

LINCOLNSHIRE DRIVE/CUMBERLAND DRIVE NEIGHBORHOOD DRAINAGE INFORMATION MEETING

October 8, 2019



MEETING AGENDA

- Introductions
- Meeting #1 Topics
 - Lincolnshire Drive/Cumberland Drainage System
 - Flood Response Plan
 - Overview of Drainage Area/Special Flood Hazard Area
 - Future Projects

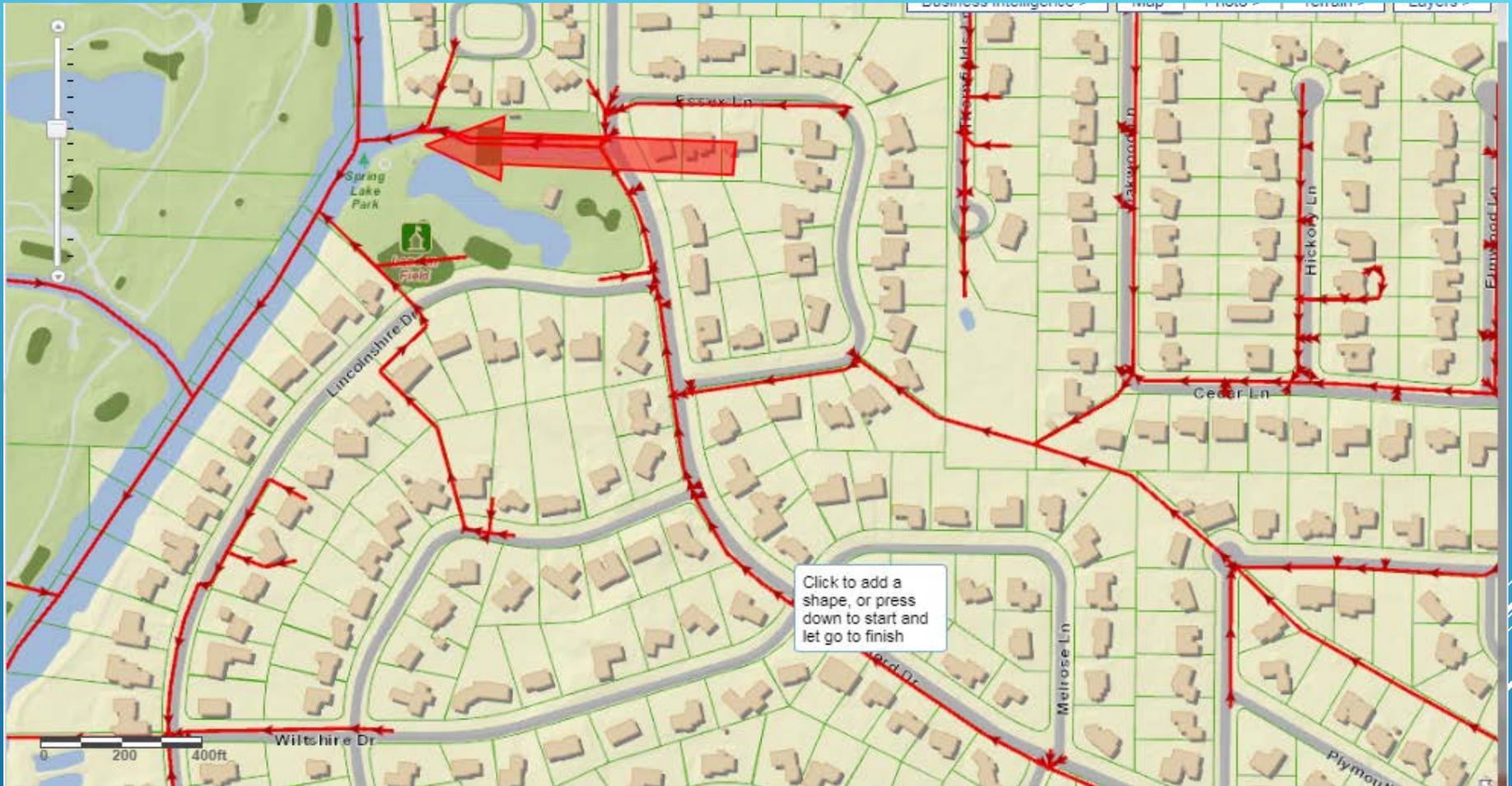


MEETING AGENDA

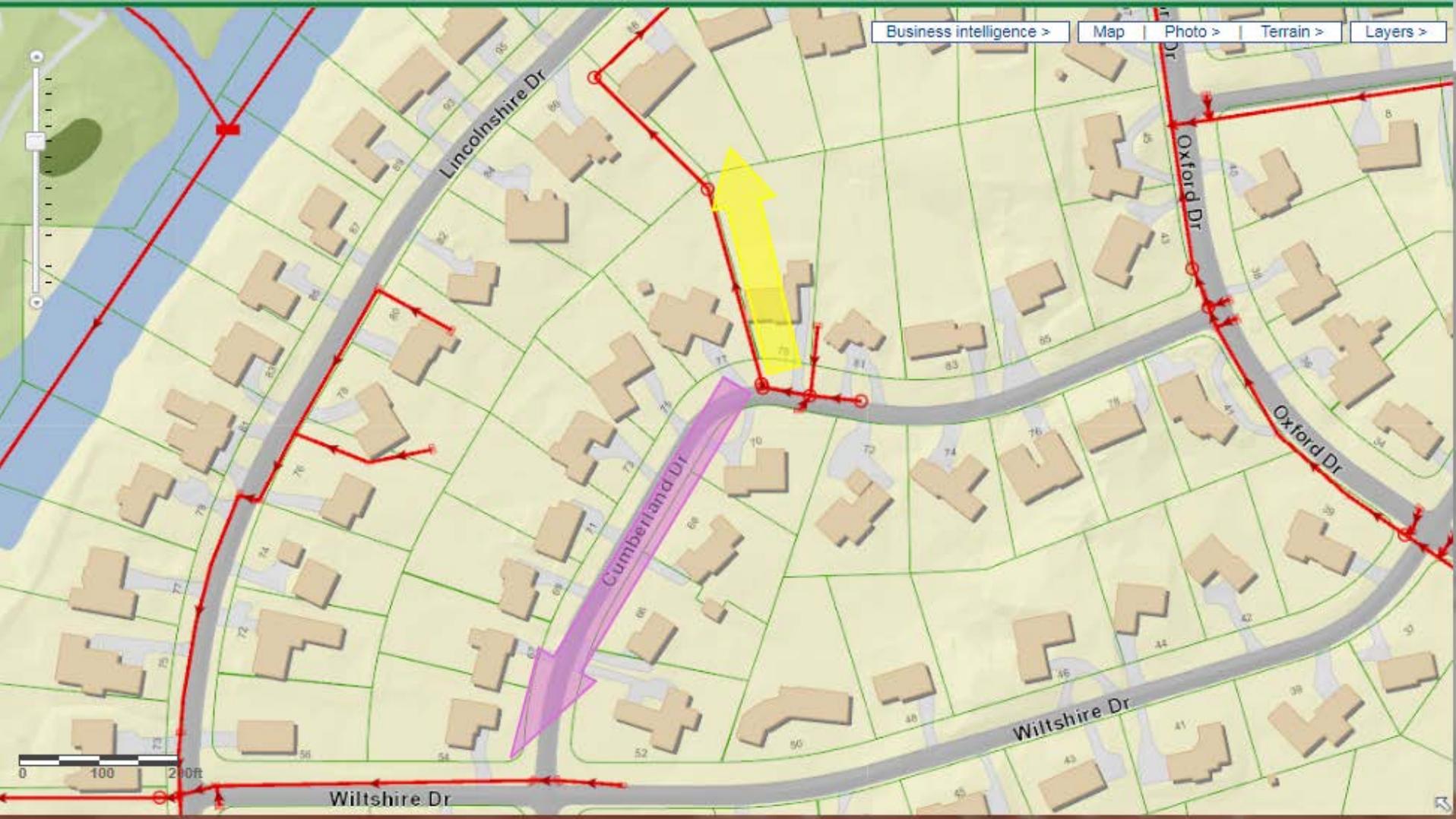
- Meeting #2 Topics
 - Des Plaines River Berm Study Review
 - Flood Modeling of Drainage Area
- Meeting #3 Topics
 - Summary of Village-wide Drainage Study



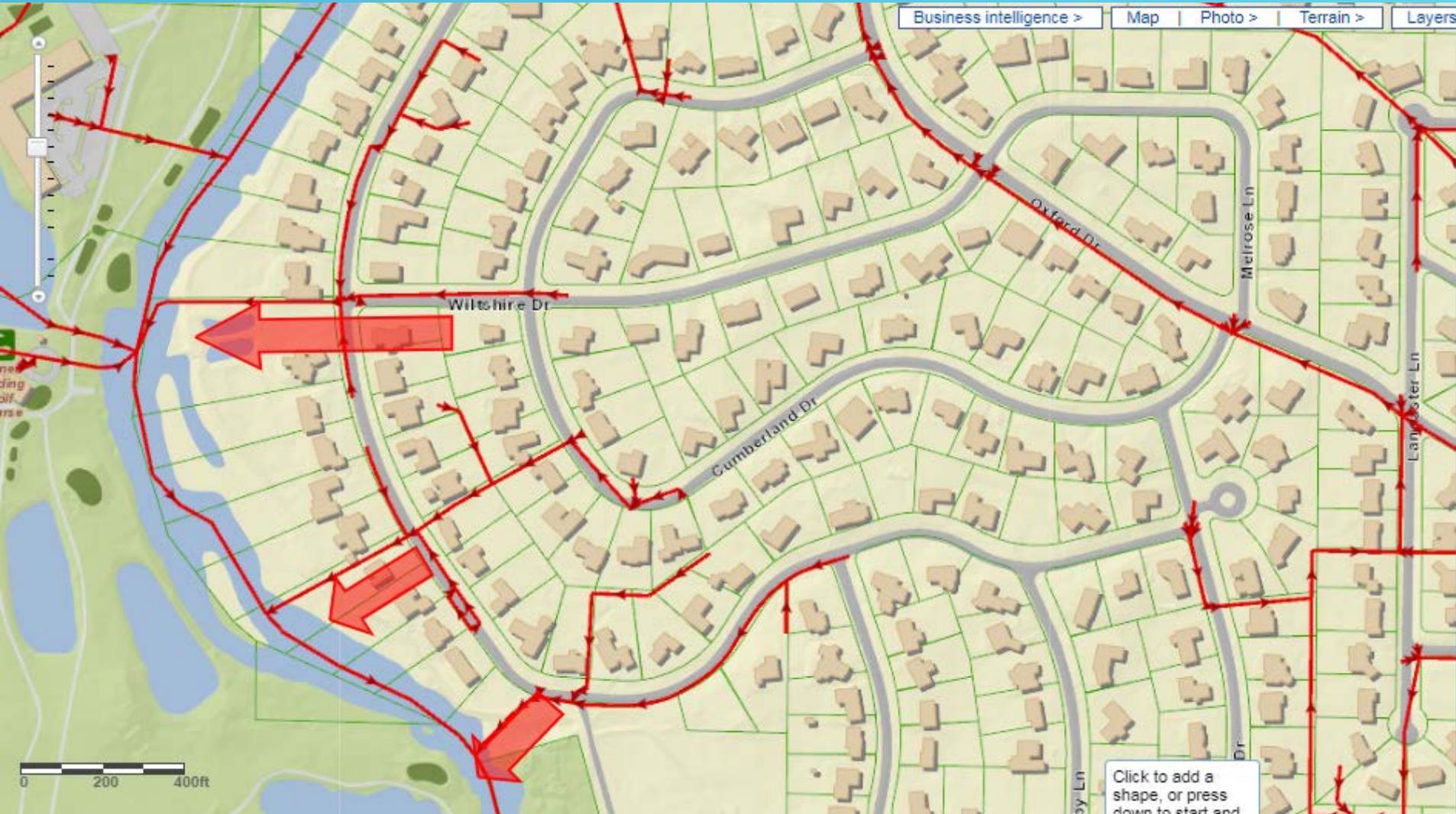
SPRING LAKE DRAINAGE SYSTEM



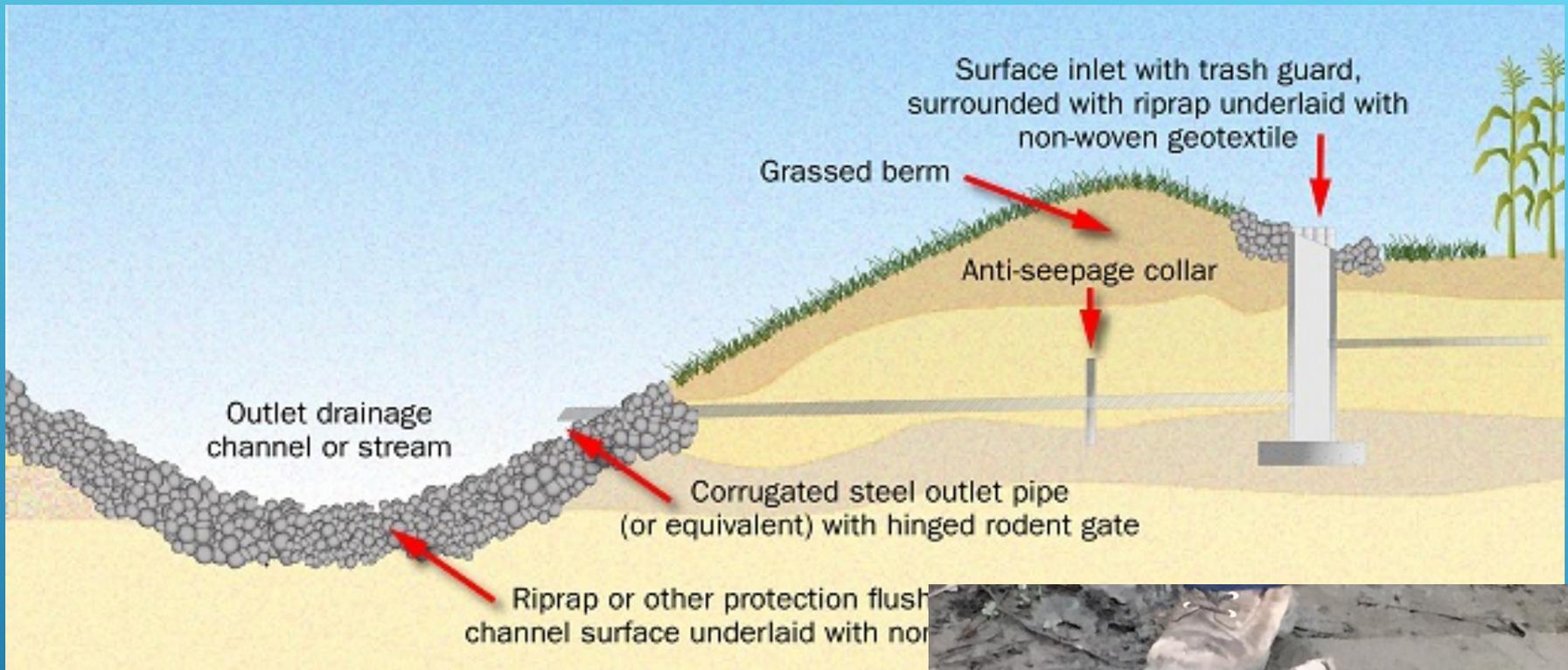
CUMBERLAND DRIVE DRAINAGE



WILTSHIRE/LINCOLNSHIRE DRIVE DRAINAGE SYSTEM

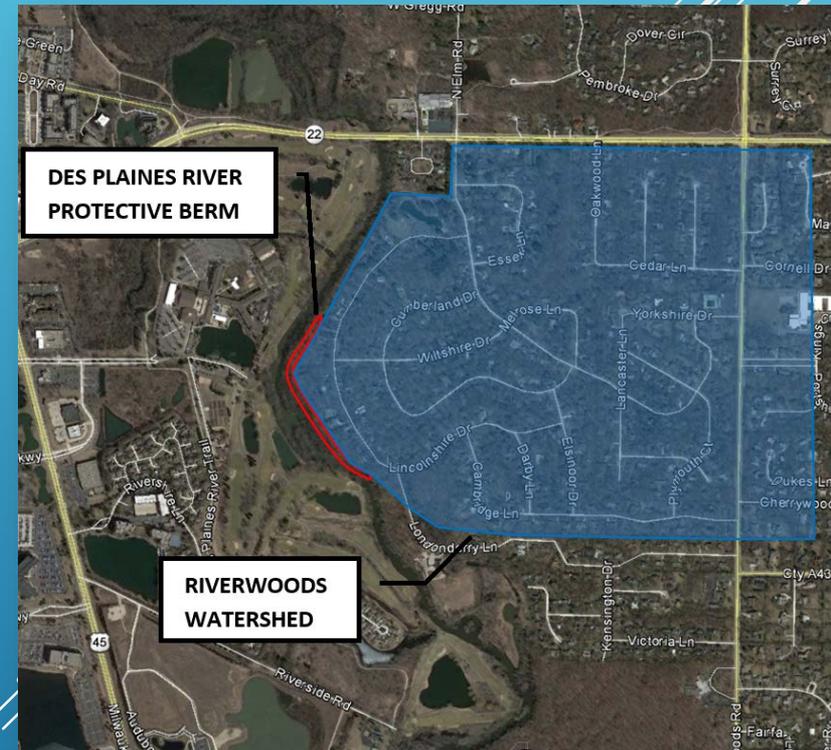


WILTSHIRE/LINCOLNSHIRE DRIVE DRAINAGE SYSTEM



DES PLAINES RIVER BERM BACKGROUND & LOCATION

- Berm system along the Des Plaines River on the west side of the Riverwoods Subdivision
- Extends approx 1,850 ft on east bank (53 Lincolnshire Dr. to 79 Lincolnshire Dr.)
- Earthen berm is designed to protect against a 10-yr flood event; 4 homes are below the 10-yr flood elevation



VILLAGE FLOOD RESPONSE OBJECTIVES

- ▶ Early Flood Recognition
(Forecasting, Weather Reports, Historical Data)
- ▶ Establish Emergency Response Actions
(based off current flood forecasts)
- ▶ Community Education/Awareness
(E-News, Village website, letters, Blackboard Connect)
- ▶ Establish Post Flood Recovery Actions
(residential assistance, debris disposal, review of procedures)

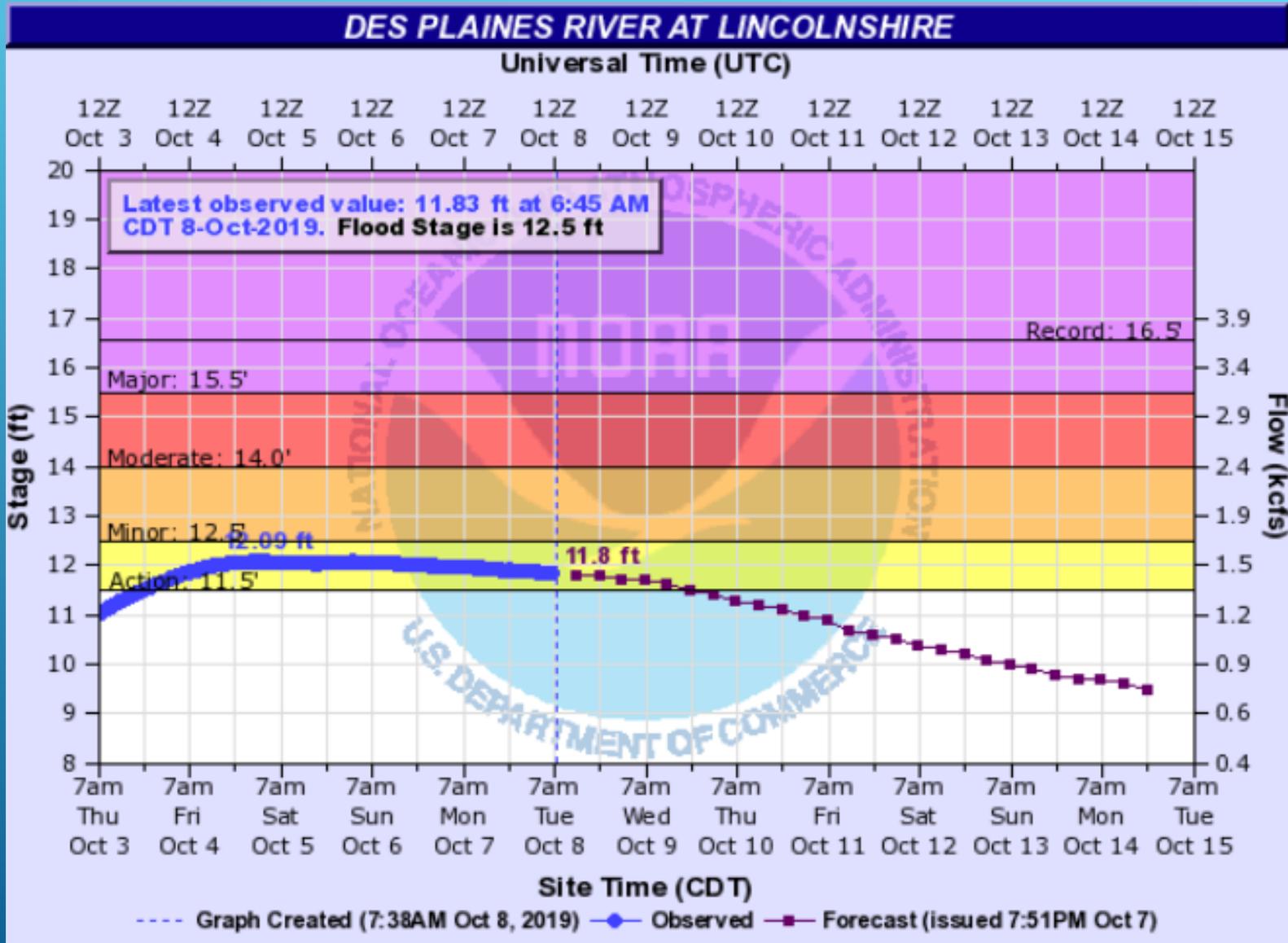


VILLAGE FLOOD RESPONSE ACTIONS

- Protect Public Infrastructure (Streets, Water and Sanitary Systems and Public Utilities) using pumps and flood control valves– Similar to a snow event
- Provide assistance to aid residents in protecting private property. While, the Village does not sandbag private property, it is our intent to provide materials to residents to sandbag private property.
- Provide sandbags to residents to pick-up in designated areas of the Village.
- Lincolnshire Police provide after hours monitoring residents can call non-emergency # (847) 883-9900 to report flooding issues



FLOOD ALERT STAGES



FLOOD ALERT STAGES

10.5 feet - Observation Stage (640.48)

The observation stage is when Village Staff begins monitoring weather forecasts and the river gauge on a daily basis. Staff will begin assessing equipment and inventory needs at this time.

11.5 feet - Action Stage (641.48)

The Action Stage is a "heads-up" stage at which the National Weather Service begins to issue river flood advisories and river forecasts. Village will begin servicing pumps and generators. Staff will order skids and sandbags as needed. Staff will also check all intake and discharge hoses are functional and order additional hose as needed.

12.5 feet - Minor Flood Stage (642.48)

Water begins to overflow onto Londonderry Lane. If the river is forecasted to increase above 13.0, the Village will monitor Londonderry Lane to determine if closure of the road is warranted. Village officials will decide whether or not to close Londonderry Lane. Village will order 2-3 semi-loads of sand to be deployed at Spring Lake Park. Public Works Staff will begin making sandbags and placing them onto skids to be placed in designated locations.

14.0 feet - Moderate Flood Stage (643.98)

Water begins to pond on Lincolnshire Drive at Wiltshire Lane. Londonderry Lane is closed between Lincolnshire Drive and 45 Londonderry Lane. At this point, the Village may deploy pumps along Lincolnshire Drive to assist in the removal of water from the pavement. Village Officials will close Londonderry Lane and close the flood control valves along Lincolnshire Drive. Pumping will begin at Wiltshire Drive and Londonderry Lane. Village will need to begin gathering volunteer information. At this stage the EOC (Emergency Operations Center) is now activated and in full effect out of Village Hall.

15.5 feet - Major Flood Stage (645.48)

Water approaches the top of the river bank on the east side of the Des Plaines River. The Village may initiate sand bag operations to protect Village facilities. Public Works will need to make a decision on whether or not to sandbag. The decision to sand bag or not sand bag will be based upon many factors, including but not limited to: forecasted crest elevation, forecasted time to crest, available resources, weather conditions, and safety of workers and volunteers.

16.5 feet - Evacuation Stage (646.48)

At this stage the Village would require a mandatory evacuation of the residents on Lincolnshire Drive from Oxford Drive to Londonderry Lane. All residents would be advised to shut off any power sources.

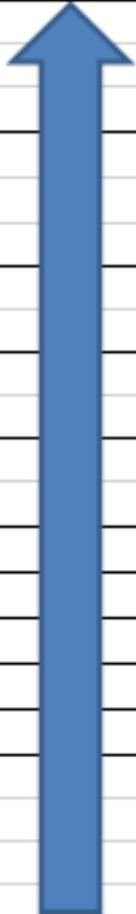
17.5 feet - 100 Year Flood Stage (647.48)

Lincolnshire Drive is closed from Cambridge Lane to Oxford Drive; Wiltshire Drive closed from Lincolnshire Drive to Cumberland; Cumberland Drive impacted; Oxford Drive between Half Day Rd and Essex Lane impacted; Stonegate Circle impacted; Half Day Rd between Village Hall and Oxford Drive (including Route 22 bridge over Des Plaines River) potentially impacted



HISTORICAL CRESTS

USGS River	Gage Ht. =	Elevation				
	19	648.98				
	18.5	648.48				
BFE	18.02	648.00	at Rte. 22 bridge			
	18	647.98				
	17.5	647.48				USGS Historic crests
	17	646.98				
	16.5	646.48	July 2017 Crest	16.5	646.51	7/13/2017
	16.36	646.34	April 2013 Crest	16.4	646.34	4/19/2013
	16	645.98				
	15.5	645.42	Major Flood			
	15	644.98		15.1	645.03	9/13/2019
	14.5	644.48				
	14	643.98	Moderate Flood			
	13.5	643.48		13.6	643.53	6/23/2009
	13			13.3		9/4/2018
	13			13.2		3/6/2019
	13			13.2	643.13	4/6/2017
	13			13.2	643.13	5/14/2010
	13			13.1		5/13/2014
	13			13		5/2/2017
	12.5			12.6		2/21/2018
	12.5	642.48	Flood Stage	12.2	642.13	4/28/2011
	12	641.98				
	11.5	641.48	Action Stage			
				10.9	640.83	4/6/2012
	0	629.98				



STAFF MONITORS FLOOD FORECASTING (10.5 FEET)

- Upstream Weather Predictions – Staff regularly looks beyond the point where flooding takes place to see what happened upstream in the watershed and prepare a plan accordingly.
- ▶ Staffing – Staffing needs are discussed, after hours needs
- Additional Stream Gauge – There is a manual stream gauge to monitor the impact of flood waters from Indian Creek.



STAFF PREPARES PUMPS, VALVES AND SANDBAGS AS NECESSARY (11.5–12.5 FEET)

- Pumps/Generators – Staff will service all pumps and generators and deploy as necessary



- Pump deployment – The decision to deploy pumps is dependent on the river level flood forecast, amount of rainfall received, as well as forecasted rainfall.
- Lincolnshire Drive/Wiltshire Drive pump normally deployed first



STAFF PREPARES PUMPS, VALVES AND SANDBAGS AS NECESSARY (11.5–12.5 FEET)

- Sandbag Materials – Staff will prepare sandbags as necessary and make them available to residents in designated locations of the Village.



STAFF PREPARES PUMPS AND SANDBAGS AS NECESSARY (12.5-14 FEET)

- Pump deployment – The decision to deploy pumps is dependent on the river level flood forecast, amount of rainfall received, as well as forecasted rainfall.
- Lincolnshire Drive/Wiltshire Drive pump normally deployed first

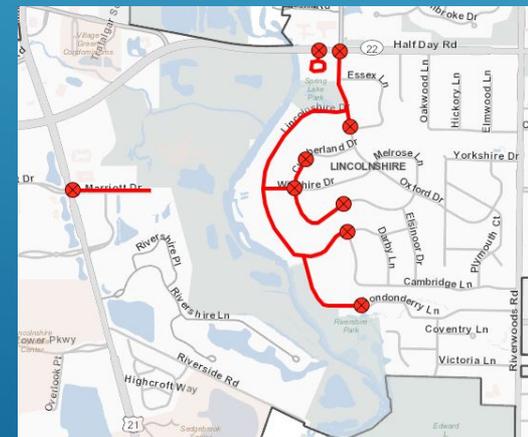


STAFF OPERATES PUMPS, VALVES AND PREPARES SANDBAG SUPPLIES AS NECESSARY (14-15.5 FEET)

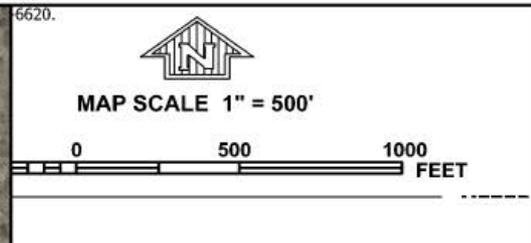
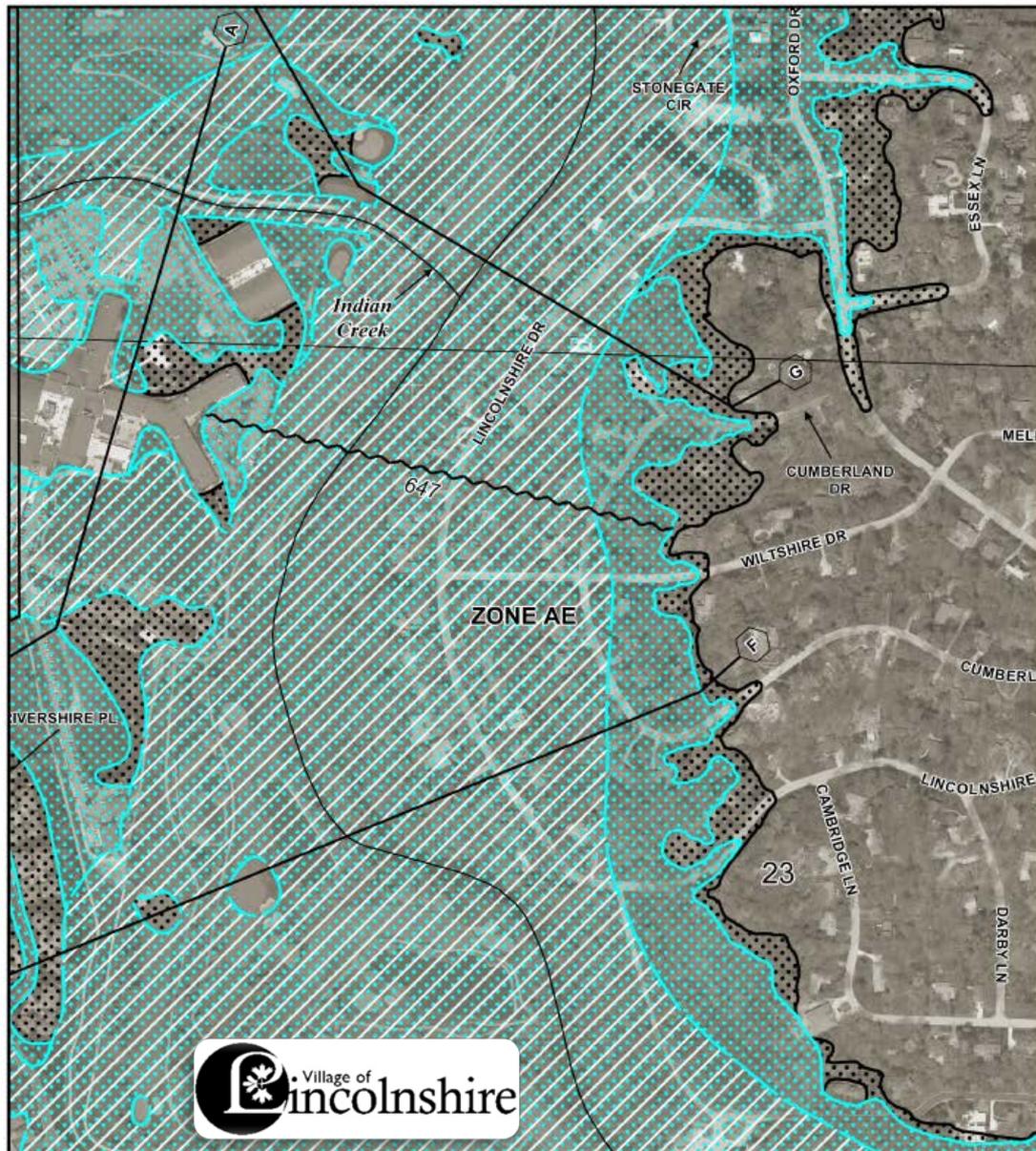
- Deployment of Pumps – Staff will deploy pumps on Lincolnshire Drive to assist with the removal of water from the pavement.



- Road Closures – Staff will close the necessary roads to ensure that vehicles are not traveling through floodwaters



SPECIAL FLOOD HAZARD AREA



NFP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0258K

FIRM
FLOOD INSURANCE RATE MAP
LAKE COUNTY,
ILLINOIS
AND INCORPORATED AREAS

PANEL 258 OF 295
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LAKE COUNTY	170357	0258	K
LINCOLNSHIRE, VILLAGE OF	170378	0258	K
VERNON HILLS, VILLAGE OF	170394	0258	K

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
17097C0258K
MAP REVISED
SEPTEMBER 18, 2013



Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



SPECIAL FLOOD HAZARD AREA (SFHA)

- ▶ A Special Flood Hazard Area - Area identified by the United States Federal Emergency Management Agency (FEMA) as an area with a special flood or mudflow, and/or flood related erosion hazard, as shown on a flood hazard boundary map or flood insurance rate map.
- ▶ The National Flood Insurance Program's (NFIP's) floodplain management regulations must be enforced in these areas, and the area where the mandatory purchase of flood insurance applies.
- ▶ Letters sent out annually to residents in the SHFA



SPECIAL FLOOD HAZARD AREA (SFHA)

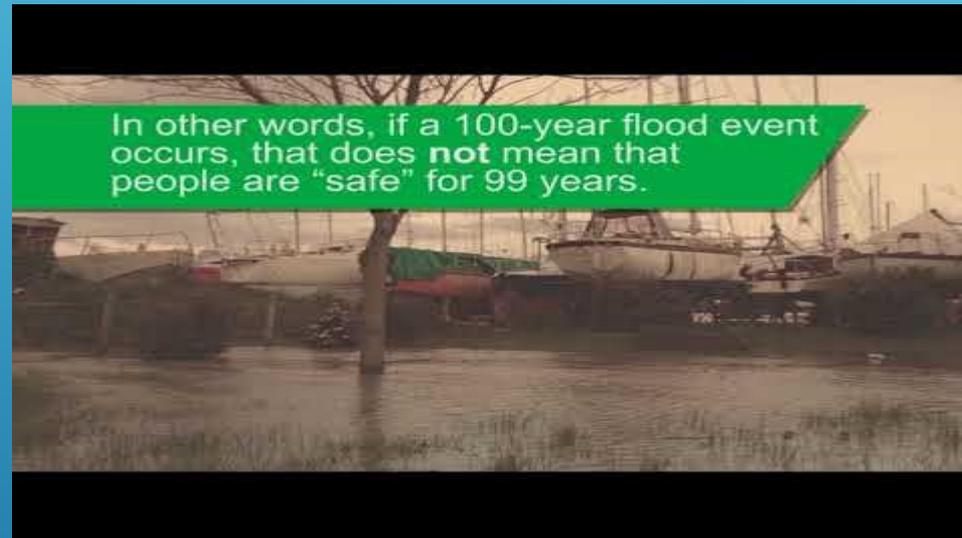
Does A 100-year flood occur once every 100-years?

Period of Time	10-Yr Flood	25-Yr Flood	50-Yr Flood	100-Yr Flood
1 Year	10%	4%	2%	1%
10 Years	65%	34%	18%	10%
20 Years	88%	56%	33%	18%
30 Years	96%	71%	45%	26%
50 Years	99%	87%	64%	39%



SPECIAL FLOOD HAZARD AREA (SFHA)

Does A 100-year flood occur once every 100-years?



SPECIAL FLOOD HAZARD AREA (SFHA) RESPONDING TO INQUIRIES

- ▶ The Village is required to follow certain regulations when responding to inquiries regarding history of flooding of properties in the SFHA



SPECIAL FLOOD HAZARD AREA (SFHA) VILLAGE EFFORTS

- ▶ The Village is committed to assisting residents with property protection in the SFHA
- ▶ Proactive planning and communication and response
- ▶ “All hands on deck” staffing made available for flooding issues
- ▶ Mutual aid from neighboring Public Works, Fire Departments, and Police as needed.



COMMUNITY RATING SYSTEM (CRS)

- ▶ The Village of Lincolnshire has been a member of the National Flood Insurance Program's Community Rating System since 1992. The CRS program is a voluntary auditing program that is used to assure our residents that the Village meets or exceeds the requirements of the NFIP. Credits in the CRS program are totaled and put into classifications with 'Class 10' being the lowest classification and 'Class 1' being the highest. The Village first achieved a Class 9 rating upon initiation. Since 2005, the Village has been a Class 5 community and is 1 of only 12 in the State of Illinois.
- ▶ Residents who purchase flood insurance for structures located in the floodplain are currently eligible to receive a 25 percent discount on their flood insurance premiums under the Village's Class 5 rating. Structures located outside of the floodplain receive a 10 percent discount on premiums.



VILLAGE WIDE DRAINAGE STUDY

Village-Wide Drainage Study

The Village of Lincolnshire is evaluating stormwater drainage issues throughout the entire community. The Village has retained the services of Christopher B. Burke Engineering to assist in evaluating existing conditions and develop alternatives to address identified deficiencies. Input received from the Open House will be compiled to assist the Village plan and prioritize future drainage improvement projects.

Survey:

The Village-Wide Drainage Study Survey has now closed. The survey was open for a total of 42 days, during which time over 130 respondents shared valuable information on their specific drainage concerns. The survey information has been provided to Christopher Burke Engineering, Ltd to assist the village with the next step of developing a Stormwater Master Plan. The Stormwater Master Plan will identify system deficiencies and include designs to reduce the risk of future floods, and proactively plan for current and future extreme rainfall events. The Stormwater Master Plan is expected to be complete by the Spring of 2020. Additional information will be added to this web-page through the duration of the project.

If you were unable to attend the open house or complete the survey, you may send any comments or concerns you have to drainagestudy@lincolnshireil.gov.

Related Documents:

- [Approval of a professional service contract with Christopher B. Burke Engineer, Ltd](#) presented at the May 13, 2019 Committee of the Whole Meeting
- [July 30, 2019 Open House Flyer](#)
- [August 2, 2019 Open House Recap Press Release](#)



VILLAGE WIDE DRAINAGE STUDY

- Stormwater lift station
- Flood storage alternatives



USE OF VACANT PROPERTIES FOR FLOOD CONTROL

- ▶ Minimal available storage below flood elevations
- ▶ Permitting
- ▶ Connections to Des Plaines River
- ▶ Status of FEMA buyouts



LONDONDERRY OUTFALL/STANDPIPE



Questions?

