



# Cook County Multi-Jurisdictional All Hazards Mitigation Plan 2016 Annual Progress Report

## Cook County Overview

Cook County is located in northeastern Illinois on the western shores of Lake Michigan. It is the most populous of Illinois' 102 counties (making up approximately 40 percent of the population of the state), with a 2016 estimated population of 5.1 million. It is the sixth largest county in the state by area, covering 946 square miles. 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.

Cook County is the second most populous county in the United States, after Los Angeles County. It contains 134 municipalities, covering about 85 percent of the area of the county. The remaining unincorporated areas are under the jurisdiction of the Cook County Board of Commissioners, a 17-member board elected by district.

## Plan Background

The Cook County Multi-Jurisdictional Hazard Mitigation Plan (HMP) was developed under a grant from the Illinois Emergency Management Agency (IEMA) by a planning team of Cook County Department of Homeland Security and Emergency Management (DHSEM) staff and expert consultants, with guidance from a steering committee representing the planning partners and other local stakeholders.

On September 10, 2014, the Cook County Board of Commissioners adopted the first-ever Cook County HMP (Volumes 1 and 2) making it the largest plan of its kind within the U.S. with 115 planning partners. To reduce the impact of a critical incident on the lives, property and economy of those that live in, work in and visit the county, the plan identified the risks of natural hazards facing Cook County, established mitigation goals, evaluated existing mitigation activities and recommended additional mitigation steps. One step includes a plan maintenance strategy to ensure that the HMP remains an active and relevant document, and that the planning partners maintain their eligibility for applicable federal grant funding sources. The HMP's format also allows for updating identified mitigation strategies.

## Purpose

The purpose of this report is to provide an annual update on the implementation of the action plan identified in Volume 2 of the HMP. The objective is to ensure that there is a continual and responsive planning process that will keep the HMP dynamic and responsive to the needs and capabilities of all partner jurisdictions. This report discusses the following:

- Review of the action item plan matrix
- Natural hazard events that have occurred within the last year
- Mitigation success stories
- Plan evaluation



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## Review of the action item plan matrix

| Municipality       | # of Action Items | Completed | Not Completed | New | Removed |  | Municipality      | # of Action Items | Completed Action Items | Not Completed | New Action Items | Removed Action Items |
|--------------------|-------------------|-----------|---------------|-----|---------|--|-------------------|-------------------|------------------------|---------------|------------------|----------------------|
| Alsip              | 8                 | 0         | 4             |     |         |  | Dolton            | 14                | 0                      | 7             |                  |                      |
| Arlington Heights  | 15                | 1         | 3             | 1   |         |  | East Hazel Crest  | 16                | 1                      | 1             | 1                | 3                    |
| Bedford Park       | 15                | 5         | 15            |     |         |  | Elk Grove Village | 16                |                        | 16            |                  |                      |
| Bellwood           | 11                | 2         | 3             |     |         |  | Elmwood Park      | 11                | 9                      | 11            |                  |                      |
| Berkeley           | 11                | 0         | 5             |     | 1       |  | Evanston          | 8                 | 0                      | 3             |                  | 2                    |
| Berwyn             | 8                 | 0         | 3             |     |         |  | Evergreen Park    | 10                | 3                      | 2             |                  | 1                    |
| Blue Island        | 15                | 7         | 5             |     | 1       |  | Flossmoor         | 15                | 0                      | 6             |                  | 1                    |
| Bridgeview         | 16                | 6         | 7             |     |         |  | Ford Heights      | 16                |                        | 16            |                  |                      |
| Broadview          | 12                | 2         | 3             |     |         |  | Forest Park       | 8                 | 0                      | 8             |                  |                      |
| Brookfield         | 16                |           | 16            |     |         |  | Forest View       | 13                | 1                      | 8             |                  |                      |
| Burbank            | 11                | 1         | 7             |     |         |  | Franklin Park     | 19                | 2                      | 3             |                  |                      |
| Burnham            | 16                | 1         | 9             |     |         |  | Glencoe           | 17                | 3                      | 0             |                  |                      |
| Calumet City       | 20                | 0         | 6             |     |         |  | Glenview          | 16                | 9                      | 0             |                  | 3                    |
| Calumet Park       | 15                | 0         | 9             |     |         |  | Glenwood          | 14                | 3                      | 0             |                  |                      |
| Chicago Heights    | 13                | 4         | 13            |     |         |  | Golf              | 10                | 1                      | 2             |                  | 1                    |
| Chicago Ridge      | 21                |           | 21            |     |         |  | Hanover Park      | 27                | 12                     | 7             |                  | 4                    |
| Cicero             | 10                | 0         | 4             |     |         |  | Harvey            | 15                |                        | 15            |                  |                      |
| Cook County        | 32                | 2         | 5             |     | 3       |  | Harwood Heights   | 8                 | 0                      | 1             |                  |                      |
| Country Club Hills | 17                |           | 17            |     |         |  | Hazel Crest       | 16                | 0                      | 6             |                  |                      |
| Countryside        | 23                | 3         | 3             |     | 6       |  | Hickory Hills     | 15                | 0                      | 2             |                  | 2                    |
| Crestwood          | 11                | 1         | 9             |     |         |  | Hillside          | 23                | 5                      | 14            |                  |                      |
| Dixmoor            | 14                | 0         | 7             |     |         |  | Hodgkins          | 20                | 3                      | 3             |                  | 1                    |



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| Municipality                            | # of Action Items | Completed Action Items | Not Completed | New Action Items | Removed Action Items |  | Municipality     | # of Action Items | Completed Action Items | Not Completed | New Action Items | Removed Action Items |
|---|-------------------|------------------------|---------------|------------------|----------------------|--|------------------|-------------------|------------------------|---------------|------------------|----------------------|
| Hoffman Estates                         | 16                | 7                      | 0             |                  |                      |  | Niles            | 13                | 6                      | 3             |                  |                      |
| Homewood                                | 9                 | 1                      | 2             |                  |                      |  | Norridge         | 14                | 0                      | 14            |                  |                      |
| Indian Head Park                        | 8                 | 0                      | 2             |                  |                      |  | North Riverside  | 8                 | 7                      | 1             |                  |                      |
| Inverness                               | 13                | 0                      | 2             |                  |                      |  | Northbrook       | 11                | 11                     | 0             |                  |                      |
| Justice                                 | 18                | 5                      | 5             |                  |                      |  | Northfield       | 16                | 2                      | 7             | 1                |                      |
| Kenilworth                              | 8                 | 0                      | 2             |                  |                      |  | Northlake        | 17                | 8                      | 2             |                  |                      |
| LaGrange                                | 17                | 2                      | 4             | 3                | 1                    |  | Oak Forest       | 8                 | 0                      | 0             | 6                |                      |
| LaGrange Park                           | 17                | 1                      | 6             |                  |                      |  | Oak Lawn         | 14                | 3                      | 0             |                  |                      |
| Lansing                                 | 25                | 2                      | 9             |                  |                      |  | Oak Park         | 12                | 1                      | 3             |                  | 2                    |
| Lemont                                  | 8                 | 0                      | 2             |                  |                      |  | Olympia Fields   | 9                 | 0                      | 4             |                  |                      |
| Lincolnwood                             | 11                | 2                      | 2             |                  | 2                    |  | Orland Hills     | 10                |                        | 10            |                  |                      |
| Lynwood                                 | 8                 | 0                      | 3             |                  |                      |  | Orland Park      | 22                | 2                      | 2             |                  |                      |
| Lyons                                   | 13                |                        | 13            |                  |                      |  | Palatine         | 18                | 3                      | 6             |                  | 1                    |
| Markham                                 | 16                | 0                      | 5             |                  |                      |  | Palos Heights    | 15                | 2                      | 3             |                  |                      |
| Matteson                                | 16                | 2                      | 8             |                  |                      |  | Palos Hills      | 11                | 4                      | 2             |                  |                      |
| Maywood                                 | 8                 | 1                      | 3             |                  |                      |  | Palos Park       | 18                | 7                      | 4             |                  | 7                    |
| McCook                                  | 9                 | 0                      | 0             |                  |                      |  | Park Ridge       | 15                | 2                      | 9             | 1                |                      |
| Melrose Park                            | 7                 | 0                      | 0             |                  |                      |  | Phoenix          | 16                |                        | 16            |                  |                      |
| Merrionette Park                        | 14                | 0                      | 14            |                  |                      |  | Posen            | 16                | 0                      | 8             |                  |                      |
| Midlothian                              | 19                | 2                      | 3             |                  |                      |  | Prospect Heights | 18                | 6                      | 5             |                  |                      |
| Morton Grove                            | 17                | 0                      | 5             |                  |                      |  | Riverdale        | 13                | 1                      | 5             |                  |                      |
| Mount Prospect                          | 18                | 3                      | 1             |                  |                      |  | Riverside        | 18                | 0                      | 10            |                  |                      |
| Metropolitan Water Reclamation District | 17                | 1                      | 0             | 5                |                      |  | River Forest     | 17                | 3                      | 2             |                  |                      |



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| Municipality       | # of Action Items | Completed Action Items | Not Completed | New Action Items | Removed Action Items |  | Municipality    | # of Action Items | Completed Action Items | Not Completed | New Action Items | Removed Action Items |
|--------------------|-------------------|------------------------|---------------|------------------|----------------------|--|-----------------|-------------------|------------------------|---------------|------------------|----------------------|
| River Grove        | 9                 | 4                      | 3             |                  |                      |  | Stone Park      | 7                 | 0                      | 1             |                  |                      |
| Robbins            | 8                 | 0                      | 4             |                  |                      |  | Streamwood      | 8                 | 2                      | 3             |                  |                      |
| Rolling Meadows    | 13                | 0                      | 2             |                  | 2                    |  | Summit          | 7                 | 0                      | 5             |                  |                      |
| Rosemont           | 11                | 0                      | 11            |                  |                      |  | Thornton        | 10                | 1                      | 5             |                  |                      |
| Sauk Village       | 9                 | 1                      | 5             |                  |                      |  | Tinley Park     | 7                 | 0                      | 1             |                  |                      |
| Schaumburg         | 15                | 1                      | 15            |                  |                      |  | Westchester     | 14                | 1                      | 1             |                  |                      |
| Schiller Park      | 10                |                        | 10            |                  |                      |  | Western Springs | 14                | 0                      | 6             |                  |                      |
| Skokie             | 11                | 3                      | 1             |                  |                      |  | Wheeling        | 12                | 4                      | 1             |                  |                      |
| South Barrington   | 11                | 0                      | 3             |                  |                      |  | Willow Springs  | 7                 | 0                      | 1             |                  |                      |
| South Chicago Hts. | 7                 | 0                      | 1             |                  |                      |  | Wilmette        | 14                | 5                      | 1             |                  | 1                    |
| South Holland      | 14                | 0                      | 1             |                  |                      |  | Winnetka        | 15                | 4                      | 2             |                  |                      |
| Steger             | 8                 | 1                      | 2             |                  |                      |  | Worth           | 8                 | 1                      | 1             |                  | 3                    |
| Stickney           | 8                 | 0                      | 6             |                  |                      |  |                 |                   |                        |               |                  |                      |

**Table 1. Jurisdictional Action Item Status Update**

To help mitigate hazards and events, and to create safer communities, HMP planning partners identified action items and activities within their annex to reduce the loss of life and property. To aid planning partners in reporting their action items and activity progress, the DHSEM created an annual progress report template. The chart above is a quantitative breakdown of completed action items, new action items and action items to be removed from their annex. Out of 115 municipalities, 10 municipalities (highlighted in gray) did not submit their annual progress report. Out of 1,555 action items, 212 were reported completed. 604 action items were reported not completed. 673 action items were reported ongoing. 18 action items were reported new and 48 were requested to be removed from the HMP. To review jurisdictional progress reports for further details, please go to: <https://www.cookcountyhomelandsecurity.org/2016-annual-progress-reports>.



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## Natural Hazard Events in 2016

Over the last year, there were no major Presidential disaster declarations within Cook County, but several municipalities reported that their jurisdictions experienced flooding due to heavy rainfall and sewer backup. They also reported structural damage to residences, businesses and roadways as a result of the flooding.

**Bedford Park:** Residents experienced localized flooding due to a partially broken storm water drain pipe that was subsequently fixed.

**Blue Island:** On July 24, 2016, a thunderstorm turned into a major micro-burst that hit Blue Island. The micro-burst took down large trees which also took out the power to the area.

**Bridgeview:** The villages of Bridgeview and Justice both experienced a huge flood. Parts of Roberts Road from 79th to 87th were almost three feet underwater. When vehicles and semi-trucks drove through the flooded streets, they caused a wake and waves that ended up damaging many businesses, apartments and homes along Roberts Road. Roberts Road and all side streets leading up to it were closed for most of the day, which affected many businesses.

**Chicago Heights:** The city experienced heavy rainfall that flooded out the Rt. 30 train viaduct. The city received assistance from the DHSEM with the aid of a large pump to remove the water and re-open the road.

**Glenview:** On July 23, 2016, the village experienced flooding that caused blocked roadways.

**Harwood Heights:** The village reported three flooding events that caused damage to over two hundred homes and cars.

**South Holland:** The village received two major rain events that caused the sewers to back up. There were measurable impacts on the residents and their properties.

## Mitigation Success Stories

The mitigation strategy section of the HMP identifies a range of specific actions and projects considered to reduce the risk to life, property and the economy. Below are success stories for implementing and administering mitigation activities.

**Arlington Heights:** In July 2016, the Arlington Heights Park District completed a year-long major renovation to the 90-acre Arlington Lakes Golf Club. In addition to making Arlington Lakes a more enjoyable golf course, the Park District staff worked with their Engineering and Public Works Departments to increase storm water retention by 3.5 percent, or almost 1 million gallons.

**Bedford Park:** The village has identified an area of flooding and is negotiating with property owners to purchase the land to develop a new retention pond.



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**Berkeley:** To address flooding on the north end of the community, a multi-phase project was started. It will install large storm sewer piping that will eventually tie into and expand the water retention pond.

**Berwyn:** The village secured a \$9.5 million grant from the Depot District Street-Scape Project.

**Bridgeview:** In 2016, the village was awarded a grant to repair the sewer systems under Roberts Road from 79th to 87th streets. The entire length of Roberts Road was dug up and new storm sewers were installed. Several new pumps were also put in to help with the water flow. The new system drains into a retention pond in Resurrection Cemetery and no parts of Roberts Road has flooded since the completion of the project.

**Burbank:** The Melvina Ditch Reservoir has been partially dug down by the Metropolitan Water Reclamation District (MWRD). Additionally, plans are under way to purchase several properties around the reservoir in order to greatly expand the site and increase flood capacity. This is all funded and under the direction of the MWRD.

**Chicago Heights:** The village has replaced the outdoor warning system control panel located in the city's emergency management office.

**Cook County:** The Federal Emergency Management Agency (FEMA) awarded the DHSEM a \$1.6 million grant to buy out eight FEMA and IEMA Severe Repetitive Loss (SRL) and Repetitive Loss (RL) properties in incorporated Leyden and Wheeling townships.

**Countryside:** The city has replaced wood mulch with rubberized mulch in parks prone to flooding to mitigate the wood mulch from entering storm systems.

**Evergreen Park:** The village was re-certified for three more years as a Storm Ready Community by the National Oceanic and Atmospheric Administration (NOAA).

**Forest View:** Due to flooding caused by Lyons Levee erosion, The Metropolitan Water Reclamation District (MWRD) performed maintenance to build the wall to its original height (Pre-1900 design) to stop flooding. MWRD is also working with the US Army Corps of Engineers on additional improvements to the Lyons Levee to reduce the potential for overtopping.

**Franklin Park:** The village has applied and has been approved for funding to buy out up to 31 repetitive loss homes through a program sponsored by the MWRD and Cook County.

**Hanover Park:** The village has updated its emergency operations plan and emergency operations center.

**Hickory Hills:** The village completed its emergency operations guide.

**Hoffman Estates:** The village has undertaken a plan to replace older outdoor warning sirens with sirens that have battery backup capabilities.

**Homewood:** When new zoning amendments or building code updates are completed, a review is conducted to determine if language needs to be changed or added to meet HMP standards.



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**LaGrange Park:** The installation of a new emergency generator was completed earlier this year at the village hall complex, which includes Fire Station No. 1, the Police Department, the Emergency Communications Center and Village Administrative Offices.

**Lynwood:** As part of the Joe Orr Road Project from Torrence Avenue west to Tyler Drive, the village installed a 30" storm water pipe to relieve flooding problems within the Sonstead subdivision.

**Markham:** The village implemented high-water mark Initiative to generate greater flood risk awareness.

**Maywood:** The Maywood Fire Department in the last two years has renovated Fire Station No. 1 (Administration). The renovation includes the upgrading of a both Sprinkler and Fire Alarm System; and to include the improvement of all mechanical systems. Additionally, the Village has also just recently both completed the renovation and opened its new Metra Train (Depot) Station.

**Midlothian:** The village secured an \$8.3 million project along Natalie Creek, to be funded by the MWRD. Scheduled to break ground in the summer of 2017, this project will take the village from a two-year protection to a 25-year protection and will mitigate the overbank flooding they have experienced in the past.

**Mount Prospect:** A new storm sewer was installed in the Catalpa Lane area, which will provide 25-year intensity storm protection.

**MWRD:** The 7.9 billion gallon Thornton Composite Reservoir officially became operational on January 1, 2016. The reservoir, located in the south suburbs near South Holland just north of the Tri-State Tollway (I-294), provides benefits to 556,000 people in 14 communities, including the South Side of Chicago and south suburbs. It protects 182,000 homes, businesses and other facilities and improves water quality in the Calumet Rivers and Calumet-Sag Channel by collecting combined sewer overflows before they can enter the waterways. The new reservoir holds these overflows before flowing 5.5 miles to the Calumet Water Reclamation Plant for treatment. During its first year of operation, the reservoir captured more than 4.5 billion gallons of combined sewer overflows during 15 storm events. Time lapse video footage of the first fill can be found at <https://youtu.be/HnOIXjDxk>. More information on the first fill can be found at [http://www.mwrdd.org/irj/go/km/docs/documents/MWRD/internet/News&Media/Newsroom/Media/Press\\_Releases/2015/15\\_1201\\_Thornton\\_Reservoir\\_Online.pdf](http://www.mwrdd.org/irj/go/km/docs/documents/MWRD/internet/News&Media/Newsroom/Media/Press_Releases/2015/15_1201_Thornton_Reservoir_Online.pdf).

**Niles:** Approximately 11,200 feet of new storm sewers have been installed to reduce surface water flooding. The intent of the project is to alleviate flood damages due to overland flows that have affected more than 140 homes in the past.

**Northbrook:** As of October 2016, the village has spent approximately \$10.6 million in storm water management improvements.



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**Oak Park:** The village is working with the Center for Neighborhood Technology (CNT) to develop and administer a pilot program called "RainReady" which provides flood risk reduction to homeowners experiencing non-sewer backup flooding, through a suite of green infrastructure solutions. The pilot program will complement the village's existing Sewer Backup Protection Grant Program, which provides funding to eligible homeowners who install an overhead sewer or backflow prevention device. The CNT is working with other communities in the county on similar programs.

**Orland Park:** The village purchased a flood prone house, which will be reconfigured as open space and potentially aid in storm water management in the future.

**Park Ridge:** The village was awarded a \$500,000 grant from FEMA to purchase a new fire engine. This was one of the items identified in the Hazard Mitigation Action Plan Matrix.

**Prospect Heights:** An overflow storm sewer was installed on Elm near Willow Ave.

**Riverdale:** In July 2016, the village received a Community Development Block Grant from Cook County in the amount of \$7,393,575 to complete the northeast sewer separation/flooding relief project. The project will help relieve the flooding issue within the northeast section of town due to an undersized and combined sewer system.

**River Forest:** To address drainage issues head-on without incurring additional costly sewer infrastructure improvements, an Illinois Green Infrastructure Grant (IGIG) grant was utilized to install permeable paver alleys in the northeast section of our town.

**Sauk Village:** Through a combination of state and village funding, significant improvements were constructed at both of Sauk Village's water treatment plants. Air strippers were also added to remove the vinyl chloride contaminants in the groundwater. These improvements renewed the village's water infrastructure are responsible for averting what was once an emergency situation.

**Schaumburg:** The village approved the Metropolitan Water Reclamation District Emergency Action Plan.

**South Barrington:** The village instituted a five year storm water management plan to inspect and clean village owned storm sewers, culverts and storm structures. As a result, many damaged culverts have been replaced.

**South Chicago Heights:** In 2016, the village opened a new public safety facility providing both police and fire departments with a structure that fulfills best practice standards in terms of infrastructure, security and incorporated technology.

**Stone Park:** The village has entered into a partnership with the MWRD to acquire approximately 35 homes in flood stricken areas. This will enable the village to purchase properties in the flood zone, so as to create a new water retention area.





# Cook County Multi-Jurisdictional All Hazards Mitigation Plan 2016 Annual Progress Report

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## *Steering Committee Members*

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**Cosme, Michael**

Metropolitan Water Reclamation  
District of Greater Chicago

**Doughtie, Matt**

City of Chicago Office of Emergency  
Management and Communications

**DuBose, LaToya**

Cook County Department of Public  
Health

**Frum, Sandra**

North West Municipal Conference

**Haywood, Dave**

MABAS

**Maxie-Alexander, Yvette**

American Red Cross

**McGee, Tylon**

Cook County Department of Homeland  
Security and Emergency management

**McNeils, John**

Cook County Project Engineer/  
Township Liaison

**Osman, Paul**

Illinois Department of Natural  
Resources, Office of Water Resources

**Pulia, Sam**

Village of Westchester

**Ryan, Gene**

Cook County Department of Homeland  
Security and Emergency management

**Schnoes, Kevin**

Cook County Department of  
Environmental Control

**Tocci, Dominic**

Cook County Bureau of Economic  
Development Department of Planning  
and Development

**Streamwood:** The village is performing a cooperative storm water mitigation project in conjunction with Bartlett.

**Westchester:** The village completed the Mayfair Reservoir expansion project.

**Western Springs:** The Public Works Department has been successful with its flood prevention strategies. They have been clearing sewers and culverts prior to any significant storms and the incidence of flooding events has decreased.

**Wheeling:** Two public improvement projects were completed, removing obstructions along the Buffalo Creek/Wheeling Drainage Ditch to enhance downstream flow and to reduce backup flooding into the community. These projects also replaced a section of corrugated metal arch storm line, as well as the replacement of the Jeffrey Avenue Bridge.

**Willow Springs:** In April 2016, the village came into an intergovernmental agreement with the Tri-State Fire Protection District, which will now act as its fire department.

**Wilmette:** The West Park Sanitary Sewer Storage Project became operational in the spring of 2016. This project was constructed to limit the frequency and severity of basement backups for more than 1,300 homes located west of Romona Road. The project was ongoing during the monumental “100-year storm” which occurred on July 23, 2016, and over 4.5 million gallons of sewage were stored in the West Park facility. The number of basement backups reported in the service area was reduced by 76 percent (compared to a small storm event in 2008). This award-winning \$18.5 million project began in September of 2014 and became fully operational on May 19, 2016

**Winnetka:** The village installed a storm water runoff control system in the northwest corner of Winnetka.

## **Plan Evaluation**

Since the 2014 adoption, no changes have been made to the Cook County Multi-Jurisdictional Hazard Mitigation Plan. The HMP is due for evaluation, update and re-submission to the State of Illinois September of 2019. Items identified in annual reports may be used to update the HMP.