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Midwest U.S.



# Overhead Transmission Line Construction in Floodways



Minimizing Long-Term  
Impacts from Temporary  
Construction

Presented by: Nathan Ehlinger  
2023 INAFSM Conference



# Agenda

»» Identifying Regulatory Stakeholders

»» Identifying Project Constraints

»» Best Management Practices

»» Permitting

# Identifying Regulatory Stakeholders

Understanding where jurisdictions can often overlap:

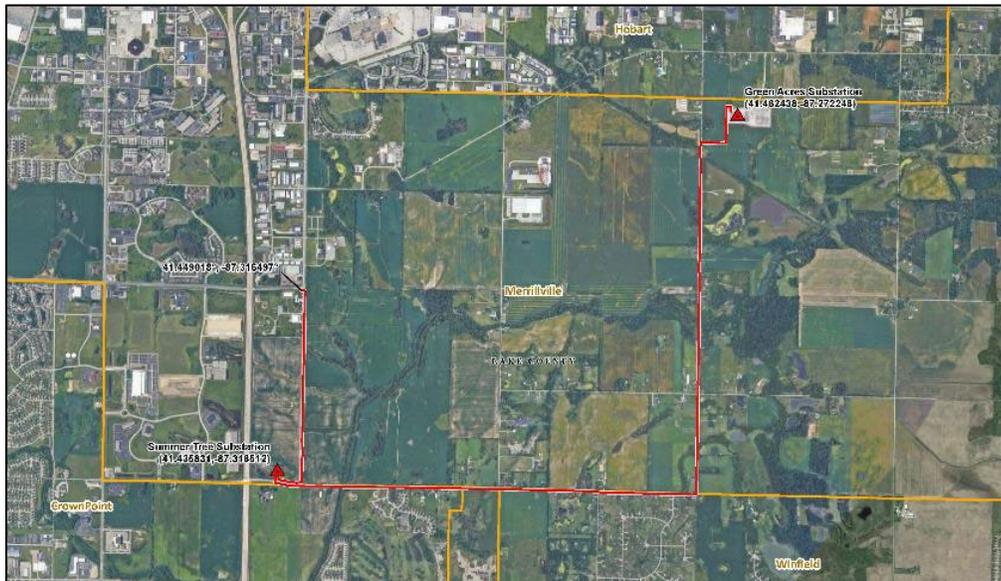
- MS4 District (Municipal/County)
- County Soil & Water Conservation District
- IDNR and USFWS
- IDNR Division of Historic Preservation and Archaeology (Indiana SHPO)
- Indiana Department of Environmental Management
- U.S. Army Corps of Engineers



# Identifying Regulatory Stakeholders

## MS4 Districts (Municipal/County):

- MS4 stormwater ordinances specific to overhead transmission line construction
- Projects extending through multiple MS4 Districts

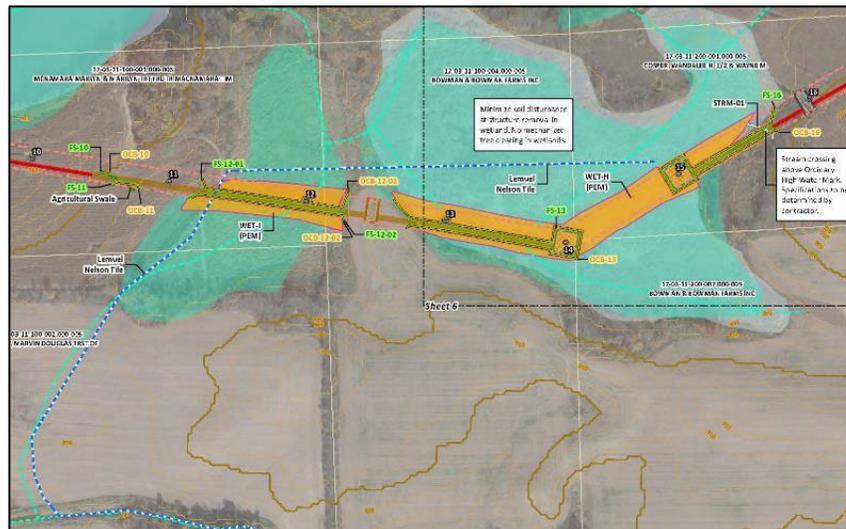


Greater Elkhart County MS4 Stormwater Clearance Application for Technical Review of a Construction Site Stormwater Pollution Prevention Plan (SWPPP)				
<b>Project Name:</b>				
<b>Project Location Description:</b>				
<b>Project Address (Required):</b>				
Municipal Jurisdiction: <input type="checkbox"/> Elkhart <input type="checkbox"/> Goshen <input type="checkbox"/> Nappanee <input type="checkbox"/> Elkhart County				
Latitude and Longitude (Submit in Decimals): _____ Hydrologic Unit Code: _____				
Civil Township: _____ Quarter: _____ Section: _____ Township: _____ Range: _____				
<b>Project Site Owner (Company):</b>				
<b>Contact Person:</b>				
Address: _____				
City: _____		State: _____		Zip: _____
Phone: _____		Email: _____		Fax: _____
<b>Plan Preparer Name:</b>				
<b>Company Name:</b>				
Address: _____				
City: _____		State: _____		Zip: _____
Phone: _____		Email: _____		Fax: _____
<b>On-Site Erosion Control Supervisor (Required):</b>				
<small>(A trained individual responsible for self-inspection and record keeping as defined by 327 IAC 15-6-4.2*)</small>				
<b>Company Name:</b>				
Address: _____				
City: _____		State: _____		Zip: _____
Phone: _____		Email: _____		Fax: _____
<b>Name of Receiving Water:</b>				
<small>(If stormwater is retained on site, name the nearest possible receiving water)</small>				
<b>Total Project Acreage:</b> _____ acres <b>Acreage to be Disturbed:</b> _____				
<b>Total Impervious Surface for Completed Project:</b>				
<small>(as defined by 327 IAC 15-6-4.16) including structures, roads, parking lots, and other similar improvements)</small>				
<small>Subject to penalty of law, the undersigned represents and certifies that the information and facts stated on this form are true, accurate, and complete.</small>				
<b>Printed Name:</b> _____ <b>Title:</b> _____				
<b>Signatures of Project Site Owner*:</b> _____ <b>Date:</b> _____				
<small>*as defined by 327 IAC 15-5-4.30), normally a developer/person who has financial and operation control of construction activities, project plans, and specifications.</small>				
<b>Make checks payable to: Elkhart County Treasurer</b>				
<b>Submit Clearance Application and Fee to the SWCD Office—call (574) 533-4383 ext 3 for more information Submit Post-Construction Plans to the appropriate jurisdiction</b>				
<b>For Office Use Only</b> <small>Form Updated 3/2018</small>				
Filing Fee: \$ _____ PermiTrack: _____				
Date Received: _____ Date Approved: _____ Date Renewed: _____				

# Identifying Regulatory Stakeholders

County Soil & Water Conservation District:

- ▶▶▶ Erosion and Sedimentation, Ground Disturbance
- ▶▶▶ County Regulated Drain Easements (surface and subsurface)



# Identifying Regulatory Stakeholders

Indiana Department of Natural Resources and U.S. Fish & Wildlife Service:

- ▶▶▶ Threatened and Endangered Species
- ▶▶▶ Managed Lands
- ▶▶▶ Floodways and Floodplains



# Identifying Regulatory Stakeholders

IDNR Division of Historic Preservation and Archaeology:

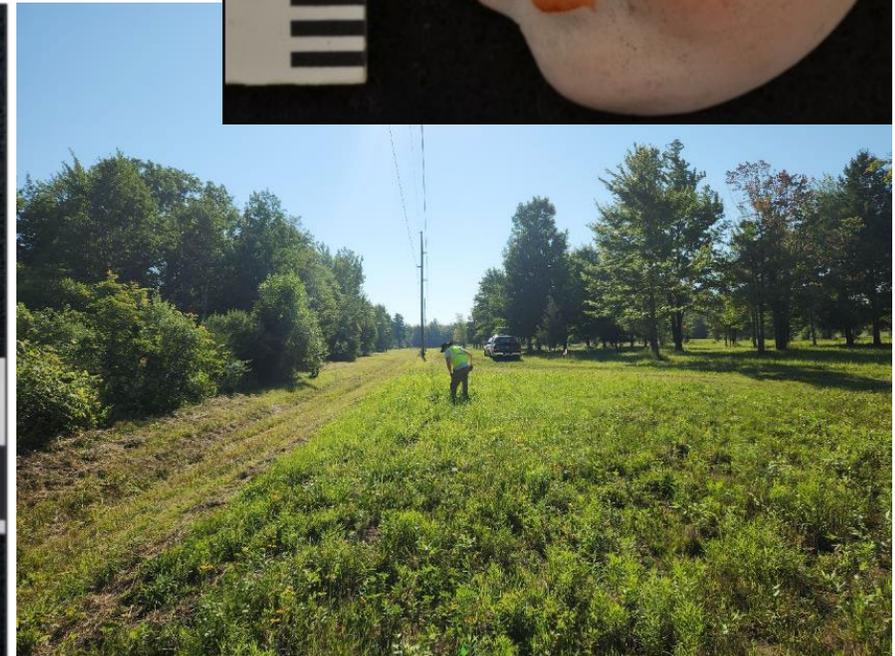
»»» Historic Properties (Archaeological and Architectural)



Mermon Expanding Stem



Trimble Side-Notched



# Identifying Regulatory Stakeholders

Indiana Department of Environmental Management:

»» Erosion and Sedimentation

»» Waters of the U.S.

»» Waters of the State



# Identifying Regulatory Stakeholders

U.S. Army Corps of Engineers:

- ▶▶▶ Traditionally Navigable Waters
- ▶▶▶ Waters of the US
- ▶▶▶ Civil Works (levees, dams)



# Case Study 1 - Judy Creek, Urban Area

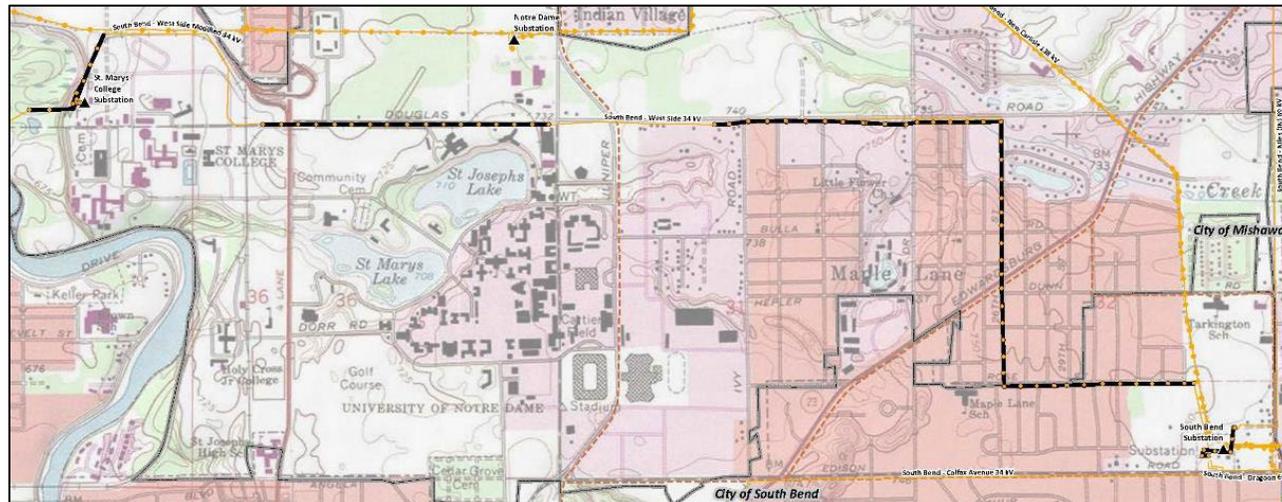
## St. Joseph County

»»» Multiple MS4 Districts (St. Joseph County, South Bend, St. Mary's College Notre Dame)

»»» IDNR

»»» IDEM

»»» USACE



# Case Study 2 - Fish Creek Floodway, Rural Area

## DeKalb County

»»» DeKalb County SWCD

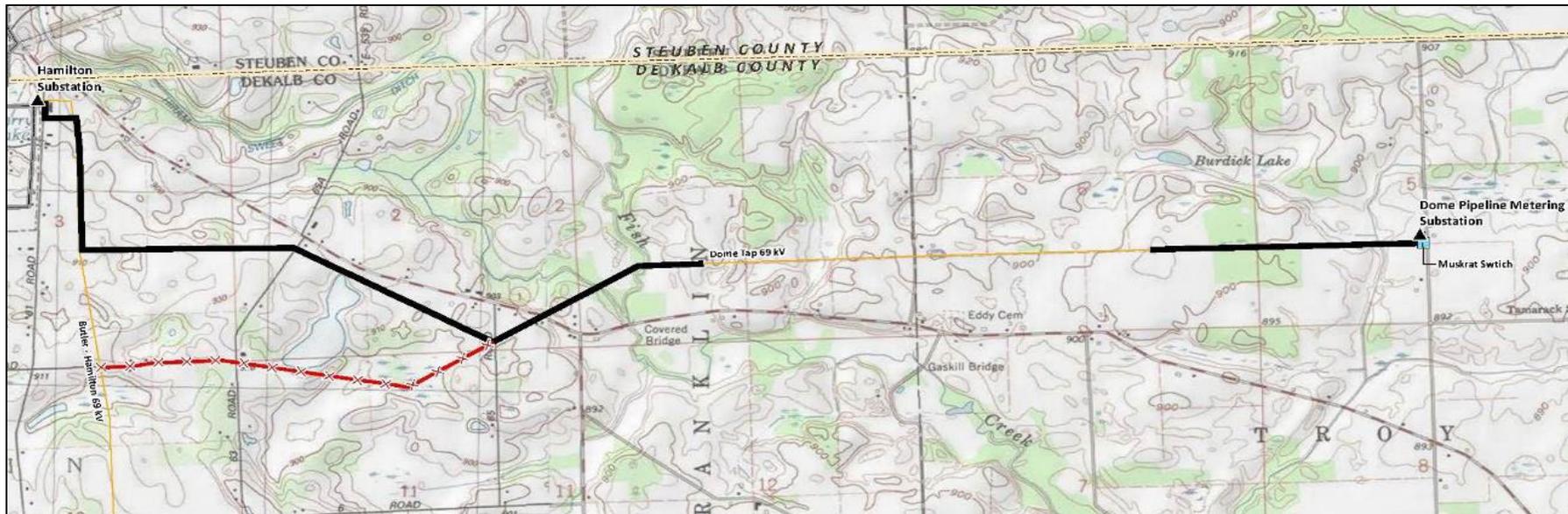
»»» The Nature Conservancy

»»» IDNR Division of Nature Preserves

»»» U.S. Fish & Wildlife Service

»»» IDEM

»»» USACE





# Agenda

»» Identifying Regulatory Stakeholders

»» **Identifying Project Constraints**

»» Best Management Practices

»» Permitting





# Identifying Project Constraints

## Due Diligence

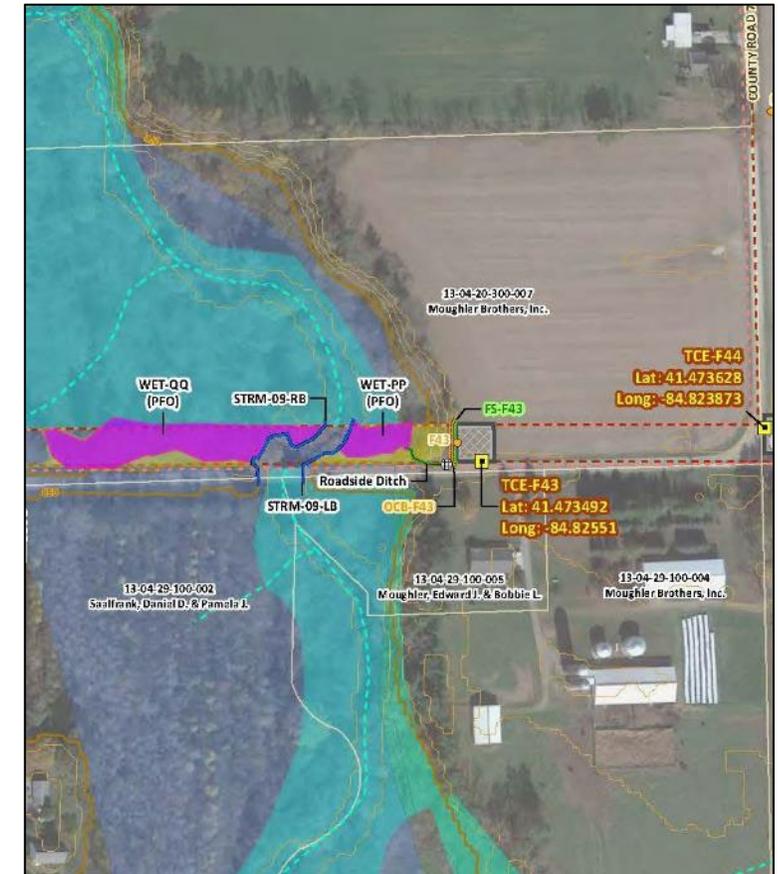
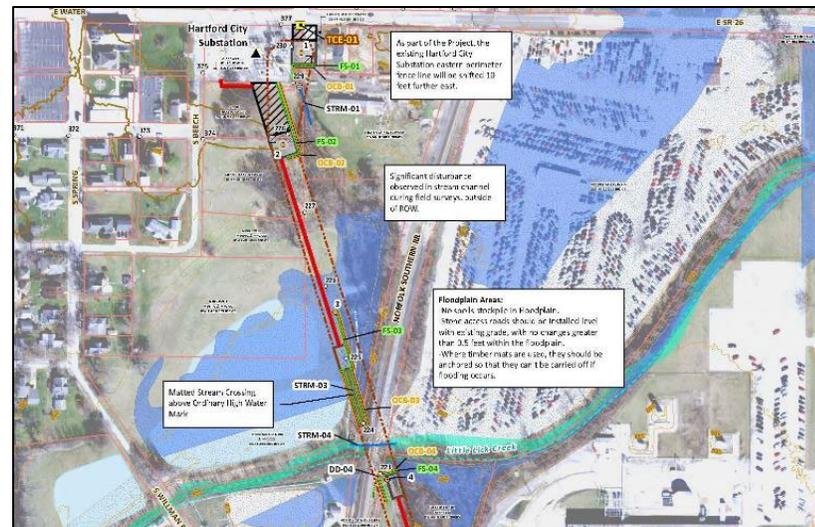
- »» Stream and wetland delineation
- »» Suitable habitat for threatened and endangered species
- »» Cultural Resources (Archaeological, Architectural)
- »» Constructability concerns



# Identifying Project Constraints

## Transmission Line Design and Construction Practices

- Coordinate with engineering staff
- Coordinate with construction management staff
- Coordinate with regulatory stakeholders

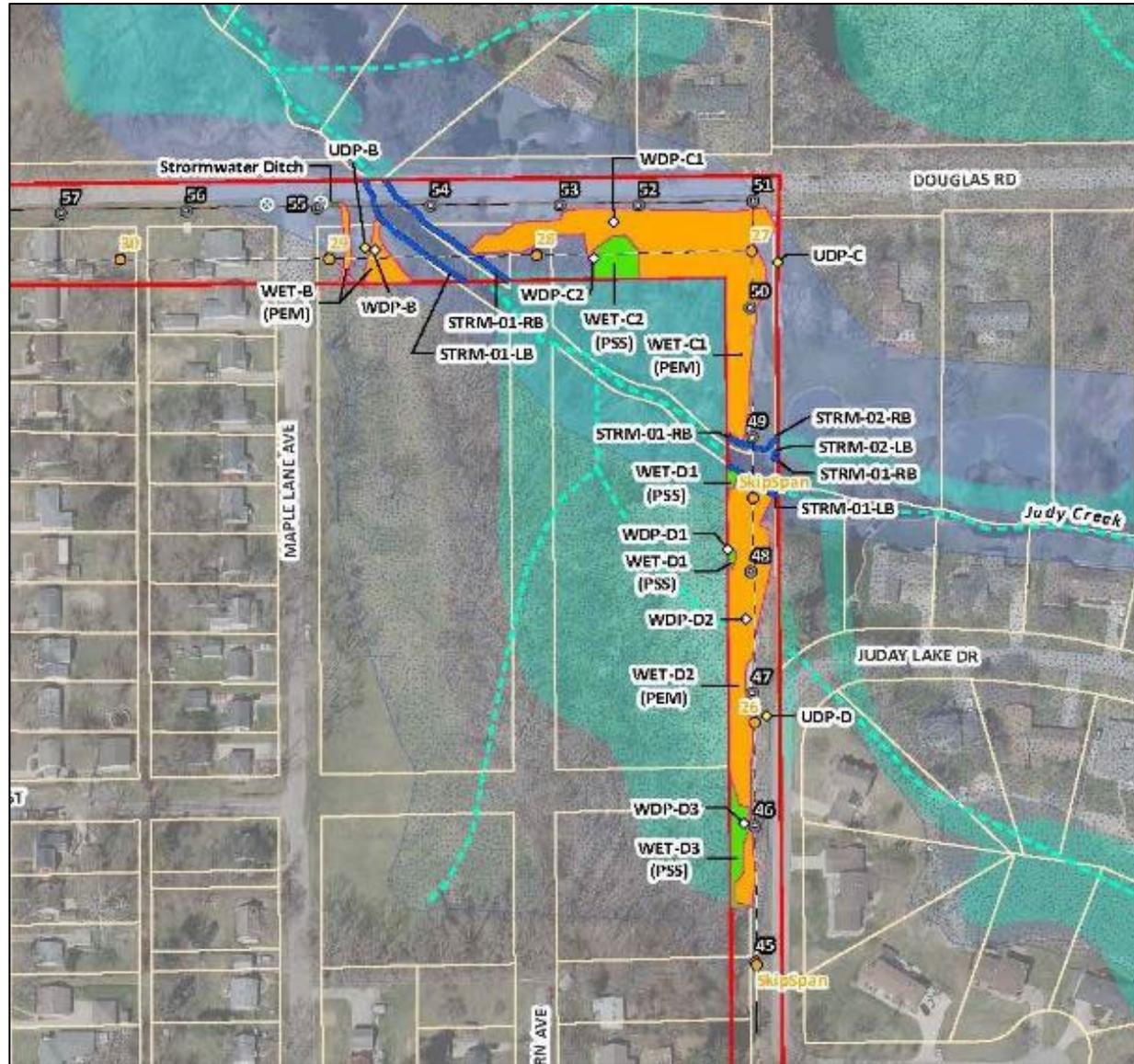


# Case Study 1 - Judy Creek, Urban Area

## St. Joseph County

- ▶▶▶ Transmission line structures in floodway
- ▶▶▶ Jurisdictional wetlands
- ▶▶▶ Document pre-construction wetland disturbance
- ▶▶▶ Phased construction





# Case Study 2 - Fish Creek Floodway, Rural Area

## DeKalb County

- Proposed transmission line structures in the floodway and floodplain
- Isolated right-of-way
- Stream crossing
- Jurisdictional wetlands
- IDNR Nature Preserve

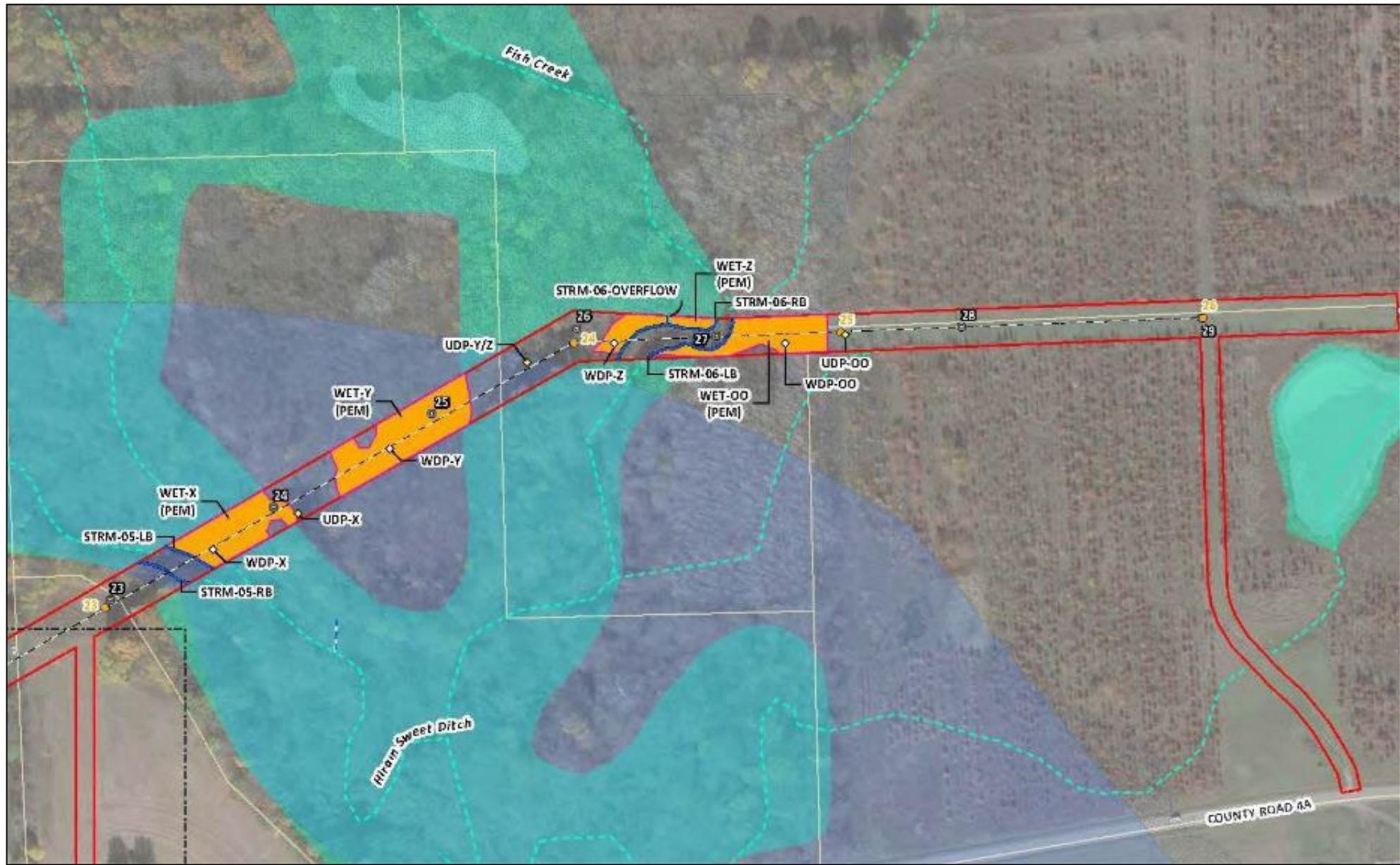


# Case Study 2 - Fish Creek Floodway, Rural Area

DeKalb County

- » Federally endangered mussel species
- » Existing structure in Fish Creek







# Agenda

»» Identifying Regulatory Stakeholders

»» Identifying Project Constraints

»» **Best Management Practices**

»» Permitting

# Best Management Practices

## Minimizing Ground Disturbance and Stream/Wetland Impacts in Floodways:

- »»» Utilize existing construction entrances and access routes
- »»» Timber Matting
- »»» Stream and wetland crossings

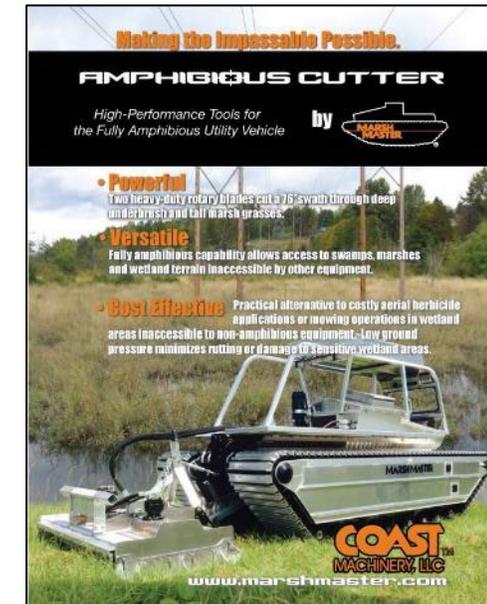




# Best Management Practices

## Non-structural Considerations

- ▶▶▶ Mechanized vs. Non-mechanized Tree Clearing
- ▶▶▶ Tracked vehicles and equipment for low ground pressure
- ▶▶▶ Vehicle and Equipment Cleaning
- ▶▶▶ Temporary Soil Stockpiling
- ▶▶▶ Stream and Wetland Restoration
- ▶▶▶ Seed Mix



# Case Study 1 - Judy Creek, Urban Area

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St. Joseph County

Best Management Practices

- »»» Timber matted access and workspace
- »»» Filter Sock and Construction Barrier Fencing
- »»» Concrete washout
- »»» Stream and Wetland Restoration Plan



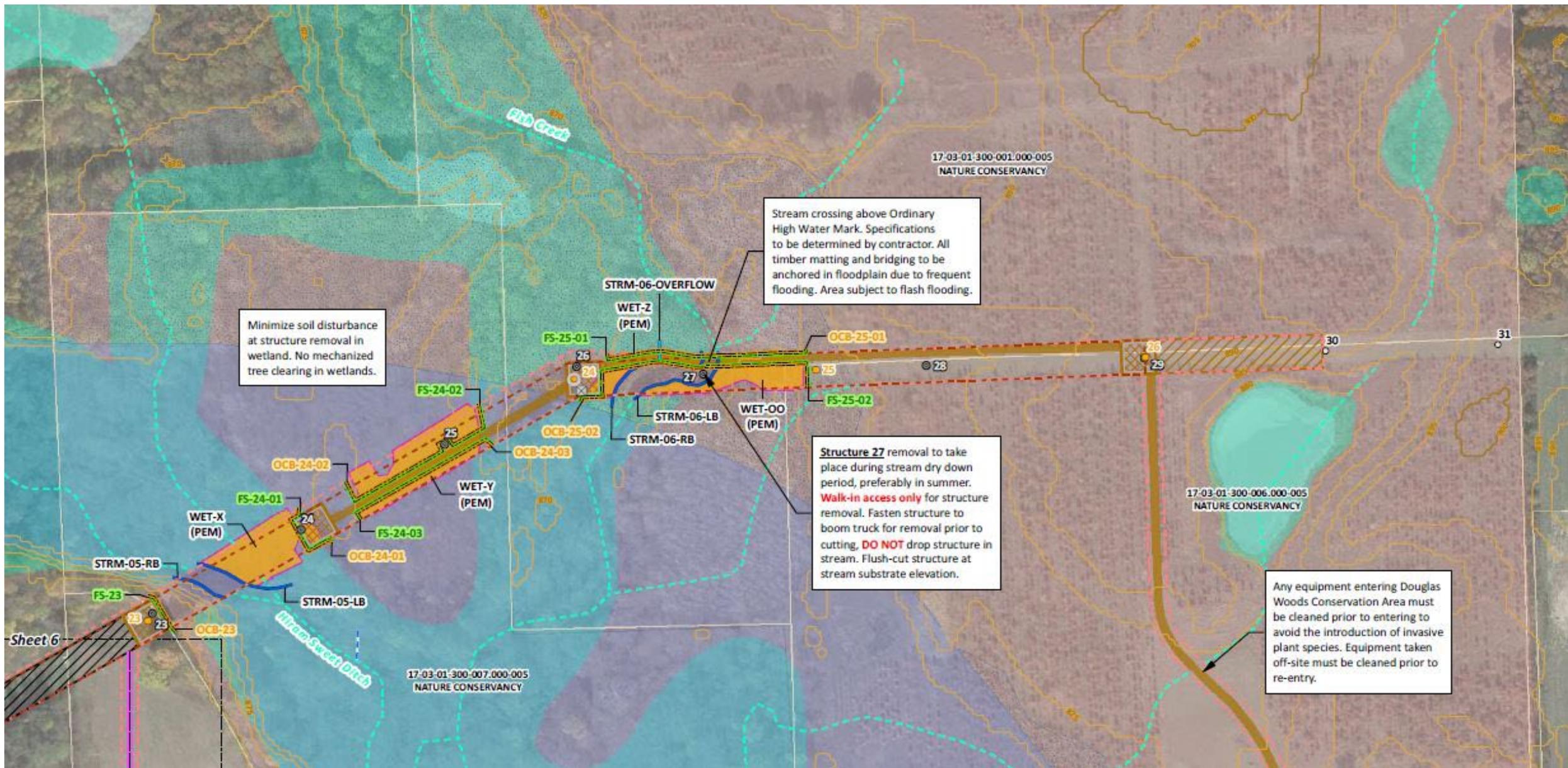
# Case Study 2 - Fish Creek Floodway, Rural Area

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DeKalb County

## Best Management Practices

- »»» Timber matted access and workspace
- »»» Filter Sock and Construction Barrier Fencing
- »»» Stream and Wetland Restoration Plan
- »»» Right-of-way Access: Least Impactful Method?
- »»» Structure Removal in Fish Creek: How? When?



Minimize soil disturbance at structure removal in wetland. No mechanized tree clearing in wetlands.

Stream crossing above Ordinary High Water Mark. Specifications to be determined by contractor. All timber matting and bridging to be anchored in floodplain due to frequent flooding. Area subject to flash flooding.

Structure 27 removal to take place during stream dry down period, preferably in summer. Walk-in access only for structure removal. Fasten structure to boom truck for removal prior to cutting. **DO NOT** drop structure in stream. Flush-cut structure at stream substrate elevation.

Any equipment entering Douglas Woods Conservation Area must be cleaned prior to entering to avoid the introduction of invasive plant species. Equipment taken off-site must be cleaned prior to re-entry.



# Agenda

»»» Identifying Regulatory Stakeholders

»»» Identifying Project Constraints

»»» Best Management Practices

»»» **Permitting**

»»» Case Studies

# Permitting

## IDNR and USFWS Coordination:

➤➤➤ IDNR Environmental Review Request

➤➤➤ USFWS Technical Review Request





# Permitting

## IDNR Authorization Worksheet for Utility Line Maintenance or Replacement:

Criteria related to:

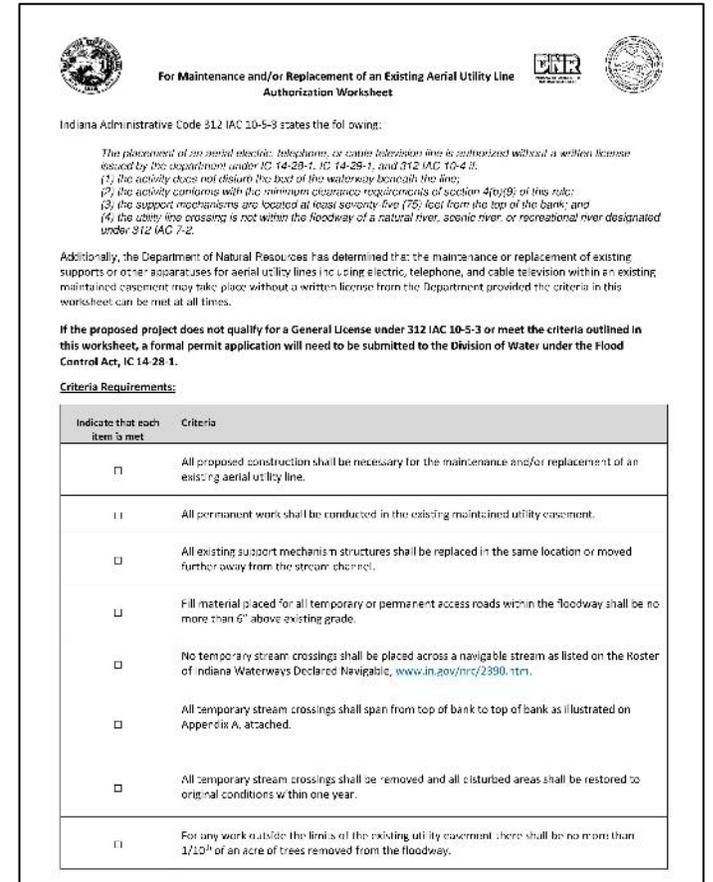
In-stream work

Stream crossing types and materials

Tree clearing outside existing easement

Transmission Line sag elevation above OHWM

If criteria are met, no notification required



The worksheet is titled "For Maintenance and/or Replacement of an Existing Aerial Utility Line Authorization Worksheet" and features the IDNR logo. It contains the following text:

Indiana Administrative Code 312 IAC 10-5-3 states the following:

*The placement of an aerial electric, telephone, or cable television line is authorized without a written license issued by the department under IC 14-28-1, IC 14-29-1, and 312 IAC 10-4 if:*

- (1) the activity does not disturb the bed of the waterway beneath the line;
- (2) the activity conforms with the minimum clearance requirements of section 4(b)(9) of this rule;
- (3) the support mechanisms are located at least seventy-five (75) feet from the top of the bank; and
- (4) the utility line crossing is not within the floodway of a natural river, scenic river, or recreational river designated under 312 IAC 7-2.

Additionally, the Department of Natural Resources has determined that the maintenance or replacement of existing supports or other apparatuses for aerial utility lines including electric, telephone, and cable television within an existing maintained easement may take place without a written license from the Department provided the criteria in this worksheet can be met at all times.

If the proposed project does not qualify for a General License under 312 IAC 10-5-3 or meet the criteria outlined in this worksheet, a formal permit application will need to be submitted to the Division of Water under the Flood Control Act, IC 14-28-1.

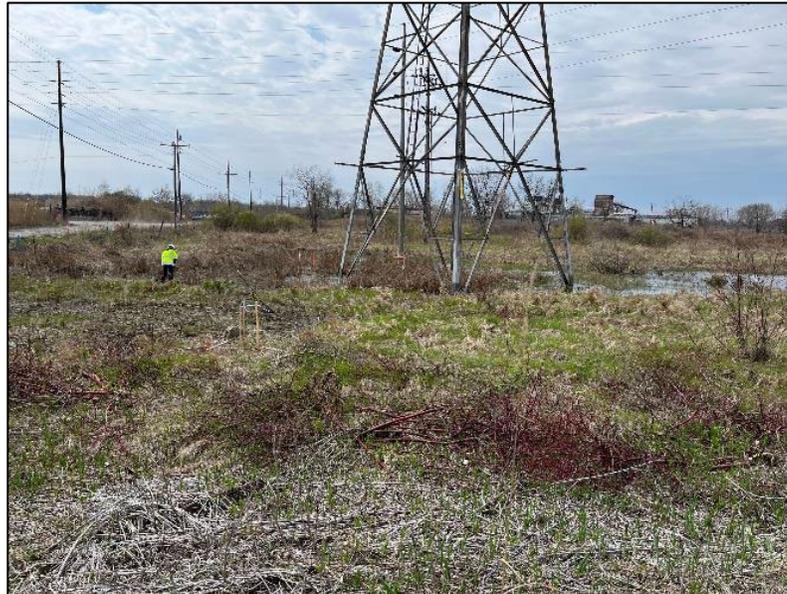
**Criteria Requirements:**

Indicate that each item is met	Criteria
<input type="checkbox"/>	All proposed construction shall be necessary for the maintenance and/or replacement of an existing aerial utility line.
<input type="checkbox"/>	All permanent work shall be conducted in the existing maintained utility easement.
<input type="checkbox"/>	All existing support mechanism structures shall be replaced in the same location or moved further away from the stream channel.
<input type="checkbox"/>	Fill material placed for all temporary or permanent access roads within the floodway shall be no more than 6" above existing grade.
<input type="checkbox"/>	No temporary stream crossings shall be placed across a navigable stream as listed on the Roster of Indiana Waterways Declared Navigable, <a href="http://www.in.gov/nrc/2390.htm">www.in.gov/nrc/2390.htm</a> .
<input type="checkbox"/>	All temporary stream crossings shall span from top of bank to top of bank as illustrated on Appendix A, attached.
<input type="checkbox"/>	All temporary stream crossings shall be removed and all disturbed areas shall be restored to original conditions within one year.
<input type="checkbox"/>	For any work outside the limits of the existing utility easement there shall be no more than 1/10 <sup>th</sup> of an acre of trees removed from the floodway.

# Permitting

## MS4/SWCD Approval and CSGP Compliance

- MS4 and/or County SWCD SWPPP Review/Approval
- IDEM CSGP Notice of Intent



# Permitting

CWA 401, 404 and 408 and Rivers and Harbors Act Section 10:

- ▶▶▶ Transmission line spanning Traditionally Navigable Waters
- ▶▶▶ Permanent fill in Waters of the U.S. or Waters of the State
- ▶▶▶ Permanent fill and temporary construction activity potentially affecting USACE Civil Works Projects



# Case Study 1 - Judy Creek, Urban Area

St. Joseph County

## Required Permitting

- ▶▶▶ Project SWPPP review by multiple MS4 Districts
- ▶▶▶ IDNR Permit for Construction in a Floodway
- ▶▶▶ IDEM Section 401 WQC Regional General Permit
- ▶▶▶ USACE Section 404 NWP 57

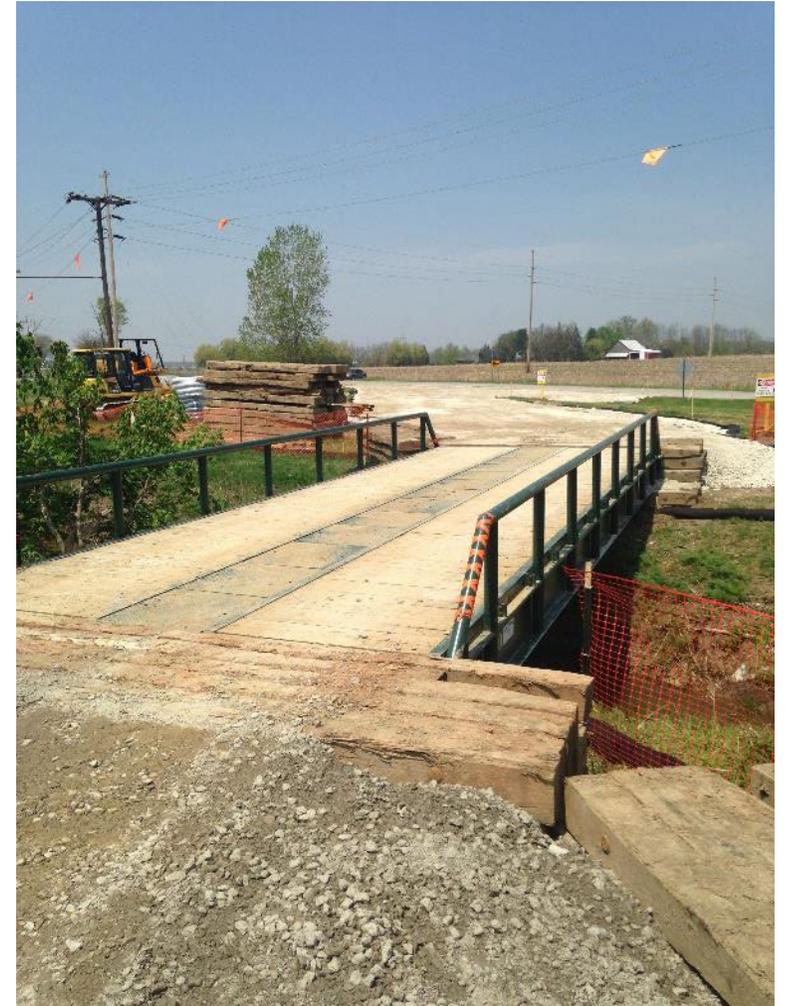


# Case Study 2 - Fish Creek Floodway, Rural Area

DeKalb County

Required Permitting

- ▶▶▶ Project SWPPP review by County SWCD
- ▶▶▶ IDNR Permit for Construction in a Floodway
- ▶▶▶ IDEM Section 401 WQC Regional General Permit
- ▶▶▶ USACE Section 404 NWP 57



# Key Takeaways



Identify potential overlapping jurisdictions early



Due Diligence is critical to project success



Coordinate early and often with Regulatory Stakeholders

# Questions?



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