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

## Calumet Park Annex

**FINAL**

July 2019

Prepared for:

Cook County
Department of Homeland Security and Emergency Management
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# Table of Contents

## 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:** 1912
- **Current Population:** 7,672 as of 2018 annual US Census estimates.
- **Population Growth:** There has been a declining trend in population since 1970. The US Census indicated that the 2010 popultion of Calumet Park was 7,831 and it decreased by 0.56 percent to 7,787 in 2016. As of the 2010 U.S. Census, there were 7,831 people, 2,872 households, and 1,983 families residing in the village.
- **Location and Description:** The village of Calumet Park is bordered by Chicago to the north and the east, the City of Blue Island to the west, and the Calumet River and the Village of Dixmoor to the south. Interstate 57 divides the village of Calumet Park from the City of Blue Island. The Village of Calumet Park has a total land area of 1.15 square miles.
- **Brief History:** Calumet Park began as an appendage of Blue Island. Originally calling their town Caswell, two to three hundred ethnically mixed residents incorporated as DeYoung in 1912. Soon Polish immigrants gained control of the village, changing its name first to Burr Oak and then to Calumet Park in 1925. During Prohibition, Calumet Park served as a bootlegging and gambling town for Al Capone, providing a haven for minor crime, which provided revenue for the village. The population reached 1,593 in 1940. After World War II, Interstate 57 cut through Calumet Park, dividing the community in two. But direct access to the Loop encouraged a population boom as builders filled the village with small brick houses. As the population expanded, the community became close-knit, with relatives frequently living nearby. By 1970 the population reached 10,069, with 60 businesses, most located along the commercial strips of 127th Street and Ashland Avenue. Even so, Calumet Park depended upon larger neighbors like Blue Island for jobs and significant purchases. As late as 1975, only 12 African American families lived in the village. But within 10 years, blacks became the dominant population, accounting for 72 percent by 1992. The transition from white to black suburb produced conflict. In the summer of 1992, within weeks of each other, two black prisoners died in the village jail, allegedly by suicide. The incidents attracted the attention of Chicago Alderman Robert Shaw, whose protests against the all-white police force provided headlines for Chicago papers. Fearful of gangs, the village created ordinances establishing curfews for children and prohibitions against gatherings of three or more people. Enforcement increased racial tensions, leading to the election of Buster Porch in 1996 as the first African American mayor of Calumet Park.
- **Climate:** Calumet Park's weather is typical for the Midwest area. The warmest average month is July with the highest temperature of 103 F in 1988. The coolest average month is January with the lowest temperature being -27 F in 1985. It does receive its share of Lake-effect snow during the winter season. And the highest average precipitation occurs in the month of June.
- **Governing Body Format:** Village of Calumet Park operates in a council-manager government format, with a Mayor, six Trustees, Village Clerk, and a Village Administrator. This body will assume responsibility for the adoption and implementation of this hazard mitigation plan. The

Village consists of several departments including Fire, Police, Public Works, Recreation, Economic Development, Buildings, and Finance.

- **Development Trends:** Calumet Park's favorable attitude toward development is the reason why so many commercial and industrial projects have succeeded in our community. For over 10 years, Calumet Park has been the Chicago Southland-area leader at using economic incentives to bring development to the Village. Our location next to the 119th and 127th Street full interchanges with Interstate 57 brings an estimated 108,200 vehicles through our community daily, according to the Illinois Department of Transportation. Our proven track record of success is especially impressive when considering that our Village is only about one square mile in size. Calumet Park uses only the best outside professionals for consultation on development decisions. Calumet Park's regular outside financial advisor, Kane, McKenna & Associates, is recognized as the leading provider of financial advisory services to Illinois municipalities. The Village's engineer, Robinson Engineering, Ltd., has been the premier municipal engineering firm serving the vast majority of municipalities in Chicago's South Suburbs for over 60 years. The Village's Mayor and Board of Trustees have made economic development one of the Village's highest priorities. They stand ready to meet with developers in Calumet Park, downtown Chicago or elsewhere, whenever necessary and do whatever it takes to bring successful and meaningful development to fruition.

## Capability Assessment

The assessment of the jurisdiction's legal and regulatory capabilities is presented in the *Legal and Regulatory Capability Table* below. The assessment of the jurisdiction's fiscal capabilities is presented in the *Fiscal Capability Table* below. The assessment of the jurisdiction's administrative and technical capabilities is presented in 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 | No | No | Yes | Ord. 86-458, passed 4-1-1986 |
| Zonings | Yes | No | No | Yes | Ord. 04-856, passed 9-9-2004 |
| Subdivisions | No | No | No | No | |
| Stormwater Management | No | No | Yes | Yes | State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA. Ord. 08-960, passed 7-10-2008 |
| Post Disaster Recovery | No | No | No | No | |
| Real Estate Disclosure | No | No | No | No | (765 ILCS 77/) Residential Real Property Disclosure Act. |
| Growth Management | No | No | No | No | |

| | | | | | |
|---|---|---|---|---|---|
| Site Plan Review | No | No | No | No | |
| Public Health and Safety | No | No | Yes | Yes | Cook County Board of Health |
| Environmental Protection | No | No | No | Yes | |
| **Planning Documents** | | | | | |
| General or Comprehensive Plan | Yes | No | No | No | Ord. 89-517, passed 6-29-1989 |
| *Is the plan equipped to provide linkage to this mitigation plan?* | | | | | Yes |
| Floodplain or Basin Plan | No | No | No | No | |
| Stormwater Plan | No | No | Yes | No | MWRD Detailed Watershed Plan |
| Capital Improvement Plan | No | No | No | No | |
| *What types of capital facilities does the plan address?* | | | | | N/A |
| *How often is the plan revised/updated?* | | | | | N/A |
| Habitat Conservation Plan | No | No | No | No | |
| Economic Development Plan | No | No | Yes | Yes | The Economic Development Commission is charged with reviewing all economic development related programs and incentives including tax incentives offered through the Cook County 6b program. |

| | | | | | |
|---|---|---|---|---|---|
| Shoreline Management Plan | No | No | No | No | |
| **Response/Recovery Planning** | | | | | |
| Comprehensive Emergency Management Plan | No | No | Yes | Yes | Cook County DHSEM |
| Threat and Hazard Identification and Risk Assessment | No | No | Yes | No | Cook County DHSEM Preparing THIRA |
| Terrorism Plan | No | No | Yes | Yes | Cook County DHSEM |
| Post-Disaster Recovery Plan | No | No | No | No | |
| Continuity of Operations Plan | No | No | Yes | No | Cook County DHSEM |
| Public Health Plans | No | No | Yes | No | Cook County DPH |

**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 | Yes |
| Incur Debt through General Obligation Bonds | Yes |
| Incur Debt through Special Tax Bonds | Yes |
| Incur Debt through Private Activity Bonds | Yes |
| Withhold Public Expenditures in Hazard-Prone Areas | Yes |
| State Sponsored Grant Programs | Yes |
| Development Impact Fees for Homebuyers or Developers | Yes |

| 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 | Engineering Consultant acting as Village Engineer, Economic Development and Public Works Dept. |
| Engineers or professionals trained in building or infrastructure construction practices | Yes | Engineering Consultant acting as Village Engineer, Economic Development and Public Works Dept. |
| Planners or engineers with an understanding of natural hazards | Yes | Engineering Consultant acting as Village Engineer, Economic Development and Public Works Dept. |
| Staff with training in benefit/cost analysis | Yes | Engineering Consultants |
| Surveyors | Yes | Engineering Consultant |
| Personnel skilled or trained in GIS applications | Yes | Engineering Consultant, Cook County GIS Consortium |
| Scientist familiar with natural hazards in local area | No | |
| Emergency manager | Yes | Fire Chief |
| Grant writers | Yes | Staff grant writer, engineering consultant |

| TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE | |
|---|---|
| What department is responsible for floodplain management in your jurisdiction? | Public Works |
| Who is your jurisdiction's floodplain administrator? (department/position) | Public Works |
| Are any certified floodplain managers on staff in your jurisdiction? | Engineering Consultant |
| What is the date of adoption of your flood damage prevention ordinance? | Unknown |
| When was the most recent Community Assistance Visit or Community Assistance Contact? | Have not received a Community Assistance Visit |
| Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are. | No |

| | |
|---|---|
| Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why) | Yes |
| Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed? | Yes. Technical capacity building in floodplain management. |
| 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, but the Village is interested. |

**TABLE: COMMUNITY CLASSIFICATIONS**

| | Participating? | Classification | Date Classified |
|---|---|---|---|
| Community Rating System | No | 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 |

## Jurisdiction-Specific Natural Hazard Event

The information provided below was solicited from the jurisdiction and supported by NOAA and other relevant data sources.

The *Natural Hazard Events Table* lists all past occurrences of natural hazards within the jurisdiction. Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 0
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: 0

**TABLE: NATURAL HAZARD EVENTS**

| Type of Event | FEMA Disaster Number (if applicable) | Date | Preliminary Dam |
|---|---|---|---|
| Severe Storms, Straight-Line Winds, Flooding | DR-4116 | 4/26/2013 | |
| Severe Winter Snowstorm | DR-1960 | 1/31/2011 | |
| Severe Storms and Flooding | DR-1935 | 7/19/2010 | |
| Severe Storms and Flooding | DR-1800 | 9/13/2008 | |
| Severe Storms and Flooding | DR-1729 | 8/20/2007 | |
| Illinois Flooding | DR-1188 | 8/16/1997 | |
| Illinois Flooding | DR-1129 | 7/17/1996 | |

### Jurisdiction-Specific Hazards and Impacts

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

***Flood:*** The western part of Calumet Park (Winchester, Lincoln, Hmihe) and the east side of I-57 (East of Ashland Ave.) are prone to flooding.

***Extreme Heat:*** The senior citizens home (124th Morgan Street), as well as several seniors throughout town with medical needs (oxygen), are vulnerable to extreme heat.

***High Winds:*** Previously, the Village has experienced high wind events that have caused trees to come down and block roads and/or take out power lines throughout the entire Village.

***Snow:*** Heavy snow events have impacted the entire Village, causing impassable roads and rendering emergency crews unable to protect life and property.

***Blizzards:*** Blizzards have impacted the entire Village, causing impassable roads and rendering emergency crews unable to protect life and property.

***Extreme Cold:*** The Village's elderly population is particularly vulnerable to extreme cold. In addition, the Village has experienced busted water lines and main breaks as a result of extreme cold events.

***Ice Storms:*** As a result of ice storms, the Village has suffered from unsafe roads and power outages.

***Tornado:*** Previously, tornadoes have caused blocked roads, downed trees and power lines, and prevented emergency service access throughout the Village.

## 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 Weather | 54 |
| 2 | Severe Winter Weather | 54 |
| 3 | Tornado | *51* |
| 4 | Earthquake | 32 |
| 5 | Flood | 15 |
| 6 | Drought | 2 |
| 7 | Dam Failure | 0 |

## 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 C2.1**—Educate property owners about flood mitigation techniques including using outreach activities to facilitate technical assistance program that address measures that citizens can take or facilitate funding for mitigation measures. | | | | | | |
| Ongoing | Flood, Severe Weather | 1, 12 | Village | Low | Local, Grant | Short-term |
| **Action C2.2**—Improve stormwater drainage capacity by increasing the capacity of the City's storm sewer drainage system. | | | | | | |
| Ongoing | Flood, Severe Weather | 1, 2, 9, 13 | Village | High | Grant | Long-term |
| **Action C2.3**—Assess vulnerability to severe wind using GIS to map areas that are at risk to the wind hazard associated with straight-line wind conditions. | | | | | | |
| Ongoing | Severe Weather | 3, 4, 10 | Village | High | Grant | Long-term |
| **Action C2.4**—Incorporate a GIS system/management plan for tracking permitting, land use patterns, tracking hazard data, and mapping risk for various hazards. | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ongoing | Multi-hazard | 3, 4, 10 | Village | Medium | Grant | Short-term |
| **Action C2.5**—Develop and maintain a database to track community vulnerability to known hazard areas. | | | | | | |
| Ongoing | Multi-hazard | 1, 5, 6 | Village | Medium | Grant | Short-term |
| **Action C2.6**—Protecting infrastructure and critical facilities from damage by engineering and/or retrofitting roads to withstand hazards. | | | | | | |
| Ongoing | Multi-hazard | 1, 2, 9, 13 | Village | High | Grant | Long-term |
| **Action C2.7**—Improve sewer capacity for stormwater and snowmelt by separating the combined sewer system. | | | | | | |
| Ongoing | Food, Severe Weather, Severe Winter Weather | 1, 2, 9, 13 | Village | High | IEPA, Grants | Ongoing |
| **Action C2.8**—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 | 7, 13 | Village | High | FEMA Hazard Mitigation Grants | Long-term (depending on funding) |
| **Action C2.9**—Continue to support the countrywide actions identified in this plan. | | | | | | |
| Ongoing | All | All | Village | Low | General Fund | Short-term |
| **Action C2.10**—Actively participate in the plan maintenance strategy identified in this plan. | | | | | | |
| Ongoing | All | 3, 4, 6 | DHSEM Village | Low | General Fund | Short-term |
| **Action C2.11**—Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady. | | | | | | |
| Ongoing | All | 3, 4, 5, 6, 7, 9, 10, 11, 13 | Village | Low | General Fund | Long-term |
| **Action C2.12**—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 | Village | Low | General Fund | Short-term and ongoing |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Action C2.13**—Where feasible, implement a program to record high water marks following high-water events. | | | | | | |
| Ongoing | Flooding, Severe Weather | 3, 6, 9 | Village | Medium | General Fund; FEMA Grant Funds (Public Assistance) | Long-term |
| **Action C2.14**—Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment. | | | | | | |
| Ongoing | All | 3, 4, 6, 10, 13 | Engineering Consultant acting as Village Engineer, Economic Development and Public Works Dept. | Low | General Fund | Short-term |
| **Action C2.15**—Consider the development and implementation of a Capital Improvements Program to increase the Village's regulatory, financial and technical capability to implement mitigation actions. | | | | | | |
| Ongoing | All | 1, 2, 7 | Public Works | High | CIP component of general fund (if implemented) | Long-term |
| **Action C2.16**—West Calumet Park flood mitigation program and Winchester Ave flood mitigation project. | | | | | | |
| New | Flood | 9 | MWRD/Cook County | 2.5 million; High | TBD | 2022 |
| **Action C2.17**—Veteran's Park Flooding Mitigation Project | | | | | | |
| New | Flood | 3, 13 | Village | 2,346,883; High | Grants | 2021 |
| **Action C2.18**—Green Alley Flood Mitigation Project | | | | | | |
| New | Flood | 3, 13 | Village | 524,080; High | Grants and local funds | 2021 |
| **Action C2.19**—Green Infrastructure: Intersection Project | | | | | | |
| New | Flood | 3, 13 | Village | 462,642; High | Grants and local funds | 2021 |

| **Action C2.20**—South Throop Street Flood Mitigation Project | | | | | | |
|---|---|---|---|---|---|---|
| New | Flood | 2, 3, 12, 13 | Village | High | Grants and local funds | 2021 |
| (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 | 2 | Medium | Low | Yes | No | Yes | Medium |
| 2 | 4 | High | High | Yes | Yes | No | High |
| 3 | 3 | High | High | Yes | Yes | No | Medium |
| 4 | 3 | High | High | Yes | Yes | Yes | Medium |
| 5 | 3 | High | Medium | Yes | No | No | Medium |
| 6 | 4 | High | High | Yes | Yes | No | High |
| 7 | 4 | High | High | Yes | Yes | No | High |
| 8 | 2 | High | High | Yes | Yes | No | Medium |
| 9 | 13 | Medium | Low | Yes | No | Yes | High |
| 10 | 3 | Medium | Low | Yes | Yes | Yes | High |
| 11 | 9 | Medium | Low | Yes | No | Yes | Medium |
| 12 | 3 | Medium | Low | Yes | No | Yes | High |
| 13 | 3 | Medium | Medium | Yes | Yes | No | Medium |
| 14 | 5 | Medium | Low | Yes | No | Yes | High |
| 15 | 3 | High | High | Yes | No | No | Medium |
| 16 | 1 | High | High | Yes | Yes | No | High |
| 17 | 2 | High | High | Yes | Yes | TBD | High |
| 18 | 2 | High | High | Yes | Yes | TBD | High |
| 19 | 2 | High | High | Yes | Yes | TBD | High |
| 20 | 4 | High | High | Yes | Yes | TBD | High |

(a) See Chapter 1 for explanation of priorities.

## New Mitigation Actions

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

**Action C2.16**

| Mitigation Action | West Calumet Park flood mitigation program and Winchester Ave flood mitigation project. |
|---|---|
| **Year Initiated** | 2019 |
| **Applicable Jurisdiction** | Village of Calumet Park |
| **Lead Agency/Organization** | MWRD/Cook County |
| **Supporting Agencies/Organizations** | MWRD/Cook County |
| **Applicable Goal** | • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects<br>• Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards. |
| **Applicable Objective** | • Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans. |
| **Estimated Cost** | 2.5 million |
| **Benefits (loss avoided)** | This will mitigate the constant and continuous flooding and will help residents maintain valuables and property. |
| **Projected Completion Date** | 2022 |
| **Priority and Level of Importance (Low, Medium, High)** | High |
| **Benefit Analysis (Low, Medium, High)** | High - Project will provide an immediate reduction of risk exposure for life and property. |
| **Cost Analysis (Low, Medium, High)** | High - Existing funding will not cover the cost of the project; implementation would require new revenue |
| **Actual Completion Date** | |

| **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 C2.17**

| | |
|---|---|
| **Mitigation Action** | Veteran's Park Flooding Mitigation Project. |
| **Year Initiated** | Project concept plan created 2019 |
| **Applicable Jurisdiction** | Village of Calumet Park |
| **Lead Agency/Organization** | Village of Calumet Park |
| **Supporting Agencies/Organizations** | |
| **Applicable Goal** | • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.<br>• Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards.<br>• Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events.<br>• Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards.<br>• Develop, promote, and integrate mitigation action plans.<br>• Promote public understanding of and support for hazard mitigation. |
| **Applicable Objective** | • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change.<br>• Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes. |
| **Estimated Cost** | $2,346,883.00 |
| **Benefits (loss avoided)** | Allow use of Veteran's Park (one of only two parks in Village)by citizens and visitors- recurring flooding frequently renders the park unusable. |
| **Projected Completion Date** | 2021 |
| **Priority and Level of Importance (Low, Medium, High)** | High Priority |
| **Benefit Analysis (Low, Medium, High)** | High - Project will provide an immediate reduction of risk exposure for life and property. |
| **Cost Analysis (Low, Medium, High)** | High - Existing funding will not cover the cost of the project; implementation would require new revenue |
| **Actual Completion Date** | |

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

| | |
|---|---|
| **Action/Implementation Plan and Project Description:** | Veterans Park was chosen for a mitigation project to provide a detention benefit to neighborhoods downstream and make the park more usable after flood events. There is substantial area north of Veterans Park that currently drains through the Park and contributes to neighborhood flooding south of Veterans Park.<br><br>The Veterans Park project would include underground detention at the baseball and soccer fields (artificial turf) and new playground (permeable rubber play surface). Maintenance for the turf fields and playground will include vacuuming twice a year, typically in the fall and spring. The detention would be sized to account for the entire tributary area, and not just the park itself in order to provide a benefit.<br><br>The amount of detention that can be provided is dependent on the ground water level, infiltration rate,<br>and the depth of the downstream receiving pipe. The northeast corner of the park would be graded to a wide, shallow swale directing flow from the north near the railroad to the north soccer field detention.<br><br>Coordination with residents within the tributary area would be prioritized to encourage as much surface water to be directed to the detention through downspout disconnection, restricting street inlets, minor regrading of Lincoln Street and 124th street as necessary, and curb cuts into the park fields. Educational signage will help residents understand how the investment helps reduce flooding.<br><br>An Engineer's Opinion of Cost was developed for this project and is $2,346,883. The Opinion of Cost as<br>developed based on an assumed excavation and detention depth of five feet. |

| 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 C2.18**

| | |
|---|---|
| **Mitigation Action** | Green Alley Flood Mitigation Project. |
| **Year Initiated** | Concept Plan created 2019 |
| **Applicable Jurisdiction** | Village of Calumet Park |
| **Lead Agency/Organization** | Village of Calumet Park |
| **Supporting Agencies/Organizations** | |
| **Applicable Goal** | • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.<br>• Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards.<br>• Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events.<br>• Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards.<br>• Develop, promote, and integrate mitigation action plans.<br>• Promote public understanding of and support for hazard mitigation. |
| **Applicable Objective** | • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change.<br>• Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes. |
| **Estimated Cost** | $524,080.00 |
| **Benefits (loss avoided)** | Protect properties from recurring flood events- stormwater entering properties and structures through alleys. |
| **Projected Completion Date** | 2021 |
| **Priority and Level of Importance (Low, Medium, High)** | High Priority |
| **Benefit Analysis (Low, Medium, High)** | High - Project will provide an immediate reduction of risk exposure for life and property. |
| **Cost Analysis (Low, Medium, High)** | High - Existing funding will not cover the cost of the project; implementation would require new revenue |
| **Actual Completion Date** | |

**Recommended Mitigation Action/Implementation Plan and Project Description**

| | |
|---|---|
| **Action/Implementation Plan and Project Description:** | The alley concept between Justine Street and Laflin Street, and 127th Street and 126th Street was chosen over neighboring alleys as the pilot location due to its flooding risk, flooding history, and an overland flow path is located along this alley. Alleys in Calumet Park typically do not have stormwater infrastructure and as a result are often locations of stormwater ponding during storm events. The alley concept would serve the adjacent homes and could be easily implemented elsewhere in the community.<br>The alley concept will have a permeable asphalt surface. Porous asphalt consists of standard asphalt where the finer particles have been reduced, creating void space to make it permeable. Porous asphalt is placed over underground detention, allowing the stormwater to drain through the pavement into the detention area. Detention for the alley will be provided in a storm chamber system and the amount of detention that could be provided is dependent on the ground water level, infiltration rate, and the depth of the downstream receiving pipe. The storm chamber system will provide more storage volume than the void space provided in a stone bed. Maintenance for the porous asphalt will include vacuum sweepers twice a year, typically in the fall and spring. Sand should not be used for winter maintenance as it would clog the pores. Educational signage will help residents understand how the investment helps reduce flooding.<br><br>An Engineer's Opinion of Cost was developed for this project and is $524,080. The Opinion of Cost as developed based on an assumed excavation and detention depth of six feet. |

| **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 C2.19**

| | |
|---|---|
| **Mitigation Action** | Green Infrastructure: Intersection Project. |
| **Year Initiated** | Concept Plan created 2019 |
| **Applicable Jurisdiction** | Village of Calumet Park |
| **Lead Agency/Organization** | Village of Calumet Park |
| **Supporting Agencies/Organizations** | |
| **Applicable Goal** | • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.<br>• Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards.<br>• Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events.<br>• Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards.<br>• Develop, promote, and integrate mitigation action plans.<br>• Promote public understanding of and support for hazard mitigation. |
| **Applicable Objective** | • Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change.<br>• Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes. |
| **Estimated Cost** | $462,642.00 |
| **Benefits (loss avoided)** | Flood loss and intersection blockage by flooding avoided in recurring flood location. Improved response preparedness and resilience to natural flood events. |
| **Projected Completion Date** | 2021 |
| **Priority and Level of Importance (Low, Medium, High)** | High Priority |
| **Benefit Analysis (Low, Medium, High)** | High - Project will provide an immediate reduction of risk exposure for life and property. |
| **Cost Analysis (Low, Medium, High)** | High - Existing funding will not cover the cost of the project; implementation would require new revenue |
| **Actual Completion Date** | |

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

| | |
|---|---|
| **Action/Implementation Plan and Project Description:** | The intersection project at Aberdeen Street and 124th Street includes Silva cells and two trees at each corner of the intersection, and stone storage underneath the intersection. Silva cells are a modular, underground stormwater BMP that can be installed under pavement, uses soil volume to support large tree growth, and provides stormwater management through absorption, evapotranspiration, and interception. They allow for larger trees than standard tree planting. The stone storage and Silva cell storage will be able to interact through underground connections. The intersection will be crowned to provide positive drainage toward the Silva cells and curb cuts will be placed along the curb line.<br><br>Standard asphalt will be installed, with the exception of a concrete pad for the bus stop. Trees will need to be mulched and watered regularly during the three-year establishment period. The existing catch basins will remain in place to serve as an overflow option should the underground detention storage be overwhelmed. Underdrains will connect the stone storage to the combined sewer along Aberdeen Street with restrictors and will require backflow preventers. The depth of detention that could be provided is dependent on the ground water level, infiltration rate, and depth of downstream receiving pipe. Educational signage will help residents understand how the investment helps reduce flooding.<br><br>An Engineer's Opinion of Cost was developed for this project and is $462,642. The Opinion of Cost as developed based on an assumed excavation and detention depth of six feet. |

| 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 C2.20**

| | |
|---|---|
| **Mitigation Action** | South Throop Street Flood Mitigation Project. |
| **Year Initiated** | Phase I underway 2019 |
| **Applicable Jurisdiction** | Village of Calumet Park |
| **Lead Agency/Organization** | Village of Calumet Park |
| **Supporting Agencies/Organizations** | |
| **Applicable Goal** | • Develop and implement sustainable, cost-effective, and environmentally sound risk-reduction (mitigation) projects.<br>• Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards.<br>• Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events.<br>• Involve stakeholders to enhance the local capacity to mitigate, prepare for, and respond to the impacts of natural hazards.<br>• Develop, promote, and integrate mitigation action plans.<br>• Promote public understanding of and support for hazard mitigation. |
| **Applicable Objective** | • Increase the resilience of (or protect and maintain) infrastructure and critical facilities.<br>• Consider the impacts of natural hazards on future land uses in the planning area, including possible impacts from climate change.<br>• Reduce natural hazard-related risks and vulnerability to potentially isolated populations within the planning area.<br>• Encourage hazard mitigation measures that result in the least adverse effect on the natural environment and that use natural processes. |
| **Estimated Cost** | TBD |
| **Benefits (loss avoided)** | Protects industrial district from recurring flooding of properties and roadway blockages due to flooding. |
| **Projected Completion Date** | 2021 |
| **Priority and Level of Importance (Low, Medium, High)** | High Priority |
| **Benefit Analysis (Low, Medium, High)** | High - Project will provide an immediate reduction of risk exposure for life and property. |
| **Cost Analysis (Low, Medium, High)** | High - Existing funding will not cover the cost of the project; implementation would require new revenue |
| **Actual Completion Date** | |

| Recommended Mitigation Action/Implementation Plan and Project Description | |
|---|---|
| **Action/Implementation Plan and Project Description:** | The project area is primarily industrial in nature, with substantial impervious surface. In particular, the property located at the end of the street on the eastern side is frequently flooded during moderate to heavy rain events. The storm sewers in the project area were modeled and indicated that they were undersized. In addition, there is no stormwater detention in the area, as well as significant areas of offsite runoff. This results in regular flooding for even relatively minor storm events.<br><br>The solution undertaken by this project is the design and construction of an outfall directly to the Cal-Sag Channel that would convey stormwater from the Site. |

| 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 C2.1**

| TABLE: ACTION PLAN MATRIX | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Hazards Mitigated** | **Objectives Met** | **Lead Agencies** | **Estimated Cost** | **Sources of Funding** | **Timeline/Projected Completion Date (a)** |
| **Action C2.1**—Educate property owners about flood mitigation techniques including using outreach activities to facilitate technical assistance program that address measures that citizens can take or facilitate funding for mitigation measures. | | | | | | |
| Ongoing | Flood, Severe Weather | 1, 12 | Village | High | Local, Grant | Short-term |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.2**

| TABLE: ACTION PLAN MATRIX | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Hazards Mitigated** | **Objectives Met** | **Lead Agencies** | **Estimated Cost** | **Sources of Funding** | **Timeline/Projected Completion Date (a)** |
| **Action C2.2** —Improve stormwater drainage capacity by increasing the capacity of the City's storm sewer drainage system. | | | | | | |
| Ongoing | Flood, Severe Weather | 1, 2, 9, 13 | Village | High | Grant | Long-term |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.3**

| TABLE: ACTION PLAN MATRIX | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Hazards Mitigated** | **Objectives Met** | **Lead Agencies** | **Estimated Cost** | **Sources of Funding** | **Timeline/Projected Completion Date (a)** |
| **Action C2.3**—Assess vulnerability to severe wind using GIS to map areas that are at risk to the wind hazard associated with straight-line wind conditions | | | | | | |
| Ongoing | Severe Weather | 3, 4, 10 | Village | High | Grant | Long-term |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.4**

| TABLE: ACTION PLAN MATRIX | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Hazards Mitigated** | **Objectives Met** | **Lead Agencies** | **Estimated Cost** | **Sources of Funding** | **Timeline/Projected Completion Date (a)** |
| **Action C2.4**—Incorporate a GIS system/management plan for tracking permitting, land use patterns, tracking hazard data, and mapping risk for various hazards. | | | | | | |
| Ongoing | Multi-hazard | 3, 4, 10 | Village | Medium | Grant | Short-term |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.5**

| TABLE: ACTION PLAN MATRIX | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Hazards Mitigated** | **Objectives Met** | **Lead Agencies** | **Estimated Cost** | **Sources of Funding** | **Timeline/Projected Completion Date (a)** |
| **Action C2.5**—Develop and maintain a database to track community vulnerability to known hazard areas. | | | | | | |
| Ongoing | Multi-hazard | 1, 5, 6 | Village | Medium | Grant | Short-term |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.6**

| TABLE: ACTION PLAN MATRIX | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Hazards Mitigated** | **Objectives Met** | **Lead Agencies** | **Estimated Cost** | **Sources of Funding** | **Timeline/Projected Completion Date (a)** |
| **Action C2.6**—Protecting infrastructure and critical facilities from damage by engineering and/or retrofitting roads to withstand hazards. | | | | | | |
| Ongoing | Multi-hazard | 1, 2, 9, 13 | Village | High | Grant | Long-term |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.7**

| TABLE: ACTION PLAN MATRIX | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Hazards Mitigated** | **Objectives Met** | **Lead Agencies** | **Estimated Cost** | **Sources of Funding** | **Timeline/Projected Completion Date (a)** |
| **Action C2.7**—Improve sewer capacity for stormwater and snowmelt by separating the combined sewer system. | | | | | | |
| Ongoing | Food, Severe Weather, Severe Winter Weather | 1, 2, 9, 13 | Village | High | IEPA, Grant | Ongoing |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.8**

| TABLE: ACTION PLAN MATRIX | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Hazards Mitigated** | **Objectives Met** | **Lead Agencies** | **Estimated Cost** | **Sources of Funding** | **Timeline/Projected Completion Date (a)** |
| **Action C2.8**—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 | 7. 13 | Village | High | FEMA Hazard Mitigation Grants | Long-term (depending on funding) |
| (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. | | | | | | |

**Action C2.9**

| TABLE: ACTION PLAN MATRIX | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Hazards Mitigated** | **Objectives Met** | **Lead Agencies** | **Estimated Cost** | **Sources of Funding** | **Timeline/Projected Completion Date (a)** |
| **Action C2.9**—Continue to support the countrywide actions identified in this plan. | | | | | | |
| Ongoing | All | All | Village | Low | General Fund | Short-term |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.10**

| TABLE: ACTION PLAN MATRIX | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Hazards Mitigated** | **Objectives Met** | **Lead Agencies** | **Estimated Cost** | **Sources of Funding** | **Timeline/Projected Completion Date (a)** |
| **Action C2.10**—Actively participate in the plan maintenance strateg identified in this plan. | | | | | | |
| Ongoing | All | 3, 4, 6 | DHSEM Village | Low | General Fund | Short-term |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.11**

| TABLE: ACTION PLAN MATRIX | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Hazards Mitigated** | **Objectives Met** | **Lead Agencies** | **Estimated Cost** | **Sources of Funding** | **Timeline/Projected Completion Date (a)** |
| **Action C2.11**—Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady. | | | | | | |
| Ongoing | All | 3, 4, 5, 6, 7, 9, 10, 11, 13 | Village | Low | General Fund | Long-term |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.12**

| TABLE: ACTION PLAN MATRIX | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Hazards Mitigated** | **Objectives Met** | **Lead Agencies** | **Estimated Cost** | **Sources of Funding** | **Timeline/Projected Completion Date (a)** |
| **Action C2.12**—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 | Village | Low | General Fund | Short-term and ongoing |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.13**

**TABLE: ACTION PLAN MATRIX**

| Status | Hazards Mitigated | Objectives Met | Lead Agencies | Estimated Cost | Sources of Funding | Timeline/Projected Completion Date (a) |
|---|---|---|---|---|---|---|
| **Action C2.13**—Where feasible, implement a program to record high water marks following high-water events. | | | | | | |
| Ongoing | Flooding, Severe Weather | 3, 6, 9 | Village | Medium | General Fund; FEMA Grant Funds (Public Assistance) | Long-term |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.14**

**TABLE: ACTION PLAN MATRIX**

| Status | Hazards Mitigated | Objectives Met | Lead Agencies | Estimated Cost | Sources of Funding | Timeline/Projected Completion Date (a) |
|---|---|---|---|---|---|---|
| **Action C2.14**—Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment. | | | | | | |
| Ongoing | All | 3, 4, 6, 10, 13 | Engineering Consultant acting as Village Engineer, Economic Development and Public Works Dept. | Low | General Fund | Short-term |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

**Action C2.15**

**TABLE: ACTION PLAN MATRIX**

| Status | Hazards Mitigated | Objectives Met | Lead Agencies | Estimated Cost | Sources of Funding | Timeline/Projected Completion Date (a) |
|---|---|---|---|---|---|---|
| **Action C2.15**—Consider the development and implementation of a Capital Improvements Program to increase the Village's regulatory, financial and technical capability to implement mitigation actions. | | | | | | |
| Ongoing | All | 1, 2, 7 | Public Works | High | CIP component of general fund (if implemented) | Long-term |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. | | | | | | |

## Completed Mitigation Actions

Calumet Park has no completed actions at this time.

## 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

| CALUMET PARK EXISTING CONDITIONS | |
|---|---|
| 2010 Population | 7,835 |
| Total Assessed Value of Structures and Contents | $4,067,136,290 |
| Area in 100-Year Floodplain | 25.85 acres |
| Area in 500-Year Floodplain | 25.85 acres |
| Number of Critical Facilities | 19 |

**HAZARD EXPOSURE IN CALUMET PARK**

| | Number Exposed | | Value Exposed to Hazard | | | % of Total Assessed Value Exposed |
|---|---|---|---|---|---|---|
| | Population | Buildings | Structure | Contents | **Total** | |
| **Dam Failure** | | | | | | |
| Buffalo Creek | 0 | 0 | $0 | $0 | **$0** | 0.00% |
| U. Salt Cr. #2 | 0 | 0 | $0 | $0 | **$0** | 0.00% |
| Touhy | 0 | 0 | $0 | $0 | **$0** | 0.00% |
| U. Salt Cr. #3 | 0 | 0 | $0 | $0 | **$0** | 0.00% |
| U. Salt Cr. #4 | 0 | 0 | $0 | $0 | **$0** | 0.00% |
| **Flood** | | | | | | |
| 100-Year | 3 | 1 | $13,035,000 | $13,035,000 | **$26,070,000** | 0.64% |

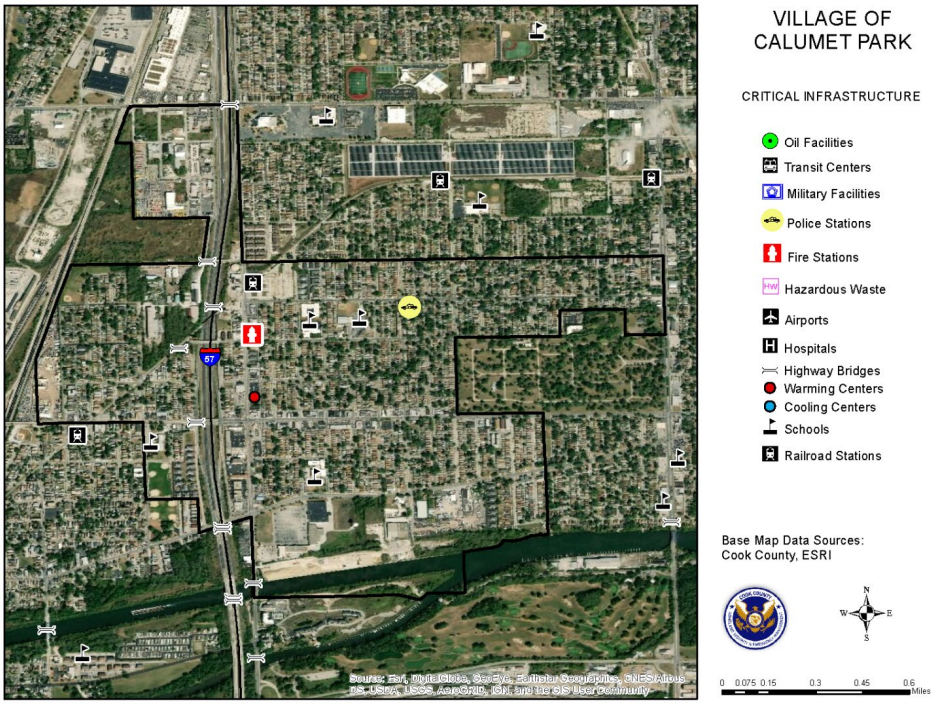
| | | | | | | |
|---|---|---|---|---|---|---|
| 500-Year | 3 | 1 | $13,035,000 | $13,035,000 | **$$26,070,000** | 0.64% |
| **Tornado** | | | | | | |
| 100-Year | — | — | $0 | $0 | **$0** | 0% |
| 500-Year | — | — | $0 | $0 | **$0** | 0% |

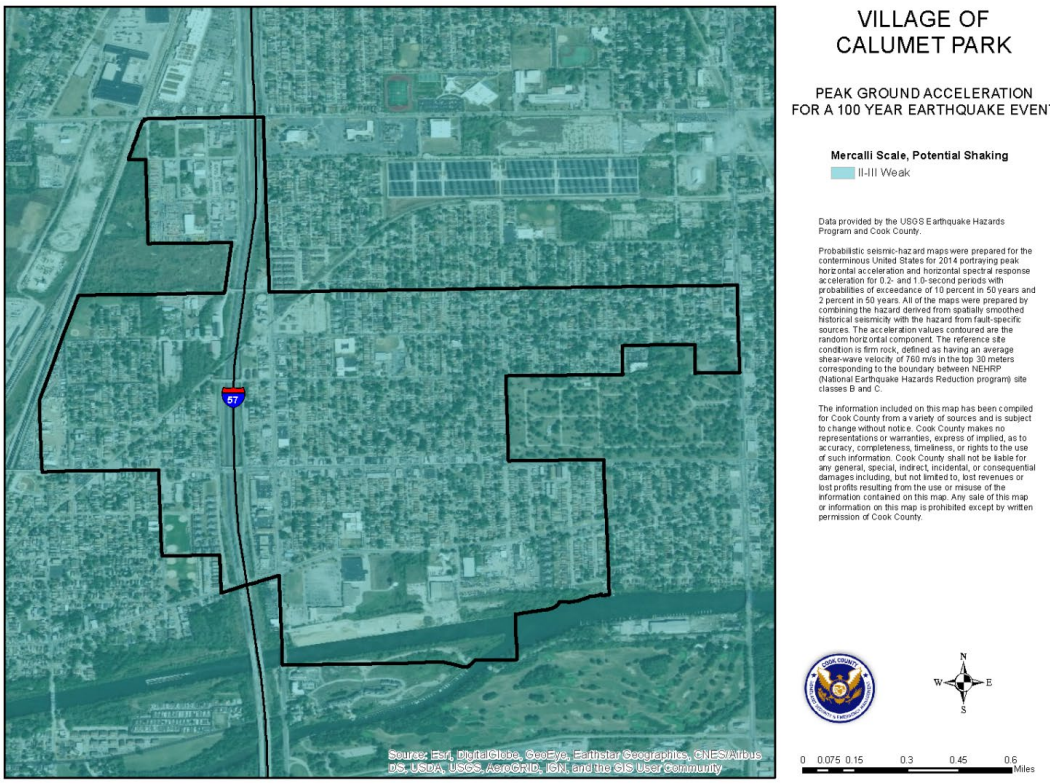
**ESTIMATED PROPERTY DAMAGE VALUES IN CALUMET PARK**

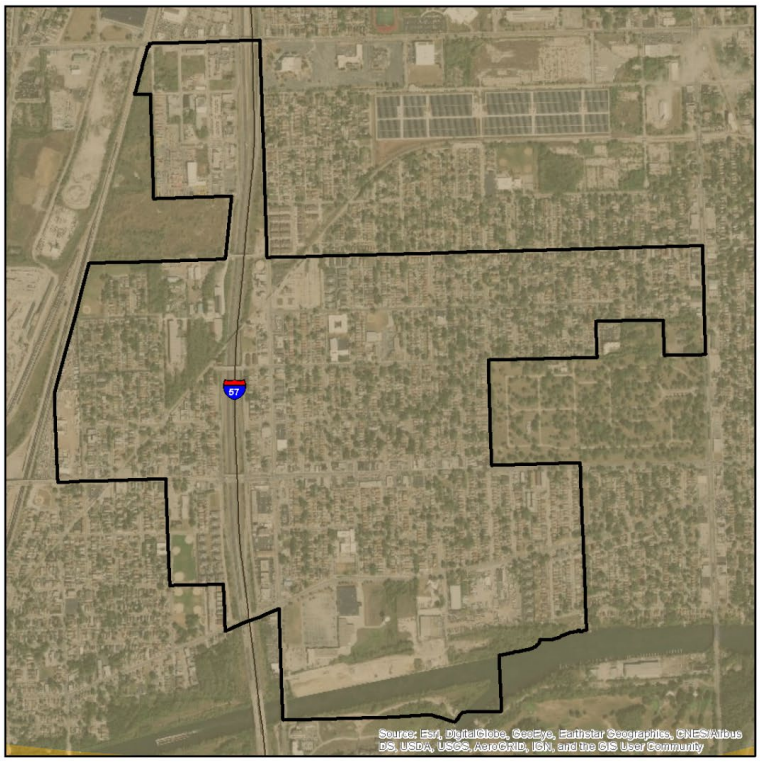
| | Estimated Damage Associated with Hazard | | | % of Total Assessed Value Damaged |
|---|---|---|---|---|
| | Building | Contents | **Total** | |
| **Dam Failure** | | | | |
| Buffalo Creek | $0 | $0 | **$0** | 0.00% |
| U. Salt Cr. #2 | $0 | $0 | **$0** | 0.00% |
| Touhy | $0 | $0 | **$0** | 0.00% |
| U. Salt Cr. #3 | $0 | $0 | **$0** | 0.00% |
| U. Salt Cr. #4 | $0 | $0 | **$0** | 0.00% |
| **Earthquake** | | | | |
| 1909 Historical Event | $12,867,461 | $3,332,188 | **$16,199,649** | 0.40% |
| **Flood** | | | | |
| 10-Year | $0 | $0 | **$0** | 0.00% |
| 100-Year | $0 | $0 | **$0** | 0.00% |
| 500-Year | $0 | $0 | **$0** | 0.00% |

| **Tornado** | | | | |
|---|---|---|---|---|
| 100-Year | $50,499,172 | $41,059,424 | **$91,558,596** | 2.25% |
| 500-Year | $171,299,263 | $147,233,069 | **$318,532,332** | 7.83% |

# Hazard Mapping






## VILLAGE OF CALUMET PARK

### NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL CLASSIFICATION

**TYPE**

- C - Very Dense Soil, Soft Rock
- D - Stiff Soil
- F- Site Specific Evaluation

Data provided by the Illinois State Geological Survey and Cook County.

The Central United States Earthquake Consortium (CUSEC) State Geologists produced a regional Soil Site Class map (NEHRP Soil Profile Type Map), a Liquefaction Susceptibility Map and a Soil Response Map for the 8 states to be used in the FEMA New Madrid Catastrophic Planning Initiative Phase II work. The USGS Geologic Investigation Series I-2789 Map of Surficial Deposits and Materials in the Eastern and Central United State (East of 102 degrees West Longitude) by David S. Fullerton, Charles A. Bush and Jean N. Pennell (2003) was the base map used for this work. Each State Geological Survey produced its own state map version of the Soil Site Class and Liquefaction Susceptibility maps. The procedures outlined in the NEHRP provisions (Building Seismic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2002) were followed to produce the soil site class maps. CUSEC State Geologists used the entire column of soils material down to bedrock and did not include any bedrock in the calculation of the average shear wave velocity for the column, since it is the soil column and the difference in shear wave velocity of the soils in comparison to the bedrock which influences much of the amplification.

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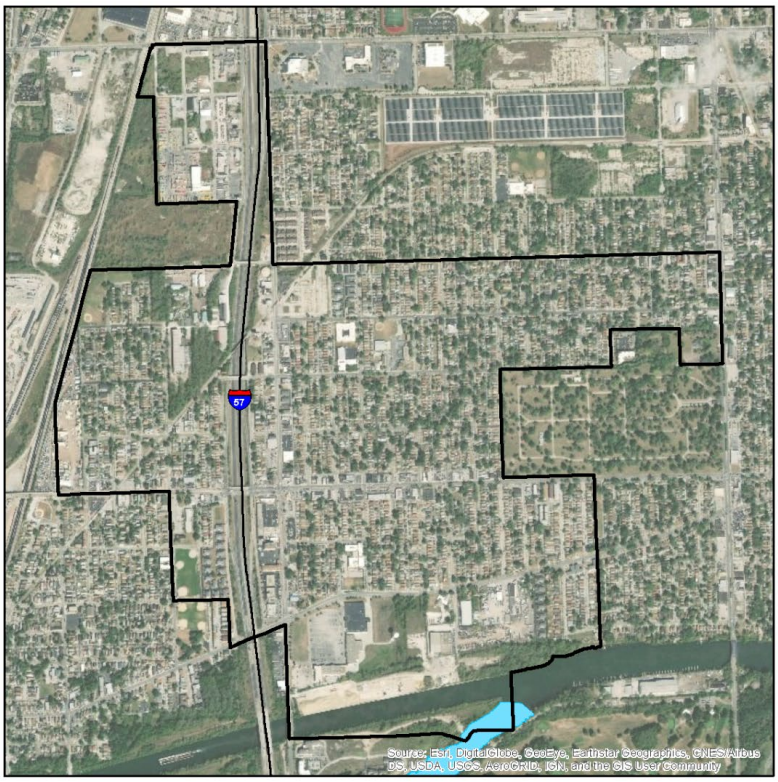
N W E S

0 0.05 0.1 0.2 0.3 0.4 Miles




## VILLAGE OF CALUMET PARK

### COOK COUNTY MWRDGC 100-YEAR INUNDATION AREA

100-year Inundation Area

MWRDGC Data provided by Metropolitan Water Reclamation District of Greater Chicago and Cook County.

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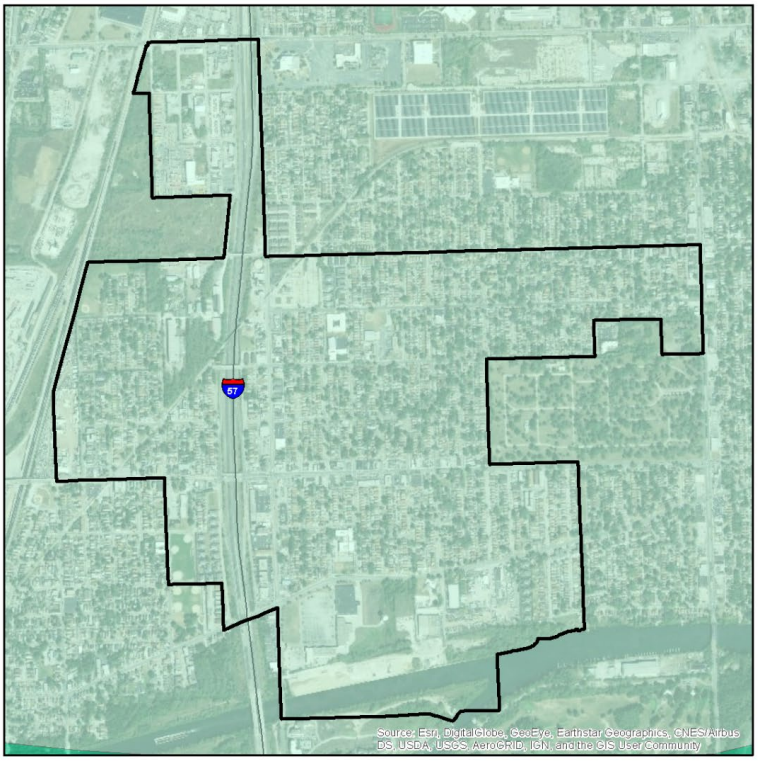
DISCLAIMER: The Cook County MWRDGC 100-year Inundation Map is provided to show general flood risk information regarding floodplains and inundation areas. This map is not regulatory. Official FEMA Flood Insurance Study information and regulatory maps can be obtained from http://www.fema.gov.

N W E S

0 0.05 0.1 0.2 0.3 0.4 Miles




VILLAGE OF CALUMET PARK

LIQUEFACTION SUSCEPTIBILITY

**LIQUEFACTION SUSCEPTIBILITY**
- high
- low
- very low

Data provided by the Illinois State Geological Survey and Cook County.

The Central United States Earthquake Consortium (CUSEC) State Geologists produced a regional Soil Site Class map (NEHRP Soil Profile Type Map), a Liquefaction Susceptibility Map and a Soil Response Map for the 8 states to be used in the FEMA New Madrid Catastrophic Planning Initiative Phase II work. The USGS Geologic Investigation Series I-2769 Map of Surficial Deposits and Materials in the Eastern and Central United State (East of 102 degrees West Longitude) by David S. Fullerton, Charles A. Bush and Jean N. Pennell (2003) was the base map used for this work. Each State Geological Survey produced its own state map version of the Soil Site Class and Liquefaction Susceptibility maps. The procedures outlined in the NEHRP provisions (Building Seismic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2002) were followed to produce the soil site class maps. CUSEC State Geologists used the entire column of soils material down to bedrock and did not include any bedrock in the calculation of the average shear wave velocity for the column, since it is the soil column and the difference in shear wave velocity of the soils in comparison to the bedrock which influences much of the amplification.

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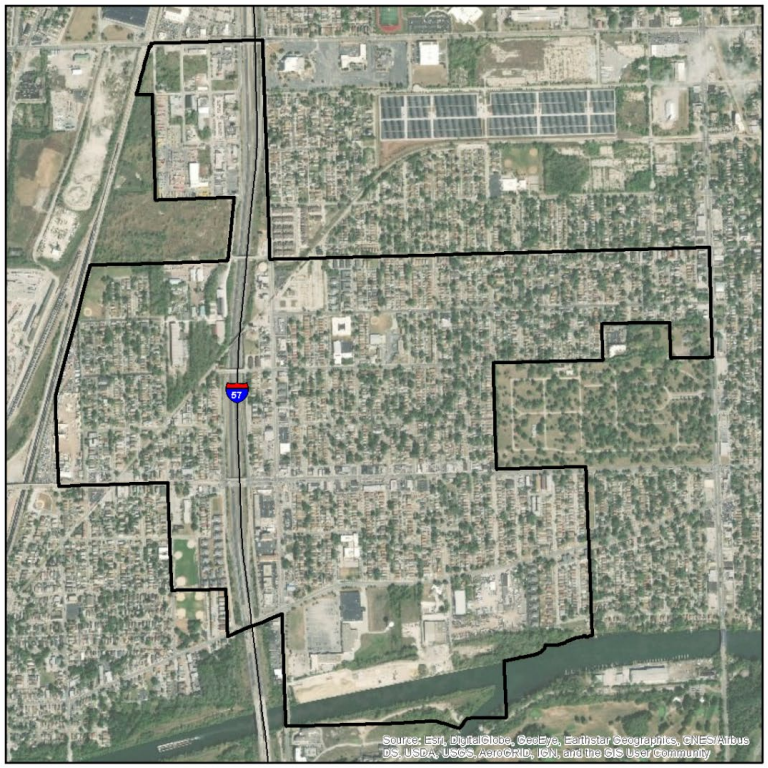
N W E S

0 0.05 0.1 0.2 0.3 0.4 Miles




VILLAGE OF CALUMET PARK

100- AND 500- YEAR TORNADO EVENTS

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

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

N W E S

0 0.05 0.1 0.2 0.3 0.4 Miles