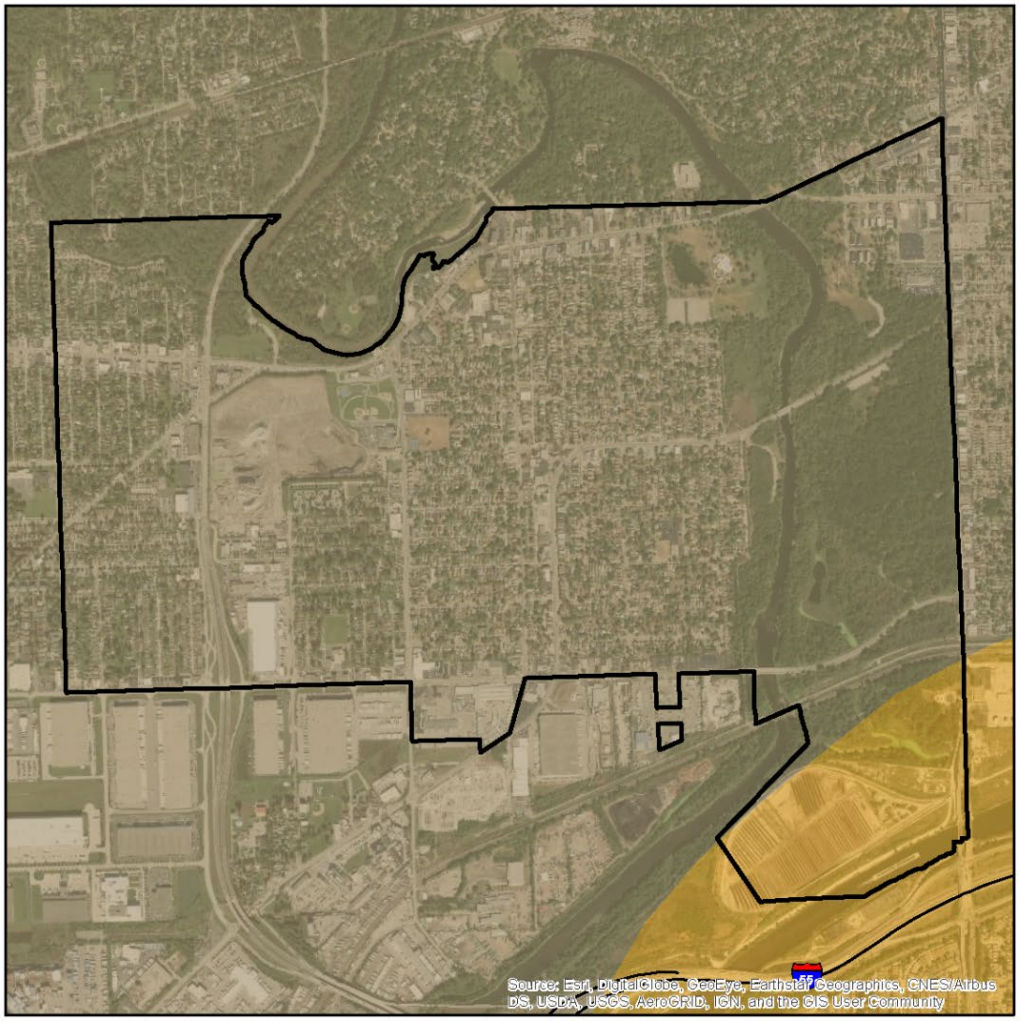
Data provided by the USGS Earthquake Hazards Program and Cook County.

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.

COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

N W E S

0 0.1 0.2 0.4 0.6 0.8 Miles



VILLAGE OF LYONS

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-2769 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 (2003) was the base map used for this work. Each State Geological Survey produced its own state map version of the Soil Site Class and Liquefaction Susceptibility maps. The procedures outlined in the NEHRP provisions (Building Seismic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2002) were followed to produce the soil site class maps. CUSEC State Geologists used the entire column of soils material down to bedrock and did not include any bedrock in the calculation of the average shear wave velocity for the column, since it is the soil column and the difference in shear wave velocity of the soils in comparison to the bedrock which influences much of the amplification.

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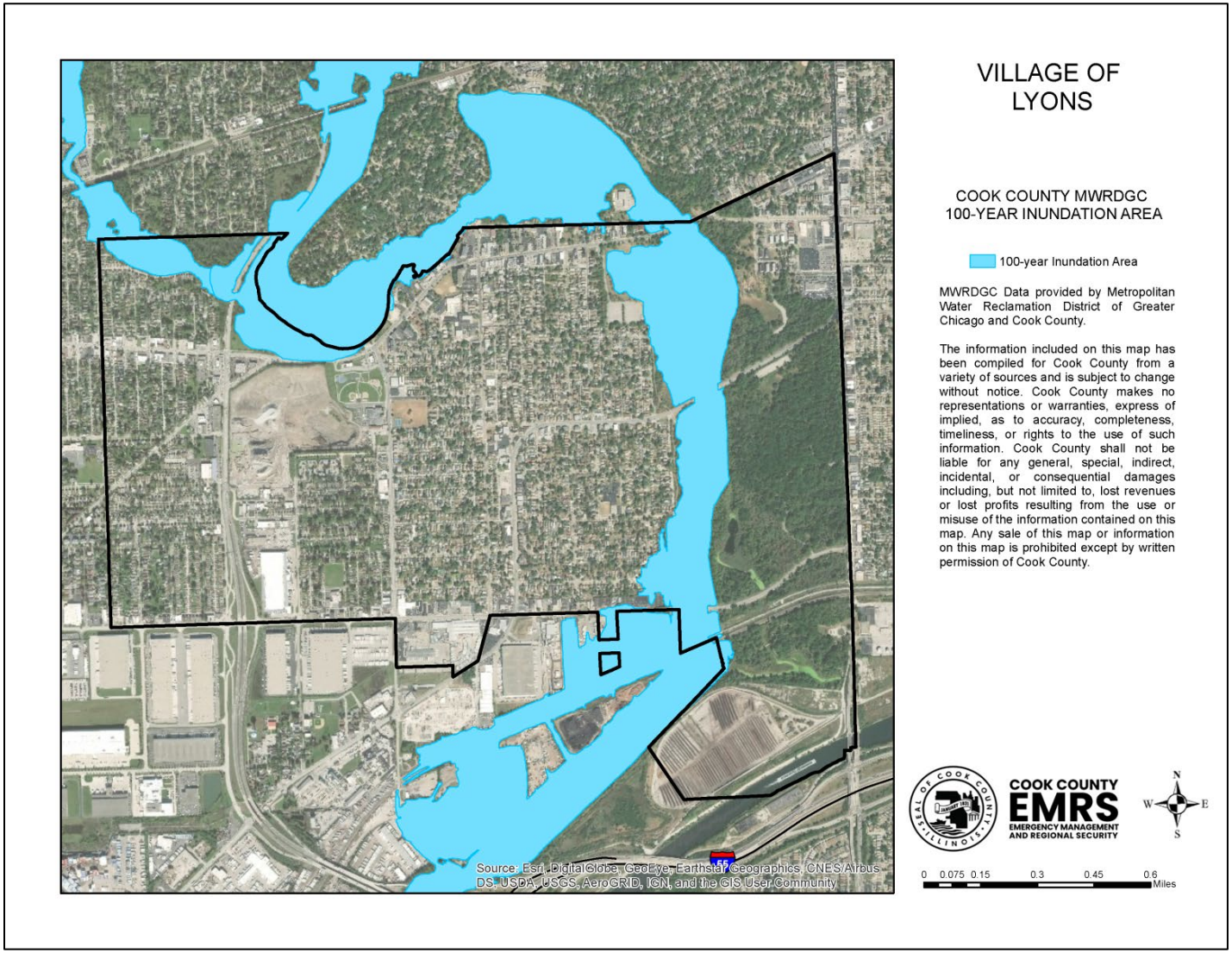
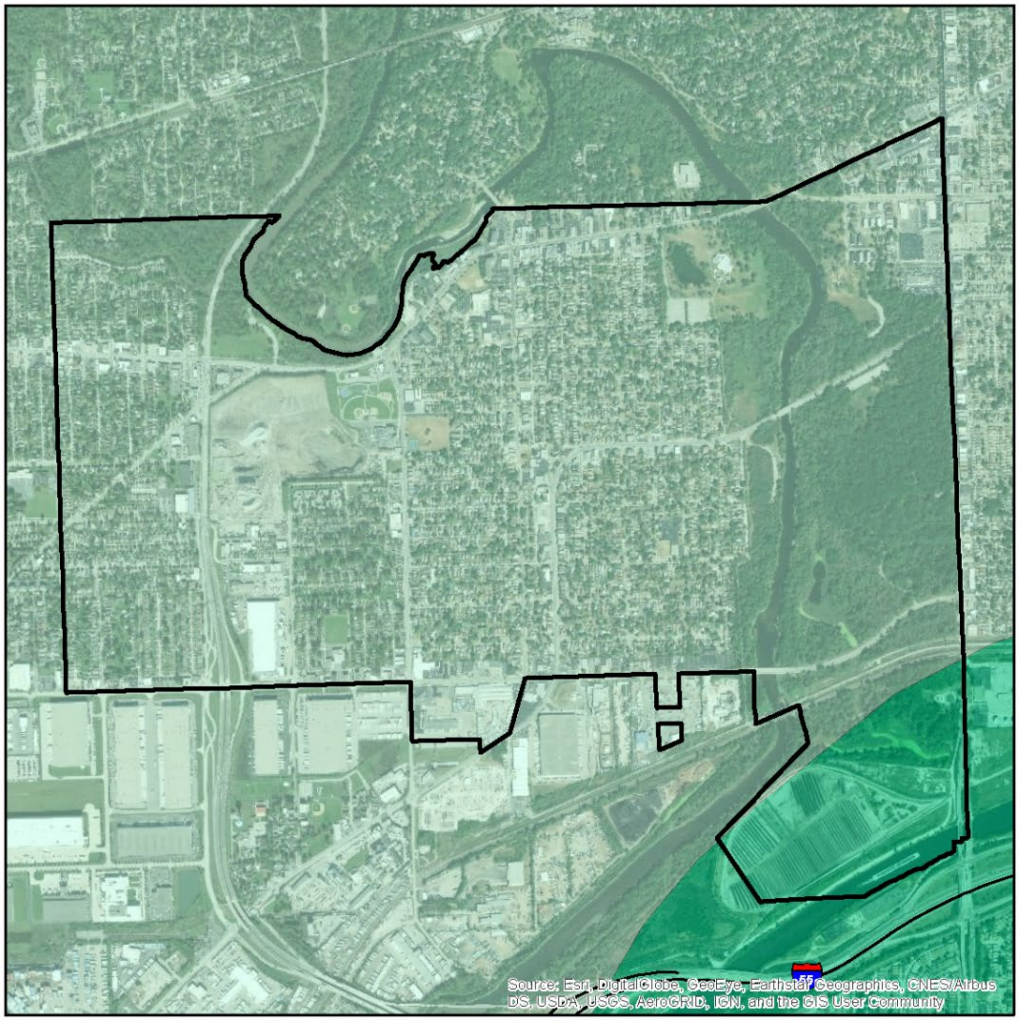
COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

N W E S

0 0.075 0.15 0.3 0.45 0.6 Miles

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





VILLAGE OF LYONS

LIQUEFACTION SUSCEPTIBILITY

LIQUEFACTION SUSCEPTIBILITY

- high
- low
- very low

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

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COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

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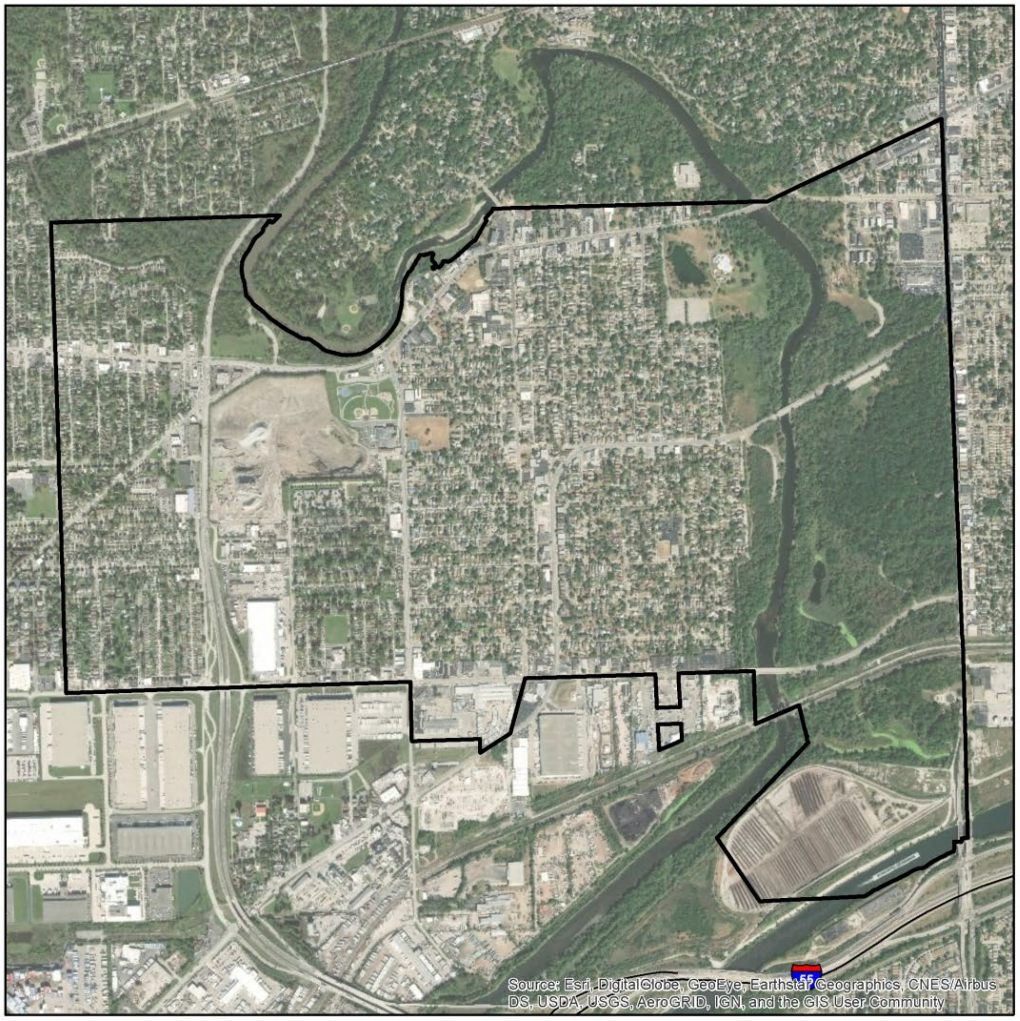

VILLAGE OF LYONS

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.

COOK COUNTY EMRS
EMERGENCY MANAGEMENT AND REGIONAL SECURITY

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