

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

Unincorporated 2019 MJ-HMP Jurisdictional Annex

FINAL

July 2019

Prepared for:



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Hazard Mitigation Point of Contact

| Primary Point of Contact | Alternate Point of Contact |
|--|--|
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Jurisdiction Profile

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

- **Date of Incorporation:** January 15, 1831 ([Cook County Website](#)).
- **Current Population:** In 2010, approximately 98,000 individuals lived in unincorporated areas of Cook County. Based on the [December 2014 Cook County Report, the residents do not pay taxes](#). In 2016, the Civic Federation released a comprehensive report building off the 2014 report. The townships currently included in the 2016 report are:

| North Cook County Region Townships | West Cook County Region Townships | South Cook County Region Townships |
|--|--|--|
| <ul style="list-style-type: none"> • Barrington Township • Elk Grove Township • Hanover Township • Maine Township • New Trier Township • Northfield Township • Palatine Township • Schaumburg Township • Wheeling Township <p>*The Townships of Evanston and Niles do not contain any unincorporated residents.</p> | <ul style="list-style-type: none"> • Leyden Township • Lyons Township • Norwood Park Township • Proviso Township • Riverside Township • Stickney Township <p>*The Townships of Cicero, Oak Park, and River Forest do not contain any unincorporated residents.</p> | <ul style="list-style-type: none"> • Bloom Township • Bremen Township • Lemont Township • Orland Township • Palos Township • Rich Township • Thornton Township • Worth Township <p>*The Township of Calumet does not contain any unincorporated residents.</p> |

In the first 100 years after the incorporation of Cook County, an increase in industrialization and urbanization within the City of Chicago caused the county population to increase from 10,201 citizens in 1840 to 3,982,123 citizens in 1930. From the 1930s to the 1960s, the County saw an increase of over 1 million citizens and peaked in 1970 with a population of 5,492,369. From 1970-2010, the population of Cook County remained relatively steady with an average population change of (/-) 4.8% every 10 years. As of 2010, the population density of Cook County was 5,495 residents per square mile. The 135 municipalities in the County range in size from Chicago with over 2.7 million residents to small communities such as Thornton, Kenilworth, East Hazel Crest, East Dundee, and Phoenix with fewer than 3,000 residents. The most populous jurisdictions after Chicago are Elgin, Cicero, Arlington Heights, Evanston, Schaumburg, Palatine, and Skokie ([Cook County Government Website Open Data](#)).

- **Location and Description:** Cook County is located in northeast Illinois on the western shore of Lake Michigan. It is the most populous of Illinois’ 102 counties, with a 2013 estimated population of 5.24 million, 2018 estimate of 5.18 million, and 2019 estimate of 5.21 million, according to the [U.S. Census Bureau](#) and [World Population Review](#). It is the sixth largest county in the state by area, covering 946 square miles. Cook County makes up approximately 40 percent of the population of Illinois. The surrounding counties are Lake and McHenry to the north, Kane, and DuPage to the west, and Will to the southwest. Lake Michigan is the county’s eastern border.

According to the [Cook County Government Website](#), the City of Chicago and the suburban municipalities account for approximately 85% of the County's 946 square miles, while unincorporated areas make up the remaining 15%. The unincorporated areas are under the jurisdiction of the Cook County Board of Commissioners, a 17-member board elected by district. ([Cook County Website](#)).

- **Brief History:** The legislative act creating Cook County was passed by the General Assembly of Illinois and was approved on January 15th, 1831. The same act also designated Chicago as the county seat. The Cook County Board was organized the following March in 1831 when the first commissioners, Samuel Miller, Gholson, Kercheval, and James Walker, took the oath of office as the elected government officials of Cook County and held their first court in Chicago. During the same election, as directed by the General Assembly of Illinois, a sheriff and a coroner were also elected into public positions within the county. The first meeting of the Board of Commissioners occurred at Fort Dearborn over the course of two days and undertook the responsibilities for the poor, sick, prisoners, roads, courts, elections, and taxation within the county.

At its date of incorporation, Cook County had approximately 100 residents within the 2,464 square miles that covered what are now Lake, DuPage, Will, McHenry, and Cook Counties. By 1839, Cook County had lost over half of its territory and was partitioned into the current jurisdictional boundaries seen today. Despite the decrease in land within the county in the 1830s, the population growth continued to increase for almost 150 years. During the 1830s and 1840s, the land in Cook County was purchased by farmers and used for agriculture and to raise livestock. Without industrial infrastructure like railroads, some farmers took their crops to Chicago, while others went to smaller outlying settlements. This helped smaller settlements grow in population and industry to fulfill the needs of local farmers.

In 1878, the Illinois legislature voted in favor of allowing counties to adopt local townships, which would take on some of the County Government responsibilities, such as collecting taxes, running schools, and maintaining roads. Cook County was initially subdivided into 27 townships and would later incorporate many more as the population and size of the county grew. In the wake of the building and industrial boom of the 1920s, farmland within Cook County steadily disappeared. A second large housing and infrastructure development increase occurred after World War Two with the increase in loans insured by the Federal Housing Administration (FHA) and Department of Veterans Affairs (VA) for returning veterans. By the 1980's most of the remaining farmland within the county was bought and developed to accommodate the number of Cook County residents living outside of Chicago. A significant shift in the population disbursement was seen from the early years following the incorporation of Cook County to the most recent 25 year period. In 1889 almost 90% of the population of Cook County lived within Chicago. By 1990, 55% of the county population lived within Chicago, showing a more even disbursement throughout the jurisdiction.

- **Climate:** The climate of Cook County has 4 distinct seasons with large variability seen in both temperature and precipitation throughout the year. The temperatures within the County range from the average daytime highs of 84 degrees Fahrenheit in July to the average nighttime lows of 18 degrees Fahrenheit in January. The precipitation in Cook County in the past 30 years ranges from a monthly average of 1.8 inches in February to a monthly average of 3.5 inches in June. Cook County can see large variations in the weather due to the lake effect from Lake Michigan and incoming weather systems. The highest recorded temperature in Cook County was

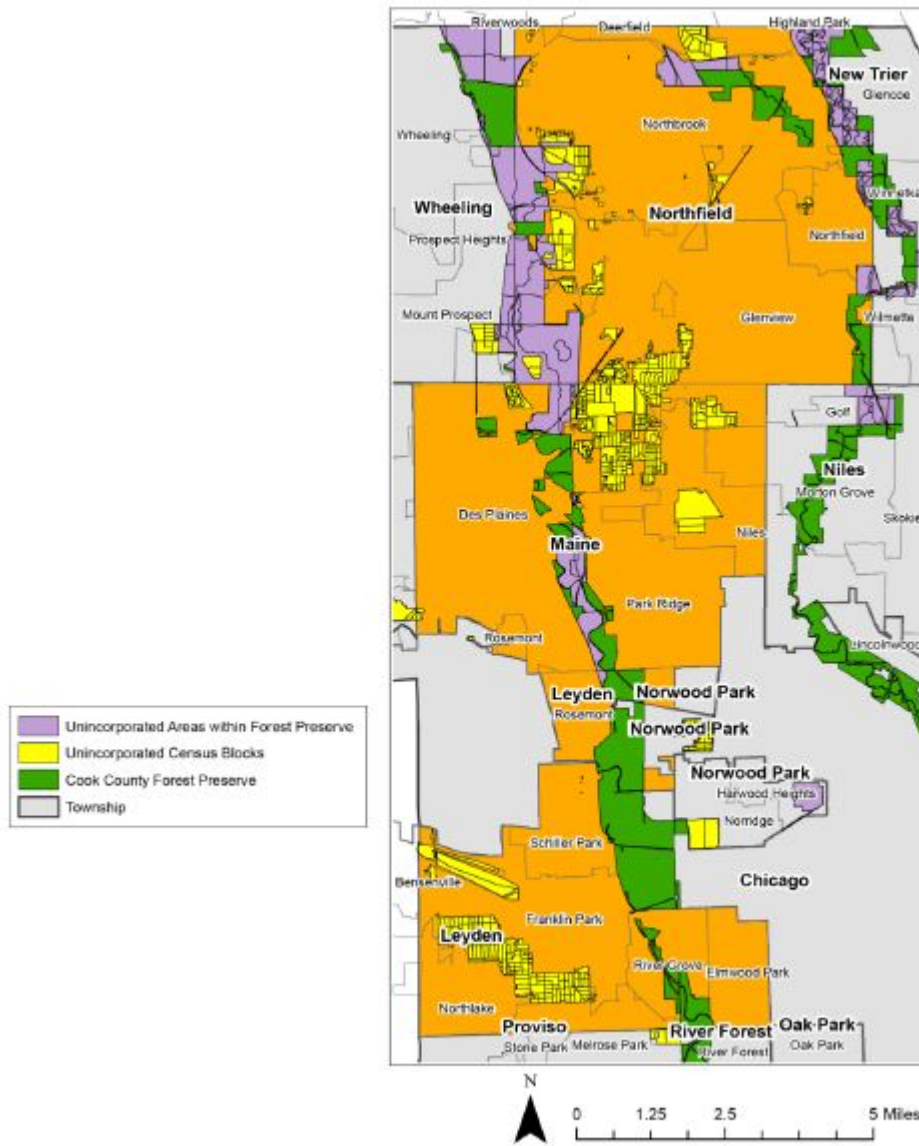
105 degrees Fahrenheit on July 24th, 1934 and the lowest recorded temperature was -27 degrees Fahrenheit on January 20th, 1985. Cook County has experienced a variety of extreme weather conditions, which historically include: floods, snowstorms, hail, ice storms, blizzards, high winds, and heatwaves.

- **Governing Body Format:** The Cook County Board of Commissioners is the legislative body of government, with the President serving as the County Board’s Chief Executive Officer. As the Chief Executive Officer, the President presides over the meetings of the County Board and supervises departments that are responsible for a variety of direct and support services. The President is elected to a four-year term by the voters of the entire county. The Cook County Board of Commissioners is comprised of seventeen Commissioners, each serving a four-year term and is elected from single-member districts. Each district represents approximately 300,000 residents. Eleven independently elected officials run the additional Cook County governmental offices that oversee many functions and services of county government. The County Board of Commissioners has no direct control over these offices, except in the passage of their budgets and approvals of their bond issues, contracts, and large expenditures. This body of government will assume the adoption and implementation of the Hazard Mitigation Plan.
- **Development Trends:** Cook County is the second largest County in the Country. The 135 municipalities that comprise Cook County – including the City of Chicago – each govern development within their borders. A significant unincorporated land area and population also exist, and the County government oversees development activity in the unincorporated areas. In total, there are 1,500 taxing districts within the County.
- **Civic Federation:** The Civic Federation released its second report on unincorporated areas of Cook County in September 2016, with the first being released in December 2014. The report makes recommendations to promote the incorporation of unincorporated areas in Cook County such that every resident of the County is also a resident of a municipality. Cook County spent approximately \$18.9 million more on unincorporated area services than the total revenue it collected in those areas in FY2014. This includes nearly \$24.0 million in revenues generated from the unincorporated areas of the county and \$42.9 million in expenses related to the delivery of municipal-type services to the unincorporated areas of the county. Services include law enforcement, building and zoning, and liquor control. In sum, all Cook County taxpayers provide an \$18.9 million subsidy to residents in the unincorporated areas. On a per-capita basis, the variance between revenues and expenditures is \$150, or the difference between \$340 per capita in expenditures versus \$190 per capita in revenues collected. Services provided to Cook County’s unincorporated areas are funded through a variety of taxes and fees. These include revenues generated from both incorporated and unincorporated taxpayers to fund operations countywide. Some revenue sources are generated or are distributed solely within the unincorporated areas, such as income taxes, building and zoning fees, state sales taxes, wheel taxes, and business and liquor license fees. The unincorporated areas also generated revenues from the Cook County sales and property taxes, which totaled nearly \$15.5 million in revenue. However, those taxes are imposed at the same rate in both incorporated and unincorporated areas and are used to fund all county functions ([Civic Federation](#), 2016).
- **Revitalizing older industrial inner suburbs:** One overall development trend impacting the County is the challenge facing older industrial inner suburbs. Significant business and job losses have left high unemployment and considerable vacant property in some suburbs. A considerable portion of the vacant properties have issues that pose public health or safety concerns. Despite growing vacancies, jurisdictions are working to maintain their services and infrastructure. The lack of taxes collected on vacant property shifts a higher tax burden on residents and existing businesses. The older industrial suburban areas have a significant potential for residential,

commercial, and industrial redevelopment due to their location efficiency to the region's transportation assets. There have been several initiatives which seek to address hurdles to redevelopment.

- **Foreclosure crisis:** The County recently formed the Cook County Land Bank Authority to acquire vacant and neglected property and make it into productive use.
- **Brownfields:** The Millennium Reserve Calumet Area seeks to clean up 140,000 acres of brownfields and transform a 220 square mile region that includes numerous neighborhoods on Chicago's south side, the southeast lakefront, and 35 south suburban municipalities. The Brownfield Remediation and Intermodal Promotion Act grant fund initiative aimed to remediate and reuse brownfields to create intermodal, warehousing and light manufacturing jobs on over 1,500 industrial acres in a designated zone of freight-rich southern Cook County.
- **Leveraging County resources:** In the City of Chicago Heights, City officials are working with the County's Bureau of Economic Development (CCBED), the Chicago Metropolitan Agency for Planning, and the American Planning Association – Illinois Chapter to focus efforts and resources in the 3rd Ward to strengthen the light manufacturing sector, increase job opportunities, develop affordable housing and enhance social services. The City has benefitted from significant funds from the CCBED through the Community Development Block Grant (CDBG), Emergency Solutions Grant (ESG), and Neighborhood Stabilization Program (NSP) funds supporting affordable housing development, social services, and infrastructure over the years including recent investments noted in the attached map. Investment highlights include \$1.9 million in CDBG for roadway improvements, demolition, and social services projects and \$9 million in NSP supporting 53 affordable housing units.
- **Matching jobs to housing:** The County's North and Northwest suburbs – especially the northwest – are a major job center for the region and continue to attract business development, and therefore residential development as well. Many County residents are cost-burdened by their housing and transportation-related expenses. This results in a jobs-housing mismatch that creates long commuting patterns and high transportation costs. Housing needs include a variety of affordable housing opportunities across all the sub-regions of the County, senior housing as the population ages, and special needs housing.
- **Flood remediation:** The U.S. Army Corps of Engineers, Chicago District released a plan in September 2013, that outlines a variety of potential flood risk management and ecosystem restoration projects that could be implemented along the Upper Des Plaines River area. This area includes portions of Cook County that have chronic flooding issues. The plan seeks to reduce flood risk in communities across the watershed while increasing forest habitats that could be used for recreational trails.

Unincorporated Areas and Forest Preserves in Cook County

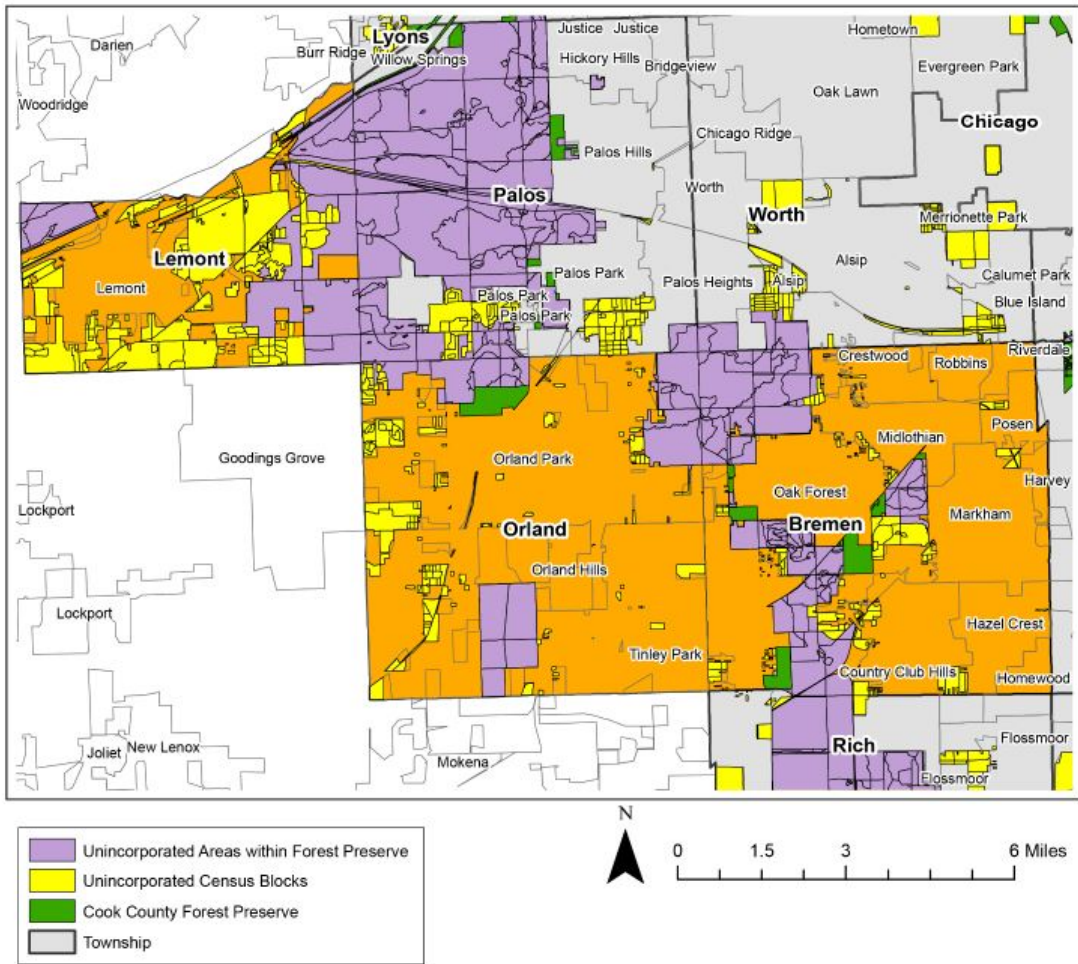


Source: Cook County Department of Geographic Information Systems Unincorporated Zoning data, 2014.

Map: *Unincorporated Areas and Forest Preserves in Cook County*

Source: [Civic Federation - Unincorporated Cook County](#)

Unincorporated Areas and Forest Preserves in Cook County



Source: Cook County Department of Geographic Information Systems Unincorporated Zoning data, 2014.

Map: *Unincorporated Areas and Forest Preserves in Cook County*

Source: [Civic Federation - Unincorporated Cook County](#)

Capability Assessment

The assessment of the jurisdiction’s legal and regulatory capabilities is presented in *Legal and Regulatory Capability Table* below. The assessment of the jurisdiction’s fiscal capabilities is presented in the *Fiscal Capability Table* below. The assessment of the jurisdiction’s administrative and technical capabilities is presented in the *Administrative and Technical Capability Table* below. Information on the community’s National Flood Insurance Program (NFIP) compliance is presented in the *National Flood Insurance Program Compliance Table* below. Classifications under various community mitigation programs are presented in the *Community Classifications Table* below.

| TABLE: LEGAL AND REGULATORY CAPABILITY | | | | | |
|---|------------------------|--------------------------------------|---------------------------------------|-----------------------|--|
| | Local Authority | State or Federal Prohibitions | Other Jurisdictional Authority | State Mandated | Comments |
| Codes, Ordinances & Requirements | | | | | |
| Building Code | Yes | Yes | Yes | No | Cook County Building Code Amended May 29, 2014; Cook County Department of Building and Zoning Land Development Ordinances Part II, Land Development Ordinances Chapter 106 (Unincorporated County); Reference Municipal Annexes. |
| Zonings | Yes | No | No | Yes | Ord. No. 01-O-30, as adopted by the County Board on November 6, 2001 |
| Subdivisions | Yes | No | No | No | Cook County Department of Building and |

| | | | | | |
|-------------------------------|-----|-----|-----|-----|--|
| | | | | | Zoning Land Development Ordinances Part II Storm Water |
| Stormwater Management | No | No | Yes | Yes | Cook County Watershed Management Ordinance adopted October 3, 2013 by the Metropolitan Water Reclamation District (MWRD) |
| Post Disaster Recovery | No | No | No | No | |
| Real Estate Disclosure | No | No | Yes | Yes | (765 ILCS 77/) Residential Real Property Disclosure Act. |
| Growth Management | No | No | No | No | |
| Site Plan Review | Yes | No | No | No | Cook County Department of Building and Zoning |
| Public Health and Safety | Yes | No | No | No | Cook County Department of Public Health |
| Environmental Protection | Yes | Yes | Yes | Yes | Cook County Department of Environmental Control, Illinois EPA, Illinois Department of National Resources, and U.S. EP |
| Planning Documents | | | | | |
| General or Comprehensive Plan | Yes | Yes | Yes | Yes | CCED: Five-year consolidated plan under revision; annual updates |

| | | | | | |
|---|-----|-----|-----|-----|---|
| | | | | | submitted to HUDD; includes housing, community development, and economic development. |
| <i>Is the plan equipped to provide linkage to this mitigation plan?</i> | | | | | Yes |
| Floodplain or Basin Plan | No | No | No | No | |
| Stormwater Plan | Yes | No | Yes | Yes | Cook County Storm Water Management Plan adopted February 15, 2007; Cook County Watershed Management Ordinance adopted October 3, 2013; 55 ILCS 5/5-1062 |
| Capital Improvement Plan | Yes | No | No | Yes | Cook County 2014 Budget, Capital Improvement Program. |
| <i>What types of capital facilities does the plan address?</i> | | | | | Cook County facilities, hospitals, roads, etc. |
| <i>How often is the plan revised/updated?</i> | | | | | Annually, as a function of budget. |
| Habitat Conservation Plan | Yes | Yes | No | No | Illinois Department of Natural Resources; and Cook County Forest Preserve District Natural and Cultural Resources Master |

| | | | | | |
|--|-----|-----|----|-----|---|
| | | | | | Plan by December 2014 |
| Economic Development Plan | Yes | Yes | No | No | Cook County Department of Planning and Development: Required by Federal Economic Development Administration, 2015 Cook County Economic Development Strategy Plan under revision; Cook County Council of Economic Advisors CC Partnering for Prosperity. |
| Shoreline Management Plan | No | No | No | No | |
| Community Wildfire Protection Plan | No | Yes | No | No | Cook County Forest Preserve District Plan updated annually. |
| Response/Recovery Planning | | | | | |
| Comprehensive Emergency Management Plan | Yes | Yes | No | Yes | Cook County Emergency Operations Plan – under update for 2014 completion. IEMA Plan and FEMA Plan. |
| Threat and Hazard Identification and Risk Assessment | Yes | Yes | No | Yes | THIRA completed in 2013 and updated annually. |
| Terrorism Plan | Yes | Yes | No | Yes | |
| Post-Disaster Recovery Plan | No | No | No | No | |

| | | | | | |
|-------------------------------|-----|-----|----|-----|---|
| Continuity of Operations Plan | Yes | Yes | No | Yes | Currently in development and addressed in the Appendix to Cook County Emergency Operations Plan |
| Public Health Plans | Yes | Yes | No | Yes | U.S. Department of Health and Human Services; Illinois Department of Public Health; Cook County Department of Public Health |

| TABLE: FISCAL CAPABILITY | |
|--|---------------------------------------|
| Financial Resources | Accessible or Eligible to Use? |
| Community Development Block Grants | Yes |
| Capital Improvements Project Funding | Yes |
| Authority to Levy Taxes for Specific Purposes | Yes |
| User Fees for Water, Sewer, Gas or Electric Service | No |
| Incur Debt through General Obligation Bonds | No |
| Incur Debt through Special Tax Bonds | No |
| Incur Debt through Private Activity Bonds | No |
| Withhold Public Expenditures in Hazard-Prone Areas | Yes |
| State-Sponsored Grant Programs | Yes |
| Development Impact Fees for Homebuyers or Developers | No |
| Other | |

| TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY |
|---|
|---|

| Staff/Personnel Resources | Available? | Department/Agency/Position |
|---|------------|--|
| Planners or engineers with knowledge of land development and land management practices | Yes | Cook County Departments of: Transportation and Highways, Planning and Development, Environmental Control, and the Metropolitan Water Reclamation District |
| Engineers or professionals trained in building or infrastructure construction practices | Yes | Cook County Department of Building and Zoning, Office of Capital Planning and Policy, and the Department of Transportation and Highways |
| Planners or engineers with an understanding of natural hazards | Yes | Cook County Departments of: Transportation and Highways, Environmental Control, Homeland Security and Emergency Management and the Metropolitan Water Reclamation District |
| Staff with training in benefit/cost analysis | Yes | Cook County Departments of: Planning and Development, Budget and Management Services and Bureau of Finance |
| Surveyors | Yes | Cook County Department of Transportation and Highways, Office of Capital Planning and Policy, and the Metropolitan Water Reclamation District. |
| Personnel skilled or trained in GIS applications | Yes | Multiple individuals throughout the County Departments |
| Scientist familiar with natural hazards in local area | Yes | Cook County Forest Preserve District |
| Emergency manager | Yes | Cook County Department of Homeland Security and Emergency Management |
| Grant writers | Yes | Multiple individuals throughout various County Departments |

| TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE | |
|--|--|
| What department is responsible for floodplain management in your jurisdiction? | Department of Building and Zoning |
| Who is your community’s floodplain administrator? (department/position) | This position is not currently staffed |
| Do you have any certified floodplain managers on staff in your community? | Yes |
| What is the date of adoption of your flood damage prevention ordinance? | August 2008 |

| | |
|---|---|
| When was the most recent Community Assistance Visit or Community Assistance Contact? | August 2011 |
| To the best of your knowledge, does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are. | Yes, 2 minor violations |
| Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why) | No – the County currently needs urban, storm sewer, and riverine (stream gauge) data. |
| Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed? | Yes – Training is needed covering current practices. |
| Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program? | No Yes – Cook County is interested in joining the CRS Program. |

TABLE: COMMUNITY CLASSIFICATIONS

| | Participating? | Classification | Date Classified |
|--|-----------------------|-----------------------|------------------------|
| Community Rating System | N/A | N/A | N/A |
| Building Code Effectiveness Grading Schedule | Yes | Unknown | Unknown |
| Public Protection/ISO | Yes | Unknown | Unknown |
| StormReady | Yes | Gold (Countywide) | 2014 |
| Tree City USA | No | N/A | N/A |

Jurisdiction-Specific Natural Hazard Event

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: 126
- Number of FEMA-Identified Severe Repetitive Loss Properties: 8
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 2

| Type of Event | FEMA Disaster Number (if applicable) | Date | Preliminary Damage Assessment |
|---|---|-------------|--------------------------------------|
| Severe Storms, Straight-line Winds and Flooding | DR-4116 | 4/16/2013 | Not available |
| Severe Winter Storm and Snowstorm | DR-1960 | 1/31/2011 | Not available |
| Severe Storms and Flooding | DR-1935 | 7/19/2010 | Not available |
| Severe Storms and Flooding | DR-1800 | 9/13/2008 | Not available |
| Severe Storms and Flooding | DR-1729 | 8/20/2007 | Not available |
| Hurricane Katrina Evacuation | EM-3230 | 9/7/2005 | Not available |
| Severe Winter Storm | EM-3161 | 12/11/2000 | Not available |
| Winter Snow Storm | EM-3134 | 1/1/1999 | Not available |
| Flooding | DR-1188 | 8/16/1997 | Not available |
| Flooding | DR-1129 | 7/17/1996 | Not available |
| Flooding and Severe Storms | DR-997 | 4/13/1993 | Not available |
| Severe Storms and Flooding | DR-798 | 8/13/1987 | Not available |
| Severe Storms and Flooding | DR-776 | 9/21/1986 | Not available |

| | | | |
|--|---------|-----------|---------------|
| Severe Storms, Flooding, and Tornadoes | DR-643 | 6/30/1981 | Not available |
| Blizzards and Snowstorms | EM-3068 | 1/16/1979 | Not available |
| Severe Storms, Flooding, and Tornadoes | DR-509 | 6/18/1976 | Not available |
| Severe Storms and Flooding | DR-373 | 4/26/1973 | Not available |
| Severe Storms and Flooding | DR-351 | 9/4/1972 | Not available |
| Tornadoes | DR-227 | 4/25/1967 | Not available |

Hazard Risk Ranking

The *Hazard Risk Ranking Table* below presents the ranking of the hazards of concern. Hazard area extent and location maps are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

| TABLE: HAZARD RISK RANKING | | |
|-----------------------------------|----------------------------------|---|
| Rank | Hazard Type | Risk Rating Score (Probability x Impact) |
| 1 | Severe Winter Weather | 51 |
| 2 | Severe Weather | 45 |
| 3 | Flood (including urban flooding) | 39 |
| 4 | Earthquake | 32 |
| 5 | Tornado | 24 |
| 6 | Drought | 8 |
| 7 | Dam Failure | 6 |

Mitigation Strategies and Actions

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

- New Mitigation Actions - New actions identified during this 2019 update process
- Ongoing Mitigation Actions - Ongoing actions with no definitive end or that are still in progress. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- Completed Mitigation Actions - An archive of all identified and completed projects, including completed actions since 2014.

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

| TABLE: HAZARD MITIGATION ACTION PLAN MATRIX | | | | | | |
|---|--------------------------|-----------------------------|--|-----------------------|-------------------------------------|---|
| Status | Hazards Mitigated | Objectives Met | Lead Agencies | Estimated Cost | Sources of Funding | Timeline/Projected Completion Date (a) |
| Action CCU.1—Enhance/update the Cook County post-disaster action plans. | | | | | | |
| Completed | All | 2, 3, 4, 5, 7, 8, 9, 10, 11 | DHSEM, Public Safety Consortium, DPD, OCPP, MWRD | Medium | General funds, U.S. DHS FEMA Grants | Short-term; Ongoing |
| Action CCU.2—Review the existing debris management plan and update as necessary. | | | | | | |
| Ongoing | All | 8, 13 | DOTH, DHSEM | Medium | General funds, U.S. DHS FEMA Grants | Short-term; Ongoing |
| Action CCU.3—Strengthen the Cook County Continuity of Operations Plans (COOP). | | | | | | |
| Ongoing | All | 1, 2, 5, 8 | DHSEM, BOT, Public | Medium | General Funds, U.S. DHS | Short-term; Ongoing |

| | | | | | | |
|--|-----|-------------------|--------------------------------------|--------|-------------------------------------|---------------------|
| | | | Safety Consortium | | FEMA Grants | |
| Action CCU.4 —Review current building codes, ordinances, and zoning guidelines and update as necessary. | | | | | | |
| Ongoing | All | 1, 2, 3, 7, 9, 10 | DBZ, DOTH, MWRD | Low | General Funds | Long-term |
| Action CCU.5 —Continue to support the training and organization of a Cook County Incident Management Team. | | | | | | |
| Ongoing | All | 1, 8 | DHSEM, Public Safety Consortium | Low | General Funds, U.S. DHS FEMA Grants | Short-term; Ongoing |
| Action CCU.6 —Complete the Cook County Mobile Trauma Medical Unit (MTMU) Project. | | | | | | |
| Removed | All | 2, 8 | DHSEM, Public Safety Consortium | Medium | General Funds, U.S. DHS FEMA Grants | Removed |
| Action CCU.7 —Expand the capabilities of the Cook County Emergency Response Centers- North, Central, and South. | | | | | | |
| Completed | All | 1, 2, 5, 8 | DHSEM | Medium | General Funds, U.S. DHS FEMA Grants | Short-term; Ongoing |
| Action CCU.8 —Continue to support the development of the current Cook County Emergency Operations Center (EOC). | | | | | | |
| Completed | All | 1, 2, 4, 5 | OCP, DHSEM, Public Safety Consortium | Low | General Funds, U.S. DHS FEMA Grants | Short-term; Ongoing |
| Action CCU.9 —Continue our partnership with the National Oceanic and Atmospheric Administration (NOAA) and the development of a Cook County weather system. | | | | | | |
| Ongoing | All | 5, 6, 8, 12, 13 | DHSEM, BOT | Low | General Funds | Short-term; Ongoing |
| Action CCU.10 —Expand the Cook County DHSEM training program to include: county-wide elected officials, emergency managers, and other key emergency response personnel. | | | | | | |

| | | | | | | |
|---|-------------|----------------------|---|--------|--|---------------------|
| Ongoing | All | 8, 12, 13 | DHSEM, Public Safety Consortium | Medium | General Funds, U.S. DHS FEMA Grants | Short-term; |
| Action CCU.11 —Integrate the Hazard Mitigation Plan (HMP) and Threat Hazard Identification Risk Assessment (THIRA) into other plans, programs, and initiatives that enhance or support all phases of emergency management. | | | | | | |
| Ongoing | All | All Objectives | DHSEM, Public Safety Consortium, DPD, MWRD | Low | General Funds | Short-term; Ongoing |
| Action CCU.12 —Support homeowner education on flood insurance programs. | | | | | | |
| Ongoing | Flood | 6, 8 | DHSEM, Public Safety Consortium, DPD, MWRD | Low | General Funds | Short-term; Ongoing |
| Action CCU.13 —Consider building code provisions to reduce earthquake damage risk. | | | | | | |
| Ongoing | Earthquakes | 2, 10 | DBZ, OCPP | Low | General Funds | Long-term |
| Action CCU.14 —Map and assess community vulnerability to seismic hazards. | | | | | | |
| Completed | Earthquakes | 2, 3, 6, 7, 8, 12 | DHSEM, BOT | High | General Funds, U.S. DHS FEMA Grants | Long-term |
| Action CCU.15 —Develop a mass notification system for tornadoes. | | | | | | |
| Ongoing | Tornado | 2,5,8,12 | DHSEM | High | General Funds, U.S. DHS FEMA Grants | Short-term |
| Action CCU.16 —Consider public education programs on tornado warning protocols and shelter facilities. | | | | | | |
| Ongoing | Tornado | 5, 6, 8, 12 | DHSEM, Public Safety Consortium | Low | General Funds | Short-term; Ongoing |

| | | | | | | |
|--|----------------|--------------------------|--|--------|-------------------------------------|---------------------|
| Action CCU.17 —Conduct an analysis to identify vulnerabilities within the communication systems. | | | | | | |
| Ongoing | Severe Weather | 1, 2, 5, 8 | DHSEM, BOT | Medium | General Funds | Short-term |
| Action CCU.18 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses. | | | | | | |
| Ongoing | All | 9, 10, 11, 13 | DHSEM, DBZ, DPD, MWRD, IDNR | High | General Funds, U.S. DHS FEMA Grants | Short-term; Ongoing |
| Action CCU.19 —Coordinate with MWRD for flood-related mitigation projects. | | | | | | |
| Ongoing | Flood | All | MWRD, DHSEM, Public Safety Consortium | Medium | General Funds, U.S. DHS FEMA Grant | Short-term; Ongoing |
| Action CCU.20 —Support and maintain a comprehensive plan for urban flooding. | | | | | | |
| Completed | Flood | All | MWRD, DHSEM, Public Safety Consortium | Medium | General Funds, U.S. DHS FEMA Grants | Short-term Ongoing |
| Action CCU.21 —Adopt “no-adverse impact” floodplain management policies. | | | | | | |
| Completed | Flood | 1, 2, 4, 7, 8, 9, 10, 13 | DHSEM, MWRD, DPD, Public Safety Consortium | Low | General Funds | Short-term |
| Action CCU.22 —Consider obtaining easements for planned and regulated public use of privately-owned/ publically owned land for temporary water retention and drainage. | | | | | | |
| Ongoing | Flood | 1, 2, 3, 13 | MWRD, DBZ, DHSEM, DOTH, DPD | High | General Funds | Short-term; Ongoing |
| Action CCU.23 —Consider a hazard mitigation fee on all new permits to create a hazard mitigation funding source for initiatives or grant cost share requirements. | | | | | | |
| Removed | Flood | 1, 2, 3, 4, 6, 8, 9, 13 | DBZ, DOPD, DHSEM | Low | General Funds | Removed |

| | | | | | | |
|--|-----------------------|----------|---------------------------------------|--------|-------------------------------------|------------------------|
| Action CCU.24 —Develop a strategy to address sewer and storm sewer capacity issues for future mitigation projects. | | | | | | |
| Ongoing | Flood, Severe Weather | 9,10 | MWRD, Public Safety Consortium, DHSEM | High | General Funds | Long-term |
| Action CCU.25 —Participate in the Community Rating System (CRS). | | | | | | |
| Ongoing | Flood | 10,11 | Public Safety Consortium, DHSEM | Low | General Funds | Long-term |
| Action CCU.26 —Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts. | | | | | | |
| Ongoing | Flooding | 4, 6, 9 | DBZ | Low | General Funds | Short-term and Ongoing |
| Action CCU.27 —Consider developing the development of a plan that incorporates public and private partners to protect critical infrastructure and critical facilities within the county. | | | | | | |
| Completed | All | 2, 8 | Public Safety Consortium, DHSEM | Medium | General Funds | Long-term |
| Action CCU.28 —Increase capability for severe winter weather incidents through snow removal assets, weather tracking, and identification of where excess snow will be relocated. | | | | | | |
| Completed | Severe Winter Weather | 1, 2 | DOH, DHSEM, CCFPD | Medium | General Funds | Short-term; Ongoing |
| Action CCU.29 —Evaluate the role of Floodplain Administrator for Cook County and appoint agency that has the highest degree of capability to maintain the County’s floodplain management program. | | | | | | |
| Completed | Flood | 8, 9, 11 | DOH, DHSEM | Low | General Funds | Short-term; Ongoing |
| Action CCU.30 —Develop more efficient methods to conduct post-disaster damage assessments. | | | | | | |
| Ongoing | All Hazards | 3, 4, 13 | DHSEM, Public Safety Consortium | Medium | General Funds, U.S. DHS FEMA Grants | Short-term |
| Action CCU.31 —Revisit contingency plans for debris removal in high impact areas. | | | | | | |

| | | | | | | |
|---|---------|------------------|--------------|----------------|------------------------|-----------|
| Removed | Tornado | 8, 13 | DOTH | Medium | General Funds | Removed |
| Actions CCU.32 —Further develop supply chain plans for public health and healthcare-related concerns. | | | | | | |
| Ongoing | Flood | 2, 8 | CCDPH, DHSEM | Low | General Funds | Ongoing |
| Actions CCU.33 —Begin Flood Control Project on Farmers and Prairie Creeks. | | | | | | |
| New | Flood | 1, 2, 3, 4, 7, 9 | MWRD | Medium | Local Funds and Grants | Long-term |
| Actions CCU.34 —Begin Central Road Flood Control Project. | | | | | | |
| New | Flood | 1, 2, 3, 4, 7, 9 | MWRD | Medium | Local Funds and Grants | Long-term |
| Actions CCU.35 —Begin Plainfield Road Flood Control Project from Willow Springs to East Avenue. | | | | | | |
| New | Flood | 1, 2, 3, 4, 7, 9 | MWRD | Medium | Local Funds and Grants | Long-term |
| Actions CCU.36 —Begin Flood Control Project on Calumet-Sag Tributary C. | | | | | | |
| New | Flood | 1, 2, 3, 4, 7, 9 | MWRD | Medium | Local Funds and Grants | Long-term |
| Actions CCU.37 —Develop Forest Preserve District of Cook County Green Infrastructure Project. | | | | | | |
| New | Flood | 1, 2, 3, 4, 7, 9 | MWRD | Medium | Local Funds and Grants | Long-term |
| Actions CCU.38 —Start Storm Drainage System Improvement on 151st Street at Boca Rio Ditch in the City of Oak Forest. CCDOTH is working with MWRD and the City of Oak Forest to replace the deteriorating culvert with a larger one which will help to reduce the risk of local flooding. | | | | | | |
| New | Flood | 2,3,7,9,13 | CCDOTH, MWRD | \$619,000; Low | MWRD Grant | 2020 |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

TABLE: MITIGATION STRATEGY PRIORITY SCHEDULE

| Action Number | Number of Objectives Met | Benefits | Costs | Do Benefits Equal or Exceed Costs? | Is Project Grant-Eligible? | Can Project Be Funded Under Existing Programs/Budgets? | Priority (a) |
|---------------|--------------------------|----------|--------|------------------------------------|----------------------------|--|--------------|
| 1 | 9 | Medium | Medium | Yes | Yes | Yes | High |
| 2 | 2 | Medium | Medium | Yes | Yes | Yes | High |
| 3 | 4 | Medium | Medium | Yes | Yes | Yes | High |
| 4 | 6 | Medium | Low | Yes | No | Yes | High |
| 5 | 2 | High | Low | Yes | Yes | Yes | High |
| 6 | 2 | Medium | Medium | Yes | Yes | No | Medium |
| 7 | 4 | High | Medium | Yes | Yes | Yes | High |
| 8 | 4 | High | Medium | Yes | Yes | Yes | High |
| 9 | 5 | Medium | Low | Yes | No | Yes | High |
| 10 | 3 | Medium | Medium | Yes | No | Yes | High |
| 11 | 13 | Medium | Low | Yes | No | Yes | High |
| 12 | 2 | Low | Low | Yes | No | Yes | High |
| 13 | 2 | Medium | Low | Yes | No | Yes | Medium |
| 14 | 6 | High | High | Yes | Yes | No | Medium |
| 15 | 4 | High | High | Ye | Yes | No | Medium |
| 16 | 4 | Low | Low | Yes | No | Yes | High |
| 17 | 4 | Medium | Medium | Yes | No | Yes | High |
| 18 | 4 | High | High | Yes | Yes | No | High |
| 19 | 13 | High | Medium | Yes | No | Yes | High |
| 20 | 13 | Medium | Medium | Yes | No | Yes | High |
| 21 | 7 | High | Low | Yes | No | Yes | High |
| 22 | 4 | High | High | Yes | No | Yes | High |
| 23 | 8 | Medium | Low | Yes | No | No | Medium |
| 24 | 2 | High | High | Yes | No | No | Medium |
| 25 | 2 | Medium | Low | Yes | No | No | Medium |
| 26 | 3 | Medium | Low | Yes | No | Yes | High |
| 27 | 2 | High | Medium | Yes | No | Yes | Medium |
| 28 | 2 | Medium | Medium | Yes | No | Yes | High |

| | | | | | | | | |
|--|---|--------|--------|-----|-----|---------|--------|--|
| 29 | 3 | Medium | Low | Yes | No | Yes | High | |
| 30 | 3 | Medium | Medium | Yes | Yes | Yes | High | |
| 31 | 2 | Medium | Medium | Yes | No | Yes | High | |
| 32 | 2 | Medium | Low | Yes | No | Yes | High | |
| 33 | 6 | High | Medium | Yes | Yes | Yes | High | |
| 34 | 6 | High | Medium | Yes | Yes | Yes | High | |
| 35 | 6 | High | Medium | Yes | Yes | Yes | High | |
| 36 | 6 | High | Medium | Yes | Yes | Yes | High | |
| 37 | 6 | High | Medium | Yes | Yes | Yes | High | |
| 38 | 5 | Medium | Low | Yes | Yes | Unknown | Medium | |
| (a) See Chapter 1 for explanation of priorities. | | | | | | | | |

List of Public Safety Consortium Agencies and Acronym Guide:

- Bureau of Administration (BOA)
- Bureau of Human Resources (BHR)
- Bureau of Technology (BOT)
- Clerk of the Circuit Court
- Cook County Forest Preserve District (CCFPD)
- Cook County Health and Hospitals System (CCHHS)
- Cook County Office of the President
- Cook County Sheriff’s Office (CCSO)
- Department of Animal Control and Rabies
- Department of Building and Zoning (DBZ)
- Department of Environmental Control (DEC)
- Department of Facilities Management (DFM)
- Department of Homeland Security and Emergency Management (DHSEM)
- Department of Planning and Development (DPD)
- Department of Risk Management (DRM)
- Juvenile Temporary Detention Center (JTDC)
- Office of Budget and Management (OBM)
- Office of Capital Planning and Policy (OCPP)
- Office of the Chief Judge (OCJ)
- Office of the Medical Examiner (ME)
- Office of the Public Defender
- State’s Attorney’s Office (SAO)

New Mitigation Actions

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

Action CCU 33

| | |
|---|--|
| Mitigation Action | Begin Flood Control Project on Farmers and Prairie Creeks. |
| Year Initiated | 2019 |
| Applicable Jurisdiction | Cook County |
| Lead Agency/Organization | MWRD |
| Supporting Agencies/Organizations | Cook County |
| Applicable Goal | <ul style="list-style-type: none"> • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects. • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. |
| Applicable Objective | <ul style="list-style-type: none"> • Eliminate or minimize disruption of local government operations caused by natural hazards through all phases of emergency management. • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • Integrate hazard mitigation policies into land use plans in the planning area. • Retrofit, purchase, or relocate structures in high hazard areas, including those known to be repetitively damaged. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. |
| Potential Funding Source | Local Funds and Grants |
| Estimated Cost | \$15,000,000 |
| Benefits (loss avoided) | Flood mitigation |
| Projected Completion Date | Long-term |
| Priority and Level of Importance (Low, Medium, High) | High |
| Benefit Analysis (Low, Medium, High) | High |

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

| Recommended Mitigation Action/Implementation Plan and Project Description | |
|--|--|
| Action/Implementation Plan and Project Description: | ID: FRCR-12 Contract: 12-056-3F, Watershed: Lower Des Plaines Location: Park Ridge, Des Plaines, and Maine Township, IL Provides flood storage and conveyance improvements along Farmers and Prairie Creeks, including channel modifications, detention expansion, diversion sewer construction, and streambank stabilization. |

| Mitigation Action and Project Maintenance | | |
|--|---------------|---|
| Year | Status | Comments |
| 2019 | New | Final Design. Intergovernmental agreement being finalized. Acquiring easements. |
| 2020 | | |
| 2021 | | |
| 2022 | | |
| 2023 | | |

| Mitigated Hazards | |
|--------------------------|------------------------------|
| | All Hazards |
| | Dam/Levee Failure |
| | Drought |
| | Earthquake |
| X | Flood |
| | Extreme Heat |
| | Lightning |
| | Hail |
| | Fog |
| | High Wind |
| | Snow |
| | Blizzard |
| | Extreme Cold |
| | Ice Storms |
| | Tornado |
| | Epidemic or pandemic |
| | Nuclear Power Plant Incident |

| | |
|--|--|
| | Widespread Power Outage |
| | Coastal Erosion |
| | Secondary Impacts from Mass Influx of Evacuees |
| | Hazardous Materials Incident |

Action CCU 34

| | |
|---|--|
| Mitigation Action | Begin Road Flood Control Project. |
| Year Initiated | 2019 |
| Applicable Jurisdiction | Cook County |
| Lead Agency/Organization | MWRD |
| Supporting Agencies/Organizations | Cook County |
| Applicable Goal | <ul style="list-style-type: none"> • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects. • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. |
| Applicable Objective | <ul style="list-style-type: none"> • Eliminate or minimize disruption of local government operations caused by natural hazards through all phases of emergency management. • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • Integrate hazard mitigation policies into land use plans in the planning area. • Retrofit, purchase, or relocate structures in high hazard areas, including those known to be repetitively damaged. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. |
| Potential Funding Source | Local Funds and Grants |
| Estimated Cost | TBD |
| Benefits (loss avoided) | Flood mitigation |
| Projected Completion Date | Long-term |
| Priority and Level of Importance (Low, Medium, High) | High |
| Benefit Analysis (Low, Medium, High) | High |
| Cost Analysis (Low, Medium, High) | Medium |
| Actual Completion Date | TBD |

| Recommended Mitigation Action/Implementation Plan and Project Description | |
|---|--|
| Action/Implementation Plan and Project Description: | ID: IDOT-17 Contract: 14-065-5C Watershed: Lower Des Plaines |

| | |
|--|--|
| | Location: Unincorporated Northfield, Maine Township, and Glenview, IL Analysis of new conveyance improvements along Central Road and possible detention facilities. |
|--|--|

| Mitigation Action and Project Maintenance | | | | | |
|---|--------|--|--|--|--|
| Year | Status | Comments | | | |
| 2019 | New | Ongoing coordination with the Illinois Department of Transportation. | | | |
| 2020 | | | | | |
| 2021 | | | | | |
| 2022 | | | | | |
| 2023 | | | | | |

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

Action CCU 35

| | |
|---|--|
| Mitigation Action | Begin Plainfield Road Flood Control Project from Willow Springs to East Avenue. |
| Year Initiated | 2019 |
| Applicable Jurisdiction | Cook County |
| Lead Agency/Organization | MWRD |
| Supporting Agencies/Organizations | Cook County |
| Applicable Goal | <ul style="list-style-type: none"> • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects. • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. |
| Applicable Objective | <ul style="list-style-type: none"> • Eliminate or minimize disruption of local government operations caused by natural hazards through all phases of emergency management. • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • Integrate hazard mitigation policies into land use plans in the planning area. • Retrofit, purchase, or relocate structures in high hazard areas, including those known to be repetitively damaged. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. |
| Potential Funding Source | Local Funds and Grants |
| Estimated Cost | TBD |
| Benefits (loss avoided) | Flood mitigation |
| Projected Completion Date | Long-term |
| Priority and Level of Importance (Low, Medium, High) | High |
| Benefit Analysis (Low, Medium, High) | High |

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

| Recommended Mitigation Action/Implementation Plan and Project Description | |
|--|--|
| Action/Implementation Plan and Project Description: | ID: CCDTH 4 Contract: 14-112-5C Watershed: Lower Des Plaines Location: LaGrange; Countryside; McCook; and Lyons Township, IL May include construction of a new trunk sewer along portions of Planfield Road, 55th Street and East Avenue and stormwater improvements to the McCook Ditch, McCook Ditch Overflow, and McCook Levee. Estimated Construction Cost: TBD Status: Preliminary Engineering being finalized. |

| Mitigation Action and Project Maintenance | | |
|--|---------------|--|
| Year | Status | Comments |
| 2019 | New | Preliminary Engineering being finalized. |
| 2020 | | |
| 2021 | | |
| 2022 | | |
| 2023 | | |

| Mitigated Hazards | |
|--------------------------|------------------------------|
| | All Hazards |
| | Dam/Levee Failure |
| | Drought |
| | Earthquake |
| X | Flood |
| | Extreme Heat |
| | Lightning |
| | Hail |
| | Fog |
| | High Wind |
| | Snow |
| | Blizzard |
| | Extreme Cold |
| | Ice Storms |
| | Tornado |
| | Epidemic or pandemic |
| | Nuclear Power Plant Incident |

| | |
|--|--|
| | Widespread Power Outage |
| | Coastal Erosion |
| | Secondary Impacts from Mass Influx of Evacuees |
| | Hazardous Materials Incident |

Action CCU 36

| | |
|---|--|
| Mitigation Action | Begin Flood Control on Calumet-Sag Tributary C. |
| Year Initiated | 2019 |
| Applicable Jurisdiction | Cook County |
| Lead Agency/Organization | MWRD |
| Supporting Agencies/Organizations | Cook County |
| Applicable Goal | <ul style="list-style-type: none"> • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects. • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. |
| Applicable Objective | <ul style="list-style-type: none"> • Eliminate or minimize disruption of local government operations caused by natural hazards through all phases of emergency management. • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • Integrate hazard mitigation policies into land use plans in the planning area. • Retrofit, purchase, or relocate structures in high hazard areas, including those known to be repetitively damaged. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. |
| Potential Funding Source | Local Funds and Grants |
| Estimated Cost | TBD |
| Benefits (loss avoided) | Flood mitigation |
| Projected Completion Date | Long-term |
| Priority and Level of Importance (Low, Medium, High) | High |
| Benefit Analysis (Low, Medium, High) | High |
| Cost Analysis (Low, Medium, High) | Medium |
| Actual Completion Date | TBD |

| Recommended Mitigation Action/Implementation Plan and Project Description | |
|---|--|
| Action/Implementation Plan and Project Description: | ID: Bremen Twp 1 Contract: 14-257-5C Watershed: Cal-Sag Channel Location: Bremen Township & Midlothian, IL Preliminary engineering alternatives developed to address flooding along Calumet-Sag Tributary Channel in the vicinity of 143rd Street and Linder Avenue. |

| Mitigation Action and Project Maintenance | | |
|---|--------|--------------------|
| Year | Status | Comments |
| 2019 | New | Preliminary design |
| 2020 | | |
| 2021 | | |
| 2022 | | |
| 2023 | | |

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

| | |
|--|------------------------------|
| | Hazardous Materials Incident |
|--|------------------------------|

Action CCU 37

| | |
|---|--|
| Mitigation Action | Develop Forest Preserve District of Cook County Green Infrastructure Project. |
| Year Initiated | 2019 |
| Applicable Jurisdiction | Cook County |
| Lead Agency/Organization | MWRD |
| Supporting Agencies/Organizations | Cook County |
| Applicable Goal | <ul style="list-style-type: none"> • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects. • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. |
| Applicable Objective | <ul style="list-style-type: none"> • Eliminate or minimize disruption of local government operations caused by natural hazards through all phases of emergency management. • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • Integrate hazard mitigation policies into land use plans in the planning area. • Retrofit, purchase, or relocate structures in high hazard areas, including those known to be repetitively damaged. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. |
| Potential Funding Source | Local Funds and Grants |
| Estimated Cost | TBD |
| Benefits (loss avoided) | |
| Projected Completion Date | Long-term |
| Priority and Level of Importance (Low, Medium, High) | High |
| Benefit Analysis (Low, Medium, High) | High |

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

| Recommended Mitigation Action/Implementation Plan and Project Description | |
|--|--|
| Action/Implementation Plan and Project Description: | |

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

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

Action CCU 38

| | |
|--|--|
| Mitigation Action | Start Storm Drainage System Improvement on 151st Street at Boca Rio Ditch in the City of Oak Forest. CCDOTH is working with MWRD and the City of Oak Forest to replace the deteriorating culvert with a larger one which will help to reduce the risk of local flooding. |
| Year Initiated | 2019 |
| Applicable Jurisdiction | CCDOH/MWRD/City of Oak Forest |
| Lead Agency/Organization | CCDOH |
| Supporting Agencies/Organizations | MWRD |
| Applicable Goal | <ul style="list-style-type: none"> • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects. • Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. • Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events. |
| Applicable Objective | <ul style="list-style-type: none"> • Increase the resilience of (or protect and maintain) infrastructure and critical facilities. • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change. • Retrofit, purchase, or relocate structures in high hazard areas, including those known to be repetitively damaged. • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. • Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes. |
| Potential Funding Source | MWRD Grant |

| | |
|---|--|
| Estimated Cost | \$619,000 |
| Benefits (loss avoided) | Will reduce flood risk for up to 28 residential structures. |
| Projected Completion Date | 2020 |
| Priority and Level of Importance (Low, Medium, High) | Medium Priority |
| Benefit Analysis (Low, Medium, High) | Medium - Project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for property. |
| Cost Analysis (Low, Medium, High) | Low - The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program. |
| Actual Completion Date | |

| Recommended Mitigation Action/Implementation Plan and Project Description | |
|---|--|
| Action/Implementation Plan and Project Description: | The main component of the project will be the replacement of the deteriorating culverts underneath 151st Street, which is under CCDOTH jurisdiction, with larger culverts. In addition, we anticipate additional improvements to promote improved water quality and reduce the potential for siltation and erosion through streambank stabilization and a naturalized channel section with sedimentation basins to reduce future migration of silt downstream of 151st Street. |

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

| Mitigated Hazards | |
|-------------------|--------------------|
| | All Hazards |
| | Dam/Levee Failure |
| | Drought |
| | Earthquake |
| X | Flood |
| | Extreme Heat |
| | Lightning |

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

Ongoing Mitigation Actions

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

Action CCU.2

| TABLE: ACTION PLAN MATRIX | | |
|---|---|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.2 | Review the existing debris management plan and update as necessary. | |
| Status Description: Yes | Update is pending. | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.3

| TABLE: ACTION PLAN MATRIX | | |
|---|---|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.3 | Strengthen the Cook County Continuity of Operations Plans (COOP). | |
| Status Description: Yes | Update is pending. | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.4

| TABLE: ACTION PLAN MATRIX | | |
|---|---|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.4 | Review current building codes, ordinances, and zoning guidelines and update as necessary. | |
| Status Description: Yes | | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.5

| TABLE: ACTION PLAN MATRIX | | |
|---|--|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.5 | Continue to support the training and organization of a Cook County Incident Management Team. | |
| Status Description: Yes | There have been training conducted and future trainings scheduled. | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.9

| TABLE: ACTION PLAN MATRIX | | |
|---|---|------------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.9 | Continue our partnership with the National Oceanic and Atmospheric Administration (NOAA) and the development of a Cook County weather system. | |
| Status Description: Yes | Yearly weather update meetings are being held with County staff and partners. | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.10

| TABLE: ACTION PLAN MATRIX | | |
|---|--|------------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.10 | Expand the Cook County DHSEM training program to include: county-wide elected officials, emergency managers, and other key emergency response personnel. | |
| Status Description: Action Taken? | Conducted nine (9) Leading Through Crisis Trainings in 2016. And will continue to be conducted throughout 2017. | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.11

| TABLE: ACTION PLAN MATRIX | | |
|---|---|------------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.11 | Integrate the Hazard Mitigation Plan (HMP) and Threat Hazard Identification Risk Assessment (THIRA) into other plans, programs, and initiatives that enhance or support all phases of emergency management. | |
| Status Description: Yes | Completed yearly through the THIRA/SPR | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.12

| TABLE: ACTION PLAN MATRIX | | |
|---|--|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.12 | Support homeowner education on flood insurance programs. | |
| Status Description: Yes | Provide NFIP updates and changes. | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.13

| TABLE: ACTION PLAN MATRIX | | |
|---|---|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.13 | Consider building code provisions to reduce earthquake damage risk. | |
| Status Description: No | | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.15

| TABLE: ACTION PLAN MATRIX | | |
|---|---|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.15 | Develop a mass notification system for tornadoes. | |
| Status Description: Yes | Still in Development | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.16

| TABLE: ACTION PLAN MATRIX | | |
|---|---|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.16 | Consider public education programs on tornado warning protocols and shelter facilities. | |
| Status Description: No | Part of the mass notification system training. | X |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.17

| TABLE: ACTION PLAN MATRIX | | |
|---|--|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.17 | Conduct an analysis to identify vulnerabilities within the communication systems. | |
| Status Description: Yes | DHSEM preforms a communication exercise on the statewide StarCom network the 1st Tuesday of each month with 256 of our public safety partners. | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.18

| TABLE: ACTION PLAN MATRIX | | |
|---|---|------------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.18 | Where appropriate, support retrofitting, purchase, or relocation of structures in hazardprone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses. | |
| Status Description: Yes | DHSEM was awarded a 1.6 million dollar Flood Mitigation Assistance grant to buyout FEMA and IEMA eight (8) severe repetitive loss flood prone properties. Process should be Completed 2019. | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.19

| TABLE: ACTION PLAN MATRIX | | |
|---|---|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.19 | Coordinate with MWRD for flood-related mitigation projects. | |
| Status Description: Yes | Currently working with MWRD to buyout flood prone properties. | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.22

| TABLE: ACTION PLAN MATRIX | | |
|---|---|------------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.22 | Consider obtaining easements for planned and regulated public use of privately-owned/ publically owned land for temporary water retention and drainage. | |
| Status Description: Yes | | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.24

| TABLE: ACTION PLAN MATRIX | | |
|---|---|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.24 | Develop a strategy to address sewer and storm sewer capacity issues for future mitigation projects. | |
| Status Description: Yes | Working with MWRD and Cook County Department of Highways | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.25

| TABLE: ACTION PLAN MATRIX | | |
|---|---|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.25 | Participate in the Community Rating System (CRS). | |
| Status Description: Yes | Process is ongoing | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.26

| TABLE: ACTION PLAN MATRIX | | |
|---|--|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.26 | Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts. | |
| Status Description: Yes | Currently Supporting the program | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.30

| TABLE: ACTION PLAN MATRIX | | |
|---|--|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.30 | Develop more efficient methods to conduct post-disaster damage assessments. | |
| Status Description: Yes | Conducting internal trainings with staff. And plan to conduct trainings with municipalities. | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.32

| TABLE: ACTION PLAN MATRIX | | |
|---|---|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.32 | Further develop supply chain plans for public health and healthcare-related concerns. | |
| Status Description: Yes | Ongoing effort to increase coordination with the Cook County Department of Public Health and Health and Hospitals System. | O |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Completed Mitigation Actions

The following section represents completed mitigation actions, and serves as an archive of identified and completed projects.

Action CCU.1

| TABLE: ACTION PLAN MATRIX | | |
|---|--|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.1 | Enhance/update the Cook County post-disaster action plans. | |
| Status Description: Yes | The Cook County EOP has been successfully updated. | C |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.7

| TABLE: ACTION PLAN MATRIX | | |
|---|--|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.7 | Expand the capabilities of the Cook County Emergency Response Centers – North, Central, and South. | |
| Status Description: Yes | Capabilities have been expanded and a fourth site has been added called air ground station (AGS) | C |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.8

| TABLE: ACTION PLAN MATRIX | | |
|---|---|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.8 | Continue to support the development of the current Cook County Emergency Operations Center (EOC). | |
| Status Description: Yes | The EOC construction has been completed and technology is continually being enhanced. | C |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.14

| TABLE: ACTION PLAN MATRIX | | |
|---|--|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.14 | Map and assess community vulnerability to seismic hazards. | |
| Status Description: Yes | Completed during the creation of the HMP. Also data is provided on FEMA risk maps. | C |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.20

| TABLE: ACTION PLAN MATRIX | | |
|---|--|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.20 | Support and maintain a comprehensive plan for urban flooding. | |
| Status Description: Yes | Participated in the development of the Urban Flood Awareness Act | C |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.21

| TABLE: ACTION PLAN MATRIX | | |
|---|---|---------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.21 | Adopt “no-adverse impact” floodplain management policies. | |
| Status Description: Yes | It was agreed upon in the development of the HMP. | C |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.27

| TABLE: ACTION PLAN MATRIX | | |
|---|---|------------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.27 | Consider developing the development of a plan that incorporates public and private partners to protect critical infrastructure and critical facilities within the county. | |
| Status Description: Yes | Developed the THRIA and Port Security initiative | C |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.28

| TABLE: ACTION PLAN MATRIX | | |
|---|---|------------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.28 | Increase capability for severe winter weather incidents through snow removal assets, weather tracking, and identification of where excess snow will be relocated. | |
| Status Description: Yes | Completed through DHSEM weather system and Automatic Vehicle Location (AVL) | C |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Action CCU.29

| TABLE: ACTION PLAN MATRIX | | |
|---|--|------------------------------|
| Action Number Action Taken Y/N | Action Item Description | Status (X, O, C, R, N) |
| #CCU.29 | Evaluate the role of Floodplain Administrator for Cook County and appoint agency that has the highest degree of capability to maintain the County's floodplain management program. | |
| Status Description: Yes | Determined MWRD is the responsible agency. | C |
| Completion status legend: N = New O = Action Ongoing toward Completion C = Project Completed R = Want Removed from Annex X = No Action Taken | | |

Future Needs to Better Understand Risk/Vulnerability

No needs have been identified at this time.

Additional Comments

No additional comments at this time

HAZUS-MH Risk Assessment Results

| UNINCORPORATED COOK COUNTY EXISTING CONDITIONS | |
|---|------------------|
| 2010 Population | 104,874 |
| Total Assessed Value of Structures and Contents | \$19,803,075,197 |
| Area in 100-Year Floodplain | 14,896.46 acres |
| Area in 500-Year Floodplain | 16,140.60 acres |
| Number of Critical Facilities | 262 |

| HAZARD EXPOSURE IN UNINCORPORATED COOK COUNTY | | | | | | |
|---|----------------|-----------|-------------------------|---------------|------------------------|-----------------------------------|
| | Number Exposed | | Value Exposed to Hazard | | Total | % of Total Assessed Value Exposed |
| | Population | Buildings | Structure | Contents | | |
| Dam Failure | | | | | | |
| Buffalo Creek | 640 | 197 | \$179,860,000 | \$127,588,000 | \$307,448,000 | 1.55% |
| U. Salt Cr. #2 | 475 | 146 | \$57,375,000 | \$28,683,000 | \$86,058,000 | 0.43% |
| Touhy | 215 | 66 | \$140,563,000 | \$165,900,000 | \$306,463,000 | 1.55% |
| U. Salt Cr. #3 | 549 | 169 | \$72,514,000 | \$39,978,000 | \$112,492,000 | 0.57% |
| U. Salt Cr. #4 | 543 | 167 | \$65,062,000 | \$32,526,000 | \$97,588,000 | 0.49% |
| Flood | | | | | | |
| 100-Year | 2,269 | 698 | \$544,795,466 | \$468,260,980 | \$1,013,056,446 | 5.12% |

| | | | | | | |
|----------------|-------|-------|------------------|-----------------|-------------------------|--------|
| 500-Year | 3,361 | 1,034 | \$681,710,169 | \$553,842,253 | \$1,235,552,422 | 6.24% |
| Tornado | | | | | | |
| 100-Year | — | — | \$153,585,500 | \$100,150,575 | \$253,736,075 | 1.28% |
| 500-Year | — | — | \$10,551,567,739 | \$7,104,828,692 | \$17,656,396,431 | 89.16% |

| ESTIMATED PROPERTY DAMAGE VALUES IN UNINCORPORATED COOK COUNTY | | | | |
|---|---|---------------|----------------------|-----------------------------------|
| | Estimated Damage Associated with Hazard | | | % of Total Assessed Value Damaged |
| | Building | Contents | Total | |
| Dam Failure | | | | |
| Buffalo Creek | \$238,000 | \$588,000 | \$826,000 | 0.00% |
| U. Salt Cr. #2 | \$934,000 | \$515,000 | \$1,449,000 | 0.01% |
| Touhy | \$419,000 | \$1,268,000 | \$1,687,000 | 0.01% |
| U. Salt Cr. #3 | \$2,423,000 | \$1,802,000 | \$4,225,000 | 0.02% |
| U. Salt Cr. #4 | \$2,446,000 | \$1,313,000 | \$3,759,000 | 0.02% |
| Earthquake | | | | |
| 1909 Historical Event | \$555,263,546 | \$168,293,990 | \$723,557,535 | 3.65% |
| Flood | | | | |
| 10-Year | \$9,538,653 | \$21,509,370 | \$31,048,023 | 0.16% |
| 100-Year | \$45,156,152 | \$100,642,104 | \$145,798,256 | 0.74% |
| 500-Year | \$73,164,879 | \$150,722,763 | \$223,887,642 | 1.13% |

| Tornado | | | | |
|----------------|-----------------|-----------------|------------------------|--------|
| 100-Year | \$15,358,550 | \$10,015,057 | \$25,373,608 | 0.13% |
| 500-Year | \$1,540,528,890 | \$1,037,304,989 | \$2,577,833,879 | 13.02% |

Hazard Mapping

[Part 2. Risk Assessment](#) in Volume I provides the necessary information and maps regarding the hazards that affect Cook County and the unincorporated areas.