2.14 Chicago 2021 MJ-HMP Jurisdictional Annual Report

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Annual Reporting Year: 2021

Background: Cook County and participating municipalities in the county developed a hazard mitigation plan to reduce risk from all hazards by identifying resources, information, and strategies for risk reduction. The federal Disaster Mitigation Act of 2000 requires state and local governments to develop hazard mitigation plans as a condition for federal disaster grant assistance. To prepare the plan, the participating partners organized resources, assessed risks from natural hazards within the county, developed planning goals and objectives, reviewed mitigation alternatives, and developed an action plan to address probable impacts from natural hazards. By completing this process, these jurisdictions maintained compliance with the Disaster Mitigation Act, achieving eligibility for mitigation grant funding opportunities afforded under the Robert T. Stafford Act.

Purpose: The purpose of this report is to provide an annual update on the implementation of the action plan identified in the Cook County Multi-Jurisdictional Hazard Mitigation Plan. The objective is to ensure that there is a continuing and responsive planning process that will keep the Hazard Mitigation Plan dynamic and responsive to the needs and capabilities of the partner jurisdictions. This report discusses the following:

- Natural hazard events that have occurred within the last year
- Changes in risk exposure within the planning area (all of Cook County) Mitigation success stories
- Review of the action plan
- Changes in capabilities that could impact plan implementation
- · Recommendations for changes/enhancement.

Hazard Analysis

Jurisdiction-Specific Hazards and Impacts - Chicago Dept. of Aviation

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

- Dam/Levee Failure: Dam failure concerns at Touhy Ave.
- Flood: Tunnels and I-90 are susceptible to flooding.

The following capabilities may be needed to further mitigate the impacts of these hazards:

- Lightning: Lightning detection system
- Hail: Emergency notifications
- Extreme Cold: Back up of all heating systems
- Tornado: Siren system updates. P.A. system upgrade. Visual alert system.

Jurisdiction-Specific Hazards and Impacts - CDPH

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: Limitations with sewer system size and capacity for water runoff. Lakefront erosion, and potential loss of East N/S evacuation road (LSD).
- Extreme Heat: Long-term care and senior living facilities lack electric panel conversions to receive external power source/generator power.
- **Drought:** There may be a need to enhance water distribution networks.
- Extreme Cold: Lack of overnight housing for the homeless population or sustained sheltering.
- Disease Transmission: Chicago has a very transient visitor population. There is a greater need for a global early warning system to mitigate/prevent
 infectious disease transfer (Aviation, Rail, etc). Lack of isolation/quarantine housing for patients under investigation (PUI) for high consequence disease
 exposures (SARS, Pandemic, Ebola, etc.).

Jurisdiction-Specific Hazards and Impacts - DWM

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 has 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.

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 to recover from property damage. Non-English speakers have a harder time getting information regarding basement flooding initiatives or "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 crews might be longer.
- Hail and High Winds: These incidents will result in damaged facilities
- Lightning and Severe Storms: Loss of power could affect the operational viability of pumping stations.

<u>Jurisdiction-Specific Hazards and Impacts - PWM</u>

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.

Natural Hazard Events in 2021

Instructions: Please use the **Edit** Tool to describe new hazard occurrences/incidents from the past year that have impacted your jurisdiction and had a measurable impact on people or property. (Example: A tornado occurred on [Date] and impacted [insert area] and caused damage to [insert damages]). You may also use the Edit Tool to suggest any modifications/improvements to the hazards unique to your community, as described below from the 2019 plan.

Describe 2021 Natural Hazard Events Here:

October 24-25, 2021: Widespread heavy rain and strong winds, as well as lakeshore flooding

August 24, 2021: Thunderstorms produce wind damage and localized flooding on the northside of Chicago

August 10-11, 2021: Multiple rounds of severe storms produce widespread wind damage

July 29, 2021: Overnight severe thunderstorms produce wind damage across the Chicago metro; fallen trees

July 24, 2021: Gusty thunderstorms track across part of the area producing fallen trees and localized flooding

June 25-26, 2021: Severe storms produce flash flooding, roadway flooding

June 20-21, 2021: Late night wind damage producing, fallen trees, roadway flooding

June 11-12, 2021: Localized severe thunderstorms produce hail and damaging winds

February 14-16, 2021: Heavy snow brings a foot plus to all of Chicago; caps off record three weeks

Mitigation Strategies and Actions

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process.

New Mitigation Actions

Please submit here

Ongoing Mitigation Actions

The following are ongoing actions. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed. Reviewers of this report should refer to the Hazard Mitigation Plan for more detailed descriptions of each action and the prioritization process. Address the following for each mitigation action:

- Was any element of the action carried out during the reporting period?
- · If no action was completed, why?
- Is the timeline for implementation or the action still appropriate?
- If the action was completed, does it need to be changed or removed from the action plan?

	TABLE: HAZARD MITIGATION ACTION PLAN MATRIX										
	Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken										
Hazards Chiechives Estimated Solinces of								Timeline/Projected Completion Date (a)			

		ate, support retrof		or relocation of st	ructures in hazard	d-prone areas to լ	prevent future struc	tural damage. Give
Status Desc	ription:							
0	Ongoing	Ongoing	All	7, 13	Dept. of Buildings	Low	FEMA Haz Mitigation Grants	Long-term
Action C.2—	Continue to supp	oort the countrywi	de actions identi	fied in this plan.				
Status Desc	ription:							
0	Ongoing	Ongoing	All	All	City of Chicago	Low	General Fund	Short- and long-term
Action C.3—	Actively participa	te in the plan ma	intenance strateç	gy identified in this	plan.			
Status Desc	ription:							
0	Ongoing	Ongoing	All	3, 4, 6	Chicago OEMC	Low	General Fund	Short-term
Action C.4—	Consider particip	oation in incentive	-based program	s such as the Co	mmunity Rating S	ystem, Tree City,	and StormReady.	
Status Desc	ription:							
0	Ongoing	Ongoing	All	3, 4, 5, 6, 7, 9, 10, 11, 13	City of Chicago	Low	General Fund	Long-term
Action C.5— Hazard Area.	Continue to main	ntain the minimun	n National Flood	Insurance Progra	m participation re	quirement for cor	nmunities with no n	napped Special Flood
Status Desc	ription:							
0	Ongoing	Ongoing	Flooding	4, 6, 9	Dept. of Buildings	Low	General Fund	Short-term and Ongoing
Action C.6—	Integrate the haz	zard mitigation pla	an into other plan	ns, programs, or re	esources that dicta	ate land use or re	development.	
Status Desc	ription:							
0	0	Ongoing	All	3, 4, 6, 10, 13	City of Chicago	Low	General Fund	Short-term
Action C.7—	Complete constru	uction and impler	mentation of the	Albany Park Storr	nwater Diversion	Tunnel.		
Status Desc	ription:							
С	Complete	Complete	Flooding	3, 4, 9	CDOT	Medium		Complete
Action C.8—	Implement the G	reen Infrastructu	re Project: Barba	ara Vick Outdoor (Classrooms	,		
Status Desc	ription:							
С	Complete	New	Flood	13	MWRD	TBD	TBD	TBD
Action C.9— City assistan		nentation of the C	hicago Sustaina	ble Development	Policy, which enh	ances the sustair	nable performance	of projects receiving
Status Desc	ription:							
0	Ongoing	Ongoing	Flooding, Severe Weather	3, 4, 7, 10, 13	Buildings, Planning & Development	Low	Grants/General Fund	Long-term and Ongoing
	•				, ,	es City's efforts in	renewing water inf	rastructure,
		ater operations, a	ind sustainably n	nanaging stormwa	ater.			
Status Desc	ription:			1			1	
0	Ongoing	Ongoing	Flooding	2, 4, 10, 13	Buildings, Water Management	Low	N/A	Long-term/Ongoing
Action C.11- sewer system	· ·	ementation of the	Inlet Control Sys	stem (Rainblocke	r) program, which	installs restrictors	s to slow the flow of	f stormwater into the
Status Desc	ription:							
0	Ongoing	Ongoing	Flooding	4, 9, 13	Dept. of Water Management	Low		Long-term/Ongoing
Action C.12- and Lake Sho		mentation of the	Chicago Shorelir	ne Protection Proj	ect, which provide	s storm damage	protection to the La	ke Michigan shoreline
Status Desc	ription:							
0	Ongoing	Ongoing	Flooding	2, 3, 4, 8, 9, 13	USACE, Park District	Medium	USCAE, IL Dept of Natural Resources	Long-term/Ongoing
Action C.13- flood risks.	-Continue implei	mentation of the	RainReady Prog	ram, which provid	les individualized	services to help h	nomes and commu	nities reduce their
Status Desc	ription:							

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0	Ongoing	Ongoing	Flooding	2, 3, 6, 8, 9, 10	Center for Neighborhood Technology	Low	CNT	Long-term/Ongoing
Action C.14— (TARP).	-Continue constr	uction and imple	mentation of the	Metropolitan Wat	er Reclamation D	istrict of Greater (Chicago's Tunnel a	nd Reservoir Plan
Status Descr	iption:							
0	Ongoing	Ongoing	Flooding	1, 2, 3, 6, 9, 12, 13	MWRDGC	Medium	MWRDGC, ACOE	Long-term/Ongoing
Action C.15—	-Continue to exp	and the usage a	nd capabilities of	the City's NotifyC	chicago public not	ification system.		
Status Descr	iption:							
0	Ongoing	Ongoing	All	4, 5, 6, 12	OEMC	Low	Corporate	Long-term/Ongoing
Action C.16—	-Continue to exp	and the usage a	nd capabilities of	the City's Revers	e 9-1-1 public not	ification system.		
Status Descr	iption:							
0	Ongoing	Ongoing	All	4, 5, 6, 12	OEMC	Low	Corporate	Long-term/Ongoing
Action C.17—	-Continue to exp	and the usage a	nd capabilities of	the City's Digital	Sign Network pub	lic notification sys	tem.	
Status Descr	iption:							
0	Ongoing	Ongoing	All	4, 5, 6, 12	OEMC	Low	Corporate	Long-term/Ongoing
Action C.18—	-Develop local ca	apabilities for imp	lementation of F	EMA's Integrated	Public Alert & Wa	arning System (IP	AWS).	
Status Descr	iption:							
0	Ongoing	Ongoing	All	4, 5, 6, 12	OEMC	Low	Corporate	Long-term/Ongoing
	-Continue the ins		intenance of Gre	en Alleys, which r	esults in rainwate	r being allowed to	infiltrate into the so	oils through permeable
Status Descr	iption:							
0	Ongoing	Ongoing	Flooding	2, 3, 4, 9, 12, 13	CDOT	Low	General Obligation Bond	Long-term/Ongoing
	-Continue the inst tormwater runoff		intenance of biof	iltration systems a	and rain gardens t	hroughout the city	v, which promote th	e absorption and
Status Descr	iption:							
0	Ongoing	Ongoing	Flooding	2, 3, 4, 9, 12, 13	DMW/CDOT	Low	Corporate	Long-term/Ongoing
Action C.21—	-Continue develo	opment and main	tenance of the C	city of Chicago Flo	od Operations Gu	uidance Documen	t.	
Status Descr	iption:							
0	Ongoing	Ongoing	All	2, 4, 8, 12	OEMC	Low	Corporate	Long-term/Ongoing
Action C.22—	-Chicago Ward (Green Alley Proje	ect.					
Status Descr	iption:							
0	Ongoing	New	Flooding	9	MWRD	TBD	TBD	TBD
Action C.23— reduce flooding	· ·	mentation of Chic	ago's Basement	Flooding Partner	ship, where the D	ept of Water Man	agement works wit	h neighborhoods to
Status Descr	iption:							
0	Ongoing	Ongoing	Flooding	2, 3, 6, 8, 9, 10	DWM	Low	Corporate	Long-term/Ongoing
Action C.24— headquartered		development of c	ontinuity plannin	g for Chicago dep	partments and the	Chicago area's la	argest employers a	nd companies
Status Descr	iption:							
0	Ongoing	Ongoing	All	1	OEMC	Low	Corporate	Long-term/Ongoing
Action C.25	-Ensure continue	ed compliance wi	th the National F	lood Insurance Pr	rogram (NFIP).			
Status Descr	iption:							
0	Ongoing	Ongoing	Flooding	2, 3, 4, 9, 10, 11, 12	Buildings	Low	Corporate	Long-term/Ongoing
Action C.26	-Evaluate existin	g notification sys	tems for airport of	coverage and inte	grate all systems	into single deploy	ment method.	
Status Descr	iption:							
	Ongoing	New	All	5	Aviation	\$250,000 per year; Low	Aviation Funding	2021
Action C.27	-Implement Long	g-term Care and	Senior Housing F	Retrofits to Electric	c Panels to Allow	for Exterior Powe	r Connection/Gene	rators.

Status Desci	rintion:									
Otatus Desci			Extreme heat,							
О	Ongoing	New	lightning, fog, high wind, widespread power outage	13	City of Chicago, Chicago Department of Public Health	High	Grants	TBD		
Action C.28-	-Utilize ILWARN	utility-to-utility ne	etwork for flooding	g emergencies.						
Status Description:										
0	Ongoing	New	Flood	8	Illinois Section AWWA	Low	Existing budget, TBD	Ongoing		
Action C.29—Build a new backup generator facility for Jardine Water Plant.										
Status Description:										
С	Complete	New	Widespread Power Outage	2	DWM	Low	Capital funding	2019/2020		
Action C.30-	Enhance Storm	Water Managen	nent through the i	installation of bioi	infiltration systems	s.				
Status Desci	ription:									
0	Ongoing	New	Flooding	2	Chicago Housing Authority	Varies per project; Low	Grants, capital budget	2020		
Action C.31-	–Install a solar P	V system connec	cted to ComEd's I	Bronzeville Micro	grid.					
Status Desci	ription:									
С	Complete	New	Widespread power outage	1, 2, 12	Chicago Housing Authority	\$3,000,000; Low	Grants	2019		
Action C.32	-Implement a Gr	een Infrastructur	e program for the	County as a who	ole.					
Status Desci	ription:									
0	Ongoing	New	Flood	9, 13	DHSEM	TBD; Medium	Grant Funds	TBD		
	-Purchase deplo t hookups at eacl		enerators that cou	uld provide powe	r to firehouses tha	t fall victim to long	-term power outag	es. Should include		
Status Desci	ription:									
R	Ongoing	New	All	1, 2, 12	Chicago Fire Department	\$250,000 or more; High	Grants	2021		
Action C.34	-Purchase Porta	ble High Capacit	y Air Conditioners	S.						
Status Desci	ription:									
R	Ongoing	New	Extreme Heat, Widespread Power Outage	12	Chicago Fire Department	Less than \$100,000; High	Grants	Unsure		
Action C.35	–Purchase high o	capacity portable	heaters.							
Status Desci	ription:									
R	Ongoing	New	Hail, High Wind, Snow, Blizzard, Extreme Cold, Ice Storms, Widespread Power Outage	12	Chicago Fire Department	Above \$100,000; High	Grants	2021		
Action C.36-	-Purchase Mass	Decontaminatio	n Apparatus.							
Status Desci	ription:									
С	Completed	New	All	1, 2	Chicago Fire Department	Greater than \$300,000; High	Grants	2019		
Action C.37	-Implement Alba	ny Park Stormwa	ater Diversion Tur	nnel.						
Status Desci	ription:									
С	Completed	Completed	Flood	9	MWRD	\$70,655,320	MWRD Contribution: \$25,920,000	Completed 4/25/18		
Action C.38-	-Implement Gree	en Infrastructure	at Chicago Public	Schools, Space	2 Grow.					
Status Desci	ription:									

0		New	Flood	13	MWRD	MWRD Max Contribution (through 2022); \$16,000,000	TBD	TBD			
Action C.39—	-Launch Pilot Stu	udy for Investigat	ing Technology to	o Address Basem	nent Backups.						
Status Descr	iption:										
0		New	Widespread Power Outage	8	MWRD	MWRD Contribution; \$400,000	MWRD	TBD			
Action C.40—	Action C.40—Space to grow partnered schools.										
Status Descr	iption:										
0		New	Flood	13	MWRD	TBD; MWRD (Max Contribution: \$16,000,000)	MWRD, Chicago Public Schools, City of Chicago Department of Water Management	2022			
Action C.41—	-Prevent Stormw	ater Infiltration th	rough the Establ	ishment of Native	Habitat at 3 Chic	ago Parks.					
Status Descr	iption:										
0		New	Flood	13	MWRD	TBD	TBD	TBD			
Action C.42	-Lakefront stabili	zation (Juneway	, Rogers and Hov	vard Beaches)							
Status Descr	iption:					1					
С		New	Flood, Coastal Erosion		CDOT	\$3,000,000; Low	Local Funds	2020			
Action C.43	-Emergency Rev	etment Reconst	ruction (Morgan S	Shoal)							
Status Descr	iption:										
С		New	Flood, Coastal Erosion		CDOT	\$3,000,000; Low	Local Funds, Grants	2021			
Action C.44	-Emergency reve	etment reconstru	ction (Berger Par	rk)							
Status Descr	iption:										
С	New (2021)		Flood, Coastal Erosion		CDOT	\$600,000; Low	Local Funds	2021			
Action C.45	-Emergency reve	etment reconstru	ction (Arthur Ash	e Beach and Par	k)						
Status Descr	iption:										
С	New		Flood, Coastal Erosion		CDOT	\$1,000,000; Low	Local Funds	2021			
Action C.46—	-Lakefront Stabili	ization (La Rabid	a to 67th St Inter	mediate Lakefron	t Trail Protection)						
Status Descr	iption:										
С		New	Flood, Coastal Erosion		Chicago Park District	\$314,979; Low	Private	2021			
Action C.47	-Lakefront Stabili	ization (47th St to	49th St Intermed	diate Lakefront Ti	rail Protection)						
Status Descr	iption:										
С		New	Flood, Coastal Erosion		Chicago Park District	\$513,469; Low	Private	2020			
Action C.48	-Lakefront Trail F	Repair and Interm	nediate Shoreline	Protection (Fuller	ton Ave to North	Ave)					
Status Descr	iption:										
С	New		Flood, Coastal Erosion		Chicago Park District	\$2,181,295; Low	Private	2021			
Action C.49—Jackson Outer Harbor Lake Front Trail Protection											
Status Descr	iption:										
С	New		Flood, Coastal Erosion		Chicago Park District	\$572,000; Low	Private	2021			
	ndicates continua in after five years		that is already in	place. Short-tern	n indicates implen	nentation within fiv	ve years. Long-term	n indicates			

In 2019 CDOT and other partners completed construction on the \$70 million Albany Park Stormwater Diversion Tunnel. The Albany Park area has a history of significant flooding after heavy rains. To date the neighborhood has experienced zero significant flooding events since the completion of the tunnel.

In 2021 CDOT completed construction on a new, permeable pavement "Green Alley" near the Six Corners intersection in the Portage Park neighborhood. The Green Alley Program is a sustainable infrastructure initiative that is designed to reduce stormwater runoff and standing water, as well as the urban heat island effect.

Future Needs: Examples of future needs include, but are not limited to: receiving training to better understand the mitigation grant application process, studies that may be needed to better understand hazards/risks, etc.

As climate change continues to increase the severity of flooding events, the City of Chicago needs a long-term strategy to address lakefront flooding as we begin to see higher lake levels on a regular basis.