

# Introduction to Waterway Permitting for Project Managers

Ecology and Waterway Permitting Office

This training is designed to provide an overview of waterway permitting for Project Managers.

## Outline

---

- What are Waterway Permits?
- What is a regulated resource?
- What activity is regulated?
- Types of Waterway Permits
- Permitting Process
- Mitigation
- Violation Identification and Response
- Other Considerations

## What are Waterway Permits?

---

- Approval from Regulatory Agencies for impacts to regulated environmental resources.
- Usually (but not always) come in the form of a document from the approving agency.
- Regulatory Agencies:
  - U. S. Army Corps of Engineers (USACE)
  - Indiana Department of Environmental Management (IDEM)
  - Indiana Department of Natural Resources (IDNR)
  - U. S. Coast Guard (USCG)

A Waterway Permit is a document provided by a regulatory agency that approves the permanent and temporary impacts that were presented in a permit application. In most circumstances this is a written document from the regulatory agency. Some Nationwide Permits (NWP) do not require preconstruction notification (PCN) to the regulators.

The review of the permit application for compliance with the condition of the permit is documented by the Ecology and Waterway Permitting Office (EWPO) staff. IDEM may document their review and approval of a Regional General Permit (RGP) application with an email.

The three agencies that we work with are the U.S. Army Corps of Engineers (USACE), the Indiana Department of Environmental Management (IDEM) and the Indiana Department of Natural Resources (IDNR). Projects located along the Ohio River and near Lake Michigan may require coordination with or a permit from the U.S. Coast Guard (USCG).

## What are Regulated Environmental Resources?

---

- Environmental resources under regulatory protection by Federal and/or State agencies.
- Three main types
  - Streams
  - Wetlands
  - Floodways
- IDEM also regulates any construction project with >1.0 acre of soil disturbance

A regulated resource is feature that is protected under federal or state law. The three main types that we work with are streams, wetlands and floodways.

The Rule 5 permit issued by IDEM, that is required when 1.0 acre or more of soil is disturbed, provides protection to the streams and wetlands in the project area through erosion and sediment control.

The USACE and USCG also protect the ability to navigate on traditional navigable waterways. A USACE Section 10 permit is required for an activity over or in a traditional navigable waterway. A USCG Section 9 permit is required for bridges on navigable waterways.

# Stream

---

- 1) Has a defined bed and bank and conveys water for short periods or year round
- 2) Includes natural, relocated and channelized streams, encapsulated channels and ditches
- 3) Is a feature regulated by USACE and IDEM



A stream is any feature that has a defined bed and bank and that conveys water. It includes natural, relocated and channelized streams, encapsulated channels and ditches. It is a feature that is regulated by the USACE and IDEM.

There are three types of streams. A perennial stream has water that flows year-round. An intermittent stream has water that flows for part of the year. An ephemeral stream has water flow only during or after rain events. The top photo looks like a trail through the woods, but it is an ephemeral stream. The water flow is sufficient to prohibit the growth of understory vegetation.

## Ordinary High Water Mark (OHWM)

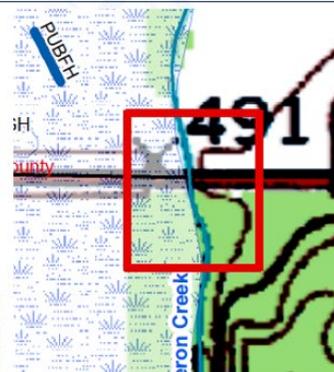
- A line on the shore established by fluctuations of water and indicated by
  - clear natural line impressed on bank
  - destruction or absence of terrestrial vegetation
  - vegetation matted down, bent or absent
  - leaf litter disturbed or washed away
  - abrupt change in plant community
  - presence of litter or debris
  - sediment deposition
  - water staining



The Ordinary High Water Mark (OHWM) is used by all of the regulators to establish a jurisdictional boundary. It is used by USACE and IDEM to determine the boundary between the linear water feature and the upland or wetland area. See the slide on page 8. The IDNR also uses it as a boundary. For example, the Construction in a Floodway (CIF) permit may state that “all work and equipment shall remain above the OHWM.” If work must occur below the OHWM that work cannot be done until, the appropriate environmental permits can be obtained.

## Wetland

- Three characteristics –
  - Wetland vegetation
  - Wetland soils
  - Water saturation from surface or groundwater frequent enough to support wetland vegetation and soil



The figure on the right is a topographic map with the National Wetland Inventory information added. It can be found in the project waters report. It is one tool that we use to evaluate a project site for the presence of wetlands.

One side of the bridge is a wetland and the other side is an upland. This was field verified when collecting site information for the waters report. For this site, access was limited to the upland area to place scour protection below the bridge. No impacts to the wetlands was allowed. Many of our roadside wetlands can be identified by cattails, willows or other vegetation that prefers moist conditions.

Don't be concerned if you're unsure about whether a feature is regulated or not. There are a lot of regulated resources that are hard to visually identify even to a trained eye. Wetlands are especially difficult and are often only confirmed after analyzing the soil. The waters report is the first resource to check and don't hesitate to phone your Permit Specialist.

## Wetland (cont.)



These are two examples of the types of wetland vegetation that often dominate wetlands within our project areas. The photo on the left shows cattails, an invasive species, with other native vegetation. The tall plant in the photo on the right is phragmites, also an invasive species, and the short plant is a native sedge.

# Floodway

---

- River or stream channel and portions of the adjoining floodplain
- Required to efficiently carry and discharge the peak flow of the regulatory flood
  - Peak flow = 100 year discharge (Q100)
- Floodplain boundary is used when the floodway is not mapped



The IDNR regulates impacts to the floodway through the CIF permit. A primary concern evaluated during their review of a permit application is whether the project will reduce the cross-sectional area under the structure. In addition, mitigation is required for removal of trees greater than ten (10) inches diameter breast height (dbh) in the floodway or by acres impacted. Depending on the location, the mitigation ratio can be as high as five trees for each one impacted.

When the project has a CIF permit and a utility company requests approval to remove additional trees in order to relocate utility lines the request should be evaluated by reviewing the location, quantity or acreage of trees to be removed, and time of year. Discuss the request with the EWPO Permit Specialist prior to authorizing the tree removal. This may require additional mitigation if the impacts were not included in the permit application or mitigation plan. The other concern is whether the tree removal would require mitigation for loss of bat habitat.

## Jurisdiction

---

- Waters of the U.S. (WOTUS)
  - Includes waterways (streams) and wetlands
  - Regulated by two agencies
    - U.S. Army Corps of Engineers (USACE) – Federal
    - Indiana Department of Environmental Management (IDEM) - State
- Waters of the State/Isolated Wetland – Regulated solely by IDEM
- Floodway – Indiana Department of Natural Resources (IDNR)
  - Permit for each crossing
- Regulated Drain – County Drain Commissioner/Surveyor

There is one federal agency and two state agencies that are responsible for the majority of our permits. The USACE regulates impacts to waterways and wetlands determined to be Waters of the U.S. (WOTUS) under Section 404 of the Clean Water Act (CWA). IDEM regulates these same features under Section 401.

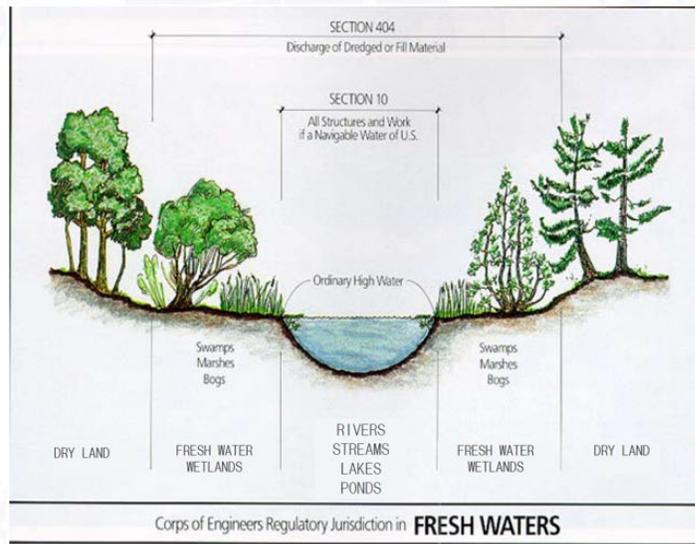
IDEM also regulates wetland features that the USACE has not taken jurisdiction of under the state isolated wetlands law. This requires a formal jurisdiction determination by the USACE.

IDNR jurisdiction extends out from the water feature into the floodway.

If the feature is designated as a regulated drain, the designer will need to coordinate with the county office with jurisdiction. This is frequently under the county surveyor. Only five counties require a permit but all county drains have restrictions.

There is one more federal agency that may be interested in our projects – the U. S. Coast Guard. They are primarily concerned with projects located along Lake Michigan or the Ohio River and its major tributaries.

# USACE Jurisdiction



This diagram shows the areas that the USACE has jurisdiction over. IDEM jurisdiction follows the same guidelines, but includes isolated wetlands. Section 10 of the Rivers and Harbors Act applies to all structures and work within a navigable water of the U.S. Section 404 of the CWA applies to the discharge of dredged or fill material within the waterway or the adjacent wetlands.

## Activities that require a permit

- Placement of fill within Waters of the U.S. or Waters of the State
  - Fill = soil, riprap, concrete, structure, etc.
  - Permanent or temporary
- Alteration to the cross-sectional area of a waterway
- Land disturbance



A permit from USACE or IDEM is required for any activity that would result in permanent or temporary fill into a Waters of the U.S. or Waters of the State. The IDNR is primarily concerned with a change to



## Permit Types

---

- 404 Permits
  - Issued by U.S. Army Corps of Engineers
  - Refers to Section 404 of Clean Water Act
  - Required for work in streams and/or wetlands
- 401 Permits
  - Issued by IDEM
  - Refers to Section 401 of Clean Water Act
  - Will (typically) be submitted on same form and at same time as 404 permit application
- Construction in Floodway
  - Issued by IDNR
  - Required for work below Q100 of any waterway that does not meet exemptions
- County Drain permits
  - Required for work within Regulated Drains within Allen, Elkhart, Hamilton, Lake, and LaPorte Counties

A USACE 404 permit, IDEM 401 Water Quality Certification (WQC) and the IDNR Construction in a Floodway permit are the permits that INDOT projects require most frequently.

## General Conditions

---

- Are specific to the permit (NWP, RGP)
- Must be met by project for permit to apply
- USACE and IDEM conditions may be different
- Some are covered by INDOT Standard Specifications
- Examples from NWP –
  - Not disrupt aquatic life movement
  - Maintain existing conditions as much as possible
  - Install run-off and sediment control measures
  - Remove temporary fills, restore and revegetate
  - Install riprap flush with upstream and downstream bank and stream channel (IDEM)

The USACE and IDEM have general and permit specific conditions for the Nationwide Permit and Regional General Permits that must be met by the project for the permit type to be applicable. IDEM conditions will be in addition to what is required by the USACE. For example, there are 54 Nationwide permit types. The one we use most frequently is NWP 3 - Maintenance. There are 32 general conditions

for the NWP and specific conditions for the NWP 3 that must be met in order for the project to qualify for that permit.

In addition to the USACE conditions, IDEM has 19 general conditions. Some examples are:

- The permittee shall deposit any dredged material in a contained upland disposal area to prevent sediment run-off to any waterbody.
- The permittee shall install run-off and sediment control measures prior to any land disturbance to manage storm water and to minimize sediment from leaving the project site or entering a waterbody.
- The permittee must ensure all discharges of riprap into streams are flush with the upstream and downstream bank and stream channel elevations and grades.

IDEM has specific conditions associated with some of the permit types used in Indiana. The categories are for the replacement of stream encapsulation, pipe liners and all other maintenance activities. Some examples of specific conditions are:

- For stream encapsulation replacement, it must not reduce the cross-sectional area under bank full elevation or increase the length of the total encapsulation to over 150 feet. In addition, it must be the same type as the existing.
- For pipe liners, the liner size must be the largest size approved by the INDOT office of hydraulics and liners must be installed so that the invert of the liner is as close to the invert of the host pipe as practical.

Compliance with the conditions of the permit are verified by the EWPO Permit Specialist when the application is reviewed. When the NWP does not require notification to the USACE there is no additional review. For permits that require agency review, the USACE will also verify that the project meets the permit conditions to include IDEMs when their review is not required.

## Other Condition Examples

---

- Temporary fills –
  - Not be erodible by expected high flows
  - Removed at the completion of construction
  - Area returned to pre-construction elevations and revegetated
- Construction equipment must not be directly in streams
- Construction equipment in wetlands must be on mats
- Suitable material must be used for activity or structure



Examples of unsuitable material includes asphalt or other bituminous material, broken concrete containing asphalt, concrete with protruding rebar, or erodible materials in an area subject to erosion. We must maintain the preconstruction course, condition, capacity, and location of open waters. The temporary feature must also be constructed to withstand high flows.

# 404/401 Nationwide Permit (NWP)

---

- NWP #3 - Maintenance
  - (a) Covers “maintenance” work including repair, rehabilitation, or replacement of current structure or fill.
  - (c) Covers temporary impacts for dewatering, site access, etc.
  - Generally covered under NWP if <300 LF or <0.1 acres of impacts.
  - Do not require notification to the USACE (no PCN).
  - The permit expires on 3/18/2022.
  - Submitted to EWPO on State Form 51937
- (b) Covers the removal of accumulated sediments.
  - This work requires PCN to the USACE.
- Conditions are sent with the approval email and included at the following location in ProjectWise: Des. No. > Environmental Services > Waterways Permitting > Permits

Maintenance is a broad term used to describe any repair, rehabilitation, or replacement of a previously authorized structure or fill. The Nationwide Permit (NWP) covers most projects with less than 300 Linear Feet (LF) or 0.1 acre of impacts. The 404 NWP #3 - Maintenance (a) and (c) applications are not reviewed by the USACE, but are reviewed by EWPO to verify compliance with the permit conditions. A NWP #3(b) requires preconstruction notification (PCN) to the USACE. USACE review of an NWP application can take up to two months. EWPO will provide a cover letter to attach with the no notification application stating that no permit will be received. EWPO will keep the completed application until the project is closed. IDEM does not review the NWP applications nor issue a permit.

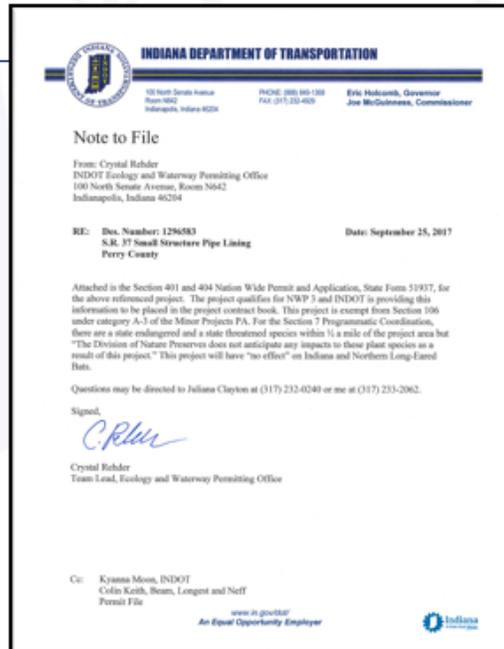
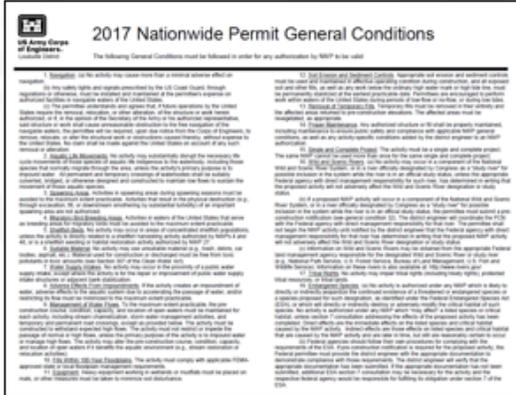
The NWP #3 for maintenance is what we use the most. It includes three categories. NWP 3(a) is for the repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill. NWP 3(b) is for the removal of accumulated sediments and debris outside the immediate vicinity of existing structures. NWP 3(c) is used for temporary structures, fills, and work. The design must maintain normal downstream flows, minimize flooding, consist of non-erodible material and be placed such that they will not be eroded by high flows. Temporary structures must be completely removed at the completion of the work and all affected areas must be returned to preconstruction elevations and revegetated.

The permit application, approval letter and conditions related to this permit can be found in ProjectWise. They will be in the Environmental Services folder under Waterway Permits. This information must be included in the contract letting documents. Look for file names that start with “FT\_”.

IDEM does not review NWPs, but their Water Quality Certification has specific conditions that must also be complied with to qualify for the permit. INDOT must insure that the project meets the conditions when reviewing the permit application.

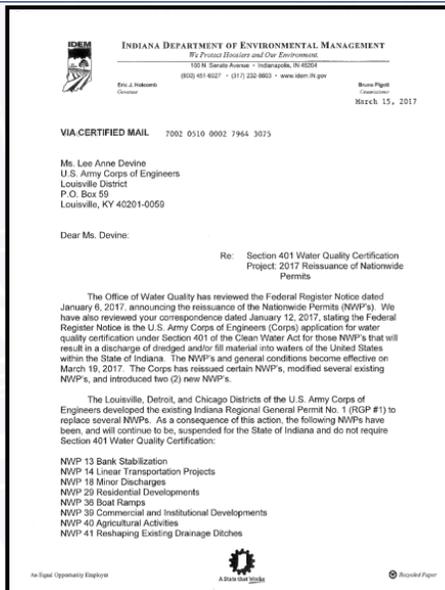
# NWP Note to File

- No pre-construction notification is required for NWP #3 (a) and (c)
  - No agency review
- Note to File serves as permit approval



The Note to File documentation must be added to the letting website.

# IDEM 401 Water Quality Certification (WQC)



This is the front page of IDEM's 2017 Section 401 Water Quality Certification of the NWP program. This will be included in NWP documentation for any project with this permit type.

## 404/401 Regional General Permit (RGP)

---

- 404 - Projects with impacts <1,500 LF or 1.0 acre that cannot be covered under the NWP.
- 401 - Projects with <300 LF or 0.1 acre of impacts that meet IDEM's RGP conditions.
- Requires notification to the USACE and IDEM.
- The permit expires on 12/15/2019.
- For projects that have impacts greater than the 401 impact thresholds use State Form 51821 for both agencies.
- Submitted on State Form 51937 or State Form 51821.
  
- Conditions are sent with the approval email and included at the following location in ProjectWise: Des. No. > Environmental Services > Waterways Permitting > Permits

The USACE and IDEM have different impact thresholds for the Regional General Permit (RGP). If the project impacts are less than 300 LF or 0.1 acre the project will qualify for a 404 and 401 RGP. If the impacts are greater, the project will require a 404 RGP and a 401 Individual Permit (IP).

The RGP will cover most projects that do not qualify for a NWP. Examples of this would be minor stream relocations, going from a pipe or culvert to a bridge, or new riprap placement (if in the USACE Detroit or Chicago Districts). All 404 RGP applications must be submitted to the USACE and IDEM for their review and approval.

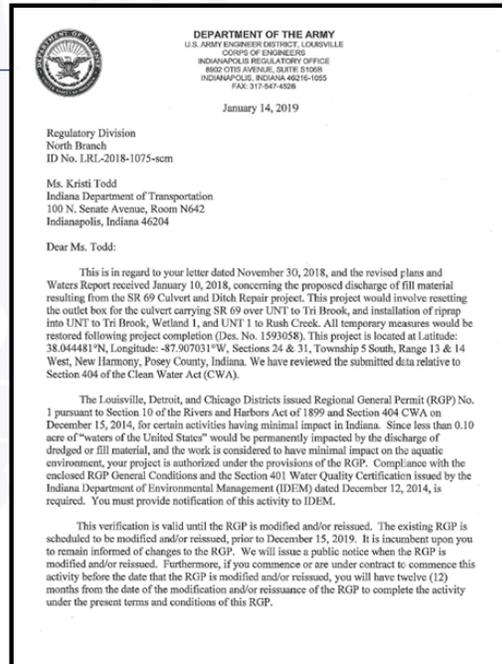
The USACE will accept State Form (SF) 51937 or SF 51821 for the 404 RGP application. USACE review can take up to four months. IDEM reviews all 401 RGP applications. They have 30 days to complete their review and it can extend longer if the application is missing information or they have concerns. The 401 IP has an average review time of two months to provide time for public notice.

The permit application, approval letter and conditions related to this permit can be found in ProjectWise. They will be in the Environmental Services folder under Waterway Permits. This information must be included in the contract letting documents.

A RGP may require mitigation when the impacts are greater than 0.1 acre or 300 LF.

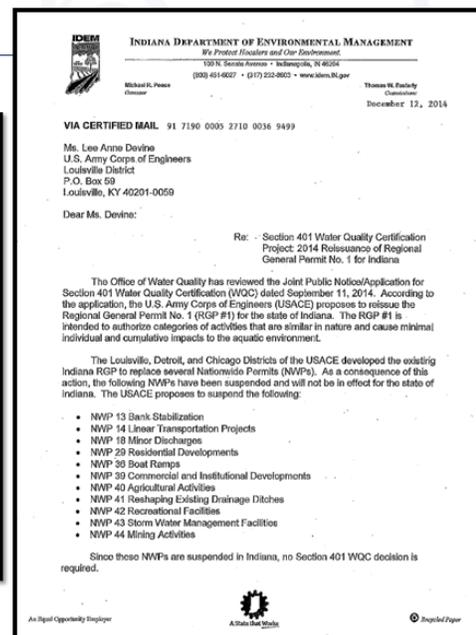
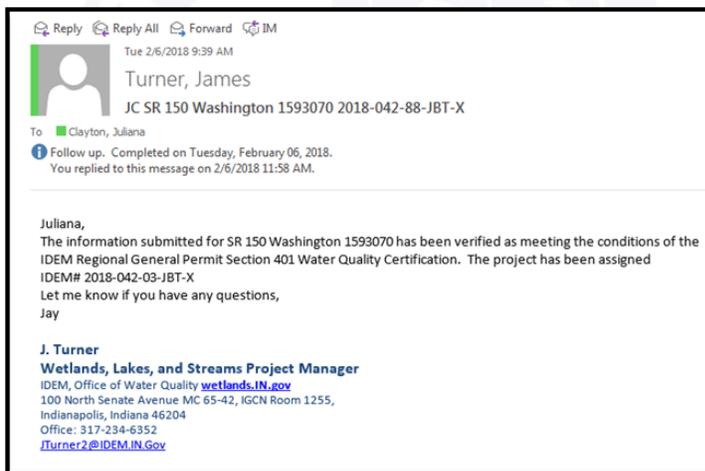
# USACE 404 RGP Approval Letter

- Example 404 RGP Approval Letter
  - Permit #
  - Expiration Date
  - Special Conditions



This is an example of a standard USACE RGP approval letter. This letter contains the permit number and the expiration date for the permits and is a reference for other aspects of the project. The RGP has general conditions that must be followed for all projects. There may also be special conditions listed in the letter. All permit approvals must to be included in the contract letting documents.

## 401 RGP Approval



IDEM approval for the RGP will be by email. This needs to be included in the contract letting documents along with the 401 Water Quality Certification.

## IDEM Specific RGP Conditions

---

- Placement of riprap or other bank stabilization materials must be installed flush with the upstream and downstream banks and stream bed elevation
- Pump-around activities must
  - Not cause erosion at the outlet
  - Be maintained
  - Constructed using non-erodible material
- Cofferdam activities must
  - Use sediment control devices to filter sediment from water

These are two specific conditions that IDEM has for the RGP. The previous RGP also included a requirement to obtain a fish spawning waiver from the DNR for any activity in a stream from April 1 to June 30. This condition was removed from the current RGP. A DNR fish spawning waiver is only required if a condition of the project CIF permit or if it was specifically listed in the USACE or IDEM permit. Any temporary structure must maintain the preconstruction course, condition, capacity, and location of open waters and be constructed to withstand high flows.

## USACE 404 Individual Permit (IP)

- Impacts are >1.0 acre or 1,500 LF
- Only needed for very large INDOT projects

**This notice of authorization must be conspicuously displayed at the site of work.**

United States Army Corps of Engineers APRIL 6, 2018

**A permit to:** discharge 84.14 cubic yards (cys) of fill material below the Ordinary Highwater mark (OHW) of 154 linear feet of ephemeral, intermittent, and perennial unnamed tributaries (INT) to East Fork White Creek. In addition, 5,398 cys of fill material would be discharged into 11.66 acres of adjacent emergent and forested wetlands to widen Interstate 65 at two separate and complete crossings.

**At:** On unnamed tributaries to East Fork White Creek and adjacent wetlands in Bartholomew County, Indiana, at Latitude 39.04927 North/ Longitude -85.91348 West.

**Has been issued to:** INDIANA DEPARTMENT OF TRANSPORTATION

**Address of permittee:** 100 NORTH SENATE AVENUE, ROOM N642, INDIANAPOLIS, IN 46204

Permit No. LRI-2017-54

Antoinette Gant  
Colonel, Corps of Engineers  
Commanding

BY: *Greg McKay*  
Greg McKay  
Chief, North Section  
Regulatory Branch

ENG FORM 4336, JUL 81 (ER 1145-2 383) EDITION OF JUL 70 MAY BE USED (Proponent: DAEM-CWO)

A 404 Individual Permit is required for a project with more than one acre or 1,500 LF of impacts. Agency review can take up to twelve (12) months for more complex projects.

## IDEM 401 Individual Permit (IP)

- Projects with >300 LF or >0.1 acres of impacts.
- Required for impacts to salmonid streams, outstanding state or national water resource waters, or critical wetland types.
- Requires notification to IDEM.
- Permit expiration is two (2) years after approval (with extensions available).
- Submitted on State Form 51821.
- IP approval and conditions always come in their own letter with specific conditions, as shown on the right.
- Conditions are sent with the approval email and included at the following location in ProjectWise: Des. No. > Environmental Services > Waterways Permitting > Permits

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
By: Protect Diversity and Our Environment  
100 N. Senate Avenue • Indianapolis, IN 46204  
(800) 451-6327 • (317) 232-8883 • www.idem.in.gov

Shane L. Pigott  
Commissioner  
July 29, 2018

VIA CERTIFIED MAIL HAND DELIVERY

Ms. Kristi Todd  
Indiana Department of Transportation  
100 North Senate Avenue, Room N642-ES  
Indianapolis, IN 46204

Dear Ms. Todd:

Re: Section 401 Water Quality Certification Project: I-466 & US 24 Interchange Mod IDEM No.: 2018-296-02-JET-A COE No.: IRE-1696-1000061-102-J18 INDOT DES: 1383675 County: Allen

The Office of Water Quality has reviewed your application for Section 401 Water Quality Certification dated and received June 11, 2018. According to the application, you propose to place clean earthen fill, class 1 rip-rap, and geotextile into 0.043 acre of open water and 0.705 acre of emergent wetland as part of a project to modify the Interstate 466 and U.S. Highway 24 interchange. To compensate for these impacts you propose to purchase 1.5 credit acres of emergent wetland credit from the Openings Mitigation Bank. The project is located in Sections 6 and 7, Township 30 North, Range 14 East in Allen County.

Based on available information, it is the judgment of this office that the proposed project will comply with the applicable provisions of 327 IAC 2 and Sections 301, 302, 303, 306, and 307 of the Clean Water Act if you comply with the conditions set forth below. Therefore, subject to the following conditions, the Indiana Department of Environmental Management (IDEM) hereby grants Section 401 Water Quality Certification for the project described in your application received June 11, 2018. Any changes in project design or scope not detailed in the application described above or modified by the conditions in this Section 401 Water Quality Certification are not authorized.

Failure to comply with the terms and conditions of this Section 401 Water Quality Certification may result in enforcement action against you. If an enforcement action is pursued, you could be assessed up to \$25,000 per day in civil penalties. You may also

Equal Opportunity Employer A State of Indiana Recycled Paper

The IDEM 401 Individual Permit (IP) will cover projects greater than 300 LF and greater than 0.1 acre of impacts, or that otherwise do not meet the RGP conditions. All 401 IP applications are reviewed and

approved by IDEM. All 401 IPs must be posted for a 21-day public notice period. IDEM review can take two months or more. The permit is valid for two (2) years, but it can be extended with sufficient justification. The permit application, approval letter and conditions related to this permit can be found in ProjectWise. This information must be included in the contract letting documents.

## IDEM Isolated Wetland Permit

---

### Isolated Wetland Permitting Process

1. Wetland features have been identified in the Waters of the U.S. report.
2. INDOT requests a formal jurisdiction determination from the USACE.
3. USACE has declined jurisdiction over the features.
4. IDEM determines what features are covered by an exemption.
5. Impacts to remaining features will require a permit.
6. Mitigation may also be required.

INDOT policy is to consider all features under federal jurisdiction unless there is the potential need for mitigation.

When the USACE declines jurisdiction of a wetland through a formal jurisdiction determination, it then falls under IDEM jurisdiction under the state isolated wetlands law. IDEM will evaluate the wetlands under the isolated wetlands law to determine which features are exempt. Impacts to non-exempt features must be permitted and may require mitigation if the impacts are above the impact threshold.

INDOT policy is to consider all identified wetlands under federal jurisdiction unless there may be a requirement for mitigation. The staff time (INDOT and regulatory agency) and length of time required to complete the JD process precludes pursuing it for projects.

# State Form 51937

- Used for all 401 and 404 NWP's
- Used for all 401 and 404 RGP's (unless we are getting a 404 RGP with a 401 IP)
- Form must be signed and dated by EWPO before submittal

**SECTION 401 WQC REGIONAL GENERAL PERMIT NOTIFICATION**  
 State Form 51937 (RS 7-18)  
 INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM) AND U.S. ARMY CORPS OF ENGINEERS (USACE)

**AGENCY USE ONLY**  
 Date Received (mm/dd/yyyy)  
 USACE  
 Processing Date (mm/dd/yyyy)

**APPLICANT INFORMATION**  
 Name of Project: \_\_\_\_\_ Designation Number: \_\_\_\_\_  
 Applicant: \_\_\_\_\_ Agent (Name of Company): \_\_\_\_\_  
 Contact Person: \_\_\_\_\_ Contact Person: \_\_\_\_\_  
 Address (number and street): \_\_\_\_\_ Address (number and street): \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_  
 Telephone Number: \_\_\_\_\_ Telephone Number: \_\_\_\_\_  
 E-mail Address: \_\_\_\_\_ E-mail Address: \_\_\_\_\_

**PROJECT LOCATION**  
 County: \_\_\_\_\_ Nearest Town: \_\_\_\_\_  
 Quad Name: \_\_\_\_\_ Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_  
 Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_  
 Project Address and Driving Directions: \_\_\_\_\_

**EXISTING CONDITIONS ON THE PROJECT SITE**  
 Lake:  Yes  No Name of Lake: \_\_\_\_\_  
 Stream:  Yes  No Name of Stream: \_\_\_\_\_ Stream Type:  Perennial  Intermittent  Ephemeral  
 Wetlands:  Yes  No Acreage on the site by Wetland Type(s): \_\_\_\_\_ Emergent \_\_\_\_\_ Scrub-Shrub \_\_\_\_\_ Forested \_\_\_\_\_  
 Date (mm/dd/yyyy) of Wetland Delineation: \_\_\_\_\_  
 Date (mm/dd/yyyy) of the U.S. Army Corps of Engineers Jurisdiction Correspondence: \_\_\_\_\_

**PROJECT IMPACTS**  
 Activity Description: \_\_\_\_\_  
 Purpose of Project: \_\_\_\_\_

For Lake Impact (Acceptable fill is defined in the instructions):  
 (1) Linear feet of shoreline impact (Example - Steeple): \_\_\_\_\_  
 (2) Type of fill below the Ordinary High Water Mark: \_\_\_\_\_ Volume (Cubic Yards): \_\_\_\_\_ Acres: \_\_\_\_\_  
 (3) Does the shoreline or open water area have vegetation present?  Yes  No  
 If yes, are you proposing natural shoreline stabilization?  Yes  No Description: \_\_\_\_\_  
 (4) Open water fill beyond shoreline (Examples - Boat Well, Underwater Beach): Type of Fill: \_\_\_\_\_ Acres: \_\_\_\_\_

There are three forms that are used for the 404 and 401 permit applications. State Form 51937 is used for projects that qualify for an NWP or RGP. If a project requires a 404 RGP but a 401 IP State form 51821 must be used. If a project requires a 404 IP a USACE Eng Form 4345 must also be completed.

# State Form 51821

- Used for 401 IP's.
- If the project also requires a 404 RGP, we can submit for the 404 RGP on this form as well.
- Used for Isolated Wetlands.
- Form must be signed and dated by EWPO before submittal.

**APPLICATION FOR AUTHORIZATION TO DISCHARGE DREDGED OR FILL MATERIAL TO ISOLATED WETLANDS AND/OR WATERS OF THE STATE**  
 State Form 51821 (RS 1-14)  
 Indiana Department of Environmental Management

**INSTRUCTIONS:** 1. Read the instruction sheet before filling out this form.  
 2. You must complete all applicable sections of this form.

**1. Applicant Information**  
 Name of Applicant: \_\_\_\_\_ Name of Agent: \_\_\_\_\_  
 Mailing address (Street/PO Box/Rural Route, City, State, ZIP Code): \_\_\_\_\_ Mailing address (Street/PO Box/Rural Route, City, State, ZIP Code): \_\_\_\_\_  
 Daytime Telephone Number: \_\_\_\_\_ Daytime Telephone Number: \_\_\_\_\_  
 Fax Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_  
 E-mail address (optional): \_\_\_\_\_ E-mail address (optional): \_\_\_\_\_  
 Contact person (optional): \_\_\_\_\_ Contact person: \_\_\_\_\_

**3. Project / Tract Location**  
 County: \_\_\_\_\_  
 U.S.G.S. Quadrangle map name (Topographic map): \_\_\_\_\_ Project street address (if applicable): \_\_\_\_\_  
 Quarter: \_\_\_\_\_ Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_  
 Type of aquatic resource(s) to be impacted (Attach Worksheet One): \_\_\_\_\_ Project name or title (if applicable): \_\_\_\_\_  
 Other location descriptions or driving directions: \_\_\_\_\_

**4. Project Purpose and Description (Use additional sheet(s) if required)**  
 Has any construction been started?  Yes  No Completed start date (month, day, year): \_\_\_\_\_  
 If yes, how much work is completed? \_\_\_\_\_  
 Purpose of project and overview of activities: \_\_\_\_\_





# CIF Application Status

- Projects are issued a tracking number FW-XXXXX
- Status can be checked with the FW number at

[https://www.in.gov/apps/dnr/water/query/dnr\\_water\\_permit\\_query](https://www.in.gov/apps/dnr/water/query/dnr_water_permit_query)

Division of Water  
Indiana Department of Natural Resources  
Permit Application Information Report

**Thu Mar 14 2019 11:09:24**

**Application #:** FW-29480

**Water Body:** Unnamed Tributary Richland Creek

**Applicant:** Kristi Todd  
Indiana Department of Transportation  
100 North Senate Avenue, Room N642-ES  
Indianapolis, IN 46204-2249

**Agent:** Michael Oliphant  
United Consulting  
1625 North Post Road  
Indianapolis, IN 46219-1995

**Description:**  
The existing corrugated metal pipe arch will be replaced with a 12' by 10' four sided concrete box culvert (Des 1600237). The new structure will be 288' in length. Additionally, riprap aprons will be placed on geotextile fabric at the inlet and outlet. Temporary impacts include a pump around for dewatering, and sandbag cofferdams on each end of the structure. Temporary impacts will be in place for approximately 4 weeks. Details of the project are contained in information and plans received at the Division of Water on June 11, 2018, July 9, 2018, September 10, 2018 and September 17, 2018.

**Location - Downstream End:**  
The stream crossing at State Road 9 over Unnamed Tributary Richland Creek

**Location - Upstream End:**

<b>Downstream End:</b>	<b>Upstream End:</b>
At/Near: near	At/Near: near
City: Mt Etna	City: Mt Etna
Civil Township: Wayne	Civil Township: Wayne
County and #: Huntington 35	County and #: Huntington 35
Quadrangle: Mount Etna	Quadrangle: Mount Etna
Section: 12	Section: 12
Township: 29N	Township: 29N
Range: 8E	Range: 8E
UTM North: 4505549	UTM North: 4505549
UTM East: 620520	UTM East: 620520

**Staff:**

Administrative: Scott Dean  
Environmental: Matthew Buffington  
Technical: Scott Dean

**History:**  
Application Received: 06/11/2018  
DNR Public Notice: 08/16/2018  
Public Hearing Petition Filed  
Public Hearing Scheduled  
Public Hearing Held

<b>Review Status:</b>	<b>Review Requested</b>	<b>Review Returned</b>
Environmental: 09/16/2018	08/09/2018	09/10/2018
Technical: 08/09/2018		10/22/2018
Historic Preservation Law Enforcement		

**Abseyance Status**

<b>Administrative</b>	<b>Information Requested</b>	<b>Information Received</b>
Environmental: 09/14/2018	09/14/2018	09/17/2018
Technical Historic Preservation		

**Action:**  
Action Taken: Approved  
Taken on: 10/24/2018

An application number FW-XXXXX will be issued when the IDNR begins their review. The status of the review can be monitored at [https://www.in.gov/apps/dnr/water/query/dnr\\_water\\_permit\\_query](https://www.in.gov/apps/dnr/water/query/dnr_water_permit_query)

For the CIF permit that follows here is the status page. Four sections review each application. The environmental section issued an abeyance on Sept. 14 that was resolved by Sept. 19. Abeyances from the technical or hydraulic review are common.

# CIF Approvals: What do they look like?

STATE OF INDIANA  
DEPARTMENT OF NATURAL RESOURCES  
CERTIFICATE OF APPROVAL  
CONSTRUCTION IN A FLOODWAY

**APPLICATION #** : FW-29480 **MAILED: October 24, 2018**

**STREAM** : Unnamed Tributary Richland Creek

**APPLICANT** : Indiana Department of Transportation  
Kristi Todd  
100 North Senate Avenue, Room N642-ES  
Indianapolis, IN 46204-2249

**AGENT** : United Consulting  
Michael S Oliphant  
1625 North Post Road  
Indianapolis, IN 46219-1995

**AUTHORITY** : IC 14-28-1 with 312 IAC. 10

**DESCRIPTION** : The existing corrugated metal pipe arch will be replaced with a 12' by 10' four sided concrete box culvert (Des. 1600237). The new structure will be 288' in length. Additionally, riprap aprons will be placed on geotextile fabric at the inlet and outlet. Temporary impacts include a pump around for dewatering, and sandbag cofferdams on each end of the structure. Temporary impacts will be in place for approximately 4 weeks. Details of the project are contained in information and plans received at the Division of Water on June 11, 2018, July 9, 2018, September 10, 2018 and September 17, 2018.

**LOCATION** : The stream crossing at State Road 9 over Unnamed Tributary Richland Creek near Mt Etna, Wayne Township, Huntington County  
Section 12, T. 29N, R. 8E, Mount Etna Quadrangle  
UTM Coordinates: Downstream 4505549 North, 620520 East

**APPROVED BY** :   
Larissa Mueller, CFM, Sr Environmental Manager  
Division of Water

**APPROVED ON** : October 24, 2018

Included: Notice Of Right To Administrative Review - General Conditions - Special Conditions - Service List

STATE OF INDIANA  
DEPARTMENT OF NATURAL RESOURCES  
SPECIAL CONDITIONS  
APPLICATION #: FW-29480

**PERMIT VALIDITY** : This permit is valid for 24 months from the "Approved On" date shown on the first page. If construction work in the floodway has not been completed by October 24, 2020 the permit will become void. This permit may be renewed one (1) time if a written request is received by DNR, Division of Water prior to October 24, 2020. Thereafter the permit will become void and a new permit will be required in order to continue work on the project.

This permit becomes effective 18 days after the "MAILED" date shown on the first page. If both a petition for review and a petition for a stay of effectiveness are filed before this permit becomes effective, any part of the permit that is within the scope of the petition for stay is stayed for an additional 15 days.

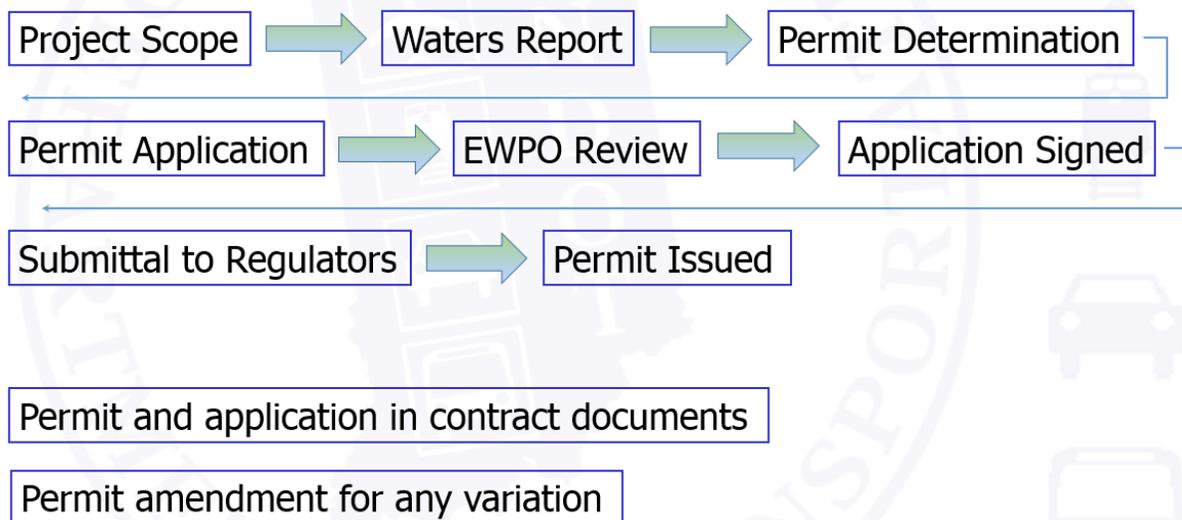
**CONFORMANCE** : Other than those measures necessary to satisfy the "General Conditions" and "Special Conditions", the project must conform to the information received by the Department of Natural Resources on: June 11, 2018, July 9, 2018, September 10, 2018 and September 17, 2018. Any deviation from the information must receive the prior written approval of the Department.

Number	Special Condition
(1)	revegetate all bare and disturbed areas within the project area using a mixture of grasses (excluding all varieties of tall fescue), sedges, and wildflowers native to Northern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion
(2)	minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush
(3)	do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife
(4)	use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids
(5)	do not use broken concrete as riprap
(6)	underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap
(7)	all excavated material must be properly spread or completely removed from the project site such that erosion and off-site sedimentation of the material is prevented
(8)	minimize the movement of resuspended bottom sediment from the immediate project area
(9)	do not deposit or allow construction materials or debris to fall or otherwise enter the waterway
(10)	seed and protect disturbed stream banks and slopes not protected by other methods that are 2:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-weave / Leno-weave netting to minimize the entanglement and smothering of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas

This is the cover of the CIF permit for FW-29480. The permit includes general conditions and project specific general conditions. Two of the general conditions are the requirement to post and maintain the permit at the project site and notice to the applicant that the IDNR has the right to enter the project site to inspect the work.

The project had eighteen special conditions. Some of these conditions include the requirement to revegetate the disturbed areas post construction, project design and construction requirements such as placing aggregate or geotextile to prevent piping of soil underneath the riprap and removing all debris from the floodway at the completion of construction.

## Waterway Permitting Process



The project scope sets the parameters for the area researched in the waters report. The waters report is created during the National Environmental Policy Act (NEPA) process and it documents conditions prior to disturbance. The fieldwork for the report must be done during the growing season. The permit determination is done at 30 percent design and is revised as necessary. The environmental goal of the remaining portion of the design process is to avoid and minimize impacts to regulated resources. This may change the permit type and may reduce mitigation needs.

The permit application should be submitted at 70 percent design. At this point, the impacts and general design considerations should be set enough to minimize post-permit modifications. A EWPO Permit Specialist will review the application to ensure that it accurately and clearly describes the scope of work, regulated impacts, and includes the regulators permit requirements. The EWPO Team Leads, Manager and ESD Director are the **only** authorized signatories for INDOT. The goal is to have the application submitted to the regulator to ensure permits in hand by RFC.

The agency review time and type vary based on the permit type. Some NWP's do not require agency pre-construction notification. In this situation, the contract package would only include the general permit conditions, cover letter and the application. IDEM has 30 days to review a RGP application. They may not provide a permit, but often we obtain an approval email with the permit number and expiration date for our records. A 404 Individual Permit can take up to 12 months to review and a CIF permit up to six months. Multiple DNR divisions review the CIF permit. Any one may find concerns and issue an

abeyance thus delaying the review by the remaining. Hydraulics and the DNR biologists issue the most common abeyances.

A permit amendment is required for changes to the type or amount of impacts or temporary measures impacting a regulated resource that were not permitted. The failure to include temporary measures required for construction is the most common amendment. When the regulator allows, we try to include the need for specific temporary measures in the permit application. If a project with a CIF permit requires a temporary causeway, the contractor must submit a design. Temporary causeways will be permitted as an amendment to the original permit. The amendment request should be processed through the Permit Specialist. An RGP cannot be amended. A new permit must be issued for the additional impacts.

## Project Planning for Permits

---

- What will be done?
  - Box culvert replacement
- What are the permanent impacts to the regulated resources?
  - Fill below the ordinary high water mark form sub-base material, box, wing walls and rip rap
- How will it be done? What temporary impacts will occur?
  - Cofferdams, pump arounds, stream crossings

Any fill in a regulated resource requires a permit from the regulatory agencies. The fill can be permanent, such as the volume of a reinforced box culvert with wingwalls located below the OHWM, or temporary, such as the coffer dam required to construct bridge piers. It is important for the designer to consider how the project will be constructed in order to permit the potential temporary impacts.

# Waters Reports

- Often needed if work or equipment will leave the existing pavement
- Documents jurisdictional features (or lack thereof)
  - Streams (UNTs and named streams) and wetlands
- Must be completed before a permit determination can be made
- Valid for five years from date of earliest field work
- Ecology and Waterway Permitting Specialist approves



The Permit Specialist will work with the consultant if there is a question concerning the need for or the extent of a waters report investigation. EWPO developed [Waters of the United States \(WOTUS\) Documentation](#) to provide direction to the consultants on our requirements and format. One example of what is provided in the WOTUS documentation is directions on how to label stream features. If the stream at the structure is named on the USGS topographic map, we use that name. If the stream is not named, we would use the name of the first named stream downstream of our structure but add Unnamed Tributary To (UNT) in front of it, i.e. UNT to Indian Creek. It is a great resource if you have any questions about the process or concepts used in preparing the report.

## 18-Month Letting List

---

- Ecology and Waterway Permitting Specialist sends an email every month asking about new projects
  - Will work be confined to the existing pavement? Please bear in mind that full-depth replacement is soil disturbance, as is shoulder work.
  - Will equipment stay on the roadway?
- If yes to both, no permits required
- If no to either, permits may be required

EWPO Permit Specialists monitor the 18-month letting list to determine the permit needs for upcoming projects. A permit determination can also be done when the waters report has been reviewed and approved.

## Permit Determination

---

- Performed by Ecology and Waterway Permitting Specialist
- Designer's responsibility to make sure permit specialist is contacted
  - Permit specialists will often initiate process based on letting list or waters report, but may not be able to for every project
- Due dates calculated using permitting time table
  - PMs are welcome to ask for applications sooner than EWPO's date

Now that the waters report has been approved, please provide (or have the designer provide) answers to the following questions for Des. number xxxxxxx (RFC xx/xx/xx):

- What kind of structure work is associated with this project (replacement, painting, scour protection, etc.)?
- What is the estimated total soil disturbance associated with this project in acres? Please provide a number; do not just say "less than 0.9 acres."
- Will any permanent or temporary work take place below the Q100? If so, is the project considered Rural or Urban? What is the upstream drainage area?
- What are the anticipated permanent impacts to any jurisdictional streams (in **linear feet** below ordinary high water mark and in **acres** below ordinary high water mark) and wetlands (acres)?
- What are the anticipated temporary impacts to any jurisdictional streams (in **linear feet** below ordinary high water mark and in **acres** below ordinary high water mark) and wetlands (acres)?
- If riprap is being placed for scour protection, is it just being placed on any existing riprap footprint?
- Will there be any tree clearing?
- Are there any known wildlife concerns (nesting swallows, bats, or **ETR** species located within 0.5 miles of the project)?
- Are preliminary project plans available?

Here are the questions that are asked:

- What kind of structure work is associated with this project (replacement, painting, scour protection, etc.)?
- What is the estimated total soil disturbance associated with this project in acres? Please provide a number; do not just say “less than 0.9 acres.”
- Will any permanent or temporary work take place below the Q100? If so, is the project considered Rural or Urban? What is the upstream drainage area?
- What are the anticipated permanent impacts to any jurisdictional streams (in **linear feet** below ordinary high water mark and in **acres** below ordinary high water mark) and wetlands (acres)?
- What are the anticipated temporary impacts to any jurisdictional streams (in **linear feet** below ordinary high water mark and in **acres** below ordinary high water mark) and wetlands (acres)?
- If riprap is being placed for scour protection, is it just being placed on any existing riprap footprint?
- Will there be any tree clearing?
- Are there any known wildlife concerns (nesting swallows, bats, or Endangered, Threatened or Rare (ETR) species located within 0.5 miles of the project)?

ProjectWise may also be used to review bridge scoping reports, preliminary plans or other information that may help understand the scope of the proposed project.

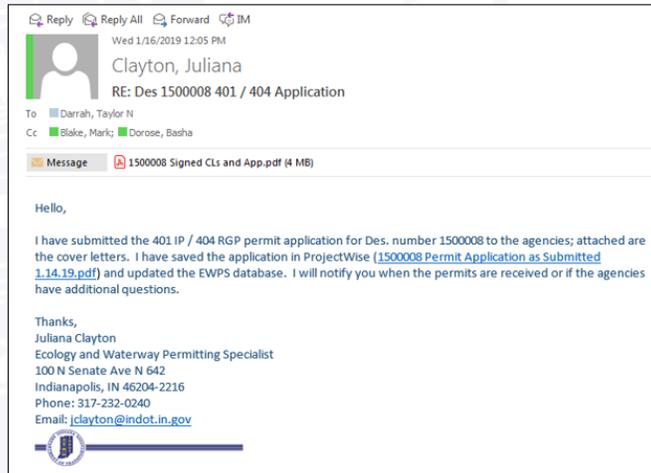
## Permit Timeframes

Agency	Permit Type	Average Agency Review Time (months)	Number of Months Application Packages Need to be Submitted to EWPO Prior to RFC
USCG	Section 9	3 months	5 months
USACE	Section 10	2 months	7 months
USACE	404 Individual Permit	12 to 18 months	20 months
USACE	404 Nationwide Permit	2 months	4 months
USACE	404 Regional General Permit	4 months	4 months
IDEM	401 Individual	2 months	9 months
IDEM	401 Nationwide Permit	1 month	4 months
IDEM	401 Regional General Permit	1 month	4 months
IDEM	Rule 5	1 month	4 months
IDEM	Isolated Wetlands	4 months	9 months
IDNR	All Permits	6 months	9 months
County Drain	Regulated Drain Permit	3 months	4 months

This is the time required for the review of a complete permit application. Incomplete permits will extend the review time. An abeyance or incomplete application notice will stop the clock. This is why the Permit Specialists review is thorough and may seem overkill to those watching the process from the outside.

# Submitting Applications to Regulators

- Once application is signed by the Team Lead, it is submitted to its regulatory agency or agencies by the Permit Specialist
- For average agency review times, refer to Permit Timeframes table



# What does a permit look like?

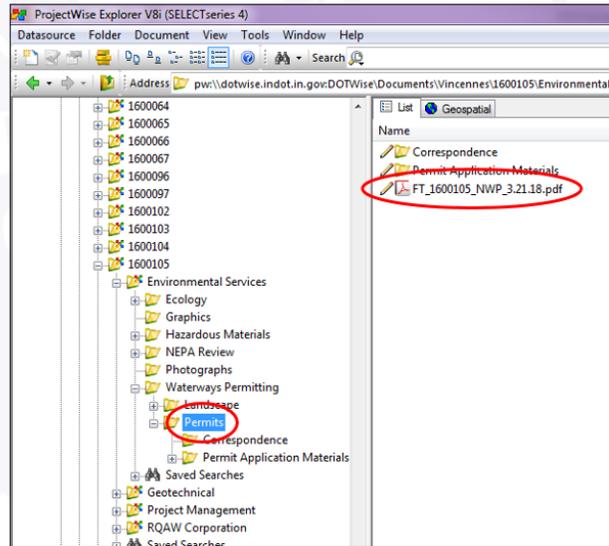
- Permit approval letter / Note to File
- Permit application package
- Permit conditions



The permit approval letter or Note to File, permit application package and the permit conditions must be loaded on the letting website. It provides notice during the bidding process and supports compliant work by the contractor.

# Final Tracings Document

- Must be included on the letting website
- Titled “FT\_DES\_DOC TYPE”
- Attached to approval email and placed in ProjectWise
  - Environmental Services > Waterways Permitting > Permits
  - Includes:
    - Agency approvals (if applicable)
    - Signed cover letter
    - Permit application form
    - Attached activity description (if applicable)
    - Plan sheets
    - Aerial map
    - 401-404 conditions



Permits may not be received by the date of Final Tracings submittal. Permit documents may be added to the letting website at any time, as long as the window to upload documents is open. If permits are received after the window has closed, the project designer should provide FT permit documents directly to contractor.

# Permit Amendments

- NWP or CIF: submit new plan sheets and a brief narrative summarizing changes to the Permit Specialist
- RGP: update State Form 51937
  - Send updated form, activity description, and plan sheets to Permit Specialist, who will forward it to the agencies
- IP: update State Form 51821
  - Send updated form, activity description, and plan sheets to Permit Specialist, who will forward it to the agencies

If the project scope or timeline changes, contact your EWPO Permit Specialist.

The 401 RGP cannot be amended. Therefore changes to the project impacts will require a new permit.

## IDEM Rule 5 Permit

---

- A Rule 5 permit is needed for any project that will have >0.9 acre of soil disturbance.
- Soil Disturbance includes but is not limited to:
  - Full-depth replacement;
  - Shoulder work;
  - Construction entrances;
  - Riprap drainage turnouts riprap around bridge cones;
  - Area under the bridge where equipment will be driving and working;
  - Cofferdams or dewatering systems for scour work, and;
  - Excavation around piers.

A Rule 5 permit is required when the disturbed area is 1.0 acre or greater. INDOT uses 0.9 acre as the break point to account for temporary impacts that may not be included. If a project does not require a Rule 5 permit, it must still comply with Standard Specification Section 205 – Temporary Erosion and Sediment Control.

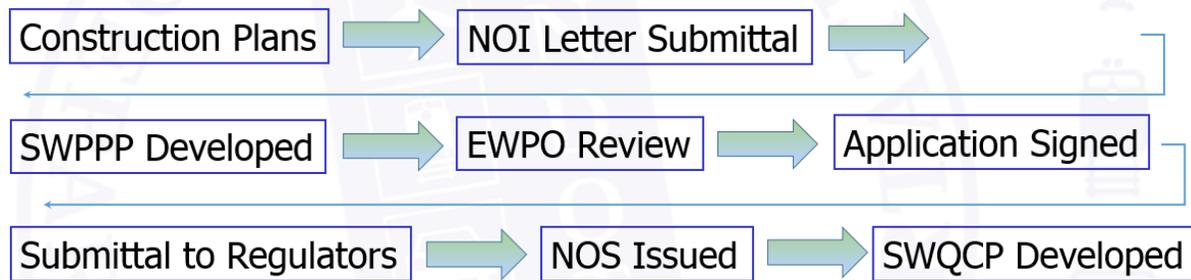
## Rule 5 Permit

---

- Protects regulated resources (streams, wetlands)
- Saves time and money
- Priority of control (cost ↑ as soil movement ↑)
  1. Storm water
  2. Erosion
  3. Sediment
  4. Pollution
- Site inspections
  - Weekly from first disturbance and at rainfall one-half inch or greater
  - End when NOT is approved by storm water and request submitted to IDEM

Compliance with Rule 5 and/or Standard Specification 205 protects streams and wetlands regulated by the USACE, IDEM and/or the IDNR. Compliance saves times and money. It is easier to use measures to keep sediment and other materials out of a resource than it is to remove it. The priority is to control storm water in order to prevent soil erosion. The removal of sediment from a stream or wetland can be very expensive and difficult to execute.

## Rule 5 Permitting Process



- Parts 1 – 4 (NOI, SWPPP, NOS)
- Must be posted with the letting documents
  - Must be posted on the job site
  - Contractors Storm Water Quality Control Plan (SWQCP) completes NOI

The Notice of Intent (NOI) indicates a project owner's intent to operate a construction project in a manner consistent with the Rule. The Storm Water Pollution Prevention Plan (SWPPP) outlines how erosion and sediment will be controlled on the project site. The goal of Rule 5 is to minimize the discharge of sediment off-site or to a jurisdictional waterway (wetland or stream). The plan also describes ways to control other pollutants to include disposal of building materials, management of fueling operations, concrete washout water, and a plan to control pollutants associated with the post-construction land use.

IDEM issues the Notice of Sufficiency (NOS) after approval of the Rule 5 application and it confirms receipt of all NOI submittal requirements. The NOS and NOI with the SWPPP must be posted at the job site bulletin board.

The Storm Water Quality Control Plan (SWQCP) is developed by a professional engineer (CPESC, or CPESC in training) working for the contractor. It contains phasing and sequencing of construction and addresses the installation, maintenance and removal of storm water management measures through the phases. The SWQCP also includes information for construction entrances, portolets, haul roads, lay down yards, concrete waste water, stockpiles, equipment storage, batch plants and borrow & disposal sites. It should be submitted to the INDOT Project Engineer (PE) 14 days prior to start of operations and can be submitted in phases. It must be kept current and be available on site while the project is in construction. See USP 205-R-636.

## Mitigation

---

- Compensation for impacts to regulated resources
- Required when a project impacts > 300 LF of streams, or 0.1 total acres of streams and/or wetlands.
- Can be
  - Credits from a mitigation bank
  - Credits from the DNR IN SWMP In-lieu Fee Program
  - Permittee Responsible

When a project impacts more than the amount allowed by regulation, mitigation will be required. IDEM may also require restoration of site as mitigation for impacts. For example, when a stream must be shifted from its current position to allow the construction of a bridge and the approach at the new standards. IDEM will require specific requirements to be met for the stream at the new location and may require monitoring to ensure it is stable before release.

## Mitigation Hierarchy

---

Hierarchy from USACE Section 404(b)(1) Guidelines

### #1 Mitigation Bank –

- Sale of credits for stream or wetland mitigation that has been created.
- Requires approval of USACE and IDEM prior to sale.

### #2 In-Lieu Fee Program –

- Sponsor has been approved to accept funds to develop stream and wetland mitigation.
- Credits are sold prior to creation.
- Responsibility is transferred from the permittee to sponsor with payment.

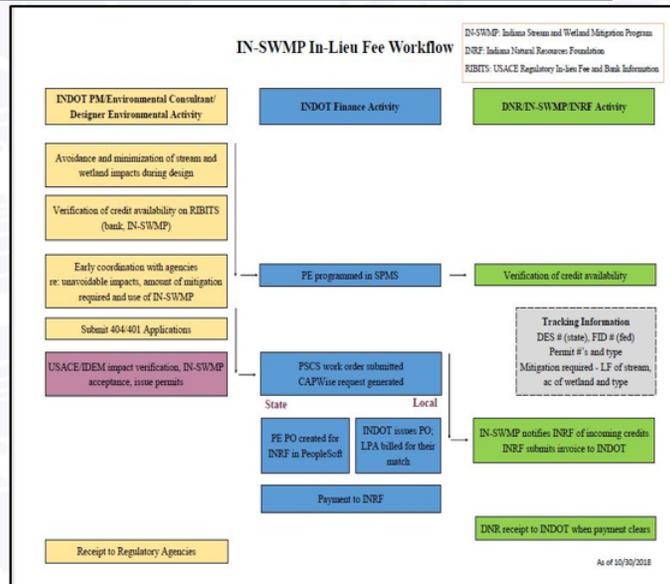
### #3 Permittee Responsible –

- Stream and wetland mitigation undertaken by the permittee.
- The permittee retains full responsibility for the successful creation of the mitigation.

The USACE 404(b)(1) Guidelines establishes the hierarchy for the type of mitigation. There is no temporal loss, or time between the loss of aquatic resource functions and their replacement, when the mitigation purchase is from a bank since the wetland or stream mitigation already exists. An in-lieu fee program will provide more ecologically valuable sites, in size and quality, than permittee responsible mitigation.

## Mitigation Credits

- Permit application states how mitigation will be provided
- Permits states type and quantity required
- Cost based on linear feet of stream or wetland acres impacted
- Purchase runs concurrently with permit application



There are several mitigation banks in Indiana, including one owned by INDOT for INDOT mitigation (Wolfe). Each bank covers specific watersheds and must have USACE approved credits of the type impacted available.

The Indiana Stream and Wetland Mitigation Program (IN SWMP) is the IDNR In-Lieu-Fee program. It was approved in May 2018. Permittees pay a set price per acre or linear feet based on the service area. Once payment has been received, INDOT is no longer responsible for providing the mitigation. IDNR has three years from payment to start construction.

## Permittee Responsible Mitigation

---

- Construction or restoration of streams/wetlands to offset project impacts.
- Requires site of sufficient size and design potential.
- Constructed by project consultant or subcontractor.
- Monitoring and maintenance required for three to ten years.



The majority of INDOT mitigation completed prior to May 2018 was permittee responsible. INDOT has created 323 mitigation sites and more than over 80 currently being monitored.

Here are examples of mitigation provided for a couple of INDOT projects. The off-site wetland and stream mitigation for the State Road 23 bridge replacement project did not have the hydrology required to develop wetlands for the 404 and 401 mitigation. The mitigation site did provide the acreage required for the CIF tree mitigation. The Kankakee Sands Mitigation bank provided 0.27 acre of emergent wetland credits for \$24,300. The 3.0 acres of forested wetland credit for \$285,000 and 310 LF of stream mitigation credit for \$155,000 was provided through IN SWMP.

The mitigation for I-69 Sections 6.2 through 6.5 will be provided through a combination of permittee responsible mitigation and in-lieu fee credits. INDOT is developing five mitigation sites that will provide all of the wetland mitigation and some of the stream mitigation. More than 10,000 LF of stream credits will be purchased from IN SWMP for over \$4 million.

# CIF Mitigation

- Requirements
  - CIF permit
  - Trees removed within the 100 year floodway
  - Plan follows NRC Information Bulletin #17
- Trees planted on-site or off-site
- May be monitored by Permit Specialist.

Habitat Category	Disturbed Area	Location	Mitigation Ratio
Emergent Wetland			2:1
Scrub-Shrub Wetland			3:1
Forested Wetland			4:1
Non-wetland Forest	≥ 1 acre		2:1
Non-wetland Forest	< 1 acre	Rural	1:1
Non-wetland Forest	< 1 acre	Urban	5:1*

\* For each tree removed ten (10) inches diameter-at-breast-height or greater.

Avoidance and minimization of impacts to resources under the jurisdiction of the IDNR through the Construction in a Floodway permit is important. An INDOT bridge replacement project located in Monticello, as originally designed, would have impacted 23 trees, 10 inches diameter-at-breast-height (dbh). Since the project was in an urban area, we would have had to plant 115 trees. Modifying the tree removal and grading plan reduced the number of impacted trees to 10. There was sufficient room on-site to plant the 50 trees and 25 shrubs proposed for mitigation. Additional trees were planted outside of the floodway to enhance the site.

The IDNR is in the process of developing an in-lieu fee program for CIF mitigation. This will be a valuable resource for projects that lack the room for on-site mitigation. The S.R. 213 Bridge Replacement project over the Wildcat Creek is a good example of a project that could have used this program. The site is located in a rural area and the tree clearing required for installation of the bridge required 1.0 acre of mitigation. Additional tree clearing to install the utilities resulted in the requirement for an additional acre of mitigation. There was no room to provide the mitigation in the immediate area.

It may not be appropriate to use the program for all projects. The S.R. 167 bridge replacement project near Albany, as originally designed, would have removed 33 trees that would have required mitigation. The design was modified to account for the lower traffic volumes and the number of trees requiring removal was reduced to 13. The City of Albany park was located downstream in the floodway. INDOT planted 75 trees (10 extra) in the park. It was losing many of the old trees to disease and storm damage. This placed the trees near the impact site while also helping the local community.

## What happened?

---

- I-64 was overtopping during high rain events
- Insufficient storage in right-of-way and sizing of bridges from design
- Trees removed, banks regraded, and riprap in the channel without permits
- Banks were left unprotected, and sediment washed into creek
- IDEM Rule 5 violation
- USACE letter of violation
- Project initiated to improve storage in right-of-way
- Required permits and mitigation

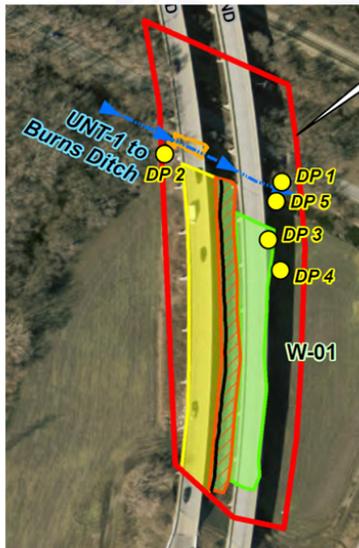


This location along I-64 was over topping with water during high rain events causing a serious safety issue. In one storm, cars and trucks floated off the roadway. INDOT maintenance staff was directed to work on the area to reduce the water problems. They removed trees, regraded the banks and placed riprap in the channel without obtaining permits. Measures to protect the banks from erosion were not installed immediately after the disturbance and resulted in sediment entering the creek. An IDEM Erosion and Sediment Control Specialist assigned to the area noticed the fresh disturbance and a violation notice was issued. USACE subsequently also issued a violation. A project was initiated to increase the storm retention in the median by creating a two stage ditch. Mitigation for the project will consist of enhancing the two stage ditch and surrounding area, floodway tree planting for the IDNR CIF permit and the purchase of bat habitat mitigation credits.

# I-64 Hurricane Creek



## What happened?



- Impacted Wetland (W-01)
- Delineated Wetland (W-01)
- Temporary Crane Mat Bridge
- Active Construction Area

- Bridge Deck Replacement
- Twin continuous composite steel beam bridges
- 16 spans, total length – 1,100 LF
- Programmatic CE – work was originally not going to leave roadway
- Plans were changed – contractor placed timber mats through wetland and created a stream crossing, without permits

There may be situations where errors in the project planning and design phase impact construction. This is a bridge deck replacement project. During planning, the project was determined to fit under the Programmatic Categorical Exclusion (CE). The programmatic CE includes superstructure replacement and activity in previously disturbed soils. In addition, the project must not require any work that would need a waterway permit. Could this bridge deck replacement project be done without access from below the bridges? The proposed maintenance of traffic (MOT) plan required that both bridges be closed to traffic and all work be done from the other bridge. The MOT proposal was not approved. The planning

and permitting process needs to consider project execution. The project went to construction without a waters report or a permit for temporary impacts.

The site was inspected in July, 2018 by the District Erosion and Sediment Control specialist who identified the permit violation - unpermitted fill in a regulated resource. A waters report was done in August. The area under the bridge and extending to the sides was a wetland.

## Where did we go wrong?

---



The permits required for this project included 404 and 401 RGPs for the temporary fill in the wetland from the crane mat.

## Responding to a potential permit violation

---

1. Stop activity causing potential violation
2. Implement measures to prevent additional environmental impacts
3. Contact
  - District Environmental Staff
  - ***EWPO Permit Specialist***
  - District Construction E&SC Specialists
4. Document
  - What happened
  - Resulting impacts
  - Photos
5. Work with Permit Specialist to determine
  - Is there a violation?
  - What agency notification is warranted?
  - What corrective action is required?

The first step in our response is to stop any activity causing a potential violation. Are there any measures that can be implemented to stop additional impacts? If yes, implement them. The following steps will depend on the situation. Contact the District Construction Erosion and Sediment Control Specialist and your EWPO Permit Specialist. They will help with what is required from the permit perspective.

## Endangered Species Act (ESA)

---

- Listed Bat Species
  - Indiana Bat (Federally Endangered - FE)
  - Northern Long-Eared Bat (NLEB) (Federally Threatened)
  - Gray Bat (FE)
- Programmatic BO for Transportation Projects
  - Covers Indiana Bat and NLEB
  - Avoidance and minimization measures (AMMs) identified early in planning process



Hibernating Indiana bats; one with a wing band by Andrew King/USFWS

There are three bat species in Indiana that are protected under the Endangered Species Act (ESA). The Gray Bat, found in the southern part of the state, requires direct coordination with the U.S. Fish and

Wildlife Service (USFWS) for projects with potential impacts. The process for the Indiana Bat and Northern Long Eared Bat is different since they are covered under the Range-Wide Programmatic Consultation. This established procedures to simplify the consultation process for transportation projects for these species. Avoidance and minimization measures (AAMs) are required for each project. The AAMs are firm commitments.

If bats are using a structure, we will need to determine the species prior to determining the appropriate course of action. This is using done through genetic testing of guano collected from under the bridge if circumstances do not allow for a positive visual identification. It may take several months to receive test results. For example, a bridge rehabilitation site located in southern Marion County had a large number of bats using it based on the amount of staining and guano present. Guano samples were taken from all of the areas under the bridge. The results came back that the bats were Tri-colored bats. Some of the bats observed were pregnant so it was assumed that it was a maternity colony. Measures were developed to exclude the bats from using the bridge during the rehabilitation work. The measures will be removed post-construction to allow the bats continued use of the bridge.

## Endangered Species Act (ESA)

- Freshwater Mussels

- 10 Listed Species – nine endangered, one threatened



Northern RiffleShell  
FE

Sheepnose  
FE



Fanshell  
FE



There are 10 listed freshwater mussel species that can be found in Indiana waters. In most circumstances, the presence of mussels in the project area would have been identified during the early coordination process. The USFWS and IDNR coordination would determine the avoidance and mitigation requirements for the project. An example of mitigation provided was the relocation of mussels from the project site.

## Endangered Species Act (ESA)

- Freshwater Mussels



Clubshell  
FE



Snuffbox  
FE

- Asian Clam – common invasive, not protected



## Endangered Species Act (ESA)

- Rusty Patched Bumble Bee

- Listed 1/11/2017
- Nesting – underground, abandoned rodent cavities, clumps of grass
- Keystone species
- Crop pollinator



Rusty patched bumble bee; courtesy of ©Christy Stewart

The Rusty Patched Bumble Bee is the first bee species to be listed. Many other species are under stress. Their presence in a project area would be identified during the early coordination process.

In rare circumstances a project area may contain state listed species. This includes mammals, birds, fish, amphibians and reptiles. If there is the potential for the project to impact them, a species specific USP will be developed to avoid and minimize impacts.

## Migratory Bird Treaty Act (MBTA)

---

- Barn Swallows



- Cliff Swallows



Eastern Phoebe



The three species of migratory birds found on our structures are the Barn and Cliff Swallows and the Eastern Phoebe. The swallow nests are made of mud and can be found in groups. The Eastern Phoebe nests alone. The nest has other fibrous material in it. It may be attached to a wall or constructed on a flat surface.

Awareness of the potential for the use of a structure by migratory birds early in the planning process is essential. The bridge inspection, IDNR Early Coordination letter and waters reports are documents that should indicate whether birds were using the structure. This information should get transferred to the NEPA document. The ability to change the project letting date could ensure that a contractor was in place to implement avoidance and minimization measures prior to the start of construction.

# Migratory Bird Treaty Act Compliance

---

Step 1. Avoidance and minimization throughout planning and project construction

- Unique Special Provision for projects with documented use or bridges located over/near water resource
- Special situations from agency coordination documents

Step 2. Identify remaining potential to impact migratory birds after avoidance and minimization measures implemented

Step 3. Evaluate to determine if potential impacts will be “incidental”

Step 4. If “incidental,” construction continues without implementation of additional measures

Avoidance and minimization measures must be implemented as part of the planning process and during construction. Awareness of the need to have a contractor in place so that nests can be removed prior to May 1 is essential. INDOT does not have sufficient maintenance or construction staff to remove nests and monitor the site until the contractor is mobilized. If active nests are present EWPO will assist with the evaluation of whether the work can continue. This will depend upon such factors as the avoidance and minimization measures implemented, the type of work to be performed and the location of the nests in relation to the work area.

# Migratory Bird Treaty Act

---

- General Guidelines

- Do not disturb nests with eggs or young
- Can remove nests from under bridge prior to May 1<sup>st</sup>, if no eggs or young present
- Regular monitoring is required
- Remove new nest construction prior to egg laying
- Inspect prior to start of work each day, remove nest if no eggs or young present
- Once cleared construction can begin



For current EWPO contacts go to <https://www.in.gov/indot/2522.htm>