

# Natural Hazards Mitigation Plan

## Calumet City

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# Calumet City, Illinois

## Natural Hazards Mitigation Plan

### Executive Summary

#### 1. Introduction

To address historical and potential flooding problems, the City of Calumet City prepared a *Floodplain Management Plan* in 1999. In 2005, the City decided to update that plan, incorporate other natural hazards, and meet certain criteria for FEMA's Community Rating System and mitigation funding programs. The *Plan* has 10 chapters which are summarized here.

This *Natural Hazards Mitigation Plan* was prepared by a committee that included City staff and a resident from each of the City's wards. The Committee met monthly to review the extent of the problem and the full range of solutions. Maintaining the City's excellent CRS rating of a Class 6 helped guide the planning effort.



#### 2. Problem Description

Eight natural hazards were reviewed.

- Overbank flooding
- Local drainage
- Sewer backup
- Tornadoes
- Winter storms
- Severe storms
- Earthquake
- Extreme heat

For each hazard, the plan summarizes historical events, calculates the frequency of occurrence and the dollar damage to property, and discusses the impact on the economy and the threat to safety and health. Of these eight natural hazards:

- Overbank flooding has the potential to cause the greatest amount of property damage.
- Overbank flooding and tornadoes have the greatest economic impact from a single occurrence. However, over the long run, local drainage problems, winter storms, severe storms, and extreme heat are more economically disruptive.
- Extreme heat poses the greatest threat to life and health in an average year. Winter storms are the second greatest threat.
- Except for overbank flooding, drainage, and sewer backup, the City's exposure to these hazards has not been reduced. A mitigation program should include measures to protect new construction from damage expected from disasters.



### 3. Goals

The following goals statements were adopted by the Planning Committee:

1. Protect the people of Calumet City, their homes and their health, from the dangers of natural hazards.
2. Place a priority on protecting public services, including critical facilities, utilities and schools.
3. Inform residents and businesses about the hazards they face and the ways they can protect themselves and their properties from those hazards.
4. Protect open space, wetlands and natural areas for the public to enjoy and to prevent inappropriate development in hazardous areas.

### 4. Preventive Measures

The Planning Committee looked at a variety of ways to keep the various problems from getting worse. Because there is little vacant land available for development, the measures that would be most effective in a developed community such as Calumet City are building codes, mobile home regulations, and floodplain regulations. The City is actively administering all three programs.

Some technical changes are needed to the City's floodplain management ordinance. The Committee found that more coordination is needed between those who promote land development and those who are responsible for regulating it.

### 5. Property Protection

There are several measures that can be taken on a property to protect it from damage. They have been used on homes in the area and have been shown to work. Among the measures reviewed are:

- Acquiring and clearing structures in the floodplain (done on 12 homes in the 1980's),
- Elevating buildings above flood levels,
- Retrofitting buildings to protect them from water, wind, earthquakes, and storms,
- Protecting against sewer backup, and
- Insuring properties with coverage for natural hazards.

Many of the measures can be installed at relatively little cost to the owner. There are a variety of ways the City can assist owners to implement property protection measures, ranging from providing information to helping fund construction under the rebate program.



## 6. Natural Resource Protection

Protecting natural resources, such as prairie lands and native vegetation, can help reduce flood losses. While Calumet City has recently adopted regulations for protecting many of its natural resources, its wetland regulations may not provide any more protection than the Corps of Engineers' program, which had its jurisdiction reduced by a recent US Supreme Court order.

There is interest in protecting natural areas and developing connecting greenways. A hazard mitigation program can take advantage of this interest and utilize natural resource protection programs to support mitigation activities, such as keeping floodprone areas open. Urban forestry can help protect against damage to trees and utility lines caused by wind and ice storms, but Calumet City does not have a formal program.



## 7. Emergency Management

Accurate flood stage and time predictions are available for the Little Calumet River from the nearby Cottage Grove Avenue gage. However, to be useful, the City needs to be able to access the Weather Service predictions and convert the data to sites in Calumet City. The best warning that can be expected for the local drainage and sewer backup flooding, tornadoes, and thunderstorms is a general “watch” issued by the Weather Service.

The City has effective means to disseminate warnings to the general public and has successfully responded to recent disasters, especially floods. However, the Emergency Response Plan does not provide enough specific guidance to qualify for credit under the Community Rating System.

## 8. Flood Control

The Thornton Transitional Reservoir has had a major impact on Little Calumet River flood levels. The City has benefited greatly from its levee along the Little Calumet River. However, repairs and improvements are needed if the levee is to be depended on when needed.

There have been successful small scale flood control projects, including the separate sewers and retention basins in the northwestern quarter of the city which have reduced local drainage and sewer backup problems.

The City's channel maintenance program has reduced flooding from smaller, more frequent storms and improves the appearance of the river, all at a relatively low cost. However, more attention is needed toward maintaining retention basins and storm sewer inlets and improving internal coordination of the maintenance activities.



## 9. Public Information

The City's official floodplain map, the Cook County Flood Insurance Rate Map, is out of date. It is keeping development regulations and the flood insurance purchase requirement in place for thousands of properties in the south suburbs that may no longer be subject to the 100-year flood.

The City has implemented a variety of methods of delivering hazard awareness and protection information, including the Calumet City Review, the website, and open houses. The messages should stress ways people can protect themselves and what they can do to reduce the hazards. The more times a message is repeated using different media, the more effective the information strategy.



## 10. Action Plan

The culmination of the *Calumet City Natural Hazards Mitigation Plan* is the series of 14 action items presented in Chapter 10. An agency is responsible for each one and has been given a deadline. All projects will be completed in five years.

1. The Floodplain management Committee will continue to act as a forum for mitigation issues, monitor implementation of this *Plan*, and report on progress to the City Council.
2. The Department of Inspectional Services will critique and improve its procedures.
3. The Committee will review recommended floodplain and stormwater ordinance amendments.
4. The Department's authority in mobile home parks will be clarified and expanded.
5. Repetitively flooded buildings and critical facilities will be evaluated to determine appropriate hazard protection measures.
6. The sewer backup rebate program will continue.
7. The City will formalize its urban forestry program and become a Tree City USA.
8. The flood response procedures will be improved.
9. Emergency preparedness planning will coordinate better with critical facilities.
10. The levee will be evaluated for improvements after the floodplain map is revised.
11. Drainage system maintenance procedures will be improved and expanded.
12. The Flood Insurance Rate Map will be revised to reflect new flood control projects.
13. The City will improve and conduct a variety of outreach projects.
14. Special public information projects will be conducted with neighboring villages, developers, real estate offices, insurance agents, contractors, home improvement stores, and schools.