

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

Winnetka 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
Alan Berkowsky, Fire Chief 428 Green Bay Road Winnetka, IL 60093-2576 Telephone: 847-716-3309 Email Address: Aberkowsky@Winnetka.org	Marc Hornstein, Police Chief 410 Green Bay Road Winnetka, IL 60093-2576 Telephone: 847-716-3400 Email Address: Mhornstein@Winnetka.org

Jurisdiction Profile

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

- **Date of Incorporation:** 1869
- **Current Population:** The 2018 US Census population estimate is 12,385.
- **Population Growth:** Based on the US Census population estimates, Winnetka has a population of 12,385, showing little change since 2000. With mainly single-family residential dwellings, the population has remained relatively stable over the last 18 years.
- **Location and Description:** Winnetka is located just 16 miles north of Downtown Chicago nestled between Glencoe to the north, Kenilworth to the south, and Northfield to the west, with Lake Michigan on its eastern border. According to CNN Money, the Village has been recognized as one of the most exclusive and wealthiest suburbs in the nation. The building stock is mainly single-family homes with four shopping districts throughout the Village. Winnetka produces its own water and electricity with both plants just off the Lake Michigan shoreline. According to the US Census Bureau, the Village of Winnetka has a total land area of 3.81 square miles.
- **Brief History:** The Village was incorporated in 1869, with its first house built in 1836. During the Great Depression, the Village rebuilt the railroad right-of-ways and recessed them below grade to eliminate railroad gate crossing accidents. As a result, there are no railroad gate crossings in the Village. Winnetka has been providing fire protection to the Village of Kenilworth since the 1930s and both fire and police protection to the unincorporated areas of Cook County (also known as the Woodley area) adjacent to the Village. Numerous movies were filmed in Winnetka, but the most notable was the house used for *Home Alone* in 1990.
- **Climate:** Together with the Chicago area, Winnetka's climate 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 area's wettest and unpredictable season. Winter-like conditions can persist well into April and even occasionally into May. Thunderstorms are especially prevalent in the springtime as the areas lakeside location makes it a center of conflicts between large volumes of warmer and colder air, triggering many kinds of severe weather. Temperatures vary tremendously in the springtime; March is the month with the greatest span between the record highs and lows. On a typical summer day, humidity is usually moderately high and temperatures ordinarily reach anywhere between 78 and 92 °F (26 and 33 °C). The extreme heat that the Chicago area is capable of experiencing during the height of the summer season can persist into autumn. Temperatures have reached 100 °F high and subzero lows below –18 °C. Fall can bring heavy thunderstorms, many of which are capable of producing flooding. The average first accumulating snow occurs around November 19. Over the last two years, the Village has experienced significant rainfall and torrential flooding resulting in a plan to

implement a stormwater relief program. This plan is currently in discussion with all stakeholders.

- **Governing Body Format:** The Village of Winnetka follows the Village Manager form of government with the Manager responsible for the day-to-day operations of the Village and for hiring staff. This body of government will assume the responsibility for the adoption and implementation of this plan. The Manager reports to the Village President and six trustees elected at-large through a caucus system of recommending candidates for office. There are eight lower boards and commissions that are appointed by and report to the Village Council including Fire Pension, Police Pension, Plan Commission, Design Review Board, Environmental & Forestry Commission, Landmark Preservation Commission, Zoning Board of Appeals and Business Community Development Commission. The Village has seven departments including Administration, Fire, Police, Finance, Water & Electric, Community Development, and Public Works.
- **Development Trends:** With mainly single-family homes, the Village has seen an uptick in demolition permits and newer homes being built on the same lots. Recent studies of its commercial areas indicate some additional emphasis is needed on economic development for the Village's shopping districts. The Village is also in the process of securing funding for the stormwater relief project utilizing bonds and a utility fee to cover the multi-million dollar work that is planned over the next several years. The utility fee is charged to each property owner and is based upon the amount of impervious surface on the property. In 2017, one mixed-use development was proposed for construction, eventually passing additional planning hurdles in 2018. Current plans call for a five-story building with a height of 59 feet. It would include nearly 30,000 square feet of street-level commercial space, 355 parking spaces, 36 apartments, 15 condos, and seven townhome units.

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	Yes	Yes	In accordance with Public Act 096-0704, Illinois has adopted the IBC as its state building code. Winnetka Municipal Code adopted IBC in 2009, and adopted the 2015 International Codes in 2019.
Zonings	Yes	No	No	Yes	(65 ILCS 5/) Illinois Municipal Code. Winnetka Municipal Code MC- 221-1999
Subdivisions	Yes	No	No	No	Winnetka Municipal Code MC- 221-1999
Stormwater Management	Yes	No	Yes	Yes	State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA.

					Winnetka Municipal Code MC- 8-2001
Post Disaster Recovery	No	No	No	No	
Real Estate Disclosure	No	No	Yes	Yes	(765 ILCS 77/) Residential Real Property Disclosure Act.
Growth Management	No	No	No	No	
Site Plan Review	Yes	No	No	No	Design Review Board Adopted by Ordinance 1997.
Public Health and Safety	Yes	No	Yes	Yes	Cook County Board of Health. Winnetka MC MC-1-2004
Environmental Protection	Yes	No	No	No	MC-3-2011 (3.04.050)
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	“Winnetka 2012 Comprehensive Plan”
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>					No
Floodplain or Basin Plan	No	No	No	No	
Stormwater Plan	Yes	No	Yes	No	Regional stormwater impacts are managed by MWRD. The Village lies within the North Branch of Chicago River watershed planning area of MWRD’s comprehensive Stormwater Master Planning Program. The

					Village is also in the process of a large project to address flooding from storm water.
Capital Improvement Plan	Yes	No	No	No	
<i>What types of capital facilities does the plan address?</i>					Buildings, vehicles and infrastructure with a life expectancy of more than 20 years.
<i>How often is the plan revised/updated?</i>					Annual
Habitat Conservation Plan	No	No	No	No	
Economic Development Plan	No	No	Yes	Yes	ULI Report in Progress
Shoreline Management Plan	No	No	Yes	No	Army Corp of Engineers
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	No	Yes	Yes	Cook County DHSEM
Threat and Hazard Identification and Risk Assessment	No	No	Yes	No	Cook County DHSEM Preparing THIRA
Terrorism Plan	Yes	No	Yes	Yes	Cook County DHSEM
Post-Disaster Recovery Plan	Yes	No	No	No	
Continuity of Operations Plan	Yes	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	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	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	Community Development
Engineers or professionals trained in building or infrastructure construction practices	Yes	Community Development - Public Works
Planners or engineers with an understanding of natural hazards	Yes	Community Development - Public Works
Staff with training in benefit/cost analysis	Yes	Several Departments
Surveyors	Yes	Contracted when needed
Personnel skilled or trained in GIS applications	Yes	Cook County GIS Consortium
Scientist familiar with natural hazards in local area	Yes	Public Works
Emergency manager	Yes	Fire Department
Grant writers	Yes	All - Contracted Position

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

What department is responsible for floodplain management in your jurisdiction?	Public Works
Who is your jurisdiction’s floodplain administrator? (department/position)	Public Works/ 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?	Reviewed MWRD's watershed management ordinance in Fall 2017
When was the most recent Community Assistance Visit or Community Assistance Contact?	2016 was most recent contact Recertified in June 2019
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?	Yes, currently working on classification

TABLE: COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Community Rating System	Yes	6	6/2016
Building Code Effectiveness Grading Schedule	Yes	5/5	8/20/12
Public Protection/ISO	Yes	3	5/2019
StormReady	Yes	Gold (Countywide)	2014
Tree City USA	Yes	N/A	2013

Jurisdiction-Specific Natural Hazard Event

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

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

- Number of FEMA-Identified Repetitive Loss Properties: 18
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0

Type of Event	FEMA Disaster Number (if applicable)	Date	Preliminary Damage Assessment
Severe Weather	DR-4116	4/2013	-
Severe Storm/Flooding	9325781	6/2011	-
Severe Winter Storm	9314001	2/2011	-
Severe Winter Storm	DR-1960	1/2011	-
Severe Storm	DR-1800	9/2008	-
Windstorm	DR-1929	8/2007	-
Severe Storm/Flooding	152870	8/2001	-
Severe Winter Storm	EM-3134	1/1999	-
Severe Storm/Flooding	DR-798	8/1987	-
Severe Storm/Flooding	DR-776	9/1986	-
Severe Winter Storm	EM-3068	1/1979	-

Jurisdiction-Specific Hazards and Impacts

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

Flood: The Village has experienced impassable streets and residential flooding (especially in the west section of the Village). The area in the floodplain (around gold club) is particularly susceptible to flooding but can also be used for stormwater retention. Basements can be flooded and residents need to be educated on when and how best to seek shelter.

Wind/Tornado: Above ground power lines are susceptible to winds. Shelter plans must consider the impact of the winds on the power grid. 13.6% of the residents are 65 and over and need a safe place during an extended power outage.

Dam/Levee Failure: While none has occurred, a structural failure at the Skokie Lagoon Dam could impact the area.

Drought: While no drought has occurred for a substantial period, water quality and increasing temperatures are a concern for the community.

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	51
4	Tornado	30
5	Earthquake	18
6	Drought	6
7	Dam Failure	2

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 W6.1 —Work towards completion of storm water improvements to mitigate flooding.						
Ongoing	Severe Weather, Flooding	1, 2, 3, 6, 8, 9	Department of Public Works	\$41,000,000; Medium	Bonds, Storm Water Utility Fee	Short-term
Action W6.2 —Encourage the burying of electrical services lines underground to protect from weather events.						
Ongoing	All	1, 10	Electric Department	\$54,700,000; High	Capital Improvement Fund, Grants	Long-term
Action W6.3 —Encourage stormwater detention and runoff reduction through code enhancements.						
Completed	Severe Weather, Flooding	1, 3, 4, 9, 11	Public Works, Community Development	Low	General Fund	Completed
Action W6.4 —Develop a communications link with the Cook County Forest Preserve District to alert Winnetka in the event of a structural concern regarding the Skokie Lagoon Dam.						

Ongoing	Severe Weather, Flooding, Dam Failure	2, 5, 8	Public Works	Low	General Fund	Short-term
Action W6.5 —Update Emergency Operations Plans.						
Completed	All	1, 2, 5, 8	Fire Department	Low	General Fund	Completed
Action W6.6 —Continue to support the implementation (Countywide actions), monitoring, maintenance, and updating of this Plan as defined in Volume 1.						
Completed	All	All	DHSEM, Fire Department	Low	General Fund	Completed
Action W6.7 —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	Severe Weather, Flooding	4, 6, 9	Public Works	Low	General Fund	Completed
Action W6.8 —Once CRS classification is confirmed, Village will maintain/enhance that classification through its existing floodplain management program.						
Completed	All	3, 4, 5, 6, 7, 9, 10, 11, 13	Public Works	Low	General Fund	Completed
Action W6.9 —Work with all schools on severe weather drills.						
Completed	Severe Weather, Tornado	2, 5, 6, 8	Fire Department	Low	General Fund	Completed
Action W6.10 —Update shelter plan for extreme weather conditions.						
Ongoing	Severe Weather, Severe Winter Weather, Tornado	6, 8	Fire Department	Low	General Fund	Long-term
Action W6.11 —Develop an educational program to inform residents on how to prepare for severe weather events.						
Ongoing	Severe Weather,	1, 6, 8, 11	Multiple Departments	Low	General Fund	Long-term

	Severe Winter Weather, Tornado, Drought					
Action W6.12 —Monitor water conservation initiatives in the event of drought conditions.						
Completed	Drought	1, 6, 8, 11	Water Department	Low	General Fund	Completed
Action W6.13 —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.						
Ongoing	All	7, 13	Village of Winnetka	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action W6.14 —Where feasible, implement a program to record high water marks following high-water events.						
Ongoing	Flooding, Severe Weather	3, 6, 9	Village of Winnetka	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action W6.15 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
Ongoing	All	3, 4, 6, 10, 13	Community Development	Low	General Fund	Short-term
Action W6.16 —Actively maintain and clear the critical waterways and overflow routes within the village						
New	Flood	3, 9	Village of Winnetka	\$10,000; Low	Local Funds and Grants	Ongoing
Action W6.17 —Implement the Hibbard Road Forest Preserve Wetland and Duke Childs Stormwater Management Project						
New	Flood	2, 8, 9	Village of Winnetka	\$25,903,340; High	Local Funding, Grants	Ongoing
(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	6	High	High	Yes	Yes	Yes	High
2	2	Medium	High	Yes	Yes	No	Medium
3	5	High	Low	Yes	No	Yes	Medium
4	3	Medium	Low	Yes	No	Yes	Low
5	4	Low	Low	Yes	No	Yes	Low
6	4	Medium	Low	Yes	Yes	Yes	Medium
7	4	Medium	High	Yes	No	Yes	High
8	4	Medium	Low	Yes	No	Yes	High
9	4	High	Low	Yes	No	Yes	High
10	2	Medium	Low	Yes	No	Yes	Medium
11	4	Low	Low	Yes	Yes	Yes	Low
12	4	High	Medium	Yes	No	Yes	Medium
13	2	High	High	Yes	Yes	No	Medium
14	3	Medium	Medium	Yes	Yes	No	Medium
15	5	Medium	Low	Yes	No	Yes	High
16	2	High	Low	Yes	Yes	No	High
17	3	High	High	Yes	Yes	No	High

(a) See Chapter 1 for explanation of priorities.

New Mitigation Actions

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

Action W-6.16

Mitigation Action	Actively maintain and clear the critical waterways and overflow routes within the village
Year Initiated	2018
Applicable Jurisdiction	Village of Winnetka
Lead Agency/Organization	Village of Winnetka
Supporting Agencies/Organizations	N/A
Applicable Goal	<ul style="list-style-type: none"> Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.
Applicable Objective	<ul style="list-style-type: none"> Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes
Potential Funding Source	Local Funds and Grants
Estimated Cost	\$10,000 Annually
Benefits (loss avoided)	Eliminates debris to allow flow of water during flooding events
Projected Completion Date	Ongoing
Priority and Level of Importance (Low, Medium, High)	High Priority
Benefit Analysis (Low, Medium, High)	High—Project will provide an immediate reduction of risk exposure for life and property.
Cost Analysis (Low, Medium, High)	Low—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.
Actual Completion Date	

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Work will consist of the regular trimming of vegetation and removal of natural obstructions within critical waterways and overland flow routes within the Village of Winnetka. This work shall also include the re-establishment of these critical flow routes after major weather events to ensure their reliability.

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 W-6.17

Mitigation Action	Implement the Hibbard Road Forest Preserve Wetland and Duke Childs Stormwater Management Project
Year Initiated	2019
Applicable Jurisdiction	Village of Winnetka
Lead Agency/Organization	Village of Winnetka
Supporting Agencies/Organizations	Metropolitan Water Reclamation District, Forest Preserve District of Cook County, New Trier High School District 203
Applicable Goal	<ul style="list-style-type: none"> • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.
Applicable Objective	<ul style="list-style-type: none"> • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Establish partnerships among all levels of local government, the private sector, and/or nongovernmental organizations to improve and implement methods to protect people and property. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans.
Potential Funding Source	Local Funding, Grants
Estimated Cost	\$25,903,340
Benefits (loss avoided)	Increased stormwater storage to reduce flooding for New Trier High School and Western/Southwestern sections of the Village of Winnetka.
Projected Completion Date	Ongoing
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:	The Village of Winnetka is working with New Trier High School District 203 to establish an intergovernmental agreement to allow the Village to implement stormwater improvements on Duke Childs field. This agreement will guide future stormwater improvements at Duke Childs field. This project includes underground stormwater storage and a water quality facility on Duke Childs field which will help limit flooding for New Trier High School and the Southwestern/Western sections of Winnetka. This project will also include improvements to stormwater management and water quality monitoring on 74 acres of Cook County Forest Preserve land north of Winnetka Avenue and west of Hibbard Road.

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 W-6.1

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.1	Works towards completion of storm water improvements to mitigate flooding.	
Status Description: Yes	Improvements were made to the northwest corner of the Village that had a positive impact on storm water runoff. The Village to work with the Park District, Cook County and our school districts to finalize a plan for storm water control.	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 W-6.2

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.2	Encourage the burying of electrical service lines underground to protect from weather events.	
Status Description: No	Lines are buried when possible. No action has been taken thus far.	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 W-6.4

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.4	Develop a communications link with Cook County Forest Preserve District to alert Winnetka in the event of a structural concern regarding the Skokie Lagoon Dam.	
Status Description: Yes	Our Public Works Director has been in constant contact with the CCFPD as part of their storm water discussions. This has lend itself to a good contact for the CCFPD.	O
<p style="text-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 W-6.10

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.10	Update shelter plans for extreme weather conditions.	
Status Description: Yes	Recently work with schools on their secondary evacuation areas when the weather is inclement. For our recent Music Festival, we activated cooling shelters.	O
<p style="text-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 W-6.11

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.11	Develop an educational program to inform residents on how to prepare for severe weather events.	
Status Description: Yes	We are in the process of implementing a new software (Acella) that will allow residents to report issues related to weather events. As part of this rollout, we will include an educational piece.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action W-6.13

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.13	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.	
Status Description: Yes	Acquired property on Boal Parkway to install new pump station for flood control.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action W-6.14

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.14	Where feasible, implement a program to record high water marks following high-water events.	
Status Description: Yes	This action is taken by our Public Works Department during any major rain event.	O
<p style="text-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 W-6.15

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.15	Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.	
Status Description:	Any new structure is required to provide some storm water retention that will help reduce runoff.	O
<p style="text-align: center;">Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken</p>		

Completed Mitigation Actions

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

Action W-6.3

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.3	Encourage storm water detention and runoff through code enhancements.	
Status Description: Yes	As structures are razed and new buildings are constructed, they are required to comply with the storm water retention codes. Adopted 2015 International Codes in June 2019.	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 W-6.5

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.5	Update Emergency Operations Plans.	
Status Description: Yes	Police & Fire continue to train on Active Shooters and the Rescue Task Force concepts and these procedures will become part of the EOPs. This year, we also "hardened" access to some of our larger public events to protect the public from vehicle ramming. Adopted updated Emergency Operations Plans in June 2019.	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 W-6.6

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.6	Continue to support the implementation (Countywide actions), monitoring and updating of the Plan as defined in Volume I.	
Status Description: Yes	Annual update 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 W-6.7

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.7	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	Adopted Cook County Stormwater Regulations.	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 W-6.8

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.8	Once CRS classification is confirmed, Village will maintain/enhance that classification through its existing floodplain management program.	
Status Description: Yes	The Village has received its CRS approval of a Class 6.	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 W-6.9

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.9	Work with all schools on severe weather drills.	
Status Description: Yes	We have just completed a full review of District 65's emergency operations plan which includes severe weather drills and have met with the high school. We observe a severe weather drill at each school annually.	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 W-6.12

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# W-6.12	Monitor water conservation initiatives in the event of drought conditions.	
Status Description: Yes	Winnetka's Water Department does this on a regular basis. If there is a concern, they will implement certain restricts to conserve water.	C
<p>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

WINNETKA EXISTING CONDITIONS	
2010 Population	12,187
Total Assessed Value of Structures and Contents	\$3,550,875,301
Area in 100-Year Floodplain	661.96 acres
Area in 500-Year Floodplain	742.89 acres
Number of Critical Facilities	32

HAZARD EXPOSURE IN WINNETKA						
	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	1,232	379	\$184,386,517	\$92,193,259	\$276,579,776	7.79%

500-Year	1,742	536	\$283,661,831	\$141,830,915	\$425,492,746	11.98%
Tornado						
100-Year	—	—	\$376,823,131	\$188,712,674	\$565,535,806	15.93%
500-Year	—	—	\$721,565,920	\$419,543,887	\$1,141,109,807	32.14%

ESTIMATED PROPERTY DAMAGE VALUES IN WINNETKA				
	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	\$8,538,310	\$1,495,996	\$10,034,306	0.28%
Flood				
10-Year	\$1,268,923	\$544,971	\$1,813,894	0.05%
100-Year	\$23,540,891	\$9,715,524	\$33,256,414	0.94%
500-Year	\$40,664,427	\$17,051,700	\$57,716,126	1.63%

Tornado				
100-Year	\$37,682,313	\$18,871,267	\$56,553,581	1.59%
500-Year	\$105,348,624	\$61,253,408	\$166,602,032	4.69%

Hazard Mapping





