

Request For Board Action

REFERRED TO BOARD: October 9, 2017

AGENDA ITEM NO: 3

ORIGINATING DEPARTMENT: Administration

SUBJECT: APPROVAL OF A RESOLUTION ADOPTING THE 2017 LAKE COUNTY ALL NATURAL HAZARDS MITIGATION PLAN

SUMMARY AND BACKGROUND OF SUBJECT MATTER:

In 2006, Lake County and participating Lake County municipalities developed and adopted the first Lake County Countywide All Natural Hazards Mitigation Plan (ANHMP). The Federal Emergency Management Agency (FEMA) requires that a community develop and adopt a FEMA-approved ANHMP in order to be eligible for hazard mitigation grant funds. This ANHMP is required to be updated and re-adopted every five years to maintain grant eligibility.

Lake County Stormwater's 2017 ANHMP is the second update for the 2006 ANHMP. This plan is multi-jurisdictional, meaning the County and its municipalities must adopt the ANHMP. The mitigation plan identifies activities and projects to reduce the damages caused by natural hazards such as tornadoes, floods, and severe summer and winter storms. Mitigation means anything that can be done to reduce the impact of a natural hazard.

DOCUMENTS ATTACHED:

1. Resolution
2. Lake County ANHMP 2017 Executive Summary
3. ANHMP FAQ

RECOMMENDED MOTIONS:

Move to Approve a Resolution Adopting the 2017 Lake County All Natural Hazards Mitigation Plan

RESOLUTION NO. 17-xx

**ADOPTION OF THE 2017 LAKE COUNTY
ALL NATURAL HAZARDS MITIGATION PLAN**

WHEREAS, Lake County is subject to flooding, tornadoes, severe summer and winter storms, and other natural hazards that can damage property, close businesses, disrupt traffic, and present a public health and safety hazard; and

WHEREAS, the Lake County Hazard Mitigation Planning Committee has prepared and recommended the 2017 update of *Lake County All Natural Hazards Mitigation Plan* that reviews the County's options to protect people and reduce damage from hazards; and

Whereas, the Lake County and Lake County municipalities prepared and adopted the 2012 *Lake County All Natural Hazards Mitigation Plan* and the 2017 *Lake County All Natural Hazards Mitigation Plan* is an update required by the Federal Emergency Management Agency; and

WHEREAS, the 2017 *Lake County All Natural Hazards Mitigation Plan* was developed as a multi-jurisdictional plan and has been submitted and approved by Illinois Emergency Management Agency and the Federal Emergency Management Agency; and

WHEREAS, the recommended *2017 Lake County All Natural Hazards Mitigation Plan* has been widely circulated for review by residents and federal, state, and regional agencies and has been supported by those reviewers; and

WHEREAS, the preparation and adoption of a community mitigation plan is a requirement of the Federal Emergency Management Agency in order for Lake County to be eligible for federal mitigation funds under Section 104 of the Disaster Mitigation Act of 2000 (42 USC 5165), and under 44 CFR (Code of Federal Regulations) Part 201.

NOW, THEREFORE BE IT RESOLVED, that the *2017 Lake County All Natural Hazards Mitigation Plan*, is hereby adopted as an official plan of the Village of Antioch; and

BE IT FURTHER RESOLVED, that John Laskowski is hereby appointed as the Village's representative on the Lake County Hazard Mitigation Planning Committee and he will keep the Village apprised of the mitigation action items undertaken by or reported to the Lake County Hazard Mitigation Planning Committee; and

BE IT FURTHER RESOLVED, that the Village Clerk is hereby requested to distribute a certified copy of this Resolution to the Lake County Stormwater Management Commission.

APPROVED this the 9th day of October, 2017.

Lawrence M. Hanson, Mayor

Attest:

Lori K. Romine, Village Clerk

Executive Summary

In 2006, Lake County and participating Lake County municipalities developed and adopted the first *Lake County Countywide All Natural Hazards Mitigation Plan (ANHMP)*. The Federal Emergency Management Agency (FEMA), through the Disaster Mitigation Act of 2000 (DMA 2000) and the Stafford Act require that a community develop and adopt a FEMA-approved natural hazard mitigation ANHMP in order to be eligible for hazard mitigation grant funds. DMA 2000 and the Stafford Act require that the mitigation ANHMP be updated and re-adopted every five years to maintain grant eligibility. This 2017 ANHMP is the second update of the 2006 ANHMP. The ANHMP is multi-jurisdictional, meaning the County and the municipalities must adopt the ANHMP.



This ANHMP meets all FEMA planning requirements including those of the FEMA National Flood Insurance Program’s (NFIP) Community Rating System (CRS). The ANHMP allows Lake County and the participating communities to receive Hazard Mitigation Assistance Program (HMA) grant funding from FEMA to fund mitigation projects. More can be learned about these programs at: <http://www.fema.gov/hazard-mitigation-grant-program>. CRS allows participating communities to earn credit towards discounts in flood insurance premiums.

“Hazard mitigation is defined as any sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event.”

FEMA

While this ANHMP meets federal planning requirements, it has also been prepared to protect life, health and safety, and to reduce damage to property and infrastructure from natural hazards. This ANHMP assesses the natural hazards that affect Lake County, sets mitigation goals, considers mitigation efforts currently being implemented, evaluates additional mitigation strategies, and recommends mitigation actions to be implemented over the next five years. The mitigation actions are designed to protect the people and assets of Lake County, and designed to be undertaken by both the public and the private sectors.

ANHMP Development

The ANHMP update was conducted with the input of the Lake County Hazard Mitigation Planning Committee (HMPC), which includes Lake County departments and agencies, Lake County municipalities and other stakeholders. The HMPC has been in place since the development of the 2006 ANHMP and has been meeting annually. The efforts of the HMPC were coordinated by the Lake County Stormwater Management Commission (SMC) and Lake County Emergency Management Agency (LCEMA).

Lake County, Illinois, is subject to natural hazards that threaten the life, health, and safety of residents and visitors. Natural hazards have caused extensive property damage throughout the County and can be expected to cause more damage in the future. In recent years:

- Major flood events struck the County in 1979, 1982, 1986, 1993, 1996, 2000, 2004, 2008 and 2013;
- Sixteen tornadoes have touched down since 1957;
- Severe thunderstorm, high winds, hail and rain impacted the County in 1996, 1998, 2002, 2007 and 2011;
- Severe winter storms impacted the residents in 1999, 2000, 2008;
- Wildfires burned acreage in 2003 and 2005; and
- Extreme heat impacted the young and the elderly in 1999.

The update of the ANHMP was based on discussion and data provided by the participating municipalities as they followed the recommended 10-step planning process. An ANHMP introduction and a description of the planning process are presented in Chapters 1 and 2. Natural hazards that can impact Lake County have been assessed in Chapter 3. Goals and guidelines established by the HMPC are presented in Chapter 4. Six mitigation strategies and a capabilities assessment of Lake County are examined in Chapter 5. The ANHMP action plan is detailed in Chapter 6, and procedures for monitoring and maintaining this ANHMP are included in Chapter 7.

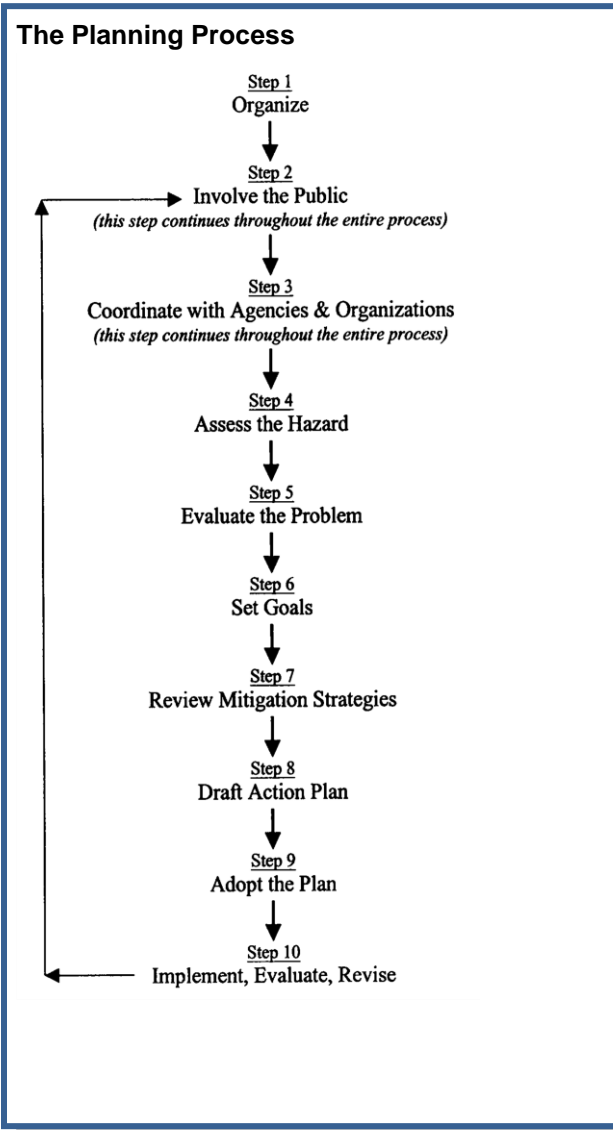
Chapter Summary

Introduction

Lake County is the most northeastern County in Illinois. The County Seat is Waukegan, Illinois. The County is composed of 53 individual communities and 18 townships. The total area of Lake County is approximately 1,368 square miles with a land area of approximately 448 square miles and the rest water.

Land in the county generally slopes to the southeast. Lake County is approximately 23.5 miles from north to south. At its widest point, the southern county border, Lake County is approximately 22.6 miles from east to west. Elevations in the county range from 957 feet above sea level to 580 feet above sea level. There are four major watersheds in Lake County: Des Plaines River, Fox River, North Branch of the Chicago River, and Lake Michigan.

Lake County has a population of 703,462 and a population density of 1,572 people per square mile, according to the 2010 U.S. Census. Approximately 260,310 housing units exist within the County. Lake County is the third most populated county in Illinois behind Cook County and DuPage County. The Lake County population makes up approximately 5.5% of the total population in the State of Illinois.



Planning Process

The HMPC followed a 10-step planning process to update the ANHMP. The HMPC met three times from June to October 2016. The HMPC reviewed the hazards and their effects on people and property, considered a variety of ways to reduce and prevent damage, and recommended the most appropriate and feasible measures for implementation. Existing plans and programs were reviewed during the planning process. It should be underscored that this ANHMP does not replace other planning efforts, such as community comprehensive plans, or the Lake County Comprehensive Stormwater Management Plan. This ANHMP complements those efforts. The public was invited to participate through several concurrent means, including the HMPC meetings, online surveys, paper surveys, press releases, newsletter articles, and the Lake County website. A public meeting was held on October 21, 2016 at the Lake County Administration Building in Waukegan, Illinois. The public comment period extended from October 21 to November 21, 2016.

Natural Hazard Risk Assessment

The HMPC reviewed all potential natural hazards that could impact Lake County, and evaluated them based on their causes, their likelihood of occurring, and their impact on people, property, critical facilities, and the local economy. The information was based on available technical studies and reports by the participating agencies and communities and on their past experiences. The table below shows the natural hazards that are the focus of this ANHMP and provides a summary of the hazards’ potential impact on Lake County’s health and safety, total assets, and economy from the risk assessment.

Summary of Impact on Natural Hazards

Hazard	Impact on			
	Health and Safety	Buildings	Critical Facilities	Economy
Floods (1% chance any year)	Moderate	High	Moderate	High
Floods (10% chance any year)	Moderate	Moderate	Moderate	Moderate
Tornado (Countywide)	High	High	Moderate	Moderate
Tornado (Community)	High	High	Moderate	Moderate
Severe Summer Storms	Moderate	Moderate	Moderate	Low
Severe Winter Storms	Moderate	Moderate	Moderate	Low
Drought	High	Moderate	Low	Moderate
Earthquake	Low	Low	Moderate	Low
Dam Failure	--	--	--	--
Extreme Temperatures	Low	Low	Low	Low
Erosion	Moderate	Low	Low	Moderate
Power Outage	High	Low	Low	Low

All exhibits included in Chapters 3 and 5 will be available on the SMC website. Exhibits can be downloaded at: <http://www.lakecountyl.gov/2369/All-Natural-Hazards-Mitigation-Plan>

Hazard Mitigation Goals and Guidelines

The goals of the ANHMP were reviewed and reaffirmed by the HMPC. The ANHMP goals are:

- Goal 1. Protect the lives, health, and safety of the people of Lake County from the impact and effects of natural hazards.
- Goal 2. Protect public services, utilities and critical facilities from potential damage from natural hazard events.
- Goal 3: Mitigate existing buildings to protect against damage from natural hazard events.
- Goal 4. Ensure that new developments do not create new exposures of people and property to damage from natural hazards.
- Goal 5. Mitigate to protect against economic and transportation losses due to natural hazards.

Chapter 4 presents guidelines developed by the HMPC for the purpose of achieving the above goals and to facilitate the development of hazard mitigation action items.

Hazard Mitigation Strategies

The HMPC then considered mitigation strategies for the natural hazards shown on page ES-4. The HMPC reviewed current preventive mitigation measures being implemented by the County and municipalities. Preventive measures include activities such as building codes and the enforcement of the Lake County Watershed Development Ordinance. Lake

County is very strong in preventive measures through floodplain regulations and sustainable projects.

Property protection mitigation measures are used to modify buildings or property subject to existing damage. The HMPC agreed that special attention should be given to floodplain areas and designated repetitively flooded areas. SMC should continue with their voluntary floodplain acquisition program. Many measures can be implemented by the property owners, such as dry and wet floodproofing. Appropriate government activities include public information, technical assistance and financial support. Emphasis has also been placed on critical facilities; understanding their vulnerability to wind and severe storm hazards.



Source: Daily Herald

Natural resource protection activities are aimed at preserving (or in some cases restoring) natural areas. They include preserving wetlands, control of erosion and sedimentation, stream restoration, and urban forestry. Urban forestry programs are encouraged to protect utility lines during wind and ice storms.

The HMPC called for a better understanding of flood and other hazards to improve emergency management – preparedness, response and recovery.

Structural mitigation projects, such as the regional detention basins are still important within the County's comprehensive watershed management program. Additional watershed studies are still needed. The HMPC also recommended that each community establish a formal and regular program of drainage system maintenance and examine drainage improvements.

The HMPC identified numerous subject areas that would benefit from a coordinated public information program to focus on residents and property owners obtaining proper insurance and ways for people to protect themselves and their property from natural hazards.

Case Study: Lake County's Flood Hazard Mitigation Program

The Lake County Stormwater Management Commission began purchasing repetitively damaged homes and properties in 1998 utilizing funds from FEMA's Pre-Disaster Mitigation, Hazard Mitigation Grant, and Severe Repetitive Loss Grant programs.

Grant funding received to date amounts to over \$9 million for the purchase of 198 structures and properties in the Village of Gurnee, the Village of Round Lake Heights, unincorporated Wauconda Township and other areas throughout the county. A mix of local cost-share funding has included Lake County's Capital Improvement Program, local municipalities and SMC.

Mitigation Action Plan

The action plan outlines the recommended activities and initiatives to be implemented over the next five years. It is understood that implementation is contingent on the availability of resources (staff and funding). The action plan identifies those responsible for implementing the action items, and when they are to be completed.

Mitigation actions are not limited to those listed in the action plan. Other recommendations in this ANHMP (Chapter 5) should be implemented as opportunities arise.

There are 33 action items included in this ANHMP update. The first two action items are administrative. The first action item calls for the formal adoption of this ANHMP. Formal adoption is a requirement for recognition of the ANHMP by mitigation funding programs. The HMPC will provide the mechanism and a vehicle for the ANHMP to be implemented, monitored, evaluated and updated, and for continued public involvement. The HMPC will report to the County Board and municipal councils and boards, annually, and participate in the next five-year update.

The other action items are mitigation program items. Many are ongoing activities of stormwater management and emergency management offices and agencies. The action items were prioritized by the HMPC based on action that they felt should be implemented countywide and which each municipality should undertake. Below is a list summarizing the action items included in Chapter 6. Action items are also presented as community-specific action items in Chapter 6.

2017 ANHMP Action Items – for All Agencies and All Communities

1. Adoption
2. Monitor & Maintain
3. Incorporate ANHMP in Other Plans
4. Implement WDO & NFIP
5. Public Information
6. Alternate Power Sources
7. Mitigation of Critical Facilities
8. Capacity of Drainage Systems
9. Maintain Drainage Systems
10. Property Protection Projects
11. Reduce Inflow and Infiltration
12. Wind Mitigation & Safe Rooms
13. Tree City USA
14. NIMS Compliance
15. Improve Building Codes
16. Seek Grant Funding
17. StormReady
18. CRS Participation
19. Continue to Map Natural Hazard Impacts & Continue Vulnerability Assessments
20. SMC Flood Mitigation Projects
21. Development of Flood Stage Maps
22. Snow Removal Plan
23. Utility Tree Trimming
24. Sump Pump Disconnects
25. Local Drainage Studies
26. Increase Detention
27. SMC Flood Mitigation Projects
28. Development of Flood Stage Maps
29. Snow Removal Plan
30. Investigate Countywide Warning System
31. Investigate Future Conditions & the Impact on Depth and Frequency of Flooding
32. Lincolnshire Creek Improvements
33. Mitigate Septic Discharge; Leaching into Waterways
34. Emergency Response
35. Implement the FFRMS

Plan Adoption

This ANHMP serves to recommend mitigation measures for Lake County. Adoption is also a requirement for recognition of the ANHMP by FEMA for mitigation funding programs.

The adoption of this *Lake County All Natural Hazards Mitigation Plan* will be done by resolution of the County Board, the city councils, and boards of trustees of each participating municipality. The municipal resolutions will adopt each action item that is pertinent to the community and a person responsible for it will be assigned. With adoption, the County and each municipality are individually eligible to apply for FEMA mitigation grant funding.

Summary

This 2017 update to the ANHMP was developed by the Lake County HMPC as a multi-jurisdictional ANHMP to meet federal mitigation planning requirements. This ANHMP updated the examination of natural hazards facing Lake County, establishes mitigation goals, evaluates and highlights the existing mitigation activities underway in Lake County, and recommends a mitigation action plan for the County and municipalities to undertake in the next five years. The mitigation efforts included in this ANHMP are for protecting people, property and other assets of Lake County. Some action items are ongoing efforts; others are new. Implementation of all action items is contingent on the availability of staff and funding.

This ANHMP will be adopted by resolution by the County and each participating municipality. This ANHMP will be implemented and maintained through both countywide and individual initiatives, as funding and resources become available.



STORMWATER MANAGEMENT COMMISSION



Lake County All Natural Hazards Mitigation Plan – 2017 Update Frequently Asked Questions (ANHMP FAQs)

1. What is the Lake County All Natural Hazards Mitigation Plan?

The Lake County All Natural Hazards Mitigation Plan (ANHMP) is a plan that addresses natural hazards that may impact Lake County, such as floods, severe summer storms, winter storms and tornadoes, and identifies activities that can be undertaken by both the public and the private sectors to reduce safety hazards, health hazards, and property damage caused by natural hazards. While the ANHMP was developed countywide, it is considered to be a “multi-jurisdictional plan.”

2. Why was the ANHMP developed?

Having an adopted mitigation plan allows Lake County and participating Lake County municipalities to be eligible for mitigation grant funds from the Federal Emergency Management Agency (FEMA). The ANHMP was developed to fulfill the federal mitigation planning requirements of Section 104 of the Disaster Mitigation Act of 2000 and the Stafford Act for funding under the FEMA Hazard Mitigation Assistance (HMA) grant programs. The ANHMP is also eligible for credit for communities that participate in FEMA’s Community Rating System (CRS) under the National Flood Insurance Program.

3. Who developed the ANHMP?

The ANHMP was developed through a mitigation planning committee that included Lake County, participating Lake County municipalities and other stakeholders, and through the assistance of a planning consultant. The Hazard Mitigation Planning Committee (formerly called the Local Planning Committee or LPC) was established as a permanent advisory body to Lake County in 2006 and has been meeting annually.

4. Why update the ANHMP?

FEMA requires hazard mitigation plans to be updated and re-adopted every five (5) years.

5. What was the update “process”?

Our update process included three meetings of the Hazard Mitigation Planning Committee (HMPC) to review the ANHMP’s goals and action items, and to draft updated plan. Information was requested from municipalities regarding mitigation activities of the past five years. Public input and comments were collected through an online survey. A draft of the updated ANHMP was made available for public review and a public hearing/meeting, and sent to Illinois Emergency Management Agency (IEMA) and FEMA for review and approval. Last, the County and participating municipalities will adopt the updated ANHMP.

6. The ANHMP is considered multi-jurisdictional. Is this the same as “countywide”?

No, the ANHMP is *not* a countywide plan like the Lake County Stormwater Management Plan. FEMA allows for the multi-jurisdictional development of hazard mitigation plans. Each government agency must adopt and implement the ANHMP for its own purposes. The County Board adoption of the ANHMP is for unincorporated areas of the County. Each municipality must adopt the ANHMP for themselves.

7. How do we adopt the ANHMP?

By resolution. Communities will be provided with a sample adoption resolution and instructions on where to send a copy of the resolution for IEMA and FEMA’s records.

8. If we don’t adopt the 2017 ANHMP will our community is eligible for IEMA/FEMA disaster assistance following a disaster declaration for Lake County?

Yes. This ANHMP is for the mitigation grant purposes. It is not tied to disaster assistance. Recognize that often mitigation projects come to light following a disaster. It is prudent to have an adopted mitigation plan.

9. Who will implement the Mitigation Plan?

Each municipality, agency and institution that adopts the Mitigation Plan will implement the Mitigation Plan, according to the resolution passed, and *as resources (staff time and funding) become available*. Ideally, there will be some joint efforts, through the Mitigation Committee, with the County, municipalities and townships to implement mitigation actions. An example of a joint effort may be the development of common public information materials.

10. What are the types of mitigation grants available?

Planning grants and project grants. Examples of mitigation planning grants would be for the study of repetitive flood loss areas, or the evaluation of critical facilities to determine if they are disaster resistant. Examples of mitigation project grants would be for floodplain property acquisitions, or construction of a tornado shelter at a senior care facility. All plans and projects are funded 75% by FEMA and 25% by the community or agency.

11. How do we apply for a mitigation grant?

Mitigation grants are applied for through the IEMA. An online “eGrant” application is used. Communities can contact Ron Davis, the State Hazard Mitigation Officer at IEMA, at 217/782-8719 (<mailto:ron.davis@illinois.gov>) for more information.

12. What is the FEMA web site for hazard mitigation grants programs?

For more information about FEMA mitigation grant programs, or HMA, visit: www.fema.gov/hazard-mitigation-assistance.

Also, visit IEMA’s web site at:

www.state.il.us/iema/planning/planning.htm

13. How can I learn more about the Community Rating System (CRS)?

Information on the CRS can be found at FEMA’s web site:

www.floodsmart.gov/crs or www.fema.gov/national-flood-insurance-program-community-rating-system

14. Who do we contact about the ANHMP update?

Feel free to contact Sharon Østerby of the SMC at <mailto:sosterby@lakecountyil.gov> or 847-377-7706.