

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

Arlington Heights Annex

FINAL

July 2019

Prepared for:



Cook County
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Hazard Mitigation Point of Contact

Primary Point of Contact	Alternate Point of Contact
Andrew Larson, Fire Chief 1150 N. Arlington Heights Road Arlington Heights, IL 60004 Telephone: 847-368-5450 Email Address: alarson@vah.com	Scott Shirley, Director of Public Works 1150 N. Arlington Heights Road Arlington Heights, IL 60004 Telephone: 847-368-5800 Email Address: sshirley@vah.com

Jurisdiction Profile

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

- **Date of Incorporation:** 1887
- **Current Population:** The US Census 2016 estimate indicated the population estimate was 75,525.
- **Population Growth:** Based on the data available Arlington Heights has experienced a relatively flat rate of growth over the past 6 years (2010 to 2016). The overall population has increased 0.58 percent between 2010 and 2016 with an increase of 436 residents.
- **Location and Description:** Arlington Heights is a village in Cook County. A suburb of Chicago, it lies about 25 miles (40 km) northwest of the city's downtown. It is the most populous community in the United States that is incorporated as a "village", and is the 13th most populous municipality in Illinois, although it is not far ahead of its nearby Illinois neighboring villages of Schaumburg and adjacent Palatine. Arlington Heights is known for Arlington Park Race Track, home of the Arlington Million, a Breeders' Cup qualifying event; it also hosted the Breeders' Cup World Thoroughbred Championships in 2002. The village is also home to the Arlington Heights Memorial Library, which has one of the largest collections in the state.
- **Brief History:** Arlington Heights was founded in the mid-1800s by Asa Dunton. Asa's son William Dunton was the first landowner in this small farming community. In 1853 William Dunton persuaded the Illinois & Wisconsin Railroad to make a stop and a depot in the area and he laid out a town called Dunton in the surrounding area. In 1887 the community was incorporated as the Village of Arlington Heights with a population of 1,000.
- **Climate:** The climate in Arlington Heights is typical for the mid-west. Average rainfall is 32 inches and the average snowfall is 24 inches annually. The July high temperature is 83 degrees and the January low temperature is 11 degrees. The comfort index, which is based on humidity during hot months, is 46, which is close to the national average of 44.
- **Governing Body Format:** The Village of Arlington Heights is a home rule community with a council-manager form of government that provides policy leadership by elected officials along with the administrative direction of a village manager. The Village Board is composed of eight (8) Trustees and one (1) Village President, who is the Mayor. The Village consists of sixteen (16) departments and nineteen (19) boards and commissions. This body of Government will assume the responsibility for adoption and implementation of the plan.
- **Development Trends:** Arlington Heights has experienced a recent boom in development of condos, restaurants and other businesses in the Central Business District or downtown area of Arlington Heights, with restaurants experiencing the greatest overall success. Some of the most popular restaurants include Javier's Sabor Mexicano, Peggy Kinanes, Mago Grill, TTOWA Korean Bistro, Shakou, and Francescas. Although land and space is now limited in Arlington Heights, business and community development along with community design are key concerns. The Village of Arlington Heights is also instrumental in business, residential and community development. The community is served by many fine hotels.

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	<i>ICC 2009 Ord. 11-034 8/1/2011</i>
Zonings	Yes	No	No	Yes	(65 ILCS 5/) Illinois Municipal Code. Ord. 85-114, 9/23/1985
Subdivisions	Yes	No	No	No	Ord. 07-114, 9/23/1985
Stormwater Management	Yes	No	Yes	Yes	State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA. MWRD - TARP Ord. 07-023, 4/9/2007
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	97-038, 1997
Site Plan Review	Yes	No	No	No	Ord. 95-088, 12/4/1995
Public Health and Safety	Yes	No	Yes	No	Cook County Dept. of Public Health Ord. 95-088, 12/4/1995
Environmental Protection	No	No	No	No	
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Ord. 97-038, 1997 could be linked
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>					N/A
Floodplain or Basin Plan	No	No	No	No	

Stormwater Plan	No	No	No	No	
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	92-113, 97-038 11/16/92
Shoreline Management Plan	No	No	No	No	
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	No	No	Yes	1st 1982, amended bi.ann. Latest 2013-2014
Threat and Hazard Identification and Risk Assessment	No	No	Yes	No	Cook County DHSEM Preparing THIRA
Terrorism Plan	Yes	No	No	Yes	Emergency Operations Plan Annex Q
Post-Disaster Recovery Plan	Yes	No	Yes	Yes	Emergency Operations Plan Annex P
Continuity of Operations Plan	Yes	No	Yes	No	Emergency Operations Plan Annex A
Public Health Plans	Yes	No	Yes	No	Emergency Operations Plan Annex E

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	No
State Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	

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

TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE	
What department is responsible for floodplain management in your jurisdiction?	Engineering
Who is your jurisdiction's floodplain administrator? (department/position)	Engineering Dept. Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	No
When was the most recent Community Assistance Visit or Community Assistance Contact?	4/9/07 12/09/05
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?	Continued training is always welcomed.
Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program?	No; No

TABLE: COMMUNITY CLASSIFICATIONS			
	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	4	3/27/12
Public Protection/ISO	Yes	ISO Class 2	January 2009
StormReady	Yes	Gold (Countywide)	2014
Tree City USA	Yes	N/A	1980

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: 3
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0

TABLE: NATURAL HAZARD EVENTS			
Type of Event	FEMA Disaster Number (if applicable)	Date	Preliminary Damage Assessment
Severe Weather	-	8/28/2018	-
Hail	-	4/10/2017	-
Severe Weather	-	6/6/2016	-
Polar Vortex/Winter Weather	-	12/2013 - 3/2014	-
Severe Weather/Urban Flooding	DR-4116	4/2013	-
Severe Weather/Urban Flooding	-	6/2012	-
Severe Weather/Urban Flooding	-	7/2011	-
Severe Weather/Urban Flooding	DR-1800	9/2008	-
Severe Weather/Urban Flooding	-	9/2006	-
Winter Storm	-	1/2005	-
Winter Storm	-	1/2002	-
Winter Storm	-	2/2000	-
Winter Storm	-	1/1999	-
Sever Weather/Urban Flooding	DR-798	8/1987	-
Sever Weather/Urban Flooding	DR-776	9/1986	-
Winter Storm	-	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/Severe Weather: Multiple areas are prone to urban flooding in the community which causes road blockages, especially in poor drainage areas.

Hail: This event occurs during thunderstorms, which often cause flooding and severe wind events. Power line, structures, and trees are frequently damaged.

Tornado/High Winds: High winds have historically affected residential areas, causing downed trees and downed electrical lines.

Snow: Senior citizens and individuals with functional and access needs in the community have historically had issues when there is a large amount of snow or severe winter weather.

Extreme Cold: Senior citizen complexes/housing, and those that reside in those facilities are especially vulnerable during extreme cold incidents.

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	Tornado	36
4	Earthquake	18
5	Flood	18
6	Drought	18
7	Dam Failure	6

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 A2.1 —Construction & maintenance of the Lake Arlington retention & Wilke Rd. detention basins and the Weller Creek flood control projects.						
Ongoing	Urban Flooding	1, 2, 9, 10, 13	Engineering Dept.	\$140,000,000; High	Grants, Bonds & CIP	Long Term
Action A2.2 —Construction of rear yard storm sewers in chronic flood prone areas.						
Ongoing	Urban Flooding	1, 2, 9, 10, 13	Engineering Dept.	\$800,000; High	Ill. Dept. of Commerce grant, CIP	Long Term
Action A2.3 —Implementation of a rebate program to help owners of older homes install overhead sewers or install a sewer back up system.						
Ongoing	Urban Flooding	1, 2, 6, 8, 9, 10, 13	Engineering Dept.	\$725,000; Medium	CIP	Long Term
Action A2.4 —Commission two studies, one regarding areas of chronic flooding and a second regarding a combined Storm/Sanitary sewer system in the older part of the village.						
Ongoing	Urban Flooding	1, 2, 6, 8, 9, 10, 13	Public Works Dept.	\$200,000; Low	CIP	Short Term and Ongoing
Action A2.5 —Implement recommendations from studies mentioned in Action A2.4.						

Ongoing	Urban Flooding	1, 2, 6, 8, 9, 10, 13	Engineering Dept.	Study due by June 2014; Medium	CIP	Long Term
Action A2.6 —Print & distribute the 2014 Arlington Heights Multi-Hazard Emergency Preparedness Guide.						
Completed	All	1, 6, 8, 11, 13	Emergency Management	\$10,000; Low	General Fund	Completed
Action A2.7 —Update, bi-annually, the Arlington Heights Emergency Operations Plan.						
Ongoing	All	1, 4, 5, 6, 8	Emergency Management	\$1,000; Low	General Fund	Short Term
Action A2.8 —Continue to improve and maintain the Everbridge Mass Notification System.						
Ongoing	All	1, 5, 6, 8, 11, 12	Admin.	\$112,000; Low	General Fund & 911 budget	Short Term and Ongoing
Action A2.9 —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 Arlington Heights	High	FEMA Hazard Mitigation Grants	Long-Term (depending on funding)
Action A2.10 —Continue to support the countywide actions identified in this plan.						
Ongoing	All	All	Village of Arlington Heights	Low	General Fund	Short- and long-term
Action A2.11 —Actively participate in the plan maintenance strategy identified in this plan.						
Ongoing	All	3, 4, 6	DHSEM, Village of Arlington Heights	Low	General Fund	Short-term
Action A2.12 —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 of Arlington Heights	Low	General Fund	Long-term
Action A2.13 —Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.						
Ongoing	Flooding	4, 6, 9	Village of Arlington Heights	Low	General Fund	Short-term and ongoing
Action A2.14 —Where feasible, implement a program to record high water marks following high-water events.						

Ongoing	Flooding, Severe Weather	3, 6, 9	Village of Arlington Heights	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action A2.15 —Integrate hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
Ongoing	All	3, 4, 6, 10, 13	Arlington Heights Planning, Engineering & Community Development Departments	Low	General Fund	Short-term
Action A2.16 —Increase combined sewer system capacity by installing larger pipes and parallel pipes to mitigate basement backups.						
New	Flooding	2, 9	Village of Arlington Heights	\$15,200,000; Medium	Local	2023
Action A2.17 —Replace emergency generator to increase the Village's resiliency.						
New	Earthquake, Lightning, Hail, High Wind, Snow, Blizzard, Extreme Cold, Ice Storms, Tornado, Widespread Power Outage	2, 9	Village of Arlington Heights	\$1,000,000; Medium	Local	2021
Action A2.18 —Develop Permeable Parking Lot Pavers and a Bio-infiltration Basin.						
Completed	Flooding	1, 2, 8, 9	Village of Arlington Heights	\$1,515,000; High	Local, MWRD (23.6%)	Completed
Action A2.19 —Install Relief Sewers to Mitigate Basement Backups in Arlington Heights.						
New	Flooding	2, 9	MWRD	\$1,800,000	MWRD, TBD	TBD
(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	5	High	High	Yes	partial	Yes	High

2	5	Medium	Medium	Yes	Yes	Yes	High
3	7	High	Medium	Yes	No	Yes	High
4	7	High	Medium	Yes	No	Yes	High
5	7	High	Medium	Yes	No	Yes	High
6	5	High	Low	Yes	No	Yes	Medium
7	5	High	Low	Yes	No	Yes	Medium
8	6	High	Medium	Yes	No	Yes	High
9	2	High	High	Yes	Yes	No	Medium
10	13	Medium	Low	Yes	No	Yes	High
11	2	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	No	Yes	High
16	2	Medium	Medium	Yes	No	Yes	High
17	2	High	Medium	Yes	No	Yes	High
18	4	High	High	Yes	No	Yes	High
19	2	TBD	TBD	TBD	TBD	TBD	TBD

(a) See Chapter 1 for explanation of priorities

New Mitigation Actions

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

Action A-2.17

Mitigation Action	Increase combined sewer system capacity by installing larger pipes and parallel pipes to mitigate basement backups.
Year Initiated	2019
Applicable Jurisdiction	Village of Arlington Heights
Lead Agency/Organization	Village of Arlington Heights
Supporting Agencies/Organizations	Village of Arlington Heights
Applicable Goal	<ul style="list-style-type: none"> • Develop and implement sustainable, cost-effective, 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. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans.
Potential Funding Source	Local
Estimated Cost	\$15,200,000
Benefits (loss avoided)	Village of Arlington Heights
Projected Completion Date	2023
Priority and Level of Importance (Low, Medium, High)	High Priority
Benefit Analysis (Low, Medium, High)	Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for 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:	Increase combined sewer system capacity by installing larger pipes and parallel pipes to mitigate basement backups.

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 A-2.16

Mitigation Action	Replace emergency generator to increase the Village's resiliency.
Year Initiated	2019
Applicable Jurisdiction	Village of Arlington Heights
Lead Agency/Organization	Village of Arlington Heights
Supporting Agencies/Organizations	Village of Arlington Heights
Applicable Goal	<ul style="list-style-type: none"> Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events.
Applicable Objective	<ul style="list-style-type: none"> Increase the resilience of (or protect and maintain) infrastructure and critical facilities. Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans.
Potential Funding Source	Local
Estimated Cost	\$1,000,000
Benefits (loss avoided)	Village of Arlington Heights
Projected Completion Date	2021
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:	Replace aged standby emergency generator at potable water pumping station No. 16.
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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
X	Earthquake
	Flood
	Extreme Heat
X	Lightning
X	Hail
	Fog
X	High Wind
X	Snow
X	Blizzard
X	Extreme Cold
X	Ice Storms
X	Tornado
	Epidemic or pandemic
	Nuclear Power Plant Incident
X	Widespread Power Outage
	Coastal Erosion
	Secondary Impacts from Mass Influx of Evacuees
	Hazardous Materials Incident

Action A-2.19

Mitigation Action	Install Relief Sewers to Mitigate Basement Backups in Arlington Heights.
Year Initiated	2019
Applicable Jurisdiction	Village of Arlington Heights
Lead Agency/Organization	MWRD
Supporting Agencies/Organizations	Village of Arlington Heights
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. • Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards. • Develop, promote, and integrate mitigation action plans.
Applicable Objective	<ul style="list-style-type: none"> • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans.
Potential Funding Source	MWRD
Estimated Cost	\$1,800,000; MWRD Contribution: TBD
Benefits (loss avoided)	TBD
Projected Completion Date	TBD
Priority and Level of Importance (Low, Medium, High)	TBD
Benefit Analysis (Low, Medium, High)	TBD
Cost Analysis (Low, Medium, High)	TBD
Actual Completion Date	TBD

Recommended Mitigation Action/Implementation Plan and Project Description

Action/Implementation Plan and Project Description:	ID: Arlington Heights Contract: 18-IGA-34 Watershed: Lower Des Plaines Location: Arlington Heights, IL Construction of relief sewers for various locations to mitigate basement backups along Campbell Street, Vail Avenue, Dunton Avenue, and Sigwalt Street and in downtown areas.
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Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	Drafting intergovernmental agreement.
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 A-2.1

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.1	Construction & maintenance of the Lake Arlington retention & Wilke Rd. detention basins and the Weller Creek flood control projects.	
Status Description: No		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.2

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.2	Construction of rear yard storm sewers in chronic flood prone areas.	
Status Description: No		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.3

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.3	Implementation of a rebate program to help owners of older homes install overhead sewers or install a sewer back up system.	
Status Description: No		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.4

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.4	Commission two studies, one regarding areas of chronic flooding and a second regarding a combined Storm/Sanitary sewer system in the older part of the village.	
Status Description: No		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.5

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.5	Implement recommendations from studies mentioned in Action A2.4.	
Status Description: No		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.7

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.7	Update, bi-annually, the Arlington Heights Emergency Operations Plan.	
Status Description: No		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.8

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.8	Continue to improve and maintain the Everbridge Mass Notification System.	
Status Description: Yes	Continue to add and update village staff and emergency operations center contacts. Maintain the ability to warn staff and the public of immediate threats and hazards. Continue to add and update village staff and emergency operations center contacts. Maintain the ability to warn staff and the public of immediate threats and hazards.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.9

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.9	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: No		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.10

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.10	Continue to support the countywide actions identified in this plan.	
Status Description: No		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.11

TABLE: ACTION PLAN MATRIX		
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Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.11	Actively participate in the plan maintenance strategy identified in this plan.	
Status Description: Yes	Currently submitting annual review and update	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.12

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.12	Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.	
Status Description: Yes	Currently cooperating with the National Weather Service to become Storm Ready in 2019.	O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.13

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.13	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: No		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.14

TABLE: ACTION PLAN MATRIX		
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Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.14	Where feasible, implement a program to record high water marks following high-water events.	
Status Description: No		O
Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.15

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.15	Integrate hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.	
Status Description: No		O
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 A-2.6

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# A-2.6	Print & distribute the 2014 Arlington Heights Multi-Hazard Emergency Preparedness Guide.	
Status Description: Yes	Printed and distributed the 2014 Emergency Preparedness Guide	C
Completion status legend:		
N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken		

Action A-2.18

Mitigation Action	Develop Permeable Parking Lot Pavers and a Bio-infiltration Basin.
Year Initiated	2018
Applicable Jurisdiction	Village of Arlington Heights
Lead Agency/Organization	Village of Arlington Heights
Supporting Agencies/Organizations	MWRD
Applicable Goal	<ul style="list-style-type: none"> • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects. • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. • Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events and potential damage from such activities. • Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards. • Develop, promote, and integrate mitigation action plans.
Applicable Objective	<ul style="list-style-type: none"> • Eliminate or minimize disruption of local government operations caused by natural hazards through all phases of emergency management. • 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 Funds, MWRD
Estimated Cost	\$1,515,000; MWRD Contribution: \$358,000
Benefits (loss avoided)	
Projected Completion Date	2018

Priority and Level of Importance (Low, Medium, High)	
Benefit Analysis (Low, Medium, High)	
Cost Analysis (Low, Medium, High)	
Actual Completion Date	2018

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Installation of a permeable pavement parking lot along with a bioswale at the Village of Arlington Heights Police Station. MWRD provided funding for 23.6% of the total \$1,515,000 construction cost. Project provides 90,807 gallons of design retention capacity in a flood-prone area. The Village is to provide long term maintenance per the intergovernmental agreement.

Mitigation Action and Project Maintenance		
Year	Status	Comments
2018	Complete	Substantially Completed in 2018.
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

As shown in the Action Plan Matrix, Arlington Heights has been dealing with its urban flooding issues for many years. Lake Arlington, the Wilke-Kirchoff detention basins, and the Weller Creek flood control projects have provided exceptional flood prevention and control. Arlington Heights is a partner in the MWRD – TARP, better known as the “Deep Tunnel Project.” Since the completion of the Gloria Alitto Majewski Reservoir in 1998 along with the aforementioned projects, flooding in the village has been greatly reduced.

The severity of flood damage within the village depends on topography, stormwater control measures, sewer capacity, etc. In some of the older parts of the village, built prior to 1975, there are combined sewer systems. Catch basin flow restrictors installed intentionally pond water in the streets in order to reduce the flow into the sewer system, thereby reducing basement flooding/backup.

Paved roads, parking lots, sidewalks, and buildings all reduce the amount of land which can absorb water and can lead to increased urban flooding issues without sufficient regulations. Arlington Heights requires on site stormwater detention systems with flow restrictors for various sites by ordinance.

HAZUS-MH Risk Assessment Results

ARLINGTON HEIGHTS EXISTING CONDITIONS	
2010 Population	75,101
Total Assessed Value of Structures and Contents	\$13,507,001,344
Area in 100-Year Floodplain	171.72 acres
Area in 500-Year Floodplain	1,368.74 acres
Number of Critical Facilities	91

HAZARD EXPOSURE IN ARLINGTON HEIGHTS						
	Number Exposed		Value Exposed to Hazard			% of Total Assessed Value Exposed
	Population	Buildings	Structure	Contents	Total	
Dam Failure						
Buffalo Creek	400	123	\$73,027,000	\$60,348,000	\$133,375,000	0.99%
U. Salt Cr. #2	0	0	\$0	\$0	\$0	0.00%
Touhy	0	0	\$0	\$0	\$0	0.00%
U. Salt Cr. #3	46	14	\$53,485,000	\$53,362,000	\$106,847,000	0.79%
U. Salt Cr. #4	46	14	\$53,485,000	\$53,362,000	\$106,847,000	0.79%
Flood						
100-Year	7	2	\$571,253	\$285,627	\$856,880	0.01%
500-Year	12,233	3,764	\$1,048,736,908	\$546,262,513	\$1,594,999,421	11.81%
Tornado						
100-Year	—	—	\$843,431,153	\$507,709,348	\$1,351,140,501	10.00%
500-Year	—	—	\$1,195,479,510	\$733,654,021	\$1,929,133,530	14.28%

ESTIMATED PROPERTY DAMAGE VALUES IN ARLINGTON HEIGHTS				
	Estimated Damage Associated with Hazard			% of Total Assessed Value Damaged
	Building	Contents	Total	
Dam Failure				
Buffalo Creek	\$450,000	\$985,000	\$1,435,000	0.01%
U. Salt Cr. #2	\$0	\$0	\$0	0.00%
Touhy	\$0	\$0	\$0	0.00%
U. Salt Cr. #3	\$481,000	\$1,682,000	\$2,163,000	0.02%
U. Salt Cr. #4	\$814,000	\$2,695,000	\$3,509,000	0.03%
Earthquake				
1909 Historical Event	\$33,714,113	\$7,290,861	\$41,004,974	0.30%
Flood				
10-Year	\$0	\$0	\$0	0.00%

100-Year	\$0	\$0	\$0	0.00%
500-Year	\$118,344,585	\$54,434,879	\$172,779,464	1.28%
Tornado				
100-Year	\$84,343,115	\$50,770,935	\$135,114,050	1.00%
500-Year	\$174,540,008	\$107,113,487	\$281,653,495	2.09%

Hazard Mapping







