



# Office of the City Clerk

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## Legislation Details (With Text)

**File #:** R2019-750  
**Type:** Resolution **Status:** Adopted  
**File created:** 10/16/2019 **In control:** City Council  
**Final action:** 11/20/2019  
**Title:** Adoption of FEMA-approved 2019 Cook County Multi-Jurisdictional Hazard Mitigation Plan and 2019 City of Chicago jurisdictional annex document  
**Sponsors:** Lightfoot, Lori E.  
**Indexes:** Miscellaneous, Miscellaneous  
**Attachments:** 1. R2019-750.pdf

Date	Ver.	Action By	Action	Result
11/20/2019	1	City Council	Adopted	Pass
11/18/2019	1	Committee on Public Safety	Recommended to Pass	
10/16/2019	1	City Council	Referred	

OFFICE OF THE MAYOR

CITY OF CHICAGO

LORI E. LIGHTFOOT  
MAYOR

October 16, 2019

TO THE HONORABLE, THE CITY COUNCIL OF THE CITY OF  
CHICAGO

Ladies and Gentlemen:

At the request of the Executive Director of Emergency Management and Communications, I transmit herewith a resolution authorizing adoption of the Cook County Multi-jurisdictional Hazard Mitigation Plan.

Your favorable consideration of this resolution will be appreciated.

Very truly yours,

## RESOLUTION

WHEREAS, the City of Chicago (the "City") is a home rule unit of government under Article VII, Section 6(a) of the Constitution of the State of Illinois and, as such, may exercise any power and perform any function pertaining to its government and affairs; and

WHEREAS, The federal Disaster Mitigation Act of 2000 (the "Act") requires jurisdictions to adopt a hazard mitigation plan on a form approved by the Federal Emergency Management Agency ("FEMA") to enable local eligibility for future hazard mitigation grant funds; and

WHEREAS, The Hazard Mitigation Grant Program ("HMGP") is a program managed by the State of Illinois to administer funds from FEMA; and

WHEREAS, The intent of the HMGP is to reduce the risk of future damage, hardship, loss, or suffering caused by natural hazards by providing financial support to carry out cost-effective hazard mitigation projects and plans as required of state and local governments as a condition of receiving federal disaster and emergency management assistance; and

WHEREAS, proactive mitigation of known natural hazards before a disaster event occurs can reduce or eliminate long-term risk to life and property; and

WHEREAS, to maintain continued eligibility for FEMA mitigation grant assistance programs, the Act requires that a hazard mitigation plan be updated every five years; and

WHEREAS, in accordance with the Act's requirements, 121 Cook County jurisdictions engaged in the FEMA-prescribed mitigation planning process to prepare the 2019 Cook County Multi-Jurisdictional Hazard Mitigation Plan ("2019 County HMP") and its associated local hazard mitigation plan annexes; and

WHEREAS, the 2019 County HMP has been approved by the Illinois Emergency Management Agency and by FEMA's Region V, pending Cook County adoption; and

WHEREAS, pursuant to the Act, the City is required to adopt by resolution (i) the entirety of Volume 1 of the 2019 County HMP and the "Countywide Mitigation Actions" portion of Volume 2 of the 2019 County HMP, and (ii) the 2019 City of Chicago jurisdictional annex document ("2019 City of Chicago Annex") to the 2019 County HMP; now, therefore,

### BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CHICAGO.

The City:

1.       ) Adopts (i) the entirety of Volume 1 - Planning-Area-Wide Elements of the 2019 County HMP and (ii) the "Countywide Mitigation Actions" portion of Volume 2 of the 2019 County HMP, all attached hereto as Exhibit A, effective immediately.
- 2.) Adopts the 2019 City of Chicago Annex, attached hereto as Exhibit B, as the City's annex to Volume 2 of the 2019 County HMP, effective immediately.
- 3.) Will use the adopted and approved portions of the 2019 County HMP and the 2019 City of Chicago Annex to guide pre- and post-disaster mitigation of the natural hazards identified therein.

Exhibit A

**Volume 1 of the 2019 County HMP**

[see attached Executive Summary] The entirety of Volume 1 can be located on the internet at: <<https://www.cookcountvhomelandsecurity.org/2019-volume-1>>

**The "Countywide Mitigation Actions" portion of Volume 2 of the 2019 County HMP**

This document can be located on the internet at:

<<https://www.cookcountvhomelandsecurity.org/2019-volume-2-annexes>>

**Executive Summary**

*Published 7/15/2019 20:59 by Daiko Abe*  
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Hazard mitigation is the use of long-term and short-term policies, programs, projects, and other activities to alleviate the death, injury, and property damage that can result from a disaster. Cook County and a coalition of 121 municipal planning partners prepared and updated the 2019 Cook County Multi-Jurisdictional Hazard Mitigation Plan (MJ-HMP) in order to identify the risks posed by hazards and find ways to reduce their impacts. The plan reduces risk for those who live in, work in, and visit the County.

Exhibit B 2019 City of Chicago Annex

[see attached]

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#### 4.4.6.3 Completed Mitigation Actions

1 Action C.7

2 Action C.37

7 Future Needs to Better Understand Risk/vulnerability

8 Additional Comments

9 HAZUS-MH Risk Assessment Results

#### 4.4.10 Hazard Mapping

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## 4.4 Chicago 2019 MJ-HMP Jurisdictional Annex

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[Cook County Department of Homeland Security and Emergency Management \(DHSEM\) Website](#)

#### 4.4.1 Hazard Mitigation Plan Point of Contact

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##### Primary Point of Contact

Matthew Doughtie  
Sr. EM Coordinator Chicago OEMC  
1411 W. Madison St.  
Chicago, IL 60607  
Telephone 312-746-9462  
Email Address mdoughtie@cityofchicago.org  
Alternate Point of Contact

David R Ramos  
Deputy Director, EM Chicago OEMC 1411 W Madison St Chicago, IL 60607 Telephone 312-746-9233 Email Address david.ramos2@cityofchicago.org

#### 4.4.2 Jurisdiction Profile

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

Date of Incorporation: 1837

• Current Population: 2,705,994 as of 2018

Population Growth: While Chicago experienced a population decline of over 200,000 persons between 2000 and 2010, the City's population has increased by .003% from 2010 to 2016.

Location and Description: The City of Chicago is located in northeastern Illinois at 41°59 N and 86°54 W, and at an altitude of 578.5 feet above sea level. It is the third-most populous city in the United States and is the county seat of Cook County. Chicago has often been called a global architecture capital and is considered one of the most important business centers in the world. Positioned along Lake Michigan, the City is an international hub for finance, commerce, industry, technology, telecommunications, and transportation. O'Hare International Airport is the second-busiest airport in the world when measured by aircraft traffic, the region also has the largest number of U.S. highways and railroad freight. In 2012, Chicago was listed as an alpha global city by the Globalization and World Cities Research Network, and ranked seventh in the world in the 2016 Global Cities Index. Chicago has the third-largest gross metropolitan product in the United States—about \$640 billion according to 2015 estimates. The City has one of the world's largest and most diversified economies, with no single industry employing more than 14% of the workforce.

Brief History: Chicago's recorded history begins with the arrival of French explorers, missionaries and fur traders in the late 17th century and their interaction with the local Potawatomi Native Americans. The modern city was incorporated in 1837 by Northern businessmen and grew rapidly from real estate speculation and the realization that it had a commanding position on the emerging inland transportation network, based on lake traffic and railroads, controlling access from the Great Lakes into the Mississippi River basin. Despite the Great Chicago Fire in 1871, the city grew exponentially, becoming the nation's rail center and the dominant Midwestern center for manufacturing, commerce, finance, higher education, religion, broadcasting, sports, jazz, and high culture. Chicago is a highly urbanized area and much of its natural environment has been altered since its early development.

*Climate: The climate of Chicago is classified as humid continental, with all four seasons distinctly represented: wet springs, variably hot, humid summers; pleasantly mild autumns; and cold winters. Temperatures are at their coldest in the months of January and February, and the highest during the months of July and August. Chicago's weather has the influence of Lake Michigan which influences the weather throughout the year. The highest official temperature ever recorded in Chicago was 105°F on July 24, 1934. The coldest official temperature ever recorded was -27°F on January 20, 1985. The yearly precipitation average is 36.89 inches. Chicago is prone to thunderstorms from spring to early fall. Heavy rainfall events can occur with thunderstorms and occasional prolonged systems. The average Chicago winter season produces 36.7 inches of snow, but these tend to vary.*

Governing Body Format: Chicago City government is divided into executive and legislative branches. The mayor is the chief executive while the City Council, elected from 50 wards, is the legislative body. City priorities and activities are established in a budget ordinance usually adopted in November of each year. The City takes official action through the passage of ordinances and resolutions. In addition to the Mayor, Chicago's two other city-wide elected officials are the City Clerk and the City Treasurer. The Chicago Police Department provides law enforcement and the Chicago Fire Department provides fire suppression and emergency medical services for the City and its residents. Civil and criminal law cases are heard in the Cook County Circuit Court of the State of Illinois court system, or in the Northern District of Illinois, in the federal system. In the state court, the public prosecutor is the Illinois State's Attorney; and, in the Federal court, it is the United States Attorney.

Development Trends: Chicago is a heavily urbanized city, with only 7.1% of its total land area classified as open space. The City has seen a large increase in its Central Business District (CBD) population over the last 20 years. The CBD and adjacent neighborhoods are currently undergoing a building boom, with over \$20 billion in "megaprojects" currently underway or in the planning stages. The Chicago Sustainable Development Policy has been continuously implemented since 2004. The goal of the policy is to enhance the sustainable performance of projects receiving City assistance. It requires development projects that are receiving financial assistance or special approvals from the City to include sustainable elements. The Policy has been a driving force in making Chicago a global leader in the green roof movement as well as the number of LEED certified projects. As of 2013, the City of Chicago had more than 500 green roofs totaling nearly 5.6 million square feet. More than 500 development projects have been LEED certified, which equates to roughly 180 million square feet. The City and its surrounding metropolitan area contain the third-largest labor pool in the United States with about 4.63 million workers. Illinois is home to 66 Fortune 1000 companies, including those in Chicago. The City of Chicago also hosts 12 Fortune Global 500 companies and 17 Financial Times 500 companies. The City claims three Dow 30 companies: aerospace giant, Boeing, which moved its headquarters from Seattle to the Chicago Loop in 2001, McDonald's, and Kraft Heinz. According to Site Selection magazine, the Chicago area has seen the most corporate headquarters relocation or expansion projects in the U.S. for each of four consecutive years from 2013 to 2016.

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### 4.4.3 Capability Assessment

What is the purpose of this assessment?

The assessment of the jurisdiction's legal and regulatory capabilities is presented in the Legal and Regulatory Capability Table below. The assessment of the jurisdiction's fiscal capabilities is presented in the Fiscal Capability Table below. The assessment of the jurisdiction's administrative and technical capabilities is presented in the Administrative and Technical Capability Table below. Information on the community's National Flood Insurance Program

(NFIP) compliance is presented in the National Flood Insurance Program Compliance Table below. Classifications under various community mitigation programs are presented in the Community Classifications Table below.

TABLE: LEGAL AND REGULATORY CAPABILITY

Local Authority				
State or other jurisdiction;				
Other Jurisdictional Authority				
State				
Codes, Ordinances & Requirements				
Municipal Code of Chicago - adopted 1939				
In accordance with Public Act 096-0704, Illinois has adopted the IBC as its state Building Code				
Municipal Code of Chicago - adopted 1939				
65 ILCS 5/ Illinois Municipal Code.				
765 ILCS 205/PLAT ACT as passed by Illinois State General Assembly				
Municipal Code of Chicago, Chapter 11-18 (Stormwater Ordinance) - adopted 1939				
State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA.				
Post Disaster Recovery				
65 ILCS 5/ Illinois Municipal Code.				
Municipal Code of Chicago - adopted 1939 (Chicago Zoning Ordinance, MCC § 17-1-0100 et seq , controls development in Chicago)				
Municipal Code of Chicago - adopted 1939				
Municipal Code of Chicago - adopted 1939				
Municipal Code of Chicago - adopted 1939				
Planning Documents				
Chicago Central Area Action Plan				
Chicago Sustainable Development Policy				
CMAP ON TO 2050 Comprehensive Regional Plan				
Yes				
Floodplain or Basin Plan				
Regional stormwater planning is managed by MWRD.				
Chicago Capital Improvement Program				
What types of capital facilities does the plan address?				Transportation, parkland, lakefront/shoreline, municipal facilities, neighborhood infrastructure, sewer infrastructure, water infrastructure
How often is the plan revised/updated?				Annually
Habitat Conservation Plan	Yes	No	Chicago Mayor's Office	No
				2011 Chicago Nature and Wildlife Chicago Wilderness Biodiversity Plan

Economic Development Yes	No	Yes	•. Yes	The Chicago City Council review development related programs incentives including tax incentives through the Cook County 6b P Lake Michigan and Chicago Lake Protection Ordinance, Municipal Chicago § 16-4-010, et seq. or Municipal Code of Chicago - article (Chicago Zoning Ordinance, N 0100 et seq )
Shoreline Management Yes	No	No		
Response/Recovery Planning		.		
Comprehensive Emergency Plan	Yes	Yes		2018 City of Chicago Emergency Plan
Threat and Hazard Identification Assessment	Yes	Yes		2018 Chicago Urban Area TH
Terrorism Plan	No	No	No	2018 City of Chicago EOP - Hazards Annex
Post-Disaster Recovery	No	No	No	
Continuity of Operations	No	Yes	No	
Public Health Plans	Yes			Chicago Public Health Emergency Operations Plan

#### STABLE: FISCAL CAPABILITY

##### Financial Resources

Community Development Block Grants

Capital Improvements Project Funding

Authority to Levy Taxes for Specific Purposes

User Fees for Water, Sewer, Gas or Electric Service

Incur Debt through General Obligation Bonds

Incur Debt through Special Tax Bonds

Incur Debt through Private Activity Bonds

Withhold Public Expenditures in Hazard-Prone Areas

State Sponsored Grant Programs

Development Impact Fees for Homebuyers or Developers

Other

Accessible or Eligible

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#### TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources Available?

Planners or engineers with knowledge of land development

Engineers or professionals trained in building or infrastructure

Planners or engineers with an understanding of natural resources

Department/Agency/Position

Planning and Development

Buildings

Transportation, Buildings, Water Management

Staff with training in benefit-cost analysis  
 Surveyors  
 Personnel skilled or trained in GIS applications (a)  
 Scientist(s) familiar with natural hazards in the local  
 Emergency manager (b)

Budget and Management  
 Transportation  
 Innovation and Technology,  
 Police Department, Planning and  
 Development

Grant writers

Office of Emergency  
 Management and  
 Communications  
 Office of Emergency  
 Management and  
 Communications

a. All partners have access to Cook County GIS Consortium as a technical resource. b If your jurisdiction does not have an emergency manager, Cook C

#### TABLE: NATIONAL FLOOD INSURANCE, PRG6rAM COMPLIANCE

What department is responsible for floodplain management in your jurisdiction?  
 Who is your jurisdiction's floodplain administrator? (department/position)

DepLoF Buildings  
 Andrew Bjlling, PE  
 &rt"

Are any certified floodplain managers on staff in your jurisdiction?  
 What is the date of adoption of your flood damage prevention ordinance?  
 When was the most recent Community Assistance  
 Does your jurisdiction have

so, please state what they are.

Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)  
 Does your floodplain management staff need vary assistance or training to support its floodplain management program? If so, v  
 Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS?

#### TABLE: COMMUNITY CLASSIFICATIONS

	Classification	ft-D'ate; Class Tfie ft
Community Rating System		
Building Code Effectiveness Grading		
Public Protection/ISO	1	
StormReady	Gold (Countywide)	
Tree City USA		

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### 4.4.4 Jurisdiction-Specific Natural Hazard Event History-

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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 60 (Non-Mitigated) 37 (Single- Family), 15 (Other Residential), 8 (2^t Family)
- Number of FEMA-Identified Severe Repetitive Loss Properties 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated 2 (1 Other Residential, 1 Single-Family)



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

- **Flood:** Flooding certainly has been a problem and most likely will continue in the future. DWM resources have been maximized to provide mitigation for communities that are flooded.
- **Extreme Heat:** Historically, prolonged extreme heat incidents have severely impacted the senior/elderly population in the City.
- **High Winds:** High winds have made many households vulnerable to power outages.
- **Snow:** Snow and extreme cold have historically affected the City; and depending on the severity, has even shut down the City.
- **Extreme Cold:** Extreme cold incidents uniquely impact the City. Recent extreme cold incidents resulted in water services being frozen throughout the City. DWM and private contractors continued to abate the problem.

#### Jurisdiction-Specific Hazards and Impacts - Dept. of Water Management

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

- **Flood:** The wards in the southeast side of the City often struggle with property damage. Non-English speakers have a harder time getting information regarding basement flooding initiatives. "Alert Chicago". Sewers can be impacted by urban flooding and overflow.
- **Extreme Heat:** Hydrants being utilized during an extreme heat incident could adversely affect the City from suppressing and managing fires.
- **Snow, Blizzards, Extreme Cold, Ice Storms:** Those dependent on public transportation are at greatest risk (food, work, appointments, medical, etc.). Senior citizens in the City are also very vulnerable. Residents in Chicago may be susceptible to frozen pipes during an extreme cold incident. Response times for maintenance are slow.
- **Lightning and Severe Storms:** Loss of power could affect the operational viability of pumping stations.

#### Jurisdiction-Specific Hazards and Impacts - PWID

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

- **Extreme Cold:** During an Extreme Cold incident, many in the City may not have access to water if water services are adversely impacted by the cold (i.e. frozen lines, etc.).
- **Tornado:** During a tornado or other severe events that result in a loss of power, may be unable to treat and pump water to citizens.

### 4.4.5 Hazard Risk Ranking

Public Safety - WC 3 v 22.3 - Law and Order

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		Risk Rating Score (Probability x Impact)
1		54
2		54
3	■; ■ c'yTornado v, -; ■: .	36
4	■: > ■ 'yEarthquake f...; .	18
5		18
6		18
7	.; " .v , "Dam-i^ajiQr^	6

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

- New Mitigation Actions - New actions identified during this 2019 update process

mitigation actions and projects were modified and/or amended, as needed • Completed Mitigation Actions - An archive of all identified and completed projects, including completed actions since 2014

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

TABLE: HAZARD MITIGATION ACTION PLAN MATRIX

Estimated Cost		Timeline/Projected Completion Date (a)	
'Action-C/rt.^Vyh'ere^ damage;; Gi^	repetit^	V^Vj^j-""--^	FEMA Haz Mitigation Grants
Short- and long-term			
Actibn C.34^ctively ip			
ChicagoOEMC			
J^jtibjn^.:4^		jree^City.vand Stpr^	
5. 6. 7. 9-10, 11, 13			
City of Chicago			
Action mapped:-- ;' ;	Cifc^oritirue	to rhaintairi.the	minimum iNatiQ.gaf Fjobdd^u'raneel^gl'am^articip^t
-Short^ertri and Ongoing			
^ctipn C:.6^lrte.gfafa^;th			
!>.£, 6, 10, 13'7			
Actibn C.T^T^qmplet^			
Complete			
■Attioh^			
MWRD			
^c^idn C:9^bntiriu			
Hooding, Severe Weather			
Buildings, Planning & Development			
Long-term and Ongoing			

!Actipn:p:4^ oflTe-'Gree'h.Stomvvafe

^conserving,wafe/\;greening ^er'operations,^an^^statr^bVIHtlni^ir^itprfjivaterV\*&gt;:«&gt;:,;:,^f-Xi.■ v'. ^^:^^ ■ ^■ ■:~^,;:~;

## Buildings, Water Management

■Action:'^

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Dept of Water Management

Action G;12-^^o.ntinue implemeh \$&lt;!'\$ iMi^igaasfibVeline and

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Ongoing	Flooding	2, 3, 4, 8, 9, 13	USACE, Park District	Medium	USCAE, IL Dept of Natural Resources	Long-term/Ongoing
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Action C.13-Continue implementation ofthe RainReady Program, which provides individualized services to help homes and communities reduce their flood risks.

Ongoing	Flooding	2, 3, 6, 8, 9, 10	Center for Neighborhood Technology	Low	CNT	Long-term/Ongoing
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:Ac|j&lt;6^ implementation ofthe Metropolitan Water Reclamation District ofGreater.C

Ongoing	Flooding	1, 2, 3, 6, 9, 12, 13	MWRDGC	Medium	MWRDGC, ACOE	Long-term/Ongoing
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^^^A^A^gye'itb expand,,the u sage and .capabilities of the Cityjsj^ ^!:?:vjs|?^A^A^

Ongoing	All	4, 5, 6, 12	OEMC	Low	Corporate	Long-term/Ongoing
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^^fir^n^SB^Gp^ usage and-capabilities!pf the dty^^ev^se^

Ongoing	All	4, 5, 6, 12	OEMC	Low	Corporate	Long-term/Ongoing
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Ongoing	All	4, 5, 6, 12	OEMC	Low	Corporate	Long-term/Ongoing
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Ongoing	All	4, 5, 6, 12	OEMC	/■Low	Corporate	Long-term/Ongoing
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Ongoing	Flooding	2, 3, 4, 9, 12, 13	CDOT^I^	ALOW	^General Obligation Bond	Long-term/Ongoing
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Ongoing	Flooding	2, 3,4,9, 12, 13	DM^eDI&T^	YX/ Low	Corporate	Long-term/Ongoing
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Action'.e^

Ongoing	All	2, 4, 8, 12//-'		Low	Corporate	Long-term/Ongoing
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New	Flooding	9	^ ItflWRD	TBD	TBD	TBD
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•ActipJi^Cx??^^ X;;X"vX rieighborhop^

Ongoing	Flooding	'^,<3, 6, 8, 9, 1'p j	DWM	Low	Corporate	Long-term/Ongoing
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-A'c-^rf^ri^hcupurge the development^

Ongoing	All	1	OEMC	Low	Corporate	Long-term/Ongoing
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Ongoing	Flooding	2, 3,4, 9, 10, 11, 12	Buildings	Low	Corporate	Long-term/Ongoing
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New	All	5	Aviation	\$250,000 per year; Low	Aviation Funding	2021
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New	Extreme heat, lightning, 13 fog, high wind, widespread power outage		City ofChicago, Chicago Department of Public Health	High	Grants	TBD
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New	Flood	8	Illinois Section AWWA	Low	Existing budget, TBD	Ongoing
New	Widespread Power Outage	2	DrWT	Low	Capital funding	2019/2020
Action C.30-enhance Storm Water Management through the installation of bioinfiltration systems.						
New	Flooding	0	Chicago Housing	Varies per j	Authority	Grants, capital budget j 2020
Action C.31-Install a solar PV system connected to ComEd's Bronzeville Microgrid.						
New	Widespread power outage	1, 2, 12	Chicago Housing Authority	\$3,000,000, Low	Grants	2019
New	Flood	9, 13	DHSEM	TBD, Medium	Grant Funds	TBD
New	' All	1, 2, 12	Chicago Fire Department	\$250,000 or more; High	Grants	2021
New	Extreme Heat, Widespread Power Outage	12	Chicago Fire Department	Less than \$100,000; High	Grants	Unsure
New	Hail, High Wind, Blizzard, Extreme Cold, Ice Storms, Widespread Power Outage	12	Chicago Fire Department	High	Grants	2021
New	All	1,2	Chicago Fire Department	Greater than \$300,000; High	Grants	2019
Completed	Flood	9	MWRD	\$70,655,320	MWRD Contribution. \$25,920,000	Completed 4/25/18
New	Flood	13	MWRD	MWRD Max Contribution (through 2022), \$16,000,000	TBD	TBD
New	Widespread Power Outage	8	MWRD	MWRD Contribution; \$400,000	MWRD	TBD
New	Flood	13	MWRD	TBD; MWRD (Max Contribution: \$16,000,000)	MWRD, Chicago Public Schools, City of Chicago Department of Water Management	2022
New	Flood	13	MWRD	TBD	TBD	TBD

(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years.

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TABLE: MITIGATION STRATEGY PRIORITY SCHEDULE

Action Number	Number of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Priority (a)
1	1- 2	High	High ,	Yes	Yes	No	Medium ' r
2	13 . ' -	Medium	Low	Yes	No	Yes	High./.- . •
3	V.Tv/;3.	Medium	Low	Yes	Yes	Yes	, :HjghV^_;
4	m ?.,v., a^..	Medium	"."Low "Afl	Yes	!>No!*"V;...;	Yes	■' >~iVi 'v
5		Medium	Low.	Yes		Yes	,V-AS" * "WkI?I. '• ^;
6		Medium	Medium;...;	Yes		No	High;?;v;.. Medium'....
7	•!^S^;5	Medium		Yes	"*;-.-rKNb""^;V; '..7-..e%/...;..-..-jv.v; ■ s- - ^A+ :^■.'M'f<"pl""^»..*■ ■■■■ ■■	Yes	
8		High	...; -p. M ediu m:>%*	Yes		Yes	
9		High	.Lpw.!>...;..r;	Yes		Yes	
10		Medium	' . ^ JLowS/'H'	Yes		Yes	. Medium^~ft
11		High	'\$ \$1111 1	Yes		Yes	^^Mediumffin:S
12		Medium	VV■..~"lir^~jT...rTrit	Yes		No	•i.n;~l^W(>..).
13		High	.' II7; v	Yes		Yes	•High~". . "" ■
14		Medium		Yes	^^./J^v^es^~^;..	Yes	
15		Medium	iLovv'. -i^iV .-l"-..		"AW" si.rwit,~l..	Yes	-■ ^Medium^L~
16		Medium				Yes	■. Medium
17		Medium	Low!.. \	Yes "\ x		Yes	...;~Med um: ' . ';
18		Medium	! ^LpVH""^		.;K. ^5Vgs";	Yes	v;...;Me^iSm.<";
19	~^..'.•.6.;; :vX'~»	Medium	V ;'-:.'^W  c ?::	1.	;;g^Nb~r;..	Yes	
20		Medium		ffYes	;;^^?Nbv; V;.-':	Yes	. iMeSium-
21		Medium				Yes	. Me&ium■...;•>■
22		TBD		igC^TBD		TBD	
23		Mediujrr^		Yes	5!^^NoIP^	Yes	iMed!_urn^,,
24		TBD'		TBD	^fiv'3p3:..i;~ :">'	TBD	"TB^T:"
25		' TBD		TBD		TBD	... ..fBg^}, .
26		High>x		Yes	' .!^viNo;.. ^/Yes		
27		High \£	F ^ig^r;...;	Yes		No	
28		Medium	;;P~;5iLOW^;;	Yes		Yes	••.tLoWfc;,' r'
29		Low	LOW. ■.	Yes		Yes	: r:m;V
30		Medium	... .. ... ..< Low!>...;...;	Yes		Yes	
31		Medium	... .. f...;MowJ	Yes		Yes	
32		Medium	..-.-:.. .Mediifn;.	Yes		Yes	.Medium.'!.
33		High	r;...7:r gh^g-	Yes		No	" 'Mlaiufn;^;'....'
34		Medium	..^t" ■ . , High	Yes		No	
35		High	" ' * HjghV^V "	Yes		No	' Medjum' '
36		Medium		Yes	■;:iiwiv	No	■ : jr kjh"/

37	TBD	;-V.-t\$P ,7:;,' TBD	;" ^i.fIO): ? :VTBD	
38	TBD	TBD	, TIBD ;, ' TBD	
39	TBD	L'_.tbFjK :. TBD	' /•TBD'-;.' TBD	.V;.v5iB nJ:t 3
				' ■ \-T;b1;?;- P:
40	TBD	TBD	'v'.^fBpi ;,;V; TBD	
41	TBD	TBD	TBD	

(a) See Chapter 1 for explanation of priorities.

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#### 4.4.6.1 New Mitigation Actions

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The following are new mitigation actions created during the 2019 update

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<b>Mitigation Action</b>	Implement the Green Infrastructure Project. Barbara Vick Outdoor Classrooms
<b>Year Initiated</b>	2019
<b>Applicable Jurisdiction</b>	City of Chicago
<b>Lead Agency/Organization</b>	MWRD
<b>Supporting Agencies/Organizations</b>	Chicago Public Schools - Barbara Vick Early Childhood and Family Center .
<b>Applicable Goal</b>	• Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects
<b>Applicable Objective</b>	• Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that \ use natural processes i
<b>Potential Funding Source</b>	TBD
<b>Estimated Cost</b>	TBD
<b>Benefits (loss avoided) <sup>1</sup></b>	TBD <
<b>Projected Completion Date</b>	Tqn j
<b>Priority and Level of Importance (Low, ■ Medium, High)</b>	TBD <^

Benefit Analysis (Low, |  
Medium, High) |  
Cost Analysis (Low,  
Medium, High)  
Actual Completion Date ; TBD

TBD W ;

VV-CT^ 'Ox !

Action/Implementation ] ID CPS-Barbara Vick // jj ||  
Plan and Project  
Description:

Year::j..iy::';Y'J..!^

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2020

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2021

2022 !

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2023

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All Hazards

X

Dam/Levee Failure  
Drought  
Earthquake  
Flood  
Extreme Heat  
Lightning  
Hail ;  
Fog  
High Wind |  
Snow  
Blizzard  
Extreme Cold  
Ice Storms ■

Tornado  
 Epidemic or pandemic j  
 Nuclear Power Plant Incident  
 Widespread Power Outage  
*Coastal Erosion As\*Cl*  
 Secondary Impacts from Mass Influx of Evacuees  
 Hazardous Materials Incident

## 4 4 6.1.2 Action C.22

[Implement the Chicago Ward Green Alley Project

**Year Initiated**

City of Chicago (18th, 28th, and 47th Ward)

**Lead****Agency/Organization**

Supporting City of Chicago

**Agencies/Organizations****Applicable Goal**

• Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards

**Applicable Objective**

« Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans

**Potential Funding Source**

TBD

**Estimated Cost**

TBD

**Benefits (loss avoided)**

TBD

**Projected Completion Date**

TBD /■; f/

**Priority and Level of Importance (Low, Medium, High)**

TBD

&lt;^ Nil AY

\\ !

**Benefit Analysis (Low, Medium, High)**

£ /&gt; ^ i

**Cost Analysis (Low, Medium, High) j**

TBD ^

**Actual Completion Date**

TBD

YSN^ . i

**-RecpmmedlMitJgation^****Action/Implementation Plan and\*PrbjecT Description:****j Project Title: j& p**

[Chicago-18th Ward

City of Chicago - 18th War^80Q&amp; SHolmaTvGreen Alley

Chicag6-^8thWai^ ^ \_ v\ \_ City of Chicag6&gt;2"8'th:Ward 725 S. Laflin Green Alley Chicago-47th Ward N^S

City of Chicago - 47th Ward :1900 W Eddy-Addison Green Alley

/Year;-;y %ry ^yWy'Al

**Status** \_ , V  
 V'■ ■ /; "£"1 ;  
 New

Comment^

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2019 i

2020 j

2021 !

2022

2023

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	All Hazards	
	Dam/Levee Failure	
DRAFT	Drought	
	Earthquake	
X	Flood	
	Extreme Heat 1	
	Lightning :	
	Hail ;	
	Fog	
	High Wind	
	Snow j	
	Blizzard	
	Extreme Cold	
	Ice Storms !	
	Tornado !	
	Epidemic or pandemic j	
	Nuclear Power Plant Incident	„s !
	<i>Widespread Power Outage J,;1'</i>	
	Coastal Erosion	
	Secondary Impacts from Mass Influx of Evacuees	& \?K
	Hazardous Materials Incident	\<\ J

Mitigation Action Evaluate existing notification systems for airport coverage and integrate all systems into single deployment method

Year Initiated 2019

Applicable Jurisdiction Cny of Chicago

Lead Agency/Organization Aviation

Supporting Agencies/Organizations ,

Applicable Goal • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards :

Applicable Objective Objective 5 Develop, improve, and protect systems that provide early warnings, emergency response ; communications, an

Potential Funding Source : Aviation Funding j

Estimated Cost \$250,000 per year ,

Benefits (loss avoided) Integrated emergency notification to simultaneously warn the public on multiple methods j

Projected Completion Date 2021 '

Priority and Level of Importance (Low, Medium, High) /.y \ High Priority A/ ;

Benefit Analysis (Low, j Medium, High) 1 High - Project will provide an immediate r isX.. .. -

Cost Analysis (Low, j Medium, High) Low - The project could be funded under the existingbudgetLvThe projectWpart of or can be part of an ongoing existing proq

Actual Completion Date TBD

SRecommended:MitigationAction/Impleme^

Action/Implementation Plan and Project Description:

Year	V:l'.y:[i iygil	Status ; ; ,^sir;.- >.-	Comments • - ./;A">-it'!'--^.-;
2019		New //	
2020		, ¥>	
2021		^  3	

2022 !

2023

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X All Hazards  
Dam/Levee Failure  
Drought  
Earthquake  
Flood  
Extreme Heat  
Lightning  
Hail  
Fog  
High Wind I  
Snow  
Blizzard  
Extreme Cold  
Ice Storms  
Tornado j  
Epidemic or pandemic !  
Nuclear Power Plant Incident  
*Widespread Power Outage /■*  
Coastal Erosion /v^.\  
*Secondary Impacts from Mass Influx of Evacuees <A*  
Hazardous Materials Incident f~f ^X&s.

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Mitigation Action

Implement Long-term Care and Senior Housing Retrofits to Electric Panels to Allow for Exterior Power Connection/Generators j

Year Initiated

2019

Applicable Jurisdiction

City of Chicago

Lead ■Agency/Organization

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Supporting Agencies/Organizations

Applicable Goal

• Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards • Protect public including infrastructure, from loss of use during natural hazard events j  
Objective 13 Reduce natural hazard-related risks and vulnerability to potentially isolated populations with

Potential Funding Source

Grants l

Estimated Cost

TBD

Benefits (loss avoided)

Avoid the necessity of evacuating this vulnerable population during.power failures ;

Projected Completion Date

Long-term /?/ i /vv\ i

Priority and Level of Importance (Low, Medium,

<r xv High

/!> \\\

Benefit Analysis (Low, l Medium, High)

High - Project will provide an immediate redudiori^f^risjc.,exposure for life and property i

Cost Analysis (Low, Medium, High) i

High - Existing funding will not cover the cost of the project, implementation would require new revenue t  
source (for example, bonds,(graQts, and fee increases) i  
TBD

Actual Completion Date

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Action/Implementation

Plan and Project

Description:

Year:yLX;:v::r

on: Action' aridTBr^ i-;^.^::^

Cbmments.,^' ; .■' ^-i.. ■. xH^vX;;X..V"/^vX;;; \tv^:C.VSf>;

2019		JNew	Jff
2020	j	I^/y	
2021		;	w
2022			
2023		:	

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^Mitigated  
Hazards :  
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X	All Hazards
X	Dam/Levee Failure
	Drought
	Earthquake
	Flood
	Extreme Heat
	Lightning
	Hail
X	Fog
X	High Wind j
	Snow ;

	Blizzard	
	Extreme Cold	
	Ice Storms 1	
	Tornado !	
	Epidemic or pandemic	
	Nuclear Power Plant Incident	....
x	Widespread Power Outage i	
	Coastal Erosion ,X\	
	Secondary Impacts from Mass Influx of Evacuees	Cf XX
	Hazardous Materials Incident	/>/ XX

#### 4.4.5.1.5 Action C 28

Mitigation Action	Utilize ILWARN utility-to-utility network for flooding emergencies
Year Initiated	2019
[Applicable Jurisdiction	Chicago
Lead Agency/Organization	Illinois Section AWWA
[Supporting Agencies/Organizations	DWN, IL water utilities
i {Applicable Goal i	• Protect the lives, health, safety, and property of citizens of Cook County from the impacts of natural hazards
Applicable Objective	Objective 8 Establish partnerships among all levels of local government, the private sector, and/or nongovernmental organizations to improve and implement methods to protect people and property :
Potential Funding Source	TBD
Estimated Cost	LOW ;
Benefits (loss avoided)	Increased coordination and partnerships
Projected Completion Date	Ongoing ;
Priority and Level of Importance (Low, Medium, High)	Low priority y ■
Benefit Analysis (Low, Medium, High)	Medium-Project will have a long-term impact on the reduction of nsfcexposure for life and property, or project will provide an immediate reduction in the risk exposure^fo/'property. ^XX
Cost Analysis (Low, Medium, High)	Low-The project could be funded under the existirtcfbudget!The projects part of or can be part of an ongoing existing program. XX /ty
Actual Completion Date	Ongoing V; / I

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#### Action/Implementation Plan and Project Description:

	«-e# *^*3mro«3 ^Mitigatii	sn ActionrandrPrbjeetMa^htenance^>w-^^-"-rt-M;; ^#-^-.A
Year.... ' v; v;;;	Status	(S^mmerits ~.v;.. V;';;XS.'-..i;--J ;;;_:-r: -;-;-v-;-;'.r.^-_'>^-.^..-;-<; ^/'.i."-r^^-ttJ :j
2019	New // \	XX
2020	«>X V;	
2021	xx. /y	
2022 i	■ XX/y"	
2023	V	

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All Hazards  
Dam/Levee Failure  
Drought  
Earthquake  
Flood  
Extreme Heat  
Lightning  
Hail  
Fog  
High Wind  
Snow |  
Blizzard  
Extreme Cold •  
Ice Storms j  
Tornado  
Epidemic or pandemic j  
Nuclear Power Plant Incident A |  
Widespread Power Outage ■  
Coastal Erosion y x'Co\  
Secondary Impacts from Mass Influx of Evacuees Of "S,¢  
Hazardous Materials Incident /P? \\\

#### 4.6.1.6 Action C 29

Mitiation Action	Build a new backup generator facility for Jardine Water Plant
Year Initiated	2019
Applicable Goal	ChiCSy 0
Lead Agency/Organization	DWM
Supporting Agencies/Organizations	
Applicable Objective	• Protect the lives, health, safety, and property of the citizens of Cook Couty from the impacts of natural hazards.
Potential Funding Source	Objective 2 Increase resilience of (or protect and maintain) infrastructure and critical facilities
Estimated Cost	Capital funding
Benefits (loss avoided)	Low j
Projected Completion Date	Increased redundancy of a key lifeline j
Priority and Level of Importance (Low, Medium, High)	2019/2020 i
Benefit Analysis (Low,   Medium, High) ;	High Priority // <i>M</i>
Cost Analysis (Low, Medium, High) j	Low-Project will provide an immediate reduction of risk eyposureeifpr life and property.
Actual Completion Date	<i>Low-The project could be funded under the existingbudget. The projects part of or can be part of an ongoing / existing program.</i> J>> ^■
	TBD XX

Refcbbmmended :Mrtigatro

Action/Implementation Plan and Project Description:

*M*

2019	New - - - \X.
2020	// _ X\.
2021	X>
2022	XX M

2023

X>-^ .

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All Hazards  
Dam/Levee Failure  
Drought

i Earthquake

Flood  
Extreme Heat  
Lightning  
Hail  
Fog  
High Wind  
Snow  
Blizzard  
Extreme Cold j  
Ice Storms j  
Tornado

Epidemic or pandemic

f Nuclear Power Plant Incident

^ ' !

X ' Widespread Power Outage

/N I

Coastal Erosion

.-OvJ\ i

Secondary Impacts from Mass Influx of Evacuees

<y I

Hazardous Materials Incident

#### 4 4.6.1.7 Action C 30

Mitigation Action Enhance Storm Water Management through the installation of bioinfiltration systems  
Year Initiated 2019  
[Applicable Jurisdiction Chicago Housing Authority  
Lead Agency/Organization Chicago Housing Authority  
Supporting Agencies/Organizations



Applicable Goal • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) , projects  
Applicable Objective Objective 2: Increase resilience of (or protect and maintain) infrastructure and critical facilities  
Potential Funding Source Grants, capital budget  
C:\Program Files\Microsoft Office\Office16\Word\WordDocument.docx Varies per project  
Benefits (loss avoided) Decreases combined sewer system overflow  
Projected Completion 2020 !  
Priority and Level of Importance (Low, Medium, High) Low Priority / 1^  
Benefit Analysis (Low, Medium, High) Medium-Project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for property.  
Cost Analysis (Low, Medium, High) Low-The project could be funded under the existing budget\The project is part of or can be part of an ongoing existing program. Xol /%/ I  
Actual Completion Date TBD \TX

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Action/Implementation jPlan and Project | Description:

The Chicago Housing Authority\*(GHA) willVrhstall bioinfiltration systems that promote the absorption and infiltration of stormwater runoff, where appNcabie^pn CHA-pwned properties throughout the City.

4K Mr-^ V  
i>ri;Actiqn.^

Year	Status	Comments
2019	New	X\ : \N !
2020		
2021	'XXM	
2022		
2023	Vj	

All Hazards

Dam/Levee Failure

Drought

Earthquake  
Flood '  
Extreme Heat  
Lightning j  
Hail  
Fog

High Wind

Snow ;

Blizzard

Extreme Cold

Ice Storms

Tornado

Epidemic or pandemic  
Nuclear Power Plant Incident  
Widespread Power Outage /■'■/  
Coastal Erosion I

Secondary Impacts from Mass Influx of Evacuees

Hazardous Materials Incident j

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Year Initiated	2019
----------------	------

Lead Agency/Organization Chicago Housing Authority

Applicable Goal	<ul style="list-style-type: none"> <li>• Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events.</li> </ul>
-----------------	---

## Grants ■

Benefits (loss avoided)	Redundant power source, job creation, and reduced utility cost <sup>16</sup>
-------------------------	--

Priority and Level of Importance

Cost Analysis (Low, Medium, High): The project could be funded under the <sup>^</sup>^'s %ig. budget. The project is part of or can be part of an ongoing or existing program.

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The CHA had a unique opportunity to pilot the first smart renewable energy system in public housing at Dearborn

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New

2022  
2023

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1	
iL . _	Dam/Levee Failure
<hr/>	
1	
i	Extreme Heat
<hr/>	

All Hazards

Drought  
Earthquake  
Flood

Lightning  
Hail  
Fog  
High Wind  
Snow  
Blizzard  
Extreme Cold  
Ice Storms  
Tornado I  
Epidemic or pandemic .'  
Nuclear Power Plant Incident  
*Widespread Power Outage //*  
Coastal Erosion  
*Secondary Impacts from Mass Influx of Evacuees (*  
Hazardous Materials Incident

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#### 4.6.1 Action C 32

Mitigation Action	Implement a Green Infrastructure program for the County as a whole
Year Initiated	2019
Applicable Jurisdiction	County
Lead Agency/Organization	DHSEM
Supporting Agencies/Organizations	MWRD
Applicable Goal	• Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects
Applicable Objective	• Objective 9 - Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. • C environment and that use natural processes
Potential Funding Source	Grant Funds
Estimated Cost	TBD
Benefits (loss avoided)	Mitigation of water flow to reduce urban flooding
Projected Completion Date	
Priority and Level of Importance	Medium Priority
Benefit Analysis (Low, Medium, High)	Medium-Project will have a long-term impact of reduction of risk exposure for life and property, or project will ; provide an immediate reduction in the risk exposure for property
Cost Analysis (Low, Medium, High)	Medium-The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
Actual Completion Date	

Recommendation:  
 Action/Implementation Plan and Project Description:  
 Develop a Countywide program to assist municipalities in the use of green infrastructure to mitigate flooding.

Year				Comments
2019	New	W		
2020	S			
2021				
2022				

2023 ||

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

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#### 4.4.6 1.10 Action C.33

<b>Mitigation Action</b>	Purchase deployable portable generators that can provide power to firehouses that are impacted by long-term power ' outages. Should include quick connect hookups at each fire house.
<b>Year Initiated</b>	2019
<b>[Applicable Jurisdiction</b>	Chicago Fire Department
<b>[Lead iAgency.Organization</b>	Chicago Hre Department
<b>[Supporting Agencies/Organiz</b>	
<b>Applicable Goal</b>	» Protec public services and critical facilities, including infrastructure, from loss of use during natural hazard events
<b>Applica• Objective 1 Eliminate or minimize disruption of local government operations caused by natural hazards through all phases of emergency manag</b>	
<b>Potential Funding Source</b>	<i>Grants .-y</i>
<b>Estimated Cost '</b>	Moderate (\$250,000 or more) <i>/ / j</i>
<b>Benefits (loss avoided)</b>	Allow doors to open and close and refrigeration units to wgrtc!-. Provide heating and cooling ofthe building.
<b>Projected Completion Date</b>	2021 ^\

Priority and Level of Importance

Medium Priority

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\V> !

**Benefit Analysis (Low, Medium, High)**-Project will provide an immediate reduction of risk exposure for life and property.

**Cost Analysis (Low, Medium, High)**-Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example bonds, grants, and fee increases).

Actual Completion Date

TBD

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Recommended Mitigation Activities

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Action/Implementation Plan and Project Description:

Mitigation Activities

Status  
New

Comments - T:.. "y\^  
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2019  
2020  
2021  
2022  
2023

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All Hazards  
Dam/Levee Failure  
Drought  
Earthquake  
Flood  
Extreme Heat  
Lightning  
Hail  
Fog :'  
High Wind  
Snow  
Blizzard  
Extreme Cold  
Ice Storms  
Tornado

Epidemic or pandemic I  
 Nuclear Power Plant Incident .iv j  
*Widespread Power Outage j(y*  
*Coastal Erosion* ,A<.l. l  
 Secondary Impacts from Mass Influx of Evacuees Nyj\l  
 Hazardous Materials Incident /?■/ \s\

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Mitigation Action Portable High Capacity Air Conditioners  
 Year Initiated 2019  
 Applicable Jurisdiction Chicago Fire Department  
 Lead Agency/Organization Chicago Fire Department  
 Supporting Agencies/Organiz:

**Applicable Goal:** Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events. • Involve stakeholders

**Applicable Objective** • Objective 12 Reduce natural hazard-related risks and vulnerability to potentially isolated populations within the planning area  
**Potential Funding Source** Grants i

**Estimated Cost** Less than \$100,000

**Benefits (loss avoided)** *Provide CFD cooling units for extreme heat emergencies* /\*/ l

**Projected Completion Date** Ongoing/TBD /^^K

**Priority and Level of Importance** Medium Priority - // ^vN,

**Benefit Analysis (Low, Medium, High)** Medium-Project will have a long-term impact on the reduction of risk exposure for life and property, or project will I provide an immediate reduction in the risk exposure-for;property. !

**Cost Analysis (Low, Medium, High)** Existing funding will not cover the cost-of the projectV.implementation would require new revenue through an j alternative source (for example, bonds, gra^s?a^?,fee increases). !

**Actual Completion Date j** TBD \3\ // l

## ^Recommended ^

### Action/Implementation Plan and Project Description:

Units can provide additional^doling^rapabilities that can be deployed or used by CFD buildings, rehab units, high  
 bu^ldiFigsT-er^ethefiisites- in-ea%e^f-an-exteB^e-^eat-emergency^Hivhen-there^re-power-outages:

V

ort-ActioffandIProjA MAPMYLA 7:4

Status" KMMV - ■ . •' M

Comments; y -j.v">.\^:\*VI'iIW::S""-.vv-vX^v-:;<

2019

New \K //

2020

N/ i

2021

2022

2023

DRAFT

All Hazards

Dam/Levee Failure

Drought

Earthquake



Flood '

X Extreme Heat

' ;

Lightning <sup>1</sup>

Hail

Fog

High Wind

Snow i

Blizzard

Extreme Cold

Ice Storms I

	Tornado	
	Epidemic or pandemic j	
	Nuclear Power Plant Incident	^ j
X !	Widespread Power Outage	/[/ j
	Coastal Erosion	y&sX i
	Secondary Impacts from Mass Influx of Evacuees	\$f XX i
	Hazardous Materials Incident	/fff XX
X?		

DRAFT

#### 4.4.6.1.12 Action C.35

Mitigation Action	Purchase high capacity portable heaters
Year Initiated	2019
Applicable Jurisdiction	Chicago Fire Department
Lead Agency/Organization	Chicago Fire Department
Supporting Agencies/Organizations	
Applicable Goal	<ul style="list-style-type: none"> <li>• Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events « Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards</li> </ul>
Applicable Objective	<ul style="list-style-type: none"> <li>• Objective 12. Reduce natural hazard-related risks and vulnerability to potentially isolated populations within the planning area.</li> </ul>
Potential Funding Source	Grants
Estimated Cost	Above \$100,000
Benefits (loss avoided)	Provide heating units to protect structures, First Responder vehicles! and equipment from damage due to excessive cold weather „.<f*>,'
Projected Completion Date	2021 \;x !
Priority and Level of Importance (Low, Medium, High)	./ ""€S. j Medium Priority // /y l
Benefit Analysis (Low, Medium, High)	High-Project will provide an immediate.reduction of risk exposure for life and property.
Cost Analysis (Low, Medium, High)	High-Existing funding will not cover fte bsVb'f4\$&^ would require new revenue through an j alternative source (for example, bonds, grants, and feelXncreases)
Actual Completion Date	tbd y::jy>'.. yyy



[Mitigation Action Purchase Mass Decontamination Apparatus

Year Initiated 2019

'Applicable Jurisdiction Chicago Fire Department

Lead Agency/Organization *Chicago Fire Department*

Supporting Agencies/Organiz:

Applicable Goal • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. : • Involve stakeho

A nr.1 in 3 Kl A • Objective 1 Eliminate or minimize disruption of local government operations caused by natural hazards through , all phases of emergency ma

Potential Funding Source i Grants

Estimated Cost Greater than \$300,000 <sup>1</sup>

Benefits (loss avoided) *Removal of contaminants for large amounts of people* yy '

Projected Completion Date |

Priority and Level of Importan yy \k j High Priority // \Ev j yy /> v !

Benefit Analysis (Low, i MediMedium-Project will have a long-term impact on-tfie. reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure'fprVpVoperty. !

Cost Analysis (Low, Medium, High-Existing funding will not cover thecjo^&ofthe projVr^implementation would require new revenue through an j alternative source (for example, bonds, grants>aiid:fe j

Actual Completion Date j TBD ^kJ/' i

"Recb'mmerided

Action/Implementation Plan and Project ijD esc ripti on: j Mass Decontamination^hits arefctesigT^jtoj'rbvide a solution to removing hazardous materials from large amounts of contaminated people. Th^-vvpuTo^efrc^m chemical releases, sewage, etc. We need to have them staged on various sides gf-the~city,.to be jhpst effective The current vehicle is aged and falling into disrepair.

Status; A ' f'ff

2019 New IX/YI

2020 i

2021

2022 I

2023 |

/r:\ :-:y- nX :/r;-rv,; .;XA\*XXx»Ht-gatedHazards . >;;• XAXXx X-XX-vr • e\*;y V -'^--X^

am Hazards

DRAFT

Dam/Levee Failure

Drought

Earthquake

Flood

Extreme Heat I

Lightning

Hail

Fog !

High Wind i

Snow	
Blizzard	
Extreme Cold !	
Ice Storms I	
Tornado	
Epidemic or pandemic	' , j
Nuclear Power Plant Incident	A j
Widespread Power Outage f/	
Coastal Erosion	\ i
Secondary Impacts from Mass Influx of Evacuees	<^ XX 1
Hazardous Materials Incident	/./ XX 1

4.4.5.1 14 Action C.38

Mitigation Action	Implement Green Infrastructure at Chicago Public Schools, Space 2 Grow
Year Initiated	2018
Applicable Jurisdiction	City of Chicago
Lead Agency/Organization	MWRD
Supporting Agencies/Organizations	City of Chicago
Applicable Goal i	• 1. Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects
Applicable Objective	• Objective 13 Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes
Potential Funding Source	TBD i
Estimated Cost	MWRD Max Contribution (through 2022) \$16,000,000
Benefits (loss avoided)	TBD !
Projected Completion Date	//
Priority and Level of Importance (Low, Medium, High)	TBD
Benefit Analysis (Low, Medium, High)	£' A ^
Cost Analysis (Low, Medium, High)	\\./ ! TBD >■,./ ! \ ' s

Actual Completion Date	TBD	WQ>r^ V\ i	
	~^f^rr>nfiM)d.ed	--y v^: ^ ..v.	
Action/Implementation	ID: Multiple Locations	^).»» \*X Contract: 15-IGA-20 \X ^.fcr-r>:r_V Watershed: Chicago n^v^""^	
Plan and Project Description:	Location: Multi^le;Locatjions^i\^ MWRD, the'Chicago Depa^ment'efA/Vater Management, and the Chicago Public Schools are partnering to design and install playgrounds at various Chicago Elementary Schools utilizing Green Infrastructure. The projects will reduce flooding, reduce,the load on ,the combined sewer system, and educate students and neighbors about Green Infrastructure technic]ues,and purpose.		
	-- --* yy ""Mitigation-Action and Project^aintenance 'Zy~7Zz?:!^J?: ~ 7 ^... , "It T.'^:		
2018		S\$tu£\$;;p¥^ New	Comriferi^ 6 playgrounds were transformed capacity are as follows: John W. Nathan S. Davis Elementary Sch School 10041 S. Union Avenue 1 Ashland Avenue 422,169 Gal Mc James B. Farnsworth Elementary Retention Capacity for 2018 CPS
2019		Ongoing	
2020			
2021			
2022			
2023			

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- All Hazards
- Dam/Levee Failure
- Drought
- Earthquake
- X Flood
- Extreme Heat
- Lightning ■
- Hail
- Fog i
- High Wind
- Snow :
- Blizzard
- Extreme Cold ]
- Ice Storms
- 1 Tornado i
- Epidemic or pandemic :

Nuclear Power Plant Incident ^ j  
Widespread Power Outage A/ I  
Coastal Erosion />-x\ I  
Secondary Impacts from Mass Influx of Evacuees \^ ^StN.  
Hazardous Materials Incident /\$/ N?!\

#### 4.4.6.1 15 Action C.39

Mitigation Action Launch Pilot Study for Investigating Technology to Address Basement Backups  
Year Initiated 2019  
Applicable Jurisdiction City of Chicago  
Lead Agency/Organization MWRD  
Supporting Agencies/Organizations City of Chicago  
Applicable Goal • 2 Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards.  
Applicable Objective • Objective 8 - Establish partnerships among all levels of local government, the private sector, and/or nongovernmental org.  
Potential Funding Source MWRD Contribution \$400,000  
Estimated Cost TBD  
Benefits (loss avoided) TBD  
Projected Completion Date TBD ,/f ;  
Priority and Level of Importance (Low, Medium, High) j  
Benefit Analysis (Low, Medium, High)  
Cost Analysis (Low, Medium, High) j \W/ TBD \:V ..... . , - . .

Actual Completion Date j tbd V\$H£>^ |>\

Trn^Recommen

Action/Implementation

Vlan-and Project -Description:

ID: N/A /^^il || Contract: 16-IGA-20 <»x ^^fes^V W.  
Location: ChicagoT"tL--^ . 'v Description: ?ihtergovernment research pilot study on the south sidetot\Chicago to gain insig reducing basement backups. "x\

#### Comj^ritf^

2019 New Intergovernmental agreement being executed. [  
2020  
2021  
2022  
2023

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--yK :cr: ^~:  
^v:>v'v; .-l : :-x|:~  
~:~;

x !

- Dam/Levee Failure
- Drought
- Earthquake
- Flood
- Extreme Heat ,
- Lightning
- Hail !
- Fog i
- Snow
- Blizzard
- Extreme Cold ;
- Ice Storms
- Tornado !
- Epidemic or pandemic 1
- Nuclear Power Plant Incident A !
- Widespread Power Outage y{/*
- Coastal Erosion XxN.
- Secondary Impacts from Mass Influx of Evacuees 4ff*
- Hazardous Materials Incident jff#? X^S.

4.4.6.1 16 Action C.40

Mitigation Action	Space to grow partnered schools
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Year Initiated 2018

Applicable Jurisdiction City of Chicago

[Lead Agency/Organization - .... - .... .... -. MWRC

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Supporting City of Chicago

Agencies/Organizations

Applicable Goal 1. Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.

Applicable Objective Objective 13 Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and t

Potential Funding Source MWRD (Max Contribution \$16,000,000), Chicago Public Schools, and the City of Chicago Department of Water Manageme

Estimated Cost TBD

Benefits (loss avoided) Unkown

Projected Completion j Date 2022

Priority and Level of Importance (Low, Medium, High) JL |

Benefit Analysis (Low, Medium, High) TBD j^T ^\

Cost Analysis (Low, | Medium, High)

Actual Completion Date ' TBD \<(j

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ID. Multiple Locations \ " ! Contract 15-IGA-20 /y~\ \ '■ Watershed- Chicago </v^

J.£ v\ Location: Multiple Lorattj^re^^siSJ^T |

Action/Implementation Plan Description- MWRGnthe Chicago Department of Water Management, and the Chicago Public Schools are partnering to design and'iristall playgrounds\at various Chicago Elementary Schools utilizing green infrastructure. The projects will reduce flooding, reduce the.load orv'the combined sewer system, and

educate students and neighbors about green Infrastructure'techniques andllpurpose. : JJ | The existing intergovernmental agreement between MWRD and Chicago Public Schools will be amended to extend the timeline for the\*remaining projects through 2022. MWRD plans to invest \$1 million to fund ten school designs, with the remaining school'Sesigns to be funded by Chicago Public Schools and the City of Chicago Department of Water Management.

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in^ttoh^id'RrbiecfMa

2018 New Status: 15 of a total up to 30 schools have been completed through 2018. 6 playgrounds were transformed in 2018

^019 Ongoing An additional 5 schools have been designed and are planned for construction in 2019. j They are as follows: Arthur R. Ashe Elementary School 8505 S. Ingleside Avenue Ninosh Heroes Elementary Academic Center 8344 S. Commercial Avenue Henry H. Nash Elementary School 4837 W Erie Street Daniel Webster Elementary School 4055 W. Arthington Street Oliver S. Weseott Elementary School 409 W. 80th Street j

[2020

[2021

[2022

2023

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yy:):y;x<':-^v  
yy^  
Mitigated  
Hazards  
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X

All Hazards  
Dam/Levee Failure  
Drought  
Earthquake  
Flood  
Extreme Heat  
Lightning  
Hail  
Fog  
High Wind  
Snow  
Blizzard  
Extreme Cold  
Ice Storms j  
Tornado  
Epidemic or pandemic 1  
Nuclear Power Plant Incident yy i  
Widespread Power Outage /• / j  
Coastal Erosion /A\  
Secondary Impacts from Mass Influx of Evacuees \_ W "xil  
Hazardous Materials Incident Af \y\

**Mitigation Action** Prevent Stonnwater Infiltration through the Establishment of Native Habitat at 3 Chicago Parks

**Year Initiated** 2019

**Applicable Jurisdiction** City of Chicago

**Lead Agency/Organization** MWRD

**Supporting Agencies/Organizations** City of Chicago

**Applicable Goal** • 1 Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects i

**Applicable Objective** • Objective 13. Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes

**Potential Funding Source** TBD

**Estimated Cost** TBD

**Benefits (loss avoided)** TBD

**Projected Completion Date** TBD

**Priority and Level of Importance (Low, Medium, High)** TBD |

**Benefit Analysis (Low, Medium, High)** £ A ^ !

**Cost Analysis (Low, Medium, High)** TBD

**Actual Completion Date !** TBD

**Action/Implementation Plan and Project Description:** *^Recommended PlanandPrbjVct Description - w-*  
 Project Title CPD 18-IGA^^ly ^\ j  
*x?yy*

*T^a^;-:':i:" :;;V.*  
*A •'■a"*  
 2019  
 2020  
 2021  
 2022  
 2023

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DRAFT

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

#### 4.4.6.2 Ongoing Mitigation Actions

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

##### 4.4.6.2.1 Action C.1

Resolution 750S(2019) of 13 May 2019

#### HAZARD MITIGATION ACTION PLAN MATRIX

Hazards Mitigated

Objectives Met

Lead Agencies

Sources of Funding  
Timeline/Projected Completion Date (a)

Dept of Buildings

FEMA Haz . Mitigation Grants

DRAFT

(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years.

4 4.6 2.2 Action C.2

HAZARD MITIGATION ACTION PLAN MATRIX

Status	Hazards Mitigated	Objectives Met	Lead Agencies	Estimated Cost	Sources of Funding	Timeline/Projected Completion Date (a)
Ongoing	All	All	City of Chicago	Low	General Fund	Short- and long-term

(a) Ongoing indicates continuation of an action that is already in place Short-term indicates implementation within five years Long-term indicates implementation after five years

4.4.6.2.3 Action C.3

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HAZARD MITIGATION ACTION PLAN MATRIX

DRAFT

(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years Long-term indicates implementation after five years

#### 4.4.5.2.4 Action C.4

##### HAZARD MITIGATION ACTION PLAN MATRIX

Hazards Mitigated

Objectives Met

Lead Agencies

Sources of Funding  
Timeline/Projected Completion Date (a)

3. 4. 5. 6. 7. 9. 10. 11. 13

City of Chicago

(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years Long-term indicates implementation after five years

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#### 4.4.6.2.5 Action C.5

##### HAZARD MITIGATION ACTION PLAN MATRIX

Hazards Mitigated

Objectives Met

Lead Agencies

Sources of Funding

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Timeline/Projected Completion Date (a)

Dept of Buildings

Short-term and Ongoing

DRAFT

(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years Long-term indicates implementation after five years

4 4.6.2.6 Action C.6  
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HAZARD MITIGATION ACTION PLAN MATRIX

Status	Hazards Mitigated	Objectives Met	Lead Agencies	Estimated Cost	Sources of Funding	Timeline/Projected Completion Date (a)
■Actjb^C;6p^Ir^g fede^opmenf:':1 '■, 5AAi:- ■■■■');A Ongoing	All	3,4,6, 10, 13	City of Chicago	Low	General Fund	Short-term

(a) Ongoing indicates continuation of an action that is already in place Short-term indicates implementation within five years Long-term indicates implementation after five years

4.4.6.2.7 Action C.9  
^Shsnoa ?"S/20-9 o- 2' oy Vamaroei Warfw

Hazards Mitigated

HAZARD MITIGATION ACTION PLAN MATRIX  
Estimated Cost

Objectives Met

Sources of Funding

Timeline/Projected Completion Date (a)

Action.OJ9j^  
receiving :City'^^^

:. ::7:: ^^Wr^

Flooding, Severe Weather

3, 4, 7, 10, 13

Buildings, Planning & Development

Long-term and Ongoing

/  
DRAFT

(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years Long-term indicates implementation after five years

4.4 5.2.8 Action C.10

HAZARD MITIGATION ACTION PLAN MATRIX

Hazards Mitigated

Objectives Met

Sources of Funding ■

Timeline/Projected Completion Date (a)

Action.£\*1fe£^nfanue<impteme water'infrastructure.vr'

;conserving.-water,,:greeningwaterjoperations,^ana,sustainably«m

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Buildings, Water Management

□ RAFT

(a) Ongoing indicates continuation of an action that is already in place Short-term indicates implementation within five years Long-term indicates implementation after five years.

#### 4.4.6.2.9 Action C.11

##### HAZARD MITIGATION ACTION PLAN MATRIX

Hazards Mitigated

Objectives Met

Sources of Funding

Timeline/Projected Completion Date (a)

Action^S^

Low

Dept of Water Management

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A-.AA <v,; :A^^;\*v-A'^•'^^Av'^AAi;?^-^

Ongoing Flooding 4,9,13

DRAFT

(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years Long-term indicates implementation after five years

4.4.6.2.10 Action C.12  
DRAFT

HAZARD MITIGATION ACTION PLAN MATRIX						
Status	Hazards Mitigated	Objectives Met	Lead Agencies	Estimated Cost	Sources of Funding	Timeline/Projected Completion Date (a)
Ongoing	Flooding	2, 3, 4, 8, 9, 13	USACE, Park District	Medium	USCAE, IL Dept of Natural Resources	Long-term/Ongoing

(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years Long-term indicates implementation after five years

#### 4.4.6.2.11 Action C.13

"uoiiisraa 7/1S/2019 01 23 by Nathaniel Vfartetr

#### HAZARD MITIGATION ACTION PLAN MATRIX

**Hazards Mitigated**

**Objectives Met**

**Sources of Funding**

**Timeline/Projected Completion Date (a)**

Center for Neighborhood Technology  
DRAFT

(a) Ongoing indicates continuation of an action that is already in place Short-term indicates implementation within five years Long-term indicates implementation after five years.

4.4.6.2.12 Action C.14

HAZARD MITIGATION ACTION PLAN MATRIX

Hazards Mitigated		Objectives Met	
Lead Agencies			
Sources of Funding		Timeline/Projected Completion Date (a)	
Action: AS Trieese1voik:£ianf^ 1, 2, 3, 6, 9, 12, 13		vA'AAv.r■' A'.'.^^B'^i^A^ MWRDGC, ACOE	
		..Av	

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(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years Long-term indicates implementation after five years.

4.4.6.2.13 Action C.15

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HAZARD MITIGATION ACTION PLAN MATRIX

Hazards Mitigated

Objectives Met

Lead Agencies

Sources of Funding

Timeline/Projected Completion Date (a)

ActibrV^

Ongoing      All      4,5,6,12 OEMC  
DRAFT

(a) Ongoing indicates continuation of an action that is already in place Short-term indicates implementation within five years Long-term indicates implementation after five years.

4.4.6.2.14 Action C.16  
DRAFT

HAZARD MITIGATION ACTION PLAN MATRIX						
Status	Hazards Mitigated	Objectives Met	Lead Agencies	Estimated Cost	Sources of Funding	Timeline/Projected Completion
Ongoing	All	4, 5, 6, 12	OEMC	Low	Corporate	Long-term/Ongoing
(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years						

4.4.6.2.15 Action C.17

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HAZARD MITIGATION ACTION PLAN MATRIX	
Hazards Mitigated	Objectives Met
Lead Agencies	

Sources of Funding

Timeline/Projected Completion Date (a)

Action C.18: To continue to expand...

Corporate Long-term/Ongoing  
DRAFT

(a) Ongoing indicates continuation of an action that is already in place Short-term indicates implementation within five years. Long-term indicates implementation after five years.

4.4.5.2.18 Action C.18

HAZARD MITIGATION ACTION PLAN MATRIX

Status	Hazards Mitigated	Objectives Met	Lead Agencies	Estimated Cost	Sources of Funding	Timeline/Projected Completion Date (a)
Ongoing	All	4, 5, 6, 12	OEMC	Low	Corporate	Long-term/Ongoing

(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years Long-term indicates implementation after five years

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4.4.6.2.17 Action C.19

Published 7/16/2010 0? 24 by Nathaniel Ma'lalle

HAZARD MITIGATION ACTION PLAN MATRIX

Hazards Mitigated

Objectives Met

Lead Agencies  
Sources of Funding

Timeline/Projected Completion Date (a)

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2, 3, 4, 9, 12, 13  
General Obligation Bond

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(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years

#### 4.4.6.2.18 Action C.20

##### HAZARD MITIGATION ACTION

Lead Agencies

Status

Estimated

Sources of Funding

Estimated Cost

Timeline/Projected Completion Date (a)

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gbso^tiqn'andPinM^

jA":::':!,>\*: v;"A. :>:'^;.-'tV;;^^

Long-term/Ongoing

m indicates implementation within five years Long-term indicates

(a) Ongoing indicates continuation of an action that is already in place Short-term implementation after five years

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4.4.6.2.19 Action C.21

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HAZARD MITIGATION ACTION PLAN MATRIX

Hazards Mitigated

Objectives Met

Lead Agencies

Sources of Funding

Timeline/Projected Completion Date (a)

Corporate Long-term/Ongoing  
DRAFT

(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years Long-term indicates implementation after five years.

4.4 6.2 20 Action C 23

## HAZARD MITIGATION ACTION PLAN MATRIX

Hazards Mitigated

Objectives Met

Lead Agencies

Sources of Funding

Timeline/Projected Completion Date (a)

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Long-term/Ongoing  
DRAFT

(a) Ongoing indicates continuation of an action that is already in place Short-term indicates implementation within five years Long-term indicates implementation after five years

### 4.4.6.2.21 Action C.24

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## HAZARD MITIGATION ACTION PLAN MATRIX

Hazards Mitigated

Objectives Met

Lead Agencies

Sources of Funding

Timeline/Projected Completion Date (a)

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th^).Chiragb;area's .largest employers and ,

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Corporate Long-term/Ongoing  
DRAFT

(a) Ongoing indicates continuation of an action that is already in place Short-term indicates implementation within five years Long-term indicates implementation after five years.

#### 4.4.6.2.22 Action C.25

##### HAZARD MITIGATION ACTION PLAN MATRIX

**Hazards Mitigated**

**Objectives Met**

**Lead Agencies**

**Sources of Funding**

**Timeline/Projected Completion Date (a)**

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Long-term/Ongoing  
DRAFT

(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years Long-term indicates implementation after five years

4.4.6.3 Completed Mitigation Actions  
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The following section represents completed mitigation actions, and serves as an archive of identified and completed projects

4.4.6.3.1 Action C.7

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TABLE: ACTION PLAN MATRIX

Hazards Mitigated

Objectives Met

Lead Agencies	Sources of Funding	Timeline/Projected Completion Date (a)
<i>fc'tiohTe^f^lsbm'p ""T:</i>		
Complete Flooding 3, 4, 9 DRAFT		
(a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years Long-term indicate implementation after five years		

#### 4.4.6.3.2 Action C.37

<i>Puoisnso V15/2019 S' 27 o&gt;- Naljtajvsl Marielle</i>		
Mitigation Action	Albany Park Stormwater Diversion Tunnel	
Year Initiated		
Applicable Jurisdiction	City of Chicago	
Lead Agency/Organization	MWRD	
Supporting Agencies/Organizations	City of Chicago	
Applicable Goal	• Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.	
Applicable Objective	• Objective 9 - Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans	
Potential Funding Source	MWRD and Unknown	
Estimated Cost	\$70,655,320; MWRD Contribution: \$25,920,000	
Benefits (loss avoided)	Unknown	
Projected Completion Date	Unknown	<i>yf/ /</i>
Priority and Level of Importance (Low, Medium, High)	Unknown ^^^N^A	
Benefit Analysis (Low, Medium, High)	Unknown	<i>^jj/ ^p. ^ j</i>

Cost Analysis (Low, Medium, High) j  
Actual Completion Date 4/25/18

Unknown

VAAA.\ \>\ i

'Recommended Mitigation Action/Implementation Plan and Project Description':A.A:: 'A';, 'A~ ... '-A.... :..

Action/Implementation Plan and Project Description:

id. ms-07 /y ffl m Contract: 14-066-3F yfe&^v | Watershed: North Branch<sup>0^'^^'^^'^^</sup> Location: Albany«P,ark,JL A cost sharing'agreemeritiwith tn"e^6ity of Chicago. Constructed by the Chicago Department of Transportation. 5,800 j feet of 18-foptdiameter rock tunnel with inlet and out shaft facilities protecting approximately 336 structures from j overbank flooding in the Albany Park neighborhood in Chicago.

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2019

-: '?A:7: :~' 7.Ai Mitigation Actioniland'P

2020  
2021  
2022  
2023

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11 i \_ All Hazards

— Dam/Levee Failure  
Drought  
1 \_ Earthquake  
X Flood  
Extreme Heat

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— Hail  
Fog  
High Wind  
Snow  
Blizzard  
Extreme Cold  
Ice Storms  
Tornado  
Epidemic or pandemic  
Nuclear Power Plant Incident  
Widespread Power Outage  
Coastal Erosion  
Secondary Impacts from Mass Influx of Evacuees

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Hazardous Materials Incident

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#### **4.4.7 Future Needs to Better Understand Risk/Vulnerability**

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No needs have been identified at this time

#### 4.4.8 Additional Comments

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No additional comments at this time

#### 4.4.9 HAZUS-MH Risk Assessment Results

Pvolisnec 7/13/2019 13 21 by <im Pleva-BerKa

##### CHICAGO EXISTING CONDITIONS

2010 Population	2,704,958
Total Assessed Value of Structures and	\$579,392,639,428
Area in 100-Year Floodplain '	5,223 88 acres
Area in 500-Year Floodplain	5,664 46 acres
Number of Critical Facilities	3,642

##### HAZARD EXPOSURE IN CHICAGO

	Number Exposed		Value Exposed to Hazard			% of Total Assessed Value Exposed
	Population	Buildings	Structure	Contents	Total	
Buffalo Creek	0	0	\$0	SO /A	\$0	0 00%
Plum Grove	0	0	\$0		\$0	0 00%
Touhy	3	1	\$13,035,000	\$13,035^000^ />-	\$26,070,000	0 00%
St. Michael	0	0	\$0		AAx \$0	0.00%
Twin Lakes	0	0	\$0 <	r se»	\$0	0.00% <sup>1</sup>
100-Year	653	201	\$452,655>25	\$455,^42,279	\$907,797,704	0.16%
500-Year	991	305	\$485,87^440**		\$957,620,226	0.17%
100-Year	-		' \$6761044,430\	\$515,681,760	\$1,191,726,200	21%
500-Year	-		\$^^279;35,0^J	\$1,570,940,430	\$3,373,119,780	.58%

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## ESTIMATED PROPERTY DAMAGE VALUES IN CHICAGO

	Estimated Damage Associated with Hazard			% of Total Assessed Value Damagea
	Building	Contents	Total	
<i>Dam Failure, . . . [ ■-yy,' ■■■■■.X--. i i'; '-s/l. ■ .. ■</i>				
Buffalo Creek	SO	SO	\$0	0.00%
Plum Grove	SO	SO	\$0	0.00%
Touhy	SO	\$0	\$0	0.00%
St. Michael	\$0	\$0	\$0	0.00%
Twin Lakes	\$0	\$0	\$0	0.00% ■
1909 Historical Event	\$2,854,751,334	\$759,966,776	\$3,614,718,109	0.62%
jFJop^A-^^				
10-Year	\$20,941,832	\$52,361,673	c-71 mo cnc	0.01%
100-Year	\$31,363,512	\$71,466,941	\$102,830,453	0.02%
500-Year	\$485,870,440	\$471,749,787	^\$957,620,226	0.17%
/^//^f/^				
100-Year	\$6,760,444,340	\$5,156,817,620 <C	/ 1,917,261,Sou	2.06%
500-Year	\$12,343,694,180	\$10,759,865,97^0^	\$23^03,560,150	3.99%

## 4.4.10 Hazard Mapping

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## CITY OF CHICAGO

## CRITICAL INFRASTRUCTURE

0 Oil Facilities

Transit Centers

Military Facilities

Pokcc Stations Eij Fire Stations ^ Hazardous Waste Q Airports

Hospitals ■ Highway Bridges ○ Warming Centers ○ Cooling Centers \_L Schools EI Railroad Stations

Base Map Data Sources Cook County, ESRI

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CITY OF CHICAGO

CRITICAL INFRASTRUCTURE

© Oil Facilities Transrt Centers Military Facilities Police Stations Fire Stations  
ffli Hazardous Waste  
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Base Map Data Sources Cook County, ESRI

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CITY OF CHICAGO

CRITICAL INFRASTRUCTURE

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Transft Centers .Ct.' Military Facilities Polico Stations  
U Fire Stations  
⁠ Hazardous Waste  
□ Airports  
Hospitals Highway Bridges  
# Warming Centers  
○ Cooling Centers  
JL Schools  
Railroad Stations

Base Map Data Sources Cook County, ESRI

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CITY OF CHICAGO

CRITICAL INFRASTRUCTURE

© Oil Facilities

Transit Centers IJ«2J Militwiy Facilities \*\*\* Police Stations O Fire Stations il^I Hazardous Waste Airports  
Hospitals - Highway Bridges 6 Warming Confers O Cooling Centers X Schools  
Railroad Stations

Base Map Data Sources' Cook County. ESRI

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CITY OF CHICAGO  
CRITICAL INFRASTRUCTURE

Oil Facilities E3 Transit Centers .0,1 Military Facilities  
Pofice Stations D Fire Stations I^J Hazaidous Waste  
Airports  
Hospitals " Highway Bridges © Warming Centers O Coolhng Centers ^ Schools Q Railroad Stations

Base Map Data Sources Cook County, ESRI

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CITY OF CHICAGO  
CRITICAL INFRASTRUCTURE

Oil Facilities fa Transit Centers ..O.^ Military Facilities  
Police Stations t3 Fire Stations  
Hazardous Waste Q Airports  
Hospitals  
Highway Bridges © Warming Centers 0 Cooling Centers m Schools  
Railroad Stations

Base Map Data Sources' Cook County, ESRI

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CITY OF CHICAGO

CRITICAL INFRASTRUCTURE

© Oil Facilities B Transit Centers .E?\_! Military Facilities \*\*\*• Police Stations Fire Stations Hazardous Waste Airports  
Hospitals ■■=--". Highway Bndges 0 Warming Centers O Cooling Centers . Schools E3 Railroad Stations

Base Map Data Sources Cook County, ESRI

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CITY OF CHICAGO

COOK COUNTY MWRDGC 100-YEAR INUNDATION AREA

1" ■ 100-year Inundatlnn Area

MWRDGC Data provided ay Metropolitan. Wjter Reclamation Hisfjct ot Greater Chicago and Cook County

The information included on this map has een compiled for Cook County (rum a variety of source\* and is subject to change without notice Cook County makes no re preservatons or warranties, express of implied, as to accuracy, complotcnew, timeliness, or rights lo the use of such information Cook County shall not be liable for any general, ipecol, indirect, incidental, or consequential damages including but not limited lo, tost revenges oi lost profits resuming from the use or misuse of the rn for ma l ion contained on tim map Any sale of this map or n formation on this map is prohibited except by written parminston of Cook County

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