

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

Evanston 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
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Jurisdiction Profile

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

- Date of Incorporation: 1872
- Current Population: 74,756 as of 2017
- Population Growth: Evanston has seen a slow, but steady increase in population of about 2% since 1990. There appears to be a continued upward trend, especially with all the new residential developments.
- Location and Description: Evanston is a suburban city in Cook County, Illinois, United States, 12 miles (19 km) north of downtown Chicago, bordered by Chicago to the south, Skokie to the west, Wilmette to the north, with a population of 75,430 as of 2012. It is one of the North Shore communities that adjoin Lake Michigan. The boundaries of the city of Evanston are coterminous with those of Evanston Township—although school districts 65 and 202 take in a small portion of eastern Skokie. Evanston is the home of Northwestern University. The City of Evanston has a total land area of 7.78 square miles.
- Brief History: Evanston was formally incorporated as a town on December 20, 1863, but declined in 1869 to become a city despite the Illinois legislature passing a bill for that purpose. Evanston expanded after the Civil War with the annexation of the village of North Evanston. Finally, in early 1892, following the annexation of the village of South Evanston, voters elected to organize as a city. The 1892 boundaries are largely those that exist today. During the 1960s, Northwestern changed the city's shoreline by adding a 74-acre (30 ha) lake fill.
- Climate: Evanston, IL gets 32 inches of rain and 24 inches of snow per year. The US average is 37 and 25 inches, respectively. The number of days with any measurable precipitation is 124 and, on average, there are 193 sunny days per year in the City. The July high is around 83 degrees and the January low is 18 degrees. The comfort index, which is based on humidity during the hot months, is a 47 out of 100, where higher is more comfortable. The US average on the comfort index is 44.
- Governing Body Format: The City of Evanston is governed with a Home Rule, Council/City Manager form of government. Evanston operates 10 departments including the Health Department, Fire Department, Police Department, and Public Works Department. The Fire Department Administration will oversee the adoption and implementation of this plan.
- Development Trends: In an article in January 2013 edition of Governing Magazine, a representative from the American Association of Retired Persons (AARP) acknowledges that “most features that attract older people to a community are the same ones that draw younger residents.” Age-friendly communities feature “public transportation, different options for housing, lifelong learning opportunities, a robust arts and cultural scene, walkability, and urban spaces.” Based on census population data, this trend appears to be playing out in Evanston—over 50 percent of Evanston's population is part of the Generation X or Y cohort. This addition of retail retention and attraction as a focus area helps support the ongoing health increasing competition posed by online retailing and the resulting downsizing of the national retail footprint poses unique challenge for Evanston. Staff has already started the tasks of data collection, developing relationships with retail brokers, and initiating proactive outreach to national and regional retailers to gauge their interest in Evanston. Staff is also exploring unique

“incubation” models to encourage home-based businesses to open in storefronts, City staff will work closely with workforce development focused on non-profits to identify opportunities to support programs aimed at comprehensive workforce. Staff will identify effective ways of linking Evanston’s socio- economically diverse population to the network of workforce development resources. Contrasted with the traditional “quality of life” indicators such as climate, park, acreage per resident, or school test scores, “Quality of Place” represents the elements defining a livable place.

- Economic Development staff will explore opportunities to grow Evanston’s economy by quality of place characteristics. The addition of “Quality of Place” to the 2013 update recognizes that there are a number of qualities within Evanston that make it a distinctive, attractive and compelling place to live, to visit and to start a business that differentiate it from other Chicago suburbs and Chicago itself. These qualities need to be protected, promoted, and preserved. As of 2019, Evanston has many current approved development projects. These projects include a new car wash facility, a new 40-unit town home development, a new 17-story senior living residence, a 5-story mixed use residential building, a 15-story mixed-use dwelling with 273 units, several other multi-story buildings and an additional senior living building.

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.

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	Ord. Number 8-0-12, 2012
Zonings	Yes	No	No	Yes	Ord. number 31-0-92, 1993
Subdivisions	Yes	No	No	No	Ord. Number 8-0-12, 2012
Stormwater Management	Yes	No	Yes	Yes	State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA. Ord. Number 8-0-12, 2012
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	Comprehensive General Plan, 2012
Site Plan Review	Yes	No	No	No	Ord. Number 8-0-12, 2012
Public Health and Safety	Yes	No	Yes	Yes	Cook County Board of Health. Ord. Number 49-0-11, 2012
Environmental Protection	No	No	No	No	
Planning Documents					
General or Comprehensive Plan	Yes	No	No	No	Comprehensive General Plan, 2012
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>					Yes, Plan includes a land use element.
Floodplain or Basin Plan	Yes	No	Engineering Department	No	615 ILCS 5/18 Ord. Number: 8-0-12, 2012
Stormwater Plan	Yes	No	MWRD	No	Regional stormwater impacts are managed by MWRD. The Village lies within the North Branch

					Watershed planning area of MWRD's comprehensive Stormwater Master Planning Program
Capital Improvement Plan	Yes	No	No	No	Fiscal Year 2014 Proposed Budget, 2014
<i>What types of capital facilities does the plan address?</i>					City owned facilities
<i>How often is the plan revised/updated?</i>					Annually
Habitat Conservation Plan	Yes	No	Engineering Department (Floodplain Regulations)	No	615 ILCS 5/18 Ord. Number 8-0-12, 2012
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.
Shoreline Management Plan	No	No	No	No	
Response/Recovery Planning					
Comprehensive Emergency Management Plan	Yes	No	Yes	Yes	Emergency Operations Plan, 2013
Threat and Hazard Identification and Risk Assessment	Yes	No	Yes	No	Cook County DHSEM Preparing THIRA
Terrorism Plan	Yes	No	Yes	Yes	Annex L Emergency Operations Plan, 2013
Post-Disaster Recovery Plan	Yes	No	Yes	Yes	Disaster Recovery Plan, Current
Continuity of Operations Plan	Yes	No	Yes	No	COOP, Current
Public Health Plans	Yes	No	Yes	No	Public Health Plan, Current

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	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	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	City of Evanston, internal
Engineers or professionals trained in building or infrastructure construction practices	Yes	City of Evanston, internal
Planners or engineers with an understanding of natural hazards	Yes	City of Evanston, Government Partner
Staff with training in benefit/cost analysis	Yes	City of Evanston, internal
Surveyors	No	N/A
Personnel skilled or trained in GIS applications	Yes	IT Department, GIS Div., Cook County GIS Consortium
Scientist familiar with natural hazards in local area	Yes	Government Partner
Emergency manager	Yes	Fire and Life Safety Services, State Accredited
Grant writers	Yes	City of Evanston, internal

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
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	July 28, 2008
When was the most recent Community Assistance Visit or Community Assistance Contact?	June 27, 2013
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are.	No

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

TABLE: COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	2/2	12/03/2010
Public Protection/ISO	Yes	2	12/03/2010
StormReady	Yes	Gold (Countywide)	2014
Tree City USA	Yes	N/A	2013

Jurisdiction-Specific Natural Hazard Event History

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

The Natural Hazard Events Table lists all past occurrences of natural hazards within the jurisdiction.

- Repetitive flood loss records are as follows: Number of FEMA-Identified Repetitive Loss Properties: 0
- 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
Heavy Rain	-	9/3/2018	-
Severe Weather	-	5/9/2018	-
Severe Weather	-	6/14/2017	\$100,000 in property damage.
Hail	-	2/24/2017	-
Severe Weather	-	7/23/2016	-
Severe Weather	-	7/23/2016	-
Severe Weather	-	7/23/2016	-
Severe Weather	-	7/2/2016	-
Severe Weather	-	8/2/2015	1 injured.
Hail	-	8/2/2015	-
Severe Weather	-	7/18/2015	\$1,000 in property damage.
Severe Storms, Straight-Line Winds, and Flooding	DR-4116	4/16/2013	Not Available
Severe Winter Storm and Snowstorm	DR-1960	1/31/2011	Not available
Severe Storms and Flooding	DR-1935	7/19/2010	Not available
Flooding, Public Assistance	DR-1800	10/15/2008	Not available
Severe Storm and Flooding	DR-1729-031-24582-00	2007	Not available
Hurricane Katrina Evacuation	EM-3230	9/7/2005	Not available
Severe Winter Storm	EM-3161	12/11/2000	Not available
Winter Snow Storm	EM-3134	1/1/1999	Not available
Flooding	DR-1188	8/16/1997	Not available
Flooding	DR-1129	7/17/1996	Not available

Severe Storms and Flooding	DR-997	4/13/1993	Not available
Severe Storms and Flooding	DR-798	8/13/1987	Not available
Severe Storms and Flooding	DR-776	9/21/1986	Not available
Severe Storms, Flooding, and Tornadoes	DR-643	6/30/1981	Not available
Blizzards and snowstorms	EM-3068	1/16/1979	Not available
Severe Storms, Flooding, and Tornadoes	DR-509	6/18/1976	Not available
Severe Storms and Flooding	DR-373	4/26/1973	Not available
Severe Storms and Flooding	DR-351	9/4/1972	Not available
Tornadoes	DR-227	4/25/1967	Not available

Jurisdiction-Specific Hazards and Impacts

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

Dam/Levee Failure: We are not aware of any previous dam/levee failure.

Flood: Previously, we have experienced flooding. Oftentimes, this was flash flooding that was the result of torrential rain.

Extreme Heat: Temperatures routinely reach 90 F during months June, July, August, and September.

Lightning: Numerous fire-related incidents have resulted from lightning strikes. The most recent of which was just 1 week ago, knocking out about 15%-25% of electricity within Evanston

Hail: We have experienced minimal damage related to hail.

Fog: We have experienced minimal issues related to fog

High Winds: Numerous high wind-related events have resulted in physical damages to trees, homes, and local businesses

Earthquake: We are not aware of any previous earthquakes in our area.

Drought: We are not aware of any previous droughts in our area.

Snow: We have experienced numerous snow-related emergencies have related to downed power lines, compromised emergency response due to blocked/impassible roadways, health/safety concerns for population without heat, transportation, electricity due to power lines, etc.

Blizzards: We have experienced numerous snow-related emergencies have related to downed power lines, compromised emergency response due to blocked/impassible roadways, health/safety concerns for population without heat, transportation, electricity due to power lines, etc.

Extreme Cold: We have experienced numerous extreme weather-related events related to below freezing temps, broken pipes, loss of heat due to power outages, etc. (health issue for homeless people).

Ice Storms: Previously, the City has experienced downed power lines.

Tornado: We have only experienced high wind events - no tornado activity is known to date.

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	45
2	Severe Winter Weather	45
3	Tornado	24
4	Earthquake	16
5	Flood	3
6	Drought	2
7	Dam Failure	0

Note: The ranking of hazards was subjectively changed based on past experience.

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 E7.1 —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.						
Removed	All	7, 13	City of Evanston	High	FEMA Hazard Mitigation Grants	Removed
Action E7.2 —Continue to support the countywide actions identified in this plan.						
Ongoing	All	All	City of Evanston	Low	General Fund	Short- and Long-term
Action E7.3 —Actively participate in the plan maintenance strategy identified in this plan.						
Ongoing	All	3, 4, 6	DHSEM, City of Evanston	Low	General Fund	Short-term
Action E7.4 —Consider participation in incentive-based programs such as Tree City and StormReady.						
Ongoing	All	3, 4, 5, 6, 7, 9, 10, 11, 13	City of Evanston	Low	General Fund	Long-term
Action E7.5 —Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.						
Removed	Flooding	4, 6, 9	City of Evanston	Low	General Fund	Removed
Action E7.6 —Where feasible, implement a program to record high water marks following high-water events.						

Ongoing	Flooding, Severe Weather	3, 6, 9	City of Evanston	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action E7.7 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
Ongoing	All	3, 4, 6, 10, 13	City of Evanston	Low	General Fund	Short-term
Action E7.8 —New horn and audio warning sirens at Fire and Life Safety Headquarters, Fire Stations 2, 3, and 4, Evanston Township High School, and three along the lakefront. Altogether approximately 10 units.						
Ongoing	Tornado, Severe Winter Weather, Severe Weather / Seiche Waves, Earthquake, Flooding	5, 6	Office of Emergency Preparedness	\$100,000; Medium	General Fund	Short-term
Action E7.9 —Establish interoperable communications at the water treatment plant with local first responders.						
New	Flood, Extreme Heat, Lightning, Hail, Fog, High Wind, Snow, Blizzard, Extreme Cold, Ice Storms, Tornado, Widespread Power Outage, Hazardous Materials Incident	5	Water Production Bureau	\$50,000; Low	Local Funds, Grants	2019 or 2020

Action E7.10—Implement Evanston/Skokie School District 65 GI at Orrington Elementary School Project.

New	Unknown	Unknown	MWRD	Unknown	Unknown	Unknown
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Action E7.11—Improve cellular reception and communication in the EOC through the incorporation of a mobile broadband signal.

New	All	12	Northwestern Police Department	\$10,000; Low	Grants and Local Funds	2019
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Action E7.12—Employ a Community Health Specialist in the EOC to better prepare and support the special needs and at-risk Evanston population.

New	All	12	Health & Human Services Department	\$90,000; High	Grants	Continuous
Action E7.13 —Install the Evanston Library Backup Generator Addition and Finalize Sheltering Renovations.						
New	Dam/Levee Failure, Earthquake, Flood, Extreme Heat, Lightning, Hail, High Wind, Snow, Blizzard, Extreme Cold, Ice Storms, Tornado, Nuclear Power Plant Incident, Widespread Power Outage, Secondary Impacts from Mass Influx of Evacuees, Hazardous Materials Incident	2, 6, 8	Evanston Public Library	\$1,282,801; High	TBD	2019-2021
(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	High	High	Yes	Yes	No	Medium
2	13	Medium	Low	Yes	No	Yes	High
3	3	Medium	Low	Yes	Yes	Yes	High
4	9	Medium	Low	Yes	No	Yes	Medium
5	3	Medium	Low	Yes	No	Yes	High
6	3	Medium	Medium	Yes	Yes	No	Medium
7	5	Medium	Low	Yes	No	Yes	High
8	2	High	Medium	Yes	Yes	Yes	High
9	1	High	Low	Yes	No	Yes	High
10	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
11	1	High	Low	Yes	No	Yes	High
12	1	High	High	Yes	Yes	No	High
13	3	Unknown	High	Unknown	Unknown	Unknown	Unknown

(a) See Chapter 1 for explanation of priorities.

New Mitigation Actions

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

Action E-7.9

Mitigation Action	Establish interoperable communications at the water treatment plant with local first responders.
Year Initiated	2019
Applicable Jurisdiction	City of Evanston
Lead Agency/Organization	Water Production Bureau
Supporting Agencies/Organizations	City of Evanston Fire Department
Applicable Goal	Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects. Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events. Develop, promote, and integrate mitigation action plans.
Applicable Objective	Develop, improve, and protect systems that provide early warnings, emergency response communications, and evacuation procedures.
Potential Funding Source	Local Funds, Grants
Estimated Cost	\$50,000.00
Benefits (loss avoided)	With the establishment of interoperable communication with first responders this will provide critical communication in order to coordinate response activities.
Projected Completion Date	2019 or 2020
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	
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Action/Implementation Plan and Project Description:	Water Treatment plant personnel are currently working with a vendor to test repeaters at the water treatment plant in order to determine interoperable communication hardware needs. The test is scheduled for the week of June 24, 2019 and will last for two days. Based on the results of the test, staff can make an informed decision regarding next steps. The recommendation was based on the site visit conducted by DHS during the week of August 9, 2017 and follow up report dated September 13, 2017 (Infrastructure Survey Security & Resilience Report).
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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
X	Extreme Heat
X	Lightning
X	Hail
X	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
X	Hazardous Materials Incident

Action E-7.10

Mitigation Action	Implement Evanston/Skokie School District 65 GI at Orrington Elementary School project
Year Initiated	2019
Applicable Jurisdiction	City of Chicago
Lead Agency/Organization	MWRD
Supporting Agencies/Organizations	City of Chicago
Applicable Goal	Unknown
Applicable Objective	Unknown
Potential Funding Source	Unknown
Estimated Cost	Unknown
Benefits (loss avoided)	Unknown
Projected Completion Date	Unknown
Priority and Level of Importance (Low, Medium, High)	Unknown
Benefit Analysis (Low, Medium, High)	Unknown
Cost Analysis (Low, Medium, High)	Unknown
Actual Completion Date	Unknown

Recommended Mitigation Action/Implementation Plan and Project Description	
Action/Implementation Plan and Project Description:	Project Title: Evanston/Skokie SD 65 Evanston/Skokie School District 65 GI at Orrington Elementary School

Mitigation Action and Project Maintenance			
Year	Status	Comments	
2019	New		
2020			
2021			
2022			
2023			

Mitigated Hazards	
	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
	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 E-7.11

Mitigation Action	Improve cellular reception and communication in the EOC through the incorporation of a mobile broadband signal.
Year Initiated	2019
Applicable Jurisdiction	Evanston Fire Department
Lead Agency/Organization	Northwestern Police Department
Supporting Agencies/Organizations	City of Evanston
Applicable Goal	Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects. Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events. Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards. Develop, promote, and integrate mitigation action plans.
Applicable Objective	Develop, improve, and protect systems that provide early warnings, emergency response communications, and evacuation procedures.
Potential Funding Source	Grants and Local Funds
Estimated Cost	\$10,000
Benefits (loss avoided)	Improved communications in EOC
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)	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:	Incorporation of mobile broadband signal (Verizon) within EOC located within lower floor of Northwestern Police Department.

Mitigation Action and Project Maintenance

Year	Status	Comments
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
	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 E-7.12

Mitigation Action	Employing a Community Health Specialist
Year Initiated	2019
Applicable Jurisdiction	City of Evanston
Lead Agency/Organization	Health & Human Services Dept.
Supporting Agencies/Organizations	Evanston Fire Department
Applicable Goal	Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. Develop, promote, and integrate mitigation action plans. Promote public understanding of and support for hazard mitigation.
Applicable Objective	Reduce natural hazard-related risks and vulnerability to potentially isolated populations within the planning area.
Potential Funding Source	Grants
Estimated Cost	\$90,000
Benefits (loss avoided)	The mitigation grant will help develop enhanced Emergency Planning for Special Needs populations in the City of Evanston Emergency Operations Plan and other planning documents. Special Needs populations, (such as people with physical or developmental dis
Projected Completion Date	Continuous
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:	<p>Evanston has a residential population of 75,000 persons. As many as close to 20,000 Evanston residents may be classified as special needs and/or vulnerable. These populations include the elderly, non-English speaking persons, low income and disabled populations. The vulnerability of special needs populations may be magnified during an emergent event. The City of Evanston, COE, endeavors in prioritizing vulnerable populations in some of its mitigation actions considering vulnerable population’s likelihood of being in more physically vulnerable places, their access to services, and their access to appropriate warning information.</p> <p>COE’s Health and Human Services Department, HHS, is proposing a hazard and vulnerability mitigation project to prepare the at-risk population for a potential natural and man-made disaster by hiring a Community Health Specialist to identify the organizations serving vulnerable populations and coordinate actions to maximize safety, well-being and the provision of essential life-sustaining services and by guaranteeing the proper dissemination of emergency and early warning information.</p> <p>The Community Health Specialist will work with various public and private transportation companies to enlist their service during the evacuation of people with underlying medical conditions that require electricity and people with accessibility issues such as those that rely on Wheelchair Accessible Vehicles (WAV). The Community Health Specialist will also coordinate transportation of the population to mass dispensing and mass vaccination clinics and to the community shelters. When sheltering is required, the Community Health Specialist will be responsible for organizing all stakeholders, Officials and concerned public and private entities to operate and maintain special needs shelters, churches, schools, and local service agencies.</p>

Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	
2020		
2021		
2022		
2023		

Mitigated Hazards	
X	All Hazards
	Dam/Levee Failure
	Drought
	Earthquake
	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 E-7.13

Mitigation Action	Install the Evanston Library Backup Generator Addition and Finalize Sheltering Renovations
Year Initiated	2018 (November)
Applicable Jurisdiction	City of Evanston
Lead Agency/Organization	Evanston Public Library
Supporting Agencies/Organizations	City of Evanston
Applicable Goal	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	Increase the resilience of (or protect and maintain) infrastructure and critical facilities. Use the best available data, science and technologies to educate the public and to improve understanding of the location and potential impacts of natural hazards, the vulnerability of building types and community development patterns, and the measures needed to protect life safety. 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.
Potential Funding Source	Currently TBD
Estimated Cost	Approximately \$1,282,801 (2019 projection)
Benefits (loss avoided)	TBD
Projected Completion Date	2019 - 2021
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

<p>Action/Implementation Plan and Project Description:</p>	<p>The process to complete this project will begin with a preliminary, overcurrent, protective device coordination study within the library facilities to ensure the viability and safety of the generator addition. Once this occurs, various switchboards, enclosed and automatic transfer switches, and a fire pump controller will be purchased and delivered to the site. Following this, complete factory assembled and packaged engine generator sets are anticipated to be purchased and the entire assembly separately contracted out to be properly installed. The installation package is likely to require, but is not limited to, the renovation of structural components within the facility, including substantial reinforcement of masonry, in order for the Evanston Public Library to be able to fully function as a shelter, as is intended.</p> <p>Estimated Summary: Pre-Purchase Package: \$473,000 Installation Package: \$691,955 Bonds and Insurance: \$9,460.00 General Conditions: \$47,300.00 Total Construction Cost: \$1,221,715*</p> <p>*Note: This cost is reflective of 2018 calculation estimates, but is projected to increase moderately the further in the future construction will begin. As an example, the projected total cost for 2019 is \$1,282,801, 2020 is \$1,346,941 and 2021 is \$1,414,288.</p> <p>This action also includes additional renovations to enable the Evanston Public Library to adequately serve as a shelter for the community.</p>
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Mitigation Action and Project Maintenance		
Year	Status	Comments
2019	New	This project will be fully initiated upon location of available funding.
2020		
2021		
2022		
2023		

Mitigated Hazards	
	All Hazards
X	Dam/Levee Failure
	Drought
X	Earthquake
X	Flood
X	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
X	Nuclear Power Plant Incident
X	Widespread Power Outage
	Coastal Erosion
X	Secondary Impacts from Mass Influx of Evacuees
X	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 E-7.2

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# E-7.2	Continue to support the county wide actions identified in this plan	
Status Description: Yes	Continuing partnership with CCDHS	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 E-7.3

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# E-7.3	Actively participate in the plan maintenance strategy identified in this plan	
Status Description: Yes	Continue to address and maintain	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 E-7.4

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# E-7.4	Consider participation in incentive based programs such as Tree City and Storm Ready	
Status Description:	City has a plan in place for trees, and is also Storm Ready.	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 E-7.6

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# E-7.6	Where feasible, implement a program to record high water marks following high water events.	
Status Description: Yes	Program in place to record the quantity of rainfall with monitors in the sewer to record the flow characteristics during storms.	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 E-7.7

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# E-7.7	Integrate the hazard mitigation plan into other plans or resources that dictate land use or redevelopment	
Status Description:	Being addressed by Community Development	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 E-7.8

TABLE: ACTION PLAN MATRIX		
Action Number Action Taken Y/N	Action Item Description	Status (X, O, C, R, N)
# E-7.8	New horn and audio warning sirens at Fire and Life Safety Headquarters, Fire Stations 2, 3, 4, 5, Fire Headquarters, Evanston Township High School, and three along the lake-front. approximately 10 units.	
Status Description:	City working on plan to replace siren system in 2019	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>		

Completed Mitigation Actions

Evanston has no completed actions at this time.

Future Needs to Understand Risk and Vulnerability

None at this time.

Additional Comments

None at this time.

HAZUS-MH Risk Assessment Results

CITY OF EVANSTON EXISTING CONDITIONS	
2010 Population	74,486
Total Assessed Value of Structures and Contents	\$10,990,715,215
Area in 100-Year Floodplain	84.07 acres
Area in 500-Year Floodplain	84.07 acres
Number of Critical Facilities	179

HAZARD EXPOSURE IN CITY OF EVANSTON						
	Number Exposed		Value Exposed to Hazard			% of Total Assessed Value Exposed
	Population	Buildings	Structure	Contents	Total	
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	0	0	\$0	\$0	\$0	0.00%
500-Year	0	0	\$0	\$0	\$0	0.00%
Tornado						
100-Year	—	—	\$1,070,123,058	\$721,902,749	\$1,792,025,807	16.30%
500-Year	—	—	\$1,970,405,726	\$1,369,316,286	\$3,339,722,012	30.39%

ESTIMATED PROPERTY DAMAGE VALUES IN CITY OF EVANSTON				
	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	\$31,144,573	\$6,253,218	\$37,397,791	0.34%
Flood				
10-Year	\$0	\$0	\$0	0.00%

2019 COOK COUNTY HAZARD MITIGATION PLAN – EVANSTON ANNEX

100-Year	\$0	\$0	\$0	0.00%
500-Year	\$0	\$0	\$0	0.00%
Tornado				
100-Year	\$107,012,306	\$72,190,275	\$179,202,581	1.63%
500-Year	\$287,679,236	\$199,920,178	\$487,599,414	4.44%

Hazard Mapping





