

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

Northlake Annex

FINAL

July 2019

Prepared for:



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

Toni Preckwinkle
President
Cook County Board of Commissioners

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

Table of Contents

Hazard Mitigation Point of Contact	3
Jurisdiction Profile	4
Capability Assessment	7
Jurisdiction-Specific Natural Hazard Event	12
Hazard Risk Ranking.....	14
Mitigation Strategies and Actions.....	15
New Mitigation Actions	20
Ongoing Mitigation Actions	33
Completed Mitigation Actions.....	39
Future Needs to Better Understand Risk/Vulnerability	48
Additional Comments	49
HAZUS-MH Risk Assessment Results	50
Hazard Mapping	53

Hazard Mitigation Point of Contact

Primary Point of Contact	Alternate Point of Contact
Norman Nissen, Jr., Chief of Police 55 E. North Ave. Northlake, IL 60164 Telephone: 708-531-5755 Email Address: nnissen@northlakecity.com	Jeffrey Sherwin, Mayor 55 E. North Ave. Northlake, IL 60164 Telephone: 708-343-8700 Email Address: northlakemayor@comcast.net

Jurisdiction Profile

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

- **Date of Incorporation:** 1949
- **Current Population:** The 2018 US Census population estimate was 12,235.
- **Population Growth:** Based on data tracked by the City of Northlake Comprehensive Study, Northlake has seen minor population growth in the last 16 years, with a rise in Latinos residing in the area. The city’s population has grown in cohesion through a strong network of schools, parks and open spaces, public library, worship areas, grocery stores and restaurants.
- **Location and Description:** The City of Northlake is a near western suburb of Chicago located just south of O’Hare International Airport. Northlake is situated on the western most border of Cook County with DuPage County (Elmhurst) being its western boundary. Northlake is bordered by Franklin Park to the north, Berkley to the south, Melrose Park to the east, and Elmhurst to the west. With several major highways converging in its jurisdiction the daytime traffic population can triple or quadruple. Illinois 290, State Tollway 294, US 64 and US 20 all are located within or boarding Northlake. Northlake also shares a major part of the Proviso Railroad Yards which is a shipping hub for many millions of pounds of cargo daily for Chicago and the greater Midwest. According to the US Census Bureau, the city has a total area of 3.17 square miles.
- **Brief History:** The City of Northlake encompasses three square miles along Addison Creek in west central Cook County. When World War II brought a Buick defense factory to nearby Melrose Park, farmland in Northlake was converted to residential neighborhoods for plant workers. The City’s name is derived from two major thoroughfares, North Avenue and Lake Street, which intersect at Northlake’s western boundary. Reportedly, naming rights for the town were awarded in a contest hosted by an early land developer, Midland Development Company. In order to quickly and affordably settle war-time workers, Midland built housing shells in Northlake, advertised them as “semi-finished,” and required plant employees who purchased the homes to finish the interiors, electrical work, and exterior painting. The City was incorporated in 1949, with an initial population of 3,000.

In the 1950s, construction of the Tri-State Tollway on Northlake’s western border attracted industrial development. One of the City’s largest employers was Automatic Electric, a telephone-switching equipment manufacturer that employed a workforce of 14,000 by the 1970s.

The 1960s, ‘70s, and ‘80s brought the completion of large infrastructure projects—street paving, curb and sewer installation, replacement of wooden bridges over Addison Creek with concrete spans, and the construction of the Doyle Retention Basin to alleviate recurring flood issues. Northlake residents voted to grant the city government “home rule” authority in 1994, as well as modifying the city-manager form of government by making the mayor a full-time position.

- **Climate:** Northlake’s weather is typical of the Midwest Great Lakes region of Northern Illinois. Northlake’s typical summer temperatures could reach upper 90s with cold wet winters. It’s common in the winter to experience sub-freezing temperatures and large snowfall. Average annual snowfall is over 32 inches. Annual average rainfall is over 36 inches. The average year-

round temperature is 48.3 °F. Humidity averages between 73 percent. Prevailing winds average 16 mph.

- **Governing Body Format:** The City of Northlake is governed by an 8 eight-member City Council and Mayor. This body of government will assume the responsibility for the adoption and implementation of this plan. The City consists of four departments: Finance, Public Works, Building and Police. The City has 6 Committees or Commissions, which report to the City Council and Mayor.
- **Development Trends:** Anticipated development levels for Northlake are low to moderate, consisting primarily of industrial and retail redevelopment. The majority of recent development has been the reformatting and developing of industrial sites, one example being several new data centers. Residentially, there has been a focus on redeveloping or removal from the market debilitated properties. The City of Northlake adopted its Comprehensive Plan in May 2013. The Plan serves as a guide for elected and appointed officials, City staff, residents, business owners, and potential investors, allowing them to make informed decisions about land use, transportation, infrastructure, and capital improvements within Northlake. The Plan’s highest priorities are as follows: strengthening the City’s residential neighborhoods and its commercial and industrial businesses; enhancement of pedestrian amenities; and improving the appearance of Northlake’s commercial districts.

The City of Northlake will continue to invest in its future with infrastructure upgrades in 2018. On October 16th, the City Council approved the 2018 capital program which will include the following projects:

- Resurfacing of Wolf Road from North Avenue to Winters Drive;
- Installation of new water main on Wolf Road form Fullerton to Diversey Avenue;
- Resurfacing of Maplewood, Morse Drive (east of Roberta) and South Caryl and Marilyn Avenues;
- Replacement of the Prater and Roy Avenue Bridge decks;
- Resurfacing of Midland Trail from Wolf Road to Palmer Avenue;
- Replacement of water main on Lake Street from Lind Avenue to Railroad Avenue;
- Replacement of water main on Maplewood Avenue;
- Resurfacing of Sandra Avenue south of Grand Avenue to include water main replacement;
- Water valve replacement on streets that are being re-surfaced.
- The City will be providing approximately \$6,292,125.00 for these infrastructure improvements, with another \$4,542,000 coming in from various federal/state grants for a total of \$10,834,125 being invested in the future of our community.

The City of Northlake is very fortunate to be in a financial position to undertake this program without borrowing any funds. A strong community is one that is always pushing ahead, focusing on the future. We must always be in a position to accommodate redevelopment, whether it is resident, commercial or industrial in order to keep our community vibrant and relevant.

Plans for 2019 include upgrading the City's main water pumping station, resurfacing Roy Avenue, Country Club Drive and Parkview and replacement of the remaining pocket of 4 inch water main and additional storm water management projects.

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	Building Code 8-1A-1 adopted 2003
Zonings	Yes	No	No	Yes	Municipal Code 12-1-1 adopted: 2008
Subdivisions	Yes	No	No	No	Municipal Code 11-1-1 adopted: 1976
Stormwater Management	Yes	No	Yes	Yes	Municipal Code 12-2-1 adopted: 1990
Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	No	No	Yes	Yes	(765 ILCS 77/) Residential Real Property Disclosure Act.
Growth Management	Yes	No	No	No	Municipal Code 9-1-1 adopted: 2013
Site Plan Review	Yes	No	No	No	Municipal Code 12-2-13 adopted: 1990
Public Health and Safety	Yes	No	Yes	Yes	Cook County Board of Health. Municipal Code 4-1-1 adopted: 1997

Environmental Protection	No	Yes	No	No	
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Plan is completed. Municipal Code 9-1-1 adopted: 2013
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>					No
Floodplain or Basin Plan	No	No	Yes	No	MWRD
Stormwater Plan	No	No	MWRD	No	Regional stormwater impacts are managed by MWRD. The City lies within Lower Addison Creek Watershed planning area of MWRD's comprehensive Stormwater Master Planning Program
Capital Improvement Plan	Yes	No	No	No	
<i>What types of capital facilities does the plan address?</i>					Improvements using Green infrastructure solutions including property acquisitions, stream bank restorations/stabilization programs.
<i>How often is the plan revised/updated?</i>					5 year plan, reviewed and updated annually
Habitat Conservation Plan	Yes	No	No	No	None
Economic Development Plan	Yes	No	Yes	No	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	Yes	No	No	No	Municipal Code 12-2-5 adopted: 1990
Response/Recovery Planning					
Comprehensive Emergency Management Plan	No	No	Yes	No	Cook County DHSEM
Threat and Hazard Identification and Risk Assessment	No	No	Yes	No	Cook County DHSEM Preparing THIRA
Terrorism Plan	No	No	Yes	No	Cook County DHSEM
Post-Disaster Recovery Plan	No	No	Yes	No	Cook County DHSEM
Continuity of Operations Plan	No	No	Yes	No	Cook County DHSEM
Public Health Plans	No	No	Yes	No	Cook County DPH

TABLE: FISCAL CAPABILITY	
Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes

State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Christopher Burke Engineering Rosemont Illinois
Engineers or professionals trained in building or infrastructure construction practices	Yes	Christopher Burke Engineering Rosemont Illinois
Planners or engineers with an understanding of natural hazards	Yes	Christopher Burke Engineering Rosemont Illinois
Staff with training in benefit/cost analysis	Yes	Christopher Burke Engineering Rosemont Illinois
Surveyors	Yes	Christopher Burke Engineering Rosemont Illinois
Personnel skilled or trained in GIS applications	Yes	Cook County GIS Consortium
Scientist familiar with natural hazards in local area	No	
Emergency manager	No	Northlake Police Department
Grant writers	Yes	Christopher Burke Engineering Rosemont Illinois

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

What department is responsible for floodplain management in your jurisdiction?	Building Department
Who is your jurisdiction’s floodplain administrator? (department/position)	Building Department
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	June 6, 2005
When was the most recent Community Assistance Visit or Community Assistance Contact?	August 15, 2013
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No

Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program?	No, currently in application process.

TABLE: COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Community Rating System	No	In application stage	---
Building Code Effectiveness Grading Schedule	Yes	Unknown	---
Public Protection/ISO	Yes	4	Leyden 2011/Northlake 2013
StormReady	Yes	Gold (Countywide)	2014
Tree City USA	No	---	---

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: 40
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 2

TABLE: NATURAL HAZARD EVENTS			
Type of Event	FEMA Disaster Number (if applicable)	Date	Preliminary Damage Assessment
Illinois Severe Storms, Straight-Line Winds and Flooding	DR-4116	4/26/2013	\$2,000,000 (estimate)
Illinois Severe Winter Storm and Snowstorm	DR-1960	1/31/2011	\$50,000 (estimate)
Illinois Severe Storms and Flooding	DR-1935	7/19/2010	\$2,000,000 (estimate)
Illinois Severe Storms and Flooding	DR-1800	9/13/2008	\$2,000,000 (estimate)
Illinois Severe Storms and Flooding	DR-1729	8/20/2007	\$2,000,000 (estimate)
Illinois Flooding	DR-1188	8/16/1997	\$2,000,000 (estimate)
Illinois Severe Winter Storm	EM-3161	12/11/2000	\$50,000 (estimate)
Illinois Winter Snow Storm	EM-3134	1/1/1999	\$50,000 (estimate)
Illinois Flooding	-	5/10/1990	\$100,000 (estimate)
Illinois Severe Storms and Flooding	DR-798	8/13/1987	\$100,000 (estimate)
Illinois Severe Storms and Flooding	DR-776	9/21/1986	\$1,000,000 (estimate)

Illinois Severe Storms and Flooding	-	8/7/1982	\$500,000 (estimate)
Illinois Severe Storms and Flooding	-	3/4/1979	\$500,000 (estimate)
Illinois Blizzards and Snowstorms	EM-3068	1/16/1979	\$5,000 (estimate)
Illinois Severe Storms, Tornadoes, Flooding	DR-509	6/18/1973	\$100,000 (estimate)
Illinois Severe Storms, Tornadoes, Flooding	DR-509	6/18/1973	\$100,000 (estimate)

Jurisdiction-Specific Hazards and Impacts

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.

Dam/Levee Failure: All roadways and schools near Addison Creek Retention Pond - "Northlake Reservoir" near West Leyden within the Village are vulnerable to dam/levee failure.

Flood: Within the Village, all roadways near viaducts - those are. US Rt 64, US Rt 20, I-294 (viaduct), US Rt 45 at US Rt 64, Grand Ave viaduct - are susceptible to flooding.

Lightning: The Village does not have generators for power outages in the event of severe lightning.

High Winds: The Village requires a substantial tree removal program following high wind events. In 2007, powerful and damaging thunderstorms moved across northern Illinois producing widespread wind damage. The most intense wind damage occurred along a path which began in far western Dupage County near the intersection of Roosevelt Road and Washington Street in West Chicago and continued east through the northern portions Lombard and Glen Ellyn, into Northlake, then across the north side of Chicago to the Lake Michigan Shore near Montrose Harbor.

Earthquake: The Village would require bridge/roadway improvements following earthquakes.

Snow: In the event of snow events, the Village requires warming shelters support.

Blizzards: In the event of blizzards, the Village requires warming shelters support.

Extreme Cold: In the event of extreme cold events, the Village requires warming shelter support.

Tornado: The Village would benefit from cleaning support following tornadoes.

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	Flood	51
2	Severe Weather	51
3	Severe Winter Weather	32
4	Tornado	24
5	Earthquake	21
6	Dam Failure	6
7	Drought	4

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 N5.1 —Consider participation in the Community Rating System.						
Ongoing	Flood	3, 4, 5, 6, 7, 9, 10, 11, 13	Building	Low	General revenue	Long-term
Action N5.2 —Remove Addison Creek dam at Grant Park.						
Complete	Dam Failure, Flood	1, 9, 13	Building	High	Bonds, General Revenue, CIP, Grants	Completed
Action N5.3 —Support County/Statewide/Federal all hazard initiatives.						
Ongoing	All Hazards	1, 8	Police, Planning	Low	City	Long-term
Action N5.4 —Where appropriate, support retrofitting, purchase, or relocating of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority.						

Ongoing	Flood	7, 13	Building, Planning, PW	High	FEMA Hazard Mitigation Grants, Local Funds	Long-term
Action N5.5 —Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.						
Completed	Flood	4, 6, 9	Building	Low	General revenue	Completed
Action N5.6 —Implement recommendations identified in the City of Northlake Comprehensive plan of 2013 and other comprehensive flood hazard management plans.						
Ongoing	All	3, 4, 6, 10, 13	PW/Building	High	General revenue	Ongoing
Action N5.7 —Inform and educate the public on hazard mitigation preparedness via local newspapers and envelope stuffers.						
Complete	All Natural Hazards	6, 8	City	Low	City	Completed
Action N5.8 —Install all Tornado warning system on northwestern boundaries of city.						
Ongoing	Tornado	1, 5	City	Med	Grant	Long-term
Action N5.9 —Continue to participate in general mutual-aid agreements with adjoining jurisdictions for cooperative response to all hazard and disasters.						
Complete	All Natural Hazards	1, 8	Police Dept., Fire Dept.	Low	General revenue	Completed
Action N5.10 —Replace existing failed drainage systems with adequately sized drainage systems.						
Complete	Flood	1, 2, 9	Building, MWRD	High	Grants, MWRD Phase-II, Bonds, CIP	Completed
Action N5.11 —Identify and Replace/Retrofit vulnerable bridges and roadways within municipality.						
Ongoing	Flood	1, 2	Police, Planning	High	Local Funds, Grants	Long-term
Action N5.12 —Where appropriate, provide soil stabilizations for existing wetlands or flood prone properties						

Complete	Flood	1, 9, 13	Building, Planning, PW	High	Grant	Completed
Action N5.13 —Develop department continuity of operations plans for all city departments.						
Ongoing	All Natural Hazards	1, 8	PW	Low.	City	Long-term
Action N5.14 —Seek land acquisition opportunities for open space use and preservation in areas of high vulnerability due to multiple risk exposure.						
Ongoing	All Natural Hazards	1, 7, 13	Planning	High	Grant	Long-term
Action N5.15 —Develop program of overhead check valve/overhead sewer system to mediate basement flooding						
Completed	Flood	1, 7	PW	Med		Completed
Action N5.16 —Continue to support the countywide actions identified in this plan.						
Ongoing	All	All	City	Low	General Fund	Short- and long-term
Action N5.17 —Actively participate in the plan maintenance strategy identified in this plan.						
Ongoing	All	3, 4, 6	DHSEM, City	Low	General Fund	Long-term
Action N5.18 —Decrease flooding at railroad viaducts in Northlake.						
New	Flood	2, 3, 13	City of Northlake	High	Federal, State and County Grants	2022
Action N5.19 —#1 - Roadway flash flooding at viaducts (runoff from train tracks); #2 - Green infrastructures were needed along railroad tracks or other project areas - Green Alley Program.						
New	Flood, Hazardous Materials Incident	2, 3, 13	Clooney/MWRDGC/IDOT/Railroad	High	Clooney/MWRDGC/IDOT/Railroad	2022
Action N5.20 —Addison Creek Wetland Restoration Project						
Completed	Flood	2, 3, 13	MWRD	\$4,544,450; High	Local/MWRD	Completed
Action N5.21 —Northlake Flood-Prone Property Acquisition						

Completed	Flood	2, 3, 13	MWRD	\$1,184,018; High	Local/MWR D	Completed
Action N5.22 —Implement the Streambank Stabilization along Addison Creek - Phase I						
New	Flood	2, 3, 13	MWRD	\$998,696; High	Unknown	Unknown
Action N5.23 —Implement the Addison Creek Channel Improvements						
New	Flood	2, 3, 13	MWRD	\$43,400,000 ; High	Unknown	Unknown
(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years.						

TABLE: MITIGATION STRATEGY PRIORITY SCHEDULE							
Action Number	Number of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority (a)
1	9	Medium	Low	Yes	No	Yes	High
2	3	High	High	Yes	Yes	No	Medium
3	2	Medium	Low	Yes	No	Yes	High
4	2	High	High	Yes	Yes	No	Medium
5	3	Medium	Low	Yes	No	Yes	High
6	5	High	High	Yes	Possibly	Yes	High
7	2	Low	Low	Yes	No	Yes	High
8	2	High	Medium	Yes	Yes	No	Medium
9	2	Medium	Low	Yes	No	Yes	High
10	3	High	High	Yes	Yes	No	Medium
11	2	High	High	Yes	Yes	No	Medium
12	3	High	High	Yes	Yes	No	Medium
13	2	Medium	Low	Yes	Yes	Yes	High
14	3	High	High	Yes	Yes	No	Medium
15	2	High	Medium	Yes	Yes	No	Medium

16	13	Medium	Low	Yes	No	Yes	High
17	3	Low	Low	Yes	Yes	Yes	High
18	3	High	High	Yes	Yes	Unknown	High
19	3	High	High	Yes	Unknown	Unknown	High
20	3	Unknown	High	Yes	Unknown	Unknown	High
21	3	Unknown	High	Yes	Unknown	Unknown	High
22	3	Unknown	High	Yes	Unknown	Unknown	Unknown
23	3	Unknown	High	Yes	Unknown	Unknown	Unknown
(a) See Chapter 1 for explanation of priorities.							

New Mitigation Actions

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

Action N-5.18

Mitigation Action	Decrease flooding at railroad viaducts in Northlake.
Year Initiated	2019
Applicable Jurisdiction	City of Northlake, IDOT and Union Pacific Railroad
Lead Agency/Organization	City of Northlake
Supporting Agencies/Organizations	IDOT and Union Pacific Railroad
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. • Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes.
Potential Funding Source	Federal, State and County Grants
Estimated Cost	Unknown
Benefits (loss avoided)	The City of Northlake has several roadways that have railroad viaducts that have been closed due to standing water runoff after sudden intense rainfalls. This has lasted for over 24 hours. During large rain events the entire city is closed to any egress

Projected Completion Date	2022
Priority and Level of Importance (Low, Medium, High)	High Priority
Benefit Analysis (Low, Medium, High)	High—Project will provide an immediate reduction of risk exposure for life and property.
Cost Analysis (Low, Medium, High)	High—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Although the noted roadways are located within the boundaries of the City of Northlake IDOT has almost 100% control of the project scope. Northlake could work with State and County traffic planners do develop raised roadways and better water management coming from the railroads above the viaducts. Temporary detour planning should also be considered.

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 N-5.19

Mitigation Action	#1 - Roadway flash flooding at viaducts (runoff from train tracks) #2 - Green infrastructures were needed along railroad tracks or other project areas - Green Alley Program.
Year Initiated	2019
Applicable Jurisdiction	City of Northlake
Lead Agency/Organization	Clooney/MWRDGC/IDOT/Railroad
Supporting Agencies/Organizations	Clooney/MWRDGC/IDOT/Railroad
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. • Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes.
Potential Funding Source	Clooney/MWRDGC/IDOT/Railroad
Estimated Cost	N/A
Benefits (loss avoided)	Traffic flow
Projected Completion Date	TBD

Priority and Level of Importance (Low, Medium, High)	High priority
Benefit Analysis (Low, Medium, High)	High - Project will provide an immediate reduction of risk exposure for life and property.
Cost Analysis (Low, Medium, High)	High - Existing funding will not cover the cost of the project; implementation would require new revenue through 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:	

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
X	Hazardous Materials Incident

Action N-5.22

Mitigation Action	Implement the Streambank Stabilization along Addison Creek - Phase I
Year Initiated	2019
Applicable Jurisdiction	City of Northlake
Lead Agency/Organization	MWRD
Supporting Agencies/Organizations	City of Northlake
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 and potential damage from such activities.
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. • Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes.
Potential Funding Source	N/A
Estimated Cost	\$998,696
Benefits (loss avoided)	N/A
Projected Completion Date	TBD
Priority and Level of Importance (Low, Medium, High)	N/A
Benefit Analysis (Low, Medium, High)	N/A
Cost Analysis (Low, Medium, High)	High
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description

Action/Implementation Plan and Project Description:	ID: ADCR-7A, 9 Contract: 14-108-3F Watershed: Lower Des Plaines Location: Northlake; North Riverside, IL Stabilizing 1,950 feet of Addison Creek adjacent to Fullerton Avenue in the City of Northlake and 410 linear feet of streambank adjacent to 19th Avenue in the Village of North Riverside. Stabilization methods include the installation of native vegetation, a vegetated geogrid, turf reinforcing mat, and the placement of riprap.
--	--

Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	Awarded, construction to begin in Spring 2019.
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 N-5.23

Mitigation Action	Implement the Addison Creek Channel Improvements
Year Initiated	2019
Applicable Jurisdiction	City of Northlake
Lead Agency/Organization	MWRD
Supporting Agencies/Organizations	City of Northlake
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 and potential damage from such activities.
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. • Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes.
Potential Funding Source	N/A
Estimated Cost	\$43,400,000
Benefits (loss avoided)	N/A
Projected Completion Date	TBD
Priority and Level of Importance (Low, Medium, High)	N/A
Benefit Analysis (Low, Medium, High)	N/A
Cost Analysis (Low, Medium, High)	High
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description

Action/Implementation Plan and Project Description:	ID: ADCR-6B Contract: 11-187-3F Watershed: Lower Des Plaines Location: Northlake, Melrose Park, Stone Park, Bellwood, Westchester, and Broadview, IL Improves channel conveyance through channel improvements from Northlake to Broadview that include open channel, soldier piles wall, articulated concrete blocks, gabions, and channel clearing. Removal of 3 bridges along Harrison St. at 30th Ave., 31st Ave., and 32nd Ave.
--	---

Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	Executed intergovernmental agreements with all six villages. Final Design. Right-of-way acquisition in progress.
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 N-5.1

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.1	Consider participation in the Community Rating System.	
Status Description: No		X
<p>Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken</p>		

Action N-5.3

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.3	Support County/Statewide/Federal all hazard initiatives.	
Status Description: Yes		O
<p>Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken</p>		

Action N-5.6

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.6	Implement recommendations identified in the City of Northlake Comprehensive plan of 2013 and other comprehensive flood hazard management plans.	
Status Description: Yes		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 N-5.8

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.8	Install all Tornado warning system on northwestern boundaries of city.	
Status Description: No		X
<p align="center">Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken</p>		

Action N-5.11

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.11	Identify and Replace/Retrofit vulnerable bridges and roadways within municipality	
Status Description: Yes		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 N-5.13

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.13	Develop department continuity of operations plans for all city departments.	
Status Description: Yes		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 N-5.14

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.14	Seek land acquisition opportunities for open space use and preservation in areas of high vulnerability due to multiple risk exposure.	
Status Description: Yes	Three (3) properties purchased and removed from flood hazard areas.	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 N-5.16

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.16	Continue to support the countywide actions identified in this plan.	
Status Description: Yes		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 N-5.17

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.17	Actively participate in the plan maintenance strategy identified in this plan.	
Status Description: Yes		O
<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>		

Completed Mitigation Actions

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

Action N-5.2

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.2	Remove Addison Creek dam at Grant Park.	
Status Description: Yes		C
<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 N-5.4

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.4	Where appropriate, support retrofitting, purchase, or relocating of structures located in hazard prone areas to protect structures from future damage, with repetitive loss and severe repetitive loss properties as priority.	
Status Description: Yes	Three (3) properties purchased and removed from flood hazard areas.	C
<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 N-5.5

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.5	Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.	
Status Description: Yes		C
<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 N-5.7

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.7	Inform and educate the public on hazard mitigation preparedness via local newspapers and envelope stuffers.	
Status Description: Yes		C
<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 N-5.9

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.9	Continue to participate in general mutual-aid agreements with adjoining jurisdictions for cooperative response to all hazard and disasters.	
Status Description: Yes		C
<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 N-5.10

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.10	Replace existing failed drainage systems with adequately sized drainage systems	
Status Description: Yes		C
<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 N-5.12

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.12	Where appropriate, provide soil stabilizations for existing wetlands or flood prone properties	
Status Description: Yes	Lowered and cleaned low lying area adjacent to creek within flood hazard areas. Under review for 2017 project list.	C
<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 N-5.15

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-5.15	Develop program of overhead check valve/overhead sewer system to mediate basement flooding.	
Status Description: Yes	Program has been passed and implemented.	C
<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 N-5.20

Mitigation Action	Addison Creek Wetland Restoration Project
Year Initiated	2018
Applicable Jurisdiction	City of Northlake
Lead Agency/Organization	MWRD
Supporting Agencies/Organizations	City of Northlake
Applicable Goal	
Applicable Objective	
Potential Funding Source	
Estimated Cost	\$4,544,450; MWRD Contribution: \$1,000,000
Benefits (loss avoided)	
Projected Completion Date	
Priority and Level of Importance (Low, Medium, High)	
Benefit Analysis (Low, Medium, High)	
Cost Analysis (Low, Medium, High)	
Actual Completion Date	11/1/2018

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	ID: ADCR-7B Contract: 15-IGA-13 Watershed: Lower Des Plaines Location: Northlake, IL A cost-sharing agreement with the City of Northlake providing streambank stabilization along Addison Creek from Wolf Road to Palmer Avenue. Included removal of two degraded dams and restoration of riparian area and wetland creation.

Mitigation Action and Project Maintenance		
Year	Status	Comments
2018	New	
2019		
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 N-5.21

Mitigation Action	Northlake Flood-Prone Property Acquisition
Year Initiated	2019
Applicable Jurisdiction	City of Northlake
Lead Agency/Organization	MWRD
Supporting Agencies/Organizations	City of Northlake
Applicable Goal	
Applicable Objective	
Potential Funding Source	
Estimated Cost	\$1,184,018
Benefits (loss avoided)	
Projected Completion Date	
Priority and Level of Importance (Low, Medium, High)	
Benefit Analysis (Low, Medium, High)	
Cost Analysis (Low, Medium, High)	
Actual Completion Date	12/31/2018

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	ID: Northlake FPPA Contract: 16-IGA-14 Watershed: Lower Des Plaines Location: Northlake, IL In collaboration with the City of Northlake, purchased 7 flood-prone properties along Addison Creek.

Mitigation Action and Project Maintenance		
Year	Status	Comments
2018	New	
2019		
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

Future Needs to Better Understand Risk/Vulnerability

No needs have been identified at this time.

Additional Comments

Within the municipal boundaries of the City of Northlake is the “Northlake Reservoir” (STR. 86) This structure is owned and managed by the Metropolitan Water Reclamation District of Greater Chicago (MWRD). The Northlake Reservoir feeds into Addison Creek which is a source of localized flooding. This is an earthen supported structure that when at capacity holds 415 acre-feet of flood water. Parts of the structure are about 6 feet higher than adjacent properties. The City of Northlake considers this a low risk hazard (Dam Failure) should it breach.

HAZUS-MH Risk Assessment Results

NORTHLAKE EXISTING CONDITIONS	
2010 Population	12,323
Total Assessed Value of Structures and Contents	\$3,951,970,563
Area in 100-Year Floodplain	193.67 acres
Area in 500-Year Floodplain	236.00 acres
Number of Critical Facilities	55

HAZARD EXPOSURE IN NORTHLAKE						
	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	1,180	363	\$204,553,289	\$169,401,327	\$373,954,616	9.46%

500-Year	1,430	440	\$222,195,951	\$179,518,716	\$401,714,668	10.16%
Tornado						
100-Year	—	—	\$802,135,503	\$681,882,309	\$1,484,017,812	0%
500-Year	—	—	\$811,738,413	\$691,627,309	\$1,503,365,722	0%

ESTIMATED PROPERTY DAMAGE VALUES IN NORTHLAKE				
	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. #2	\$0	\$0	\$0	0.00%
U. Salt Cr. #2	\$0	\$0	\$0	0.00%
Earthquake				
1909 Historical Event	\$24,063,442	\$8,005,147	\$32,068,589	0.81%
Flood				
10-Year	\$2,097,111	\$3,722,690	\$5,819,801	0.15%
100-Year	\$15,836,817	\$27,043,375	\$42,880,192	1.09%
500-Year	\$20,171,845	\$34,496,561	\$54,668,406	1.38%

Tornado				
100-Year	\$80,213,550	\$68,188,231	\$148,401,781	3.76%
500-Year	\$118,513,808	\$100,977,587	\$219,491,395	5.55%

Hazard Mapping





