

## Evanston

### Hazard Mitigation Plan 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:** 1863

**Current Population:** The 2022 U.S. Census population was 75,538, while the World Population Review estimates Evanston's population in 2024 was 73,231.

**Population Growth:** According to the World Population Review, Evanston's population has declined by -1.55% annually and -5.94% since the 2020 U.S. census.

**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, and Lake Michigan to the East. The City of Evanston has a total land area of 7.78 square miles. Evanston boundaries are coterminous with those of Evanston Township—although school districts 65 and 202 take in a small portion of eastern Skokie. Evanston is both a metropolitan and a suburban city, home to Rotary International, Northwestern University, 91 houses of worship, 64 congregate/long-term care facilities, and more than 30 social service agencies. High-rise complex developments (5 or more stories) are routinely developed, with Optima Towers, our tallest building at 28 stories. Evanston has been known as a college town, with the educational community still a prevailing fixture in the nature of the community, including Garrett Theological Seminary, 2121 Sheridan Road. District 65 has ten K-5 schools, three middle schools, two magnet schools, and three education centers. Evanston Township High School, ranked 39 in Illinois and 933 in the nation, provides instruction for nearly 4,000 students on a campus 65 acres in size. An additional complement of private academic institutions also reside in Evanston.

**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. During the Civil War, the town of Evanston fought on the side of the abolitionists. After the war, Evanston saw a huge economic and population boom with the annexation of the village of North Evanston. Between 1860

and 1870, the population quadrupled. 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 36 inches of rain and 35 inches of snow annually. The U.S. average precipitation is 38.1 and 27.8 inches, respectively. The number of days with any measurable precipitation is 125, 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 17 degrees. The annual comfort index, which is based on average comfortability throughout the year, is 6.9 out of 10, where higher is more comfortable. The US average on the comfort index is 7 out of 10, so slightly more comfortable outside of Evanston.

**Governing Body Format:** The City of Evanston has a Home Rule, Council/City Manager form of government. Evanston has ten city departments, including a certified Health Department, Fire Department, Police Department, and Public Works department. The Evanston Fire Department Office of Emergency Management is accredited by IEMA and will oversee the adoption and implementation of this plan.

**Development Trends:** 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 a unique challenge for Evanston. The 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 a 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 the quality of place characteristics. As of this year, Evanston has many current approved development projects. These projects include a robust capital improvement program that addresses City buildings, parks, streets, water, sewer, and other miscellaneous categories.

**Changes in Community Priorities:** There have been no significant changes in priority regarding the hazards that could potentially impact the community or changes in priority regarding resilience.

## 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 *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.

<b>TABLE: LEGAL AND REGULATORY CAPABILITY</b>					
	<b>Local Authority</b>	<b>State or Federal Prohibitions</b>	<b>Other Jurisdictional Authority</b>	<b>State Mandated</b>	<b>Comments</b>
<b>Codes, Ordinances &amp; Requirements</b>					
Building Code	Yes	No	No	Yes	Ord. Number 15-O-24, 2024
Zonings	Yes	No	No	Yes	Ord. number 8-O-12, 2012
Subdivisions	Yes	No	No	No	Ord. Number 13-O-63, 2022
Stormwater Management	Yes	No	Yes	Yes	The 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	Ord. Number 8-O-12, 2012
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 Ord. Number 43-O-93
Site Plan Review	Yes	No	No	No	Ord. Number 8-O-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	Ord. Number 8-O-12, 2012
<b>Planning Documents</b>					

General or Comprehensive Plan	Yes	No	No	No	Comprehensive General Plan, 2012
<i>Is the plan equipped to provide integration 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	MWSRD	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	The 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	Ord. Number 81-O-21, 2021
<b>Response/Recovery Planning</b>					
Comprehensive Emergency Management Plan	Yes	No	Yes	Yes	Emergency Operations Plan, 2021
Threat and Hazard Identification and Risk Assessment	Yes	No	Yes	No	Cook County EMRS Preparing THIRA
Terrorism Plan	Yes	No	Yes	Yes	Annex L Emergency Operations Plan, 2021
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

<b>TABLE: FISCAL CAPABILITY</b>	
<b>Financial Resources</b>	<b>Accessible or Eligible to Use?</b>
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
Other	Yes

<b>TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY</b>		
<b>Staff/Personnel Resources</b>	<b>Available?</b>	<b>Department/Agency/Position</b>
Planners or engineers with knowledge of land development and land management practices	Yes	The City of Evanston, internal
Engineers or professionals trained in building or infrastructure construction practices	Yes	The 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	The 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	The City of Evanston, internal

<b>TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE</b>	
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?	September 27, 2021
When was the most recent Community Assistance Visit or Community Assistance Contact?	September 10, 2021
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

### **NFIP Participation Activities**

Maintaining compliance under the NFIP is an important component of flood risk reduction. All planning partners that participate in the NFIP have identified actions to maintain their compliance and good standing. Cook County entered the NFIP on April 15, 1981. Structures permitted or built in the County before then are called “pre-FIRM” structures, and structures built afterwards are called “post-FIRM.” The insurance rate is different for the two types of structures. The effective date for the current countywide FIRM is August 19, 2008. This map is a DFIRM (digital flood insurance rate map). The communities in Cook County that participate in the NFIP are shown in **Table: NFIP Participating Communities in Cook County** in **Volume I** of the Cook County MJ-HMP.

The NFIP makes federally-backed flood insurance available to homeowners, renters, and business owners in participating communities. The communities in Cook County that participate in the NFIP and their "Policies in Force," "Total Coverage," and "Total Written Premiums" are shown in **Table: Cook County Flood Insurance Policies** in **Volume I** of the Cook County MJ-HMP.

The following are NFIP-related activities completed by our community:

- Our staff provide the following services: permit reviews, GIS, inspections, engineering capability.

- My community's Floodplain Administrator is a Certified Floodplain Manager (CFM).
- My community teaches property owners or other stakeholders about the importance of flood insurance through public outreach events, workshops, and/or seminars.
- Our community enforces local floodplain regulations and monitors compliance.
- Our floodplain development regulations meet or exceed Federal Emergency Management Agency (FEMA) or State minimum requirements.

The City of Evanston Office of EM and the Sustainability and Resilience Division conduct workshops throughout the year to discuss financial preparedness, the need for insurance, and mitigation measures, among other programs.

### **Substantial Improvement Rule and the Substantial Damage Rule**

The IDNR/OWR has developed a model ordinance for floodplain management, which has been adopted by most communities in Illinois. The ordinance includes the minimum requirements an NFIP participating jurisdiction must adopt and enforce, as well as additional higher regulatory requirements. The optional, higher regulatory standards include a minimum one foot of freeboard above the base flood elevation and cumulative tracking of damage repairs and improvements to establish substantial damage and substantial improvement compliance. Some jurisdictions have chosen to exceed the requirements of the model ordinance and have adopted more restrictive ordinances. This is most common in the communities in northeastern Illinois.

#### *Existing Municipal Code:*

#### **4-13-2 Definitions**

**Substantial Damage:** *Damage* of any origin sustained by a building whereby cost to repair the building to its before *damaged* condition equals or exceeds fifty (50) percent of the market value of the building before the *damage* occurred, regardless of actual repair work performed. The term includes flood related *damages* sustained by a building on two (2) separate occasions in a ten-year period, in which the cost of the repairs, on average, equals or exceeds twenty-five (25) percent of the market value of the building at the time of each such flood event.'

**Substantial Improvement:** Any reconstruction, rehabilitation, addition, or improvement of a building taking place during a ten-year period in which the percentage of improvements, figured cumulatively by dividing the cost of each improvement by the market value of the building prior to the start of construction of each improvement, equals or exceeds fifty (50) percent.

(A) *Substantial* improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the building. This term includes buildings which have incurred repetitive loss or *substantial damage*, regardless of the actual work done.

(B) The term does not, however, include either:

1. Any project for improvement of a building to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are solely necessary to assure safe living conditions, or

2. Any alteration of a historic structure listed on the National Register of Historic Places or the Illinois Register of Historic Places, provided that the alteration will not preclude the building's continued designation as a historic structure.

#### 4-13-3-2 Duties of the Floodplain Administrator

(A) Check all new development sites to determine whether they are in a floodplain using criteria listed in Section 4-13-4 of this Chapter or for critical facilities, using the two-tenths-percent annual chance flood elevation, if defined.

(B) If the site is in a floodplain, determine whether the site is in a coastal high hazard area, moderate wave action area, floodway, flood fringe or in a floodplain for which a detailed study has not been conducted.

(C) If the site is within a flood fringe, require that the minimum requirements of Sections 4-13-5 and 4-13-8 be met.

(D) If the site is within a floodway, require that the minimum requirements of Sections 4-13-6 and 4-13-8 be met.

(E) If the site is located within a floodplain for which no detailed study has been completed and approved, require that the minimum requirements of Sections 4-13-7 and 4-13-8 be met.

(F) If the site is within a coastal high hazard area or moderate wave action area, require that the minimum requirements of Section 4-13-8 be met.

(N) Establish procedures for administering and documenting determinations, as outlined below, of substantial improvement and substantial damage made pursuant to Section 4-13-8.

1. Determine the market value or require the applicant to obtain an appraisal of the market value prepared by a qualified independent appraiser, of the building before the start of construction of the proposed work. In the case of repair, the market value of the building shall be the market value before the damage occurred and before any repairs are made.

2. Compare the cost to perform the improvement, the cost to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, if applicable, to the market value of the building, including the cost of volunteer labor and donated materials must be included.

3. Determine and document whether the proposed work constitutes substantial improvement or substantial damage.

4. Notify the applicant if it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the City and this Chapter is required.

#### 4-13-8 Permitting Requirements Applicable to all Flood Plain Areas

In addition to the requirements found in Sections 4-13-5, 4-13-6 and 4-13-7 for development in flood fringes, designated floodways, and floodplains where no floodways have been identified, the following requirements shall be met. Where an existing or proposed building or other development is affected by multiple flood zones, by multiple BFEs, or both, the development activity must comply



with the provisions of the Chapter applicable to the most restrictive flood zone and the highest base flood elevation affecting any part of the existing or proposed building, or for other developments, affecting any part of the development area.

*(C) Protecting Buildings.*

1. In addition to the damage prevention requirements in Sections 4-13-5 and 4-13-6 of this Chapter, all buildings located within a floodplain, shall be protected from flood damage below the FPE. This building protection criteria applies to the following situations:

- a. New construction or placement of a new building or alteration or addition to an existing building.
- b. Substantial improvements, made to any existing building. If substantially improved, both the existing building and any addition must meet the flood protection standards of this Section.
- c. A substantially damaged building under repair. Substantial damage shall be figured cumulatively during a ten-year period by comparing the cost to repair the building to its pre-damage condition with the market value of the building immediately prior to the damage, for each event in which the building sustains damage, and adding the percentages of damage for each event. If substantially damaged, the entire building must meet the flood protection standards of this Section.
- d. Installing a manufactured home on a new site or a manufactured home on an existing site.
- e. Installing a travel trailer or recreational vehicle on a site for more than one hundred eighty (180) consecutive days; and
- f. Repetitive loss to an existing building.

8. The repair, remodeling, or maintenance of existing buildings located within a designated floodway, built before November 18, 1987, are exempt from 17 Ill. Adm. Code Part 3708, including the more restrictive appropriate use standards. Such buildings are not exempt from Subsection 4-13-8(A), including substantial damage and substantial improvement requirements, and if enlarged, replaced, or structurally altered must meet the requirements of 17 Ill. Adm. Code Part 3708.

9. New construction or substantial improvement of critical facilities within the floodplain or the two-tenths-percent annual chance flood elevation when defined, shall have the lowest floor (including basement) elevated or structurally dry floodproofed to the two-tenths-percent annual chance flood elevation or three (3) feet above the BFE, whichever is greater. Adequate parking shall be provided for staffing of the critical facilities at or above the BFE or two-tenths-percent chance flood, when defined. Access routes to all critical facilities should be reviewed and considered when permitting. Access routes should be elevated to or above the level of the BFE.

Floodproofing and sealing measures may also be used to provide protection, as described in Subsection 7., and must be taken to ensure that toxic substances will not be displaced by or released into floodwaters.

Critical facilities include emergency services facilities (such as fire and police stations), schools, hospitals, retirement homes, senior care facilities, water treatment plants, and arterial roads and associated bridges.

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

### **Opportunities to Expand and Improve Capabilities**

At this time, the municipality did not include or identify any opportunities to expand and improve capabilities. Plans will be updated in the future should this change.

### **Plan Integration**

The capability assessment describes opportunities to "link" or integrate the mitigation plan into other planning mechanisms. The process and mechanism to identify opportunities to integrate the Cook County MJ-HMP into other planning mechanisms will occur during the Annual Update Process and be reflected in the Jurisdictional Annual Report each year. Specific plan integration opportunities will include:

- Envision Evanston 2045 is a current initiative to update the Comprehensive Plan and Zoning Code for the City (<https://www.envisionevanston2045.com/>). The update will consider integration of goals and strategies and will consider hazard-specific considerations, as appropriate.

### ***Emergency Plan Integration:***

Cook County EMRS is supporting communities to develop and update their respective Emergency Operations Plans, Continuity of Operations Plan/Continuity of Government Plan, and Recovery Plan in 2024. This is an ongoing countywide initiative and is being implemented in all municipalities.

### **Emergency Operations Plan (EOP)**

An EOP template was created for all municipalities. The 2019 Cook County MJ-HMP and the hazards in the mitigation plan have been integrated into the Situation and Assumptions section of the EOP. Within that section, the natural hazards based on the 2019 MJ-HMP were added in the Initial Analysis and Assessment and Identification of Hazards section of the EOP. The hazards in the 2019 plan and the 2024 MJ-HMP did not change apart from adding wildfires for the Forest Preserve and unincorporated areas of the County. Future updates of the EOP will take into consideration any additional new natural hazards that are added to subsequent updates to the MJ-HMP.

### **Continuity of Operations Plan (COOP)**

The Continuity of Operations Plan (COOP) for the municipality includes a Situation section that is based on the 2019 Cook County MJ-HMP jurisdictional annex, and specifically the hazards identified

in the annex. The COOP-specific risk assessment is hazard-specific and based on likelihood of occurrence and severity of impact.

#### Recovery Plan

The goals of the Recovery Plan were developed to align with the 2019 Cook County MJ-HMP, and specifically prioritizes the responsibility of officials under this plan to save lives, protect property, relieve human suffering, sustain survivors, repair essential facilities, restore services, and protect the environment. The plan acknowledges that hazard mitigation is an important priority and consideration during the rebuilding process.

### 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

#### Federal Disasters Declared

Disaster Declaration Number	Date Declared	Event
DR-227	4/25/1967	Tornado
DR-351	9/4/1972	Flood
DR-373	4/26/1973	Flood
DR-509	6/18/1976	Severe Storm(s)
DR-643	6/30/1981	Severe Storm(s)
DR-776	10/7/1986	Flood
DR-798	8/21/1987	Flood
DR-997	7/9/1993	Flood
DR-1129	7/25/1996	Severe Storm(s)
DR-1188	9/17/1997	Severe Storm(s)
DR-1729	9/25/2007	Severe Storm(s)
DR-1800	10/3/2008	Severe Storm(s)
DR-1935	8/19/2010	Severe Storm(s)
DR-1960	3/17/2011	Snow
EM-3068	1/16/1979	Snow
EM-3134	1/8/1999	Snow
EM-3161	1/17/2001	Snow
EM-3230	9/7/2005	Hurricane – Katrina Evacuation
EM-3435	3/13/2020	Biological
DR-4116	5/10/2013	Flood
DR-4489	3/26/2020	Biological
DR-4728	8/15/2023	Severe Storm(s)

DR-4749	11/20/2023	Flood
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**State Disaster Declarations**

Date Declared	Event
7/26/2010	Severe Storms, High Winds, Torrential Rain
1/31/2011	Winter Weather
4/25/2011 5/25/2011	High Wind, Tornadoes, Torrential Rain
4/18/2013 4/20/2013 4/21/2013 4/25/2013 4/30/2013	Severe Storms, Heavy Rainfall, Flooding, Straight-line Winds
1/6/2014	Heavy Snowfall, Frigid Temperatures
7/12/2017 7/14/2017	Thunderstorms, Heavy Rainfall, Flooding
1/29/2019	Winter Storm
2/6/2020	Severe Storms
3/12/2020 – present (reissued monthly)	COVID-19
2/16/2021	Winter Storms
2/1/2022	Winter Storms
8/1/2022 (reissued monthly through 10/28/2022)	Monkeypox

TABLE: NATURAL HAZARD EVENTS			
Type of Event	FEMA Disaster Number (if applicable)	Date	Preliminary Damage Assessment/ Event Narrative
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: Vulnerabilities and Impacts**

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2024 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:** None.

**Flood:** Previously, we have experienced urban and lakefront flooding resulting from torrential rainfall. August is the wettest month in Evanston, averaging 4.3 inches of rainfall, with 32% of yearly precipitation in Autumn and 15% in Spring. Annually, Evanston averages 36.4 inches annually making this City one of the driest jurisdictions in Illinois. Lakefront flooding is due to storm surges in combination with urban flooding, compromising our displaced and migrant populations and lower socioeconomic homeowners.

**Extreme Heat:** Temperatures routinely reach 90 F during June, July, August, and September, with July being the hottest month with an average temperature of 83.1 Degrees Fahrenheit. High temperatures especially impact high-risk populations: seniors (17.3% = 13,069), lower socioeconomic (11.6% = 8,763), disabled individuals (24% = 18,130), and homeless/transient populations (estimated 380 - 450 individuals). On average, Evanston has 13.4 days per year over 90-degree temperatures.

**Lightning:** Numerous fire-related incidents have resulted from lightning strikes. The most significant power outages in 2021 and 2022 occurred in August when ComEd reported over 6,000 Evanstonians were without power, some of whom had to wait four days for service restoration.

**Hail:** Evanston experienced negligible impacts from hail.

**Fog:** Evanston experienced minimal issues related to fog.

**High Winds:** Numerous high wind-related events have resulted in physical damage to trees, homes, and local businesses. These impacts were minimally disruptive to our community.

**Earthquake:** There was no significant earthquake activity impacting the Evanston community.

**Drought:** Although our region was recently determined to be in yellow drought status, the only notable impacts to Evanston were related to supply chain disruptions.

**Snow:** We have experienced numerous snow-related emergencies related to downed power lines, compromised emergency response due to blocked/impassible roadways, health/safety concerns for the population without heat, transportation, electricity due to power lines, etc. The annual snowfall in Evanston is 35.9 inches, making this community one of the snowiest places in Illinois. January is the snowiest month in Evanston, averaging 11/2 inches of snow, and six months of the year experience significant snowfall.

**Blizzards:** We have experienced numerous snow-related emergencies related to downed power lines, compromised emergency response due to blocked/impassible roadways, health/safety concerns for populations without heat, transportation, electricity due to power lines, etc. Vulnerable populations, including displaced populations, seniors (17.3% = 13,069) and children (18.5% = 13,975), lower-socioeconomic individuals (11.6% = 8,763), disabled individuals (24% = 18,130), and homeless/transient populations (estimated 380 - 450 individuals).

**Extreme Cold:** We have experienced numerous extreme weather-related events related to freezing temps, broken pipes, heat loss due to power outages, etc. Secondary impacts are mass sheltering for homeless individuals and any residents impacted by electrical disruptions. On average, January is the coldest nighttime temperature for Evanston, what an average of 17.2 degrees Fahrenheit. Annually, Evanston averages 119.3 days with nighttime temperatures below freezing and 5.8 days with nighttime temperatures below zero. Vulnerable populations especially impacted by these conditions in Evanston include homeless/transient populations (estimated 380 - 450 individuals), seniors (17.3% = 13,069), children (18.5% = 13,975), lower-socioeconomic individuals (11.6% = 8,763), and disabled individuals (24% = 18,130).

**Ice Storms:** The City has previously experienced downed power lines due to icy conditions. Secondary impacts, such as potential power outages and transportation disruptions, would likely impact the entire community.

**Tornado:** We have only experienced high wind events resulting in significant community damage; however, a derecho was reported in 2008, 2009, 2022, and 2023 in or near Chicago.

**Severe Weather:** Storm surge resulting in coastal erosion of the lakefront and lakefront flooding.

Indicator	Number	Percent
Families in poverty	8,708	11.6%
People with disabilities	4278	5.4%
People over 65 years	12,987.11	17.3%
People under 5 years	3,528	4.7%
People of color	28,826	38.4%
Black	12,386	16.5%
Native American	65	0.0009%
Hispanic	8,482	11.3%
Difficulty with English	1,650	2.4%
Households with no car	4,487	16.1%
Mobile homes	0	0%

*Data are from the U.S. Census Bureau, American Community Survey. See methods for more information.*

The community evaluated whether vulnerability, and subsequently the potential impacts, in hazard-prone areas had increased, decreased, or remained the same for each natural hazard identified in this Hazard Mitigation Plan. Climate change, infrastructure expansion, and economic shifts that can affect vulnerability were considered. For example, if planned development is in an identified hazard area or is not built to the updated building codes, it may increase the community's vulnerability to future hazards and disasters. On the other hand, if development occurred with mitigation practices in place, the vulnerability may have remained the same or decreased. Additionally, shifting demographics were taken into consideration when assessing development trends.

### **Jurisdiction-Specific Climate Change Vulnerability and Impacts**

The table below outlines if climate change, as assessed by the local planning team, has increased or decreased the municipality's vulnerability/exposure, and thereby the potential impacts, to each natural hazard over the past five (5) years (**Current Vulnerability**), and the effect of climate change in the future probability of occurrence and impacts (**Future Vulnerability**) from each natural hazard.

Hazard	Vulnerability
<b>Current Vulnerability</b>	
Dam and Levee Failure	Not Applicable
Drought	Increased
Earthquake	Remained the Same
Flood (Riverine, Urban, Shoreline)	Increased
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds)	Increased
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Increased
Tornado	Remained the Same
Wildfire (Wildfire Smoke)	Increased

Hazard	Vulnerability
<b>Future Vulnerability</b>	
Dam and Levee Failure	Not Applicable
Drought	Increase
Earthquake	Increase
Flood (Riverine, Urban, Shoreline)	Increase
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds)	Increase
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Decrease
Tornado	Increase
Wildfire (Wildfire Smoke)	Increase

### **Jurisdiction-Specific Changes (or Expected Changes) in Development Trends in Hazard-Prone Areas**

The table below outlines if development, as assessed by the local planning team, over the past five (5) years (**Current Vulnerability**) has increased or decreased the jurisdiction's vulnerability/exposure, and thereby the potential impacts, to these natural hazards, and the anticipated effects changes in development may have on the future probability of occurrence and impacts (**Future Vulnerability**) from these natural hazards.

Hazard	Vulnerability
<b>Current Vulnerability</b>	
Dam and Levee Failure	Not Applicable
Drought	Remained the Same
Earthquake	Remained the Same
Flood (Riverine, Urban, Shoreline)	Decreased
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds)	Increased
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Remained the Same
Tornado	Decreased
Wildfire (Wildfire Smoke)	Remained the Same

Hazard	Vulnerability
<b>Future Vulnerability</b>	
Dam and Levee Failure	Not Applicable
Drought	No Change is Anticipated
Earthquake	No Change is Anticipated
Flood (Riverine, Urban, Shoreline)	Increase
Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds)	Decrease
Severe Winter Weather (Ice Storms, Heavy Snow, Blizzards, Extreme Cold)	Decrease
Tornado	No Change is Anticipated
Wildfire (Wildfire Smoke)	Decrease

People and buildings would be exposed to natural hazards, along with critical infrastructure, as identified in the community lifelines.

## 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
1	Severe Weather
2	Severe Winter Weather
3	Flood
4	Tornado
5	Earthquake
6	Drought
7	Dam Failure
Note: The ranking of hazards was subjectively changed based on past experience.	





## New Mitigation Actions

The following are new mitigation actions created during the 2024 update.

### Action E7.79

Mitigation Action #79: Stormwater Master Planning					
<b>Lead Agency/Department Organization:</b> Public Works Agency / Water Production Bureau Chief	<b>Supporting Agencies/ Organizations:</b> Sustainability and Resilience Department / Engineering Department	<b>Estimated Cost:</b> Medium	<b>Potential Funding Source:</b> Funds allocated from General Fund	<b>Estimated Projected Completion Date:</b> Ongoing	<b>Hazard(s) Mitigated:</b> Flood (Riverine, Urban, Coastal/Shoreline) Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds) Severe Winter Weather (Ice Storm, Heavy Snow, Blizzards, Extreme Cold)
<b>Year Initiated</b>		2024			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,5,6			
<b>Applicable Objective</b>		1,2,3,5,6,7,8,9,11,12,13			
<b>Cost Analysis (Low, Medium, High)</b>		Medium			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Medium			
<b>Action/Implementation Plan and Project Description:</b>		Stormwater Master Planning			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b>		N			

<b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	
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**Action E7.80**

<b>Mitigation Action #80: Increase Tree Canopy</b>					
<b>Lead Agency/Department Organization:</b> Public Works Agency	<b>Supporting Agencies/ Organizations:</b> Sustainability and Resilience Department	<b>Estimated Cost:</b> Medium	<b>Potential Funding Source:</b> General Fund Community Development Block Grant (CDBG)	<b>Estimated Projected Completion Date:</b> Ongoing	<b>Hazard(s) Mitigated:</b> Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds)
<b>Year Initiated</b>	2024				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,3,4,5,6				
<b>Applicable Objective</b>	All				
<b>Cost Analysis (Low, Medium, High)</b>	Medium				
<b>Priority and Level of Importance (Low, Medium, High)</b>	Medium				
<b>Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</b>	High				
<b>Action/Implementation Plan and Project Description:</b>	Increase Evanston's tree canopy within lower socioeconomic communities to reduce the heat island effect.				
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;	N				

**R** = Want Removed from Annex; **X** = No Action Taken/Delayed

### Action E7.81

Mitigation Action #81: Education Engagement					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> City of Evanston Resilience and Sustainability and Health and Human Service Department, Private non-profits and non-governmental organizations in Evanston	<b>Estimated Cost:</b> Low	<b>Potential Funding Source:</b> General Fund Fire Department OEM Budget EMPG	<b>Estimated Projected Completion Date:</b> Ongoing	<b>Hazard(s) Mitigated:</b> Flood (Riverine, Urban, Coastal/Shoreline) Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds) Severe Winter Weather (Ice Storm, Heavy Snow, Blizzards, Extreme Cold) Tornado Wildfire (Wildfire Smoke)
<b>Year Initiated</b>	2024				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,4,5,6				
<b>Applicable Objective</b>	5,6,8,12,13				
<b>Cost Analysis (Low, Medium, High)</b>	Low				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</b>	High				
<b>Action/Implementation Plan and Project Description:</b>	Educational engagement for the community to build preparedness, response, and recovery capabilities when natural hazards strike Evanston. Training events include an annual emergency preparedness fair and open house, a quarterly				

	emergency preparedness series, preparedness for citizens, crisis planning for houses of worship and congregate facilities, and financial preparedness for residents in January.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	N

**Action E7.82**

<b>Mitigation Action #82: Evanston Water North and South Standpipes Water Quality Improvements</b>					
<b>Lead Agency/Department Organization:</b> Public Works Agency / Water Production Bureau Chief	<b>Supporting Agencies/ Organizations:</b>	<b>Estimated Cost:</b> Medium	<b>Potential Funding Source:</b> General Fund Funds allocated from Water Department Fund	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> Drought
<b>Year Initiated</b>	2023 - noted as a new action item for 2024				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,3,6				
<b>Applicable Objective</b>	1,12				
<b>Cost Analysis (Low, Medium, High)</b>	Medium				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project (Loss Avoided or Issue Being Mitigated)</b>	High				
<b>Action/Implementation Plan and Project Description:</b>	Evanston Water North and South Standpipes Water Quality Improvements				
<b>Actual Completion Date or Ongoing Indefinite</b>					

<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	N
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**Action E7.83**

<b>Mitigation Action #83: Evanston Water Utility 36"/42" Intake Replacement</b>					
<b>Lead Agency/Department Organization:</b> Public Works Agency / Water Production Bureau Chief	<b>Supporting Agencies/ Organizations:</b>	<b>Estimated Cost:</b> High	<b>Potential Funding Source:</b> General Fund Funds from locally budgeted funds received from wholesale water customers USEPA and IEPA	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> Drought Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds) Severe Winter Weather (Ice Storm, Heavy Snow, Blizzards, Extreme Cold)
<b>Year Initiated</b>		2020 - noted as a new action item for 2024			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,4,6			
<b>Applicable Objective</b>		1,2,7,12			
<b>Cost Analysis (Low, Medium, High)</b>		High			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			

<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	High
<b>Action/Implementation Plan and Project Description:</b>	Evanston Water Utility 36"/42" Intake Replacement
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	N

**Action E7.84**

<b>Mitigation Action #84: Evanston Water Utility Window Hardening Project</b>					
<b>Lead Agency/Department Organization:</b> Public Works Agency / Water Production Bureau Chief	<b>Supporting Agencies/ Organizations:</b>	<b>Estimated Cost:</b> Low	<b>Potential Funding Source:</b> General Fund Funds allocated from the Water Fund	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> Severe Weather (Extreme Heat, Lightning, Hail, Fog, High Winds) Tornado
<b>Year Initiated</b>	2023 - noted as a new action item for 2024				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,3,5				
<b>Applicable Objective</b>	2				
<b>Cost Analysis (Low, Medium, High)</b>	Low				

<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	High
<b>Action/Implementation Plan and Project Description:</b>	Evanston Water Utility Window Hardening Project
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	N

## Ongoing Mitigation Actions

During the 2024 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.

### Action E-7.2

<b>Mitigation Action #2: Continue to support the countywide actions identified in this plan.</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Administration	<b>Supporting Agencies/ Organizations:</b>	<b>Estimated Cost:</b> Low	<b>Potential Funding Source:</b> General Funds	<b>Estimated Projected Completion Date:</b> Short- and Long-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>		2014			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,5			
<b>Applicable Objective</b>		All			



<b>Cost Analysis (Low, Medium, High)</b>	Low
<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Medium
<b>Action/Implementation Plan and Project Description:</b>	Continuing partnership with CCDHS
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

### Action E-7.3

<b>Mitigation Action #3: Actively participate in the plan maintenance strategy identified in this plan.</b>					
<b>Lead Agency/Department Organization:</b> EMRS, City of Evanston Administration	<b>Supporting Agencies/ Organizations:</b>	<b>Estimated Cost:</b> Low	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>	2014				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,5				
<b>Applicable Objective</b>	3,4,6				
<b>Cost Analysis (Low, Medium, High)</b>	Low				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Medium				
<b>Action/Implementation Plan and Project Description:</b>	Continue to address and maintain				

<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E-7.4**

<b>Mitigation Action #4: Consider participation in incentive-based programs such as Tree City and StormReady.</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Administration	<b>Supporting Agencies/ Organizations:</b>	<b>Estimated Cost:</b> Low	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>	2014				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,5				
<b>Applicable Objective</b>	3,4,5,6,7,9,10,11,13				
<b>Cost Analysis (Low, Medium, High)</b>	Low				
<b>Priority and Level of Importance (Low, Medium, High)</b>	Medium				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Medium				
<b>Action/Implementation Plan and Project Description:</b>	City has a plan in place for trees, and is also Storm Ready.				
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O				

## Action E-7.6

Mitigation Action #6: Where feasible, implement a program to record high watermarks following high water events.					
<b>Lead Agency/Department Organization:</b> City of Evanston Administration	<b>Supporting Agencies/ Organizations:</b>	<b>Estimated Cost:</b> Medium	<b>Potential Funding Source:</b> General Fund, FEMA Public Assistance(PA)	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Flooding, Severe Weather
<b>Year Initiated</b>		2014			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,5			
<b>Applicable Objective</b>		3,6,9			
<b>Cost Analysis (Low, Medium, High)</b>		Medium			
<b>Priority and Level of Importance (Low, Medium, High)</b>		Medium			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Medium			
<b>Action/Implementation Plan and Project Description:</b>		Program in place to record the quantity of rainfall with monitors in the sewer to record the flow characteristics during storms.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

## Action E-7.7

Mitigation Action #7: Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.					
<b>Lead Agency/Department Organization:</b>	<b>Supporting Agencies/ Organizations:</b>	<b>Estimated Cost:</b> Low	<b>Potential Funding Source:</b>	<b>Estimated Projected</b>	<b>Hazard(s) Mitigated:</b> All

City of Evanston Administration			General Fund	<b>Completion Date:</b> Short-term	
<b>Year Initiated</b>	2014				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,3,5				
<b>Applicable Objective</b>	3,4,6,10,13				
<b>Cost Analysis (Low, Medium, High)</b>	Low				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Medium				
<b>Action/Implementation Plan and Project Description:</b>	Being addressed by Community Development				
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O				

**Action E-7.10**

<b>Mitigation Action #10: Implement Evanston/Skokie School District 65 GI at Orrington Elementary School Project.</b>					
<b>Lead Agency/Department Organization:</b> MWRD	<b>Supporting Agencies/ Organizations:</b> City of Chicago	<b>Estimated Cost:</b> High	<b>Potential Funding Source:</b> MWRD	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Flooding
<b>Year Initiated</b>	2019				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,3				
<b>Applicable Objective</b>					

<b>Cost Analysis (Low, Medium, High)</b>	High
<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	High
<b>Action/Implementation Plan and Project Description:</b>	Project Title: Evanston/Skokie SD 65 Evanston/Skokie School District 65 GI at Orrington Elementary School
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E-7.13**

<b>Mitigation Action #13: Install the Evanston Library Backup Generator Addition and Finalize Sheltering Renovations.</b>					
<b>Lead Agency/Department Organization:</b> Evanston Public Library	<b>Supporting Agencies/ Organizations:</b> City of Evanston	<b>Estimated Cost:</b> \$1,282,801	<b>Potential Funding Source:</b> BRIC, HMGP	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>	2018 (November)				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,3,4,5				
<b>Applicable Objective</b>	2,6,8				
<b>Cost Analysis (Low, Medium, High)</b>	High				
<b>Priority and Level of Importance (Low, Medium, High)</b>	Medium				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Medium				
<b>Action/Implementation Plan and Project Description:</b>	The process to complete this project will begin with a preliminary, overcurrent, protective device coordination study within the library facilities to				

	<p>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>
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.14**

<b>Mitigation Action #14: Increase security measures for water plant through new camera system</b>
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<b>Lead Agency/Department Organization:</b> Public Works	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$520,000 plus \$16,000/year	<b>Potential Funding Source:</b> SHSP, General Fund	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Epidemic or pandemic, Hazardous Materials Incident
<b>Year Initiated</b>		2019			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Protect critical infrastructure security and prevent water contamination or disruption of water supply source High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Provide fixed thermal event monitoring cameras with overlapping coverage of water treatment plant. In the past, there have been trespassers who have jumped the fence and where caught taking pictures of our water treatment facility. The antiquated and inefficient camera system was unable to account for all actions of the trespasser and, as a result, poses a significant security challenge.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

## Action E7.15

Mitigation Action #15: Migrate to an electronic access control system throughout the plant and at the standpipes					
<b>Lead Agency/Department Organization:</b> Public Works Department	<b>Supporting Agencies/Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$35,000 plus \$3,500 annually	<b>Potential Funding Source:</b> SHSP, General Fund	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Hazardous Materials Incident
<b>Year Initiated</b>		2019			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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.			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High Priority			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Protection of critical infrastructure and public health/safety High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Build on to electronic access control system being installed at Community Center; annual cost associated with equipment maintenance. Electronic access control will improve physical security design standards at multiple locations to include public access building and water plant (critical infrastructure).			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			



## Action E7.18

Mitigation Action #18: Groin wall installation /extension along the lakefront					
<b>Lead Agency/Department Organization:</b> Public Works Department	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$8,550,000	<b>Potential Funding Source:</b> HMGP, BRIC	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> Floods, Ice Storms, Coastal Erosion
<b>Year Initiated</b>		2020			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Protect the public from dangerous lake conditions, improve public safety, save beachfront property, prevent damages to ADA beach ramps, decrease costs related to routine cleanup from flooding, protect roadway from being washed out due to high waves, etc High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Increasing the number/length of Groin walls along the lakefront, a system designed to minimize impacts related to north and south wave patterns and lakefront erosion, will increase public safety by protecting the public from dangerous lake conditions to include high waves, significant undertow, and flooded roadways; save beachfront property; prevent damages to ADA compliant beach ramps; decrease costs related to routine cleanup from flooding; restore revenues previously generated from token sales allowing residents to use beachfront property, etc.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b>		O			

<b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	Reliant on grant funding to complete this project.
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**Action E7.19**

<b>Mitigation Action #19: Communications Vehicle</b>					
<b>Lead Agency/Department Organization:</b> Emergency Management - Fire Department	<b>Supporting Agencies/ Organizations:</b> Police Department	<b>Estimated Cost:</b> \$100,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>	2020				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Promote interagency communications during both small and larger scale incidents High—Project will provide an immediate reduction of risk exposure for life and property.				
<b>Action/Implementation Plan and Project Description:</b>	A communications vehicle would promote interagency communications during both small and larger scale incidents for responses within our community. Due to a limitation in radio compatibility, and a limitation in funds to adequately address this situation, our city is in dire need of a vehicle to operate as a communications hub and unified operations post.				
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b>	O				

<b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	Reliant on grant funding to make this purchase.
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**Action E7.20**

<b>Mitigation Action #20: Provide fixed thermal event monitoring cameras with overlapping coverage of the water treatment plant</b>					
<b>Lead Agency/Department Organization:</b> Water Department - Public Works	<b>Supporting Agencies/ Organizations:</b> Emergency Management - Fire Department	<b>Estimated Cost:</b> \$520,000 start up and \$120/year	<b>Potential Funding Source:</b> SHSP, General Fund	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> Widespread Power Outage
<b>Year Initiated</b>		2020			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Provide fixed thermal event monitoring cameras with overlapping coverage of the water treatment plant designed to improve security measures for a critical infrastructure High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Provide fixed thermal event monitoring cameras with overlapping coverage of the water treatment plant will improve security measures for a critical infrastructure. The initial start up cost of equipment is \$150,00 and the annual maintenance is \$120/year.			
<b>Actual Completion Date or Ongoing Indefinite</b>					

<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	I In progress
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**Action E7.21**

<b>Mitigation Action #21: Develop a Continuity Plan(s) to support all city operations</b>					
<b>Lead Agency/Department Organization:</b> Water Department - Public Works	<b>Supporting Agencies/ Organizations:</b> Emergency Management - Fire Department	<b>Estimated Cost:</b> \$150,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Ongoing	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>	2020				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	By developing a Business Continuity Plan, the Water Department would have adequately analyzed their current conditions, effectively identified potential problems, and developed actions plans in the event of interrupted operations. High—Project will provide an immediate reduction of risk exposure for life and property.				
<b>Action/Implementation Plan and Project Description:</b>	By developing a Business Continuity Plan, the Water Department would have adequately analyzed their current conditions, effectively identified potential problems, and developed actions plans in the event of interrupted operations.				
<b>Actual Completion Date or Ongoing Indefinite</b>					

<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O COOP/COG is being drafted to support the newly developed water plant COOP.
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**Action E7.22**

<b>Mitigation Action #22: Electronic record-keeping system for managing the cross-connection control program and devices</b>					
<b>Lead Agency/Department Organization:</b> Water Department - Public Works	<b>Supporting Agencies/ Organizations:</b> Emergency Management - Fire Department	<b>Estimated Cost:</b> \$15,000; \$5,000 yearly	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> Dam/Levee Failure
<b>Year Initiated</b>		2020			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Improved quality control measures through electronic record-keeping system for managing the cross-connection control program and devices. Improved quality control measures will help to ensure the appropriate levels of security are in place. High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Improved quality control measures through electronic record-keeping system for managing the cross-connection control program and devices. Improved			

	quality control measures will help to ensure the appropriate levels of security are in place.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	I In progress

**Action E7.23**

<b>Mitigation Action #23: Increase the number of cross-connection control staff</b>					
<b>Lead Agency/Department Organization:</b> Water Department (Public Works)	<b>Supporting Agencies/Organizations:</b> Emergency Management - Fire Department	<b>Estimated Cost:</b> \$125,000/year	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Flood
<b>Year Initiated</b>	2020				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,5				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	By increasing the number of cross-connection control staff, security is improved. High—Project will provide an immediate reduction of risk exposure for life and property.				
<b>Action/Implementation Plan and Project Description:</b>	By increasing the number of cross-connection control staff and the necessary junctions, the level of security is improved and a vital asset protected.				

<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.24**

<b>Mitigation Action #24: Installation of high-security locks and intrusion detection on off-site wholesale customer vaults</b>					
<b>Lead Agency/Department Organization:</b> Public Works - Water Department	<b>Supporting Agencies/Organizations:</b> Emergency Management - Fire Department	<b>Estimated Cost:</b> \$9,800	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> Epidemic or Pandemic
<b>Year Initiated</b>	2020				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect a critical infrastructure (the City of Evanston Water Plant) from invasive attacks. In turn, this will help to ensure no tampering occurs within our water supply and that residents are not adversely impacted from tainted water. High—Project will provide an immediate reduction of risk exposure for life and property.				
<b>Action/Implementation Plan and Project Description:</b>	Installation of high-security locks and intrusion detection on off-site wholesale customer vaults associated with the Evanston Water Plant will				

	provide protections to a critical infrastructure from invasive attacks on our water supply. This increase in security will help to ensure the necessary protections of our water supply. The estimated startup cost is \$9,800, while the annual cost is \$120/year to cover equipment maintenance.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.25**

<b>Mitigation Action #25: Zerto Disaster Recovery Service (Cloud-based)</b>					
<b>Lead Agency/Department Organization:</b> Information Technology	<b>Supporting Agencies/ Organizations:</b> Emergency Management - Fire Department	<b>Estimated Cost:</b> \$150,000	<b>Potential Funding Source:</b> SHSP	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>	2020				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	The Zerto Disaster Recovery Service would protect our database servers and minimize signal injection attacks. High—Project will provide an immediate reduction of risk exposure for life and property.				



<b>Action/Implementation Plan and Project Description:</b>	<p>Cloud-based disaster recovery services are designed to protect database servers within the City and its critical infrastructure in the event of an emergency as well as from signal injection attacks. The City of Evanston has limited back up potential as it relates to off-sight storage, thereby, making our IT data and infrastructure more vulnerable to an attack. The Zerto Disaster Recovery Service would protect our database servers and minimize signal injection attacks. This service would also provide off-sight backup in case of a disaster. This cloud based service would allow for continued business operations and enable data recovery post-disaster. Additionally, critical records made available throughout the city would have adequate protections. Life Safety services, such as through our Computer Aided Dispatch (CAD), Firehouse program, evidence management and laser fiche. Real-time synchronization of data would occur in the iCloud and offer minimal interruption of data exchange. The cost of servers, networking equipment, and storage would run around \$150,000. Additional costs to run the program include monthly server charges. The City of Evanston has about 200 servers.</p>
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	<p>O</p>

#### Action E7.26

Mitigation Action #26: Web Application Firewall (WAF) would allow our City to unpack incoming IT traffic and enable a greater level of security from a cyberattack/ransomware					
<b>Lead Agency/Department Organization:</b> Information Technology	<b>Supporting Agencies/ Organizations:</b> Emergency Management - Fire Department	<b>Estimated Cost:</b> \$30,000	<b>Potential Funding Source:</b> SHSP	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Widespread Power Outage

<b>Year Initiated</b>	2020
<b>Applicable Jurisdiction</b>	City of Evanston
<b>Applicable Goal</b>	1,5
<b>Applicable Objective</b>	
<b>Cost Analysis (Low, Medium, High)</b>	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).
<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	By enabling the City to monitor what comes into the system utilizing the WAF application, the City is better able to protect itself from malicious attacks through malware/ransomware, etc. High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	By enabling the City to monitor what comes into the system utilizing the WAF application, the City is better able to protect itself from malicious attacks through malware/ransomware, etc. Our current firewall is unable to unpack incoming traffic and identify what is being transferred, therefore, making our servers more vulnerable to corrupt means. The initial startup cost is \$30,000, with \$10,000 for the device (hardware) and \$20,000 for the annual service made available through software.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.27****Mitigation Action #27: Rock wall installation**

<b>Lead Agency/Department Organization:</b> Public Works	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$300,000	<b>Potential Funding Source:</b> BRIC, HMGP	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Floods, Ice Storms, Coastal Erosion
<b>Year Initiated</b>		2020			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Protect the public from dangerous lake conditions, improve public safety, save beachfront property, prevent damages to ADA beach ramps, decrease costs related to routine cleanup from flooding, protect roadway from being washed out due to high waves, etc. High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Increasing revetment barriers, designed to minimize impacts related to rising lake levels and lakefront erosion, will increase public safety by protecting the public from dangerous lake conditions and washed out roadways; save beachfront property; prevent damages to ADA compliant beach ramps; decrease costs related to routine cleanup from flooding; restore revenues previously generated from token sales allowing residents to use beachfront property, etc.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed;		<b>O</b> Reliant on grant funding to complete this project.			

<b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	
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**Action E7.29**

<b>Mitigation Action #29: Preparedness kits for our Community Emergency Response Team to assist in responding to others in need within the Evanston community.</b>					
<b>Lead Agency/Department Organization:</b> Emergency Management	<b>Supporting Agencies/ Organizations:</b> Fire Department, Health and Human Services, and Police Department	<b>Estimated Cost:</b> \$10,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>		2019			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Community engagement promotes resilience which has proven to save lives. Preparedness kits for our Community Emergency Response Team necessary to assist in responding during a disaster to others in need within the Evanston community. High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Providing preparedness kits for our Community Emergency Response Team is necessary to assist in responding to others in need during a disaster. By			

	providing our CERT membership with the tools they need to respond will only improve our potential to assist as a community when the need arises.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O Several items have already been purchased for existing go bags, with more yet to be procured.

**Action E7.31**

<b>Mitigation Action #31: Repair of existing rock wall (revetment)</b>					
<b>Lead Agency/Department Organization:</b> Public Works Department	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$5,700,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Floods, Ice Storms, Coastal Erosion
<b>Year Initiated</b>	2020				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect the public from dangerous lake conditions, improve public safety, save beachfront property, prevent damages to ADA beach ramps, decrease costs related to routine cleanup from flooding, protect roadway from being washed out due to high waves, etc. High—Project will provide an immediate reduction of risk exposure for life and property.				

<b>Action/Implementation Plan and Project Description:</b>	Increasing revetment barriers, designed to minimize impacts related to rising lake levels and lakefront erosion, will increase public safety by protecting the public from dangerous lake conditions and washed out roadways; save beachfront property; prevent damages to ADA compliant beach ramps; decrease costs related to routine cleanup from flooding; restore revenues previously generated from token sales allowing residents to use beachfront property, etc.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	<b>O</b> Reliant on grant funding to complete this project.

**Action E7.32**

<b>Mitigation Action #32: Armor wall repair (revetment)</b>					
<b>Lead Agency/Department Organization:</b> Public Works Department	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$500,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Floods, Ice Storms, Coastal Erosion
<b>Year Initiated</b>	2020				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				

<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect the public from dangerous lake conditions, improve public safety, save beachfront property, prevent damages to ADA beach ramps, decrease costs related to routine cleanup from flooding, protect roadway from being washed out due to high waves, etc. High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Increasing revetment barriers, designed to minimize impacts related to rising lake levels and lakefront erosion, will increase public safety by protecting the public from dangerous lake conditions and washed out roadways; save beachfront property; prevent damages to ADA compliant beach ramps; decrease costs related to routine cleanup from flooding; restore revenues previously generated from token sales allowing residents to use beachfront property, etc.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	<b>O</b> Reliant on grant funding to complete this project.

**Action E7.33**

<b>Mitigation Action #33: Replace ADA compliant ramps along lakefront</b>					
<b>Lead Agency/Department Organization:</b> Parks and Recreation Department	<b>Supporting Agencies/Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$40,000	<b>Potential Funding Source:</b> BRIC, HMGP	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Floods, Ice Storms, Coastal Erosion
<b>Year Initiated</b>		2020			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,4,5,6			
<b>Applicable Objective</b>					

<b>Cost Analysis (Low, Medium, High)</b>	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).
<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Ensure ADA accessibility and safety to public beach front High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Rebuild ADA compliant beach ramps for all Evanston swimming beaches, totaling 5 ramps located at Lee Beach, Lighthouse Beach, Clark Street Beach, Greenwood Beach and South Beach.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O In progress

#### Action E7.34

Mitigation Action #34: Elliot Park Revetment Rehabilitation					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$5,700,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				



<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect lakefront park, one restroom building, one lakefront operations building, and adjacent roadways and residences from wave overtopping, flooding and erosion. High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Rehabilitate the existing revetment at Elliot Park to protect it from wave attacks and high water levels on Lake Michigan. Formal BCA is not available. Damage to park, park buildings, roadway, and adjacent residents are anticipated to exceed project cost if a significant storm event occurs.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

#### Action E7.35

<b>Mitigation Action #35: Greenwood Beach Headland Construction</b>					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$6,600,000	<b>Potential Funding Source:</b> BRIC, HMGP	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				

<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect lakefront park, beach, one restroom and adjacent roadways and residences from wave overtopping, flooding and erosion. High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Construct headlands to protect greenwood beach from wave attacks and high water levels on Lake Michigan. Formal BCA is not available. Damage to park, park buildings, roadway, and adjacent residents are anticipated to exceed project cost if a significant storm event occurs.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.36**

<b>Mitigation Action #36: Sheridan Road Revetment Rehabilitation</b>					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$5,220,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			

<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect roadway and critical infrastructure from waver overtopping, flooding and erosion. High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Rehabilitate the existing revetment at Sheridan Road east of Calvary Cemetery to protect it from wave attacks and high water levels on Lake Michigan. The benefit-cost analysis is 2.06.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.37**

<b>Mitigation Action #37: Water Plant Flood Barrier Installation</b>					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$532,000	<b>Potential Funding Source:</b> BRIC, HMGP	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				

<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect critical infrastructure and improve community resiliency as a result of climate change High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Construct a flood barrier to protect the east end of the Evanston Water Plant from wave attacks and high water levels on Lake Michigan. Formal BCA is not available. Damage to the water plant is anticipated to exceed project costs if a significant storm event occurs.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

#### Action E7.38

Mitigation Action #38: Lee Street Beach Stabilization					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$905,000	<b>Potential Funding Source:</b> BRIC, HMGP	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				

<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect critical infrastructure and improve community resiliency as a result of climate change High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Stabilize and protect the existing beach from wave attacks and high water levels on Lake Michigan. Formal BCA is not available. Damage to the beach, park, and adjacent roadway and residences is anticipated to exceed project cost if a significant storm event occurs.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.39**

<b>Mitigation Action #39: Clark Square Revetment Rehabilitation</b>					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$2,360,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				

<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect lakefront park from wave overtopping, flooding and erosion. High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Rehabilitate the existing revetment at Sheridan Square to protect it from wave attacks and high water levels on Lake Michigan. Formal BCA is not available. Damage to the park is anticipated to exceed project costs if a significant storm event occurs.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

#### Action E7.40

Mitigation Action #40: Lighthouse Beach Dune Management					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$340,000	<b>Potential Funding Source:</b> General Fund, BRIC, HMGP	<b>Estimated Projected Completion Date:</b> 2024	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				

<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect lakefront park from wave overtopping, flooding and erosion. High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Install plantings to better establish and manage the dune at Lighthouse Beach. Formal BCA is not available. Damage to the park is anticipated to exceed project costs if a significant storm event occurs.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

#### Action E7.41

<b>Mitigation Action #41: Garden Park Revetment Rehabilitation</b>					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$850,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect lakefront park, adjacent roadway, and adjacent residences from wave overtopping, flooding and erosion.				

	High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Rehabilitate the existing revetment at Garden Park to protect it from wave attacks and high water levels on Lake Michigan. Formal BCA is not available. Damage to the park, adjacent roadway, and adjacent residences is anticipated to exceed project costs if a significant storm event occurs.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

#### Action E7.42

Mitigation Action #42: South Boulevard Beach Dune Establishment and Revetment Rehabilitation					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$2,400,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect lakefront park, adjacent roadway, and adjacent residences from wave overtopping, flooding and erosion.				



	High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Establish a dune and rehabilitate the existing revetment at South Boulevard Beach to protect it from wave attacks and high water levels on Lake Michigan. Formal BCA is not available. Damage to the beach, adjacent roadway, and adjacent residences is anticipated to exceed project costs if a significant storm event occurs.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.43**

<b>Mitigation Action #43: Clark Street Beach Dune Management</b>					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$810,000	<b>Potential Funding Source:</b> BRIC, HMGP	<b>Estimated Projected Completion Date:</b> 2024	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect lakefront park from wave overtopping, flooding and erosion. Enhance existing migratory bird habitat.				

	High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Install plantings to better establish and manage the dune at Clark Street Beach. Formal BCA is not available. Damage to the beach and adjacent park is anticipated to exceed project costs if a significant storm event occurs.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.44**

<b>Mitigation Action #44: Dog Beach Stabilization and Revetment Rehabilitation</b>					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$2,980,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Stabilize the beach and adjacent park and roadway/parking area from wave overtopping, flooding and erosion. High—Project will provide an immediate reduction of risk exposure for life and property.				

<b>Action/Implementation Plan and Project Description:</b>	Stabilize the beach and rehabilitate the existing revetment at the Dog Beach to protect it from wave attacks and high water levels on Lake Michigan. Formal BCA is not available. Damage to the park, and adjacent roadway/parking is anticipated to exceed project cost if a significant storm event occurs.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.45**

<b>Mitigation Action #45: Church Street Launch Ramp Revetment Rehabilitation</b>					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$510,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect lakefront park from wave overtopping, flooding and erosion. High—Project will provide an immediate reduction of risk exposure for life and property.				

<b>Action/Implementation Plan and Project Description:</b>	Rehabilitate the existing revetment at the Church Street Launch Ramp to protect it from wave attacks and high water levels on Lake Michigan. Formal BCA is not available. Damage to the park is anticipated to exceed project costs if a significant storm event occurs.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.46**

<b>Mitigation Action #46: Dawes Park Revetment Rehabilitation</b>					
<b>Lead Agency/Department Organization:</b> Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> \$1,350,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Flood, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Protect lakefront park from wave overtopping, flooding and erosion. High—Project will provide an immediate reduction of risk exposure for life and property.				
<b>Action/Implementation Plan and Project Description:</b>	Rehabilitate the existing revetment at Dawes Park to protect it from wave attacks and high water levels on Lake Michigan. Formal BCA is not available.				

	Damage to the park is anticipated to exceed project costs if a significant storm event occurs.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.47**

<b>Mitigation Action #47: Evanston Service Center Emergency Generator Installation</b>					
<b>Lead Agency/Department Organization:</b> Evanston Public Works	<b>Supporting Agencies/ Organizations:</b> Evanston Fire Department	<b>Estimated Cost:</b> Medium	<b>Potential Funding Source:</b> BRIC, HMGP	<b>Estimated Projected Completion Date:</b> 2024	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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.				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Improve continuity/reliability of Streets, Sanitation, Forestry, Greenways, and Facilities Management service to community during emergency events High—Project will provide an immediate reduction of risk exposure for life and property.				
<b>Action/Implementation Plan and Project Description:</b>	Install an emergency generator at the Evanston Service Center. Formal BCA is not available. If service is interrupted during a major storm event damage to the community will likely be extensive.				

<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.48**

<b>Mitigation Action #48: Evanston Water Utility Electrical Reliability and Emergency Backup Power Improvements</b>					
<b>Lead Agency/Department</b> <b>Organization:</b> Public Works	<b>Supporting Agencies/ Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> \$7,800,000	<b>Potential Funding Source:</b> HMGP, BRIC	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Widespread Power Outage
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Improve continuity/reliability of treated drinking water supply for Evanston and wholesale water customers (over 400,000 population in 10 cities) High—Project will provide an immediate reduction of risk exposure for life and property.				
<b>Action/Implementation Plan and Project Description:</b>	Replacement of the outdated medium voltage switchgear and generator needed to provide emergency backup power at the Evanston Water Utility. Formal BCA is not available. If service is interrupted during a major storm event there will be significant health and safety implications.				
<b>Actual Completion Date or Ongoing Indefinite</b>					

<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O
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**Action E7.49**

<b>Mitigation Action #49: Evanston Water North and South Standpipes Pumping Reliability</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Public Works	<b>Supporting Agencies/ Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> \$550,000	<b>Potential Funding Source:</b> HMGP, BRIC	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Widespread Power Outage
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Improve continuity/reliability of treated drinking water supply for Evanston and Skokie High—Project will provide an immediate reduction of risk exposure for life and property.				
<b>Action/Implementation Plan and Project Description:</b>	The scope of this project is to make pumping and mixing improvements at the North and South Standpipes to improve water quality in the distribution system to better meet regulatory requirements. Formal BCA is not available. If pumping is disrupted then there will be a decrease in water quality provided to Skokie and Evanston. In addition, communities may not be able to meet fire flow requirements.				

<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.50**

<b>Mitigation Action #50: Evanston Water Utility 36"/42" Intake Replacement</b>					
<b>Lead Agency/Department</b> <b>Organization:</b> City of Evanston Public Works	<b>Supporting Agencies/Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> \$40,044,000	<b>Potential Funding Source:</b> HMGP, BRIC	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> Widespread Power Outage
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Improve continuity/reliability of treated drinking water supply for Evanston and wholesale water customers (over 400,000 population in 10 cities) High—Project will provide an immediate reduction of risk exposure for life and property.				
<b>Action/Implementation Plan and Project Description:</b>	This project will replace the existing 36"/42" intake with a new 60" intake. The existing intake is over 100 years old, and the capacity has substantially decreased over time. Completion of this project is necessary so that the water utility can provide its full rated capacity with the largest unit out of service. The new intake will have a heating system installed to prevent icing.				



	This line item is for construction services. Formal BCA is not available. Improvement is necessary for the Evanston Water Utility to meet its rated treatment capacity with one of three intakes out of service.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	I

**Action E7.51**

<b>Mitigation Action #51: Communications Vehicle</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Police Department	<b>Estimated Cost:</b> \$1,000,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> 2024	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>	2023				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Improve incident management through improved communications across various jurisdictions when managing a large-scale incident. 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.				

<b>Action/Implementation Plan and Project Description:</b>	This vehicle will support communications across a variety of jurisdictions, bridging communications between a variety of agencies using different radios and frequencies. This vehicle would be used to support interoperable communications with mutual aid companies and support critical operations during large-scale incident management. Formal BCA is not available. Benefits would include improving communications, coordination, and hazard mitigation during an interagency response; thereby, promoting the ability to respond to an incident. Improving response capabilities can save lives and property. An additional benefit could include decreasing City liability and insurance premiums.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.52**

<b>Mitigation Action #52: Meridian Barriers</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Police and PRCS Department	<b>Estimated Cost:</b> \$700,000	<b>Potential Funding Source:</b> BRIC, HMGP	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>		2021			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		2,3,4,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			

<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	The barriers will secure key areas around the perimeter and protect the venue from unwanted entry. Archer 1200 barriers are ideal for stadiums and event spaces because they can be specifically deployed to allow foot traffic and emergency vehicle access High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	"Archer 1200 Barriers are mobile, modular and easily moved by one person to allow emergency vehicle access or to react to developing needs. The unique security solution allows for the ability to address problem areas as well as harden perimeters in response to changing threat situations. The Meridian Rapid Defense barriers help protect areas at local events from vehicle intrusion, which has been known to impact pedestrians and the facility from danger. Formal BCA is not available. Improvement is necessary for the City of Evanston to provide event security at a more affordable price for local vendors.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.53**

<b>Mitigation Action #53: CERT Programming</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> \$15,000	<b>Potential Funding Source:</b> SHSP	<b>Estimated Projected Completion Date:</b> Ongoing	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>		2014			

<b>Applicable Jurisdiction</b>	City of Evanston
<b>Applicable Goal</b>	2,3,4,5,6
<b>Applicable Objective</b>	
<b>Cost Analysis (Low, Medium, High)</b>	Low—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.
<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	People who go through CERT training have a better understanding of the potential threats to their home, workplace, and community and can take the right steps to lessen the effects of these hazards on themselves, their homes, or their workplace. High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	People who go through CERT training have a better understanding of the potential threats to their home, workplace, and community and can take the right steps to lessen the effects of these hazards on themselves, their homes, or their workplace.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.54**

<b>Mitigation Action #54: Virtual EOC operations platform</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> City of Evanston IT Department	<b>Estimated Cost:</b> \$75,000	<b>Potential Funding Source:</b> SHSP	<b>Estimated Projected Completion Date:</b> 2024	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>		2019			

<b>Applicable Jurisdiction</b>	City of Evanston
<b>Applicable Goal</b>	2,3,4,5,6
<b>Applicable Objective</b>	
<b>Cost Analysis (Low, Medium, High)</b>	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).
<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	To promote community safety, health, and information sharing during medium to large size emergencies. High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	In a crisis situation, the best decisions are made with a full understanding of events as they are happening. A virtual emergency operations platform would deliver the dynamic workflows and real-time situational awareness required to maximize operational effectiveness for effective critical incident management, empowering real-time collaboration, and efficient tracking of data and resources. This tool would need to meet the needs of each city department, be user-friendly, and promote efficient operations necessary to promote response efforts, recovery operations, and hazard mitigation. Hazard mitigation efforts ahead of disaster recovery average a 6:1 ratio, where every \$1 spent on mitigation efforts saves \$6 spent during disaster recovery efforts. Supporting data can be found through the following links: <a href="https://www.pewtrusts.org/en/research-and-analysis/articles/2018/01/11/every-\$1-invested-in-disaster-mitigation-saves-\$6">https://www.pewtrusts.org/en/research-and-analysis/articles/2018/01/11/every-\$1-invested-in-disaster-mitigation-saves-\$6</a> AND <a href="https://www.fema.gov/sites/default/files/2020-07/fema_mitsaves-factsheet_2018.pdf">https://www.fema.gov/sites/default/files/2020-07/fema_mitsaves-factsheet_2018.pdf</a>
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

## Action E7.55

Mitigation Action #55: Underground Fiberoptic network to Utility Plant					
<b>Lead Agency/Department Organization:</b> City of Evanston IT Department	<b>Supporting Agencies/ Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> High	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Widespread Power Outage
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		2,3,4,5			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>					
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

## Action E7.56

Mitigation Action #56: Disaster Recovery Operation in the Cloud
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<b>Lead Agency/Department Organization:</b> City of Evanston IT Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> Medium	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Widespread Power Outage
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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.			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>					
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

**Action E7.57**

<b>Mitigation Action #57: Virtra Police Simulator</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Police Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> \$50,000	<b>Potential Funding Source:</b> HSGP	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> All

<b>Year Initiated</b>	2022
<b>Applicable Jurisdiction</b>	City of Evanston
<b>Applicable Goal</b>	2,3,4,5,6
<b>Applicable Objective</b>	
<b>Cost Analysis (Low, Medium, High)</b>	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.
<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Virta improves officers' critical decision making skills by training in a scenario based realistic training environment. Officers are taught critical concepts that improve de-escalation techniques, communication skills, and use of force decision making. High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	VirTra helps prepare law enforcement officers for real-life incidents using simulation technology. Scenarios are filmed in superior quality with extensive branching options increasing the realism while allowing scenarios to unfold based on decisions. Formal BCA is not available. Benefits would include improving officer response and decision making in high risk response and encounters. Improving response capabilities and decision-making can save lives. Additional benefits could include decreasing City liability. The link is for a list of settlement amounts for police misconduct cases including deadly shootings and aggressive encounters: <a href="https://policefundingdatabase.tminstitutelfd.org/misconductsettlements">https://policefundingdatabase.tminstitutelfd.org/misconductsettlements</a> . Response to Active Threats, Mental Health Crisis, de-escalation and active shooter situations.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O



## Action E7.58

Mitigation Action #58: Equipment for mental health crisis response					
<b>Lead Agency/Department Organization:</b> City of Evanston Police Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> \$15,000	<b>Potential Funding Source:</b> HSGP, SHSP	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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.			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Improved response to these mental health incidents provides us with additional options to successfully resolve a situation without the need for lethal force, improving Life Safety options for our community. High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Increasing options for response to emotionally disturbed persons, including non-lethal options for a suicidal subject armed with a knife. Building on programs used by NYPD and Elgin PD, adding equipment to provide trained officers additional resources in handling a suicide by cop type situation when the person suffering from a mental crisis is armed with a knife or other similar weapon. Includes the options of a refillable water extinguisher, low energy less-lethal impact rounds, a restraint system, and a specially made pole used to secure someone from a distance. Formal BCA is not available at this time.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b>		O			

<b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	
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**Action E7.59**

<b>Mitigation Action #59: Surveillance vehicles</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Police Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> \$60,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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.				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Improved offender identification to prevent repeat crimes, overt vehicles are a crime deterrent, and the mobility of the vehicles makes them easily and quickly deployable. High—Project will provide an immediate reduction of risk exposure for life and property.				
<b>Action/Implementation Plan and Project Description:</b>	Outfit one covert and one overt surveillance vehicle with camera equipment for a mobile observation post. Formal BCA is not available at this time.				
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion;	O				

**O** = Ongoing Indefinitely; **C** = Project Completed; **R** = Want Removed from Annex; **X** = No Action Taken/Delayed

### Action E7.60

Mitigation Action #60: Infectious disease mitigation through an array of public health interventions including the prevention of water-borne diseases for visitors at the City beaches					
<b>Lead Agency/Department Organization:</b> City of Evanston Health and Human Service Department	<b>Supporting Agencies/ Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> Medium	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Drought, Flood, Widespread Power Outage
<b>Year Initiated</b>		2021			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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.			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>					
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

## Action E7.61

Mitigation Action #61: Microgrid/Solar Storage					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> High	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> 2040	<b>Hazard(s) Mitigated:</b> Lightning, Extreme Cold, Ice Storms, Tornado, Widespread Power Outage
<b>Year Initiated</b>		2017			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Stability of electrical infrastructure High			
<b>Action/Implementation Plan and Project Description:</b>		Microgrid/Solar technology and electricity storage would reduce demands on the electrical grid, improve resiliency in Evanston based on the rising threats to electrical sub-stations, and help Evanston meet climate action goals outlined in the 2017 Community Action Resilience Plan.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

## Action E7.62

Mitigation Action #62: Resilience Hub Designation					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> High	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Widespread Power Outage
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,4,5			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Stability of electrical grid High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Resilience Hub Designation			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

## Action E7.63

Mitigation Action #63: Evanston Water Utility Window Hardening Project
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<b>Lead Agency/Department Organization:</b> City of Evanston Public Works Agency	<b>Supporting Agencies/Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> \$55,000	<b>Potential Funding Source:</b> General Fund, HMGP, BRIC	<b>Estimated Projected Completion Date:</b> Long-term	<b>Hazard(s) Mitigated:</b> Hazardous Materials Incident
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Formal BCA not available. Improvement to security was recommended by AECOM during the Water Utility Risk and Resilience Assessment to ensure staff safety and delivery of drinking water to consumers. High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Improved security of the WTP will help ensure continuous drinking water delivery to all customers. Hardening the first-floor WTP windows facing outside to secure the plant's perimeter.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

## Action E7.64

Mitigation Action #64: Back up generators for Evanston shelters					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Parks, Recreation, and Community Service	<b>Estimated Cost:</b> \$185,000	<b>Potential Funding Source:</b> HMGP, BRIC, General Fund	<b>Estimated Projected Completion Date:</b> 2024	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Formal BCA not available. Benefits would include improving shelter capacity and mass care operations. Ensuring continued operations in the event the power outage extends to the pre-designated shelter locations would improve response and recovery operation High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Ensure continuity of power, starting with the Levy Senior Center and Fleetwood Jourdain Community Center, to support stable sheltering and mass care needs during extended power outages. Fleetwood is especially important since this is located in Ward 5, a high social service needs population and a historically red-lined community.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b>		O			

<b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	
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**Action E7.65**

<b>Mitigation Action #65: Microgrid/Solar Storage</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Climate Resilience	<b>Supporting Agencies/Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> Formal BCA not available. There is a clear case for the costs/benefits of solar energy over fossil fuel sources. High	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> Extreme Heat, Lightning, Hail, High Wind, Snow, Blizzard, Extreme Cold, Ice Storms, Tornado, Widespread Power Outage
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Improved energy security, source of power when the electricity grid is disrupted. High—Project will provide an immediate reduction of risk exposure for life and property.			



<b>Action/Implementation Plan and Project Description:</b>	Hazards that will be mitigated by this project: utility disruption. Consider installing a microgrid with solar and battery storage at a City facility. Community benefits: Improved energy security and source of power when the electricity grid is disrupted. Projected timeline - 3 years.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.66**

<b>Mitigation Action #66: Resilience Hub Designation</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Climate Resilience	<b>Supporting Agencies/ Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> Formal BCA not available. There are successful examples of Resilience Hub designation throughout the US. High	<b>Potential Funding Source:</b> General Fund, HMGP, BRIC	<b>Estimated Projected Completion Date:</b> Approximately 3 years from the time the mitigation action is started	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				

<b>Priority and Level of Importance (Low, Medium, High)</b>	High
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Supports community education and placemaking for emergency management High—Project will provide an immediate reduction of risk exposure for life and property.
<b>Action/Implementation Plan and Project Description:</b>	Project description: Consider designating a community center or library as a resilience hub, designating it formally as an emergency shelter, and investing in equipment like solar plus storage for added resilience. Community benefits include: Supporting community education and placemaking for emergency management. Hazards that will be mitigated by the project: all hazards.
<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O

**Action E7.67**

<b>Mitigation Action #67: Communitywide Greenhouse Gas Emissions Reduction</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> Formal BCA not available. The benefits of acting on climate change outweigh the costs. High	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Project timeline in excess of 25 years	<b>Hazard(s) Mitigated:</b> Drought, Flood, Extreme Heat, Lightning, Hail, Fog, High Wind, Snow, Blizzard, Extreme Cold, Ice Storms, Tornado, Epidemic or

					pandemic, Widespread Power Outage, Coastal Erosion
<b>Year Initiated</b>	2022				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,3,4,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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).				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Improved air quality, improved health outcomes, increased resilience to the effects of climate change. High—Project will provide an immediate reduction of risk exposure for life and property.				
<b>Action/Implementation Plan and Project Description:</b>	Project description: The community intends to eliminate greenhouse gas emissions by 2050. Community benefits include Improved air quality, improved health outcomes, and increased resilience to the effects of climate change. This project is designed to mitigate all hazards related to climate change and is expected to take more than 25 years to achieve.				
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O				

**Action E7.68****Mitigation Action #68: Stormwater Master Planning**

<b>Lead Agency/Department Organization:</b> City of Evanston Climate Resilience	<b>Supporting Agencies/ Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> Formal BCA not available. The benefits of investing in improved stormwater infrastructure outweigh the costs. High	<b>Potential Funding Source:</b> HMGP, BRIC	<b>Estimated Projected Completion Date:</b> Project timeline a minimum of 3 years	<b>Hazard(s) Mitigated:</b> Flood
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Reduced flooding, elimination of combined sewer overflows and basement backups, promotion of green infrastructure. High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Project description: The City is undertaking a stormwater master planning process to make recommendations for better stormwater management. This project would mitigate flooding hazards. Community benefits include reduced flooding, elimination of combined sewer overflows and basement backups, and promotion of green infrastructure.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b>		O			

= Want Removed from Annex; **X** = No Action  
Taken/Delayed

**Action E7.69**

<b>Mitigation Action #69: Emergency Shelter Operations</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Office of Emergency Management	<b>Supporting Agencies/ Organizations:</b> American Red Cross, City of Evanston Parks, Recreation, and Community Services	<b>Estimated Cost:</b> Low	<b>Potential Funding Source:</b> HMPG	<b>Estimated Projected Completion Date:</b> 2025	<b>Hazard(s) Mitigated:</b> Flood, Extreme Heat, Lightning, Hail High Wind, Snow, Blizzard, Extreme Cold, Ice Storms, Tornado, Widespread power outage, Hazardous Materials Incident
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		Low—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.			
<b>Priority and Level of Importance (Low, Medium, High)</b>		Medium			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Life safety High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Increase emergency shelter capacity by partnering with the City personnel, local houses of worship, and the American Red Cross.			

<b>Actual Completion Date or Ongoing Indefinite</b>	
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	<b>O</b> Increase emergency shelter capacity by partnering with the City personnel, local houses of worship, and the American Red Cross.

**Action E7.70**

<b>Mitigation Action #70: DED Inoculation of Elm Trees</b>					
<b>Lead Agency/Department Organization:</b> Public Works	<b>Supporting Agencies/ Organizations:</b> Private Contractor	<b>Estimated Cost:</b> \$750,000 every 3 years	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Ongoing	<b>Hazard(s) Mitigated:</b> Flood, Extreme Heat, Epidemic or pandemic
<b>Year Initiated</b>	2020				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,3,4,5				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	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.				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	Preserve tree canopy, assist with tree health, lessen likelihood of power outages resulting from fallen limbs, etc. 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.				
<b>Action/Implementation Plan and Project Description:</b>	DED inoculation of Elm trees prevents the occurrence of Dutch Elm Disease and tree loss.				
<b>Actual Completion Date or Ongoing Indefinite</b>					

<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	O
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**Action E7.71**

<b>Mitigation Action #71: Radio Communications</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Police Department	<b>Estimated Cost:</b> \$800,000	<b>Potential Funding Source:</b> HSGP	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>	2021				
<b>Applicable Jurisdiction</b>	City of Evanston				
<b>Applicable Goal</b>	1,2,3,5,6				
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>	High				
<b>Priority and Level of Importance (Low, Medium, High)</b>	High				
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)	To promote a more reliable communication in managing the all-hazard response. High—Project will provide an immediate reduction of risk exposure for life and property.				
<b>Action/Implementation Plan and Project Description:</b>	Upgrade communication infrastructure by switching out repeaters, antennas, cables, Ztron units in all fire buildings, and mobile radios to 50 watts, firmware in portable radios, and establish a new frequency with repeater for lakefront operations.				
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b>	O				

<b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed	
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**Action E7.72**

<b>Mitigation Action #72: EMS Operations</b>					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> Private Vendor	<b>Estimated Cost:</b> \$900,000	<b>Potential Funding Source:</b> General Fund, SHSP	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Added 7 full-time paramedics = Improve EMS coverage by adding staffing to support a 3rd full-time ambulance High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Added 7 full-time paramedics = Improve EMS coverage by adding staffing to support a 3rd full-time ambulance			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b>		O			



= Want Removed from Annex; **X** = No Action  
Taken/Delayed

### Action E7.73

Mitigation Action #73: Incident Management					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/ Organizations:</b> City of Evanston Administrative Services	<b>Estimated Cost:</b> \$300,000	<b>Potential Funding Source:</b> General Fund, SHSPn	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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).			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Add Field Chief positions for specialized rescue and medical operations Improved in-field operations with additional staff to support technical and high-demand emergency responses. High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Add Field Chief positions for specialized rescue and medical operations			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b>		O			

= Want Removed from Annex; **X** = No Action Taken/Delayed

#### Action E7.74

Mitigation Action #74: Firefighter Operations					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Fire Department	<b>Estimated Cost:</b> \$680,000	<b>Potential Funding Source:</b> HSGP	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> Hazardous Materials Incident
<b>Year Initiated</b>		2022			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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.			
<b>Priority and Level of Importance (Low, Medium, High)</b>		Medium			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Safer environment for first responders and improved operational capabilities with lighter air packs and lower profile equipment. High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Purchase new SCBA cylinders, harnesses, RIT packs, and Mask assemblies to support response procedures.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

## Action E7.75

Mitigation Action #75: ALS Equipment					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Administrative Services	<b>Estimated Cost:</b> \$3,000,000	<b>Potential Funding Source:</b> HSGP	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>		2005			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		2,3,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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.			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Improved medical response with state-of-the-art medical equipment High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Replace stretchers, cardiac monitors, power load to support stretchers, stair chairs, and modems for cardiac monitors.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

## Action E7.76

Mitigation Action #76: Lakefront Operations					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Parks, Recreation, and Community Services	<b>Estimated Cost:</b> \$610,000	<b>Potential Funding Source:</b> General Fund	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> Flood, Extreme Heat
<b>Year Initiated</b>		2021			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		2,3,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		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.			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Improved water response for lakefront patrons High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		EFD acquired lakefront operations, including lifeguard operations, to enhance life safety on the waterfront. Additional staffing of Marine 21 to increase area patrol and lakefront response.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

## Action E7.77

Mitigation Action #77: Shelter Operations					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> Evanston Houses of Worship	<b>Estimated Cost:</b> \$0 Low	<b>Potential Funding Source:</b> Staff Time, General Fund	<b>Estimated Projected Completion Date:</b> 2027	<b>Hazard(s) Mitigated:</b> All
<b>Year Initiated</b>		2020			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,4,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		Low—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Increase space and shelter capabilities to protect the population from harm and provide for their basic needs in times of disaster. High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Increase emergency shelter capacity by identifying shelter locations to accommodate at least 5% of Evanston residents (approx. 3,500)			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

## Action E7.78

Mitigation Action #78: Lakefront Patrol					
<b>Lead Agency/Department Organization:</b> City of Evanston Fire Department	<b>Supporting Agencies/Organizations:</b> City of Evanston Parks, Recreation, and Community Services	<b>Estimated Cost:</b> \$50,000	<b>Potential Funding Source:</b> Staff Time, General Fund,	<b>Estimated Projected Completion Date:</b> Short-term	<b>Hazard(s) Mitigated:</b> Flood, Extreme Heat, Lightning, High Wind
<b>Year Initiated</b>		2021			
<b>Applicable Jurisdiction</b>		City of Evanston			
<b>Applicable Goal</b>		1,2,3,5,6			
<b>Applicable Objective</b>					
<b>Cost Analysis (Low, Medium, High)</b>		Low—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.			
<b>Priority and Level of Importance (Low, Medium, High)</b>		High			
<b>Benefits of the Mitigation Project</b> (Loss Avoided or Issue Being Mitigated)		Protect life safety High—Project will provide an immediate reduction of risk exposure for life and property.			
<b>Action/Implementation Plan and Project Description:</b>		Marine 21 was staffed with trained EFD Paramedics and certified boat operators to improve life safety operations and supplement our dive and personal watercraft operations.			
<b>Actual Completion Date or Ongoing Indefinite</b>					
<b>Project Status &amp; Changes in Priority</b> <b>Completion status legend:</b> <b>N</b> = New; <b>I</b> = In Progress Toward Completion; <b>O</b> = Ongoing Indefinitely; <b>C</b> = Project Completed; <b>R</b> = Want Removed from Annex; <b>X</b> = No Action Taken/Delayed		O			

## Completed Actions

**Completed Mitigation Actions - An archive of all identified and completed projects, including completed actions since 2014.**

Completed Action Items
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.
Establish interoperable communications at the water treatment plant with local first responders.
Improve cellular reception and communication in the EOC through the incorporation of a mobile broadband signal.
Employing a Community Health Specialist
Implementation of SIEM (security information and event management platform)
Multi-factor authentication (MSA)
Barrier Systems (Meridian System X 27)
Replace existing sirens, some of which are inoperable

## Future Needs to Better Understand Risk/Vulnerability

- Update Evanston's Climate Action Resilience Plan from 2017 using personnel recently acquired in the Sustainability and Resilience Department in the City of Evanston.
- Additional funding is needed to purchase a communications vehicle. This is essential to support in-field communications for large-scale events and critical communications for the various response agencies required to manage an incident.
- Ongoing training for EOC staff is needed to improve the operational capabilities necessary to manage a large-scale incident effectively. Due to organizational changes and significant personnel turnover, a rebuilding needs to occur to learn new roles and improve efficiency.

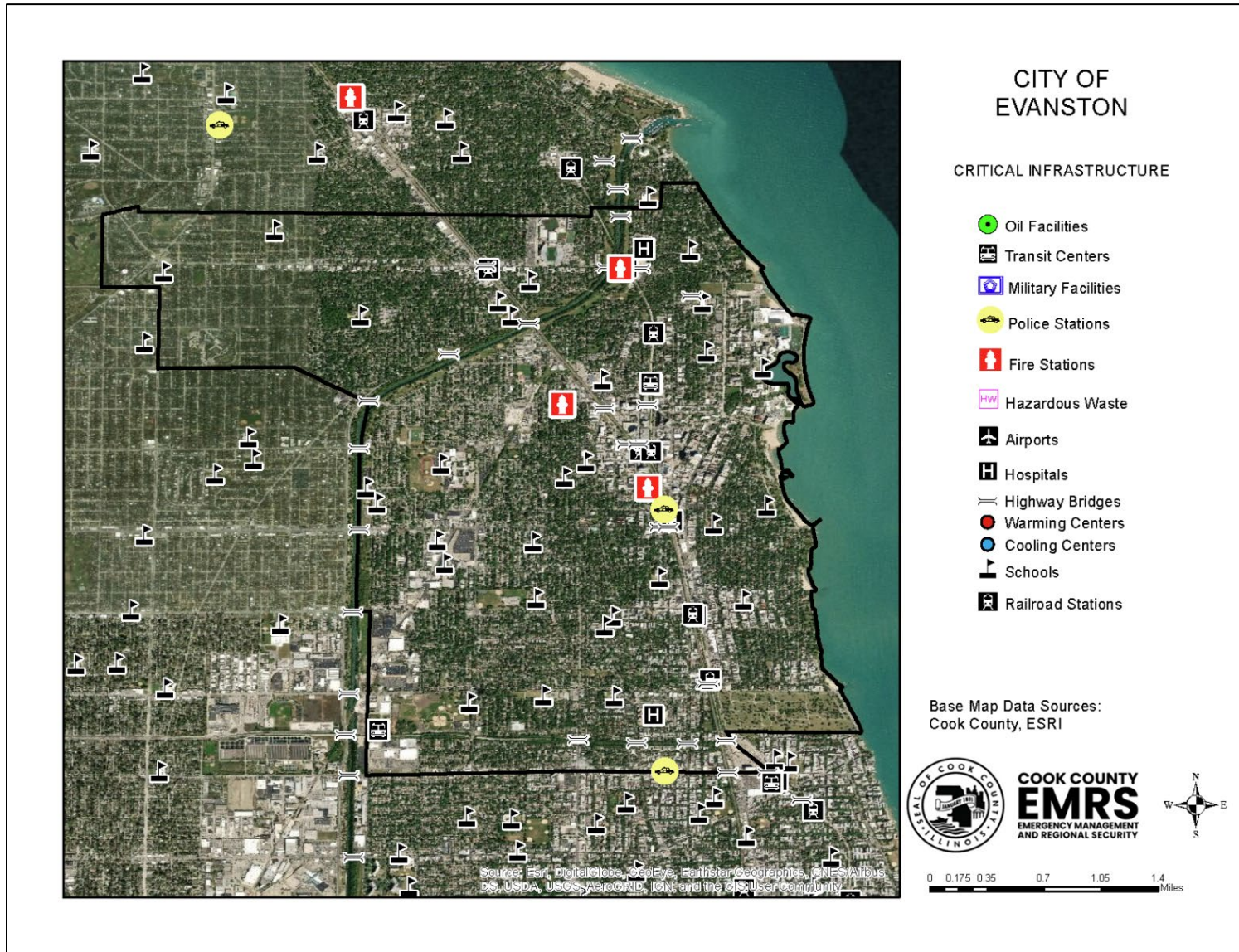
- Increase OEM staff to build further and maintain partnerships across the City, enhancing communications and intel on growing vulnerabilities and risks relevant to these populations.
- Increase partnerships with trusted agents in Evanston to improve overall awareness of emerging trends, vulnerabilities, and risks to vulnerable populations.

### **Additional Comments**

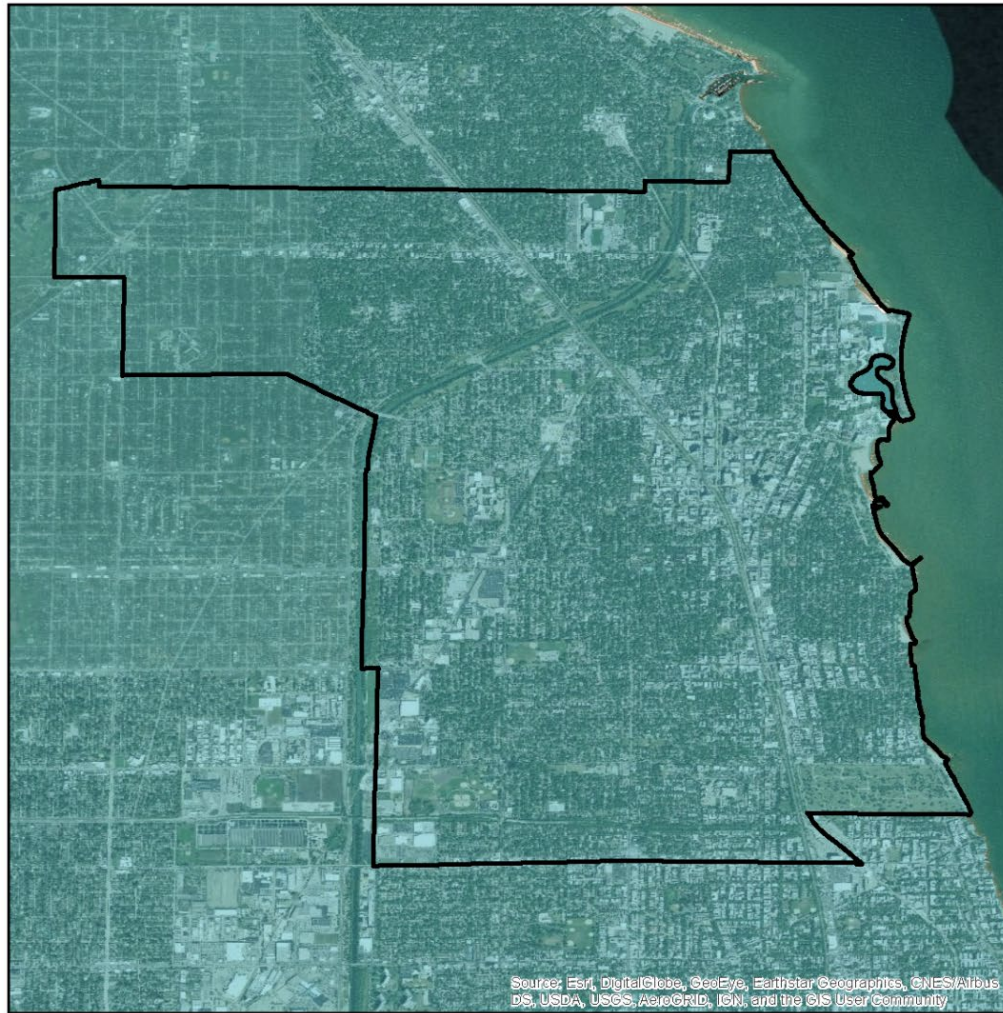
No additional comments at this time.



## Hazard Mapping







## CITY OF EVANSTON

### PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

#### Mercalli Scale, Potential Shaking

II-III Weak

Data provided by the USGS Earthquake Hazards Program and Cook County.

Probabilistic seismic-hazard maps were prepared for the conterminous United States for 2014 portraying peak horizontal acceleration and horizontal spectral response acceleration for 0.2- and 1.0-second periods with probabilities of exceedance of 10 percent in 50 years and 2 percent in 50 years. All of the maps were prepared by combining the hazard derived from spatially smoothed historical seismicity with the hazard from fault-specific sources. The acceleration values contoured are the random horizontal component. The reference site condition is firm rock, defined as having an average shear-wave velocity of 760 m/s in the top 30 meters corresponding to the boundary between NEHRP (National Earthquake Hazards Reduction Program) site classes B and C.

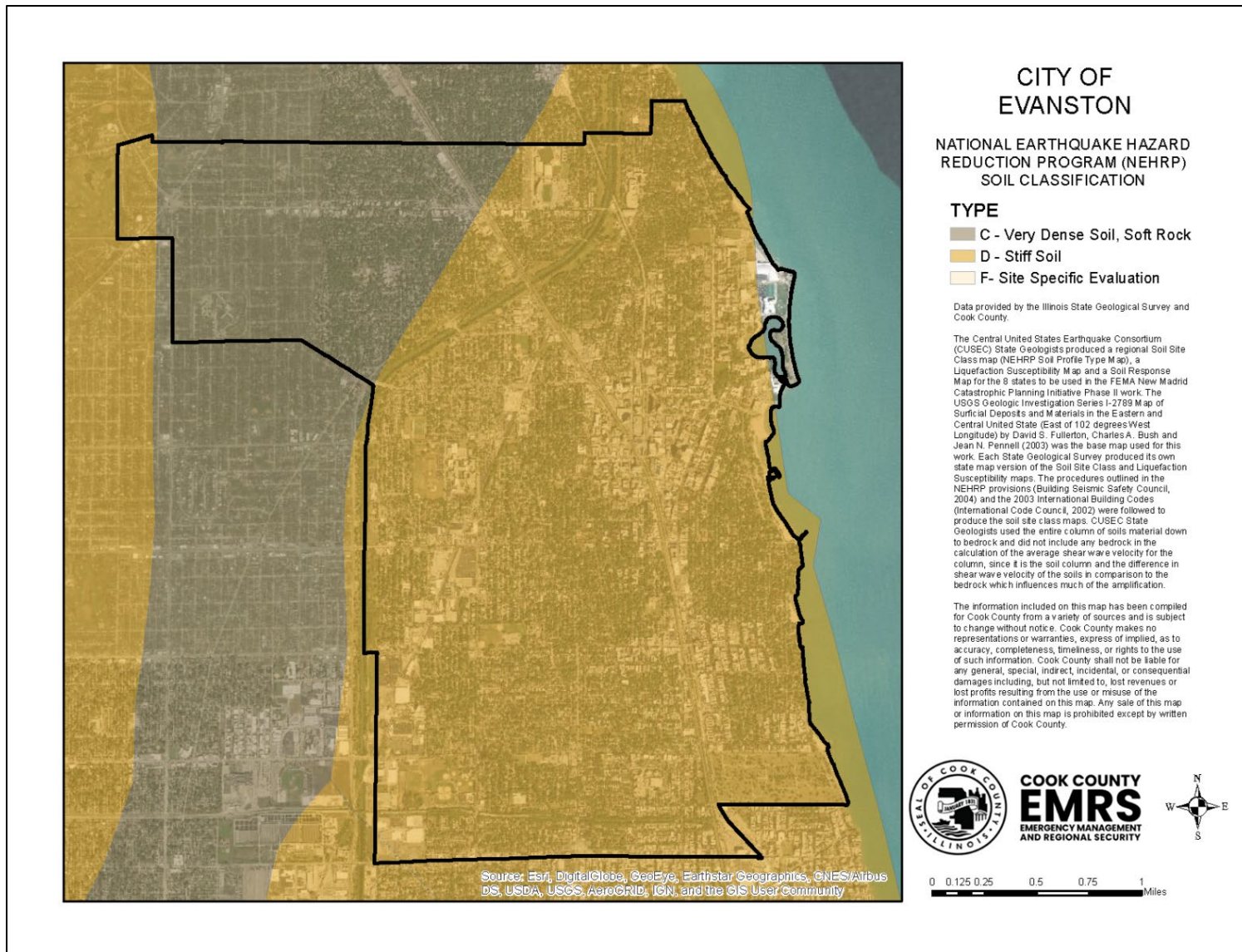
The information included on this map has been compiled for Cook County from a variety of sources and is subject to change without notice. Cook County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. Cook County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of Cook County.



**COOK COUNTY**  
**EMRS**  
EMERGENCY MANAGEMENT  
AND REGIONAL SECURITY

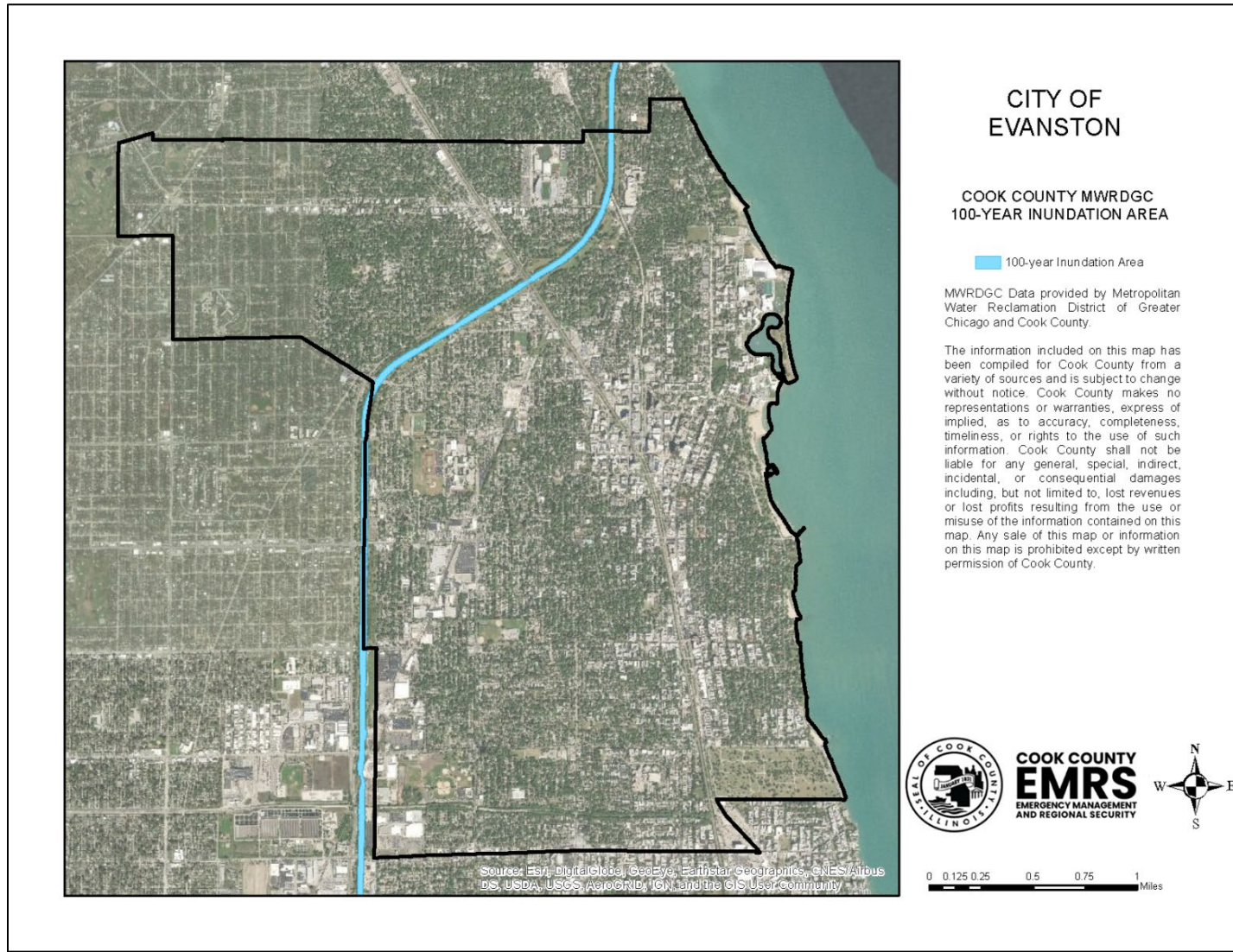


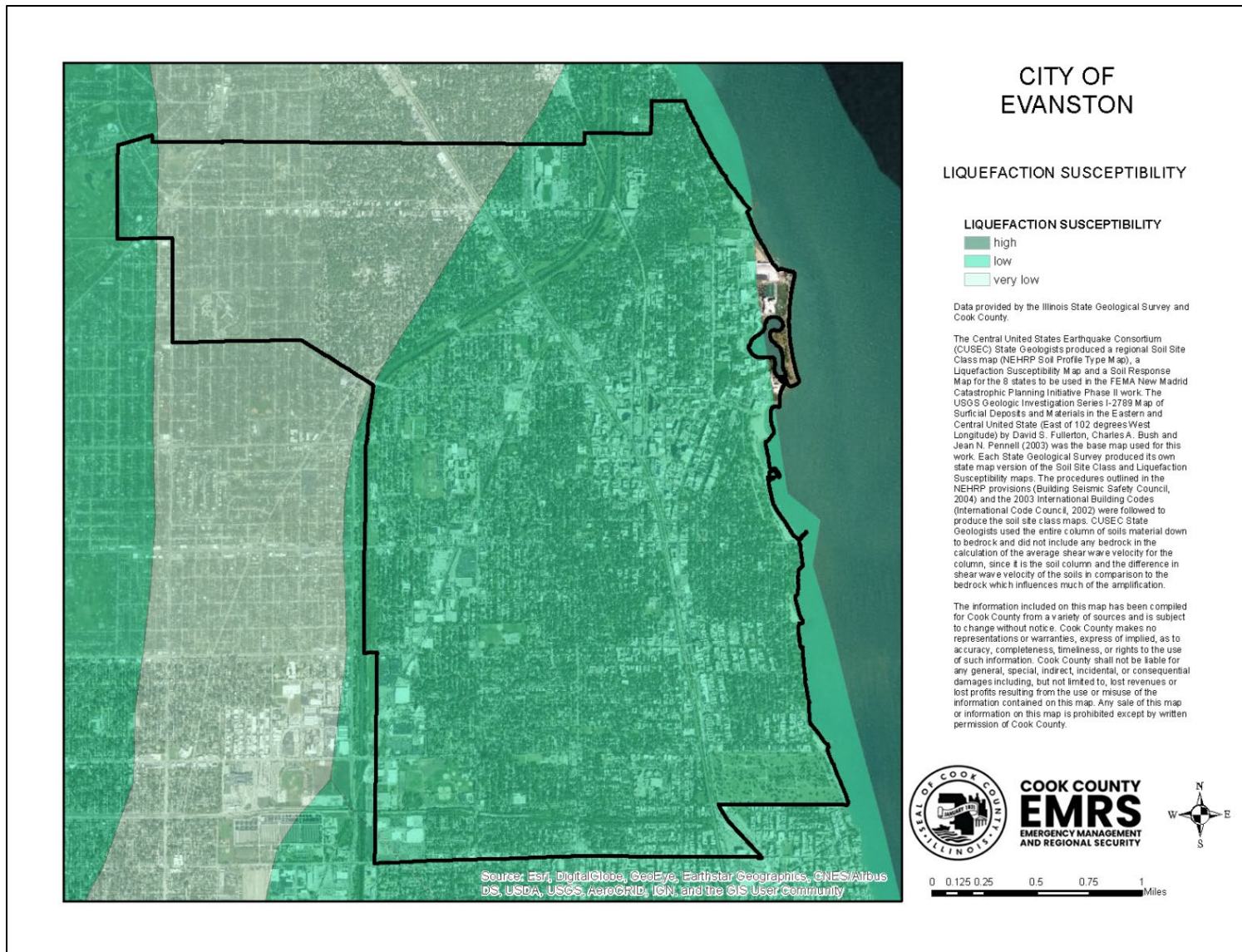
0 0.175 0.35 0.7 1.05 1.4 Miles



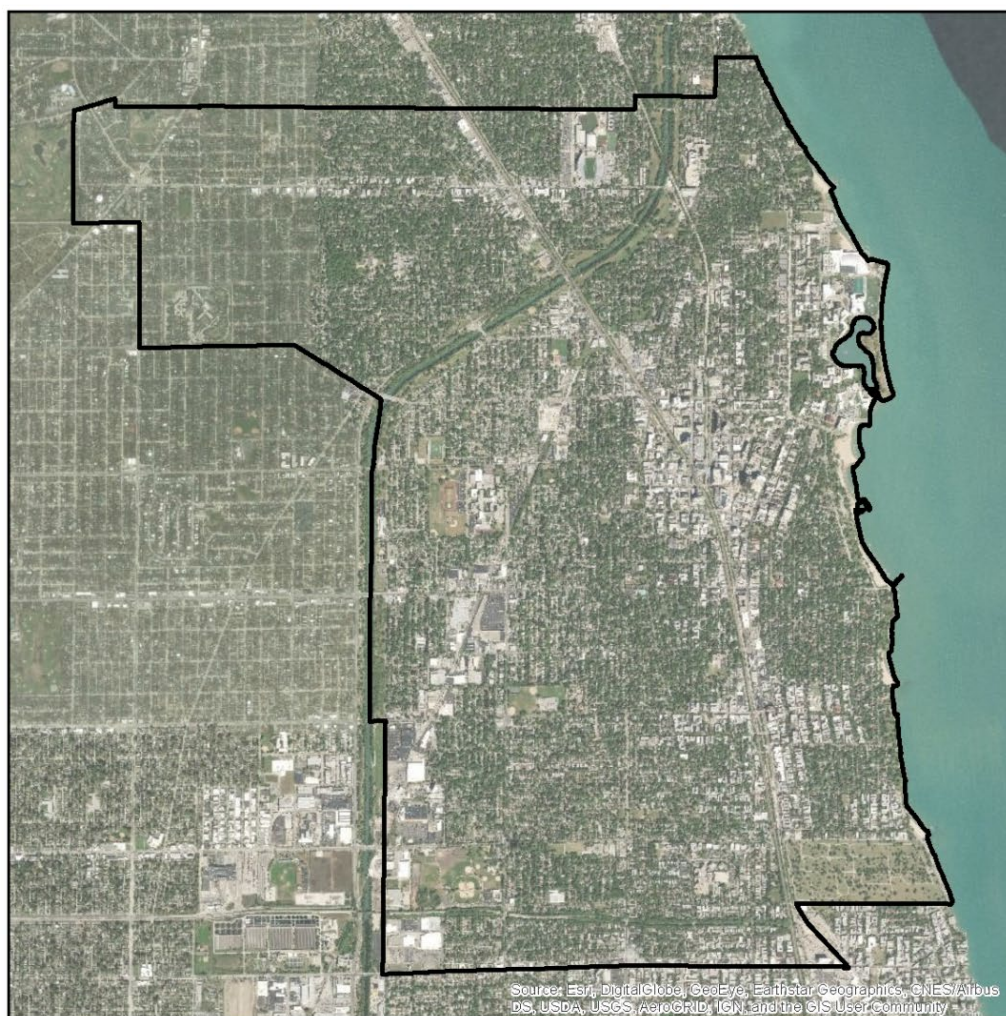


DISCLAIMER: The Cook County MWRDGC 100-year Inundation Map is provided to show general flood risk information regarding floodplains and inundation areas. This map is not regulatory. Official FEMA Flood Insurance Study information and regulatory maps can be obtained from <http://www.fema.gov>.









## CITY OF EVANSTON

100- AND 500- YEAR  
TORNADO EVENTS

### Magnitude

- 4 (100 year event)
- 5 (500 year event)

Historic tornado data provided by NOAA/NWS showing the initial points and paths of all F4 and F5 events observed from 1950 to 2017.



**COOK COUNTY**  
**EMRS**  
EMERGENCY MANAGEMENT  
AND REGIONAL SECURITY



0 0.125 0.25 0.5 0.75 1 Miles