

# Wetlands & Wetland Protection in Kane County, Illinois

A Presentation to the Fox River Ecosystem Partnership  
January 13, 2021



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# Background

## What constitutes a wetland?

- Kane County uses US Army Corps of Engineers definition
  - An area that is inundated or saturated by surface or groundwater at a frequency & duration sufficient to support, and under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.
  - Three components:
    - Hydrology
    - Hydric Soils
    - Hydrophytic vegetation



# Background

## Types of Wetlands in Kane County

- Emergent Marsh
- Wet meadow
- Wet Prairie
- Fen
- Hemimarsh
- Calcareous seep
- Shrub-scrub
- Floating aquatic
- Forested floodplain
- Submerged aquatic
- Wooded
- Mudflat annual
- Sedge meadow

## Other Water Features

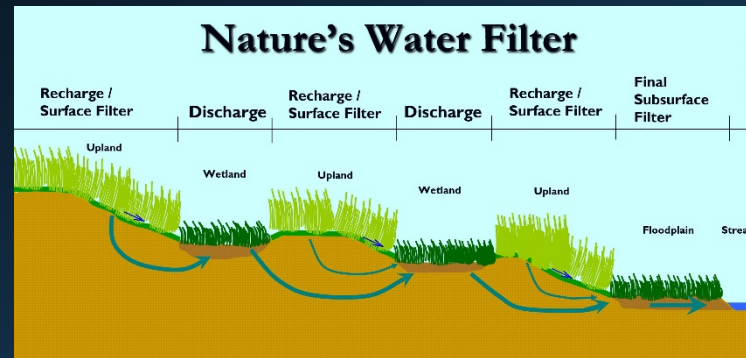
- Linear Watercourses (streams & creeks)
- Nonlinear Waterbodies (ponds & lakes)



# Why Protect Wetlands?

## Wetlands provide 2 critical functions

- **Biological functions**
  - Wildlife habitat, and species diversity
- **Water quality / stormwater storage functions**
  - Significant stormwater retention
  - Filters stormwater



Most of County's natural wetlands have been lost to agriculture & development

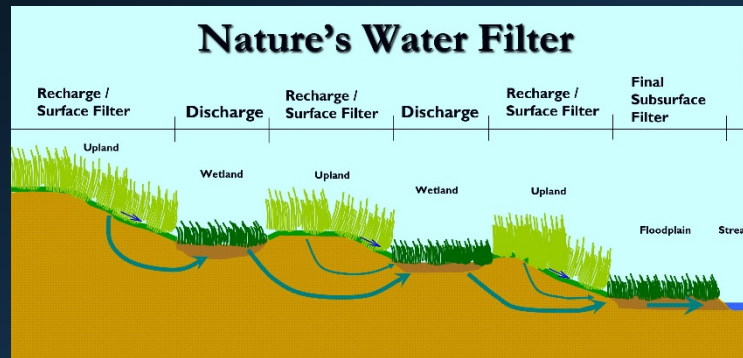
County: 335,500 acres  
Hydric Soils: 107,700 acres (32%)



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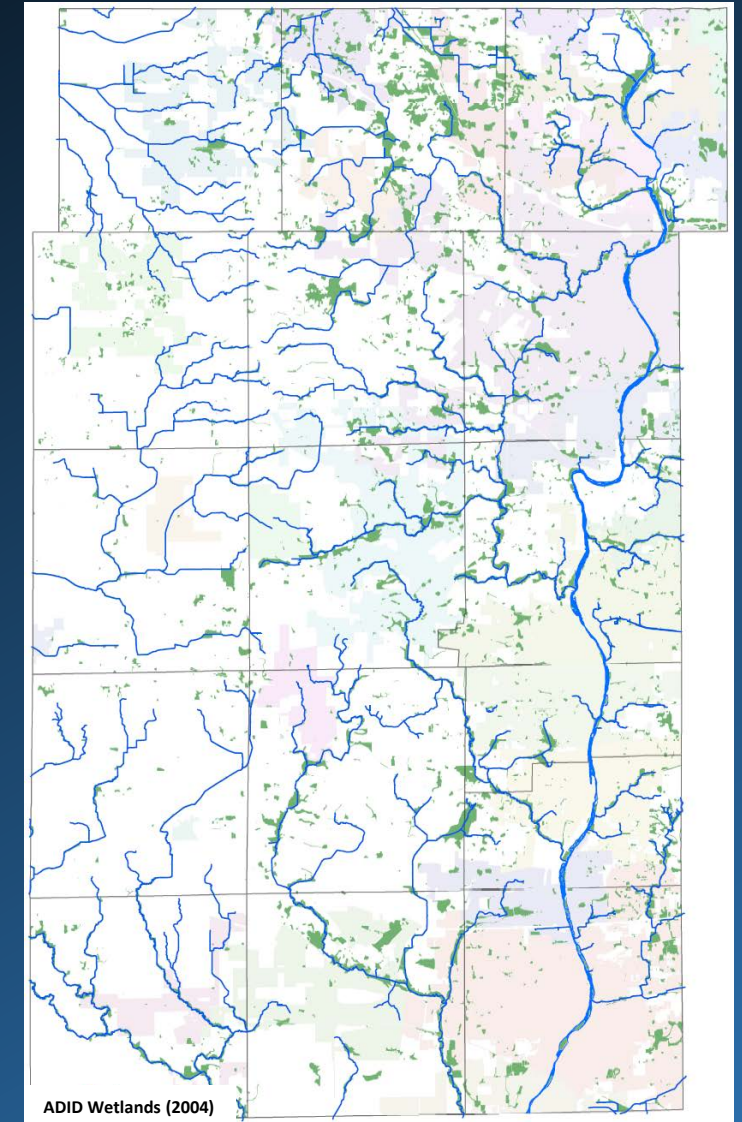
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Most of County's natural wetlands have been lost to agriculture & development

75% of wetlands lost! →

County: 335,500 acres  
Hydric Soils: 107,700 acres (32%)  
Current Wetlands: 26,560 acres (8%)  
Farmed Wetlands: 3,200 acres (1%)  
Perennial Streams: 483 miles

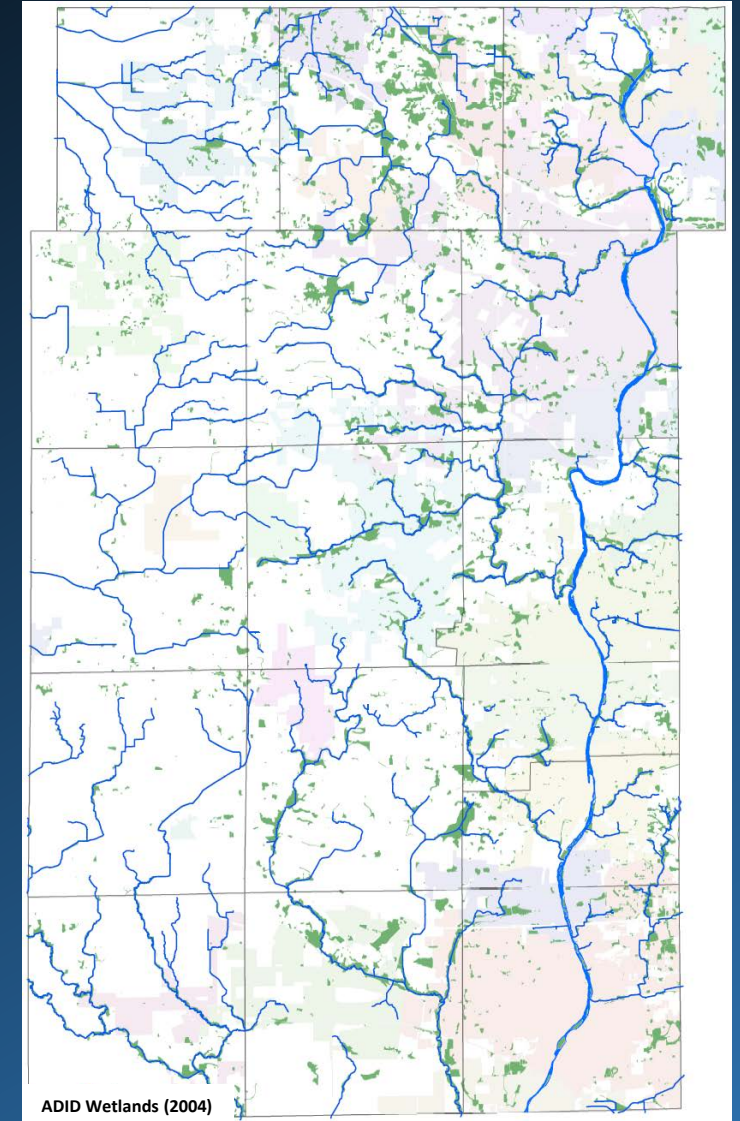


# Wetland Protection in Kane County

## Kane County Stormwater Management Ordinance, Article VII

Updated June 2019

- **Unincorporated Areas** -> Kane Co. Division of Environmental & Water Resources
- **Certified Communities** (most municipalities) review & issue their own stormwater permits for projects with wetlands
- **Projects that will have wetland impacts and require wetland mitigation must submit a wetland mitigation permit to Kane County DEWR**
  - **Exceptions:** Projects in Algonquin, Huntley, East Dundee, Elgin & Batavia (They collect their mitigation fees and administer wetland mitigation funding & projects within their jurisdiction)



# Wetland Protection in Kane County

## Regulatory Process:

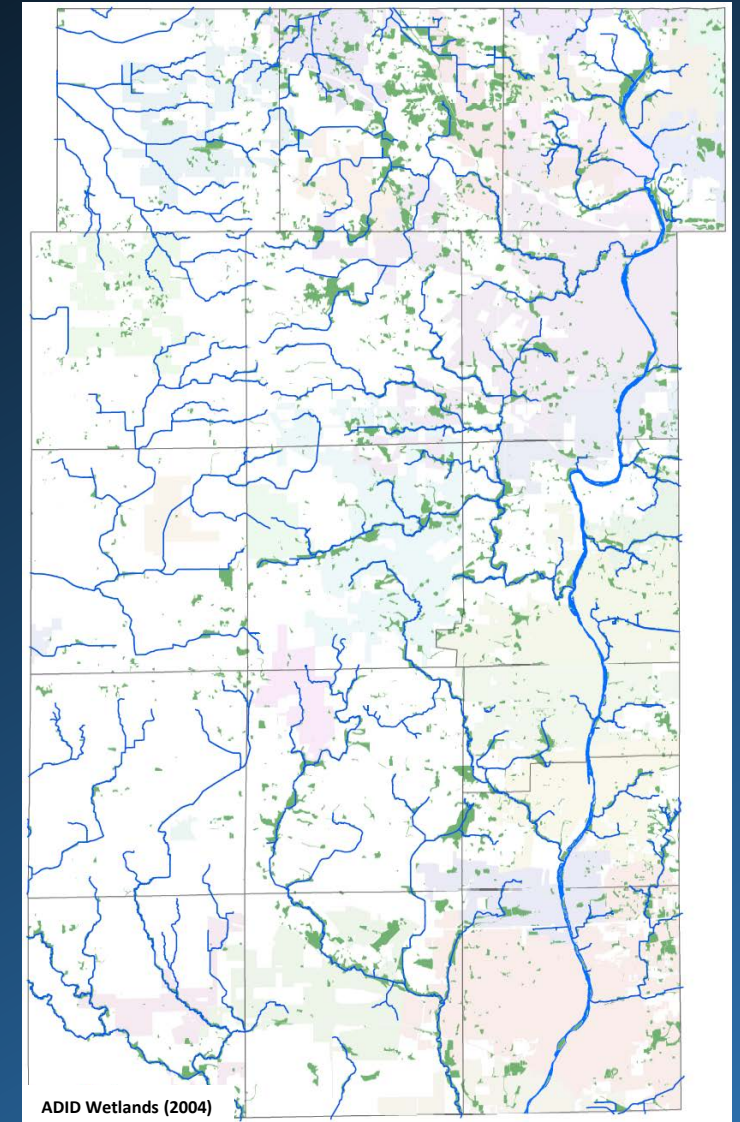
If a proposed project site contains a wetland, linear water course or non-linear water body, a stormwater permit is required.

With a few exceptions, a project site containing any one of the 3 water features above will be required to have a wetland delineation prepared.

Applicants with sites containing wetlands will be required to obtain either a Jurisdictional Determination from the USACE or a Letter of No Objection (i.e. no impacts to Waters of the US).

If the USACE rules the wetlands are Jurisdictional and the project proposes a wetland impact, a Joint Permit must be completed and submitted to the USACE for approval.

Projects involving wetland impacts to Jurisdictional Wetlands must follow USACE Chicago District requirements for wetland impacts, mitigation & buffers.



# Wetland Protection in Kane County

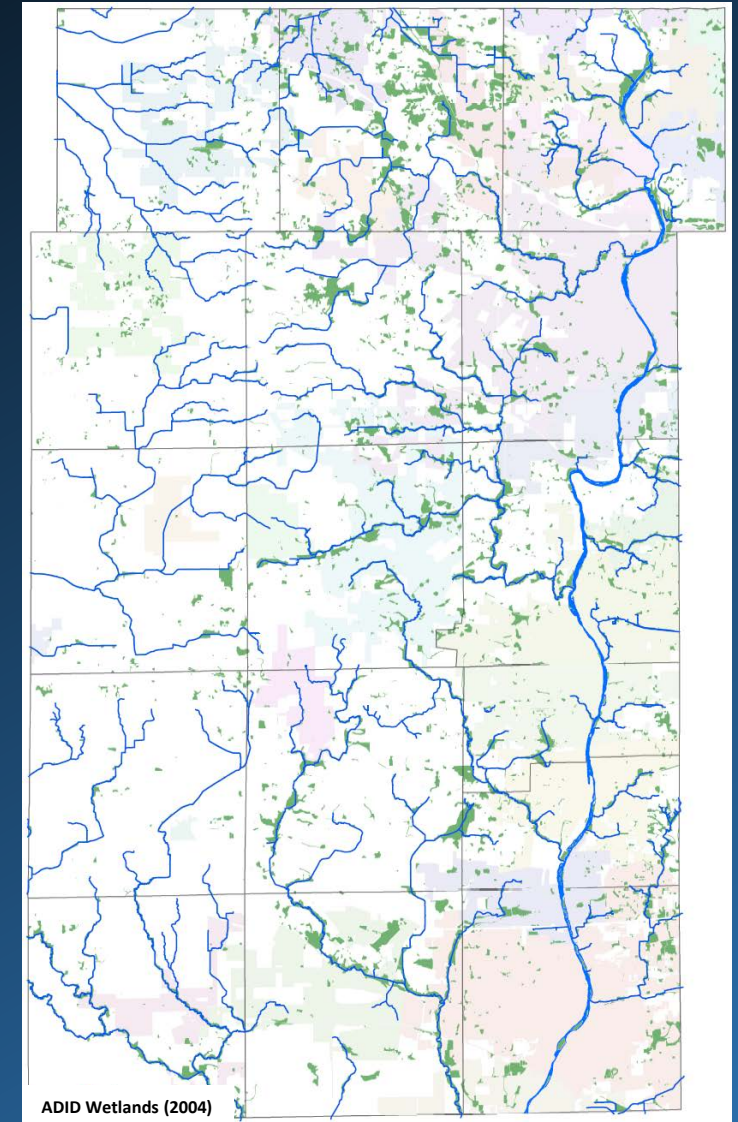
## Kane County Wetland Requirements:

To protect our remaining wetland resources, projects must:

1. Quantify direct impacts to all wetlands on the site
2. Evaluate off-site wetlands within 100 feet of the site to verify buffer requirements for the project site.
3. Evaluate indirect impacts to wetlands on-site or within 100 ft of site
  - Indirect impact defined as altering hydrology to wetland to less than 80% or more than 150% of 2 Yr, 24Hr design storm. 9-180 B g.

## Wetland Delineation Section 9-169

- For linear watercourses & non-linear waterbodies, use the Ordinary High Water Mark (OHWM)
- Wetlands shall be delineated using current USACE wetland delineation methodology (USACE Wetland Delineation Manual, 2010 Midwest Regional Supplement, etc.)
- Farmed Wetlands follow NRCS / Food Security Act methodology





# Wetland Protection in Kane County

## Wetland Delineation Report Section 9-169

### Key metric: Floristic Quality Index (FQI)

Mitigation requirements are based on a wetlands FQI

### Mitigation Options Section 9-172

1. On-site designed wetland mitigation facility
2. Purchase wetland credits from a wetland bank
3. Pay fee in lieu

Wetland Impacts less than 0.1 acres in area to Isolated Wetlands of Kane County do not need mitigation. Section 9-170

- Exception: If wetland FQI is 25 or greater.

### Farmed Wetlands:

Mitigation is required if site is to undergo a landuse change (change from Ag to new land use) OR if farmed wetland has been abandoned for 5 years or more (i.e. reverting back to its original wetland state). Section 9-170

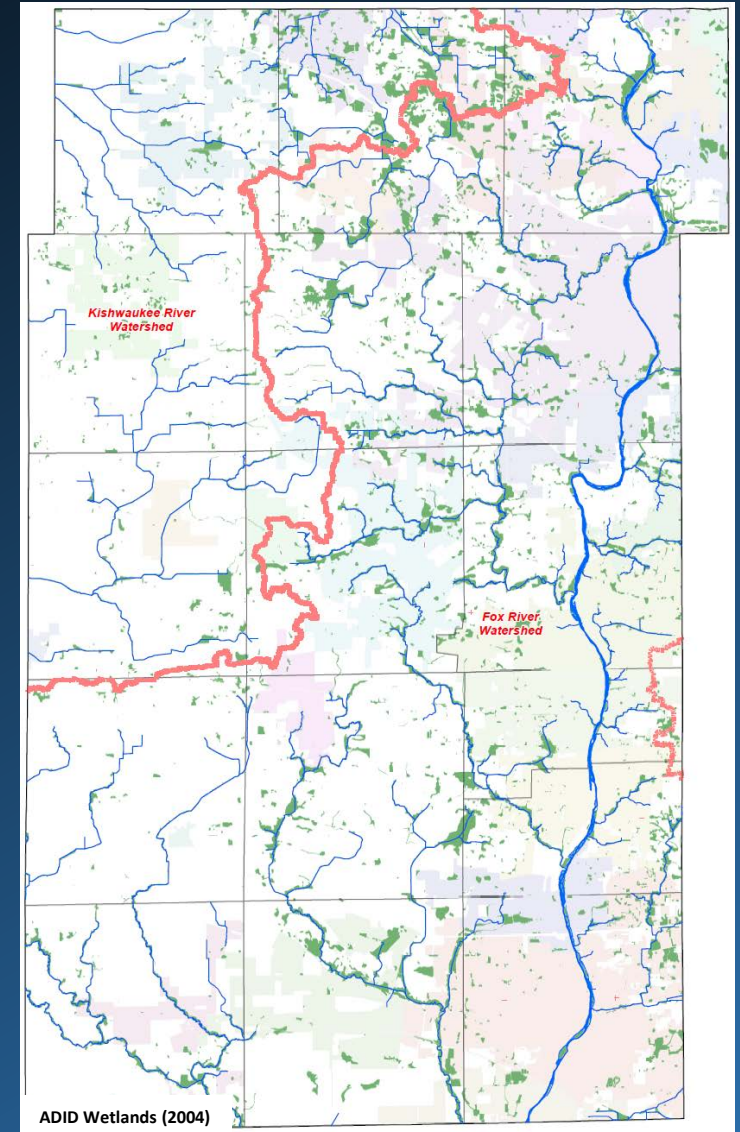
Section 9-172 Mitigation Requirements				
FQI	Activity	Mitigation Ratio	Mitigation Options	Comments
Any	Temporary Wetland Affect	N/A	Mitigation NOT required if restored to in-kind conditioning within 1 year	
< 7	Dredging for Detention Storage Facility	N/A	Mitigation not required	
< 7	Dredging	1:1	Detention storage facility, Wetland Mitigation Facility, Approved Wetland Bank, or Fee in Lieu	0.25:1 wetland credit per acre for enhancement of wetlands w/ FQI < 7
< 7	Fill	1:1	Detention storage facility, Wetland Mitigation Facility, Approved Wetland Bank, or Fee in Lieu	0.25:1 wetland credit per acre for enhancement of wetlands w/ FQI < 7
7-16	All	2:1	Wetland Mitigation Facility, Approved Wetland Bank, or Fee in Lieu	
16-25	All	3:1	Wetland Mitigation Facility, Approved Wetland Bank, or Fee in Lieu	
>25	All	10:1 + 0.5 for each point that FQI exceeds 25	Wetland Mitigation Facility, Approved Wetland Bank, or Fee in Lieu	
Any with T&E Species	All	3:1	Wetland Mitigation Facility, Approved Wetland Bank, or Fee in Lieu	

# Wetland Protection in Kane County

## Wetland Mitigation to be Local Section 9-171

Mitigation is to be provided within the watershed the wetland impact occurs (Fox River / Kishwaukee River)

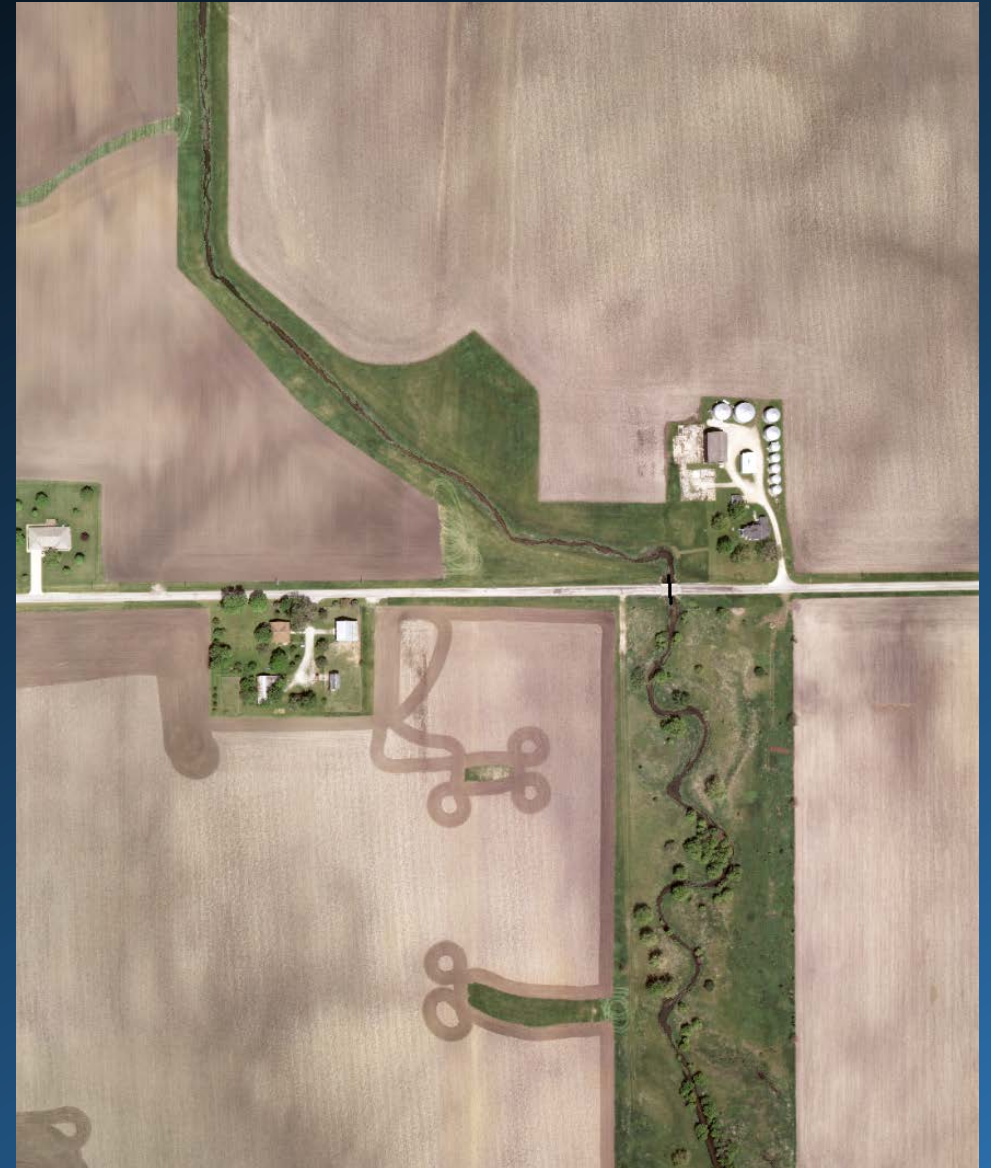
- Preference is for mitigation to be provided within Kane County, but if no wetland mitigation facilities are available in the Kishwaukee Watershed within Kane County, then wetland mitigation in an approved wetland mitigation bank outside of Kane County within the Kishwaukee River Watershed may be allowed with Director approval.



# Wetland Protection in Kane County

## Wetland Buffers Section 9-177

- A predominately vegetated upland area within a defined width adjacent to a wetland / linear watercourse / non-linear waterbody or Waters of the US that provides a functions that eliminate or minimize adverse impacts to those features.
- Buffers provide beneficial functions such as:
  - Reduce flood flow rates, velocities, or volumes
  - Promote streambank / shoreline stability
  - Filter sediment, nutrients or other pollutants
  - Help moderate water temperature
  - Provide habitat for aquatic and terrestrial flora & fauna



# Wetland Protection in Kane County

## Wetland Buffers Section 9-177

Linear Watercourse	Buffer Width			
	N/A	30-50'	50'	100'
Redevelopment on Main Stem Fox River	X			
Public Roadway X-ing	X			
Roadside/Agricultural Ditches & Swales (that are not WOTUS)	X			
Drainage Area < 640 acres		X* Figure 9-177-1		
Drainage area > 640 acres or ADID for Habitat/FQI>16			X	
Streams that are Biologically Significant or rated A or B for diversity or integrity**				X

Water Body	Buffer Width				
	N/A	15-35'	15-50'	30-50'	100'
Isolated wetlands < 0.10 acre	X				
FQI < 7		X Figure 9-177.2			
7 > FQI < 16			X Figure 9-177.3		
16 > FQI < 25				X Figure 9-177.4	
FQI > 25					X

NOTE: USACE buffer widths supersede when a USACE permit is required.

\*Determined utilizing the formula,  $X = (A * 0.0547) + 30$ , where "X" equals the buffer width in feet and "A" equals the drainage area in acres.

\*\*Based upon current edition of "Integrating Multiple Taxa in a Biological Stream Rating System" by the Illinois Department of Natural Resources

# Wetland Protection in Kane County

## Wetland Buffers Section 9-177

- **Must be placed in a conservation easement to protect against future development/encroachment.**
  - **Accessory structures & impervious areas may occupy up to 15% of the on-site buffer area.**
- **If established on private property, they remain private and are not open to the public.**
- **Must be monitored & managed for 3 years after planting is completed.**
- **Monitoring report submitted annually to permit authority.**



# Wetland Protection in Kane County

## Wetland Buffer Reestablishment Example: Development Requiring Stormwater Detention 9-177 A 1. c

### Existing Conditions:

Agricultural Property

A Linear Watercourse runs through the property with a drainage area > 640 acres

Wetlands are present along the toe of the bank

Row crops are planted up to the edge of the channel

Vegetation in the 50 foot Buffer (stream with drainage area > 640 ac) is not providing Buffer function, however this area has high potential to provide Buffer functions

### Proposed Conditions

Proposed residential subdivision

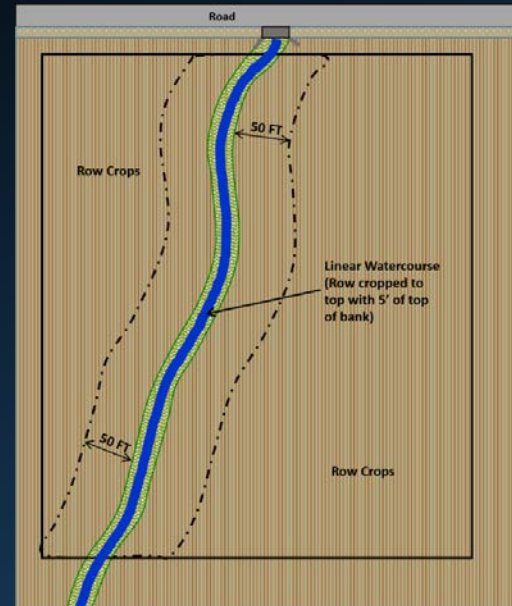
>25,000SF of new Impervious is proposed and Stormwater Management Measures are Required

### Wetland Permitting Requirements:

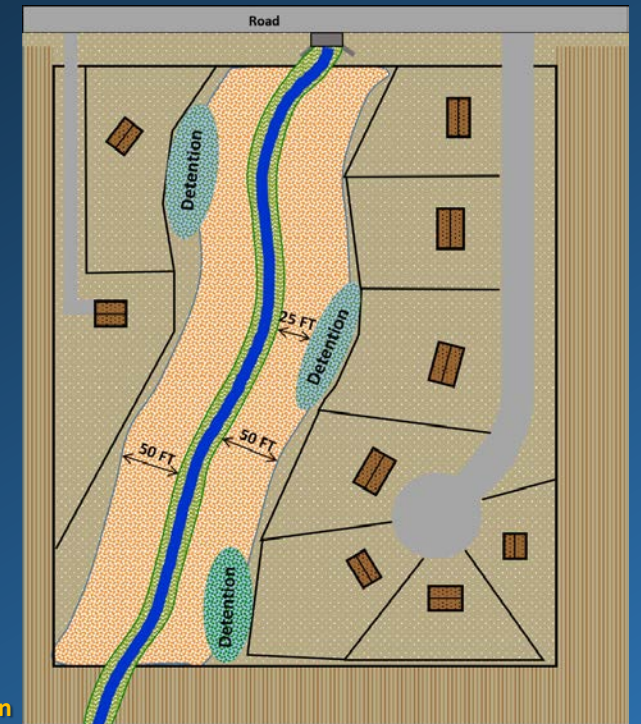
No wetland impacts are proposed (no excavation/fill is proposed in the wetland and Property Tributary area is less than 10% of the tributary area to the wetland)

Buffer (re)establishment is required 50' from the edge of the wetland

The Detention Storage Facilities may be located within the outer 50% of the buffer at the discretion of the Director or Administrator. 25,000SF



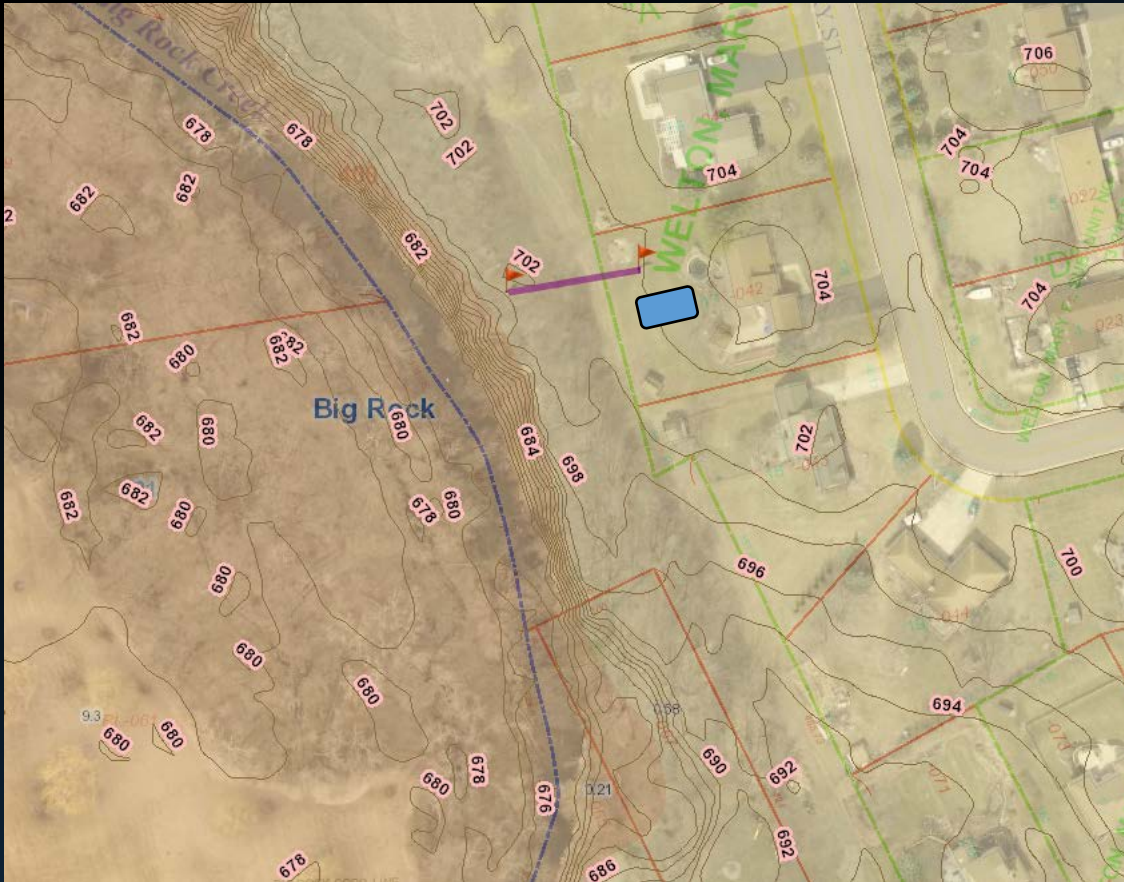
Existing Condition



Proposed Condition

# Wetland Protection in Kane County

## Wetland Buffer Example: Pool on Single Family Residential Lot



### Legend

-  100' Buffer Width
-  Mapped Floodplain

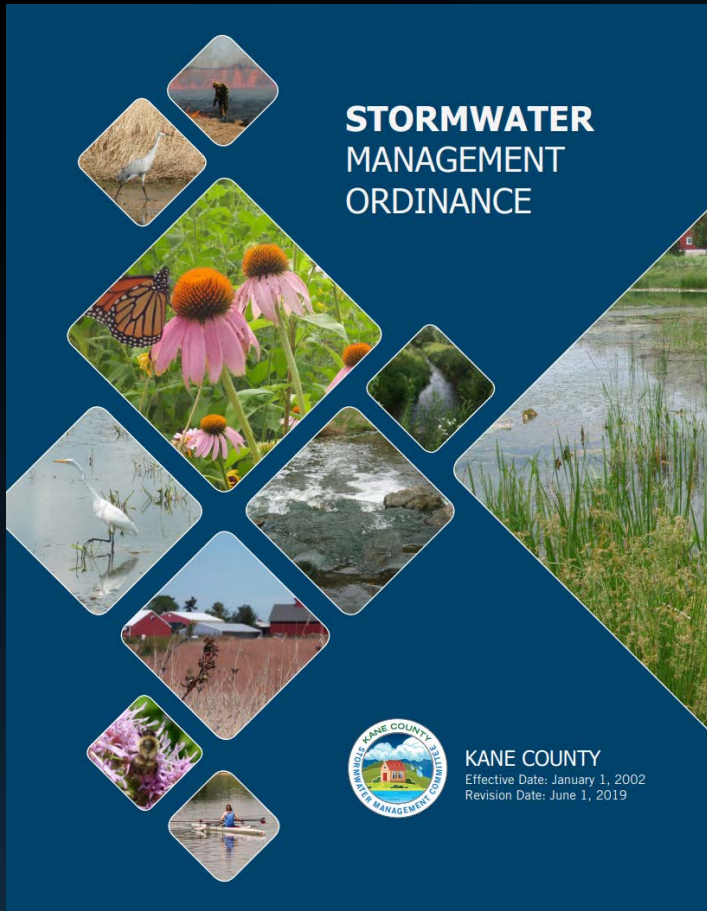
- Description: Owner desires to build a pool within 20' of rear lot line.
- The stream is Biologically Significant and has a 100' buffer.
- Pool is within 100' buffer but is proposed within turf grass and turf does not provide functions per the buffer definition.
- No Stormwater Permit is required as less than 5,000 SF of impervious is proposed.
- No buffer impacts are proposed and buffer reestablishment is not required as the project is under the detention threshold.





# Resources

Just Google “Kane County Stormwater Ordinance”



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Environmental Resources

Water Resources

Floodplain Information

Local Drainage Improvements

Stormwater Management & Permitting

Watershed Planning & Special Projects

Water Supply Planning

Electronic Payments

## Stormwater Management & Permitting

Kane County Environmental and Water Resources is responsible for administering and enforcing the Kane County Stormwater Management Ordinance. This is done through the review and permit process for various construction activities.

- [Kane County Stormwater Management Ordinance](#) ←
- [When is a Stormwater Permit Required? Worksheet](#)
- [Stormwater Permit Packet](#)
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- [Countywide Flood Inundation Maps](#)
- [Exempt Projects from June 1, 2019 Revisions](#)

### Qualified Review Specialists (QRS)

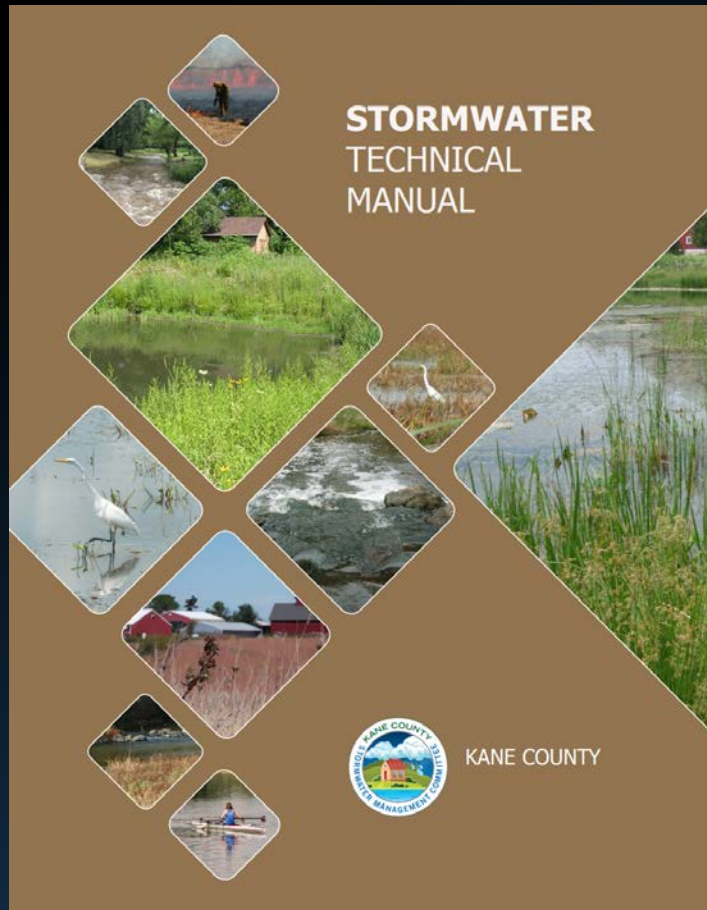
[Qualified Engineer Review Specialist Listing \(QERS\)](#)  
[Qualified Wetland Review Specialist Listing \(QWRS\)](#)  
[Appendix B: Qualified Engineer Review Specialist Statement](#)  
[Appendix C: Qualified Wetland Review Specialist Statement](#)

### Overview Presentation of June 1, 2019 Revisions

[General Overview](#)

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### KANE COUNTY WETLAND SUBMITTAL WORKSHEET

Please refer to Kane County and Certified Community Stormwater Management Ordinances for definitions of technical terms in bold and referenced Ordinance sections for additional information.

#### Step 1:

##### Wetland Delineation (Section 9-169):

A. Are there **Wetlands** identified on the Site?

**IF YES - PROCEED TO STEP 2**

B. Are there **Wetlands** identified within 100' of the Site but no **Wetlands** on the Site?

**IF YES - PROCEED TO STEP 3**

If you answered NO to both questions above, a **Wetland Submittal** is NOT required.

#### Step 2:

##### USACE Wetland Jurisdiction Determination (Section 9-180):

A. Obtain one of the following forms of documentation from **USACE**: A Jurisdictional Determination or a Letter of No Objection (where no impacts to Waters of the US are proposed)

**If Wetlands are USACE Jurisdictional and direct impacts are proposed, submit a Joint Permit Application to USACE and obtain permit. If Wetlands are not USACE Jurisdictional or indirect impacts are proposed PROCEED TO STEP 3**

**If a Letter of No Objection is received and NO indirect impacts are proposed PROCEED TO STEP 4**

#### Step 3:

##### County/Community Jurisdictional Wetlands:

A. Are there Direct (**County/Community** Jurisdiction) or Indirect (either **County/Community** or **USACE** Jurisdiction) Impacts to a **Wetland** proposed by the **Development**?

**If YES, prepare a Wetland Mitigation Plan in accordance with Article VII then PROCEED TO STEP 4**

**If NO Wetland Impacts are proposed, PROCEED TO STEP 4**

#### Step 4:

##### Buffer Requirements (Section 9-177):

A. Determine **Buffer** widths for all on-site **Wetlands** and **Wetlands** within 100' of the site per Section 9-177 and document any existing conservation easements established previously for protecting a **Buffer**.

B. Document all areas within the delineated **Buffer** width that meet the definition of a **Buffer** per the **Ordinance**.

C. Verify that no **Buffer** violations exist within existing conservation easements on the site.

D. Determine if the **Development** impacts an area within the delineated **Buffer** width that meets the definition of a **Buffer** or within an existing conservation easement?

**If YES - Verify the requirements in Section 9-177.B are met for Buffer Impacts and prepare a Buffer Impact Plan**

E. Determine if a **Detention Storage Facility** (Table 9-107) is required for the **Development**?

**If YES - Buffer (Re)establishment is required in accordance with Section 9-177.C. Prepare a Buffer (Re)Establishment Plan then PROCEED TO STEP 5**

**If NO Buffer (Re)establishment is required, PROCEED TO STEP 5**

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