

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

Northfield Annex

FINAL

July 2019

Prepared for:



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

Primary Point of Contact	Alternate Point of Contact
Thomas Burke, Asst. Fire Chief 1800 Winnetka Rd. Northfield IL 60093 Telephone: 847-441-3800 Email: tburke@northfieldil.org	Michael Nystrand, Fire Chief 1800 Winnetka Rd. Northfield IL 60093 Telephone: 847-441-3800 Email: mnystrand@northfieldil.org

Jurisdiction Profile

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

- **Date of Incorporation:** 1926
- **Current Population:** 5,422 based upon the 2018 US census population estimates.
- **Population Growth:** The Village began to attract other families who liked its small and country atmosphere, all of which still exists today. The population surged from 320 residents in 1930 to 4,887 in 1980 and 5,389 in 2000. Since 2000, the population has remained relatively stable.
- **Location and Description:** Located 17 miles north of the City of Chicago via highway or Commuter Train Northfield has easy access to two of Chicago's biggest highway systems I94 and I-294. I-94 runs thru the town. Northfield is border by the following towns, to the east is Winnetka, to the south Wilmette, to the west Glenview, to the north Northbrook. Northfield is home to the Corporate Offices of Kraft Foods Inc
- **Brief History:** When settlers first arrived, Northfield was a remote swamp. Northfielders were often called the "river folks" by residents of neighboring communities because of their struggles to get back and forth to church or the beach in their wagons, crossing the Skokie Lagoons and Middle Fork branch of the Chicago Rivers. From this small beginning the Village began to attract other families who liked its small size and country atmosphere.
- **Climate:** The climate of Northfield and the Chicago area is classified as humid continental, with all four seasons distinctly represented: wet springs; hot and humid summers; pleasant autumns; and cold winters. Annual precipitation is average, and reaches its lowest points in the months of January and February, and peaks in the months of May and June. Winter proves quite variable. Seasonal snowfall in the Village has ranged from 9 – 90 inches. The daily average temperature in January at Midway Airport is 24.8 °F (-4.0 °C), and temperatures often stay below freezing for several consecutive days or 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 areas wettest and unpredictable season. Winter like conditions can persist well into April and even occasionally into May. Thunderstorms are especially prevalent in the spring time as the areas lakeside location makes it a center of conflicts between large volumes of warmer and colder air, triggering many kinds of severe weather. Temperatures vary tremendously in the springtime; March is the month with the greatest span between the record highs and lows. On a typical summer day, humidity is usually moderately high and temperatures ordinarily reach anywhere between 78 and 92 °F (26 and 33 °C). The extreme heat that the Chicago area is capable of experiencing during the height of the summer season can persist into the autumn season. Temperatures have reached 100 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 Northfield is a home rule municipality governed by a Village President and six trustees which operates under a council-manager form of government, in which a board of six trustees and a president are elected at large on a rotating four year election cycle. Village operations and administration are run by a professional manager, who is

hired at the discretion of the Village board. The village operates 6 departments including: Community Development, Finance, Fire-Rescue, Office of the Village Manager/Village Clerk, Police Department, and Public Works Department.

- **Development Trends:** The Village has formed a committee with formulating redevelopment alternatives for the Village Center district. The goal of the task force is to create a viable plan to enhance the area as a pedestrian-oriented retail and service core for the Northfield community. In 2019, there was an application submitted for Walden Lane Planned Unit Development to build single family homes.

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	NVC, Appendix C, Articles IV, V, VI and VII, 9/17/2013
Zonings	Yes	No	No	Yes	NVC, Appendix A, 9/17/2013
Subdivisions	Yes	No	No	No	NVC, Appendix B, 9/17/2013
Stormwater Management	Yes	No	Yes	Yes	<i>State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA. NVC, Chapter 7, Article IV, 9/17/2013</i>
Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	No	No	Yes	Yes	(765 ILCS 77/) Residential Real Property Disclosure Act.
Growth Management	No	No	No	No	

Site Plan Review	No	No	No	No	
Public Health and Safety	Yes	No	Yes	Yes	Cook County Board of Health. NVC, Chapter 8, 9/17/2013
Environmental Protection	Yes	No	No	No	NVC, Chapter 10, 9/17/2013
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Northfield Vision Plan, 1999
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>					Yes, plan includes a redevelopment component.
Floodplain or Basin Plan	No	No	No	No	
Stormwater Plan	No	No	MWRD	No	Regional stormwater impacts are managed by MWRD. The Village lies within the North Branch of the Chicago River watershed planning area of MWRD's comprehensive Stormwater Master Planning Program
Capital Improvement Plan	No	No	No	No	
<i>What types of capital facilities does the plan address?</i>					N/A
<i>How often is the plan revised/updated?</i>					N/A
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	Yes	No	Yes	Yes	The Economic Development Commission is charged with

					reviewing all economic development related programs and incentives including tax incentives offered through the Cook County 6b program. Comprehensive Plan includes an ED component
Shoreline Management Plan	No	No	No	No	
Response/Recovery Planning					
Comprehensive Emergency Management Plan	No	No	Yes	Yes	Cook County DHSEM
Threat and Hazard Identification and Risk Assessment	No	No	Yes	No	Cook County DHSEM Preparing THIRA
Terrorism Plan	No	No	Yes	Yes	Cook County DHSEM
Post-Disaster Recovery Plan	No	No	Yes	Yes	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	No
Authority to Levy Taxes for Specific Purposes	No

User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No

TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	Village Engineer
Planners or engineers with an understanding of natural hazards	Yes	Village Engineer
Staff with training in benefit/cost analysis	No	
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Cook County GIS Consortium
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Village Manager
Grant writers	No	

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Community Development
Who is your jurisdiction’s floodplain administrator? (department/position)	Village Engineer
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	7/15/08
When was the most recent Community Assistance Visit or Community Assistance Contact?	2/22/06

Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	Yes
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 Maybe

TABLE: COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	Unknown	N/A
Public Protection/ISO	Yes	Unknown	N/A
StormReady	Yes	Gold (Countywide)	2014
Tree City USA	Yes	Participating	1984

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: 20
- Number of FEMA-Identified Severe Repetitive Loss Properties: None
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: None

TABLE: NATURAL HAZARD EVENTS			
Type of Event	FEMA Disaster Number (if applicable)	Date	Preliminary Damage Assessment
Flash Flood	-	8/18/2016	-
Flash Flood	-	7/23/2016	-
Severe Winter Weather	1960-IL	3/17/2011	\$22,00
Severe Storm/Flood	1800-IL	10/15/2008	\$33,800
Severe Summer Weather	1729-IL	9/25/1997	\$135,000

Jurisdiction-Specific Hazards and Impacts

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Cook County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are **relevant** and **unique** to the municipality.

Flood: The Village of Northfield has five (5) flood-prone areas, including, Winnetka, Latrobe, and Wagner Roads, Jeffery Middlefork, and Edens Expressway at Winnetka.

Extreme Heat: Our elderly population ([12.6% of the population is over 65](#)) is vulnerable to the impacts of extreme heat.

Extreme Cold: Our elderly population is vulnerable to the impacts of extreme cold.

Ice Storms: Our elderly population is vulnerable to the impacts of ice storms.

Hazard Risk Ranking

The *Hazard Risk Ranking Table* below presents the ranking of the hazards of concern. Hazard area extent and location maps are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

TABLE: HAZARD RISK RANKING		
Rank	Hazard Type	Risk Rating Score (Probability x Impact)
1	Severe Weather	54
2	Severe Winter Weather	54
3	Earthquake	36
4	Tornado	33
4	Flood	33
5	Drought	2
6	Dam Failure	0

Mitigation Strategies and Actions

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- New Mitigation Actions - New actions identified during this 2019 update process
- Ongoing Mitigation Actions - Ongoing actions with no definitive end or that are still in progress. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- Completed Mitigation Actions - An archive of all identified and completed projects, including completed actions since 2014.

The *Hazard Mitigation Action Plan Matrix Table* below lists the actions that make up the jurisdiction’s hazard mitigation plan. The *Mitigation Strategy Priority Schedule Table* identifies the priority for each action.

TABLE: HAZARD MITIGATION ACTION PLAN MATRIX						
Status	Hazards Mitigated	Objectives Met	Lead Agencies	Estimated Cost	Sources of Funding	Timeline/Projected Completion Date (a)
Action N4.1—Test emergency notification system. Smart 911						
Ongoing	All Hazards	1, 5	Fire Dept.	Low	General revenue	Short-term
Action N4.2—Sunset ridge-Willow/Old Willow Road Storm Sewer						
Removed	Flood, Severe Weather	1, 2, 9	Public Works	\$1.7 Million; High	Grants/Bonds, MWRD-Phase II	Removed
Action N4.3—Middle Fork Channel Improvements						
Ongoing	Flood, Severe Weather	1, 2, 9	Public Works	\$5.1 Million; High	Grants/Bonds, MWRD-Phase II	Short-term
Action N4.4—Willow-Lagoon Flood Barrier						
Ongoing	Flood, Severe Weather	1, 2, 9	Public Works	\$3 Million; High	Grants/Bonds, MWRD-Phase II	Long-term

Action N4.5—Winnetka-Meadowview Flood Barrier						
Ongoing	Flood, Severe Weather	1, 2, 9	Public Works	\$2.6 Million; High	Grants/Bonds, MWRD-Phase II	Long-term
Action N4.6—South Central Willow Road Storm Sewer						
Completed	Flood, Severe Weather	1, 2, 9	Public Works	\$2.3 Million; High	Grants/Bonds, MWRD-Phase II	Completed
Action N4.7—Winnetka Road Storm Sewer						
Ongoing	Flood, Severe Weather	1, 2, 9	Public Works	\$2.5 Million; High	Grants/Bonds, MWRD-Phase II	Long-term
Action N4.8—Sunset Ridge-Meadowbrook Storm Sewer						
Ongoing	Flood, Severe Weather	1, 2, 9	Public Works	\$1.4 Million; High	Grants/Bonds, MWRD-Phase II	Long-term
Action N4.9—Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage.						
Ongoing	All	7, 13	Village	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action N4.10—Continue to support the countywide actions identified in this plan.						
Ongoing	All	All	Village	Low	General Fund	Short- and long-term Action
Action N4.11—Actively participate in the plan maintenance strategy identified in this plan.						
Ongoing	All	3, 4, 6	DHSEM, Village	Low	General Fund	Short-term
Action N4.12—Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady						
Ongoing	All	3, 4, 5, 6, 7, 9, 10, 11, 13	Village	Low	General Fund	Long-term
Action N4.13—Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements.						
Ongoing	Flooding	4, 6, 9	Village	Low	General Fund	Short-term and ongoing

Action N4.14 —Where feasible, implement a program to record high water marks following high-water events						
Completed	Flooding, Severe Weather	3, 6, 9	Village	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Completed
Action N4.15 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
Ongoing	All	3, 4, 6, 10, 13	Village	Low	General Fund	Short-term
Action N4.16 —Consider the development and implementation of a Capital Improvements Program (CIP) to increase the Village’s regulatory, financial and technical capability to implement mitigation actions.						
Ongoing	All	1, 2, 7	Village	High	CIP component of general fund (if implemented)	Long-term
Action N4.17 — Install Storm Sewer in Bosworth area						
New	Flood	2, 7, 12, 13	Village of Northfield	\$1,478,937; Medium	Local Funds	2019
(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years.						

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

8	3	Medium	High	Yes	Yes	No	Medium
9	2	High	High	Yes	Yes	No	Medium
10	13	Medium	Low	Yes	No	Yes	High
11	3	Medium	Low	Yes	Yes	Yes	High
12	9	Medium	Low	Yes	No	Yes	Medium
13	3	Medium	Low	Yes	No	Yes	High
14	3	Medium	Medium	Yes	Yes	No	Medium
15	5	Medium	Low	Yes	Yes	Yes	High
16	3	High	High	Yes	No	No	Medium
17	4	High	Medium	Yes	Unknown	Unknown	High

(a) See Chapter 1 for explanation of priorities.

New Mitigation Actions

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

Action N-4.17

Mitigation Action	Install Storm Sewer in Bosworth area
Year Initiated	2019
Applicable Jurisdiction	Village of Northfield
Lead Agency/Organization	Village of Northfield
Supporting Agencies/Organizations	Gewalt Hamilton Engineers
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.
Applicable Objective	<ul style="list-style-type: none"> • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Retrofit, purchase, or relocate structures in high hazard areas, including those known to be repetitively damaged. • Reduce natural hazard-related risks and vulnerability to potentially isolated populations within the planning area. • Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes.
Potential Funding Source	Local Funds
Estimated Cost	\$1,478,937
Benefits (loss avoided)	Assist with flooding in that area.
Projected Completion Date	2019
Priority and Level of Importance (Low, Medium, High)	High Priority
Benefit Analysis (Low, Medium, High)	High—Project will provide an immediate reduction of risk exposure for life and property.
Cost Analysis (Low, Medium, High)	Medium—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description

Action/Implementation Plan and Project Description:	Phase 1 of the Bosworth Area Storm Water Drainage Improvements starting on Jeffery Street and the unimproved Willow Road right of way. 2000Lf of pipe and Catch Basins and Inlets
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Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	
2020		
2021		
2022		
2023		

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

Ongoing Mitigation Actions

The following are ongoing actions with no definitive end or that are still in progress. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.

Action N-4.1

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.1	Test Emergency Notification System. Smart 911	
Status Description: Yes	We have used it in Emergency situations.	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-4.3

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.3	Middle Fork Channel Improvements.	
Status Description: No	No Action at this time.	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-4.4

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.4	Willow Road Flood Barrier.	
Status Description: No	No Action at this time.	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-4.5

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.5	Winnetka-Meadowview Flood Barrier.	
Status Description: No	Still on the plan. No Action Yet.	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-4.7

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.7	Winnetka Road Storm Sewer.	
Status Description: No	Still Working on Plans and Founding.	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-4.8

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.8	Sunset Ridge - Meadowbrook Storm Sewer.	
Status Description: No	No action as of now.	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-4.9

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.9	Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage.	
Status Description: No	No Action at this time.	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-4.10

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.10	Continue to support the countywide actions identified in this plan.	
Status Description: Yes	On Going.	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-4.11

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.11	Actively participate in the plan and maintenance strategy 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-4.12

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.12	Consider participation in incentive based programs such as the Community Rating System, Tree City and Storm Ready.	
Status Description: Yes	We participate in these programs.	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-4.13

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.13	Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements.	
Status Description: Yes	We continue to work on this.	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-4.15

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.15	Integrate the Hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.	
Status Description: Yes	Building department handles this on every permit they get in.	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-4.16

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.16	Consider the development and implementation of a Capital Improvements Program to increase the Village regulatory, financial and technical capability to implement mitigation actions.	
Status Description: Yes		X
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Completed Mitigation Actions

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

Action N-4.6

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.6	South Central Willow Road Storm Sewer.	
Status Description: Yes	Major Storm Sewer project Completed.	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-4.14

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# N-4.14	Where feasible, implement a program to record high water mark following high water events.	
Status Description: Yes	We have multiple devices in Storm Sewer to monitor flows and measuring devices at different locations.	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>		

Future Needs to Better Understand Risk/Vulnerability

No needs have been identified at this time.

Additional Comments

No additional comments at this time

HAZUS-MH Risk Assessment Results

NORTHFIELD EXISTING CONDITIONS	
2010 Population	5,420
Total Assessed Value of Structures and Contents	\$2,259,552,560
Area in 100-Year Floodplain	421.11 acres
Area in 500-Year Floodplain	564.52 acres
Number of Critical Facilities	20

HAZARD EXPOSURE IN NORTHFIELD						
	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	523	161	\$86,614,792	\$61,963,188	\$148,577,980	6.58%

500-Year	1,355	417	\$216,388,885	\$148,027,383	\$364,416,268	16.13%
Tornado						
100-Year	—	—	\$354,231,014	\$277,524,376	\$631,755,391	27.96%
500-Year	—	—	\$505,898,278	\$338,783,278	\$844,681,556	37.38%

ESTIMATED PROPERTY DAMAGE VALUES IN NORTHFIELD				
	Estimated Damage Associated with Hazard			% of Total Assessed Value Damaged
	Building	Contents	Total	
Dam Failure				
Buffalo Creek	\$0	\$0	\$0	0.00%
U. Salt Cr. #2	\$0	\$0	\$0	0.00%
Touhy	\$0	\$0	\$0	0.00%
U. Salt Cr. #3	\$0	\$0	\$0	0.00%
U. Salt Cr. #4	\$0	\$0	\$0	0.00%
Earthquake				
1909 Historical Event	\$3,691,736	\$694,641	\$4,386,377	0.19%
Flood				
10-Year	\$100,952	\$36,749	\$137,701	0.01%
100-Year	\$4,818,437	\$2,421,555	\$7,239,992	0.32%
500-Year	\$14,188,750	\$9,062,466	\$23,251,216	1.03%

Tornado				
100-Year	\$35,423,101	\$27,752,438	\$63,175,539	2.80%
500-Year	\$73,861,149	\$49,462,359	\$123,323,507	5.46%

Hazard Mapping





