



AGENDA
COMMITTEE OF THE WHOLE MEETING
Village Hall – Community Room
Monday, August 25, 2014
Immediately following Regular Village Board Meeting

Reasonable accommodations / auxiliary aids will be provided to enable persons with disabilities to effectively participate in any public meetings of the Board. Please contact the Village Administrative Office (847.883.8600) 48 hours in advance if you need special accommodations to attend .

The Committee of the Whole will not proceed past 10:30 p.m. unless there is a consensus of the majority of the Trustees to do so. Citizens wishing to address the Board on agenda items may speak when the agenda item is open, prior to Board discussion.

CALL TO ORDER

1.0 ROLL CALL

2.0 APPROVAL OF MINUTES

- 2.1 Acceptance of August 4, 2014 Committee of the Whole Meeting Minutes.

3.0 ITEMS OF GENERAL BUSINESS

3.1 Planning, Zoning and Land Use

- 3.11 Consideration and Discussion Zoning Board Recommendation Regarding Text Amendments to Title 6, of the Lincolnshire Village Code to Provide Zoning Regulations for the Establishment and Operation of Medical Cannabis-Related Uses (Village of Lincolnshire)

3.2 Finance and Administration

3.3 Public Works

- 3.31 Consideration and Discussion of a Professional Service Contract with Donohue & Associates, Inc. for Water Distribution System Modeling in the Amount of \$19,761. (Village of Lincolnshire)
- 3.32 Consideration and Discussion of Draft Village of Lincolnshire Natural Hazards Mitigation Plan (Village of Lincolnshire – Natural Hazards Mitigation Planning Committee)

3.4 Public Safety

- 3.41 Consideration and Discussion of a Request to Waive Local Bidding Requirements and Authorize the Purchase of Two (2) Replacement Vehicles for the Police Department at a Cost of \$51,607 Via the Suburban Purchasing Cooperated (Village of Lincolnshire)
- 3.42 Consideration and Discussion of the Purchase of Digital In-Car Camera Solution and Related Equipment from WatchGuard Video, Allen, Texas at a Cost of \$68,315 (Village of Lincolnshire)

3.5 Parks and Recreation

- 3.51 Consideration of Park Board Recommendation to Approve Lincolnshire Sports Association (LSA) Request to Host a Baseball Tournament at North Park, June 24-28, 2015 (Lincolnshire Sports Association)

3.6 Judiciary and Personnel

4.0 **UNFINISHED BUSINESS**

5.0 **NEW BUSINESS**

6.0 **EXECUTIVE SESSION**

7.0 **ADJOURNMENT**



MINUTES
COMMITTEE OF THE WHOLE MEETING
Monday, August 4, 2014

Present:

Mayor Blomberg	Trustee Brandt
Trustee Feldman	Trustee Grujanac
Trustee McDonough	Trustee Servi
Trustee McAllister	Village Clerk Mastandrea
Village Treasurer Curtis	Village Attorney Simon
Village Manager Burke	Chief of Police Kinsey
Finance Director Peterson	Director of Public Works Woodbury
Community & Economic Development Director McNellis	Village Planner Robles

ROLL CALL

Mayor Blomberg called the meeting to order at 7:20 p.m. and Village Manager Burke called the Roll.

2.0 APPROVAL OF MINUTES

2.1 Acceptance of July 28, 2014 Committee of the Whole Meeting Minutes.

The minutes of the July 28, 2014 Committee of the Whole Meeting were approved as submitted.

3.0 ITEMS OF GENERAL BUSINESS

3.1 Planning, Zoning and Land Use

3.11 Consideration and Discussion of a request for Referral of an Amendment to an existing Annexation Agreement and Special Use Ordinance for a church at 1207 Riverwoods Road, and Annexation of 1.92 acres at 24325 Riverwoods Road (Ascension of Our Lord Greek Orthodox Church)

Village Planner Robles provided the background of the 2008 request and a summary of the current request. In 2011 the Board requested the church revise the plans to decrease impervious surface not to exceed 36% and to reduce the size/scale of the proposed building. The 2008 application has been withdrawn, and a new application and Site Development Plan has been

submitted. Based on a referral from the Board the next steps would be to involve the Architectural Review Board (ARB) to review the architecture and site design. Since this request involves annexation of land, the Village Board will hold the Public Hearing regarding Annexation, the amendment to the Annexation Agreement, and the amendment to the existing Special Use Ordinance. Village Planner Robles reviewed staff recommendations to be made to the ARB if referred.

Mr. Mike Firsel, Attorney with Ruben, Firsel & Ross, LLC, representing Ascension of our Lord Greek Orthodox Church provided background of the previous request and a detailed presentation of the revised, proposed plan. A tentative neighbor meeting has been scheduled for August 20, 2014 at 7:00 p.m. pending the outcome of the Village Board's consideration of the referral request at this meeting.

Trustee McDonough noted some of the parking lot in the previous plan was gravel, not impervious surface, and asked if any of the current planned parking would be anything other than asphalt. Mr. Firsel stated the current proposed parking lot would be 100% asphalt.

Trustee McAllister asked if the neighbors the church would be inviting to the pending neighbor meeting were the same group involved in the previous planned meetings. Mr. Firsel confirmed the same address list or group of neighbors would be invited to the meeting. Trustee Brandt recommended adding additional invitees to include new residents in the area. Trustees Servi and Grujanac recommended announcing the neighbor meeting on Village media.

A brief conversation followed regarding the height of the proposed tower, impervious surface and building materials.

There was a consensus of the Board to refer this item to the Architectural Review Board.

3.12 Consideration and Discussion of Zoning Board Recommendations Regarding Text Amendments to Chapters 3 and 6, Title 2, Boards and Commissions, and Chapter 14, Administration & Enforcements of the Zoning Code to Update Administrative Processes (Village of Lincolnshire).

Village Planner Robles summarized the Zoning Board recommendation regarding Text Amendments to Chapters 3, 6

and the replacement of Chapter 14 of the Zoning Code to update Administrative processes.

Trustee McDonough noted he agrees with streamlining minor changes but is not sure the proposed wording captures these changes and asked if there was a way to define what a minor change is versus a major change to a special use. Village Planner Robles noted any change that does not alter the nature of the use is defined as minor but staff will work with Village Attorney Simon to better clarify. Village Attorney Simon noted regardless of a list attempting to provide a better definition of the difference between major and minor changes, it would still require a degree of interpretation by staff since there cannot be an exhaustive list attempting to capture every potentiality, and it is hard to limit things and predict change. Trustee McDonough recommended saying “non-altering of the nature of use/anything that is not minor would be major”.

There was a brief discussion regarding the referral steps in the review process and referral votes from other Boards. Mayor Blomberg recommended maintaining the current voting requirement of the Zoning Board for recommendations at four votes to make determination or recommendation to the Village Board. Village Planner Robles noted staff’s suggestion was to have a motion be made by a simple majority of an entire Board. The consensus of the Board was to retain the current four vote minimum requirement to make a recommendation or determination on petitions before the Village’s advisory bodies.

Mayor Blomberg asked if the Board could get notification regarding what items were to be brought before the other Boards. Village Planner Robles suggested putting information being brought before the other Boards in Manager’s Notes.

Trustee McDonough asked for clarification on the appeal process and asked if a resident could appeal an item even if they were not the petitioner. Village Attorney Simon noted if staff made a decision on an interpretation of the Code, and a resident wanted to appeal, it would go to an Administrative body. If the individual is not satisfied with the Administrative body, the appeal would then go before the Village Board; the Zoning Board and ARB would not be the final decision on the appeals of interpretation of Village Code.

There was a consensus of the Board to place this item on the Agenda for approval at the next Regular Village Board Meeting.

Mayor Blomberg requested the Board discuss Parks and Recreation agenda item 3.51 next on the Agenda.

The consensus of the Board was to move up item 3.51 for discussion.

3.5 Parks and Recreation

3.51 Consideration and discussion of Park Board Recommendation to Approve a Request by the Village Club of Lincolnshire to Use North Park for a Charity Fundraiser on Sunday, October 5, 2014. (The Village Club)

Director of Public Works Woodbury summarized the Village Club request to use North Park for a Charity Fundraiser and to waive the \$100 Picnic Permit Fee.

There was a consensus of the Board to place this item on the Consent Agenda for approval at the next Regular Village Board Meeting.

3.2 Finance and Administration

3.21 Consideration of a Resolution Approving Certain Closed Session Meeting Minutes – First Review – 2014 and Authorizing the Destruction of Certain Audio Recordings of Closed Sessions Minutes (Village of Lincolnshire)

Village Manager Burke summarized the Resolution noting this was the first reading and once the minutes are reviewed by the Board, the closed session meeting minutes will be brought back for approval at the August 25, 2014 meeting. Village Manager Burke noted the resolution pertains to approval only of the minutes and does not contemplate the release of these closed session minutes at this time.

There was a consensus of the Board to place this item on the next Regular Village Board Meeting for discussion and approval.

3.22 Consideration of a Resolution Authorizing the Village Manager to Execute Documentation to Secure a Final Electricity Price for Various Electricity Accounts (Village of Lincolnshire)

Village Manager Burke summarized the Resolution authorizing the Village Manager to execute documentation to secure a final price for various electricity accounts.

Village Attorney Simon suggested some changes to the submitted Resolution which will be made when brought before the Board at the Regular Village Board meeting on August 25, 2014.

There was a consensus of the Board to place this item on the Consent Agenda for approval at the next Regular Village Board Meeting.

3.3 Public Works

3.4 Public Safety

3.41 Consideration and Discussion of the Issuance of a Class “D” Liquor License for Go Roma Lincolnshire, LLC, D.B.A. Go Roma (Village of Lincolnshire)

Chief of Police Kinsey summarized the request to issue a Class “D” liquor license for Go Roma.

Trustee McAllister asked if a background check is being done on a new owner or requestor of a liquor license. Chief of Police Kinsey confirmed a background check is done on all petitioners requesting a liquor license. Trustee McAllister asked if an interview is held prior to issuance. Chief of Police noted an interview is not held, and usually staff is working directly with the petitioner’s attorney. Trustee McAllister suggested more precautions may need to be put in place when issuing the liquor licenses given all the heightened concern about identity theft.

There was a consensus of the Board to place this item on the Consent Agenda for approval at the next Regular Village Board Meeting.

3.5 Parks and Recreation

~~**3.51 Consideration and discussion of Park Board Recommendation to Approve a Request by the Village Club of Lincolnshire to Use North Park for a Charity Fundraiser on Sunday, October 5, 2014. (The Village Club)**~~

Item 3.51 was moved up and discussed earlier on the agenda.

3.52 Consideration and Discussion of Park Board Recommendation to Install a Basketball Court at Balzer Park (Village of Lincolnshire)

Director of Public Works Woodbury summarized the Park Board

recommendation to install a basketball court at Blazer Park.

Trustee McDonough asked if any negative responses were received. Director of Public Works Woodbury noted there were not negative comments regarding the proposed basketball courts, and the only comment was regarding a request that no lights be installed. The proposal does not include lights.

There was a consensus of the Board to place this item on the Consent Agenda for approval at the next Regular Village Board Meeting.

- 3.6 Judiciary and Personnel
- 5.0 **UNFINISHED BUSINESS**
- 6.0 **NEW BUSINESS**
Trustee Grujanac noted National Night Out would be taking place the next day, August 5, 2014
- 7.0 **EXECUTIVE SESSION**
- 8.0 **ADJOURNMENT**
Trustee McDonough moved and Trustee McAllister seconded the motion to adjourn. Upon a voice vote, the motion was approved unanimously and Mayor Blomberg declared the meeting adjourned at 8:35 p.m.

Respectfully submitted,

VILLAGE OF LINCOLNSHIRE

Barbara Mastandrea
Village Clerk

**REQUEST FOR BOARD ACTION
Committee of the Whole
August 25, 2014**

Subject:	Compassionate Use of Medical Cannabis Pilot Program Act
Action Requested:	Consideration and Discussion of proposed Text Amendments to Title 6, Zoning, of the Lincolnshire Village Code to provide zoning regulations for the establishment and operation of medical cannabis-related uses.
Originated By/Contact:	Stephen Robles, Village Planner Department of Community & Economic Development
Referred To:	Zoning Board

Background:

- The Compassionate Use of Medical Cannabis Pilot Program Act was signed into law in August 2013 and became effective on January 1, 2014 (Public Act 98-122). The statute allows for the establishment of medical cannabis dispensaries and cultivation centers, and prescribing of medical cannabis to registered patients throughout Illinois. The new Act does not permit communities to prohibit these uses through zoning.
- To avoid conflicts between the State's then-pending administrative rules and Lincolnshire zoning regulations, a six month moratorium to monitor the rule making process was enacted by the Village on March 10th (expiring on September 10th).
- The State published the final Administrative Rules in July, and these rules have been taken into account during the Zoning Board's workshop process.
- On August 12th, the Zoning Board unanimously recommended approval of proposed text amendments to Title 6, Zoning, to provide zoning regulations for the establishment and operation of medical cannabis-related uses.

Summary:

Following is a general summary of text amendments resulting from Zoning Board workshops held on June 10th and July 8th (*for specific detail, please see attached Staff memoranda to the Zoning Board, as well as the attached Draft Code Sections*):

- Zoning Definitions (6-2-2): Two definitions (Cultivation Centers and Dispensary Organizations) are proposed based on new terminology established by the State Act. These terms replicate the State Act for consistency purposes.

In Staff's analysis of cultivation centers, no available Village parcels will comply with the State Act's minimum separation requirements (see attached *Prohibited Site Locations for Registered Cultivation Centers* map). Therefore, the "Cultivation Center" definition indicates the lack of available parcels within the Village and no specific zoning regulations are needed.

The following regulations apply only to Dispensary Organizations:

- "O/I" Office/Industrial District Zoning Regulations (6-8-6): The Zoning Board determined Dispensary Organizations were not comparable to uses in any Commercial Zoning Districts, including a general retail pharmacy use permissible in the "B" Commercial districts. As a result, Office/Industrial (O/I) zoned parcels were determined to be best suited for such operations (see attached *Prohibited Site Locations for Dispensing Organizations* map).

Locating Dispensing Organizations in the O/I district compares favorably with many Lake County communities who have also limited these uses to industrial-zoned properties.

Given their unique characteristics, Dispensary Organizations are proposed as a Special Use in the O/Id subdistrict, subject to eleven regulations. The Zoning Board recommended approval of twelve regulations during their consideration; however, Village Attorney Simon recommended the removal of the regulation specifying a Certificate of Occupancy must be obtained prior to operation since this was redundant with Building Regulations. The remaining regulations mainly follow the State Act which has the most direct impact on zoning-related matters. The State Regulations have been repeated in the Zoning Code for ease of use and application.

- Lot Requirements (6-8-7): Each authorized Special Use in the O/I District includes specific lot requirements. Staff added Dispensary Organizations to the current list for consistency.
- Off-Street Parking (6-11-3): With the inclusion of this new use in the Zoning Code, off-street parking requirements must also be established. It is anticipated Dispensary Organizations will generate similar parking demands to retail uses; therefore, the parking requirement of 1 space/175 SF of office/lobby space would apply. Additionally, the storage area of medical cannabis will also generate employee parking comparable to other warehouse uses. The parking requirements for warehouse uses of 1 space/2,000 SF of warehouse/storage space would be required in addition to the office/lobby space of these centers.

Recommendation:

Consideration and discussion of proposed text amendments to Title 6 of the Zoning Code, and placement on the September 8, 2014 Consent Agenda.

Attachments:

- Draft Zoning Regulations, prepared by Staff.
- Draft Ordinance, prepared by Village Attorney Simon.
- Prohibited Site Locations for Cultivation Centers Map, prepared by GIS.
- Prohibited Site Locations for Dispensing Organizations Map, prepared by GIS.
- Available Site Locations for Dispensing Organizations Map, prepared by GIS.
- Staff Memoranda and Meeting Minutes of the June 10th, July 8th, and August 12th Zoning Board.

Meeting History	
Initial Referral at Village Board (COW):	January 13, 2014
Zoning Board Workshop:	June 10, 2014
Zoning Board Workshop:	July 8, 2014.
Zoning Board (Public Hearing):	August 12, 2014
Current Consideration & Discussion (COW):	August 25, 2014

DRAFT Zoning Regulations

August 12, 2014 Zoning Board

Definitions **(Sec. 6-2-2)**

CULTIVATION CENTER: A facility operated by an organization or business registered by the Department of Agriculture to perform necessary activities to provide only registered medical cannabis Dispensing Organizations with usable medical cannabis. No available parcels in the Village of Lincolnshire permitting Cultivation Centers due to separation requirements of the Compassionate Use of Medical Cannabis Pilot Program Act (Illinois Public Act 098-0122).

DISPENSARY ORGANIZATION: A facility operated by an organization or business registered by the Illinois Department of Financial and Professional Regulation to acquire medical cannabis from a registered Cultivation Center for the purpose of dispensing cannabis, paraphernalia, or related supplies and educational materials to registered qualifying patients.

Zoning Regulations

6-8-6: SPECIAL USES: ~~ALL SUBDISTRICTS:~~

Unless otherwise stated, the following Special Uses shall be permitted in all sub-districts of this Chapter:

- A. Commercial activities intended to provide service to office and industrial uses established in the district and employees thereof, including but not limited to vehicle fueling stations which may include vehicle washes as a special accessory use, restaurants, private clubs, convention and exhibition halls, motels and hotels, and car rental outlets.
- B. Public utility facilities including transportation facilities, structures and buildings (bus turnarounds, bus waiting shelters, but excluding heliports) telephone exchanges, transmission buildings and equipment, telephone booths, electric distribution substations, natural gas equipment and distribution facilities.
- C. Parking garages.
- D. Meeting and Events Center, as defined in Section 6-2-2 of this Zoning Code. (Ord.14-3309-35)
- E. Clinics (Medical), as defined in Section 6-2-2 of this Zoning Code, excluding urgent care facilities and/or surgical centers; provided that the cumulative off-street parking spaces for all uses operated on or from the premises, shall be provided in accordance with the minimum requirements listed in Section 6-11-3(B) of this Zoning Code, and subject to the following conditions:

1. In the O/Ia subdistrict, in any building on a zoning lot with frontage on an arterial highway (including but not limited to; Aptakisic Road, Half Day Road, and Milwaukee Avenue) there shall be no limitation on the proportion of clinic to non-clinic uses, irrespective of which floor the clinic(s) are located;
2. In the O/Ia subdistrict, in any building on a zoning lot without frontage on an arterial highway, no more than 25% of the gross floor area of a building shall be occupied by clinics, irrespective of which floor the clinics are located; and
3. In all other O/I subdistricts, no more than 25% of the gross floor area of a building shall be occupied by clinics, irrespective of which floor the clinics are located. (Amd. Ord. 07-33011-39, eff. 11/26/07)

F. Dispensary Organization, as defined in Section 6-2-2 of this Zoning Code, subject to the following:

1. Shall be permitted in O/Id subdistrict only.
2. Shall comply with all provisions of the Compassionate Use of Medical Cannabis Pilot Program Act (Illinois Public Act 098-0122), Department of Financial and Professional Regulation, and Illinois Department of State Police.
3. Shall not be located within 1,000 ft. of the property line of a pre-existing public or private preschool or elementary or secondary school, day care center, day care home, group day care home, or part day child care facility.
4. Shall not be permitted in multiple-tenant property and/or structure.
5. Drive-through facilities are prohibited.
6. Shall operate for a minimum of 35 hours a week, between 6:00 AM and 8:00 PM, local time, and shall not operate uninterrupted for a 24 hour period.
7. Medical cannabis, medical cannabis infused products, medical cannabis paraphernalia, or similar products shall not be displayed for public view from the exterior of the Dispensary Organization.
8. Consumption of cannabis on the property of a Dispensary Organization shall be prohibited.
9. Shall obtain a Registration from the Department of Financial and Professional Regulation. A current copy of such registration shall be submitted to the Lincolnshire Police and Community and Economic Development Departments at all times.
10. The sale of paraphernalia that is directly used for the consumption of medical cannabis shall be permitted. The sale of paraphernalia not directly required for the consumption of medical cannabis is prohibited.
11. Exterior trash containers shall be located within a permanent enclosure that must remain locked at all times, except for disposal/removal of trash containers.

6-8-7: LOT SIZE, SETBACK AND HEIGHT REQUIREMENTS:

A. Lot Size Requirements: (Ord. 80-632-39)

3. Special Uses: (Ord. 85-817-01) (Ord. 14-3309-35)

Special Uses	Minimum Lot Area	Minimum Lot Width
Gasoline Service Stations	1 acre	150 feet
Restaurants	1 acre	150 feet
Private Clubs	1 acre	150 feet
Dispensary Organizations	40,000 S.F.	100 feet
Meeting and Events Center	2 acres	150 feet
Convention and Exhibition Halls	5 acres	220 feet
Motels and Hotels	5 acres	220 feet
Car Rental Outlet	20,000 sq.ft.	
Public Utility Facility	As specified by the Zoning Board	
Commuter Rail Station	As specified by the Zoning Board	

B. Maximum Floor Area Ratio: In the O/I District, the floor area ratio shall not exceed the following:

2. Special Uses:

Car Rental	0.7
Convention and Exhibition Halls	0.7
Gasoline Service Stations	0.7
Meeting and Events Center	0.5
Dispensary Organization	0.5
Motels and Hotels	1.0
Parking Garages	As specified by the Zoning Board
Private Clubs	0.7
Public Utilities and Services	As specified by the Zoning Board
Restaurants	0.7

6-11-3: OFF-STREET PARKING:

B. Specific Requirements: Off-street parking spaces shall be provided in accordance with the minimum requirements listed below. Parking spaces required on an employee basis shall be based on the maximum number of employees on duty or residing, or both, on the premises at any one time. Parking spaces required on an employee basis for which the number of employees is not ascertainable at the time of issuance of the building permit shall be computed on a reasonable estimate of the expected employee population, and shall be increased, if necessary, when the actual number of employees is determined.

USE	REQUIRED NUMBER OF SPACES
4. Commercial:	
Dispensary Organization	1/175 S.F. of Office Space +1/2,000 S.F. of Warehouse Space

**VILLAGE OF LINCOLNSHIRE
LAKE COUNTY, ILLINOIS**

ORDINANCE NO. _____

**AN ORDINANCE
AMENDING TITLE 6 (ZONING) OF THE VILLAGE CODE
FOR THE ESTABLISHMENT OF MEDICAL CANNABIS
DISPENSARIES AND CULTIVATION CENTERS**

WHEREAS, the Village of Lincolnshire (the “Village”) is an Illinois home-rule municipal corporation organized and operating under the Illinois Municipal Code and the Constitution of the State of Illinois;

WHEREAS, the Compassionate Use of Medical Cannabis Pilot Program Act (the “Act”) was signed into law in August 2013 and became effective on January 1, 2014 (Public Act 98-122);

WHEREAS, the Act allows for the establishment of medical cannabis dispensaries and cultivation centers throughout Illinois;

WHEREAS, the Act does not permit communities to prohibit these uses through zoning;

WHEREAS, to avoid conflicts between the State’s then-pending administrative rules and Lincolnshire zoning regulations, a six month moratorium to monitor the rule making progress was enacted by the Village on March 10, 2014, by Ordinance 14-3320-46, and the subject matter was referred to the Zoning Board to study and recommend regulations for the establishment of medical cannabis dispensaries and cultivation centers within the Village;

WHEREAS, the Zoning Board conducted workshops on June 10th and July 8th;

WHEREAS, the State has published administrative rules that have been taken into account during the Zoning Board’s workshop process;

WHEREAS, on August 12, 2014, the Zoning Board convened a public hearing to

consider draft zoning regulations governing the establishment of medical cannabis dispensaries and cultivation centers within the Village, and provided all requisite notice of the public hearing in accordance with the Village Code; and

WHEREAS, the Zoning Board has submitted to the Corporate Authorities its favorable recommendation of the amendments to the Zoning Code set forth in this Ordinance.

NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND BOARD OF TRUSTEES OF THE VILLAGE OF LINCOLNSHIRE, LAKE COUNTY, ILLINOIS, IN THE EXERCISE OF ITS HOME RULE POWERS, as follows:

SECTION 1: The foregoing recitals are incorporated as though fully set forth herein and represent the Village Board's purpose and intent for enacting this Ordinance. The findings of the Zoning Board are herein incorporated by reference as the findings of this Board to the same effect as if fully recited herein. All references in the Zoning Board's findings are made the references of the Mayor and Board of Trustees of the Village of Lincolnshire.

SECTION 2: Chapter 2 (Definitions) of Title 6 (Zoning) of the Lincolnshire Village Code is hereby amended by adding the following defined terms:

CULTIVATION CENTER A facility operated by an organization or business registered by the Department of Agriculture to perform necessary activities to provide only registered medical cannabis Dispensary Organizations with usable medical cannabis. No available parcels in the Village of Lincolnshire permit Cultivation Centers to exist due to the separation requirements of the Compassionate Use of Medical Cannabis Pilot Program Act (Illinois Public Act 098-0122).

DISPENSARY ORGANIZATION: A facility operated by an organization or business registered by the Illinois Department of Financial and Professional Regulation to acquire medical cannabis from a registered Cultivation Center for the purpose of dispensing cannabis, paraphernalia, or related supplies and educational materials to registered qualifying patients.

SECTION 3: Chapter 8 (Office/Industrial District), Section 6 (Special Uses), of Title 6 (Zoning) of the Lincolnshire Village Code is hereby amended by adding Dispensary Organizations as a special use, subject to the regulations which follow:

- F. Dispensary Organization, as defined in Section 6-2-2 of this Zoning Code, subject to compliance with the following special conditions:
1. Shall be allowed in the O/Id subdistrict only.
 2. Shall comply with all provisions of the Compassionate Use of Medical Cannabis Pilot Program Act (Illinois Public Act 098-0122), and the regulations promulgated by the Department of Financial and Professional Regulation and Illinois Department of State Police.
 3. Shall not be located within 1,000 ft. of the property line of a pre-existing public or private preschool or elementary or secondary school, day care center, day care home, group day care home, or part day child care facility. For the purpose of this Chapter, “pre-existing” means operating prior to September 8, 2014.
 4. Shall not be permitted in a multiple-tenant property and/or structure.
 5. Drive-through facilities are prohibited.
 6. Shall operate for a minimum of 35 hours a week, only between 6:00 AM and 8:00 PM, local time, and shall not operate uninterrupted for a 24 hour period.
 7. Medical cannabis, medical cannabis infused products, medical cannabis paraphernalia, or similar products shall not be displayed for public view from the exterior of the Dispensary Organization.
 8. Consumption of cannabis on the property of a Dispensary Organization shall be prohibited.

9. Registration from the Department of Financial and Professional Regulation. A current copy of such registration shall be submitted to the Lincolnshire Police and Community and Economic Development Departments at all times.
10. The sale of paraphernalia that is directly used for the consumption of medical cannabis shall be permitted. The sale of any paraphernalia not directly required for the consumption of medical cannabis is prohibited.
11. Exterior trash containers shall be located within a permanent enclosure that must remain locked at all times, except for disposal/removal of trash containers.

SECTION 4: Section 7, Chapter 8, and Section 3, Chapter 11, of Title 6 (Zoning) of the Lincolnshire Village Code are hereby amended as follows to provide for additional regulations related to Dispensary Organizations:

6-8-7: LOT SIZE, SETBACK AND HEIGHT REQUIREMENTS:

A. Lot Size Requirements:

3. Special Uses:

Special Uses	Minimum Lot Area	Minimum Lot Width
Gasoline Service Stations	1 acre	150 feet
Restaurants	1 acre	150 feet
Private Clubs	1 acre	150 feet
<u>Dispensary Organizations</u>	<u>40,000 S.F.</u>	<u>100 feet</u>
Meeting and Events Center	2 acres	150 feet
Convention and Exhibition Halls	5 acres	220 feet
Motels and Hotels	5 acres	220 feet
Car Rental Outlet	20,000 sq. ft.	
Public Utility Facility	As specified by the Zoning Board	
Commuter Rail Station	As specified by the Zoning Board	

B. Maximum Floor Area Ratio: In the O/I District, the floor area ratio shall not exceed the following:

2. Special Uses:

Car Rental	0.7
Convention and Exhibition Halls	0.7
Gasoline Service Stations	0.7
Meeting and Events Center	0.5
<u>Dispensary Organization</u>	<u>0.5</u>
Motels and Hotels	1.0
Parking Garages	As specified by the Zoning Board
Private Clubs	0.7
Public Utilities and Services	As specified by the Zoning Board
Restaurants	0.7

6-11-3: OFF-STREET PARKING:

B. Specific Requirements: Off-street parking spaces shall be provided in accordance with the minimum requirements listed below. Parking spaces required on an employee basis shall be based on the maximum number of employees on duty or residing, or both, on the premises at any one time. Parking spaces required on an employee basis for which the number of employees is not ascertainable at the time of issuance of the building permit shall be computed on a reasonable estimate of the expected employee population, and shall be increased, if necessary, when the actual number of employees is determined.

USE	REQUIRED NUMBER OF SPACES
4. Commercial:	
Dispensary Organization	1/175 S.F. of Office Space +1/2,000 S.F. of Warehouse Space

SECTION 5: The moratorium on the establishment of medical cannabis dispensaries and cultivation centers within the Village, described in Ordinance 14-3320-46, is hereby repealed and of no further force and effect.

SECTION 6: In the event any provision or application of this ordinance or the provisions enacted hereby is found unenforceable by a court of competent jurisdiction, such finding shall not affect any other application or the remaining provisions of this ordinance to the maximum extent permitted by law.

SECTION 7: This ordinance shall be in full force and effect from and after its adoption, approval and publication in pamphlet form.

PASSED this 8th day of September, 2014, by the Corporate Authorities of the Village of Lincolnshire on a roll call vote as follows:

AYES:

NAYS:

ABSENT:

APPROVED this 8th day of September, 2014.

Brett Blomberg, Mayor

ATTEST:

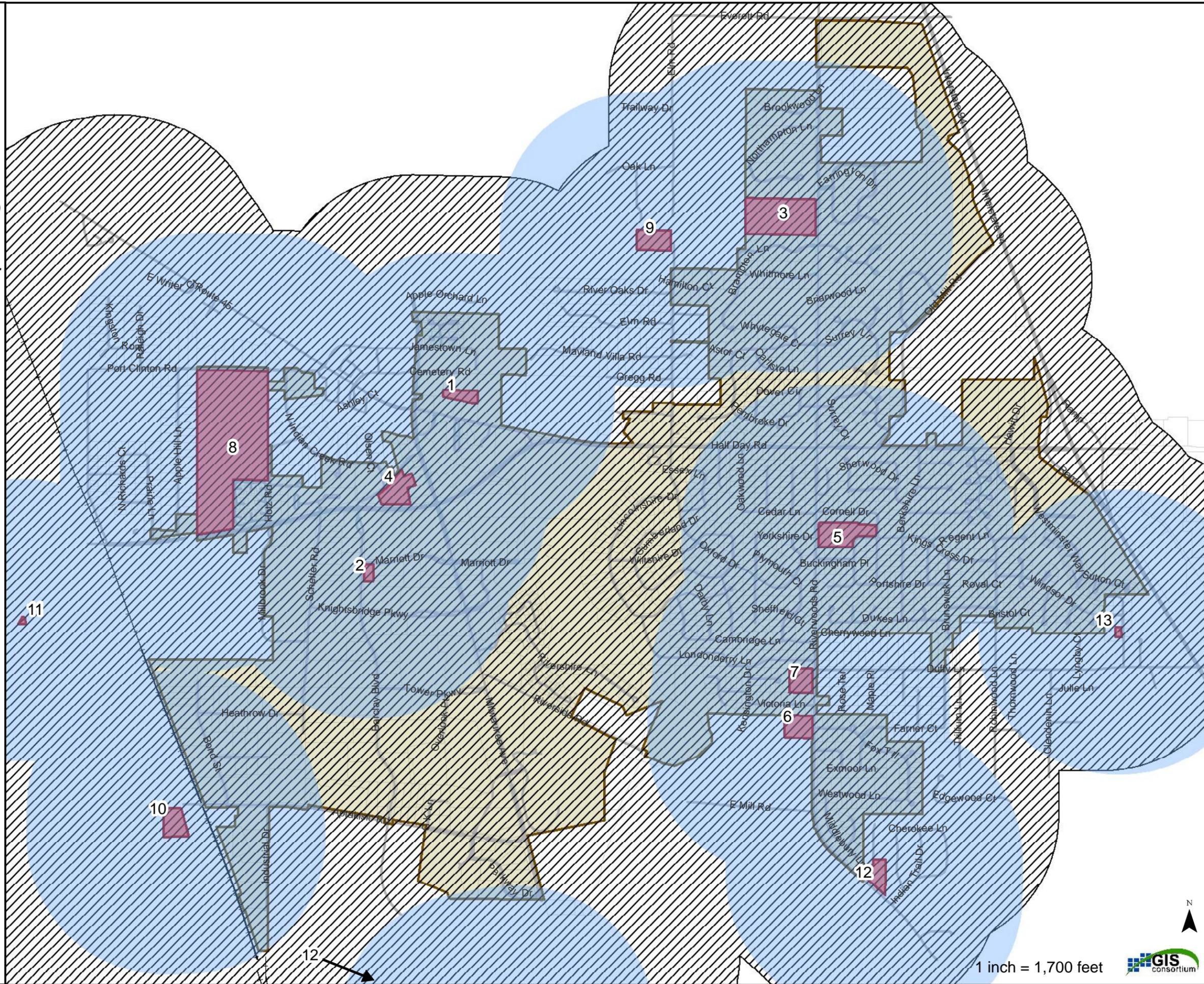
Barbara Mastandrea, Village Clerk

Compassionate Use of Cannabis Act Prohibited Site Locations for Registered Cultivation Centers

- School/Childcare (Prohibited Site)
- 2,500-foot Childcare Zone Buffer
- 2,500-foot Residential Zone Buffer
- Village of Lincolnshire

School and Childcare Facilities

1. Bright Stars Kids University
100 Village Green
2. Children's Land
400 Marriott Dr
3. Daniel Wright Middle School
1370 Riverwoods Rd
4. Half Day Elementary School
239 Olde Half Day Rd
5. Laura Sprague Elementary School
2425 Riverwoods Rd
6. Lincolnshire Community Nursery School
30 Riverwoods Rd
7. Lincolnshire Montessori School
1970 Riverwoods Rd
8. Stevenson High School
1 Stevenson Dr
9. Tamarak Day Camp and Country School
23970 N Elm Rd
10. JCYS Northeast Family Center
1700 Weiland, Buffalo Grove
11. Padma Jalasutram
47 Chesnut Ter, Buffalo Grove
12. Kid Town USA (not shown on map)
1425 Busch Pkwy, Buffalo Grove



Data source: Parcel boundaries courtesy of Lake County GIS. All other data developed by the Village of Lincolnshire GIS. 6/17/2014 - JVD

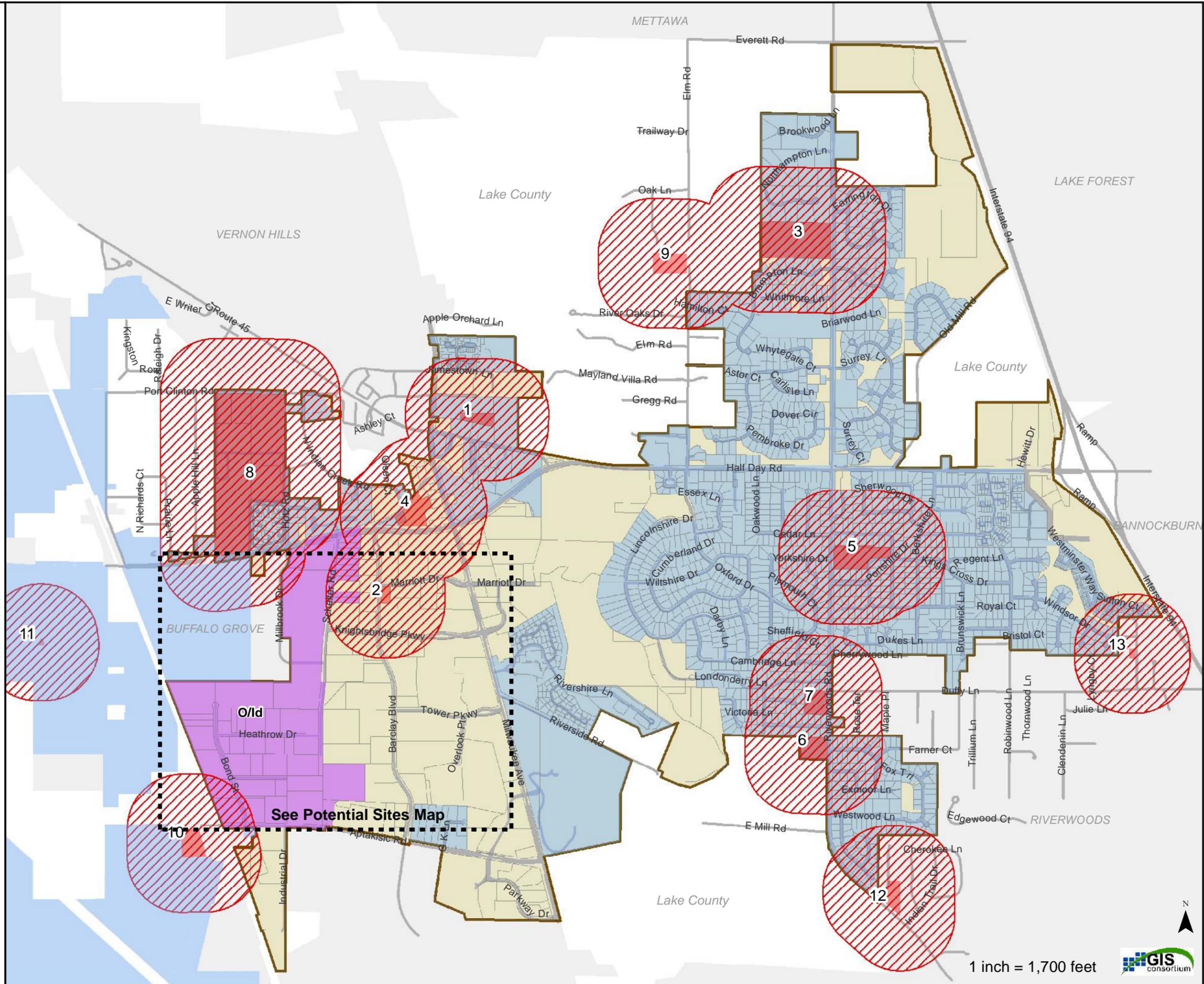
1 inch = 1,700 feet

Compassionate Use of Cannabis Act Prohibited Site Locations for Dispensing Organizations

- Residential Zones (Prohibited Site)
- School/Childcare (Prohibited Site)
- 1,000-foot Childcare Zone Buffer
- Village of Lincolnshire

School and Childcare Facilities

1. Bright Stars Kids University
100 Village Green
2. Children's Land
400 Marriott Dr
3. Daniel Wright Middle School
1370 Riverwoods Rd
4. Half Day Elementary School
239 Olde Half Day Rd
5. Laura Sprague Elementary School
2425 Riverwoods Rd
6. Lincolnshire Community Nursery School
30 Riverwoods Rd
7. Lincolnshire Montessori School
1970 Riverwoods Rd
8. Stevenson High School
1 Stevenson Dr
9. Tamarak Day Camp and Country School
23970 N Elm Rd
10. JCYS Northeast Family Center
1700 Weiland, Buffalo Grove
11. Padma Jalasutram
47 Chestnut Ter, Buffalo Grove
12. Deerfield Montessori School
3140 Riverwoods Rd, Riverwoods
13. Helen Koo
2220 Woodland Ln N, Riverwoods



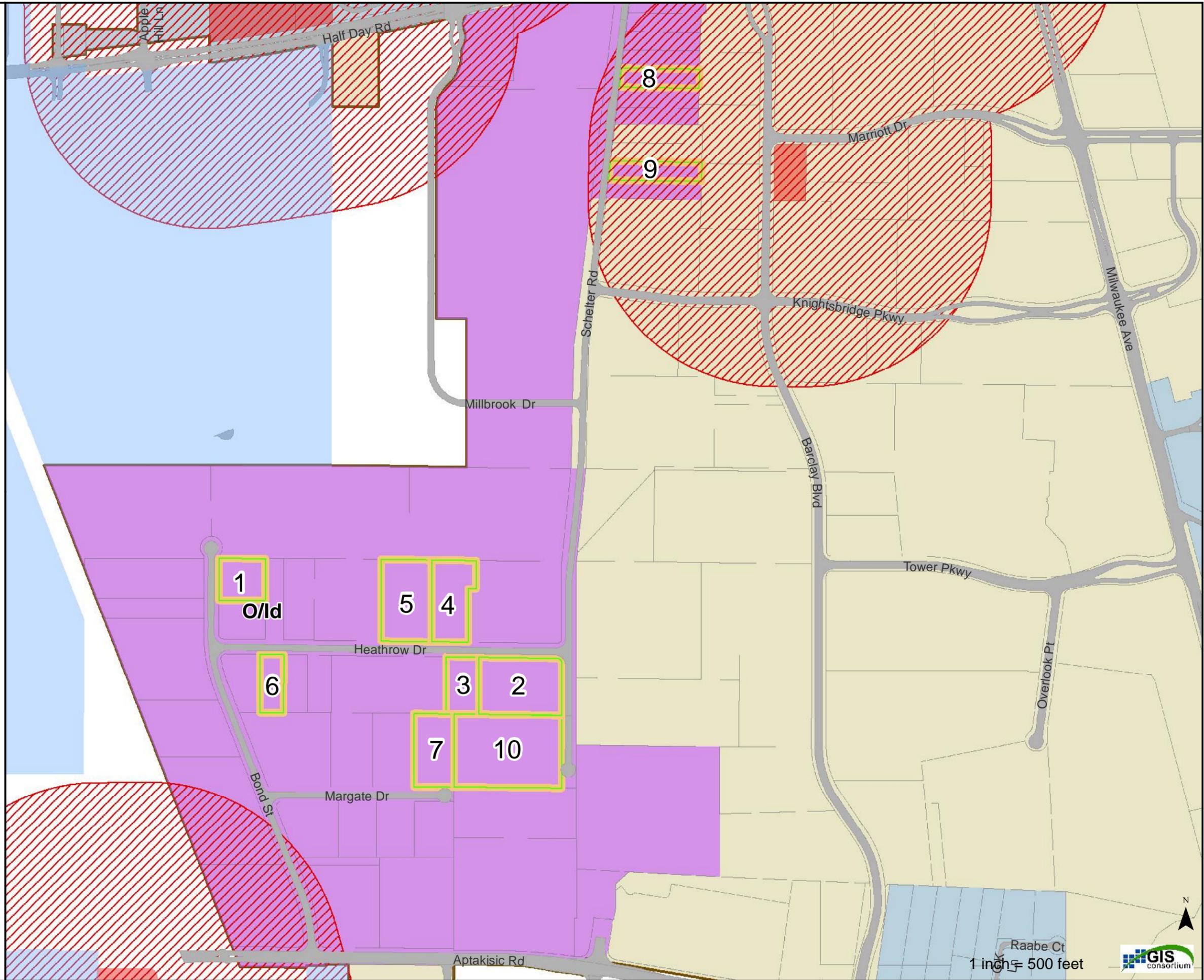
Data source: Parcel boundaries courtesy of Lake County GIS. Some daycare locations courtesy of Lake County Department of Health and the Illinois Department of Child and Family Services. All other data developed by the Village of Lincolnshire GIS. 7/21/2014 - JVD

**Compassionate Use of Cannabis Act
Potential Site Locations for
Dispensing Organizations**

-  Available Sites
-  O/ld District (Per Zoning Board)
-  Residential Zones (Prohibited Site)
-  School/Childcare (Prohibited Site)
-  1,000-foot Childcare Zone Buffer

Potential Sites

1. Available
505 Bond St
2. Available
600 Heathrow Dr
3. Available
612 Heathrow Dr
4. Vacant
615 Heathrow Dr
5. Available
625 Heathrow Dr
6. Vacant
660 Heathrow Dr
7. Vacant
625 Margate Dr
8. Available
109 Schelster Rd
9. Available
121 Schelster Rd
10. Vacant
610 Schelster Rd



Data source: Parcel boundaries courtesy of Lake County GIS. Some daycare locations courtesy of Lake County Department of Health and the Illinois Department of Child and Family Services. All other data developed by the Village of Lincolnshire GIS. 7/21/2014 - JVD

REQUEST FOR BOARD ACTION
Zoning Board
June 10, 2014

Subject:	Compassionate Use of Medical Cannabis Pilot Program Act
Action Requested:	WORKSHOP to discuss proposed Text Amendments to Title 6, Zoning, of the Lincolnshire Village Code to establish zoning regulations on the establishment and operation of medical cannabis-related uses.
Originated By/Contact:	Stephen Robles, Village Planner Department of Community & Economic Development
Referred To:	Zoning Board

Background:

- The Compassionate Use of Medical Cannabis Pilot Program Act was signed into law in August 2013 and became effective on January 1, 2014 (Public Act 98-122). The statute allows for the establishment of medical cannabis dispensaries and cultivation centers, and the prescribing of medical cannabis to registered patients throughout Illinois.
- As the new Act does not permit zoning prohibition of such uses, Staff has been a participating member of the Lake County Medical Cannabis Zoning Taskforce, in order to research reasonable zoning regulations. Model regulations, approved by the Taskforce in December (2013), focus on medical cannabis facility location and setbacks from various protected land uses, on-site facility design, signage, facility access and security features.
- Within 120 days from the Act's effective date, the State was required to establish and adopt administrative rules (these rules are still in development phase with the IL Joint Committee on Administrative Rules). After completion of the State's administrative rulemaking process, medical cannabis facilities can then be registered for operation by the State Department of Agriculture and Financial & Professional Regulation.
- To avoid conflicts between such administrative rules and Lincolnshire zoning regulations, a six month moratorium to monitor the rule making progress was enacted by the Village on March 10th (expiring on September 10th), prior to the State's adoption of administrative rules.

Summary:

- **Summary of Statutes & Regulations:** Before discussing Village code regulations at a Public Hearing, a summary of State statutes and proposed rules, and the Lake County Model Ordinance are attached for the Zoning Board to discuss in a workshop environment.
- **Medical Cannabis Maps:** Two GIS maps illustrate areas in the Village subject to the prohibited and separation requirements prescribed by the Act (attached). The "Dispensing Organization" map illustrates all parcels eligible for dispensing organization use, with B2 zoned parcels specifically identified given the retail/pharmacy nature of dispensing organizations. The "Cultivation Centers" map identifies a small area within the Lincolnshire Business Center located outside the separation zones. However, this area does not include a complete parcel, only portions of parcels, which prevent the siting of a cultivation center within Lincolnshire.
- **Questions for Discussion:**
 1. What is the most appropriate zoning district for dispensing organizations; commercial, light industrial, office?
 2. Should separation from additional land uses, such as parks and religious facilities be included? If so, why?

3. Should dispensing organizations be permitted in single-tenant (free-standing) or multi-tenant buildings?
4. Should there be a minimum separation between dispensary organizations? If so, why and what distance?
5. Should the sale of non-medical related paraphernalia be banned at dispensary organizations?

Recommendation:

Input and direction from the Zoning Board on code amendments to Title 6 – Zoning, to establish zoning regulations on the establishment and operation of medical cannabis-related uses, in order to return for a Public Hearing.

Attachments:

- Medical Marijuana Summary.
- Lake County Model Ordinances (Dispensary Organizations and Cultivation Centers).
- Dispensing Organizations Map.
- Cultivation Centers Map.

Meeting History	
Initial Referral at Village Board (COW):	January 13, 2014
Current Zoning Board Workshop:	June 10, 2014

There was a consensus among the members in support of this request and the following motion was read:

Member Van de Kerckhove moved and **Member Kalina** seconded a motion, based on facts covered in a Public Hearing held on June 10, 2014, the Zoning Board recommended approval to the Village Board of amendments to Chapter 14 of the Lincolnshire Zoning Code to update the administrative and implementation processes, as presented in Staff's memorandum.

The motion passed unanimously by voice vote.

- 3.2 WORKSHOP to discuss proposed Text Amendments to Title 6, Zoning, of the Lincolnshire Village Code to establish zoning regulations on the establishment and operation of medical cannabis-related uses. (Village of Lincolnshire).

Village Planner Robles presented that the Compassionate Use of Medical Cannabis Pilot Program Act was signed into law in August last year and became effective on January 1st. The Act allows for the establishment of medical cannabis dispensaries and cultivation centers, and the prescribing of medical cannabis to registered patients throughout Illinois. By April, the State was required to establish and adopt administrative rules on the implementation of the Act. However, such rules were still in the development phase with the Joint Committee on Administrative Rules. After completion of the rulemaking process, medical cannabis facilities can then be registered for operation by the State Department of Agriculture and Financial & Professional Regulation. To avoid conflicts between the State rules and Lincolnshire zoning regulations, a six month moratorium was enacted by the Village on March 10th and set to expire in September. Before discussing potential code regulations at a Public Hearing, a summary of the Act and proposed rules, along with the Lake County Model Ordinance had been provided for open discussion.

Village Planner Robles offered Question 1 of the Staff memorandum to the Zoning Board; *What is the most appropriate zoning district for dispensing organizations; commercial, light industrial, office?* **Chairman Manion** responded he preferred such uses not be within open view of the main roadways within the Village and he could not classify such uses to a pharmacy. **Member Kalina** questioned what other States, such as California, were enforcing regarding permissibility of such uses. **Village Planner Robles** noted it varies by State, but Staff had observed many local municipalities were leaning towards locating dispensary organization with industrial zoned districts. **Director McNellis** offered that staff internally discussed suitable zoning districts and felt dispensaries did not fit within the standard commercial use. The operations of dispensaries are not open to the general public, unlike pharmacies. **Chairman Manion** opined that dispensaries could be appropriate in office buildings, similar to medical doctors' offices, which are located for easy access to people with illnesses. **Member Kalina** felt dispensaries could generate high levels of traffic, aligned with the potential high number of card holders. **Member Bichkoff** questioned what the areas of the Village were based on zoning districts. **Village Planner Robles** briefly identified the general locations of the zoning districts with Lincolnshire. **Chairman Manion** questioned if the Village's Police Department had provided input and commentary on dispensaries locations from a safety standpoint. **Village Planner Robles** noted Police input had not been obtained prior to the night's meeting; however, Staff would obtain Police input prior to the next meeting.

Following discussion, there was a consensus among the Zoning Board to concentrate dispensary organization within the Office/Industrial (O/I) zoning district and requested Staff provide a map of O/I zoned property within the Village for further analysis.

Village Planner Robles continued with Question 2; *Should separation from additional land uses, such as parks and religious facilities be included? If so, why?* **Chairman Manion** expressed his satisfaction with the State Act separation requirements and felt such provided sufficient protection. **Member Bichkoff** if Staff would apply similar separation restriction from a Walgreen's pharmacy. Through the passing of the Act, **Member Bichkoff** noted cannabis was a legal drug for medical purposes, similar to other prescribed drugs. **Director McNellis** offered the State identified children need to be protected through the separation requirements from schools and daycare facilities. Religious facilities and parks have the same patrons, which was the reason for Staff's question. **Member Kalina** felt it was acceptable to include park and religious facilities that would require further separation from the State Act. **Village Planner Robles** sought input on what was an acceptable distance separation. The Zoning Board unanimously agreed to apply a 1,000-foot separation requirement to align with the State Act.

Continuing with Question 3, **Village Planner Robles** questioned if dispensing organizations should be permitted in single-tenant or multi-tenant buildings. **Chairman Manion** sought clarification on what was determined by Lake County's Medical Cannabis Zoning Taskforce model regulations. **Village Planner Robles** explained the County model regulations proposed to limit dispensaries solely to single-occupancy buildings. **Member Bichkoff** expressed his preference to receive input from the Police regarding siting locations. **Village Planner Robles** noted the requested information would be provided for the next Zoning Board meeting. **Member Van de Kerckhove** questioned if any zoning districts in the Village limited uses to one occupant. **Director McNellis** clarified the O/I zoning district prevents multi-tenant occupancies for buildings under 100,000 square feet in gross floor area.

Following discussion, there was a consensus among the Zoning Board to limit dispensary organizations as a single-occupant tenant.

Village Planner Robles moved on to Question 4; *Should there be a minimum separation between dispensary organizations? If so, why and what distance?* **Chairman Manion** offered his preference to only permit one dispensary in the Village. **Village Planner Robles** expressed that if such limitation was the preference of the Zoning Board, additional studies concluding multiple dispensaries within a community resulted in a detrimental effect on the morals, safety, and general well-being of residents would need to be researched and accepted by the Zoning Board to support such limitation. **Member Bichkoff** questioned if any such separation was redundant given the other requirements of the State Act and those discussed by the Zoning Board. **Director McNellis** expressed such separation should be considered as the State Act is a pilot program and could be expanded further in the future, and laying the groundwork at the present time could offer safeguards to the Village in that event.

Following discussion, there was a consensus among the Zoning Board to require a 1,000-foot separation distance between any one dispensary organization.

Concluding with Question 5, **Village Planner Robles** questioned if the sale of non-medical related paraphernalia should be banned at dispensary organizations. **Chairman Manion** questioned the need for such prohibition if dispensaries were only permitted to

sale medical cannabis. **Village Planner Robles** clarified dispensaries would be allowed to sell paraphernalia related to medical cannabis. **Director McNellis** offered clarification that any prohibition would be related to posters, hats, and the like, which had no connection to medical purposes.

Following discussion, there was a consensus among the Zoning Board to prohibit non-medical related paraphernalia within dispensary organizations.

There being no further comments, there was a consensus amongst the Zoning Board for Staff to return at the July meeting with the additional information requested.

- 4.0 UNFINISHED BUSINESS (None)**
- 5.0 NEW BUSINESS (None)**
- 6.0 CITIZENS COMMENTS (None)**
- 7.0 ADJOURNMENT**

There being no further business, **Chairman Manion** sought a motion for adjournment. **Member Kalina** moved, and **Member Van de Kerckhove** seconded the motion to adjourn. The meeting adjourned at 8:50 p.m.

Minutes Submitted by Stephen Robles, Village Planner.

REQUEST FOR BOARD ACTION
Zoning Board
July 8, 2014

Subject:	Compassionate Use of Medical Cannabis Pilot Program Act
Action Requested:	CONTINUED WORKSHOP to discuss proposed Text Amendments to Title 6, Zoning, of the Lincolnshire Village Code to establish zoning regulations on the establishment and operation of medical cannabis-related uses.
Originated By/Contact:	Stephen Robles, Village Planner Department of Community & Economic Development
Referred To:	Zoning Board

Background:

- At the June 10th Zoning Board meeting, an initial workshop was held to obtain input and feedback regarding the Compassionate Use of Medical Cannabis Pilot Program Act and potential zoning regulations.
- A second workshop has been scheduled to consider and discuss proposed code language, before a Public Hearing on specific text amendments is held.

Following, is a summary of topic areas discussed at the June Workshop and subsequently incorporated into the attached Draft Zoning Regulations:

June Workshop Summary:

1. Appropriate Zoning District – The Zoning Board agreed dispensing organizations were not comparable to a general retail pharmacy use permissible in the “B” Commercial districts and determined Office/Industrial zoned parcels were better suited to dispensing organization operations. Locating dispensing organizations in the O/I districts would compare with many Lake County communities also limiting these uses to industrial-zoned districts. *Staff prepared two maps (attached) identifying O/I districts within Lincolnshire, with the second map illustrating the currently available and vacant properties within the O/I districts. As previously discussed, the O/Ia district has been excluded given similar concerns voiced for the “B” Districts, including visibility of such parcels along primary arterials.*

The Zoning Board also requested input from the Lincolnshire Police Department regarding preferred locations from a safety perspective. *Chief of Police Kinsey identified that neither a location with primary street visibility or hidden from public view provided a benefit over the other.*

2. Separation from Additional Land Uses – Staff questioned if additional separation requirements should be considered for parks and religious facilities, which is absent from the State Act. The Zoning Board requested a map be prepared identifying these areas for review. *The attached “Prohibited Site Locations for Dispensing Organizations” map includes parks and religious facilities for Zoning Board analysis.*
3. Single-tenant (free-standing) or Multi-tenant Occupancy – The Zoning Board agreed with the Lake County Model Ordinance regulation prohibiting dispensary organizations within multiple tenant properties, and requested input from the Lincolnshire Police Department. *Chief of Police Kinsey did not believe one building type provided a benefit over the other.*

Staff has incorporated the Lake County Model Ordinance regulation into the Draft Zoning Regulations.

4. Minimum Separation - A 1,000-foot minimum separation between any two dispensary organizations was determined an acceptable requirement. *The attached Draft Zoning Regulations includes such separation requirement.*
5. Non-medical Related Paraphernalia – The Zoning Board was in agreement with the prohibition on the sale of non-medical related paraphernalia from dispensary organizations. *The attached Draft Zoning Regulations includes this prohibition.*

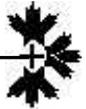
Recommendation:

Input and direction from the Zoning Board on code amendments to establish zoning regulations on the establishment and operation of medical cannabis-related uses, in order to return for a Public Hearing in August.

Attachments:

- Medical Marijuana Summary.
- Lake County Model Ordinances (Dispensary Organizations).
- Prohibited Site Locations for Dispensing Organizations Map.
- Available Site Locations for Dispensing Organizations Map.
- Draft Zoning Regulations, prepared by Staff.

Meeting History	
Initial Referral at Village Board (COW):	January 13, 2014
Zoning Board Workshop:	June 10, 2014
Current Zoning Board Workshop:	July 8, 2014.



APPROVED Minutes of the **REGULAR MEETING OF THE ZONING BOARD** held on Tuesday, July 8, 2014, in the Public Meeting Room in the Village Hall, One Olde Half Day Road, Lincolnshire, IL.

PRESENT: Chairman Manion, Members Kalina, Leider, Van de Kerckhove and Bichkoff.

ALSO PRESENT: Stephen Robles, Village Planner.

ABSENT: Trustee Liaison Brandt.

CALL TO ORDER: **Chairman Manion** called the meeting to order at 7:00 p.m.

1.0 ROLL CALL

The roll was called by **Village Planner Robles** and **Chairman Manion** declared a quorum to be present.

2.0 APPROVAL OF MINUTES

2.1 Approval of the Minutes of the Zoning Board Meeting held Tuesday, June 10, 2014.

Member Bichkoff moved and **Member Van de Kerckhove** seconded the motion to approve the minutes of the Regular Meeting of the Zoning Board held Tuesday, June 10, 2014, as submitted. The motion passed unanimously by voice vote.

3.0 ITEMS OF GENERAL BUSINESS:

3.1 CONTINUED WORKSHOP to discuss proposed Text Amendments to the Lincolnshire Village Code to establish zoning regulations on the establishment and operation of medical cannabis-related uses (Village of Lincolnshire).

Village Planner Robles presented Staff's memorandum indicating at the June Zoning Board meeting, an initial workshop was held to obtain input and feedback regarding the Compassionate Use of Medical Cannabis Pilot Program Act for potential zoning regulations in Lincolnshire. There were five items that came out of the June Workshop:

The first item regarded appropriate zoning districts, where the Zoning Board agreed dispensing organizations would be most appropriately located in Office/Industrial zoned parcels. Such would be comparable to many Lake County communities which were also limiting these uses to industrial-zoned districts. **Village Planner Robles** presented the Staff prepared maps identifying O/I districts within the Village, with the second map illustrating the available and vacant properties within the O/I districts.

Member Leider questioned if the separation from pre-existing public or private schools could extend beyond 1,000 feet. **Village Planner Robles** clarified the 1,000 foot separation was a requirement of the Compassionate Use of Medical Cannabis Pilot Program Act, and if the Zoning Board sought to increase the separation beyond the State Act, the Zoning Board would need to demonstrate the increase was due to

negative impacts on the community based on such use. **Member Van de Kerckhove** clarified only three dispensary organizations could be located in Lake County, therefore, there might not be a need to add any further separation. **Member Leider** questioned if the Village wanted to encourage such uses in the community. Based on the answer, it would affect how the regulations would be formed. **Chairman Manion** explained the Village does not have the ability to prohibit such uses based on the State Act, therefore, reasonable zoning regulations must be developed.

Following discussion regarding dispensary organization restrictions and the Staff prepared location maps, the Zoning Board concluded the O/Id subdistrict was the most appropriate zoning district for such uses.

Based on the discussion of Item 1, the Zoning Board moved to Item 4 of the Staff memorandum. **Village Planner Robles** explained Staff added draft language to require the 1,000-foot minimum separation between any two dispensary organizations as requested by the Zoning Board at the June workshop. He directed attention to the Available Site Locations Map and explained which available sites would be eliminated based on the draft language and noted the Village Attorney had expressed concern that the separation would eliminate most of the few sites available. **Member Leider** responded if one dispensary would be allowed in the Village, why it would matter if an additional dispensary would locate in the Village. **Member Kalina** noted his preference to have dispensary organizations near each other, rather than being dispersed throughout the Village. **Member Van de Kerckhove** noted his support for removing the added requirement for separation between any two dispensary organizations, which the Zoning Board was in agreement.

Village Planner Robles continued with Item 2 regarding separation from additional land uses and questioned if the additional separation for parks and religious facilities requested by the Zoning Board at the June workshop was necessary. As requested by the Zoning Board, the provided map had been prepared to illustrate the additional 1,000 foot separation from Village parks and religious facilities for Zoning Board analysis.

The Zoning Board unanimously agreed that the location of Village parks and religious facilities extended well beyond the 1,000 foot separation based on the location of O/Id zoned parcels and requested Staff remove the additional separation requirements.

Village Planner Robles proceeded with Item 3 on whether a dispensary should be permitted as a single-tenant or permitted within a multi-tenant building. He also noted Zoning Board requested input from Lincolnshire Police if single-tenant occupancy is preferred over multi-tenant spaces. **Village Planner Robles** noted Chief of Police Kinsey did not believe one building type provided a benefit over the other. However, given the previous discussion of Item 1, which limited these uses to the O/Id subdistrict, the zoning district already prohibited multi-tenancy.

The Zoning Board unanimously agreed to limit dispensary organizations to single-tenant occupancy.

Village Planner Robles moved to Item 5 regarding the prohibition on the sale of non-medical related paraphernalia within dispensary organizations. At the June workshop, the Zoning Board was in agreement with the prohibition on the sale of non-medical related paraphernalia from dispensary organizations and the attached Draft Zoning Regulations included such prohibition.

There being no further comments, there was a consensus amongst the Zoning Board for Staff to schedule a Public Hearing for the August meeting on draft text amendments regarding the establishment of medical cannabis-related uses.

- 4.0 UNFINISHED BUSINESS (None)
- 5.0 NEW BUSINESS (None)
- 6.0 CITIZENS COMMENTS (None)
- 7.0 ADJOURNMENT

There being no further business, **Chairman Manion** sought a motion for adjournment. **Member Kalina** moved, and **Member Leider** seconded the motion to adjourn. The meeting adjourned at 7:48 p.m.

Minutes Submitted by Stephen Robles, Village Planner.

REQUEST FOR BOARD ACTION
Zoning Board
August 12, 2014

Subject:	Compassionate Use of Medical Cannabis Pilot Program Act
Action Requested:	PUBLIC HEARING of proposed Text Amendments to Title 6, Zoning, of the Lincolnshire Village Code to provide zoning regulations for the establishment and operation of medical cannabis-related uses.
Originated By/Contact:	Stephen Robles, Village Planner Department of Community & Economic Development
Referred To:	Zoning Board

Background:

- The Compassionate Use of Medical Cannabis Pilot Program Act was signed into law in August 2013 and became effective on January 1, 2014 (Public Act 98-122). The statute allows for the establishment of medical cannabis dispensaries and cultivation centers, and the prescribing of medical cannabis to registered patients throughout Illinois. The new Act does not permit communities to prohibit these uses through zoning.
- The Zoning Board has conducted workshops on June 10th and July 8th to discuss reasonable zoning regulations on the establishment of such uses in the Village. The attached Draft Code amendments are a result of the workshop meetings.
- To avoid conflicts between the State's then-pending administrative rules and Lincolnshire zoning regulations, a six month moratorium to monitor the rule making progress was enacted by the Village on March 10th (expiring on September 10th).
- The State has since published their Administrative Rules, and these have been taken into account during the Zoning Board's workshop process.

Summary:

- Zoning Definitions (6-2-2): Two definitions are proposed based on the new terminology established by the State Act. These terms replicate the State Act for consistency purposes.
- O/I District Zoning Regulations (6-8-6): The Zoning Board agreed Dispensary Organizations were not comparable to a general retail pharmacy use permissible in the "B" Commercial districts and determined Office/Industrial zoned parcels were better suited to dispensing organization operations (see attached available site locations map). Locating dispensing organizations in the O/I district would compare favorably with many Lake County communities who have also limited these uses to industrial-zoned properties.

Given their unique characteristics, Dispensary Organizations would be a Special Use in the O/Id subdistrict, subject to twelve regulations. The majority of regulations follow the State Act which have the most direct impact on zoning-related matters. These have been repeated in the Zoning Code for Staff unfamiliar with the entirety of the State Act.

- Lot Requirements (6-8-7): Each authorized Special Use in the O/I District includes specific lot requirements. Staff has included Dispensary Organizations to the current list for consistency. The minimum O/Id lot requirements would apply.
- Off-Street Parking (6-11-3): With the inclusion of this new use in the Zoning Code, off-street parking requirements must also be established. It is anticipated Dispensary Organizations will generate similar parking demands to drugstores/pharmacy uses; therefore, the parking requirement of 1 space/175 SF of office/lobby space would apply. Additionally, the storage area of medical cannabis will also generate employee parking. The parking requirements for

warehouse uses of 1 space/2,000 SF of warehouse/storage space would be required in addition to the office/lobby space of these centers.

Recommendation:

Approval of text amendments to Title 6 of the Zoning Code to establish zoning regulations on the establishment and operation of medical cannabis-related uses.

Motion:

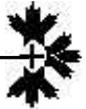
Having made findings based on facts covered in a Public Hearing held on August 12, 2014, the Zoning Board recommends approval to the Village Board of amendments to Title 6 of the Lincolnshire Zoning Code to establish zoning regulations on the establishment and operation of medical cannabis-related uses, as presented in Staff's memorandum, and further subject to. . .

{Insert any additional conditions or modification desired by the Zoning Board}

Attachments:

- Draft Zoning Regulations, prepared by Staff.
- Prohibited Site Locations for Dispensing Organizations Map.
- Available Site Locations for Dispensing Organizations Map.

Meeting History	
Initial Referral at Village Board (COW):	January 13, 2014
Zoning Board Workshop:	June 10, 2014
Zoning Board Workshop:	July 8, 2014.
Current Zoning Board (Public Hearing):	August 12, 2014



UNAPPROVED Minutes of the **REGULAR MEETING OF THE ZONING BOARD** held on Tuesday, August 12, 2014, in the Public Meeting Room in the Village Hall, One Olde Half Day Road, Lincolnshire, IL.

PRESENT: Chairman Manion, Members Kalina, Leider and Bichkoff.

ALSO PRESENT: Steve McNellis, Director of Community and Economic Development, and Stephen Robles, Village Planner.

ABSENT: Trustee Liaison Brandt and Member Van de Kerckhove.

CALL TO ORDER: **Chairman Manion** called the meeting to order at 7:00 p.m.

1.0 ROLL CALL

The roll was called by **Village Planner Robles** and **Chairman Manion** declared a quorum to be present.

2.0 APPROVAL OF MINUTES

2.1 Approval of the Minutes of the Zoning Board Meeting held Tuesday, July 8, 2014.

Member Kalina moved and **Member Bichkoff** seconded the motion to approve the minutes of the Regular Meeting of the Zoning Board held Tuesday, July 8, 2014, as submitted. The motion passed unanimously by voice vote.

3.0 ITEMS OF GENERAL BUSINESS:

3.1 PUBLIC HEARING regarding proposed Text Amendments to Title 6, Zoning, of the Lincolnshire Village Code to establish zoning regulations on the establishment and operation of medical cannabis-related uses (Village of Lincolnshire).

Chairman Manion recessed the Zoning Board meeting and opened the Public Hearing.

Village Planner Robles presented Staff's memorandum and noted the Compassionate Use of Medical Cannabis Pilot Program Act was signed into law in August 2013 and became effective on January 1st. As the Zoning Board was aware, the new Act does not permit communities to prohibit these uses through zoning. As a result, the Zoning Board held workshops in June and July to discuss reasonable zoning regulations on the establishment of such uses in the Village.

Village Planner Robles then provided a brief summary of the Draft Code. Two new definitions had been created based on the same terminology used by the State Act for consistency purposes. From the past workshops, the Zoning Board determined the Office/Industrial District is best suited for dispensing organization operations. Dispensaries would be a Special Use specifically in the O/Id subdistrict, subject to twelve regulations. The majority of the regulations follow the State Act and were carried over into the Zoning Code for Staff unfamiliar with the entirety of the State Act. **Village Planner Robles** further explained Staff made sure to include specific lot requirements

and off-street parking specifications for dispensaries in the Draft Code as a result of the new special use.

There being no public comment, **Chairman Manion** closed the Public Hearing and reconvened the Zoning Board meeting.

Member Leider questioned if the proposed regulations had been reviewed to uncover any potential conflicts. **Village Planer Robles** indicated both Staff and the Village Attorney have conducted multiple reviews of the draft code, with the provided draft as a result of such reviews.

There was a consensus among the members in support of this request and the following motion was read:

Member Leider *moved and Member Kalina* *seconded a motion, to recommend approval to the Village Board, based on facts covered in a Public Hearing held on August 12, 2014, of amendments to Title 6 of the Lincolnshire Zoning Code to establish zoning regulations on the establishment and operation of medical cannabis-related uses, as presented in Staff's memorandum.*

The motion passed unanimously by voice vote.

- 3.2 PUBLIC HEARING regarding proposed Text Amendments to Chapter 2, Definitions, Chapter 5D, Mixed Use General Residence District, Chapter 6, Business Districts, and Chapter 8, Office/Industrial Districts, of Title 6 of the Lincolnshire Village Code to revise the Permitted Uses and Special Uses permitted within the Village's commercial and office zoning districts (Village of Lincolnshire).
- 3.3 Consideration and discussion of Amendments to the 2012 Update to the Comprehensive Plan (Village of Lincolnshire).

- 4.0 UNFINISHED BUSINESS (None)
- 5.0 NEW BUSINESS (None)
- 6.0 CITIZENS COMMENTS (None)
- 7.0 ADJOURNMENT

There being no further business, **Chairman Manion** sought a motion for adjournment. **Member Kalina** moved, and **Member Leider** seconded the motion to adjourn. The meeting adjourned at 7:48 p.m.

Minutes Submitted by Stephen Robles, Village Planner.

REQUEST FOR BOARD ACTION
August 25, 2014

Subject: Professional Service Contract with Donohue & Associates, Inc. for Water Distribution System Modeling in the amount of \$19,761. (Village of Lincolnshire)

Action Requested: Consideration, Discussion, and Placement on the September 8, 2014 Village Board Meeting Consent Agenda

Originated By/Contact: Terry Hawkins, Utilities Superintendent

Referred To: Village Board

Summary / Background:

A hydraulic water model is a valuable tool used to evaluate water flow rates; peak usage; fire flow demands; future system demands; and identify potential system enhancements. A hydraulic water model is a highly effective and necessary software program when used for capital infrastructure planning.

The existing Village water model data was created by Alvord, Burdick & Howson Engineering Services in 1997. Alvord, Burdick & Howson is a subsidiary of Donohue & Associates, Inc. and therefore this firm currently possesses the original water system model.

The current water model was developed using a software package not maintained by the Village since completion of the modeling project. The software requires an annual maintenance fee be paid to keep the software updated and to access the modeling data. Keeping the Village data on this software package after retroactive fees are paid from 1997 to date, is cost prohibitive. When budgeting this project in 2013, staff based estimated budget amounts on the purchase of a software and license agreement to convert the current Village water model data to an updated software program.

Earlier this spring staff solicited formal proposals for developing a new hydraulic water model along with related software and licensing fees. Proposals were received from six firms. On May the 15th, staff opened responses to the request for proposals for the purchase of a software package and license, and engineering services necessary to convert and calibrate a new water model. Formal bids received averaged \$37,000. Upon staff reviews of the proposals, there was wide discrepancy in project scope and costs; therefore, it was decided to further investigate options available to the Village.

Staff has concluded purchasing and maintaining the software program in house is not a viable approach. Such a software program requires the routine maintenance and regular input and analysis of a qualified engineer in order to produce beneficial reports and water system evaluations. The frequency the Village performs analysis for a specific issue or potential system enhancement is only occasional. Furthermore, the costs associated with owning the software and purchasing the annual license and associated annual maintenance fee make this option not the most cost effective option.

As a result, staff revised the approach to this project and solicited proposals from three engineering firms for services necessary to convert and calibrate the Village hydraulic water model to a new software package. These proposals require the Village water model data to be incorporated under the engineering firm's software license. This would eliminate the costs associated with purchase, licensing and annual maintenance for the project.

The following are the proposals submitted to perform engineering services for the conversion and calibration to update the Village water system model;

Donohue & Associates, Inc. - proposal for \$19,761

Baxter & Woodman - proposal for \$35,100

Christopher B. Burke LTD. - proposal for \$21,440

Budget Impact: The 2014 budget contains funding in the amount of \$40,000.00 for engineering services related to this project in the Water & Sewer Improvements account. The engineering proposals received are significantly less since staff has modified the scope of work requested for this project.

Recommendation: Staff recommends approval of a professional service contract with Donohue & Associates, Inc. for engineering services related to this project. This engineering firm has provided engineering services related to numerous infrastructure improvements for the Village and has displayed both professional and quality services. Additionally, this is the firm who completed the original 1997 model.

Reports and Documents Attached:

- Proposed Professional Service Agreement with Donohue & Associates, Inc.

Meeting History	
Initial Referral to Village Board (COW):	August 25, 2014
Regular Village Board Meeting:	September 08, 2014

July 24, 2014

Revised Proposal

Engineering Consulting Services for

Water Distribution System Modeling



Prepared for

Village of Lincolnshire, Illinois



Donohue & Associates, Inc.
125 South Wacker Drive, Suite 1850
Chicago, IL 60606
Phone 312.236.9147

Rock Island, IL Champaign, IL • Indianapolis, IN • Fort Wayne, IN • South Bend, IN
Chesterfield, MO • Minneapolis, MN Sheboygan, WI • Milwaukee, WI • Madison, WI

www.donohue-associates.com



Donohue & Associates, Inc.
125 South Wacker Drive, Suite 1850 | Chicago, IL 60606
312.236.9147 | donohue-associates.com

July 24, 2014

Mr. Terry Hawkins
Utilities Superintendent
Village of Lincolnshire
One Olde Half Day Road
Lincolnshire, IL 60069-3035

Re: Request for Proposal
Engineering Consulting Services for Water Distribution System Modeling

Dear Mr. Hawkins:

Donohue & Associates is pleased to present this Proposal for your above-referenced project. We understand the goals of this project are to convert your existing hydraulic model to a more up-to-date model platform and to re-calibrate the model to existing conditions.

Based on our conversations this proposal includes a well defined scope of work and fee schedule.

Again, thank you for the opportunity to submit this proposal. As you review our proposal package, please do not hesitate to contact to contact me at 312-583-7204 with your questions. We look forward to working with you on this important project.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Eric Cockerill', with a long, sweeping flourish extending to the right.

Eric P. Cockerill, PE, BCEE
Vice-President

SCOPE AND FEE

PURPOSE OF PROJECT

The Village of Lincolnshire's existing water supply and distribution system Hydraulic Model will be converted from the current platform (H2ONet or Pipe2000) to WaterCAD and calibrated based on new field data.

SCOPE OF SERVICES

General

1. Review existing Village data including existing computer model, atlases, customer demands and GIS files, and collect data required for the project.
2. Consult with Village staff to clarify questionable issues
3. Convert and update the existing water distribution system computer model to a WaterCAD model using the Village's GIS information, or develop a new WaterCAD model using the Village's GIS data, whichever is most expedient and cost efficient.
4. Perform field tests necessary to calibrate the new WaterCAD model. Village staff shall assist with manpower necessary for data acquisition
5. Perform calibration simulations
6. Prepare and submit a report detailing the work performed. The report shall include a CD-ROM of the completed, calibrated model of the water distribution system.

Convert Hydraulic Model

The hydraulic model will be converted from its current form to the new modeling platform to reflect water piping networks, water storage facilities, pump stations, customer demands, operational controls, and other system facilities impacting water pressures and flows.

Data Request – The following information will be required to convert the hydraulic model and confirm data accuracy:

- GIS databases for the water system
- Drawings of any newly installed facilities that may not be included in the GIS data.
- Pump performance curves
- Operational setpoints
- SCADA information for each calibration day, the day before, and the day after
- Customer meter records for most recent 12 month period with addresses (customer names not necessary)

Donohue will compare the converted model to the provided GIS data and any newly installed facilities and perform any updates to the model structure that are required.

Calibrate Hydraulic Model

In order to calibrate the model, field data will be collected by Donohue staff with assistance from Village staff. This data will include:

Data from SCADA – Donohue will compile pressure and flow data recorded by the Village's SCADA system at the East Side Pump Station and the West Side Booster Station on the days of the field tests. With the assistance of Village staff, Donohue staff will also collect static pressures at a select number of locations in the distribution system. The locations for the static pressure measurements will be selected to ensure that data represent an accurate distribution of pressures throughout the water distribution system on the day of the test. The locations for the static pressure measurements will be jointly selected by Donohue and Village staff.

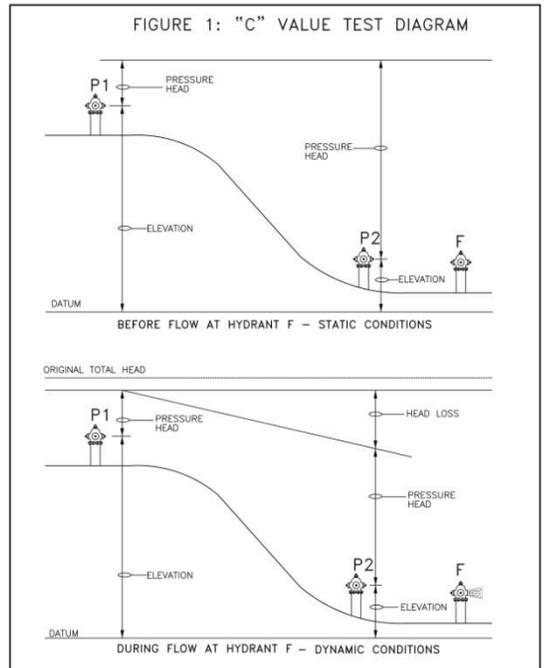
"C" value tests - Donohue will recommend pipe sections to be tested for the purpose of estimating the Hazen-Williams "C" values of the pipes within the Village's water distribution system; Donohue will develop the testing protocol and discuss it with Village staff prior to the tests.

The "C" value tests will involve isolation of the pipe sections to be tested, flushing of hydrants to induce headloss across the test section, and recording of flows through and pressure drop across the test section. Figure 1 illustrates the setup for each test.

The tests will be performed by Donohue, with the assistance of Village staff to close and open valves, and install and read pressure gages. We anticipate two (2) days of field tests. Representative "C" factors will be estimated from test results and used to update the model.

Graphs will be developed to demonstrate that the hydraulic model is calibrated. Each graph will show the 24-hour duration of the measured and modeled criteria (pressure, flow, tank elevation) for each of the calibration days.

The hydraulic model will be considered calibrated when modeled pressures are within 5 psi of recorded pressures when system conditions on the day of the static pressure measurements (pump station flows and pressures) are simulated. Donohue will coordinate with the Village to select the appropriate days for the field tests.



[Report and Documentation](#)

Following successful calibration, Donohue will draft a report outlining the following:

1. Work completed to convert the existing hydraulic model to the selected modeling platform.
2. Summary of updates made to the model based on a comparison of GIS data and newly constructed facilities.
3. Demand allocation summary
4. Summary of field tests completed and methods used.
5. Summary of SCADA data collected and used for calibration
6. Description of the model calibration process and presentation of results demonstrating achievement of the calibration threshold.

Donohue will prepare a draft report and submit that report to the Village for review. Following the review, we will meet with the Village to review the report and receive comments. Donohue will prepare and submit the final report which will incorporate the Village's comments. The report will be accompanied by a CD-ROM containing the updated, calibrated model of the Village's water supply and distribution system.

[Summary of Major Deliverables](#)

- Recommended static pressure measurement locations
- Pipe sections for Hazen-Williams "C" value tests
- Draft Hydraulic Conversion and Calibration Report
- Final Hydraulic Conversion and Calibration Report
- Hydraulic Modeling Files on CD-ROM
- Meetings minutes, if any

ESTIMATED FEE

The estimated fee to complete the Hydraulic Study is \$19,761. A summary of the major tasks and the detailed cost breakdown (hours, cost per task, etc.) is shown on the worksheet following this page.

**Village of Lincolnshire
Proposal for Water Distribution System Modeling
Fee Schedule
Donohue & Associates, Inc**

Task	Principal	PM	Lead Modeler	Engineer	Admin.	Total Hours	Total Labor	Travel	Printing	Other Expenses*	Total Cost
1. Data Collection and Review		8	4			12	\$ 1,560				\$ 1,560
2. Convert and Update Existing Computer Model			28			28	\$ 3,640			\$ 2,841	\$ 6,481
3. Perform Field Tests		2	4	16		22	\$ 2,380	\$ 150			\$ 2,530
4. Estimate "C" Values			4			4	\$ 520				\$ 520
5. Perform Calibration Simulations			16			16	\$ 2,080				\$ 2,080
6. Prepare Preliminary Report		4	16			20	\$ 2,600	\$ 50			\$ 2,650
7. Prepare Final Report		2	8		4	14	\$ 1,580		\$ 30		\$ 1,610
8. QA/QC	8	4				12	\$ 2,280	\$ 50			\$ 2,330
Total	8	20	80	16	4	128	\$ 16,640	\$ 250	\$ 30	\$ 2,841	\$19,761
Total Labor Dollars by Labor Class	\$1,760	\$ 2,600	\$ 10,400	\$ 1,600	\$ 280						

* Estimated model license costs based on leasing WaterCAD for two quarters

**REQUEST FOR BOARD ACTION
COMMITTEE OF THE WHOLE MEETING
August 25, 2014**

**Subject: Village of Lincolnshire – Draft Natural Hazards Mitigation Plan
(Village Of Lincolnshire Natural Hazards Mitigation Planning
Committee)**

Action Requested: Consideration and Discussion

**Originated By/Contact: Robert Horne, Asst. Dir. of PW/Engineering Supervisor
Natural Hazard Mitigation Planning Committee**

Referred To: Village Board

Summary / Background:

The Village of Lincolnshire participates in the Federal Emergency Management Agency's National Flood Insurance Program (FEMA-NFIP). Participation in the NFIP allows Lincolnshire residents to access flood insurance for structures and contents. In 1994, the Village elected to join FEMA's voluntary Community Rating System (CRS) program which documents the actions taken above and beyond minimum federal requirements for participation in the NFIP. Since 1997, the Village has been a Class 5 community. This rating affords policy holders a 25% discount on their flood insurance premiums on insured structures located in the Special Flood Hazard Area (SFHA), also known as the regulated floodplain.

As a result of the 2011 CRS audit, the Village learned it had achieved a sufficient number of points to warrant a Class 4 designation, which would result in a 30% discount. However, there is a pre-requisite for Class 4 communities for which the Village has not qualified. The pre-requisite involves the development of an All Natural Hazards Mitigation Plan (ANHMP). Unfortunately, the recently developed Lake County Hazard Mitigation Plan, adopted by the Village in August 2012, did not meet CRS criteria due to the lack of Lincolnshire-specific public participation in the preparation of the plan. Therefore, in August of 2013 the Village Board passed a resolution appointing a committee to prepare the ANHM Plan for the Village of Lincolnshire. At the same time, the Village retained the services of Molly O'Toole, Molly O'Toole and Associates, to provide support in the development of the plan. Molly O'Toole was the primary author of the Lake County ANHMP.

The Village's draft Natural Hazards Mitigation Plan (attached) addresses natural hazards that may impact the Village, such as floods, severe summer storms, winter storms and tornadoes, by identifying activities for consideration by residents or property owners to protect life and safety hazards and to reduce property damage caused by natural hazards.

The two main purposes for the development of the Village of Lincolnshire Natural Hazards Mitigation Plan is first, to examine the Village's specific flood concerns and recommend mitigation actions identified by the Village Board or recommended by and for residents and property owners. The second purpose is for the Village to receive additional credits for the CRS rating.

Shortly following the Committee's appointment Staff began the process of meeting with a local group of residents, business owners/representatives and public officials to review and discuss the goals and objectives of the Village, as they relate to natural hazards experienced in the

Village of Lincolnshire. Staff held five (5) public meetings and conducted an online survey between June 2013 and May 2014 to discuss the development of this plan. Based upon input from residents, business owners, public officials and staff, the Committee has formulated a plan for the Village Board to review and ultimately adopt.

In addition to the Natural Hazards Mitigation Plan provided, Staff and the consultant have developed a Plan for Public Information (PPI). Staff intends to present the PPI to the Village Board for review at the September 8, 2014, Committee of the Whole meeting. This will allow sufficient time to review both plans and have them both approved at the September 22nd meeting, should there be no objections.

The purpose of the PPI is to provide guidance when the Village gives information to the public during an emergency, disaster or in a crisis situation. The plan provides a structure for how the Village should provide accurate, well-timed, applicable, consistent and coordinated information. The PPI was developed to meet the criteria established by the Community Rating System and is to be used in conjunction with the Natural Hazards Mitigation Plan. Both plans parallel the Village's current Emergency Response and Flood Response Manuals.

Budget Impact: Much of the administrative portions of the plan incorporate processes and procedures that have been revised to be part of the current workflow. Additionally, projects identified in the recently proposed Capital Improvement Program compliment goals outlined within the plan.

Service Delivery Impact: A total of 70 policy holders currently receive a total of \$32,169 per year in insurance premium discounts based upon the Class 5 rating. If the Village can achieve Class 4, the discount will increase to \$38,405.

Recommendation:

If the Board has no objections, Staff recommends placement on the September 22, 2014, Consent Agenda for approval.

Reports and Documents Attached:

Village of Lincolnshire Draft Natural Hazards Mitigation Plan
Draft Sample Ordinance
Committee Member Roster
Meeting Agendas

Meeting History	
Initial Referral to Village Board (COW):	August 25, 2014
Regular Village Board Meeting:	September 22, 2014

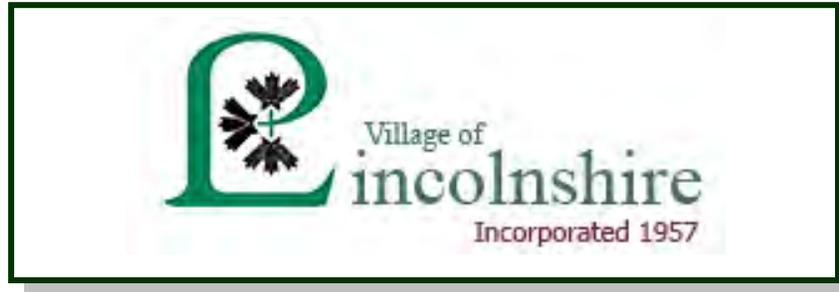
Village of Lincolnshire Natural Hazards Mitigation Plan



Village of Lincolnshire Hazard Mitigation
Planning Committee

Review Draft July 2014





Village of Lincolnshire Natural Hazards Mitigation Plan

July 2014 DRAFT

Developed by:

Village of Lincolnshire Mitigation Planning Committee

With Supplemental Information
Included in the Adopted

**Lake County All Natural Hazards
Mitigation Plan, June 2012**

Planning Consultant:

Molly O'Toole & Associates, Ltd.

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Village of Lincolnshire Natural Hazards Mitigation Plan

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July 2014 DRAFT

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List of Exhibits

[To be developed]

List of Tables

[To be developed]

Executive Summary

The Federal Emergency Management Agency (FEMA), through the Disaster Mitigation Act of 2000 (DMA 2000) and the Stafford Act require communities develop and adopt a FEMA-approved natural hazard mitigation plan to be eligible for hazard mitigation grant funds. To meet this requirement, the Village of Lincolnshire participated with Lake County and other Lake County municipalities in the development of the 2012 Lake County All Natural Hazards Mitigation (ANHMP). The Village of Lincolnshire adopted the Lake County ANHMP in August 2012.



FEMA's National Flood Insurance Program's (NFIP) Community Rating System (CRS) provided CRS floodplain management planning credit to the Village of Lincolnshire; however, the Lake County ANHMP does not meet certain CRS planning requirements, which if met, the Village of Lincolnshire could improve beyond the current CRS Class 5 rating. Currently, properties located in the Special Flood Hazard Area (SFHA) receive a 25% discount in flood insurance premiums. Moving to a Class 4 rating would mean a 30% premium discount.

The Village of Lincolnshire Natural Hazard Mitigation Plan allows the Village to meet all planning requirements of the CRS, and it also furthers the Village's efforts to protect life, health and safety, and reduce damage to property and infrastructure from natural hazards. This Mitigation Plan assesses the natural hazards that affect the Village of Lincolnshire, sets mitigation goals, considers current mitigation efforts being implemented, evaluates additional mitigation strategies, and recommends mitigation actions to be implemented in the next five years. The mitigation actions are designed to protect the people and assets of the Village of Lincolnshire, and designed to be undertaken by both the public and the private sectors.

This Mitigation Plan was developed by the Village of Lincolnshire Natural Hazard Mitigation Planning Committee consisting of residents, community stakeholders, Village elected officials and Village staff, along with the assistance of a mitigation planning consultant. The Planning Committee was formed by a Village resolution passed on August 6, 2013 to facilitate the development of this Mitigation Plan and other CRS-related plans.

The Planning Committee identified priority hazards listed in Chapter 3. In part, due to the April 2013 flooding in Lincolnshire, but also due to the Village's interest in improving the CRS class rating, the focus of this Mitigation Plan is on floods.

The Planning Committee developed goals and guidelines for this Plan, developed recommendations for mitigation measures (preventive, property protection structural measures, emergency services and public information), and identified an action plan for the

Village to use to implement this plan. The Planning Committee is fully aware that recommendations and action items will only be implemented when the Village's resources (staff time and funding) allow.

The Planning Committee will continue to meet annually to assess this Mitigation Plan and determine if any updates or changes are required. An annual progress report will be presented to the Village Board as an informational item. FEMA and CRS require all mitigation plans to be updated and re-adopted every five years.

This Mitigation Plan, when used in conjunction with the Lake County ANHMP, allows the Village of Lincolnshire to be more aware of the risks associated with natural hazards, the potential impact on the hazards on the community, and provides a list of actions to better protect property and people from harm.

Chapter 1.

Introduction

The Village of Lincolnshire is located in southeastern Lake County along the Des Plaines River. Lake County, Illinois is located in northeastern Illinois. The Village of Lincolnshire is subject to flooding, severe summer and winter storms, extreme cold and heat, and tornadoes. The Village of Lincolnshire participates in the National Flood Insurance Program and the Community Rating System (CRS).

Lake County worked with the Lake County Local Planning Committee (LPC) to develop the 2012 Lake County All Natural Hazards Mitigation Plan (ANHMP). The Village of Lincolnshire is a member of the LPC and adopted the Lake County ANHMP locally in August 2012. In June 2013, the Village organized its own Mitigation Planning Committee to develop the Village of Lincolnshire Natural Hazards Mitigation Plan.

1.1 Purpose of the Plan

The purpose of the development the Village of Lincolnshire Natural Hazards Mitigation Plan (Mitigation Plan) with the participation of the Village of Lincolnshire Mitigation Planning Committee, and adoption of Mitigation Plan by the Village of Lincolnshire Board of Trustees, is to examine flood mitigation actions that should be considered for the Village of Lincolnshire and for floodplain management planning (FMP) credit in the CRS.

The Village's adoption of the Lake County ANHMP allows the Village to be eligible for FEMA hazard mitigation grant funding from all of the FEMA Hazard Mitigation Assistance grant programs that fund mitigation activities. While the Lake County ANHMP meets all CRS planning requirements, additional FMP credit is being sought by the Village through this Mitigation Plan to allow the Village to earn a better CRS class rating. An improved CRS class rating will provide additional flood insurance premium discounts to Village of Lincolnshire floodplain residents and property owners.

The Village of Lincolnshire also worked with the Mitigation Planning Committee to develop a "Plan for Public Information" and a "Flood Insurance Coverage Improvement Plan." These plans are public information mitigation action items recommended in the Lake County ANHMP, and the implementation of these plans, qualify for additional CRS credit.

1.2 Organization of the Village of Lincolnshire Mitigation Plan

This Mitigation Plan is organized into seven chapters, and in the same manner as the Lake County ANHMP, the Village of Lincolnshire Mitigation Plan and the Lake County ANHMP are complimentary plans. Table 1-1 summarizes the contents of the Lake County ANHMP chapter and the Village of Lincolnshire Mitigation Plan. Chapter 2 of this Mitigation Plan describes what additional analysis and work of the Village of Lincolnshire Mitigation Planning Committee went into this plan beyond the information provided in the Lake County ANHMP.

Table 1-1 Summary of Lake County ANHMP and Village of Lincolnshire Mitigation Plan Contents

	2012 Lake County ANHMP	2013 Village of Lincolnshire Natural Hazards Mitigation Plan	CRS Planning Step(s)
Chapter 1 Introduction	Includes the Lake County ANHMP's purpose and organization, provides an overview of County, a summary of Lake County land use, base maps, and a summary of critical facilities.	Examined the Village's land use and provides a map of critical facilities within the Village.	Step 1 and 2
Chapter 2 Planning Process	Presents the FEMA-recommended 10 step planning process and a summary of the major changes made from the 2006 to the 2012 Lake County ANHMP.	Summarized the planning process undertaken.	Step 1, 2 and 3
Chapter 3 Risk Assessment	Discusses the natural hazards that can impact Lake County.	Relies on the Lake County ANHMP and summarized the flood hazards in Lincolnshire.	Step 4 and 5
Chapter 4 Mitigation Goals	Presents the goals and guidelines of the Lake County ANHMP.	Presents the goals and guidelines tailored to the Village of Lincolnshire.	Step 6
Chapter 5 Mitigation Strategies and Capabilities Assessment	Provides a description of the mitigation activities already underway in Lake County and recommends additional activities for six mitigation strategy categories. Also considers the County and municipal capabilities for implementing measures.	Relies on the Lake County ANHMP and summarized the six mitigation strategies for flood mitigation. Conclusions and recommendations specific to the Village of Lincolnshire are included.	Step 7
Chapter 6 Action Plan and Implementation Strategy	Discusses the consideration of countywide and community-specific mitigation action items to be implemented as staff and funding resources allow.	Presents a Village of Lincolnshire natural hazard mitigation action plan, though the Village is still participating in the implementation of the Lake County ANHMP.	Step 8, 9 and 10
Chapter 7 Plan Maintenance	Discusses plan adoption, outlines the Lake County ANHMP maintenance and monitoring efforts, continued public participation, and evaluating the plan.	Same.	Step 10

1.3 Village of Lincolnshire Overview

The Village of Lincolnshire is located in southeastern Lake County, primarily within Vernon Township, and a small portion of the eastern end of the Village in West Deerfield Township. The Village was incorporated in 1957. The Village of Lincolnshire is bordered by the Villages of Buffalo Grove to the south and west, Vernon Hills to the west, Lake Forest to the north and east, Bannockburn to the east and Riverwoods to the south. Two unincorporated portions of Vernon Township also border the Village of Lincolnshire.

The Des Plaines River flows through the Village of Lincolnshire. Lake County Forest Preserve lands are located to the south and north of the Village of Lincolnshire along the Des Plaines River.

A map of the Village of Lincolnshire is presented in Exhibit 1-1.

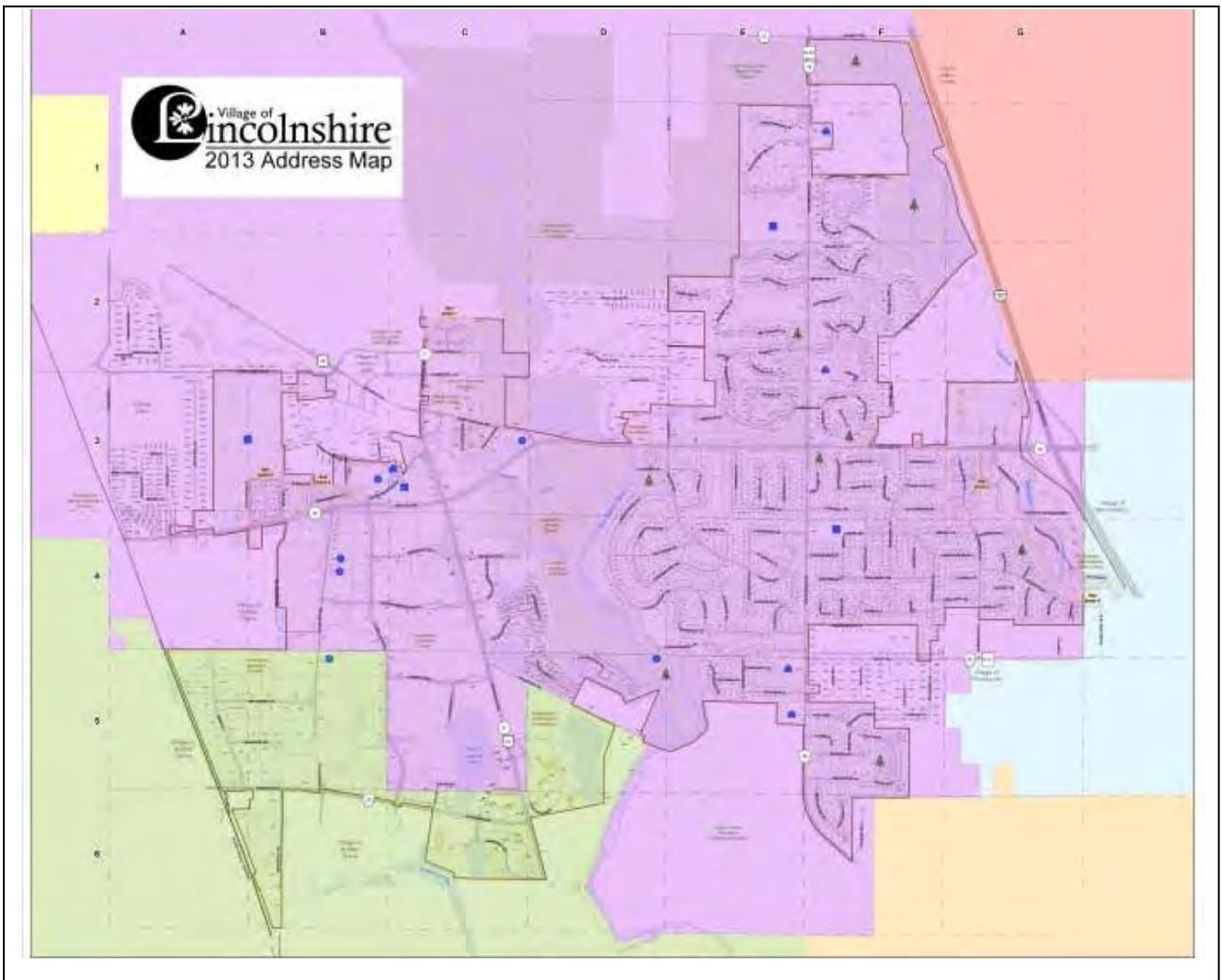


Exhibit 1-1 Village of Lincolnshire Municipal Map

Watersheds: A majority of the Village of Lincolnshire is part of the Des Plaines River watershed. The Des Plaines River originates in Wisconsin, flows south through Lake County and south into Cook County. Indian Creek is a tributary to the Des Plaines River and is located on the western portion of Lincolnshire. The eastern portion of the Village is part of the West Fork of the North Branch of the Chicago River.

There are 480 parcels of land located in the Special Flood Hazard Area (SFHA).

Population: The Village of Lincolnshire has a population of 7,275, according to the 2010 U.S. Census. Lake County has a population of 703,462. There are approximate 3,400 household units in Lincolnshire.

Population of Lincolnshire has grown 19% from 2000 to 2010 as shown in Table 1-2. The Chicago Metropolitan Agency projects population growth to continue for Lake County, with a projected population of over 950,000 by the year 2040.

Table 1-2 Village of Lincolnshire Population Data

Community	Lake County	
	2000 Population	2010 Population
Village of Lincolnshire	6,108	7,275
Total:	644,356	703,462

Employment: Largely due to its office, industrial, hospitality, and commercial/retail sectors, Lincolnshire has a diverse economic base. The Village consists of a number of office and business parks, including the Lincolnshire Corporate Center, Lincolnshire Business Center, Tri-State Office Park, and Millbrook Office Park, which house employers, such as AON Hewitt, Walgreens, HydraForce and Quill. The Village's daytime population totals more than 25,000.

Lincolnshire is home to six hotels including the Lincolnshire Marriott Resort

Schools: Lincolnshire is part of the Lincolnshire-Prairie View School District 103 elementary school district and the Adlai E. Stevenson High School District 125.

1.4 Land Use and Development

Current Zoning Map: The current Village of Lincolnshire's zoning map can be viewed at <http://www.village.lincolnshire.il.us/village-maps>.

Future Land Use: Exhibit 1-2 shows the future land use map.

Development Trends: The Village of Lincolnshire's Comprehensive Plan was updated in March 2012. The Village expects continued growth in the community for both housing units and commercial and industrial development. The Comprehensive Plan can be viewed at

<http://www.village.lincolnshire.il.us/departments-services/community-economic-development/comprehensive-plan-update-2012>.

Table 1-3 Village of Lincolnshire Land Use

Land Use	Land Use	
	Acres	Percent
Residential	1,360	46%
Non-residential	573	20%
Open Space and Parkland	395	13%
Other	609	21%
Total	2,938	100%

1.5 Critical Facilities

Critical facilities are buildings and infrastructure whose exposure or damage can affect the well being of a large group. The continued operation of critical facilities is vital to preparedness, response and recovery from any sort of natural or manmade hazard event. Exhibit 1-3 shows the critical facilities located within the Village of Lincolnshire and those located in the SFHA (100-year floodplain).

Further investigation into critical facility locations, use of critical facility mapping, and protection of critical facilities is discussed in Chapters 3 and 5 of this Mitigation Plan.

Table 1-4 Village of Lincolnshire Critical Facilities

Critical Facility Category	Within Village	Within SFHA
Fire Departments	1	0
Police Department	1	0
Riverside Foundation	1	1
Village Hall	1	0
Public Works and Water Facility	1	0
Sanitary Facility	8	2
Schools	4	0
Water Facility	1	0
Total:	18	3

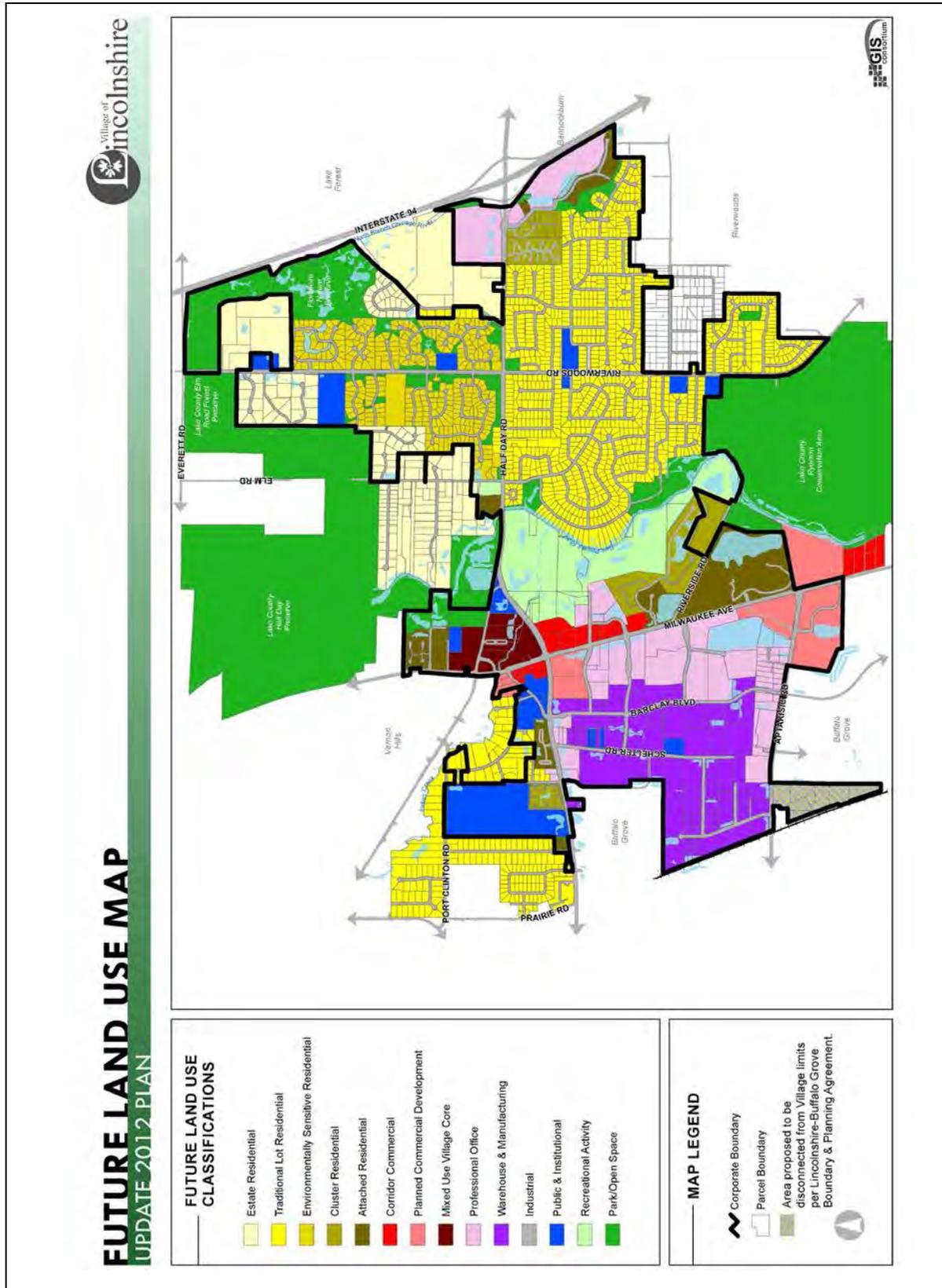
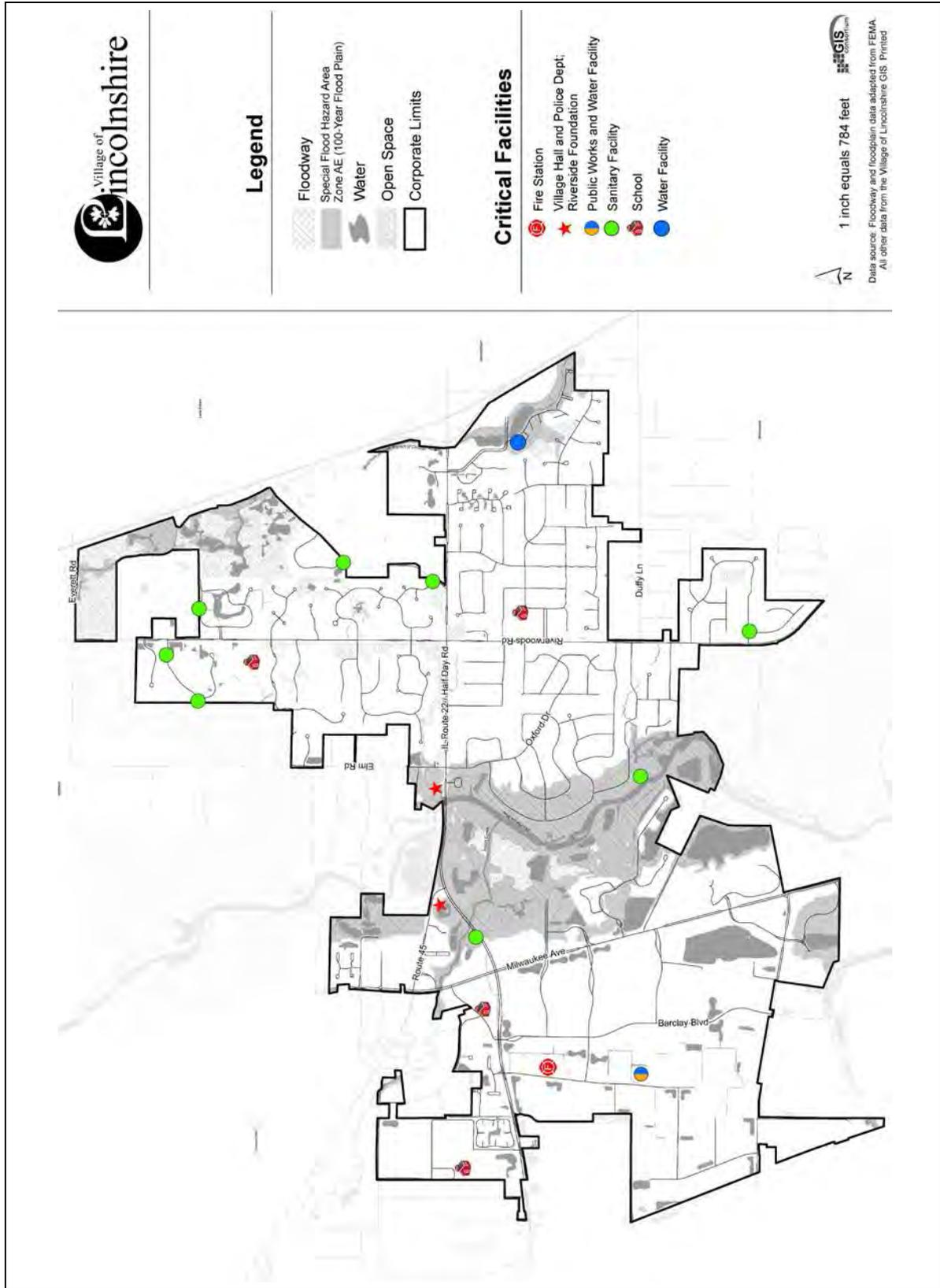


Exhibit 1-2 Village of Lincolnshire Future Land Use Map



Legend

- Floodway
- Special Flood Hazard Area
- Zone AE (100-Year Flood Plain)
- Water
- Open Space
- Corporate Limits

Critical Facilities

- Fire Station
- Village Hall and Police Dept.
- Riverside Foundation
- Public Works and Water Facility
- Sanitary Facility
- School
- Water Facility



1 inch equals 784 feet



Data source: Floodway and floodplain data adapted from FEMA. All other data from the Village of Lincolnshire GIS. Printed

Exhibit 1-3 Village of Lincolnshire Critical Facilities

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Chapter 2. Planning Process

2.1 Plan Approach and Committee Organization

The Village of Lincolnshire Natural Hazards Mitigation Plan utilizes the ten step floodplain management planning approach recommended by FEMA through the Community Rating System (CRS) program (shown to the right). The 10-step planning process was also used with the companion ANHMP.



The Village of Lincolnshire Natural Hazards Mitigation Plan was developed with the participation of the Village of Lincolnshire Natural Hazards Mitigation Planning Committee. Participating members of the Planning Committee are shown in Table 2-1. The Committee was established through a resolution passed by the Village of Lincolnshire Board of Trustees on August 6, 2013(see Appendix A).

The Committee met four times from October 2013 to May 2014. The efforts of the Committee were coordinated by the Village of Lincolnshire Department of Public Works. Technical support was provided by Molly O’Toole & Associates, Ltd. (MO&A). MO&A is an engineering consulting firm that specializes in hazard mitigation.

Organization (Step 1) began with the Village and MO&A in May 2013. The effort included other Village departments and individuals, including the Village Manager and the Director of Community Development.

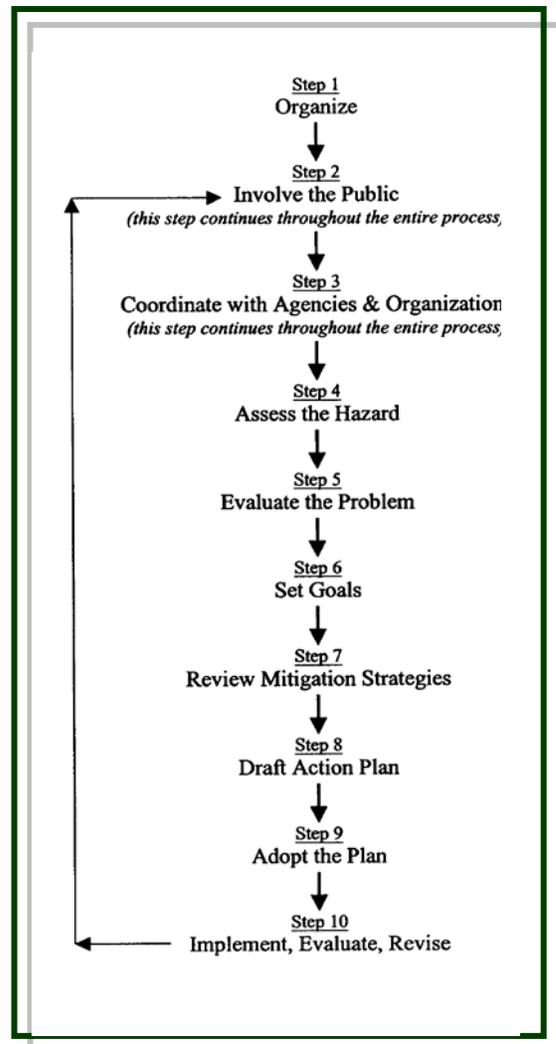


Table 2-1 Village of Lincolnshire Natural Hazards Mitigation Planning Committee

Name	Representing
Ramesh Gulatee	Residents
Jamie Godshalk	Residents
Larry Barnhart	Wood Creek Courts EPA
Mark Cohen	State Farm Insurance
Deann Daniel	Sedgebrook Retirement Community
Wendy Kritt	Residents
Marj Lundy	Residents
Ann Maine	Residents
Judy Mankus	Residents
Jeff Merwin	Residents
Rev. Douglas Meyer	Lutheran Church of the Holy Spirit
Andy Muzik	Residents
Joseph Pratt	Residents
Stan Reznik	Residents
William Rubinstein	Residents
David Schaper	Residents
Rob Sturru	Residents
Rob Weinberg	Westgate HOA
Brett Blomberg	Village President
Mara Grujanac	Village Trustee
Brad Burke	Village Manager
Rob Horne	Public Works
Steve Robles	Village Planner
Mike Tiemens	Bank Financial
Jennifer Lugo	Residents
Roger Mankus	Residents
Stancia Kalmus	Residents
Craig Parcels	Residents
Molly O'Toole	Planning Consultant

2.2 Public Involvement

Step 2 of the planning process was to obtain input from the public, particularly property owners that have been affected by natural hazards. The public was invited to participate through several concurrent means, including:

- Public meeting held at the beginning of the planning process at the Village Hall on June 20, 2013
- Property owner survey made available online and on paper at the Village Hall
- All meetings made open to the public (provided on Village website)
- Press releases provided to local newspapers
- Public meeting held prior to Mitigation Plan adoption by the Village Board on July 14, 2014



The Village of Lincolnshire meetings were publicized through media and the Village of Lincolnshire website. Examples of public involvement efforts are provided in Appendix A.

June 20, 2013 Public Meeting: This public meeting, held at the beginning of the planning process, kicked off the Village’s mitigation planning effort. Ten families attended the public meeting. The Village used the meeting to explain to flood mitigation plans to be developed, to collect input from residents who were flooded in April 2013, and to request volunteers for the Planning Committee. See Appendix B for copy of Village’s website homepage.

Public Input Survey: The Village of Lincolnshire developed a 28 question public input survey for the development of this Mitigation Plan and for the development of the “Village of Lincolnshire Plan for Flood Mitigation Public Information and Flood Insurance Coverage Improvement.”

The survey was available online and printed copies of the survey were also made available at Village Hall. The survey was open from July to August, 2013. Ten questions were presented and results were used to evaluate and prioritize natural hazards and to develop a sense of citizens’ understanding of their mitigation needs.

Fifty residents participated in the survey. Results of the survey are summarized in Appendix B of this Mitigation Plan.

Public meeting: A public meeting was held regarding the Village of Lincolnshire Natural Hazard Mitigation Plan on July 14, 2014.

2.3 Agency Coordination

Coordination (Step 3) with agencies and organizations was accomplished through meetings, phone conversations, e-mail exchanges, and/or through participation on the Planning Committee. At the end of the planning process, agencies were also sent a notice requesting their review of the draft Mitigation Plan. They were asked to provide any comments in time for the public meeting.

The agencies included the Federal Emergency Management Agency (FEMA), Lake County Stormwater Management Commission. Neighboring communities were also informed of the Village's planning efforts. See sample letter in Appendix B.

Existing plans and programs were reviewed throughout the planning process. Plans reviewed and incorporated are discussed further in Chapters 3 -5.

2.4 Plan Adoption and Implementation

The Village of Lincolnshire Board of Trustees will adopt this Mitigation Plan and implement the action plan in conjunction with the Village's action items in the adopted 2012. The Mitigation Plan maintenance approach is discussed in Chapter 7

Chapter 3. Risk Assessment

Chapter 3 of the Lake County ANHMP presents a natural hazards risk assessment for Lake County. This Mitigation Plan relies on the Lake County ANHMP risk assessment. A summary of the risk assessment, as it applies to the Village of Lincolnshire is presented in this Chapter.

3.1 Natural Hazards in Lake County and Lincolnshire

Table 3-1 presents a list of all disaster and emergency declarations that have occurred in Lake County, according to the FEMA. This list presents the foundation for identifying what hazards pose the greatest risk within Lake County.

Table 3-1 Presidential Disaster (DR) And Emergency Declarations (EM) In Lake County

Declaration Number	Date	Event Details
194-DR	April 25, 1965	Tornadoes, Severe Storms, Flooding
OEP 227-DR	April 25, 1967	Tornadoes
OEP 373-DR	April 26, 1973	Severe Storms, Flooding
FEMA 3068-EM	January 16, 1979	Blizzards and Snowstorms
FEMA 776-DR	October 7, 1986	Severe Storms, Flooding
FEMA 997-DR	July 9, 1993	Severe Storms, Flooding
FEMA 1110-DR	April 23, 1996	Tornadoes, Severe Storms
FEMA 3134-EM	January 8, 1999	Winter Snow Storm
FEMA 3161-EM	January 17, 2001	Severe Winter Storm
FEMA 3230-EM	September 7, 2005	Hurricane Katrina Evacuation
FEMA 1729-DR	September 25, 2007	Severe Storms, Flooding
FEMA 3283-EM	March 13, 2008	Snow
FEMA 1771-DR	June 24, 2008	Severe Storms, Flooding
FEMA 1960-DR	March 17, 2011	Severe Winter Storm and Snowstorm
FEMA 4116-DR	April 13, 2013	Severe Storms, Flooding
(no declaration)	June 2013	Additional Flooding

Also, while Lake County was not included, Cook County to the south of Lake County had two disasters declared: DR 1800 for flooding on September 13, 2008 and DR 1935 for flooding in July-August 2010. Lake County was impacted by these events, but damage did not warrant the county being included in the declaration.

Two additional floods along the Des Plaines River occurred along the Village of Lincolnshire adopted the 2012 Lake County ANHMP in 2013.

Based on the input from the LPC and the record of hazard events in Lake County, the priority hazards for this 2012 Lake County ANHMP update include:

- Flood
- Tornado
- Severe Summer Storms
- Severe Winter Storms
- Dam Failure
- Temperature
- Extremes Drought
- Earthquake

The Village of Lincolnshire Hazard Mitigation Planning Committee reconsidered the hazards and identified the following list:

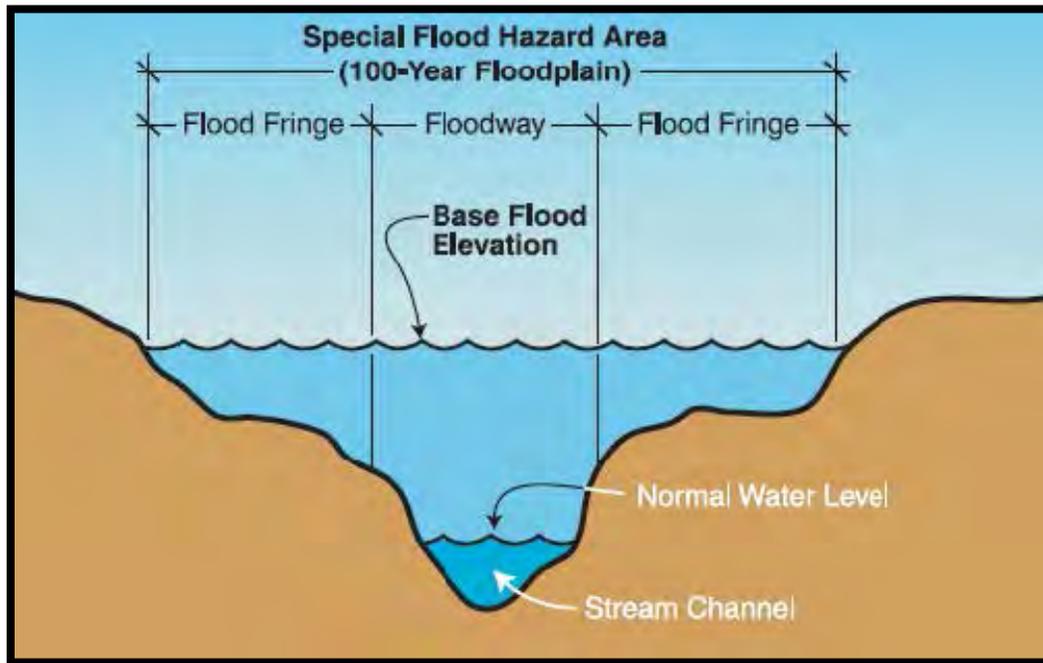
- Flood
- Severe Summer Storms
- Severe Winter Storms
- Tornado
- Dam Failure
- Erosion
- Extreme Temperature s
- Drought
- Wildfire

Note that wildfire was added to the above list, but a risk assessment of the hazard is not included in this Mitigation Plan. It is the intention of the Village to examine wildfire in the next update of this Mitigation Plan.

3.2 Flood

A flood is a natural event for rivers and streams and occurs when a normally dry area is inundated with water. Excess water from snowmelt or rainfall accumulates and overflows onto the stream banks and adjacent floodplains. As illustrated in Figure 3-1, floodplains are lowlands, adjacent to rivers, streams and creeks subject to recurring floods. Flash floods, usually resulting from heavy rains or rapid snowmelt, can flood areas not typically subject to flooding, including urban areas. Extreme cold temperatures can cause streams and rivers to freeze, causing ice jams and creating flood conditions.

Figure 3-1 Description of a Floodplain



Floods are considered hazards when people and property are affected. In Illinois, flooding occurs commonly and can occur during any season of the year from a variety of sources. Pipelines, bridges, and other infrastructure can be damaged when high water combines with flood debris. Basement flooding can cause extensive damage. Flooding can cause extensive damage to crop lands. Several factors determine the severity of floods, including rainfall intensity and duration, topography and ground cover.

Riverine flooding originates from a body of water, typically a river, creek, or stream, as water levels rise onto normally dry land. Water from snowmelt, rainfall, freezing streams, ice flows, or a combination thereof, causes the river or stream to overflow its banks into adjacent floodplains. Winter flooding usually occurs when ice in the rivers creates dams or streams freeze from the bottom up during extreme cold spells. Spring flooding is usually the direct result of melting winter snow pack, heavy spring rain, or a combination of the two.

Flash floods can occur anywhere when a large volume of water flows or melts over a short time period, usually from slow moving thunderstorms or rapid snowmelt. Because of the localized nature of flash floods, clear definitions of hazard areas do not exist. These types of floods often occur rapidly with significant impacts. Rapidly moving water, only a few inches deep, can lift people off their feet, and only a depth of a foot or two of water, is needed to sweep cars away. Most flood deaths result from flash floods.

Urban flooding or local drainage problems can occur anywhere in Lake County. Most local drainage problems result in shallow flooding on roads, yards and, sometimes, in buildings.

In some areas, a development is actually located in a drainageway or in a depressional ponding area. Inadequately maintained drainage ditches, undersized storm sewers, and failing tile drains or storm sewers are common causes of local flooding.

Local drainage problems have the greatest damage impact on homes with drive-down basement garages and split-level homes in low lying areas. In the case of drive-down garages, water accumulating on the street finds a low driveway and fills a home's basement. Split-level homes provide easy access for surface floodwaters to enter through the ground level windows.



Houses with drive-down garages are susceptible to street flooding and local drainage problems

Since much of Lake County was once tiled to provide drainage for farmland, failed or inadequate drain tiles are a large problem in the developing areas of the county. Many tiles are old and were not designed to handle the stormwater loads development produces. The same is also true for older storm sewer systems. Most storm drains and road culverts are not designed to carry more than the 10-year storm.

Depressional flooding is common in Lake County. Lake County has a gently rolling landscape including many depressional areas left from the Wisconsin Glacial Period. The common problem with development in many of these depressional areas is there is no natural outlet for runoff. Some depressions are former wetlands drained with field tiles originally installed to make them farmable. In many cases the tiles are old, in disrepair, and often have limitations for handling the increased volumes of runoff resulting from development. When the drainage system for depressional areas becomes overloaded, runoff simply fills up a depression. Without an adequate outlet, floodwater will remain until it evaporates, seeps into the ground or trickles through a tile.

Sanitary Sewer Backups. There are few combined sewers in Lake County where stormwater and wastewater discharges are transported in the same pipe system. Therefore, most of the sanitary sewer backups are caused by infiltration of stormwater into the sanitary sewer pipes, leaky manholes and inappropriate connections from residential storm drains, roof drains and sump pumps to sanitary sewer lines. In some places excess stormwater in sanitary sewers causes manhole covers to lift off, and sewage finds its way into rivers and lakes via the storm drainage system. The contamination of surface waters with sewage degrades water quality by adding fecal coliform and excess nutrients that reduce dissolved oxygen in the water and can lead to the spread of communicable diseases. Beach closures and swimming bans are a common result.

Erosion and Sedimentation. Areas prone to the most erosion damage are the bluffs and ravines, lake shores, and high energy flow streams. Channelized stream reaches are less stable and more erosive than meandering sections. Erosion will be discussed in Section 3.11.

3.2.1 Lake County-Lincolnshire Watersheds

There are four major watersheds in Lake County, shown in Exhibit 3-1 along with 26 subwatersheds. The Village of Lincolnshire is part of two major watersheds:

The **Upper Des Plaines River** watershed is located in northeastern Illinois, Lake and Cook Counties, and Kenosha and Racine Counties in southeastern Wisconsin. A summary of the watershed is presented in Table 3-8. The Upper Des Plaines is subject to significant flooding caused by lack of channel capacity of the mainstem of the Des Plaines River and tributaries to carry major flows during storms. Historical flooding in 1986 and 1987 resulted in over \$100 million in damages.

The main stems of the Fox and Des Plaines Rivers have flood characteristics very different from the other major watershed of the county. The Fox and Des Plaines Rivers experience their worst floods from rain events lasting a few days, or from a series of small rain events over a longer duration. The greatest flooding along the Fox and Des Plaines occurs following longer rain events. The floods of 1960 and 1986 resulted from long steady rains which eventually overwhelmed the available floodplain storage and set new flood stage records on the Fox and Des Plaines Rivers respectively.

Table 3-8 Des Plaines River Watershed in Lake County

Des Plaines River Watershed				
Area:	202 mi ²	Municipalities:		
	42% of County	Antioch	Indian Creek	Mundelein
Public Land:	11,730 acres	Beach Park	Kildeer	Old Mill Creek
Wetlands:	20,595 acres	Buffalo Grove	Lake Villa	Riverwoods
		Deer Park	Lake Zurich	Round Lake Beach
		Grayslake	Libertyville	Round Lake Park
		Green Oaks	Lincolnshire	Third Lake
Subwatersheds:	Area (mi²):	Gurnee	Lindenhurst	Vernon Hills
North Mill Creek	21.5	Hainesville	Long Grove	Wadsworth
Newport Drain	8.4	Hawthorn Woods	Mettawa	Wheeling
Mill Creek	31			
Upper Des Plaines	53	Townships:		
Bull Creek/Bull's Brook	12.3	Antioch	Lake Villa	Warren
Indian Creek	37.7	Avon	Libertyville	Waukegan
Lower Des Plaines	18.2	Benton	Newport	West Deerfield
Buffalo Creek	13.7	Ela	Vernon	Zion
Aptakisic Creek	6.3	Freemont		

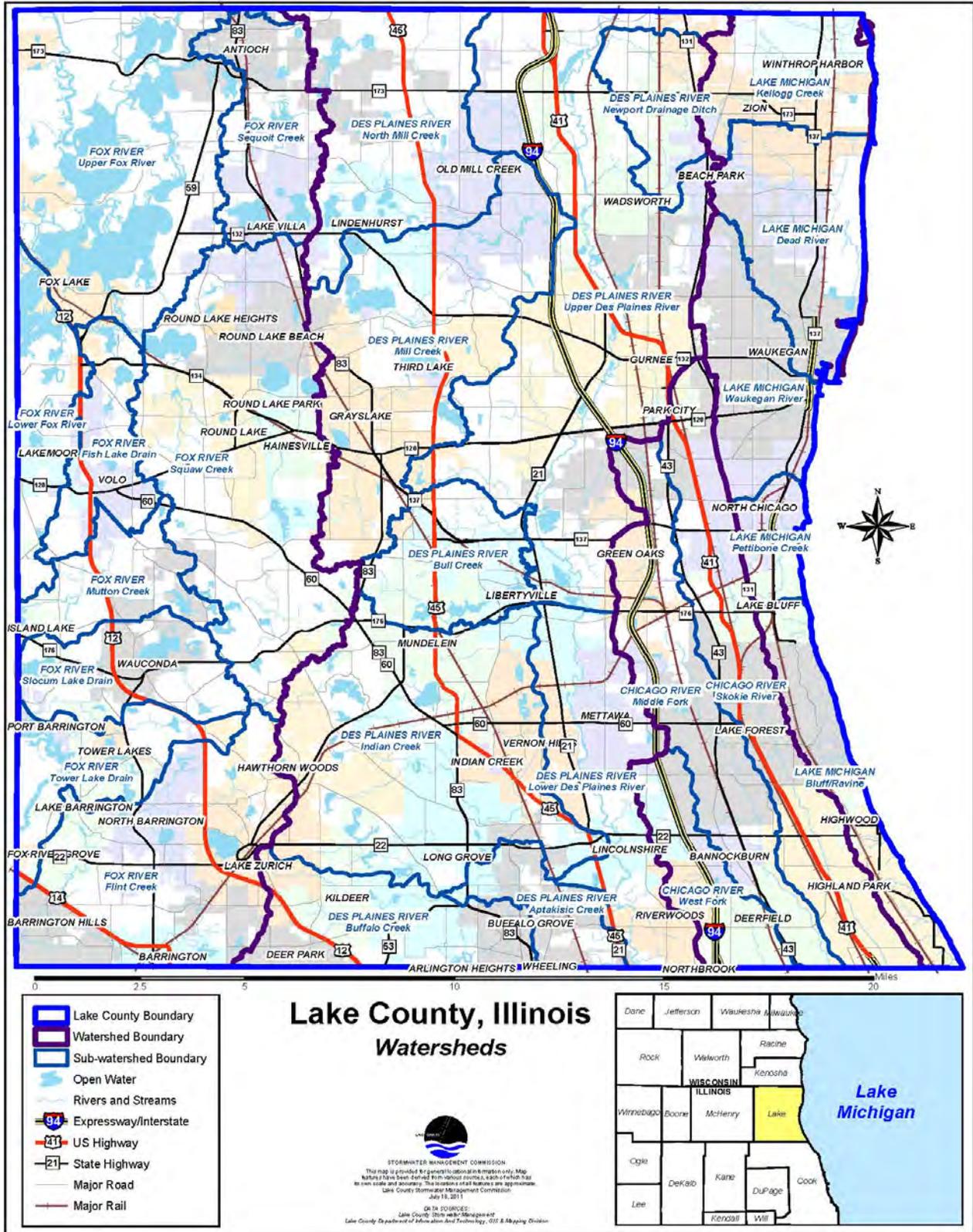


Exhibit 3-1 Lake County Watersheds and Subwatersheds
 This map can be downloaded at the Lake County SMC website

The 1986 event resulted from 10 days of widespread steady rain. It took the Des Plaines 4 weeks to pass this floodwater. For the larger Fox River, the time to pass this flood was 6 weeks. In comparison, the smaller watershed of the Skokie River drained down to normal only a few days after the rains ended. Long-duration rain events or snow pack can also cause major flooding on the larger rivers.

Exhibit 3-1 show the lakes located within the Fox River and Des Plaines River Watersheds. The lakes are a resource and also a concern when the Fox River and Des Plaines Rivers are at flood stage for extended periods and lake levels are elevated as a result.

The **North Branch Chicago River Watershed** is noted for three long and narrow subwatersheds surrounding the 3 forks of the North Branch of the river. A summary of the watershed is presented in Table 3-9. Floods on these long and narrow watersheds are affected by the direction taken by a storm. On the three forks, the worst flooding is caused by storms moving from north to south. The runoff moves under the storm front and concentrates as it goes downstream. Storms passing east to west produce smaller floods, and storms passing south to north produce the smallest floods.

The worst floods are caused by day-long rain events, but, because the watershed is so narrow, short intense rain events can also cause severe local flooding.

For more information on the North Branch Chicago River Watershed, see the “North Branch Chicago River Watershed-Based Plan,” 2008, for Lake and Cook Counties, Illinois, which is available the Lake County SMC website at <http://www.lakecountyil.gov/Stormwater/LakeCountyWatersheds/>.

Table 3-9 North Branch of the Chicago River Watershed in Lake County

North Branch Chicago River Watershed				
Area:	202 square miles	Municipalities:		
	11% of County	Bannockburn	Highwood	North Chicago
Public Land:	1,655 acres	Deerfield	Lake Bluff	Park City
Wetlands:	4,390 acres	Green Oaks	Lake Forest	Riverwoods
		Gurnee	Lincolnshire	Waukegan
		Highland Park	Mettawa	
Subwatersheds:	Area (mi²):	Townships:		
West Fork	8.6	Deerfield	Vernon	Waukegan
Middle Fork	19.8	Libertyville	Warren	West Deerfield
Skokie River	21.9	Shields		

3.2.2 Flood Insurance Coverage

An examination of National Flood Insurance Policies and Flood Insurance claims highlights the number of communities impacted by past flooding. Table 3-14 shows the Village of Lincolnshire and Lake County flood insurance coverage and flood insurance claims since 1978. Policies are show for an entire community, including portions of communities located in other counties.

Table 3-14 Lake County Flood Insurance Active Policies and Claims, FEMA 2011

Community	Number of Active Policies	Total Premium	Total Coverage	Number of Claims*	Total Paid
Village of Lincolnshire	113	\$ 113,929	\$32,609,800	19	\$ 218,460

* Since 1978

3.3.3 Repetitive Flood Loss Properties

FEMA defines a “repetitive loss structure” as a flood-insured structure that has received two or more flood insurance claim payments of more than 25% of the market value within any 10-year period. Lake County currently has 86 repetitive loss structures on the FEMA list. Of the 86 properties, 18 have been mitigated (acquired, elevated or otherwise protected). The remaining 68 properties are located in 14 municipalities and unincorporated Lake County, as presented in Table 3-15.

Table 3-15 Lake County Repetitive Loss Structures

Community	Number of Repetitive Loss Properties as of 6/30/2004*	Number of Repetitive Loss Properties as of 3/31/2011	Mitigated	Mitigation Status	Remaining Repetitive Losses
Village of Lincolnshire	1	1	0		1

The repetitive flood loss structures located throughout the county, but are more concentrated in the Fox River Watershed. They are nearly all single family residences. Two repetitive loss properties are commercial properties.

The repetitive loss properties were examined and new repetitive flood loss areas were identified for the 2012 Lake County ANHMP. The repetitive loss areas are shown in Exhibit 3-4. Repetitive flood loss areas include 1 or more repetitive loss properties and the neighboring or nearby properties subject to similar flood damage. The repetitive loss area for the Village of Lincolnshire in the Lake County ANHMP is Repetitive Loss Area 27.

3.2.4 Past Floods and Future Flood Frequency

The National Climate Data Center (NCDC), maintained by the National Oceanic and Atmospheric Administration, records weather events as they are submitted. The NCDC has a record of flooding in Lake County from 1996 to 2010, shown in Table 3-18. Other small floods most likely occurred did not get recorded. The NCDC data recorded no injuries or deaths with these events.

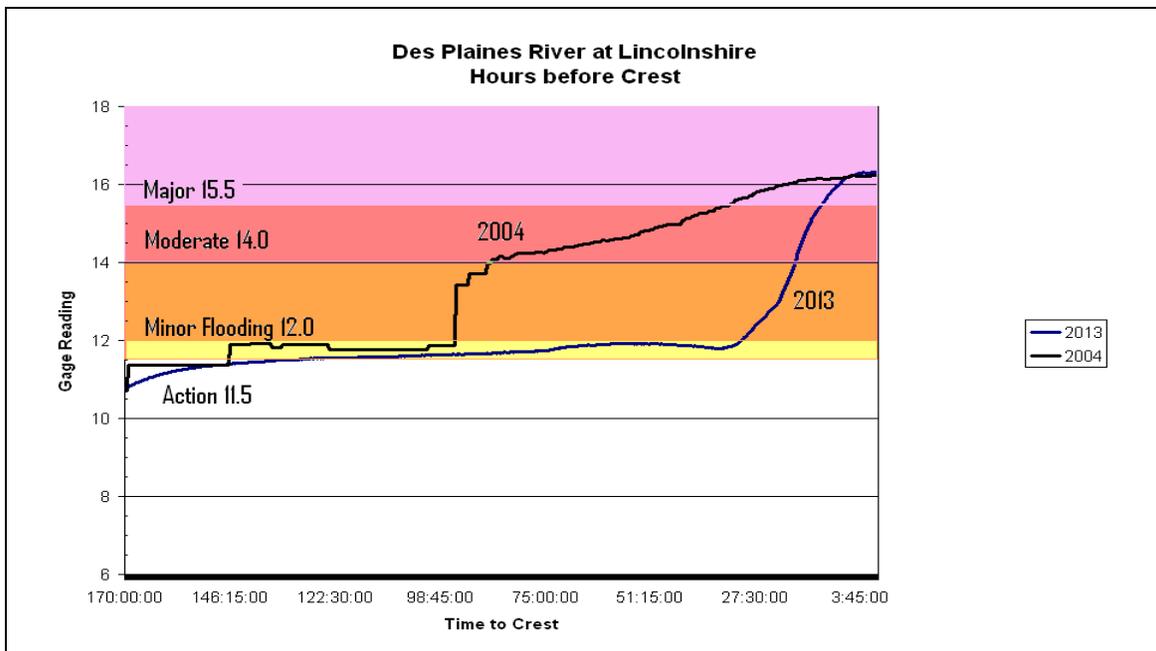
2004 Flood: The May 2004 event attracted national attention and was destructive on a wide scale. River flooding was recorded across Lake County and portions of Cook and Lake Counties, as well as local flash flooding from individual storms that occurred during this month. River flooding, mainly on the Des Plaines River, had some of its origin in southern Wisconsin, but affected the river channel through Lake County and into Cook County. Monthly rainfall totals peaked over 10 inches across Lake and Cook Counties, while 6 inches or more were common further south including northwest Indiana.

Throughout Lake County, overbank flooding is most extensive along the Des Plaines River with the highest historical floods occurring in 1938, 1960, 1979, 1986 and 2004.

1986 Flood: Northeastern Illinois received almost one inch of rain daily from September 21 through October 4, 1986. On some days, there was as much as three inches. Over this two-week period, the Des Plaines watershed received up to 12.9 inches of rain compared to the normal monthly amount of 3 inches. The flooding in Lake County killed four people. One person drowned when his boat capsized and three people had heart attacks fighting the flood.

On September 25 the Des Plaines River was two feet over flood stage and high enough to reach buildings. This flooding, along with flooding in the Fox River/Chain of Lakes watershed, resulted in a disaster declaration by the President on October 7 for Cook, Lake, Kane, and Lake Counties. The worst flooding in Lake County was in the Village of Gurnee, where approximately 100 buildings were flooded. Based on the flood insurance claims, they suffered an average of \$10,000 in damage.

April 2013: Very heavy rains in the early morning hours on April 18, 2013 brought flooding to much of northeastern Illinois. The Des Plaines River rapidly rose exceeded the 12.8 foot stage predicted by the National Weather Service to 16.33 feet. As show on the chart below, major flood damage begins at 15.5 feet on the Des Plaines River at Lincolnshire river gage.



In Lincolnshire ten houses were evacuated. Six of those houses had water over the first floor. Over 30 homes were not accessible by vehicle. Exhibit 3-2 shows a map compiled by the Village of Lincolnshire of known flood issues from the April 2013

Reported flood events over the past 25 years provide an acceptable framework for determining future occurrence in terms of frequency for such events. The probability of the County and its municipalities experiencing a flood event can be difficult to quantify, but based on historical record of 28 flood events since 1986, it can reasonably be assumed this type of event has occurred once every 1.12 years from 1986 through 2011.

[(Current Year) 2011] subtracted by [(Historical Year) 1986] = 25 Years on Record

[(Years on Record) 25] divided by [(Number of Historical Events) 28] = 1.12

Furthermore, the historic frequency calculates that there is an 89% chance of this type of event occurring each year.

3.2.5 Vulnerability - Impacts of Flooding

Lake County's population is expected to continue to grow and development will continue. Lake County is currently susceptible to flooding, and it should be anticipated flood risk will continue to grow. Lake County has been implementing a number of mitigation actions to abate this potential increase in flood risk, including the enforcement of the Lake County Watershed Development Ordinance and comprehensive watershed planning to protect against new flood damages (these efforts are summarized in Chapter 4). However, Lake County is part of two large watersheds and cannot regulate development in Wisconsin. Life, health and safety, buildings, critical facilities, infrastructure and the economy are all affected by flooding in Lake County

Health and safety: Safety during a flood, whether from overbank flooding or groundwater flooding (basements), is a concern. If clean-up after a flood is not properly done, then health problems can develop due to mold. Flooding roads and viaducts are dangerous. People continue to be at risk when driving through floodwaters; fast moving waters are a hazard to people in and out of cars. The highest flood depths are at the Fox River, but stormwater flooding away from the floodplain in Lake County can also threaten lives, as emphasized in the death during the 1982 flood event.

Impact to health and safety due to flooding is considered **moderate**.

Damage to Buildings: The Lake County estimate of structures located in the floodplain and floodway is shown in Table 3-19. These numbers were used in the 2006 Lake County ANHMP and are based on current FEMA maps. These numbers will be updated when new FEMA maps are published for Lake County (expected in early 2012).

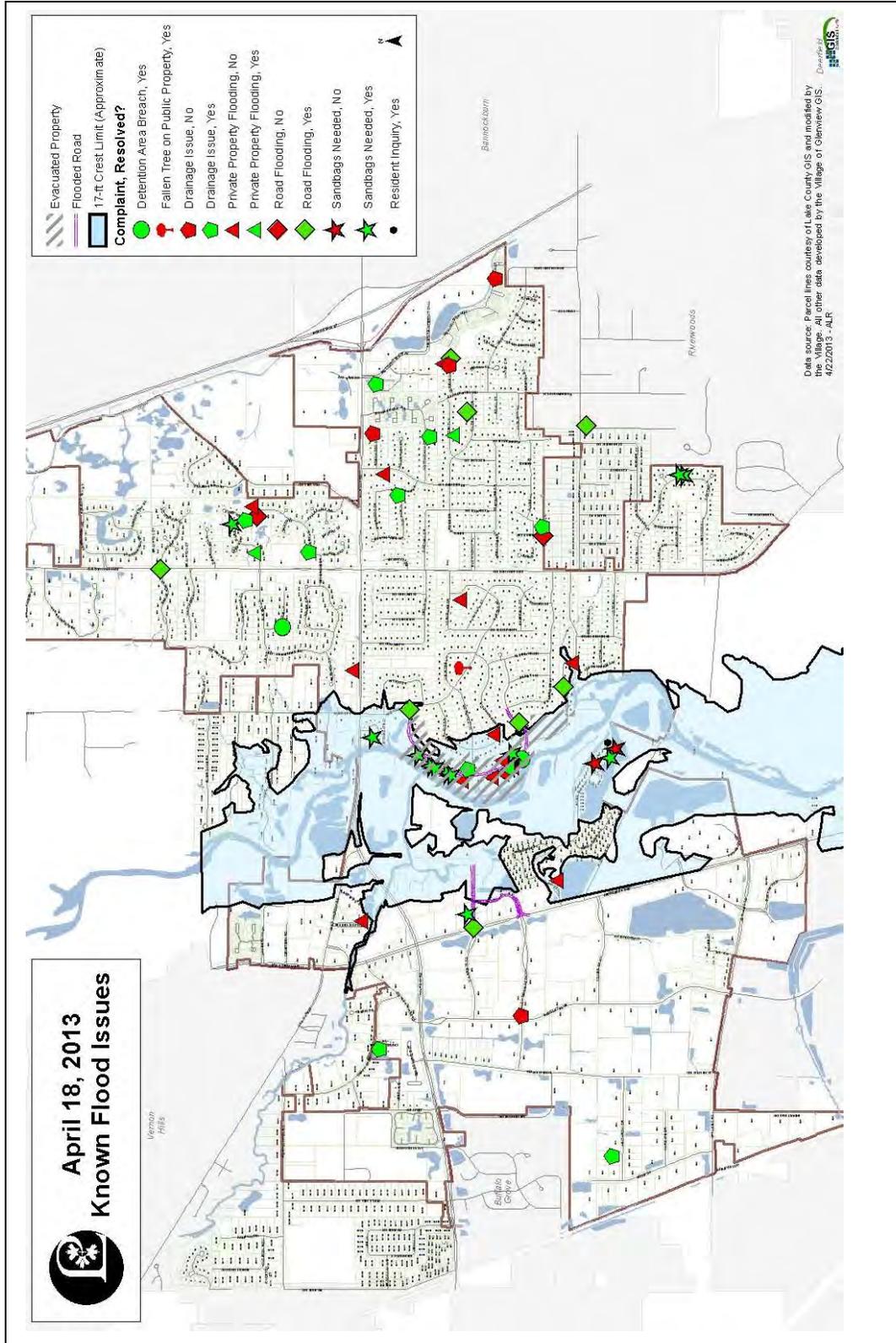


Exhibit 3-2 April 2013 Know Flood issues

Table 3-19 Structures Located in Lake County Floodplains

Watershed	Number of Structures in Floodplain	Number of Structures in Floodway
Fox River	6,420	219
Des Plaines River	2,547	695
North Branch Chicago River	1,332	431
Lake Michigan	604	103
Total:	10,903	1,448

* Source: SMC GIS

Among the 10,903 structures located in the floodplain are at least 60 of the 68 FEMA repetitive flood properties in Lake County that have not been mitigated. The value of this structures is estimated in Table 3-20,

Table 3-20 Estimated Market Value of Structures Located in Lake County Floodplains

Land Use	Estimated Market Value
Residential	\$1,072 million
Commercial	\$494 million
Industrial	\$137 million
Agricultural	\$6 million
Total Estimated Value:	\$1,709 million

The range of flood damage to buildings is likely to be 5% to 50%, or a range \$85 million to \$850 million. Impact to buildings due to flooding is considered high.

Critical Facilities and Infrastructure: SMC data shows approximately 20 critical facilities that could be closed or subject to flooding. As the County’s GIS is expanded, a more accurate count of critical facilities in the floodplain will be developed.

Impact to critical facilities due to flooding is considered moderate.

Economic Impact: Flood damage to businesses is difficult to estimate. Businesses disrupted by floods often have to be closed. They lose inventories, customers cannot reach them, and employees are often busy protecting or cleaning up flooded homes. Business can be disrupted, regardless of whether or not the business is located in the floodplain, when customers and clients cannot reach their location. As with flooded roads, public expenditures on flood fighting, sandbags, fire department calls, clean-up and repairs to damaged public property affect all residents of the County, not just those in the floodplain.

Therefore, overall economic impact to businesses is high.

3.2.6 Flood Focus Areas

The Village of Lincolnshire Natural Hazard Mitigation Planning Committee identified several area from past floods that they recommend be focus areas of flood mitigation. The focus areas are shown in Exhibit 3-3, and they include:

Area 1 – Lincolnshire-Londonderry

Area 2 – Rivershire

Area 3 – Westminster – Sutton Place

Area 4 – Indian Creek

These areas may be referred to within this Mitigation Plan and CRS plans developed by the Village.

3.3 Summary of Natural Hazards Risk Assessment

This risk assessment examines natural hazards that could impact Lake County. Section 3.12 in the 2012 Lake County ANHMP summarized the impact of the hazards on Lake County and presents conclusions drawn from the assessment. That section is repeated here.

3.3.1 Impact of the Hazards

The impacts of the hazards are summarized according to the four major concerns:

- Health and safety,
- Damage to buildings,
- Damage to critical facilities and infrastructure, and
- Economic impact.

After the conclusion of the hazard assessments and vulnerability assessments of the priority hazards, the LPC discussed findings to determine overall impact the hazard has on the County and the municipalities. The hazards and their impact are shown in Table 3-39, “Lake County Summary of the Hazards.” The different columns on the table represent the following:

Annual Chance or Frequency: The annual chance column in the table shows the likelihood of occurrence in any given year. These numbers are discussed in the “Frequency” section of each hazard.

Impact Location: The location and area affected by a single occurrence is shown.

Square Miles Impacted: The portion of the County vulnerable to the hazard.

Value of vulnerable property: The property damage exposure computed in Section 3.2 of this Chapter.

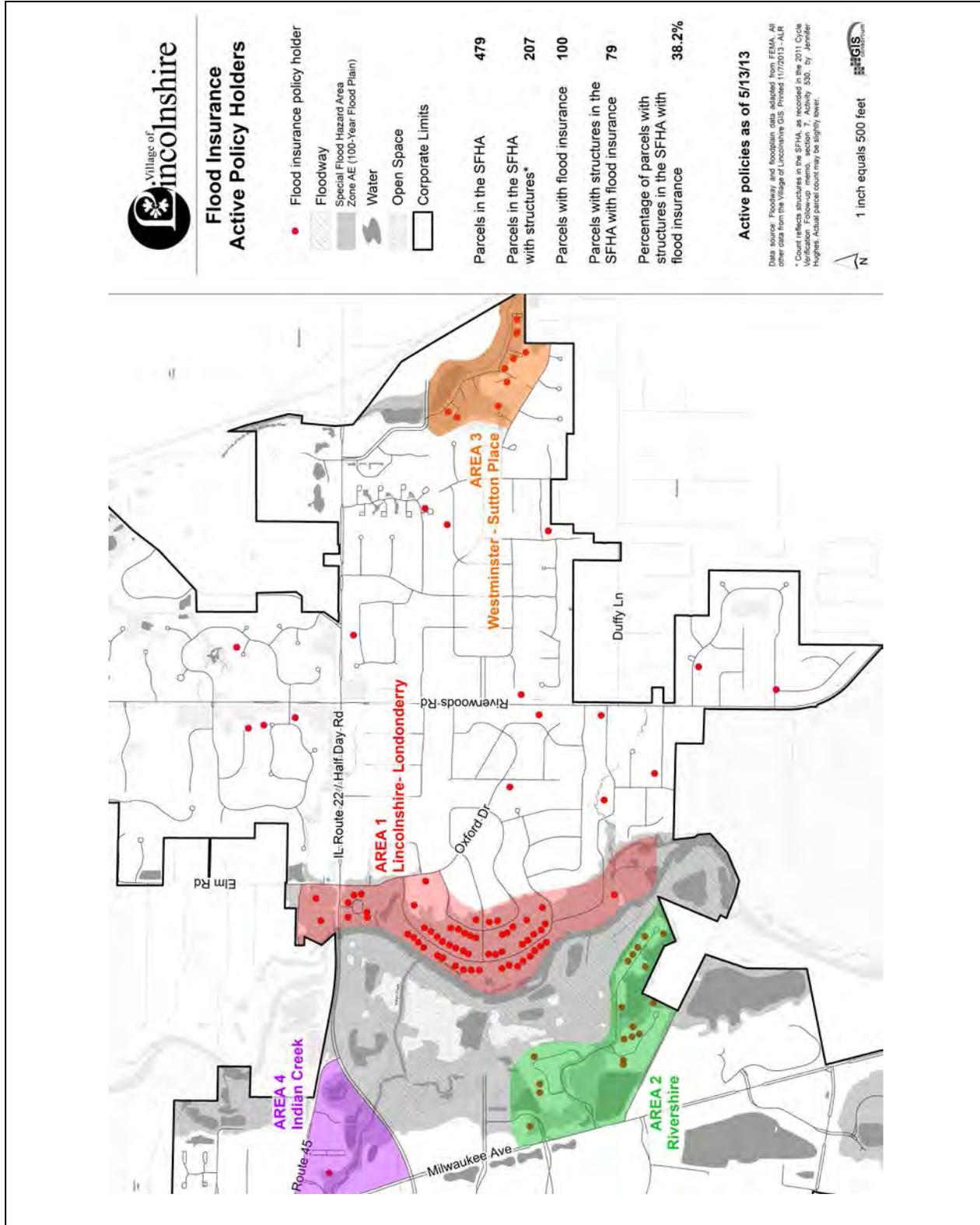


Exhibit 3-3 Village of Lincolnshire Flood Focus Area

Potential Damage: The range of potential damage related to the square miles impacted and the value of exposed property.

Impact on Health and Safety: This category relates to health and safety hazards. Ratings of high, medium, or low are shown.

Impact on Buildings: The vulnerability of structural damage to buildings or other property damage.

Critical Facilities: The types of critical facilities and infrastructure affected are listed.

Economic Impact: Typical impacts on businesses and utilities are listed in this column.

The County, all municipalities, other agencies and institutions involved in this Lake County ANHMP are exposed to all identified hazards. This is due to the relatively flat topography of the County. While much of the County is still in agricultural use, the residents and business are equally impacted by the identified natural hazards as the urban areas. Flooding in the floodplain has been considered, for example, but it is understood that flooding is not limited to floodplain areas. Community impact does vary by degree between larger and smaller communities based on population and number of buildings.

Table 3-39 Summary of Lake County Natural Hazards from the Lake County ANHMP

Hazard	Annual Chance	Impact Location	Square miles Affected	Value of Vulnerable Property	Potential Damage	Impact on Health and Safety	Impact on Buildings	Impact on Critical Facilities	Economic Impact
Floods	1%	Floodplains	80	\$1.7 billion	\$85-\$850 million	Moderate	High	Moderate	High
	10%	(Local Drainage)	448	---	---	Moderate	Moderate	Moderate	Moderate
Tornado	0.01%	Countywide	10	\$58 billion	\$872 million	High	High	Moderate	Moderate
	30.00%	Community	5	\$58 billion	\$419 million	High	High	Moderate	Moderate
Severe Summer Storms	100%	Communities	448	\$58 billion	---	Moderate	Moderate	Moderate	Low
Severe Winter Storms	100%	Countywide	448	\$58 billion	---	Moderate	Moderate	Moderate	Low
Drought	1%	Countywide	448	\$58 billion	---	High	Moderate	Low	Moderate
Earthquake	100%	Countywide	448	\$58 billion		Low	Low	Moderate	Low
Dam Failure	0%	Countywide	448	\$58 billion		--	--	--	--
Extreme Temperatures	18%	Countywide	448	\$58 billion	---	High	Low	Low	Low
Erosion	--	Countywide	448	\$58 billion		--	--	--	--

As mentioned earlier, the Village of Lincolnshire Natural Hazard Mitigation Planning Committee added wildfire to their list.

3.3.2 Comparison to State of Illinois 2013 Natural Hazard Mitigation Plan

The 2013 Illinois Natural Hazard Mitigation Plan prepared by the Illinois Emergency Management Agency (IEMA) hazard rating system has five levels: low, guarded, elevated, high and severe. Lake County’s hazard ratings for identified natural hazards are in the 2013 Plan are shown in Table 3-41.

Table 3-41 IEMA Hazard Ratings for Lake County

Hazard	IEMA Rating
Floods	Elevated
Tornado	High
Severe Summer Storms	Severe
Severe Winter Storms	Severe
Drought	Guarded
Earthquake	Guarded
Extreme Heat	Elevated

Chapter 4.

Mitigation Goals

Chapter 4 of the Lake County ANHMP established hazard mitigation goals and objective for the County. The County went through an exercise to examine priorities and other factors for establishing the goals. At the October 17, 2013 meeting, the Lincolnshire Mitigation Planning Committee went through the same exercise. Planning Committee members then modified the Lake County goals and guidelines to reflect the Village's needs and priorities.

4.1 Community Priorities and Plan Direction

To better understand, community priorities, Planning Committee members selected their top five choices for a list of potential priorities. For community priorities, the top four selected responses were:

- Provide a safe place to live and work
- Improve schools and education programs
- Improve/ get more business
- Improve/get more open space

Other responses included improve employment opportunities, water quality habitat, roads and highways and public transportation opportunities. and preserve historic and cultural resources.

For the exercise "What to Focus On," the Planning Committee what asked what the Village's hazard mitigation effort should focus on. The top five responses included:

- Protecting people's lives
- Protecting public health
- Protecting public services
- Protecting critical facilities
- Protecting wetlands, Illinois Nature Preserve area and other special areas

Other choices included giving attention to the elderly and special populations, and protecting future development.

For the exercise "How to Fund and Implement," the Planning Committee chose from a list of funding and implementation options for accomplishing hazard mitigation efforts. The top six responses included:

- Inform people of how they can protect themselves
- Make people aware of the hazards they face
- Help people protect themselves
- Develop public/private partnerships

- Protect life/safety regardless of cost
- Use county/municipal agencies to implement mitigation activities

Other choices included, only fund projects where it's proven the benefits exceed the costs, new developments should pay full cost of protection measures, and protect critical facilities regardless of the cost.

4.2 Goals and Guidelines

From the above responses, the goals and guidelines for the Village of Lincolnshire's hazard migration efforts are:

Goal 1. Protect the lives, health, and safety of the people of the Village of Lincolnshire 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 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, including the loss of wetlands and other natural resources due to natural hazards.

The following guidelines are for purpose of achieving the goals and to facilitate the development of hazard mitigation action items:

Guideline 1. Focus natural hazards mitigation efforts on floods, severe summer and winter storms, tornadoes, erosion, extreme temperatures, drought, and wildfires.

Guideline 2. Make people aware of the hazards they face, and focus mitigation efforts on measures that allow property owners and service providers to help themselves.

Guideline 3. Identify specific projects to protect lives

Guideline 4 Identify specific projects to mitigate damage where cost-effective and affordable.

Guideline 5. Use available local funds, when necessary, to protect public services, critical facilities, lives, health and safety from natural hazards.

Guideline 6. Develop and foster public agency and private property owner partnerships to fund and implement mitigation measures, and examine equitable approaches for local mitigation costs, such as user fees.

Guideline 7. Strive to improve and expand business, transportation and education opportunities in the Village of Lincolnshire in conjunction with planned mitigation efforts.

4.3 Consistent with Other Plans

The developed goals and guidelines were compared to the goals included in the Village of Lincolnshire's Comprehensive Land Use Plan and the Village of Lincolnshire emergency operations plan. At the November 2014 meeting the Planning Committee had an opportunity to review these plans and other plans adopted by the Village.

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Chapter 5. Mitigation Strategies and Capability Assessment

Chapter 5 of the Lake County ANHMP examines hazard mitigation activities currently being implemented by Lake County and the Lake County municipalities, and examines various hazard mitigation strategies that can be undertaken in the future. The Village of Lincolnshire will use Chapter 5 of the Lake County ANHMP as a resource to understand various hazard mitigation strategies for the priority natural hazards identified in Chapter 3 of the Village of Lincolnshire Mitigation Plan.

- | Mitigation Strategies |
|-------------------------------|
| • Preventative Measures |
| • Property Protection |
| • Natural Resource Protection |
| • Emergency Services |
| • Structural Measures |
| • Public Information |

This Chapter presents a list of hazard mitigation recommendations for the Village of Lincolnshire with a focus on flood hazards. The recommendations in this chapter and in the Lake County ANHMP provide a menu of options for the development of the action plan presented in Chapter 6 of this Mitigation Plan. The recommendations are consistent with the Village of Lincolnshire’s mitigation goals and guidelines presented in Chapter 4.

Six basic strategies, shown in the box above and in Table 5-1, may be applied to mitigate potential damage to property and impact to health and safety from natural hazards. Each strategy includes mitigation measures appropriate for different conditions, as shown in Table 5-1. For instance, planning and regulation measures, as a preventative strategies, are more appropriate for developing areas, while property protection strategies are approaches for existing development and buildings.

Table 5-1 Natural Hazard Mitigation Activities

Natural Hazards:	Preventive	Property Protection	Emergency	Resource Protection	Structural Measures	Public Information
Floods (100-year/10-year)	X	X	X	X	X	X
Tornado/High Wind	X	X	X			X
Severe Summer Storms/Hail	X	X	X	X	X	X
Severe Winter Storms	X		X			X
Dam Failure	X		X	X	X	X
Wildfire	X	X	X	X		X
Erosion	X	X		X	X	X
Extreme Heat						X
Extreme Cold		X	X			X
Sewer Backup	X			X		X
Drought	X			X		X
Groundwater	X			X		X

A significant number of hazard mitigation measures are already being implemented by the Village of Lincolnshire. For example, the administration and enforcement of building codes provides protection of buildings from wind, flood and earthquake events, higher watershed standards through the Lake County Watershed Development Ordinance, and the Village drainage system maintenance efforts.

The following sections provide a brief summary of the six hazard mitigation strategies applicable to flood hazards, and recommendations made by the Mitigation Planning Committee for the Village of Lincolnshire. Mitigation strategies pertaining to the Village's other priority hazards are contained in the Lake County ANHMP. Note future updates of the Village of Lincolnshire Mitigation Plan can be expanded to further examine natural hazards other than floods. The recommendations from the Lake County ANHMP are also shown within each section. As mentioned above, the Chapter 5 of the Lake County ANHMP should be used as a resource document to further explain strategies and recommendations discussed here.

5.1 Preventive Measures

Preventive measures are intended to keep flooding problems from getting worse. They help insure future development does not increase flood damage, and include actions that maintain the drainage system's capacity to carry away floodwaters. The cost of implementing most prevention measures is relatively low in comparison to most remedial measures to reduce future damage. Preventive measures include activities such as:

- Planning and Zoning
- Watershed Regulations
- Building Codes
- Standards for Manufactured Homes
- Critical Facility Construction Requirements

Planning and Zoning: "Planning" can cover a variety of community plans including, but not limited to, comprehensive plans, land use plans, transportation plans, capital improvement plans, and economic development plans. While plans generally have limited authority, they reflect what the community would like to see happen in the future. Plans also guide other local measures such as capital improvements and the development of ordinances.

The 2002 *Lake County Comprehensive Stormwater Management* adopted by the Lake County Stormwater Management Commissions (SMC) was developed to address county-wide stormwater planning needs and watershed regulations. The first countywide *County Comprehensive Stormwater Management* was adopted in 1990 in response to worsening flooding, drainage and water quality problems. SMC has developed a number of watershed-based plans for four major watersheds of the county including North Mill Creek, Bull Creek and Indian Creek within the Des Plaines River Watershed.

A number of Lake County communities have incorporated floodplain development restrictions into their zoning ordinance.

Watershed Regulations: The Lake County Watershed Development Ordinance (WDO) has been in place in Lake County since 1992. The goal of the WDO is to ensure new development does not increase existing stormwater problems or create new ones. The WDO establishes minimum countywide standards for stormwater management, including floodplains, detention, soil erosion/sediment control, water quality treatment, and wetlands.

The NFIP sets the minimum floodplain regulation requirements for local floodplain ordinances. The State of Illinois enforces floodway standards exceeding NFIP minimum standards. Standards in the WDO reflect state and federal requirements for floodplain regulation and address specific Lake County flooding problems that occur in depressional storage areas and in unmapped floodplains/floodways.

To address flooding in unmapped floodplains, the WDO definition of a regulatory floodplain includes smaller tributaries subject to more than one square mile of drainage, and depressional areas, not associated with streams, having a storage volume of .75 acre feet or more when inundated by the base flood.

Building Codes: The administration and enforcement of building codes is one of the most effective approaches for addressing natural hazard mitigation. Current building codes protect new structures from damage by tornadoes, high winds, floods, snow storms, and earthquakes.

Other Preventive Measures: Many times after a flood, victims say they would have taken steps to protect themselves if only they had known they had a floodprone property. Three regulations, one federal and two state, require potential buyers of a parcel be told of any flood hazard.

Federal law: Federally regulated lending institutions must advise applicants for a mortgage or other loan that is to be secured by an insurable building that the property is in a floodplain as shown on the Flood Insurance Rate Map (FIRM). Flood insurance is required for buildings located within the 100 year floodplain if the mortgage or loan is federally insured. This program does not apply to flood prone areas not mapped on the FIRMs. Floodprone areas that are frequently not mapped include the floodplains of smaller channels and many depressional areas. Depressional area flooding is a significant. The use of older flood studies in rapidly developing areas also results in outdated floodplain maps that do not reflect the actual flood risk.

Illinois Compiled Statutes: Chapter 55, Section 5/3-5029 requires subdivision plats must show whether any part of the subdivision is located in a Special Flood Hazard Area.

Illinois Residential Real Property Disclosure Act: This law, which went into effect on October 1, 1994, requires a seller to tell a potential buyer if the seller is aware of any flooding or basement leakage problem, if the property is located in a floodplain, or if the seller has flood insurance. The law is not wholly reliable because the seller must be aware of a problem and willing to state it on the disclosure form. Due to the sporadic occurrence of

flood events, a property owner may legitimately not be aware of potential flooding problems with a property being sold or purchased.

Lincolnshire Preventive Measure Conclusions and Recommendations

1. Current Village of Lincolnshire regulations for construction in the floodplain and stormwater management are effective.
2. The Village of Lincolnshire should continue to administer and enforce regulations and building codes to protect property from damage due to natural hazards (flood, tornado, severe storms and wind).
3. The Village should continue to coordinate with ComEd and other utility providers for the protection of utility service during and after extreme weather events.

Lake County ANHMP Preventive Measure Recommendations

1. Complete current and accurate floodplain maps for all Lake County watersheds and submit to FEMA for adoption.
2. The County and municipalities that participation in the NFIP should ensure that they fully and properly administer and enforce the requirements of the NFIP.
3. Complete current and accurate floodplain maps for all Lake County watersheds and submit to FEMA for adoption.
4. The County and municipalities that participation in the NFIP should ensure that they fully and properly administer and enforce the requirements of the NFIP.
5. The County and municipalities should ensure that they fully enforce all provisions of the WDO and the forthcoming amendments.
6. Communities that have not adopted the International Series of Codes should do so, and on a regional basis, municipal and County code enforcement staffs should work together to develop building code language to strengthen new buildings against damage by high winds, tornadoes and hail,
7. All communities should work to improve code administration and enforcement, and should also be trained on implementing the codes that are applicable to hazard mitigation.
8. The adequacy or current requirements for manufactured home and recreational vehicle parks for protection from natural hazards should be examined, especially concerns pertaining to placement in flood prone areas, tie downs and sheltering.
9. On a regional basis, municipal and county planning and engineering staff should develop example subdivision ordinance language that requires new infrastructure to have hazard mitigation provisions, such as secondary access to subdivisions.
10. Offices responsible for design, construction or permitting critical facilities should ensure that the design accounts for natural hazards and adjacent land uses.
11. Communities (certified and non-certified) need to understand and consistently enforce the WDO, the TAC should continue their efforts in these areas.
12. Communities should consider joining the NFIP's CRS program. For the municipalities already involved in CRS, they should work to improve their CRS class.

5.2 Property Protection

Property protection measures are used to modify or remove buildings subject to flood damage rather than to keep floodwaters away. Because of the widespread extent of flood damage caused by shallow, low velocity flooding in Lake County, traditional flood control structures such as levees and reservoirs are generally not economically justifiable in most areas. Individual property protection measures are usually the most preferred and cost-effective flood mitigation measures in these circumstances. Many property protection measures do not affect a building's appearance or uses, making them particularly appropriate for historical sites and landmarks.

Although most property protection measures are paid for and implemented by individual property owners, there is increasing government interest and cost-share funding available for building relocation and acquisition, which are seen as permanent solutions to flood damage. While property protection is viewed as the property owner's responsibility, local governments can actively support and promote private efforts by providing technical assistance and incentives. Property protection measures include activities such as:

- Building Acquisition/Relocation
- Building Elevation, Floodproofing or Barriers
- Building Structural Retrofitting
- Insurance

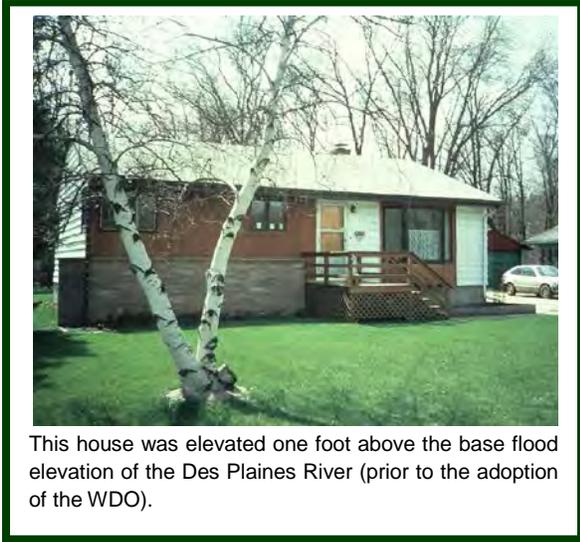
Building Acquisition/Relocation: Acquisition ensures buildings in a floodprone area will cease to be subject to damage. The major difference is acquisition is undertaken by a government agency, so the cost is not borne by the property owner, and the land is converted to an appropriate public use such as a park. Acquiring and clearing buildings from the floodplain is not only the best long-term flood protection measure, it also is a way to convert a problem area into a community asset providing environmental and recreational benefits.



This home was acquired by the SMC and the site was cleared for open space.

Moving a building to higher ground is the surest and safest way to protect it from flooding. While almost any building can be moved, the cost goes up for heavier structures, such as those made of brick, and for large or irregularly shaped buildings. Building relocation is generally cost-effective where flooding is relatively severe and/or frequent. Buildings that have suffered structural damage or contamination from frequent or long duration flooding should not be considered for relocation.

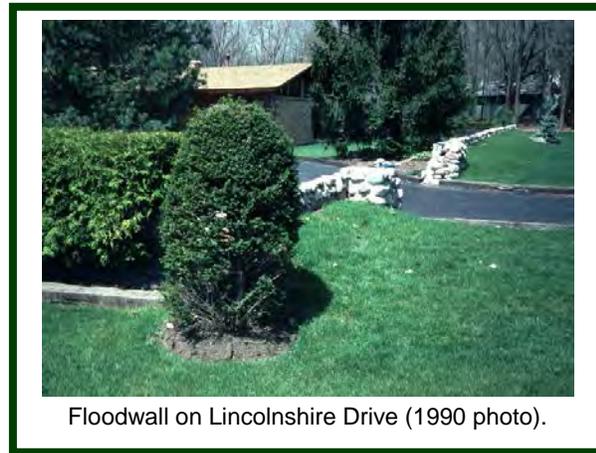
Elevation: Raising or elevating a house above the flood level protects the structure and contents from flood damage. When flooding occurs, water levels stay below the main floor, causing no damage to the structure or its contents. Raising a building above the flood level is less expensive than acquiring it or moving it, and can be less disruptive to a neighborhood. Commonly practiced in floodprone areas nationwide, this protection technique is required by law for new and substantially damaged residences located in a 100 year floodplain.



Although flood damage can be reduced significantly or eliminated through building elevation, there are some limitations to remaining in a flood prone location. While the building itself is elevated sufficiently to be protected from flood damage, flooding may isolate the building making it inaccessible. In addition, flood waters can result in a loss of utility service in flooded areas making the building uninhabitable even though it isn't damaged, and pollutant contamination in floodwaters will still threaten health and safety.

Barriers: Constructing barriers, such as floodwalls and berms, can keep floodwaters from reaching a building. Berms are commonly used in areas subject to shallow flooding. Not considered engineered structures, berms are made by regrading or filling an area. Low floodwalls may be built around stairwells to protect the basement and lower floor of a split-level home.

By keeping water away from the building walls, the problems of seepage and hydrostatic pressure are reduced.

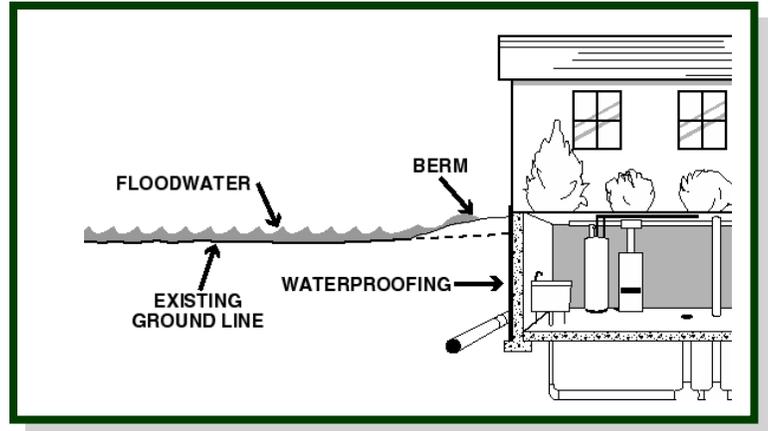


Use of floodwalls and berms must also include a plan to install drain pipes and/or sump pumps to handle leaks and water seepage through or under the barrier, and to get rid of water that may collect inside the barrier. Care must be taken in the design, location and installation of berms or floodwalls to insure floodwaters are not inadvertently pushed onto an adjacent property.

Floodproofing: Floodproofing covers measures that provide either wet floodproofing or dry floodproofing. In areas where there is shallow flooding, dry floodproofing measures can be used to prevent water from entering some buildings. A wet floodproofing strategy will allow

water to enter the building, but moves damageable belongings, appliances and utilities out of harm's way

Dry Floodproofing: Dry floodproofing is a combination of practices used to seal a building against floodwaters. Walls, floors and all openings must be sealed and made watertight. Buildings with crawlspaces generally cannot be dry floodproofed because water can seep under walls into the crawlspace.



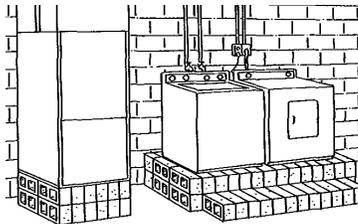
Dry Floodproofing - Buildings on slab

- Walls are coated with waterproofing compounds or plastic sheeting.
- Openings, such as doors, windows, sewer lines and vents, are closed either permanently, with removable shields, or with sandbags.

Dry Floodproofing - Buildings with basements

- Waterproofing compound is applied to the walls before fill is placed against the side of the house.
- Installation of a subsurface drain tile and sump pumps is a must to handle water that will naturally seep through the fill.
- Surface water is kept away from the walls with backfill (see illustration).

- Wet Floodproofing
- Everything subject to damage by water or sediment is moved to a higher level or out of the building. For example, the electrical panel and the furnace should be relocated to an upper floor.
- Where flooding is not expected to be deep, items needing protection may be placed on platforms or blocks.



- Lighter items, such as lawn furniture or bicycles, are evacuated after a flood warning is issued.

However, buildings on slabs and buildings with basements can benefit from dry floodproofing.

A structural engineer should be consulted to design the dry floodproofing measures due to the need to address hydrostatic pressure against foundation walls that occur during floods.

Wet Floodproofing: Wet floodproofing provides damage protection from floodwaters that cannot be kept out of a building. It is a relatively simple means of making sure that nothing gets damaged when floodwaters enter the building. Wet floodproofing includes some of the least expensive and easiest mitigation practices to install.

Wet floodproofing approaches range from moving a valuable items to a higher floor to rebuilding the floodable area. At the very least, several low-cost steps can be taken to wet floodproof a structure. Simply moving furniture and electrical appliances out of the floodprone area of the building can prevent

thousands of dollars in damages.

Wet floodproofing measures work wherever there is a level above the flood zone to which items can be relocated; in general wet floodproofing does not work for one-story houses where living areas get flooded.

Sewer backup protection: Basement flooding can occur when the sanitary system overloads with stormwater and backs sewage up into the basement through the sanitary line. Even when sanitary and storm waters are carried in separate pipes, and they are through nearly all of Lake County, sewer backup can occur when cross connections between the storm and sanitary sewers exist, or if there are infiltration or inflow problems into the lines.



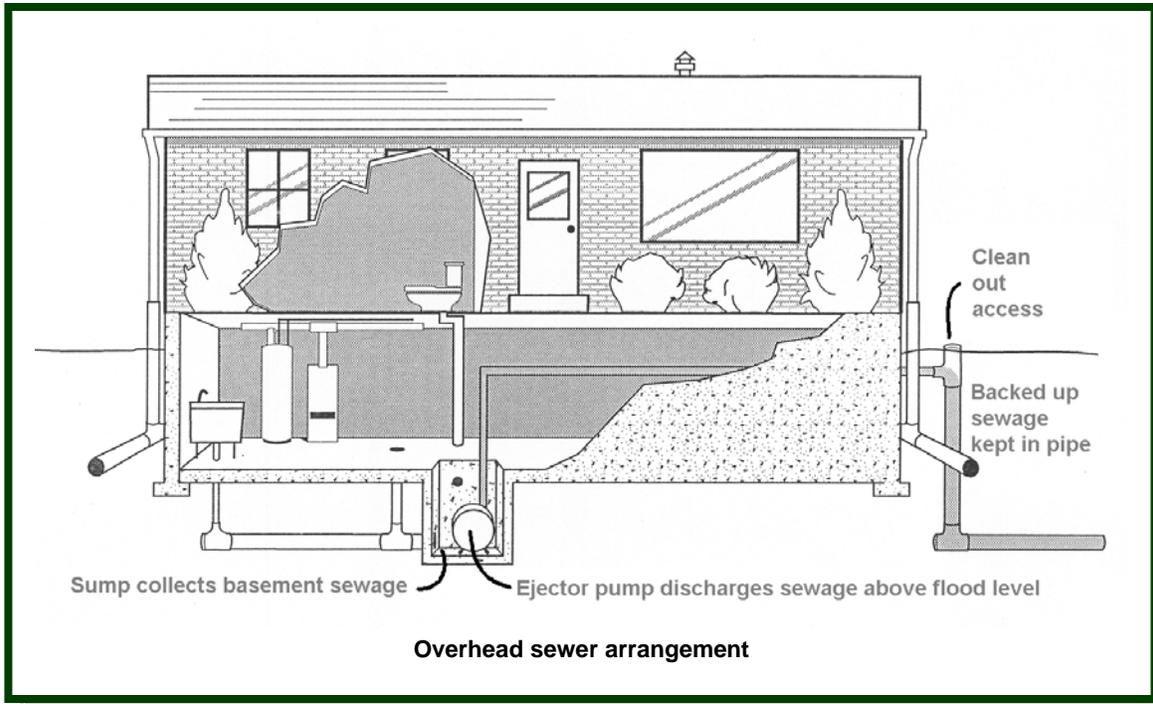
Houses which have downspouts, footing drain tile, and/or a sump pump connected to the sanitary sewer service may be inundated when heavy rains overload the system. In addition to these sources, sanitary lines can also be inundated by stormwater by way of runoff infiltration into old leaky pipes or where the sanitary manholes are not properly sealed. Several Lake County communities experience very high sewage flows following heavy rain events. As in the case of Wauconda, some wastewater treatment plants cannot adequately treat the heavy volume

of combined stormwater and sewage, so the plant is by-passed and sewage is discharged directly to surface waters untreated.

If allowed by the local code, sump pumps, downspouts and footing drains should be disconnected from the sanitary sewer line and the rain and groundwater directed out onto the ground, away from the building. The solution to stormwater overload of the sanitary system also includes the need for timely maintenance of sanitary lines, repairing or replacing pipe where it leaks, and upgrading old waste water treatment facilities that are inadequate for the existing level of use.

Until sanitary infiltration is fixed, a property owner may use four approaches to protect sanitary sewer openings from backup. Floor drain plugs or floor drain standpipes can be installed to keep water from flowing out of the floor drain into the building. However, these may not be effective if water gets deep enough in the sewer system to flow out of the next lowest opening, which is likely to be a toilet or utility sink.

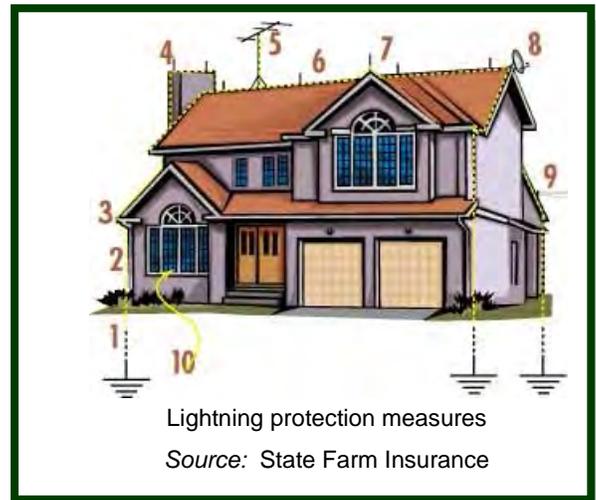
Overhead sewers and backup valves are more expensive, but more secure for this circumstance. An overhead sewer keeps water in the sewer line during a backup. A backup valve allows sewage to flow out, while preventing backups from entering the building.



Severe Storm Retrofitting: Retrofitting approaches to protect private or public buildings from the effects of **thunderstorms** include:

- Shelters
- Storm shutters
- Lightning rods
- Strengthening connections and tie-downs (similar to tornado retrofitting)
- Impact-resistant glass in window panes
- Surge protectors at electrical outlets

Also, roofs can be replaced with materials less susceptible to damage by hail, such as modified asphalt or formed steel shingles.



Winter Storm Retrofitting: Winter storm retrofitting measures include improving insulation on older buildings and relocating water lines from outside walls to interior spaces. Windows can be sealed or covered with an extra layer of glass (storm windows) or plastic sheeting. Roofs can be retrofitted to shed heavy loads of snow and prevent ice dams that form when snow melts.

Insurance: Insurance does not prevent flooding or flood damage; it helps an owner protect his/her property investment by paying for repairs and replacement of items damaged in a flood. While a typical homeowner’s insurance policy does not cover a property for flood

damage, flood insurance coverage is available through the National Flood Insurance Program (NFIP). The NFIP will cover flooding above the first floor of buildings. Flood insurance also covers basement flooding provided there is a general condition of flooding in the area that was the proximate cause of the basement getting wet. Several insurance companies offer coverage for damages incurred should a sump pump fail or sewer line back up. Most exclude damage from surface flooding covered by the NFIP. Insurance is also available for earthquakes other hazards such as sinkholes. Most of these coverages are included to a property policy as a policy rider.

Community Rating System (CRS): FEMA created the NFIP’s CRS program in 1990. It is designed to recognize floodplain management and other watershed management activities exceeding NFIP minimum requirements. Communities that participate in the NFIP can apply for the CRS. When appropriate applications and reviews are completed, a community is awarded a CRS class rating. Residents and property owners of that community then qualify for a flood insurance premium rate reduction ranging from 5 to 45 percent. CRS credit is provided for 19 creditable activities, organized under four categories:

- Public Information
- Mapping and Regulations
- Flood Damage Reduction
- Flood Preparedness

The CRS is a voluntary program and is modeled after the fire insurance rating system. Insurance premiums are adjusted based on the rating of the community. The Village of Lincolnshire is currently a CRS Class 5 community.

The CRS class rating and insurance premium reductions are shown in the table below. Properties in the FEMA Special Flood Hazard Areas (SFHAs), or the 100-year floodplain, receive a 5 percent premium reduction for every improvement in the CRS class. Properties outside the SFHA already have a reduced premium (since they are outside the floodplain), and therefore have a lower premium reduction than properties in the SFHA.

CRS Class	Credit Points	Premium Reduction	
		SFHA*	Non-SFHA
1	4,500+	45%	10%
2	4,000 – 4,499	40%	10%
3	3,500 – 3,999	35%	10%
4	3,000 – 3,499	30%	10%
5	2,500 – 2,999	25%	10%
6	2,000 – 2,499	20%	10%
7	1,500 – 1,999	15%	5%
8	1,000 – 1,499	10%	5%
9	500 – 999	5%	5%
10	0 – 499	0	0

*SFHA = Special Flood Hazard Area

Credit points are then earned from the following categories, listed by activity number:

Public Information

- 310 Elevation Certificates
- 320 Map Information
- 330 Outreach Projects
- 340 Hazard Disclosure
- 350 Flood Protection Library
- 360 Flood Protection Assistance
- 370 Flood Insurance Promotion

Mapping and Regulations

- 410 Floodplain Mapping
- 420 Open Space Preservation
- 430 Higher Regulatory Standards
- 440 Flood Data Maintenance
- 450 Stormwater Management

Flood Damage Reduction

- 510 Floodplain Management Planning
- 520 Acquisition and Relocation
- 530 Flood Protection
- 540 Drainage System Maintenance

Warning and Response

- 610 Flood Warning and Response
- 620 Levees
- 630 Dams

The Village is currently receives credit in Activities 310, 320, 330, 340, 350 and 360; Activities 410, 420, 430, 440 and 450; Activities 510, 530 and 540 and Activity 610.

Repetitive Flood Loss Properties: Chapter 3 and Chapter 5 of the Lake County ANHMP discuss the Lake County and Lake County community repetitive loss properties (properties with two federal flood insurance claims of at least \$1,000 in any ten year period) designated by FEMA. Currently, FEMA has identified one repetitive loss properties within the Village of Lincolnshire.

Lincolnshire Property Protection Conclusions and Recommendations

1. Properties of Concern:
 - Lincolnshire/Londonderry
 - Rivershire
 - Sedgebrook Community
 - Stonegate Circle
 - Marriott
2. Information and resources should be provided to residents for potential property flood damage protection measures.
3. Technical advice is needed to assist property owners in determining appropriate alternatives.
4. Obtain technical advice from agencies such as the U.S. Army Corps of Engineers.
5. Investigate sewer back-up prevention measures.
6. The treatment plant has been floodproofed.
7. The Village should consider acquisition of properties in the floodplain, as opportunities arise, to convert to floodplain open space.

Lake County ANHMP Property Protection Recommendations

1. All buildings and critical facilities in the floodplain, SMC problem areas and depressional storage areas, with priority given to buildings or facilities in the floodway, should be mitigated, to the extent that the measures are cost effective and feasible.
2. Identified repetitive flood loss areas should be further investigated through flood audits, and flood prone structures should be mitigated.
3. SMC should continue to conduct flood audits and to pursue hazard mitigation grants for the acquisition of properties that are cost effective and have interested property owners.
4. Investigate property-owner incentives for elevations, barriers and floodproofing.
5. Establish and disseminate guidelines for local officials for determining what mitigation measures are appropriate to protect property for various circumstances for floods, severe storms, tornadoes and other priority hazards in Lake County.
6. Available property protection public education materials for all priority hazards should be consolidated and tailored for Lake County. Materials should address measures that can help owners reduce their exposure to damage by natural hazards and the various types of insurance coverage that are available.
7. Critical facilities should be audited to determine their vulnerability and hazard mitigation needs.
8. Mitigation projects should be pursued for vulnerable critical facilities, including public facilities and health-care related facilities. Each public entity should protect its own publicly-owned facilities with appropriate mitigation measure(s), except where efficiencies allow for joint funding and joint projects.
9. The availability of tornado shelters or safe rooms in Lake County should be investigated
10. Safe rooms should be constructed wherever needed in Lake County with priority given to schools and critical faculties.
11. Develop action plan to identify and remedy illicit hook ups and sewer infiltration that maps and prioritizes problem areas for remediation. This can be done as county coordinated community program in conjunction with NPDES Phase 2 requirements.
12. Encourage business recovery plans.
13. Feasible mitigation projects should be funded through grants or through capital funding.
14. All property owners should be encouraged to determine if they are adequately insured for natural hazards.
15. Each public entity (county, community, schools and other agencies) should evaluate its own properties, with a priority given to critical facilities, to determine vulnerabilities to damage from natural hazards.

5.3 Resource Protection

Natural resource protection measures serve to restore or preserve the natural functions of the floodplain and other components of the watershed storage and drainage system. These measures are implemented by a variety of public and private parties ranging from forest preserves and regulatory agencies to land developers and farmers. Resource protection measures include activities such as:

- Open space preservation
- Wetland protection
- Erosion and sediment control
- Streambank restoration
- Groundwater protection
- Urban forestry
- Historic and natural area protection

Open Space Preservation: Open space preservation throughout a watershed is important for a variety of natural hazard and environmental reasons. Preserving floodplains and natural sites of water storage, such as wetlands and low-lying areas maintain the existing stormwater storage capacities of an area. These sites can also serve as recreational areas, greenway corridors, provide habitat for local flora and fauna, and improve water quality. Open space may also be maintained as a park, golf course, or in agricultural use.

Upland areas within a watershed may be key to limiting runoff that will worsen flooding problems, important for water quality and groundwater recharge. Purchase of land is the most common approach to open space preservation; however, other methods can be considered in addition. Several more affordable examples of open space preservation practices include the purchase or dedication easements limiting use of the parcel in exchange for a tax abatement or as a condition of development approval, and the purchase of development rights for a property.

Wetland Protection Regulations & Soil Erosion and Sediment Control: Wetlands are usually found in floodplains or depressional areas. They provide numerous natural and beneficial functions warranting protection. Wetlands located in the Waters of the U.S.

Wetlands
<ul style="list-style-type: none"> • Store large amounts of floodwater • Reduce downstream flood peaks • Reduce flood velocities • Protect shorelines from erosion • Filter water making it cleaner • Are groundwater recharge and discharge sites • Provide habitat for species that cannot live or breed anywhere else

(WOUS) are regulated by the U.S. Army Corps of Engineers (Corps). Local wetland programs are important for addressing gaps in the federal regulations, particularly for smaller wetlands, unregulated activities, and indirect hydrologic impacts. Local wetland programs can require undisturbed buffers be maintained around wetlands.

The WDO provides standards for the isolated wetlands no longer under the jurisdiction of the Corps.

Stream Restoration: Our understanding of the need for stream, streambank and riparian environment protection has grown significantly in past decades. Eroding streambanks negatively impact our infrastructure (bridges and culvert blockages), impact property, and degrade the water quality. Terminology for “stream restoration” can differ, but the objective is to return streams, streambanks and adjacent land to a more natural condition, including the natural meanders. Term such as ecological restoration encourage the restoration of native indigenous plants and animals to an area.

A key component of these efforts is to use appropriate native plantings along the banks that resist erosion. This may involve retrofitting the shoreline with willow cuttings, wetland plants, and/or rolls of landscape material covered with a natural fabric that decomposes after the banks are stabilized with plant roots.

Groundwater Protection: Groundwater concerns in Lake County pertain to both groundwater quantity (or groundwater availability) and groundwater quality. The quantity of groundwater and groundwater recharge, depends on the ability of runoff to reach a pervious surface where it can become seepage. Urban runoff reaching a storm sewer, for example, which discharges into a stream is effectively lost from the groundwater system.

All groundwater was at one time surface water. Rain and snow melt seeps or infiltrates into the ground. The quantity and the rate water seeps into the ground, and becomes stored groundwater, varies based on land use, soils, season, temperature, and more. Water that infiltrating through the soil can eventually reach aquifers where groundwater is stored.

Urban Forestry: The majority damage caused by wind, ice and snow storms is to trees. Downed trees and branches break utility lines and damage buildings, parked vehicles and anything else that was under them. A forestry program (urban or rural) can reduce the damage potential of trees.

Urban foresters or arborists can select hardier trees which can better withstand high wind and ice accumulation. Only trees attaining a height less than the utility lines should be allowed along the power and telephone line rights-of-way

By having stronger trees, programs of proper pruning, and ongoing evaluation of the trees, communities can prevent serious damage to their tree population. A properly written and enforced urban forestry plan can reduce liability, alleviate the extent of fallen trees and limbs caused by wind and ice build-up, and provide guidance on repairs and pruning after a storm. Such a plan helps a community qualify to be a Tree City USA. The Village of Lincolnshire participates in Tree City USA.

To qualify as a Tree City USA community must meet four standards established by The Arbor Day Foundation and the National Association of State Foresters:

1. A Tree Board or Department
2. A Tree Care Ordinance
3. A Community Forestry Program With an Annual Budget of at Least \$2 Per Capita
4. An Arbor Day Observance and Proclamation

Historic and Natural Area Protection: Lake County has over 90 homes, hotels, other buildings and districts included on the National Register of Historic Places. Additional sites are maintained by the Lake Forest/Lake Bluff Historical Society, the Fox Lake-Grant Township Historical Society, the Grayslake Historical Society and the Waukegan Historical Museum. The historic sites are vulnerable to hazards. It is difficult to protect the structures from hazards due to their historic nature, but it is important to consider should any mitigation opportunities be presented.

There are also ten historic bridges in Lake County listed in the “Historic Bridges of the U.S.” list.

Lincolnshire Resource Protection Conclusions and Recommendations

1. Village does a good job towards natural resource protection within the Village.
2. Look for opportunities to preserve flood storage.
3. Encourage activities such as rain gardens.

Lake County ANHMP Resource Protection Recommendations

1. Municipal comprehensive plans, land use plans and zoning ordinances should incorporate open space provisions protecting properties from flooding and preserve wetlands, groundwater quality and recharge, and farmland.
2. An open space network should be designated and mapped based on the information collected in data layers for the area-wide conservation and development map. Soils, historic, archeological or cultural sites and recreation potential should also be added as considerations for designation of land in the open space network.
3. Communities should implement an urban forestry program that qualifies them to become a Tree City, USA.
4. The public and decision makers should be informed about the hazard mitigation benefits of restoring rivers, wetlands and other natural areas.
5. Better monitoring and enforcement of best management practice performance.
6. Complete watershed assessments and plans that incorporate specific BMPs based on watershed condition for all 26 of Lake County’s subwatersheds.

5.4 Emergency Services

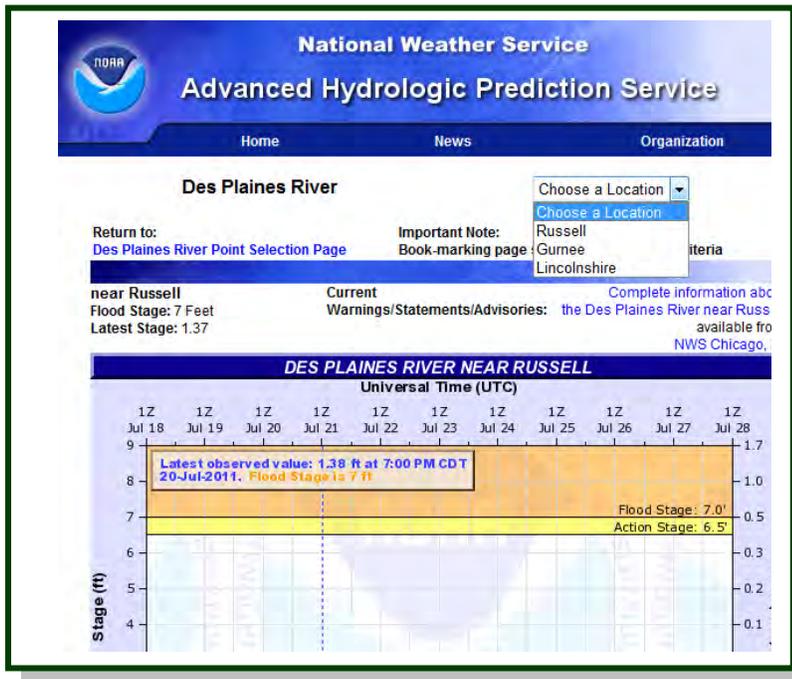
Emergency services measures protect people during and after a flood. Emergency management programs include activities such as:

- Emergency Planning
- Threat recognition
- Warning
- Response
- Recovery and mitigation
- Critical facility protection

Emergency Planning: An emergency operations plan (EOP) ensures all response needs are addressed and all response activities are appropriate for the expected threat. EOPs require frequent reviews to keep contact names and telephone numbers current and to make sure supplies and equipment needed are still available. EOPs should be critiqued and revised after disasters and exercises to take advantage of the lessons learned and changing conditions. The end result is a coordinated effort implemented by people who have experience working together so available resources will be used in the most efficient manner.

Threat Recognition: The first step in responding to a flood, tornado, storm or other natural hazard is to know when weather conditions are such an event could occur. With a proper and timely threat recognition system, adequate warnings can be disseminated. Effective threat recognition is key for emergency managers and local officials in order to protect life, health, safety and property from the impact of natural hazards.

Floods: A complete flood threat recognition system measures rainfall, snow conditions, soil moisture, and stream flows upstream in order to calculate the time and height of the flood crest downstream.



The National Weather Service (NWS) tracks precipitation, monitors river stages and issues flood crest forecasts during potential flood situations. The NWS continuously relays weather information through radio transmissions, and flood forecasts are also available via the Internet. A system of stream and rain gages jointly operated by the United States Geological Survey (USGS) and the SMC supplement that data available to the NWS.

Table 5-2 shows NWS prediction locations for the Des Plaines and

Table 5-2 NWS Flood Forecast Points

River/Location	Action Stage	Flood Stage
Des Plaines River		
Russell	6.5 feet	7.0 feet
Gurnee	6.5 feet	7.0 feet
Lincolnshire	11.5 feet	12.5 feet
Des Plaines	4.5 feet	5.0 feet
Fox River		
Antioch	--	739 feet
Stratton L&D	3.5 feet	4.0 feet
Algonquin	2.5 feet	3.0 feet

Figure 5-1 Flood Forecast and Rain and Stream Gage Links

Illinois Department of Natural Resources (IDNR)
<http://dnr.state.il.us/owr/surveillance.htm>

National Weather Service (NWS)
<http://www.crh.noaa.gov/crh/>

United States Geological Service (USGS)
<http://waterdata.usgs.gov/il/nwis/rt>

Fox Rivers. Stages are unique to a particular location and sometime difficult to relate to upstream or downstream locations. The creation of flood stage maps is one alternative to understanding a predicted flood stage and the extent of a flood inundation area.

Warning: Earlier and accurate warning leads to better response. Warning notifications may be disseminated by the community in a variety of ways, and multiple or redundant systems are most effective. Systems include:

- Outdoor warning sirens
- Sirens on public safety vehicles
- Commercial or public radio or TV stations
- The Weather Channel
- Cable TV emergency news inserts
- Reverse 911 or telephone trees/mass telephone notification
- NOAA Weather Radio
- Tone-activated receivers in key facilities
- Door-to-door contact
- Mobile public address systems
- Cellular phone text messages
- E-mail or social media notifications

StormReady: The National Weather Service established the StormReady program to help local governments improve the timeliness and effectiveness of hazardous weather-related warnings for the public. To be officially StormReady, a community must:

- Establish a 24-hour warning point and emergency operations center (EOC)

- Have more than one way to receive severe weather warnings and forecasts and to alert the public
- Create a system monitoring weather conditions locally
- Promote the importance of public readiness through community seminars
- Develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.

Being designated as a StormReady community by the NWS is a good measure of a community's emergency warning program for weather hazards.

Response: The protection of life and property is the goal of effective emergency response. Concurrent with threat recognition and issuing warnings, a community should respond with actions to prevent or reduce damage and injuries. Typical actions and responding parties include the following:

- Activating the emergency operations center (emergency management)
- Closing streets or bridges (police or public works)
- Shutting off power to threatened areas (utility company)
- Passing out sand and sandbags (public works)
- Ordering an evacuation (chief elected official)
- Holding children at school/releasing children from school (school district)
- Opening evacuation shelters (Red Cross)
- Monitoring water levels (engineering)
- Security and other protection measures (police)

Once a threat is recognized, the first priority is to alert others through the warning system. The second priority is to respond with actions to prevent or reduce damage or injury.

Critical Facility Protection: Protecting critical facilities during a hazard event is a vital part of any emergency service effort. If a critical facility is flooded, for example, workers and resources may be unnecessarily drawn away from protecting the rest of the community. If such a facility is prepared, it will be better able to support the community's flood response efforts.

Lincolnshire critical facilities are shown in Exhibit 1-[x]. All Lincolnshire critical facilities have backup power sources, and the Londonderry Lane lift station has been elevated and fitted with backup power.

Recovery and Mitigation: Preventing dangers to health and safety is critical after a hazard event. Recovery plans should identify appropriate measures that various community departments should undertake.

Appropriate post-disaster mitigation actions include, but are not limited to:

- Conducting a public information effort to advise residents about mitigation measures they can incorporate into their reconstruction work
- Evaluating damaged public facilities to identify mitigation measures that can be included during repairs
- Evaluating substantially or repeatedly damaged buildings
- Post-disaster debrief to determine response improvements
- Planning for long-term mitigation activities
- Applying for post-disaster mitigation funds

Lincolnshire Emergency Services Conclusions and Recommendations

1. All Village-owned critical facilities have back-up power for storm events.
2. Additional work can be done for preparation and staging of berm sandbag effort.
3. Post-event communication from the Village to property owners can be improved.

Lake County ANHMP Emergency Services Recommendations

1. All communities should strive to obtain a StormReady designation.
2. Continue to update emergency operations plans for the County, and continue to develop municipal emergency operations plans with a NIMS compliant template.
3. Continue work for NIMS compliance for the County and all municipalities, and provide training on NIMS and ICS for all first responders and other identified personnel for compliance.
4. Improve information sharing between Lake County, municipal/township agencies and services providers, such as ComEd, during and after natural hazard events. Systems should be put in place to help ensure that response and recovery efforts are coordinating and well communicated.
5. Add a “Flood Annex” to the *Lake County Emergency Operations & Preparedness Plan*.
6. Establish an emergency response assessment teams, including a mitigation team and a health department team.
7. Response procedures for severe storm and high wind hazards should be incorporated in all emergency operations planning and response where appropriate.
8. Incorporate more proactive flood response activities in emergency plans. (i.e. identify and closely monitor known problem constrictions in drainage system; system of monitoring lake levels by lake associations for lakes with associated flood problem areas; guidance to property owners on when and how to turn off utilities during flood)
9. Standardize and improve system of flood damage reporting by the county, townships and municipalities in computerized database format.
10. The County and communities should ensure that alternative power sources are available at critical structures and shelters.

11. Establish a You are not alone program for seniors and the handicapped.
12. Install and maintain lightning detection systems for population and/or active sites.
13. Emergency operations centers at the County and in municipalities should be evaluated for effectiveness and functionality, and modified appropriately. The County and all municipalities should have a fully operational emergency operations center and a secondary location.
14. Conduct annual emergency response training exercises and table-top exercises. Look for multi-jurisdiction training opportunities.
15. Develop a disaster recovery strategy for the County and municipalities that includes the identification of mitigation efforts.
16. Investigate adequacy and research funding opportunities for emergency warning and response equipment, including outdoor weather warning sirens, generators for critical facilities, and other warning systems.
17. Develop flood stage maps for the County's major streams to make use of gaging networks, warning systems and GIS mapping capabilities.
18. Research funding for additional rainfall and river gages. Also the County and community should look to expand the National Weather Service observer's network.
19. Continue use and funding of the County's Reverse-911 system and utilize other applications of that system for natural hazard warning and response.
20. Develop emergency transportation plans that allow for emergency coordination and evacuation (routing).
21. Maintain and update snow removal plans

5.5 Structural Measures

Structural projects are projects constructed to protect people, buildings and infrastructure from damage due to natural hazards. Preventing damage due to flooding is the primary focus of structural projects. Structural projects are usually funded by public agencies. Structural measures include activities such as:

- Watershed Planning
- Regional Flood Control
- Management Of Existing Dams
- Improving Crossings/Roadways
- Drainage And Storm Sewer Improvements

Watershed Planning: A watershed is an area of land draining to a river or stream. It includes rivers, streams, lakes and wetlands. Everyone lives in a watershed and everyone contributes to the health of the watershed. Communities are often situated in more than one watershed. In the 1970s and 1980s the watershed were studied by state and federal agencies (IDNR-OWR, the Corps and NRCS) for purposes of FEMA floodplain mapping and for purposes of identifying flood control projects to address existing flooding. Watershed

studies are based on hydrologic (rainfall-runoff) models and hydraulic (extent and depth of flooding) models. As development expands throughout Lake County, these models have become less and less reliable for depicting full extent of the 100-year flood, for example.

As funds become available, SMC has been remodeling watershed subbasins and developing watershed plans. Completed and underway watershed studies in Lake County include:

- Indian Creek Watershed-Based Plan (Des Plaines River) (*Adopted March 2009*)

Watershed studies conducted in the 1970s and 1980s did not examine wetlands, critical environmental areas or water quality. Current watershed plans examine these issues as well as flood issues.

Regional Flood Control: Structural flood control measures are used to prevent floodwaters from reaching properties, thus preventing damage. These measures generally involve construction of man-made structures to control water flows. Because of their size and cost, structural projects typically are implemented with the help of state or federal flood control agencies such as the IDNR-OWR, the Corps, and the NRCS.

Since structural flood control is generally the most expensive type of mitigation measure in terms of installation costs, maintenance requirements and environmental impacts, a thorough alternative assessment should be conducted before choosing a structural flood control measure. In some circumstances smaller structural flood control measures may be included in a package of several recommended measures for a project area where non-structural measures would not be practical or effective.

Because larger structural flood control projects have regional or watershed-wide implications, they are often planned at a regional level by the state and federal agencies that provide the majority of project funding. Nonetheless, communities should participate in and coordinate with regional flood control studies to insure they are practical, effective and have community acceptance.



Flood control studies have been done by federal and state agencies on the North Branch of the Chicago and Des Plaines Rivers. Some recommendations from these studies for reservoirs and levees have been constructed, others have not.

Drainage System Maintenance and Improving Crossings and Roadways: The drainage system may include detention ponds, stream channels, swales, ditches and culverts. Drainage system maintenance is an ongoing program to clean out blockages caused by an accumulation of sediment or overgrowth of weedy, non-native vegetation or debris, and remediation of streambank erosion sites.

“Debris” refers to a wide range of blockage materials including tree limbs and branches that accumulate naturally, or large items of trash or lawn waste accidentally or intentionally dumped into channels, drainage swales or detention basins. In addition to sediment, debris and weedy vegetation removal, drainage maintenance can also involve using best management practices (BMPs) to stabilize eroding shorelines or streambanks. Maintenance of detention ponds may also require revegetation or repairs of the restrictor pipe, berm or overflow structure.

There is currently no coordinated program or maintenance standards established at the county level to consistently perform on-going drainage maintenance. Maintenance is typically done on an as-needed basis in response to problems or complaints about blockages or erosion. In many cases property owners must consent to the maintenance program. This may require legal negotiations to obtain maintenance easements.

In Illinois, the responsibility for drainageway maintenance on private property, when no easements have been granted, is with the individual private property owner. This generally results in very little maintenance being accomplished.

The Lake County Stormwater Management Commission (SMC) has developed “A Citizen’s Guide for Riparian Area Management” educating landowners about debris removal and riparian landscaping. SMC anticipates adopting stream maintenance standards in the future to provide guidance and consistency for maintenance in Lake County.

In some cases buildings may be elevated above floodwaters but access to the building is lost when floodwaters overtop local roadways, driveways, and culverts or ditches. Depending on the recurrence interval between floods, the availability of alternative access, and the level of need for access, it may be economically justifiable to elevate some roadways and improve crossing points.

For example, if there is sufficient downstream channel capacity, a too small culvert serving as a constrictor creating backwater and causing localized flooding may be replaced with a larger culvert to eliminate flooding at the waterway crossing point. The potential for worsening adjacent or downstream flooding needs to be considered before implementing any crossing or roadway drainage improvements.

Lincolnshire Structural Measure Conclusions and Recommendations

1. Examine berm maintenance issues.
2. Londonderry Lift Station has been elevated and includes a backup generator.
3. The Village should continue to work with Lake County and other agencies to identify additional structural measures (regional approaches) to protect homes from flood damage.
4. The Village should look for any opportunities to provide additional flood storage in the Des Plaines River or North Branch watersheds.

Lake County ANHMP Structural Measure Recommendations

1. Develop, adopt and implement protocol for drainage system maintenance standards countywide (waterways, swales, detention basins, levees, reservoirs).
2. Study the feasibility of structural flood control projects within Lake County watersheds and pursue funding from IDNR-OWR and the Corps for feasible projects.
3. SMC and communities should investigate the need and ability to improve the capacity of drainage systems.
4. Communities should undertake steps to reduce inflow and infiltration into sewer system to reduce sewer backups
5. Provide preventative maintenance for susceptible landslide areas.

5.6 Public Information

Mitigation of all natural hazards can be accomplished through effective public information activities. This is also true for addressing health issues and pandemics. Public information activities advise property owners, renters, businesses, and local officials about hazards and ways to protect people and property. A successful hazard mitigation program involves a public information strategy and involves both the public and private sectors. Public information includes activities such as:

- Library and website resources
- Outreach projects
- Technical assistance

Individual property owners usually implement property protection measures; therefore, a community mitigation program should include measures to encourage and assist owners in protecting their property from flood damage.

A community has passive and active ways to inform residents about flood hazards and damage mitigation. Passive ways to provide information include providing reference materials and map information in the public library, at government agency offices and on a web page. Active approaches include outreach projects and providing technical assistance. Developing a Village of Lincolnshire Plan for Public Information is considered in this Mitigation Plan.

In one-on-one sessions with property owners, community officials such as code enforcement staff or building inspectors can provide technical advice and information on identifying flood hazards at the site, correcting local drainage problems, floodproofing, dealing with contractors, and funding.

Lincolnshire Public Information Conclusions and Recommendations

1. The Village utilizes a number of ways to communicate with residents, yet Village's public information efforts can be improved before, during and after natural hazard events.

2. Public information efforts should be expanded for resources information to property owner for activities such as building rain gardens.
3. The Village should develop a CRS Plan for Public Information and a Flood Insurance Coverage Improvement Plan.

Lake County ANHMP Public Information Recommendations

1. LCEMA, SMC and other county agencies should build a county-wide partnership for coordinated delivery of public information materials and activities.
2. Communities in the NFIP should provide floodplain information for property owners.
3. Develop and implement a system to coordinate the distribution of flood mitigation and response guidance materials for pre-flood outreach to at risk property owners.
4. Increase outreach to community plan departments and commissions to strengthen local understanding and review of development proposals and their compliance with WDO standards.
5. Educate property owners on safe rooms. Prepare informational material how to construct safe rooms in homes and other buildings
6. Develop a method that helps identifies safe rooms and encourages their use.
7. Education property owners and residents about safety during severe summer and winter storms .
8. Provide information to property owners and residents about safe use of generators and safe cooking during power outages.
9. Provide information that identifies location of cooling and warming shelters.

5.7 Capability Assessment Summary

Village of Lincolnshire has existing capabilities to minimize future vulnerabilities to hazards. Section 5.1 discusses the plans, ordinances, and programs to help prevent or minimize possible future impacts of hazards. The Lake County WDO addressed new development, but also strives to mitigate the impact of existing development.

Apparent to the development of this Mitigation Plan is that the Village of Lincolnshire has the capability to bring together citizens and local officials to work closely together in crafting a better future for the community. That same cooperative effort, if joined with the appropriate technical and financial assistance from regional, state and federal resources, can be harnessed to implement the priority hazard mitigation actions described in Section 6 of this Mitigation Plan. A sustained effort by the citizens, staff, and local officials can create a more sustainable and disaster resistant future for the Village of Lincolnshire.

Chapter 6.

Action Plan

The Village of Lincolnshire action items presented in this Chapter were developed by the Village of Lincolnshire Hazard Mitigation Planning Committee.

6.1 Development of Action Plan

The Planning Committee used its prioritization of natural hazards, review of goals and guidelines and a review of possible mitigation approached to develop the action items. The action items included in the 2012 Lake County ANHMP were also reviewed for the development of this Action Plan.

Prioritization: Action items are prioritized within this Chapter in the order presented. The prioritization was established based on the Planning Committee's discussion at the December 2013 meeting and review at the May 2014 meeting. The action items have been formulated around the priority hazards discussed in Chapter 3 and the goals and guidelines presented in the Chapter 4.

Action item format: Action items assign responsibilities and deadlines to the appropriate agencies. Each action item contains a short description and a section for the responsible agency, the deadline for accomplishing the action item, the costs (and potential funding sources), and the benefits. Potential funding sources include the FEMA Hazard Mitigation Assistance programs: the Hazard Mitigation Grant Program (HMGP), the Pre-Disaster Mitigation Grant Program (PDM), and the Flood Mitigation Assistance Program (FMA).

The action items are summarized in Table 6-1. While this Chapter provides action items in a priority order, any and all action items should be implemented if staff time and/or funding becomes available ahead of other action times. The relationship between action items and the goals and guidelines are shown in Table 6-2.

Please note, based on a hazard event, opportunity, property owner interest or available funding, the Village of Lincolnshire may choose to implement a lower priority action prior to a higher priority action, or implement a recommendation included in Chapter 5 of this Mitigation Plan or the Lake County ANHMP not included in this action plan. All mitigation opportunities should be considered.

6.2 Village of Lincolnshire Action Items

The Village of Lincolnshire will work to implement the following action items in the next five years as staff and funding resources allow:

Action Item 1: Plan Adoption

The Village of Lincolnshire will adopt this Natural Hazards Mitigation Plan (Mitigation Plan) by resolution.

Responsible Board or Department: Village Board.

Deadline: 6 months.

Cost: Staff time.

Benefits: Adoption of this Mitigation Plan is required for the CRS program.

Plan Reference: Chapters 2 and 7 of this Mitigation Plan.

Action Item 2: Plan Monitoring and Maintenance

The Village of Lincolnshire Natural Hazard Mitigation Planning Committee will continue to be an advisory group to the Village Board. The Planning Committee will meet at least once a year to evaluate and monitor progress on implementation of this Mitigation Plan, and to organize for the next update of this Mitigation Plan. An annual report should be submitted to the Village Board as an information item.

Responsible Board or Department: Public Works, CRS Coordinator and Planning.

Deadline: Planning Committee to meet each year. A five-year update is required for FEMA's mitigation funding programs.

Cost: Staff time.

Benefits: The Mitigation Plan should be evaluated in light of progress, changed conditions, and new opportunities. The annual report is a requirement of the CRS.

Plan Reference: Chapters 2 and 7 of this Mitigation Plan.

Action Item 3: Improve Natural Hazards Public Information Efforts

Education regarding natural hazards is important for protecting people and property. Messages need to be simple and repeated, and the information should tell the reader 'what to do.' A number of public information efforts (website and mailings) have been implemented by the Village, but these efforts can be improved to more effectively reach people and to provide effective messages regarding life, health and safety and property protection. Public information and education efforts should focus on severe summer and winter storms, floods and tornadoes and materials should be developed specifically for the Village of Lincolnshire's needs.

Responsible Board or Department: Administration, Public Works and Emergency Management.

Deadline: Ongoing.

Cost: Staff time and publication costs.

Benefits: Public information efforts can address nearly every natural hazard and more than on hazard can be discussed with an audience at one time.

Plan Reference: Chapter 5, Section of the 5.6 of the Lake County ANHMP, and Chapter 5 of this Mitigation Plan.

Action Item 4: Improve Village Communications Before, During and After Hazard Events

The Village should continue to improve communications of residents and other stakeholders of Lincolnshire. Village departments should work to ensure messages are consistent, provide the needed and correct information, and work to assist each other with dissemination. All forms of communication (written, website, social media) should continue to be used.

Responsible Board or Department: All departments.

Deadline: Ongoing.

Cost: Staff time and publication costs.

Benefits: These efforts serve to protect people and property.

Plan Reference: Chapter 5 of this Mitigation Plan.

Action Item 5: Property Protection Projects

Properties exposed to flood damage and severe storms throughout the Village of Lincolnshire can be protected through property protection measures where regional structural projects are not feasible. Property protection measures should include, but not be limited to elevation, floodproofing, or retrofitting. All flood prone properties (floodplain, depressional storage or SMC problem areas) including critical facilities should be included. The Village should also seek technical advice from available federal, state and regional agencies, such as the U.S. Army Corps of Engineers, the Illinois Department of Natural Resources, Office of Water Resources and the SMC.

Responsible Board or Department: Public Works and Building Department

Deadline: 5 years.

Cost: Identified per project. Potential grant funding sources may be available.

Benefits: Properties will be better protected from future flooding. Also the exposure of the NFIP will be reduced. There will also be a reduction in emergency response as structures are protected or removed from flood prone areas.

Plan Reference: Chapter 5 of this Mitigation Plan.

Action Item 6: Continue to Address Concerns with the Lincolnshire-Londonderry Berm

The earthen berm near the Des Plaines River along/following Lincolnshire Drive extends across a number of private residential properties. The Village has worked closely in the past with residents for flood fighting purposes, and has examined alternative to improve the effectiveness of the berm. This action item does not call for any specific action, but recommends the Village continue to monitor the condition of the berm and to explore options for protecting the berm, as they arise.

Responsible Board or Department: Public Works.

Deadline: Annually.

Cost: Project specific.

Benefits: The berm protects the Lincolnshire-Londonderry neighborhood from smaller floods on the Des Plaines River.

Plan Reference: Chapter 5 of this Mitigation Plan.

Action Item 7: Continue Maintenance Programs for Drainage Systems

The Village should continue with its formal and regular drainage system maintenance programs. These efforts should include inspection of privately maintained drainage facilities. Streambank and shoreline stabilization efforts should also be evaluated and implemented. Public information should be provided to property owners on how best to protect streambanks and shorelines.

Responsible Board or Department: Public Works.

Deadline: 36 months.

Cost: Staff time and equipment.

Benefits: Regular maintenance can protect both structures and property. Regular maintenance can also be more cost effective than major maintenance efforts that are done on an as-needed basis.

Plan Reference: Chapter 5, Section 5.5 of the Lake County ANHMP.

Action Item 8: Continue Participation in the Community Rating System

The Village of Lincolnshire should continue to participate in the Community Rating System (CRS). Required for CRS participation is full compliance with the minimum requirements of the National Flood Insurance Program.

Responsible Board or Department: Lincolnshire CRS Coordinator and all departments.

Deadline: Ongoing.

Cost: Staff time.

Benefits: The CRS program saves property owners money on flood insurance premiums and it has been shown to be effective for both comprehensive watershed management and emergency response planning.

Plan Reference: Chapter 5 of this Mitigation Plan.

Action Item 9: Continue to Participate in Tree City USA

The Village of Lincolnshire should maintain their status in Tree City USA to enhance the community but to also monitor the health of the trees in the Village and protect property downed trees or utility interruption during or after storms.

Responsible Board or Department: Public Works Department and Community and Economic Development Department.

Deadline: Annual.

Cost: \$2 per capita, staff time.

Benefits: Urban forestry programs provide mitigation against severe winter and summer storms, and high wind events. The loss of trees is prevented along with the protection

of power, telephone and cable services. Damage to vehicles and buildings from falling limbs is also prevented.

Plan Reference: Chapter 5, Section 5.3 of the Lake County ANHMP.

Action Item 10: Participation in StormReady

The Village of Lincolnshire should consider joining the National Weather Service's StormReady program. The StormReady program has been developed to provide communities guidelines to improve the timeliness and effectiveness of hazardous weather-related warnings for the public.

Responsible Board or Department: Emergency Management.

Deadline: 24 months.

Cost: Staff time, and equipment purchases for some communities.

Benefits: By meeting StormReady requirements, the Village will be better able to detect impending weather hazards and disseminate warnings as quickly as possible. All efforts to prevent injury, save lives, and protect property are of high value.

Plan Reference: Chapter 5, Section 5.4 of the Lake County ANHMP.

Action Item 11: Continue to Implement Action Items in the Lake County ANHMP

Implementation of the action items listed in Chapter 6 of the Lake County ANHMP should continue by the Village of Lincolnshire.

Responsible Board or Department: Lincolnshire's representative to the Lake County LPC.

Deadline: Ongoing.

Cost: Staff time and any project costs.

Benefits: This effort supports that Village's adoption of the Lake County ANHMP in August 2012.

Plan Reference: Chapter 6 of the Lake County ANHMP.

Action Item 12: Encourage Homeowner Projects That Enhance the Village and Reduce Storm Runoff

Small efforts to reduce stormwater runoff and improve water quality by one property owner have a cumulative effect when they are done by many property owners. Rain gardens help to reduce flood runoff and they also enhance the environment. The Village should distribute information on activities such as rain gardens providing property owners an idea of what they can do to help address flood issues throughout Lincolnshire.

Responsible Board or Department: Planning

Deadline: Ongoing.

Cost: Identified per project.

Benefits: Small efforts may protect basements and crawl spaces, and all efforts contribute to the reduction of runoff.

Plan Reference: Chapter 5 of this Mitigation Plan.

Action Item 13: Provide Additional Stormwater and Floodwater Storage

The Lake County SMC continues to work with other agencies to consider regional approaches (large detention sites) to provide flood damage reduction. Small detention or storage sites may be all that is available, and when small sites or small opportunities for stormwater storage become available, the Village of Lincolnshire should consider exploring funding, design and construction.

Responsible Board or Department: Public Works Department and Community and Economic Development Department.

Deadline: Ongoing.

Cost: Identified per project. Potential funding sources include HMGP, PDM, and FMA.

Benefits: Smaller flood events may have less impact on the Village of Lincolnshire residents and property.

Plan Reference: Chapter 5 of this Mitigation Plan

Action Item 14: Consider Opportunities to Acquire Available Properties in the Floodplain

When properties located in the Village of Lincolnshire floodplains become available for purchase, the Village should consider whether acquisition of that property would be a benefit to the Village.

Responsible Board or Department: Public Works and Planning.

Deadline: Ongoing.

Cost: Identified per project. Potential funding sources include FEMA Hazard Mitigation Assistance grant programs.

Benefits: Property protection measures include the acquisition of floodplain properties, and floodplain properties that are kept as open space or returned to open space allow the floodplain to do its job of storing flood waters.

Plan Reference: Chapter 5 of this Mitigation Plan and Chapter 5, Section 5.2 of the Lake County ANHMP.

Action Item 15: Seek Mitigation Grant Funding for Cost Beneficial Projects

When appropriate for a mitigation project, the Village of Lincolnshire should apply for mitigation grant funding through available IEMA and FEMA programs for mitigation planning and mitigation projects. As required by IEMA and FEMA programs, projects must be cost beneficial. FEMA Hazard Mitigation Assistance program funding and Section 406 of the Stafford Act (for facilities and infrastructure damaged due to a presidentially declared disaster) should be considered.

Responsible Board or Department: Public Works, Planning, Administrator's Office.

Deadline: As needed.

Cost: 25% of plan or project cost (non-federal share). Potential funding sources include HMGP, PDM, and FMA.

Benefits: The Village of Lincolnshire, along with residents and property owners, would benefit from the available grant funding.

Plan Reference: Chapter 5 of this Mitigation Plan.

6.3 Implementation Strategy

The Village of Lincolnshire will to pursue the action items listed in this Chapter as staff and funding resources allow. The Village of Lincolnshire will also continue to implement action items pertaining to municipalities in Chapter 6 of the Lake County ANHMP. However, as mentioned in Section 6.1, the other recommendations included in this Mitigation Plan and the Lake County ANHMP (i.e., in Chapter 5) are no less important and should be implemented as opportunities arise. Plan monitoring and maintenance are discussed in Chapter 7 of this Plan.

Table 6-1 Summary of Village of Lincolnshire Mitigation Plan Action Items

Action Item:	Action Item To Be Implemented By:						
	Village Board	Village Manager	Comm. Development	Public Works	Emerg. Mgmt.	Other Dept.	Property Owners/ Stakeholders
1. Plan Adoption	✓	✓					
2. Plan Monitoring and Maintenance			✓	✓			
3. Improve Natural Hazards Public Information Efforts		✓		✓	✓		
4. Improve Village Communications Before, During and After Hazard Events		✓	✓	✓	✓	✓	
5. Property Protection Projects				✓			✓
6. Concerns with the Lincolnshire-Londonderry Berm	✓	✓		✓			✓
7. Maintenance Programs for Drainage Systems				✓			
8. Community Rating System Participation		✓	✓	✓	✓	✓	
9. Participation in Tree City USA				✓			
10. Participation in StormReady					✓		
11. Lake County ANHMP Action Items				✓	✓		
12. Homeowner Projects to Reduce Runoff				✓			✓
13. Provide Additional Stormwater and Floodwater Storage			✓	✓			
14. Opportunities to Acquire Available Properties in the Floodplain	✓	✓	✓	✓			
15. Seek Mitigation Grant Funding	✓		✓				

Table 6-2 Summary of Village of Lincolnshire Mitigation Plan Goals

Action Item:	Goals (Chapter 4)				
	Goal 1.	Goal 2.	Goal 3:	Goal 4.	Goal 5.
	Protect the lives, health, and safety of people	Protect public services, utilities and critical facilities	Mitigate existing buildings	Ensure that new developments do not create new exposures	Mitigate to protect against economic and transportation losses
1. Plan Adoption	✓	✓	✓	✓	✓
2. Plan Monitoring and Maintenance	✓	✓	✓	✓	✓
3. Improve Natural Hazards Public Information Efforts	✓	✓	✓	✓	✓
4. Improve Village Communications Before, During and After Hazard Events	✓	✓	✓	✓	✓
5. Property Protection Projects	✓	✓	✓		✓
6. Concerns with the Lincolnshire-Londonderry Berm	✓	✓	✓		✓
7. Maintenance Programs for Drainage Systems	✓	✓	✓	✓	✓
8. Community Rating System Participation	✓	✓	✓	✓	✓
9. Participation in Tree City USA	✓	✓	✓	✓	✓
10. Participation in StormReady	✓	✓	✓	✓	✓
11. Lake County ANHMP Action Items	✓	✓	✓	✓	✓
12. Homeowner Projects to Reduce Runoff	✓	✓	✓	✓	✓
13. Provide Additional Stormwater and Floodwater Storage	✓	✓	✓	✓	✓
14. Opportunities to Acquire Available Properties in the Floodplain	✓	✓	✓		✓
15. Seek Mitigation Grant Funding	✓	✓	✓		✓

Table 6-3 Summary of Lake County ANHMP Action Items

Action Item:	Action Item To Be Implemented By:						
	Village Board	Lake County SMC	Lake County EMA	Lake County PB&D	Municipal Boards & Councils	Village Staff	Other Stakeholders
1. Plan Adoption	✓				✓		
2. Plan Monitoring and Maintenance		✓	✓			✓	
3. Improve Natural Hazards Public Information Efforts		✓	✓	✓		✓	✓
4. SMC Flood Mitigation Projects		✓				✓	
5. Development of Flood Stage Maps		✓				✓	
6. Property Protection Checklist		✓	✓				
7. Improve Emergency Response and Develop Assessment Teams		✓	✓			✓	
8. Incorporate Lake County ANHMP into Other County and Municipal Plans	✓	✓	✓	✓	✓	✓	✓
9. Property Protection Projects		✓	✓			✓	✓
10. Continue to map natural hazard impacts and continue vulnerability assessments		✓	✓				
11. Review and Mitigation of Critical Facilities		✓	✓			✓	✓
12. Seek Mitigation Grant Funding for Additional Mitigation Planning and Cost Beneficial Projects		✓				✓	
13. Continued Implementation of the WDO and NFIP Requirements		✓		✓		✓	
14. Improve Capacity of Drainage Systems		✓				✓	
15. Implement Maintenance Programs for Drainage Systems		✓				✓	
16. Improve Response & Recovery Information Sharing and Collaboration	✓		✓			✓	✓
17. Continue Work for NIMS Compliance	✓		✓			✓	✓
18. Alternate Power Sources for Critical Facilities and Shelters			✓			✓	✓
19. Improve Building Codes and Building Code Enforcement				✓		✓	
20. Community Rating System Participation				✓		✓	
21. Reduce Inflow and Infiltration to Protect Against Sewer Backups						✓	
22. Urban Forestry - Participation in Tree City USA						✓	
23. Participation in StormReady			✓			✓	

Chapter 7.

Plan Maintenance

Maintenance of the Village of Lincolnshire Natural Hazard Mitigation Plan and the monitoring of its implementation will follow the same approach outlined in the Lake County ANHMP, and outlined in this Chapter.

The Lake County Local Planning Committee is responsible for the monitoring and maintenance of the 2012 Lake County ANHMP and the Village is responsible for implementing action items from the Lake County ANHMP and participating in the annual LPC meeting and provided needed information pertaining to the Village for the Lake County ANHMP annual reports. The membership of the LPC included representative from the participating communities. The LPC is coordinated by the Lake County SMC and the LCEMA.

7.1 Plan Adoption

Action Item 1 calls for the Village Board to adopt this Mitigation Plan. Adoption of the Mitigation Plan is required for the National Flood Insurance Program's Community Rating System. The adopted 2012 Lake County ANHMP will continue to be the plan that allows the Village to remain eligible for FEMA mitigation grants.

7.2 Maintenance and Monitoring

Maintenance and monitoring of the *Village of Lincolnshire Natural Hazards Mitigation Plan* are addressed in Action Item 2. This action item explains how and when this Mitigation Plan will be reviewed, revised, and updated. Action Item 2 calls for the Village of Lincolnshire Mitigation Planning Committee to meet at least once a year to prepare an annual progress report for this Mitigation Plan for the CRS. Annual meeting should:

- Act as a forum for hazard mitigation issues
- Allow for continued public participation in the implementation and future revisions
- Investigate mitigation opportunities. investigate mitigation opportunities
- Report on progress and recommended changes to the Village Board

Written annual reports on progress should be to the Village Board and made available to the public. The annual reports will facilitate the 5-year update of this Mitigation Plan. Mitigation plans, and CRS floodplain management plans, are required by FEMA to be updated every five years

7.3 Continued Public Participation

The adopted Village of Lincolnshire Mitigation Plan and annual reports will be posted on the Village's website. Public input and participation will be welcome at the Mitigation Committee annual meetings. Other public information materials will be distributed posted on the website to support this Mitigation Plan and the for various outreach projects developed for the CRS. Also, a public meeting will precede any amendments or updates to this Mitigation Plan.

7.4 Evaluating the Plan's Success

Evaluation of the Village of Lincolnshire Mitigation Plan will include checking whether mitigation actions are implemented or not, and assessing their degree of effectiveness. The Costs to the Village will also be evaluated. The Village staff and the Mitigation Committee will also evaluate whether mitigation actions need to be discontinued, or modified in any way in light of new developments in the community.

Taskforce members

Name	Company
Andy Muzik	Resident
Ann Maine	Lake County Representative
Brad Burke	Village of Lincolnshire
Brett Blomberg	Village of Lincolnshire
Craig Parcels	Resident
David Schaper	Resident
Deann Daniel	Sedgebrook
Jamie Godshalk	Resident
Jeff Merwin	Out of Village Resident
Jennifer Lugo	Resident
Joseph Pratt	Resident
Judy Mankus	Resident
Larry Barnhart	Wood Creek Courts EPA
Mara Grujanac	Village of Lincolnshire
Marj Lundy	Resident
Mark Cohen	State Farm Insurance
Mike Tiemens	Bank Financial
Ramesh Gulatee	Resident
Rev. Douglas Meyer	Lutheran Church of the Holy Spirit
Rob Sturru	Resident
Rob Weinberg	Westgate HOA
Robert Horne	Village of Lincolnshire
Roger Mankus	Resident
Stan Reznik	Resident
Stancia Kalmus	Resident
Steve Robles	Village of Lincolnshire
Unknown	
Wendy Kritt	Resident
William Rubinstein	Resident



Lincolnshire Flood Mitigation Planning Committee

Thursday, June 20, 2013, 7:00 p.m.

Village Hall Board Room

Public Meeting Agenda

1. Welcome and Introductions
2. Why Are We Here? Flooding in Lincolnshire
3. What is Flood Mitigation and What is CRS?
4. What is the Purpose of the Planning Committee?
 - a. Flood Mitigation Plan
 - b. Program for Public Information
 - c. Flood Insurance Promotion
5. Planning Step 1 – Organize
 - a. Committee Role and Participation
 - b. Expected Meetings
6. Planning Step 2 – Involve the Community and Public Information Needs
 - a. Lincolnshire’s Current Efforts
 - b. Other Methods To Encourage Input
 - c. Community Survey
7. Planning Step 3 – Agency & Organization Coordination
8. Public Comment
9. Next Steps
10. Adjourn

Notes:



Lincolnshire Flood Mitigation Planning Committee

[____], September __, 2013, 7:00 p.m.

Village Hall Board Room

Agenda

1. Welcome and Introductions
2. Lincolnshire Flood Mitigation Plan
 - a. Outline/Chapters
 - b. Review of Lincolnshire Hazards from Lake County Plan
 - c. Review of Goals and Guidelines from Lake County Plan
3. Lincolnshire Problem Areas
4. Lincolnshire Public Information Needs
 - a. What are we doing well?
 - b. What should we be doing?
5. Flood Insurance Assessment
 - a. Coverage Map
 - b. Structure and Contents Coverage/Claims
 - c. Assessment
6. Public Comment
7. Next Steps/Next Meeting
8. Adjourn

Notes:

<https://www.surveymonkey.com/s/FC9YW2P>



Lincolnshire All Natural Hazards Mitigation Planning Committee

Thursday, October 17, 2013, 7:00 p.m.

Village Hall Board Room

Agenda

1. Welcome and Introductions
2. Review of June 20, 2013 Meeting
 - a. CRS Plans
 - b. Planning Steps
3. Purpose of Tonight's Meeting
4. Lincolnshire All Natural Hazards Mitigation Plan
 - a. Lincolnshire's Natural Hazards
 - b. Public Survey Results
 - c. Lincolnshire's CRS Goals
5. Lincolnshire Focus Areas
6. Lincolnshire Public Information Needs
 - a. What are we doing well?
 - b. What should we be doing?
7. Flood Insurance Assessment
8. Public Comment
9. Next Steps (Next Meeting: Thursday, November 14, 2013 at 7:00 p.m.)
10. Adjourn

Notes:



Lincolnshire Natural Hazards Mitigation Planning Committee

Thursday, November 14, 2013, 7:00 p.m.

Village Hall Board Room

Agenda

1. Welcome and Introductions
2. Review of Last Meeting & Purpose of Tonight's Meeting
3. Lincolnshire Natural Hazards Mitigation Plan
 - a. Review of Lincolnshire Goals and Guidelines*
 - b. Examination of Mitigation Strategies
Preventive, Property Protection, Structural Measures, Resource Protection, Emergency Services and Public Information
 - c. Review of Drafted Chapters
4. Lincolnshire Plan for Public Information
Identifying Topics, Formulating Messages and Possible Projects
5. Flood Insurance Assessment – Report on Progress
6. Public Comment
7. Next Steps/Next Meeting
8. Adjourn

* And homework assignment for next meeting.

Notes:



Lincolnshire Natural Hazards Mitigation Planning Committee

Thursday, December 5, 2013, 7:00 p.m.

Village Hall Board Room

Agenda

1. Welcome and Introductions
2. Review of Last Meeting & Purpose of Tonight's Meeting
3. Lincolnshire Natural Hazards Mitigation Plan
 - a. Review of "Homework"
 - b. Mitigation Strategies – Conclusions and Recommendations
 - From November Meeting
 - Additional Strategies
 - c. Development of Action Items
 - Continued Actions by the Village
 - New Actions or Projects
4. Lincolnshire Plan for Public Information and Flood Insurance Coverage Improvement
 - a. Review of Focus Areas
 - b. Exercise - Identifying Topics and Messages
 - c. Possible Projects
5. Public Comment
6. Next Steps/Next Meeting
7. Adjourn

Notes:

[Sample]

RESOLUTION

ADOPTION OF THE Village of Lincolnshire All Natural Hazards Mitigation Plan

WHEREAS, the Village of Lincolnshire 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 Village of Lincolnshire Natural Hazards Mitigation Planning Committee has prepared and recommended the Village of Lincolnshire Natural Hazards Mitigation Plan that reviews the Village's options to protect people and reduce damage from hazards; and

WHEREAS, the recommended Village of Lincolnshire Natural Hazards Mitigation Plan has been circulated for review by government agencies, residents and property owners and has been supported by those reviewers; and

WHEREAS, the Village meets the Federal Emergency Management Agency (FEMA) requirement of adoption of a FEMA-approved mitigation plan through the August 2012 adoption of the Lake County All Natural Hazards Mitigation Plan, which makes the Village 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; and

WHEREAS the preparation and adoption of a community mitigation plan is credited through FEMA's Community Rating System (CRS), and adoption of the Village of Lincolnshire Natural Hazards Mitigation Plan will benefit the Village in its CRS class rating.

NOW, THEREFORE BE IT RESOLVED, that the 2014 Village of Lincolnshire Natural Hazards Mitigation Plan, is hereby adopted as an official plan of the Village of Lincolnshire, and;

BE IF FURTHER RESOLVED, that the Village of Lincolnshire Natural Hazards Mitigation Planning Committee created by the Resolution ____ of the Village Board in August 2013 continue to serve as an advisory body to the Village Board, and that the Committee shall meet at least annual to review the Village of Lincolnshire Natural Hazards Mitigation Plan and report at least annually to the Village Board.

ADOPTED this the _____ day of _____, _____.

_____ Clerk

APPROVED this the _____ day of _____, _____

_____ Village President

**REQUEST FOR BOARD ACTION
AUGUST 25, 2014 COMMITTEE-OF-THE-WHOLE**

Subject: Consideration and Discussion of a Request to Waive Local Bidding Requirements and Authorize the Purchase of Two (2) Replacement Vehicles for the Police Department at a Cost of \$51,607 via the Suburban Purchasing Cooperative (Village of Lincolnshire)

Action Requested: Waive formal bidding process and advance purchase request to September 8, 2014 Regular Village Board Meeting Consent Agenda for approval.

Originated By/Contact: Peter D. Kinsey, Chief of Police

Referred To: Village Board

Summary / Background:

The Village's FY 2014 budget provides funding for the purchase of two (2) replacement vehicles for the Police Department. The department plans to replace the Investigators' unmarked 2006 Chevrolet Impala Sedan (Squad 82) and a marked 2008 Ford Crown Victoria Police Interceptor Sedan (Squad 90). Squad 90 has far exceeded 80,000 miles and Squad 82 is expected to exceed the 80,000 mile mark by the time it will be removed from service.

The Police Department recommends purchase of two (2) 2015 Ford Police Interceptor Utility vehicles. The Police Department purchased three of the new Police Interceptor Utility vehicles late last year, and placed all three in service early this year. Officers have found the Interceptor Utility vehicles to be much more desirable for police work than the sedans purchased in previous year as they provide more driver and passenger space, more backseat space for larger arrestees, better visibility out the rear window when backing, and more cargo space for police equipment.

Staff recommends purchase of new replacement vehicles through the Suburban Purchasing Cooperative, which awarded a contract for the 2015 Ford Police Interceptor Sedan and Utility vehicles to Currie Motors of Frankfort, Illinois. The Village of Lincolnshire may utilize the Suburban Purchasing Cooperative contract as a member of the Northwest Municipal Conference and given the vehicle purchase has been competitively bid. The base price for the Interceptor Utility is \$24,800. With the desired options on each vehicle, the total purchase price for both vehicles is \$51,607 (\$25,731 for the Patrol vehicle and \$25,876 for the Investigations vehicle).

Budget Impact:

There is \$52,000 budgeted in the Police Department's Capital Budget Motor Vehicle Replacement Account (#51-05-80-7001) for this purchase in Fiscal Year 2014 which is sufficient to cover the recommended purchase.

Service Delivery Impact:

Both of these vehicles will replace aging vehicles currently in the Police Department's fleet.

Recommendation:

Staff recommends approval of this purchase.

Reports and Documents Attached:

- SPC 2015 Ford Utility Police Interceptor AWD – Contract #122

Meeting History	
Initial Referral to Village Board (COW):	August 25, 2014
Regular Village Board Meeting:	

FY 2014-15



Joint Purchasing Program



*DuPAGE
MAYORS AND MANAGERS
CONFERENCE*



*NORTHWEST MUNICIPAL
CONFERENCE*



**WILL COUNTY
GOVERNMENTAL LEAGUE**

POLICE PURSUIT VEHICLES

Product Information- Contract #147

2015 Chevrolet Tahoe Patrol Package: \$27,608.00

Ordering Information

Orders are placed directly through Currie Motors Chevrolet.
Billing is performed by the dealer.

Currie Motors Chevrolet
8401 W. Roosevelt Road
Forest Park, IL 60130
P: 815-464-9200 F: 815-464-7500
Contact Person: Tom Sullivan
CurrieFleet@gmail.com

The Chevrolet Tahoe contract runs through April 10, 2015.

Product Information

Contract #121

2015 Ford Interceptor Sedan Police Package: \$23,211.00

Contract #122

2015 Ford Interceptor Utility Police Package: \$24,800.00

Ordering Information

Orders are placed directly through Currie Motors.

Currie Motors
9423 W. Lincoln Highway (Rt. 30 & 45)
Frankfort, IL 60421
P: 815-464-9200 F: 815-462-7500
Contact Person: Tom Sullivan
CurrieFleet@gmail.net

The contracts for 2015 Ford Interceptor Sedan and 2015 Ford Interceptor Utility runs through November 8, 2014.



2015 Ford Utility Police Interceptor AWD Contract # 122



Currie Motors Fleet

“Nice People To Do Business With”

Your Full-Line Municipal Dealer
www.CurrieFleet.com

GOOD THRU: November 08, 2014



2015 Ford Utility Police Interceptor AWD
Contract # 122
\$24,800.00

3.7 TI-VCT V6 FFV
6-Speed Automatic
Rear recovery hooks
Independent front/rear suspension
Engine Oil Cooler
18.6 gallon fuel tank
Engine Hour Meter
220 Amp Generator
78 Amp Hour Battery
Lower black body side cladding
Dual Exhaust
Black spoiler
Electric Power Assist Steering
Acoustic laminated windshield
18" Tires and Wheels
Fixed glass lift gate
Full Size Spare
AM/FM/CD
Roll curtain airbag
Safety Canopy W/Roll Over
Sensor
Anti-Lock Brakes With Advanced
Trac and traction control
Bi functional projector headlamps
LED tail lamps
2nd/3rd Row Privacy Glass
My Ford police cluster

All-Wheel Drive
Manual folding power mirror
Fold flat 60/40 rear vinyl bench
Single zone manual Climate
Control
Power Windows
Power Locks
Cruise Control/Tilt Wheel
Calibrated Speedometer
Column Shift
Work Task Light red/white
Simple fleet key
Power Adjustable Pedals
Two-Way Radio Pre-Wire
Particulate air filter
Power Pig tail
Delivery Within 30 Miles

Standard Warranty:

Basic: 3 Years/ 36,000 Miles
Drivetrain: 5 Years/100,000 Miles
Corrosion: 5 Years/ Unlimited
Miles
Emissions: 8 Years/80,000 Miles
Roadside Assistance:
5Years/60,000 Mile

**REQUEST FOR BOARD ACTION
AUGUST 25, 2014 COMMITTEE-OF-THE-WHOLE**

Subject: Consideration and Discussion of the Purchase of Digital In-Car Video Camera Solution and Related Equipment from WatchGuard Video, Allen, Texas at a Cost of \$68,315 (Village of Lincolnshire)

Action Requested: Referral to September 8, 2014 Regular Village Board Meeting for approval.

Originated By/Contact: Peter D. Kinsey, Chief of Police

Referred To: Village Board

Summary / Background:

The Police Department requests Village Board approval to purchase a new digital in-car video camera solution, related hardware, and operating software utilizing a two-year purchase plan for replacement of all the department's current in-car video cameras. The total cost of the project is \$68,315. Six (6) in-car video camera units, system hardware and software will be purchased in FY 2014 at a cost of \$40,465. An additional five (5) in-car video camera units will be purchased in FY 2015 at a cost of \$27,850 to complete the transition of equipment in the department's fleet.

Presently, Police Department vehicles are equipped with in-car video camera systems manufactured by Kustom Signals of Lenexa, Kansas. The Police Department began purchasing and installing these in-car video camera systems in 2005, buying 2-3 units per year until the fleet was completely outfitted. Although they have generally met the department's needs, the cameras and related components have reached the end of their useful service life, and costly repairs have become more frequent. Two camera systems have already been removed from service as parts required to repair them are no longer available. Additionally, the Kustom Signals video system utilizes a proprietary DVD-type data cartridge on which video is recorded. The DVD cartridges can only be played back on proprietary external DVD drives manufactured by Kustom Signals. These DVD drives are no longer manufactured or supported by the vendor. The department had two DVD drives, however, one failed and was not repairable. If the second DVD drive fails, there will be no way to play back recorded video, other than in a squad car.

A *Request for Proposals* (RFP) was disseminated to four vendors: Kustom Signals, L-3 Mobile-Vision, CDS Office Technologies (Panasonic), and WatchGuard Video. Kustom Signals replied to the Village inquiry, but opted not to submit a proposal. Prior to the deadline for proposals, staff researched and viewed vendor demonstrations of all three in-car video camera systems (L-3 Mobile Vision, Panasonic, and WatchGuard). In addition, staff visited area police departments that have purchased each of the vendors' products to assess the utility of each system and customer satisfaction.

During the research and evaluation of the three vendors, staff reviewed the technological advantages of these video systems, their ease-of-use by officers, picture quality, wireless microphone quality, durability, reliability, and the ability to download wirelessly the video files to a server which eliminates the cluttered and numerous files of compact disks. Also these systems have less bulky components, such as the DVD player.

Although the WatchGuard Video proposal is \$543 more than the L-3 Mobile-Vision proposal, staff believes the WatchGuard Video solution is better suited to meet the Police Department's needs. The

WatchGuard Video solution features a credit-card sized camera which mounts to the reverse side of the vehicle's rearview mirror, so there is no additional object hanging in the front windshield area to obstruct the driver's view. Staff considered this a very beneficial safety feature. The cost of each vendor's proposal is listed below:

L-3 Mobile-Vision, Inc. - \$67,772

CDS Office Technologies (Panasonic) - \$84,743

WatchGuard Video - \$68,315

Budget Impact:

There is \$44,000 budgeted in the Police Department's Capital Budget Equipment – In Car Video Account (#51-05-80-3009) for this purchase in Fiscal Year 2014 which is sufficient to cover the recommended purchase in the first phase of the project. In addition, one of the six units will be purchased from the Alcohol Enforcement Fund for installation in the department's traffic enforcement car.

The purchase of the remaining equipment will be budgeted (\$27,850) in Fiscal Year 2015.

Service Delivery Impact:

All six (6) of these video camera systems will replace aging/outdated video camera systems currently installed in Police Department vehicles.

Recommendation:

Staff recommends approval of this purchase.

Reports and Documents Attached:

- WatchGuard Video Digital In-Car Video Camera Brochure

Meeting History	
Initial Referral to Village Board (COW):	August 25, 2014
Regular Village Board Meeting:	

Open: August 18, 2014 at 2:00 p.m.



Proposal for Digital In-Car Video Solution for Lincolnshire Police Department



Submitted by
WatchGuard Video

4RE HIGH DEFINITION, WIRELESS TRANSFER, SERVER-BASED IN-CAR VIDEO FOR LAW ENFORCEMENT



WatchGuard Video
415 Century Parkway, Allen, TX 75013
1.800.MPEG (6734)
www.watchguardvideo.com



18th of August, 2014

Village of Lincolnshire

1 Olde Half Day Road

Lincolnshire, IL 6006

Attn: Youssef Shoukry, Management Analyst

Reference: RFP for Digital In-Car Video Camera Solution

WatchGuard Video is pleased to present the 4RE HD Wireless In-Car Video System and the Evidence Library 3 Backend Solution. 4RE HD makes high definition practical by eliminating the painful compromise between video quality and file storage needs. This means your agency will have high definition video (with 3.5X higher image resolution) for all of your court-bound video while simultaneously requiring less total storage than any other competing systems – or in other words you get HD video at SD cost.

4RE is not only unique for its high definition capability, but also for its dual drive architecture that enables a feature called “Record-After-the-Fact” which effectively gives your agency the power to go back in time to capture video that was not initially recorded.

WatchGuard Video has also recently introduced the High Fidelity Wireless Microphone. The Hi-Fi microphone provides near CD audio quality, one to two miles of range, and has a typical battery life of one week on a single charge. No other system on the market can offer these features or functionality.

Thank you for your consideration to this proposal.

Respectfully Submitted,

Jason Stuczynski

Vice President of Sales

EXPERIENCE AND QUALIFICATIONS

INTRODUCTION

WatchGuard Video is a privately held law enforcement technology manufacturer. WatchGuard was founded in 2002 and began full production of its mobile video products in September of 2005, with initial shipments beginning in October 2005. All product manufacturing is done domestically in the company's 65,000 square foot facility located in Allen, Texas. The North Texas facility features an engineering laboratory, customer service installation bay, pristine production space, and a state-of-the-art training room. All 4RE engineering, assembly, and factory service is conducted in this facility.



COMPANY BACKGROUND

WatchGuard Video is the world's largest manufacturer of in-car video systems for law enforcement and was recently honored for the second year in a row (2010 and 2011) as one of the top 100 fastest growing profitable companies in North Texas. The company has been consistently profitable and just completed its 5th consecutive year of growth. Our mobile video products have become the number one selling digital in-car video systems in the United States, and we currently have approximately 5,000 law enforcement agencies as customers and over 30,000 of our mobile DVR systems in the field. WatchGuard has moved solidly into the number one market share position for US sales of digital police in-car video systems. Even with about 20

companies competing in this market, nearly 1 in 4 systems sold in the US today are manufactured by WatchGuard.

WatchGuard's commitment to innovation can be seen in the large investments we make in the Research and Development of new products. We have the largest engineering team in the industry, and have invested over \$25 million into the development of digital in-car video systems for law enforcement. We feel that innovation of quality and technically advanced products is essential to maintaining our position in this fast paced and rapidly evolving industry.

WatchGuard Video produces the most advanced systems, has the most extensive track record of successful deployments, has earned a reputation for extraordinary customer support, is financially sound, and is the best positioned company to service your in-car video needs today and for many years into the future.

The Industry's Most Significant Products

The Company is best known for the WatchGuard DV-1, the world's only real-time Direct-to-DVD-Video law enforcement in-car video system, which has been the best-selling digital in-car video system of all time. In 2010, the company introduced the WatchGuard 4RE HD Wireless In-Car Video System, the world's first true high definition police in-car video system. 4RE is a revolutionary new system that provides stunning high definition video for all evidentiary recordings, yet requires less total storage space than conventional systems.

Advanced Engineering

WatchGuard Video employs the industry's largest engineering team and has invested about \$25 million specifically into the development of digital in-car video systems for law enforcement. The company's engineering team consists of twenty top level engineers and programmers that average 20 years of experience each. We have a wide range of expertise and experience that includes:

- System architecture
- High reliability systems design
- Image processing
- Video encoding/decoding
- Audio encode/decode
- MPEG2/MPEG4/H.264
- High speed data processing
- High speed communication
- Digital signal processing
- FPGA/CPLD designs
- User interface design
- Kernel/driver development
- File system design
- Board design and layout
- Mechanical and industrial design
- Thermal analysis
- Rigorous system validation and testing.

Many members of our team have been awarded numerous patents through their careers. The company continues to invest more into R&D than any other company in this market.

WatchGuard Video was recently issued a patent by the US Patent Office for the multiple resolution recording process used in the 4RE HD In-Car Video System. WatchGuard Video currently has 16 patents issued or pending.

Manufactured in the U.S.A.

The company manufactures its products in its 65,000 square foot, state-of-the-art facility located in North Texas. This new two story facility houses all departments including Engineering, Manufacturing, Sales, and Customer Service and it includes an impressive training room, customer installation bay, pristine production space, and even an employee game room and a fitness center.

Dedicated to Serving

WatchGuard Video is founded on Christian principles and the management staff is encouraged to manage their teams by modeling servant-based leadership. The company places an emphasis on developing and exhibiting the individual character qualities that are essential for true success, both personally and professionally. The company also acknowledges that by serving God people are better equipped and empowered to serve each other, which ultimately serves customers more effectively. This highly functional culture creates an environment where employees are fully engaged and customers are served in a manner that instills the highest level of trust, loyalty, and satisfaction.

EXPERIENCE

WatchGuard serves state agencies, local police departments, sheriff's offices, campus police and federal enforcement agencies. WatchGuard has successfully deployed 8 of the 10 largest digital in-car video programs installed to date (including California Highway Patrol and Texas Department of Public Safety). WatchGuard serves some of the largest agencies in the United States, including:

- Pennsylvania State Police
- California Highway Patrol
- Texas Department of Public Safety
- Oklahoma Department of Public Safety
- Minnesota Highway Patrol
- Kansas Highway Patrol
- And several other state agencies

We attribute our success over the years to our commitment to customer service and innovation. WatchGuard continues to gain the trust and confidence of law enforcement agencies throughout the country.

SOLUTION COST BREAKDOWN

REQUIRED ITEMS

These items were specified in the request for bids and/or are required for system operation.

Item #	Description	Qty.	Unit Price	Extended Price
IN-CAR HARDWARE				
1	4RE HIGH DEFINITION IN-CAR VIDEO SYSTEM <i>Includes:</i> Zero Sightline HD Front Camera Separate Back Seat Camera Integrated GPS Crash detection DVR with integrated 200GB solid state drive 16GB USB drive 4.3" touch screen remote display control panel Cabin microphone Hi-Fi Wireless microphone kit All mounting hardware and cabling and accessories needed for installation 1-Year warranty on ALL in-car components (See Warranty and Maintenance section) Shipping and Handling	11	\$4,795.00	\$52,745.00
2	4RE IN-CAR 802.11n WIRELESS KIT, 5GHz <i>Includes: Radio, Antenna, PoE, 2-10' Ethernet Cables)</i>	11	\$200.00	\$2,200.00
In-Car Hardware Total				\$54,945.00
BACK OFFICE SOFTWARE AND HARDWARE				
3	4RE SERVER SOFTWARE, EL3 <i>Includes: 3 Clients and 1 year of Software Protection.</i>	1	\$2,045.00	\$2,045.00
4	4RE CLIENT SOFTWARE, EL3, ADDITIONAL COPIES		\$75.00	\$0.00
5	WIFI ACCESS POINT, 802.11n, 5GHz, SECTOR <i>Includes PoE</i>	2	\$250.00	\$500.00
Back Office Software and Hardware Total				\$2,545.00
EXTENDED WARRANTIES AND MAINTENANCE				
6	WARRANTY, 4RE, IN-CAR, 2ND YEAR (MONTHS 13-24)		\$100.00	\$0.00
7	WARRANTY, 4RE, IN-CAR, 3RD YEAR (MONTHS 25-36)		\$200.00	\$0.00
8	WARRANTY, 4RE, IN-CAR, 4TH YEAR (MONTHS 37-48)		\$325.00	\$0.00
9	WARRANTY, 4RE, IN-CAR, 5TH YEAR (MONTHS 49-60)		\$450.00	\$0.00
10	SOFTWARE PROTECTION, EL, ADDL. 2ND YEAR (PER 4RE)		\$95.00	\$0.00
11	SOFTWARE PROTECTION, EL, ADDL. 3RD YEAR (PER 4RE)		\$95.00	\$0.00
12	SOFTWARE PROTECTION, EL, ADDL. 4TH YEAR (PER 4RE)		\$95.00	\$0.00
13	SOFTWARE PROTECTION, EL, ADDL. 5TH YEAR (PER 4RE)		\$95.00	\$0.00
Extended Warranties and Maintenance Total				\$0.00
IMPLEMENTATION SERVICES				
14	4RE SYSTEM INSTALLATION, IN-CAR (PER UNIT) <i>Not to exceed \$575.00 per unit. Actual cost may be lower.</i>	11	\$575.00	\$6,325.00
15	4RE ACCESS POINT INSTALLATION <i>Not to exceed \$1,000.00 per access point. Actual cost may be lower.</i>	2	\$1,000.00	\$2,000.00
16	SYSTEM CONFIGURATION <i>Includes:</i> Configuration services per location WG Technical Services on-site installing and configuring Evidence Library, Remote Client, and SQL database Programming all access points and available DVR units End-to-end system testing Training for: in-car hardware end users, back office software users, and system administrators	1	\$2,500.00	\$2,500.00
Implementation Services Total				\$10,825.00
4RE SOLUTION TOTAL				\$68,315.00

High Definition In-Car Video DONE RIGHT™

Every agency would prefer to record video in high resolution; however the time and expense of transferring and storing larger video files usually forces agencies to accept lower resolution video.

The WatchGuard 4RE HD in-car video system changes everything – now agencies can have high definition video while simultaneously reducing storage costs and transfer times.



Actual image from the WatchGuard® 4RE™ HD

MULTIPLE RESOLUTION RECORDING

The real magic of WatchGuard® 4RE™ (Four Resolution Encoding) is its ability to record in high definition and in a lower resolution simultaneously. On recordings that turn out to be important (5-10%), the 720p HD version is kept. Routine recordings (90-95%) are archived using 480p resolution (still 20% better than any SD system).

AGENCY DEFINED EVENT TAGS

Customizable event classifications are created to determine which types of recordings are stored in high definition. Officers simply select the event type, and the agency's policies determine the rest.



**The Event Tag Determines
Which Recordings Are Kept
In High Definition**

NEW, ULTRA-WDR CAMERA TECHNOLOGY

WatchGuard's new ZSL and HD Mini Zoom cameras utilize a revolutionary dual-exposure, Ultra-Wide Dynamic Range (WDR) technology that dramatically improves nighttime video quality.

For every frame of video, the camera actually takes 2 separate images (a dark exposure and a light exposure) and automatically blends the two images into a single video frame. The result is an ideally exposed picture that keeps bright areas from being over-exposed and keeps darker areas from turning black.



Light Exposure



Dark Exposure

Actual final nighttime video image from the ZSL Camera

USES 2
SEPARATE
EXPOSURES

**LICENSE PLATES BECOME
LEGIBLE AT NIGHT!**



HD MINI ZOOM CAMERA

- Dual-Exposure, Ultra-WDR Technology
- 720p HD Resolution (1280x720)
- 16:9 Aspect Ratio
- 57 Degree Wide Field-of-View
- 12X Optical Zoom
- Large Format, Dual-Exposure CMOS Sensor
- F1.6 Optics, 0.82 LUX (Full Color)

ZSL (Zero Sightline) CAMERA

- Dual-Exposure, Ultra-WDR Technology
- 720p HD Resolution (1280x720)
- 16:9 Aspect Ratio
- 68 Degree Wide Field-of-View
- Large Format, Dual-Exposure CMOS Sensor
- F1.7 Optics, 0.85 LUX (Full Color)

**WatchGuard's NEW Ultra-WDR Cameras
have Better Full Color Low Light Sensitivity
than the Human Eye!**

*The ZSL mounts in front of the rear view mirror,
so the officer's sightline is not obstructed.
It is the size of a credit card and only $\frac{3}{4}$ of an inch thick.*



INTUITIVE 4.3" TOUCH SCREEN DISPLAY

The WatchGuard® 4RE™ HD System Uses a Rich and Beautiful Graphical User Interface that is Easy to Use and Understand



Actual Size



MULTI-CAMERA SPLIT SCREEN

The standard WatchGuard® 4RE™ HD can record from 3 cameras simultaneously. With the optional 4RE Expansion Card, the system can record up to 6 cameras simultaneously enabling a full 360° of camera coverage. The screen layout automatically changes to display only active cameras to maximize the viewing size, and any one camera can be isolated for full screen viewing.

COMPUTER INTEGRATION OPTION

While the touch-screen display is the quickest and simplest way to control the WatchGuard® 4RE™ HD system, the system can also be integrated with a mobile data computer. The optional WatchGuard 4RE Mobile App® is a Windows® application that displays video and system controls on the in-car computer, yet the video system can be fully operated even if the computer is not working.



NEW, HIGH FIDELITY WIRELESS MICROPHONE

HEAR WHAT YOU'VE BEEN MISSING!

NEAR CD AUDIO QUALITY

3x Better Frequency Response

1-2 MILES OF RANGE (LINE OF SIGHT)

Maintain Audio Through Buildings (High Power, 900 MHz)

EXTRAORDINARY BATTERY LIFE

1 Week of Typical Use on a Single Charge



**1ST AND ONLY HIGH FIDELITY
MIC FOR LAW ENFORCEMENT**



Advanced Technology

Uses a high power industrial radio modem instead of cordless telephone technology

High Fidelity Sound

More lifelike sound, improves the intelligibility of speech

Built-in AGC (Automatic Gain Control) Processor

Helps eliminate distortion from traffic noise

Solid State MEMs Microphone Sensor

Higher sensitivity and frequency response

High Performance Internal Fractal Antenna

Helps achieve 1-2 miles of range

iPod™ Battery

Uses the exact same Lithium Polymer rechargeable battery and connector used in the iPod Classic

Continuous Talk Time

12-30 Hours (dependent on distance)

Intelligent Standby

2-35 Days (Patent Pending)

Recharge Time

2.5 Hours (charges whether it's turned off or left on)

Typical Usage

1 Week (from a single charge)

(2 hours of active recording per day)



Listen to a Real Traffic Stop with the HiFi Mic

<http://watchguardvideo.com/HiFimic/hifi-microphone-overview>

Backlit LCD Status Display



Includes 2 Clips

Rotatable Alligator Clip

Duty Belt Clip



Rubber-Overmolded corners protect the mic if it's dropped

Built-in Acoustic Foam Wind Barrier

The spring loaded slider switch can manually activate the mic or temporarily mute the audio



Actual Size

AUTOMATIC WIRELESS UPLOAD

SEAMLESS AND COMPLETELY "HANDS FREE"

The WatchGuard 4RE HD automatically handles everything for the officer. It automatically locates the desired wireless network(s), authenticates and rapidly uploads all content to the WatchGuard Evidence Library Server with no help from the officer.

- Wireless uploads are fully automatic
- New configurations are pushed to the DVR automatically
- DVR firmware updates are completely automatic

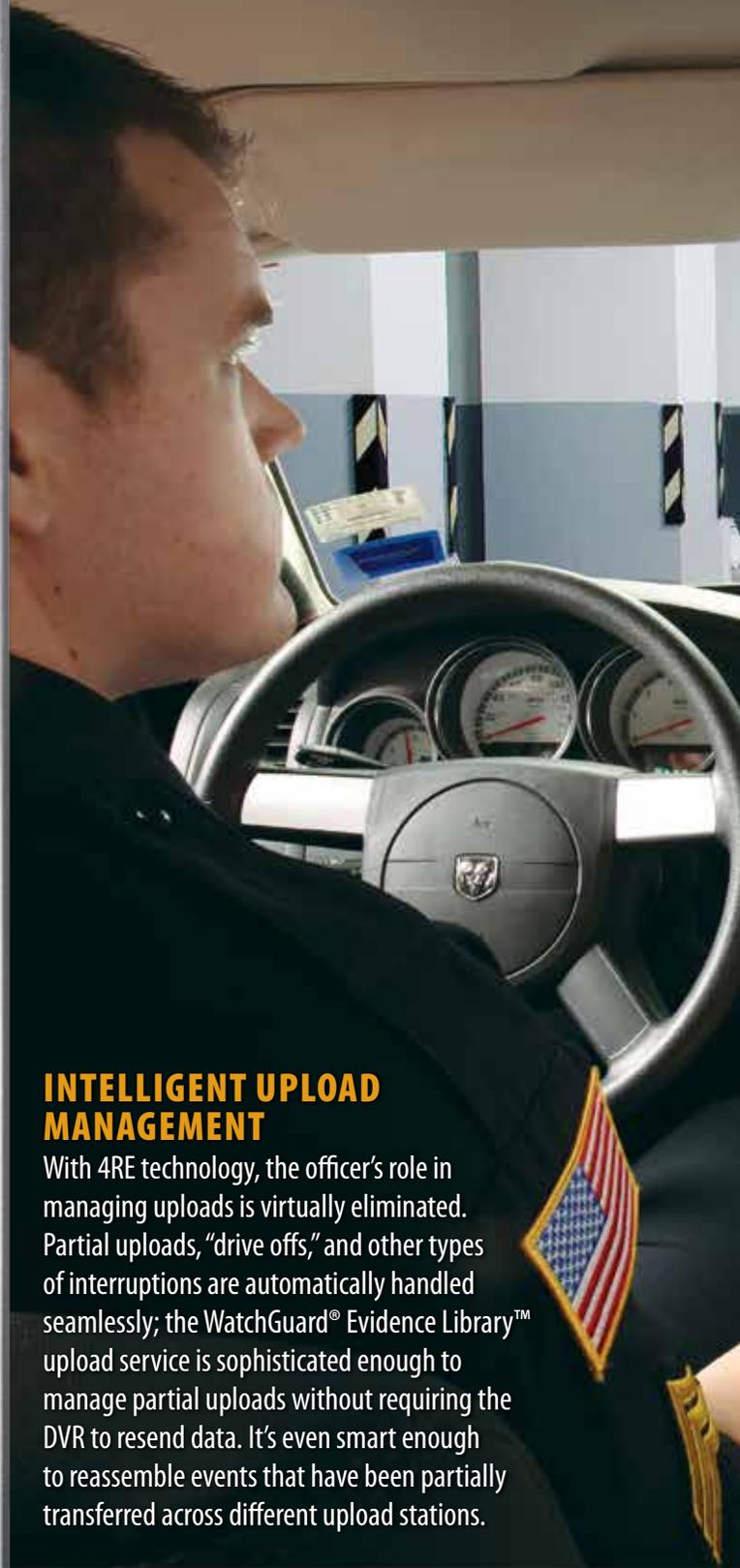
INDUSTRIAL 802.11N RADIO

4RE uses an advanced, 5 GHz industrial grade 802.11n radio system that is connected to the Ethernet port of the DVR. By not embedding the radio into the DVR, WatchGuard customers can easily upgrade the wireless radio in the future without having to scrap or service the DVR when new technologies like 802.11AC become commercially available.

SYSTEM SHUTDOWN IS AUTOMATIC

When the vehicle is turned off, the in-car unit automatically starts several programmable shutdown timer sequences and switches into a low-power mode while video is uploaded. Once the upload is complete, the DVR automatically powers down.

REAL-WORLD TRANSFER SPEEDS FAST ENOUGH TO UPLOAD AN HOUR OF SD VIDEO IN LESS THAN 3 MINUTES



INTELLIGENT UPLOAD MANAGEMENT

With 4RE technology, the officer's role in managing uploads is virtually eliminated. Partial uploads, "drive offs," and other types of interruptions are automatically handled seamlessly; the WatchGuard® Evidence Library™ upload service is sophisticated enough to manage partial uploads without requiring the DVR to resend data. It's even smart enough to reassemble events that have been partially transferred across different upload stations.

BUILT-IN HARDWARE SUPPORT FOR LIVE VIDEO STREAMING

4RE can create and output additional video streams that are optimized for live video streaming applications (by using lower resolutions and frame rates) without sacrificing any of the high resolution streams that are recorded on the solid state drives.

REQUEST FOR BOARD ACTION
August 25, 2014 Committee of the Whole Meeting

Subject: Consideration of a Park Board Recommendation to Approve Lincolnshire Sports Association (LSA) Request to Host a Baseball Tournament at North Park June 24-28, 2015 (Lincolnshire Sports Association)

Action Requested: Consideration of a Park Board Recommendation

Originated By/Contact: Scott Phippen, Superintendent of Administration, Fleet, and Facilities

Referred To: Village Board

Summary / Background: The Lincolnshire Sports Association (LSA) requests to hold its second annual LSA Summer Slam Baseball Tournament at North Park June 24-28, 2015. Like this year's tournament, LSA will sell food and possibly T-shirts from the concession stand during the tournament. LSA requests Public Works staff support during the event for clean-up and field preparation. In return, the LSA would like to turn over all profits from the tournament to the Village, minus their expenses for t-shirts and concessions, to be used for expenditures at North Park. The only change requested is the utilization of Field #5 in addition to Fields #1-#4.

At their August 18 meeting, the Park Board voted unanimously to recommend the Village Board approve LSA's field use request and the use of Village staff to support the tournament.

Budget Impact: The Village will absorb the cost for field maintenance materials and the hours needed to provide proper support for this event. This year's tournament required 116.75 staff hours, of which 98.75 hours were overtime, totaling \$2,770.44. During the event, the staff consisted of 2 Seasonal Laborers supervised by Troy Taylor, Facilities Supervisor. Material costs for chalk and rapid dry field conditioner were approximately \$500.00. The total cost to the Village was \$3,270.44.

LSA reported a profit of approximately \$10,000.00 from this year's tournament. If similar revenue is realized from the proposed tournament, the donation will offset costs to the Village for the tournament and maintenance of the North Park fields.

Service Delivery Impact: The tournament is an event that the entire community enjoyed and an opportunity for the Village to showcase North Park. There is minimal impact to the daily operations to prepare for the tournament.

Recommendation: Staff supports the Park Board's recommendation to approve the LSA request to hold a Summer Slam baseball Tournament June 24-28, 2015.

Reports and Documents Attached: Memo from Lee Fell outlining tournament concept

Meeting History	
Park Board	August 18, 2014
Initial Referral to Village Board (COW):	August 25, 2014
Regular Village Board Meeting:	September 8, 2014

To: Scott Phippen – Village of Lincolnshire Public Works Streets and Parks Superintendent

From: Lee Fell – LSA, Director of Travel Baseball

Subject: Lincolnshire Sports Association (LSA) Travel Baseball – Summer Slam

This memo is regarding the 2nd Annual Summer Slam Travel Baseball Tournament.

The tournament would be held the weekend of June 24-28. The tournament would utilize fields 1, 2, 3, 4 and 5.

It is anticipated all teams would be from the six county region.

The maximum amount of teams that could be included in the tournament.

8U – 6 teams

9U – 6 teams

10U – 6 teams

11U – 6 teams

12U – 6 teams

13U – 8 teams

Total teams = 38 teams

There would be no more than 4 games going on at any one time. Based on the schedule, we assumed there could be a maximum of 16 teams at North Park at any one time. We have assumed 12 players per team. Based on the number of teams x 12 cars/team = 192 cars in the parking lot at once. The North Park parking lot has approximately 223 parking stalls which leaves approximately 31 additional stalls.

Similar to last year, LSA plans on opening the concession stands to sell food and drinks which will require a Health Department Permit.

The planned cost per team to enter the tournament is between \$400. This is generally similar to the costs of other local tournaments and LSA has provided information on the local tournament costs to Scott Phippen for comparison.

LSA requests that the Village provide Public Works employees to help with the trash and washrooms during the tournament.

Besides the tournament fees and selling food and beverages from the concessions, LSA plans on selling t-shirts to the participants and possibly add local restaurant names to the t-shirts.

The intent is to provide the Village with a check from the profit of tournament to help with specific items and up keeping up the North Park Baseball Fields.

If you have any questions please do not hesitate to contact me.