

Waterway Permitting Manual



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NOTE: This manual is intended for use by INDOT staff and consultants. It is a guide to the regulatory process and the role of the Ecology and Waterway Permitting Office within that process. It should not be used to provide a final permit evaluation for individual projects or subvert the role of the regulatory agencies or federal or state law. INDOT EWPO staff, in consultation with the regulatory agencies, will determine the permit requirements for state projects. Other projects may also benefit from the guidance in this manual such as local projects that receive federal funds. However, INDOT does not make permit determinations or review permit applications for local projects.

Revision History [Additional updates may be required.]

Date	Page	Revision
12.14.2021	19 33 53 63 70	Updated to reflect July 2021 Sole Source Aquifer MOU Updated requirement for Rule 5 permit change from 0.9 to 1.0 acre of disturbance Added map of USACE Civil Works Boundaries eff. 29 March 2020 Updated to include DNR In-Lieu Fee (ILF) Mitigation INDOT/DNR Maintenance MOU (under revision, not finalized)

CHAPTER 1 - INTRODUCTION TO WATERWAY PERMITTING

1.1 WHAT IS A WATERWAY PERMIT?

A waterway permit is a legal document that authorizes impacts to aquatic resources such as wetlands, streams, and floodplains. A permit application provides the regulatory agencies the information required to evaluate project impacts to the resources they are legally mandated to protect and issue a permit authorizing the impacts. The application also acknowledges the applicants' intent to comply with the laws and regulations for the proposed project as presented in the permit application.

The Indiana Department of Transportation (INDOT) Ecology and Waterway Permitting Office (EWPO) developed this manual as a guide to the regulatory process and EWPO's role within that process. It should not be used to provide a final permit evaluation for individual projects or subvert the role of the regulatory agencies or federal or state law. The EWPO will determine the permit requirements for state projects in consultation with the regulatory agencies.

1.2 INDOT ENVIRONMENTAL SERVICES DIVISION ORGANIZATION AND ROLES

The Environmental Services Division (ESD) is responsible for ensuring that INDOT projects comply with all federal, state, and local environmental laws and regulations during the project development process. The division also provides technical support for projects under construction. There are three offices: Cultural Resources (CRO), Environmental Policy (EPO), and Ecology and Waterway Permitting. Each office provides technical assistance and training to INDOT staff, consultants, and the public on the environmental requirements that pertain to transportation projects, in addition to work product review and approval.

The CRO provides historians and archeologists to support INDOT project planning. The EPO is responsible for ensuring all INDOT projects comply with the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA). To comply with NEPA, INDOT documents the environmental impacts of its transportation projects and, when necessary, provides the opportunity for public input and participation throughout project development. Guidance from this office is available [online](#), including the most recent version of the Categorical Exclusion (CE) Manual and the procedural manual for preparing environmental studies. NEPA documents (to include the waters report) provide information that is useful when preparing permit applications such as:

- Presence of aquatic resources, including but not limited to floodplains, rivers, streams, wetlands, and ponds;
- Existing aquatic resource quality, including habitat assessments;
- Presence of federal and/or state listed endangered, threatened, or rare species;
- Historical properties subject to Section 106 of the National Historic Preservation Act;
- Presence of environmentally sensitive areas, such as karst resources; and
- Preliminary estimates of aquatic resource impacts and the potential waterway permits associated with the impacts.

The EWPO is comprised of two Ecology and Waterway Permitting Teams and a Storm Water Team. Each specialist is assigned an INDOT district or districts and will coordinate on all project needs within their assigned area. In addition, three team leads supervise and assist the specialists. Two multidistrict staff members assist with ecology and waterway permitting projects. A map of the ecology and waterway

permitting staff areas is available on the [INDOT EWPO webpage](#). The roles and responsibilities of the two teams are:

Ecology and Waterway Permitting

- Review or prepare waters of the U.S. reports or other ecological evaluations;
- Conduct permit determinations (PD);
- Review, prepare, and process waterway permit applications, amendments, and extensions for INDOT projects with impacts to aquatic resources;
- Review or prepare mitigation plans and coordinate on mitigation site selection;
- Review or prepare monitoring reports for INDOT mitigation sites; and
- Conduct field visits of INDOT project sites under construction to verify compliance with applicable environmental laws and regulations and provide technical guidance to resolve compliance issues.
- Conduct land management of mitigation sites.

Storm Water

- Develop INDOT policies, procedures, and standards relating to storm water quality;
- Prepare or review Storm Water Pollution Prevention Plans (SWPPPs);
- Coordinate with construction and conduct field visits to provide technical assistance to assist with construction storm water compliance;
- Liaison between INDOT construction and IDEM regarding inspections and violations;
- Implement the INDOT Storm Water Quality Management Plan (SWQMP) as an MS4 (Municipal Separate Storm Sewer System); and
- Provide landscape architecture technical assistance.

1.3 RELEVANT ENVIRONMENTAL LAWS, DECISIONS, AND EXECUTIVE ORDERS

National Environmental Policy Act (1969)

The Council on Environmental Quality (CEQ), located within the Executive Office of the President, has oversight over federal agency implementation of the [National Environmental Policy Act \(NEPA\)](#). The purpose of NEPA is to ensure that environmental factors receive equal weight when compared to other factors in the decision making process. It requires all federal agencies and their designees to disclose and consider the environmental implications of proposed actions. NEPA established three levels of analysis that depend on if the project has “potential to affect the quality of the human environment.” These levels are Categorical Exclusion (CE), Environmental Assessment (EA), or Environmental Impact Statement (EIS). A project that qualifies for a CE does not, individually, or cumulatively, have a significant effect on the quality of the human environment. An EA is prepared for projects not eligible for a CE to determine if a proposed action or its alternatives have potentially significant environmental effects. The EA process will conclude with either a Finding of No Significant Impact (FONSI) or a determination that an EIS must be prepared. An EIS is a detailed written report that provides full and fair discussion on significant environmental impacts and informs decision-makers and the public of the reasonable alternatives that would avoid or minimize adverse impacts or enhance the quality of the human environment.

Clean Water Act (1972)

The Clean Water Act (CWA) is the principal federal law protecting our nation’s waters, including lakes, rivers, wetlands, and coastal areas (33 U.S.C. § 1251 et seq.). The Federal Water Pollution Control Act,

enacted in 1948, was reorganized and expanded in 1972 and took on the Clean Water Act common name. The CWA established the structure for regulating the discharges of pollutants into the waters of the United States and surface water quality. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of our nation’s waters. Its interim goal is to make surface waters usable for drinking water and recreation activities such as fishing and swimming.

[Section 404 of the CWA](#) pertains to the discharge of fill materials into waters of the United States. The 404 regulatory program is administered by the U.S. Army Corps of Engineers (USACE) with oversight from the U.S. Environmental Protection Agency (EPA). Resources under USACE jurisdiction include:

- Traditionally navigable waters;
- Wetlands adjacent to traditional navigable waters;
- Non-navigable tributaries of traditional navigable waters where water flow is year round or relatively permanent (typically three months); and
- Wetlands directly adjacent to non-navigable tributaries.

The USACE makes the final ruling on whether an aquatic resource is a jurisdictional feature (water of the U.S.) or whether a wetland is non-jurisdictional or “isolated.” An “*isolated*” wetland is not under the USACE’s jurisdiction but is regulated by the state isolated wetlands program administered by IDEM.

Wetlands are delineated by using the [1987 U.S. Army Corps of Engineers Wetland Delineation Manual](#) and applicable regional supplements. Three regional supplements that cover the state of Indiana: Midwest, Eastern Mountains and Piedmont, and Northcentral and Northeast. See the [INDOT Ecology Manual](#) for more information on the USACE Regional Supplements.

The EPA has primary federal authority for implementation of the CWA. The EPA, in conjunction with the USACE, developed the [Section 404\(b\)\(1\) Guidelines for the Specification of Disposal Sites for Dredged or Fill Material](#). 40 CFR § 230. The purpose of the guidelines is to “restore and maintain the chemical, physical, and biological integrity of waters of the United States through the control of discharges of dredged or fill material.” 40 CFR § 230.1(a). The fundamental principle is that “dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern.” 40 CFR § 230.1(b).

USACE’s approval of discharges of dredged or fill material is contingent upon the project complying with the CWA Section 404 (b)(1) Guidelines (40 CFR § 230.10). No discharge of dredged or fill material will be permitted if:

- There is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences (i.e., the Least Environmentally Damaging Practicable Alternative (LEDPA)) 40 CFR § 230.10(a);
- The project causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable state water quality standard or toxic effluent standards (40 CFR § 230.10(b)(1) and (2));
- The project jeopardizes the continued existence of species listed as endangered and threatened under the Endangered Species Act of 1973 or results in likelihood of the destruction or adverse modification of critical habitats (40 CFR § 230.10(b)(3));
- The project causes or contributes to significant degradation of the waters of the U.S. (40 CFR § 230.10(c)); and

- Appropriate and practicable steps have not been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (40 CFR § 230.10(d)).

The USACE will evaluate the potential short- or long-term effects of the proposed discharge on the physical substrate, water circulation and fluctuation, suspended particulate/turbidity, contaminant, and aquatic ecosystem and organisms. (40 CFR § 230.11). Actions to minimize adverse effects will be reviewed to include discharge location, material to be discharged, control after discharge, dispersion method, effects on animal and plant populations and human use. (40 CFR Subpart H).

In order to comply with these guidelines, USACE permit applications must demonstrate that the permittee has taken steps to avoid impacts to water resources (where practical), minimize potential impacts to waterways, and provide compensatory mitigation (40 CFR Subpart J) for any remaining unavoidable impacts through activities to restore or create water resources.

To streamline permitting, the USACE has a set of general permit programs for projects with low impacts to aquatic resources: the nationwide permit (NWP) program and the regional general permit (RGP) program. The majority of INDOT projects are permitted using these two programs. Any project that exceeds the impact thresholds of these programs, or cannot comply with one or more of their general conditions, requires a 404 individual permit (IP). Refer to Chapter 4 for more information about these USACE programs.

The following rules and court decisions have resulted in changes to the implementation of Section 404 of the CWA.

[Tulloch Rule \(1993\)](#)

The [Tulloch Rule](#), issued in 1993 by the EPA and the USACE, revised the definition of "discharge of dredged material" to include the incidental fallback of any excavated materials that occurs during dredging operations. Activities such as mechanized land clearing, ditching, draining, and stream channelization were problematic under the CWA due to confusion over whether the excavation and spilling of debris associated with these activities constituted discharge of materials into waters of the U.S. However, a 1998 court decision found that these agencies lacked authority under the CWA to regulate such activities if conducted in such a manner as to result in only "incidental fallback" (excavated material that falls back to substantially the same place as the initial removal). In May 1999, the EPA and the USACE issued a final rule modifying the definition of "discharge of dredged material" to respond to the Court's finding and to ensure compliance with the Court decision.

The EPA and the USACE proposed further rule revisions that were finalized and went into effect in April 2001. The final rule modifies the definition of "discharge of dredged material" by clarifying what types of activities the EPA and USACE believe typically result in regulated discharges, based on the nature of the equipment and agency experience. Under the rule, these agencies regard the use of mechanized earth moving equipment to conduct land clearing, ditching, channelization, in-stream mining, or other earth-moving activity in waters of the U.S. as resulting in a discharge of dredged material, unless project-specific evidence shows that the activity results in only "incidental fallback."

The Tulloch Rule does not allow for side casting of materials. Any materials removed from a jurisdictional water should be removed from the waterway, placed into a hauling truck (or other secure means of removal), and disposed of at an approved upland location away from aquatic resources subject to waterway permits. The permittee would need project specific evidence

showing that the activity only resulted in incidental fallback to apply this rule. The volume and amount of material, as well as the nature and distance of relocation, are relevant in determining whether incidental fallback or a regulated discharge occurred.

SWANCC Decision (2001)

The U.S. Supreme Court made its ruling on *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers* on Jan. 9, 2001. 531 U.S. § 159 (2001). SWANCC, a consortium of Chicago municipalities, selected an abandoned sand and gravel pit as a solid waste disposal site. The bottom of this pit contained permanent and seasonal ponds and wetlands. The operation called for filling in some of these aquatic resources. Because of this, SWANCC applied for a Section 404 permit which was subsequently denied by the USACE. Section 404 of the CWA authorizes the USACE to issue permits for the discharge of dredged or fill material into “navigable waters of the United States.” However, the USACE did retain authority over hydrologically isolated wetlands, such as those at the SWANCC site, through its 1986 Migratory Bird Rule, which stated that Section 404 extends to intrastate waters that provide habitat for migratory birds. The SWANCC decision held that the USACE exceeded its statutory authority by using the Migratory Bird Rule to assert CWA jurisdiction over isolated wetlands. USACE still regulates isolated wetlands that support interstate commerce, but the SWANCC decision prohibits the USACE from using the Migratory Bird Rule as the sole basis for assertion of regulatory jurisdiction under the CWA in determining the interstate commerce connection.

The SWANCC verdict also extended USACE’s authority under Section 404 to all wetlands adjacent to navigable or interstate waters and their tributaries. The decision approved a definition of adjacent as “bordering, contiguous, or neighboring.” Thus, wetlands separated from other waters of the U.S. by man-made barriers such as dikes, natural river berms, and beach dunes are adjacent wetlands. Historical connections on U.S. Geological Survey (USGS) topographic maps should be used to determine adequate connection between a wetland and waters of the U.S. The USACE makes the final determination on the jurisdiction of wetlands.

Rapanos Decision (2006)

The U.S. Supreme Court’s decision in the case of *Rapanos v. United States* (126 S.Ct. § 2208) in 2006 resulted in changes to the jurisdiction of the USACE and the EPA under Section 404 of the CWA. The U.S government alleged that Rapanos illegally discharged fill material into protected wetlands violating the CWA. Rapanos argued that the disturbed wetlands were not "adjacent" wetlands subject to the CWA because they had only a surface connection to non-navigable waters of the United States. The Supreme Court ruled that the USACE must establish a “significant nexus” on a case-by-case basis when determining whether a water is jurisdictional. The USACE assesses the flow characteristics and functions of the tributary, and the functions performed by wetlands adjacent to the tributary, to determine if they will significantly affect the chemical, physical, and biological integrity of the downstream traditional navigable waters when making a significant nexus assessment. This considers hydrologic and ecologic factors.

As a result of the Supreme Court’s ruling, the USACE and United States Environmental Protection Agency (USEPA) will assert their jurisdiction over the following waters:

- Traditionally navigable waters;
- Wetlands adjacent to traditional navigable waters;
- Non-navigable tributaries of traditional navigable waters where water flow is year round or relatively permanent (typically three months); and
- Wetlands directly adjacent to non-navigable tributaries.

The USACE and the EPA will determine jurisdiction using significant nexus for the following waters:

- Non-navigable tributaries without relatively permanent flow;
- Wetlands adjacent to non-navigable tributaries without relatively permanent flow; and
- Wetlands not directly adjacent to waters with a relatively permanent flow.

The USACE and the EPA will not assert jurisdiction over the following features:

- Swales or erosion features; and
- Ditches (including roadside ditches) excavated wholly in and draining only uplands that do not carry a relatively permanent flow of water.

The Environmental Law Institute published the Second Edition of the [Clean Water Act Jurisdiction Handbook](#) in May 2012. Chapter 4 of the handbook provides wetland and stream checklists to help assess CWA jurisdiction.

Endangered Species Act (1973)

The [Endangered Species Act \(ESA\)](#) protects federally listed endangered and threatened species and requires conservation of their critical habitats. All federal agencies must protect these species and preserve their habitats. The U.S. Fish and Wildlife Service (USFWS) administer this act. INDOT complies with the ESA by performing ecological coordination during the preparation of the project's NEPA document. Refer to the [INDOT Environmental Policy Manuals](#) for detailed information on Section 7 consultation. The federal regulatory agencies are required to ensure INDOT compliance with the ESA prior to issuing a waterway permit. Mitigation for impacts to endangered or threatened bat habitat is discussed in Section 10.5.

Clean Water Act, Section 401 Certification (1972)

The CWA requires each state to establish and evaluate its water quality standards. Under [Section 401](#), states are required to certify that the discharge of fill will not violate their water quality standards. The Indiana Department of Environmental Management (IDEM) administers Section 401. Anyone who wishes to discharge dredged or fill material into waters of the U.S. must obtain a Section 401 Water Quality Certification (WQC) from IDEM. This includes individuals, businesses, and government agencies. The applicant must demonstrate that the proposed project will comply with Indiana's water quality standards. The relationship between the 404, 401 and state isolated wetland permits are discussed in Chapters 4 and 5.

Isolated Wetlands in Indiana (2004)

At the time of the SWANCC decision, many states, including Indiana, did not have wetland regulations specifically for isolated wetlands. The general assembly gave IDEM authority to regulate isolated wetlands through rule making and permitting ([IC 13-18-22](#)). An isolated wetland is a wetland not subject to regulation under Section 404(a) of the CWA. IC 13-18-22 establishes a wetland classification system, general permits and exemptions, and gives IDEM the authority to regulate the placement of dredged or fill material into isolated wetlands. This will be explained further in Section 5.3.

Executive Order 11990 (1977)

[Executive Order 11990](#) requires each federal agency to develop procedures to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of

wetlands. This order states that each federal agency shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds:

- There is no practicable alternative to such construction; and
- The proposed action includes all practicable measures to minimize impacts to wetlands.

The FHWA has adopted policies to implement the requirements of Executive Order 11990 in “Order on Preservation of the Nation’s Wetlands” (USDOT Order 5660.1A). This includes a wetland finding in NEPA documentation for projects impacting wetlands. FHWA policy requires that wetlands be identified, characterized, and evaluated for the extent of impacts through the NEPA and project development process. Project proponents are required to evaluate practicable avoidance alternatives to wetland impacts. If avoidance alternatives are not practicable, then practicable measures to minimize harm must be considered and included in the project. The order includes isolated wetlands and requires the same avoidance and minimization efforts required for jurisdictional wetlands.

Rivers and Harbors Act (1899)

[Section 9 of the Rivers and Harbors Act](#) prohibits the construction of any dam or dike across any navigable water of the U.S. without USACE authorization. It also prohibits the construction of bridges or causeways in or over commercially navigable waters of the U.S. without authorization by the United States Coast Guard through the issuance of a bridge permit or permit amendment. The purpose of the Act is to prevent interference with the navigability of navigable waters by bridges or other obstructions to include controlling horizontal and vertical clearances for commercial navigation.

[Section 10 of the Rivers and Harbors Act](#) is administered by the USACE. It prohibits the creation of any obstruction to the navigable capacity of any waters of the U.S. without prior USACE approval. Section 10 requires a permit for all work (other than construction of bridges or causeways) performed in or over navigable waters of the U.S. Activities that would require USACE approval include, but are not limited to, structure construction or the excavation, fill, alteration, or modification of jurisdictional waters.

Fish and Wildlife Coordination Act (1936)

The [Fish and Wildlife Coordination Act of 1936](#), and its subsequent amendments, requires federal agencies to consult with the USFWS and the head of the state agency exercising administration over the wildlife resources that will be impacted. The goal of the Act is the prevention of loss of and damage to wildlife resources. Early coordination with the USFWS and IDNR occurs during the NEPA process.

Flood Control Act (1995)

The [Flood Control Act](#) (IC 14-28-1) regulates development activities within the 100-year floodway of any Indiana waterway. The intent is to prevent loss of life and property from flooding. Development activities includes bank protection, structure work (bridges/culverts), excavation, fill, outfalls, and certain utility work. The IDNR requires a permit for any non-exempt work within the floodway.

In addition to reviewing a project’s impacts on the floodway’s capacity, IDNR will also evaluate the project’s environmental impact to the floodway. If the project is found to have “unreasonable detrimental effects upon fish, wildlife, or botanical resources,” compensatory mitigation may be required. Refer to Chapter 6 for more information on the IDNR Flood Control Act permitting.

Wild and Scenic Rivers Act (1968)

The [Wild and Scenic Rivers Act](#) was created to preserve rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The

designated rivers, with their immediate environments, possess outstanding or remarkable scenic, recreational, geological, fish and wildlife, historic, cultural, or other similar values. The three classifications are wild, scenic, and recreational. Indiana has no designated rivers. The Maumee River was evaluated in 1974 and was not qualified.

NPDES General Permit Rule Program (1992)

The EPA administers the National Pollution Discharge Elimination System (NPDES). This agency delegates authority to the states to administer the program. In Indiana, IDEM's Rule 5 general permit program ([327 IAC 15-5](#)) focuses on reducing pollutants, especially sediment, associated with construction as well as post construction pollutants. This program is discussed in section 7.6.

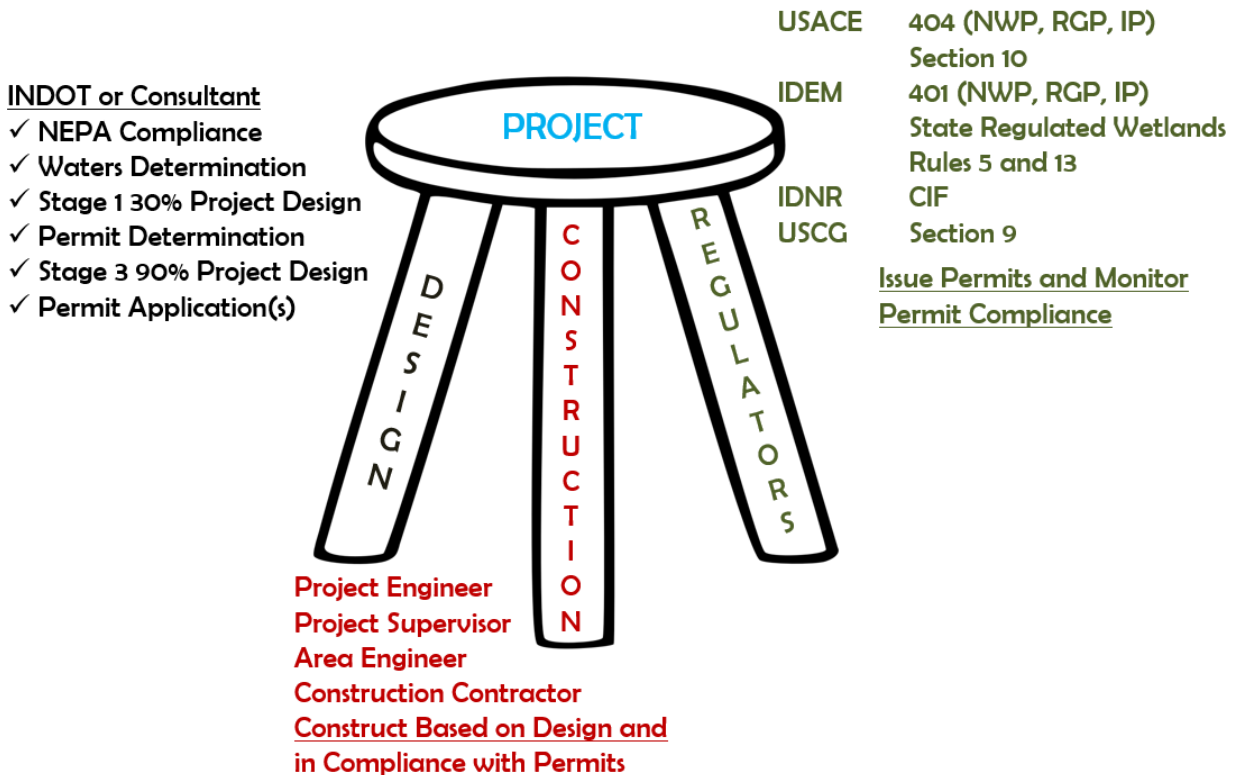
Indiana State Drainage Law (1981)

Indiana state law ([IC 36-9-27](#)) grants each county the authority to conduct and regulate activities within designated open drains and tiles for the purposes of maintaining efficient and effective flow through the drains. Each county has a drainage board with jurisdiction over regulated drains. See Chapter 9 for more information.

CHAPTER 2 - WATERWAY PERMITTING PROCESS

2.1 PROJECT TEAM

The EWPO is a part of a large project team. The team includes the INDOT staff and contractors that are involved in project design and construction and the regulatory agencies (Figure 2.1). The EWPO supports the INDOT Project Manager to ensure that all environmental permit requirements for the project are met. Some of the activities that occur in the design phase include NEPA compliance, waters determination, permit determination, and permit application preparation. These activities may be completed by consultants or INDOT district or central office staff. EWPO involvement begins with the waters determination and continues beyond the completion of construction. EWPO is responsible for document review and permit oversight and acts as a construction advisor or liaison. During the construction phase, the Project Engineer (PE), Project Supervisor (PS), Area Engineer (AE), and contractor ensure that the project is constructed according to design and that the project stays in compliance with the permits. The regulatory agencies (most commonly USACE, IDEM, and IDNR) issue the required permits and monitor permit compliance.



2.2 PERMITTING PROCESS

There are six steps in the permitting process:

- Step 1. Waters report review
- Step 2. Preliminary permit determination (at 30 percent design)
- Step 3. Permit application review (at 70 percent design)

- Step 4. Application submittal to regulatory agency
- Step 5. Regulatory agencies issue permit(s)
- Step 6. Monitor project for compliance with permits

Step 1. Waters Report Review

EWPO's role in the project development process begins when a waters report is reviewed and approved by a EWPO Specialist. The waters report is prepared during the NEPA process and included in the environmental document. A waters report is written by district staff, consultants or EWPO specialists. A waters report will identify all water features (federal and state regulated and non-regulated) within and adjacent to the proposed project limits. Water features include, but are not limited to, rivers, streams, creeks, wetlands, ponds, lakes, agricultural ditches, and county drains. Non-jurisdictional features, such as roadside ditches that lack an ordinary high water mark (OHWM), are also discussed. The report should provide specific information about each resource, such as the OHWM for streams or the delineated wetland boundary for wetlands. For more detailed information on waters reports see the [INDOT Ecology Manual](#).

Step 2. Preliminary Permit Determination

A permit determination (PD) is an evaluation by the Specialist to determine the type(s) of waterway permit(s) required for a project. The initial permit determination should be made when the project is at stage 1 (30 percent) design. The permit determination occurs after the completion of the waters report, when requested by the project designer or based on the Specialists review of the 18 month letting list. The PD gives the designer and project manager an idea of what waterway permits, if any, may be required for their project. In addition, it will provide the opportunity to modify the design to avoid and minimize impacts to regulated resources and reduce or eliminate mitigation requirements. Coordinate with the Specialist regarding design assumptions and questions. They may have project specific recommendations or may have insight from similar projects that may help with early planning.

The following documents and information is used to make a PD:

- Project scope;
- Plan and profile sheets (showing any potential stream or wetland impacts);
- Waters report;
- Early coordination documents, to include USFWS Section 7 and DNR;
- Impact estimates for water resources, including total permanent and temporary linear feet and acres of impact below the OHWM and Q100 for streams and wetlands;
- Estimates regarding the total soil disturbance (acres) associated with the project; and
- Potential tree clearing requirement.

A delayed PD may impact the ability to meet the project schedule. Agency review time can take up to 12 months for complex projects. The availability of IN-SWMP for 404, 401 and state-regulated wetland mitigation has reduced the delay caused by the need to develop permittee responsible mitigation, but it may not always be appropriate for a project. In addition, permittee responsible mitigation is still required for floodway impacts.

Projects are evaluated for the type and quantity of impacts and the ability of the project to meet the general and specific permit conditions. The determination will provide the permit type based on the current impact estimates and will also identify the need for compensatory mitigation. The preliminary PD will include the general timeline for when permit applications should be submitted for INDOT review and

processing (see Table 2.1). For the majority of INDOT projects, PDs are completed in less than one week if sufficient information is available.

A change to the project scope or design may change the permit required. The designer is responsible for notifying EWPO of changes as soon as possible so that the permit determination can be reevaluated. A determination that a different or additional permits are required at the time of application submittal increases the risk that permits will not be received prior to letting. Time and money can also be saved by not preparing unnecessary permits.

The waterway permits that may be required for INDOT projects include:

- **United States Army Corps of Engineers (USACE)**
 - 404 Nationwide Permit (NWP)
 - 404 Regional General Permit (RGP)
 - 404 Individual Permit (IP)
 - Section 10 Permit
 - Levee Permit

- **Indiana Department of Environmental Management (IDEM)**
 - Section 401 Water Quality Certification (WQC)
 - Rule 5 Permit
 - Isolated Wetland Permit
 - Section 402 National Pollutant Discharge Elimination System (NPDES) Point-Source Permit

- **Indiana Department of Natural Resources (IDNR)**
 - Flood Control Act (Construction in a Floodway (CIF)) Permit
 - Navigable Waterways Act Permit
 - Lake Preservation Act Permit
 - Lowering of Ten Acre Lakes Act Permit

- **United States Coast Guard (USCG)**
 - Section 9 Bridge Permit

- **Environmental Protection Agency (EPA)**
 - Class V Injection Well Permit
 - Sole Source Aquifer

- **County Regulated Drain Permit** (Allen, Elkhart, Hamilton, Lake, and LaPorte counties)

Step 3. Permit Application Review

The permit application is prepared by the designer or consultant and should be submitted when the project is at 70 percent design. The application should be accurate and complete and include the required supplemental materials. The application form should include all permanent impacts to water resources. Any temporary impacts should be quantified in an attachment. Inaccurate or incomplete application packets will result in multiple reviews and delay agency submittal. See Chapter 7 for more information on the application process for USACE, IDEM and IDNR permits.

The designer must submit the permit application through ERMS and copy the Team Lead. The application can also be uploaded to ProjectWise or emailed to the Specialist or Team Lead. The final

version of the complete application must be uploaded into ERMS for long-term INDOT storage. ERMS naming conventions should be followed as stipulated in the [INDOT Design Manual](#).

The Specialist will evaluate the application using a [checklist](#) and a project specific analysis. The permit determination will also be verified. The Specialist will coordinate with the preparer regarding modifications to the application. When the review is complete, one of the five authorized INDOT signatories will sign the application: the ESD Director, EWPO Manager or one of the three Team Leads. Once signed, EWPO staff will submit the application to the regulatory agency and coordinate regarding questions or comments received during agency review. All coordination with regulatory agencies should go through EWPO.

Step 4. Application Submittal to Regulatory Agencies

Permitting agencies (USACE and IDEM) have mandated review and approval time requirements. For example, IDEM must hold a 21-day public notice period for each individual 401 WQC. In addition, a 401 individual permit does not become effective until the 18-day mandated appeal period has passed. Therefore, the minimum IDEM review period is at least 39 days for each 401 individual permit application. The USACE also has review time requirements they must meet. The DNR does not have review time requirements and the applications require review by multiple offices. Accelerated agency permit review to accommodate a project’s schedule should not be expected.

Table 2.1: Permitting 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	8 months	10 months
County Drain	Regulated Drain Permit	3 months	4 months

* These timeframes assume an accurate and complete permit application is received at the first submittal.

Early application submittal allows additional time to respond to agency comments. This may require design and permit application modification. Table 2.1 describes the average review time for common waterway permit applications. The review times include the number of months prior to a project’s RFC date that the application must be submitted to the EWPO office. Failure to submit applications according

to these timelines increases the risk of not having a permit by the RFC date. The review process will be halted if INDOT or a regulatory agency denies the application, or puts it in abeyance, because of missing or insufficient information.

Application Fees

INDOT does not pay fees for waterway permit applications except for filing fees associated with Rule 5 Notices of Intent (NOI). The Lake County Drainage Board charges a permit fee that must be paid by the designer and reimbursed by INDOT. INDOT EWPO will coordinate on the funds transferred to IDEM for Rule 5 applications. The contractor is responsible for paying filing fees for design build and lump sum erosion control projects. Companies entering a private public partnership lease of INDOT Right of Way (ROW) are also responsible for paying filing fees. See Chapter 7.6 for more information on the Rule 5 permitting process. Fees are paid by the project designer for INDOT.

Public Notice

Public notices are required for several permits. In some cases, these are issued by the regulatory agencies while in others the applicant (INDOT) is required to issue the public notice. EWPO will issue the public notice required for IDEM Rule 5 and IDNR Construction in a Floodway (CIF) applications. A private company leasing INDOT ROW is required to provide public notice for their activity on the ROW.

IDEM will issue a public notice for all individual 401 WQCs. This public notice period lasts 21 days and is sent to adjacent property owners as well as other resource agencies. IDEM will coordinate with INDOT regarding any relevant comments received because of the public notice prior to approving the WQC. IDEM will also follow this process when processing permits under its Isolated Wetlands Program.

The USACE will issue a public notice for all individual 404 and Section 10 permits. The public comment period ranges from 15 to 30 days. The USCG will issue a public notice under Section 9 with a public comment period of 30 days. Comments resulting from these public notices will be passed along to INDOT for resolution prior to approval of the permit application.

Step 5. Permit(s) Issued

After a permit has been issued, EWPO staff will notify the project manager and the designer. This notification will include a copy of the permit and a request for its inclusion into the project's contract letting documents. All waterway permit conditions, including any mitigation requirements, are legal obligations. The permit, permit application, and other supporting documents should be included in the contract letting documents and/or be accessible to the contractor and INDOT construction supervision staff. Permits must be amended if there will be additional permanent or temporary impacts to aquatic resources that were not included in the original permit application. All amendment and modification requests must go through EWPO.

Step 6. Project Compliance Monitoring

During construction, EWPO staff will visit projects to verify that they are following the application, permit and applicable environmental laws and regulations. When issues arise, staff will provide technical expertise to resolve any compliance concerns. EWPO staff will also provide technical guidance and coordinate the responses to regulatory agencies' routines or follow-up inspections.

2.3 CONTRACT LETTING INFORMATION

Pre-Letting Documents

Pre-letting documents that may be available for a project include the: contract information book (CIB), revisions, plan/drawing sets, existing plans, permits, asbestos reports, Q and A forms, geotech reports, utilities information, additional information, and project commitments. These are available on [INDOT's website](#). CIBs contain pay items and special provisions associated with the project. The designer and INDOT project manager are responsible for ensuring that the pre-letting documents include all the waterway permits required for the project. The permits section should include the redacted final permit application, permits and permit conditions. For Rule 5 permits, include the Notice of Intent (NOI), Notice of Sufficiency (NOS) and the Storm Water Pollution Prevention plan. The erosion and sediment control measures associated with the Rule 5 permit application should be included in the plans, as pay items and the quantities verified to determine if adequate amounts are included in the contract. Materials required for wetland or stream mitigation are other pay items that may be required. Change orders during construction could result if necessary pay items, or the appropriate quantities, are not included in the CIB.

Special provisions related to waterway permits may include:

- Instructions on the installation of non-standard pay items, such as those associated with compensatory mitigation site construction or Rule 5 applications;
- Provisions to address unique special conditions included in waterway permits; and
- Provisions to prevent violations, such as marking adjacent wetlands with construction flagging/fencing.

Project Plans

The pre-letting documents will include plan or drawing sets for the project. The designer is responsible for ensuring the plans include sufficient information to inform the contractor of regulated features or areas of concern that must be monitored or protected during construction to prevent a violation of the permits.

Pre-letting plans should include:

- Symbols and labels for all rivers, streams, creeks, ditches, lakes, ponds, etc. using the same nomenclature used in the permit application and waters report (USGS topographic name);
- Symbols and labels for the OHWM elevation on all stream and structure cross sections;
- Marked boundaries for all impacted and adjacent wetlands with labels reflecting the nomenclature used in the permit applications;
- Marked boundaries for the 100-year floodplain;
- Marked boundaries of any other aquatic resource;
- Erosion and sediment control measures that reflect the Rule 5 application; and
- Compensatory mitigation, if required, reflecting the mitigation plan submitted to regulatory agencies.

Project Commitments

The Commitments database conveys important information to designers, project managers, and construction staff. It ensures that important requirements (commitments) on projects are either addressed during the development process or are flagged for the contractor's attention after project letting. Requirements covered by INDOT Standard Specifications should not be included in the commitments database. The Specialist will include a condition for each permit and any unique permit conditions that will require special attention during construction.

2.4 CONSTRUCTION

Preconstruction Meeting

A preconstruction (PRECON) meeting is held prior to the start of construction for each INDOT project. The Project Manager, designer, contractor, and project engineer (PE) or project supervisor (PS) in addition to other interested parties (i.e., utility companies or local government entities), will attend this meeting. The PE/PS is responsible for ensuring that waterway permits are available and discussed at the PRECON. Items to discuss during the PRECON include:

- Sequencing of erosion/sediment control measures for all phases of construction;
- Any necessary permit modifications, including unpermitted temporary impacts;
- Any necessary waivers (fish spawning season and bat tree clearing restrictions); and
- Permits needed for utility work (utilities are required to obtain their own permits).

All waterway permits (404, 401, CIF, etc.) must be posted on the construction site. In addition, the Rule 5 NOI, SWPPP and NOS must also be posted. The permit application should be available at the project trailer. They are usually posted on a bulletin board located within the project limits. The PE/PS and contractor must be familiar with the general and specific conditions associated with each permit, to include linking permitted impacts to the project plans. Any questions can be directed to the Specialist.

Permit Modifications and Extensions

Permit modifications are required for any changes to the level or type of impacts authorized in the permits. All modification requests should be submitted through the EWPO for processing since INDOT was the permit applicant. Regulatory agencies will typically reject modifications not submitted through INDOT. Additional impacts may result in the requirement for additional compensatory mitigation. As with all impacts to aquatic resources, INDOT must demonstrate that all practical steps have been taken to avoid and minimize impacts. Modifications are required for temporary structures that were not included/approved in the original permit. A common example is a temporary causeway.

The PE/PS is responsible for forwarding documentation of the proposed change(s) and the contractor is required to provide the necessary information needed for a permit modification request. This includes:

- The scope of the proposed changes to the permitted impacts;
- The reason for the additional impacts and any avoidance/minimization that was considered; and
- Project plans marked with the location of any proposed changes.

Waterway permits have expiration dates, and a permit may expire prior to the start or before completion of construction. The Project Manager and/or PE/PS are responsible for ensuring that all permits remain valid. If a permit is set to expire, the EWPO should be notified at least 90 days prior to the permit expiration date so that a permit extension can be requested. The reason for the project delay and the expected completion date should be provided so that this can be included with the extension request. Since permit extensions are from the date requested, they should not be requested too far in advance to avoid multiple extension requests.

Regulatory Agency Enforcement

A violation occurs when a project is out of compliance with one or more of its permits or when the project has unpermitted impacts to an aquatic resource. The EWPO conducts site inspections to identify noncompliance on active construction projects and provide technical assistance to project construction staff to bring projects back into compliance before formal violations are issued by regulatory agencies.

Regulatory agencies will conduct routine inspections of projects and follow-up on complaints. The agencies issue inspection summaries following their visit, which may include violations that require correction to bring the project back into compliance. EWPO staff will coordinate with construction staff (PE, PS, area engineer, etc.) and the Project Manager on appropriate corrective action. EWPO staff will also coordinate a formal written response to the agency. It is the responsibility of the Project Manager and PE/PS to ensure compliance with all permit conditions and environmental laws and regulations.

CHAPTER 3 - UNITED STATES ENVIRONMENTAL PROTECTION AGENCY PERMITTING

3.1 INTRODUCTION

The United States Environmental Protection Agency is the primary regulatory agency for environmental quality in the United States. It is responsible for administering implementation of the Clean Water Act. Some of the roles and responsibilities of the USEPA are:

- Develop and interpret policy, guidance, and environmental criteria used in evaluating permit applications;
- Determine scope of geographic jurisdiction and applicability of exemptions;
- Review and comment on individual permit applications;
- Under Section 404(c) - prohibit, deny, or restrict the use of any defined area as a disposal site; and
- Enforce Section 404 provisions.

The USACE role in Section 404 implementation will be discussed in Chapter 4.

The EPA also administers the Safe Drinking Water Act (SDWA). There are two programs under this act that may impact INDOT projects: Underground Injection Control and Sole-Source Aquifers. INDOT projects that may require coordination with EPA under the SDWA are rest areas, storm water drainage wells, and construction involving added travel lanes or new terrain when located in selected counties.

3.2 UNDERGROUND INJECTION CONTROL

Background

The [Underground Injection Control](#) (UIC) program is authorized by the SDWA and protects drinking water quality by regulating the injection of waste fluids into the ground. The waste fluids originate from industries, municipalities, and small businesses during the process of mineral extraction. The purpose of the UIC program is to ensure that the hazardous and non-hazardous fluids are injected safely and cost effectively while fulfilling the mission to protect underground sources of drinking water (USDWs). These drinking water sources are protected from contamination by regulating the location, construction, operation, and closure of injection wells.

An USDW is an aquifer or its portion: (a)(1) which supplies any public water system; or (2) which contains a sufficient quantity of ground water to supply a public water system; and (i) currently supplies drinking water for human consumption; or (ii) contains fewer than 10,000 mg/l total dissolved solids; and (b) which is not an exempted aquifer. 40 CFR §144.3. There are five pathways to contamination of USDWs from injection wells: (1) faulty well construction; (2) nearby wells that allow injected material to escape; (3) faults or fractures in confining strata; (4) direct injection; and (5) displacement of fluids from the injection zone to hydraulically connected USDWs.

There are six classes of injection wells (40 CFR §144.6):

- [Class I Wells](#) - inject hazardous and non-hazardous wastes into deep, isolated rock formations.
- [Class II Wells](#) - inject fluids associated with oil and natural gas.
- [Class III Wells](#) - inject fluids to dissolve and extract minerals.

- [Class IV Wells](#) - shallow wells used to inject hazardous or radioactive wastes into or above a geologic formation that contains a USDW.
- [Class V Wells](#) - inject non-hazardous fluids underground, primarily to dispose of waste into or above underground sources of drinking water.
- [Class VI Wells](#) - inject carbon dioxide (CO₂) into underground subsurface rock formation for long-term storage, or geologic sequestration.

The category that applies to INDOT is Class V. There are 23 categories of Class V injection wells. Two categories, storm water drainage wells and large capacity septic systems, account for over 80 percent of these wells. See Figure 3.1. The typical Class V well is shallow disposal system that depends on gravity to drain fluids directly into the ground, which is often directly into, or above, an underground source of drinking water.

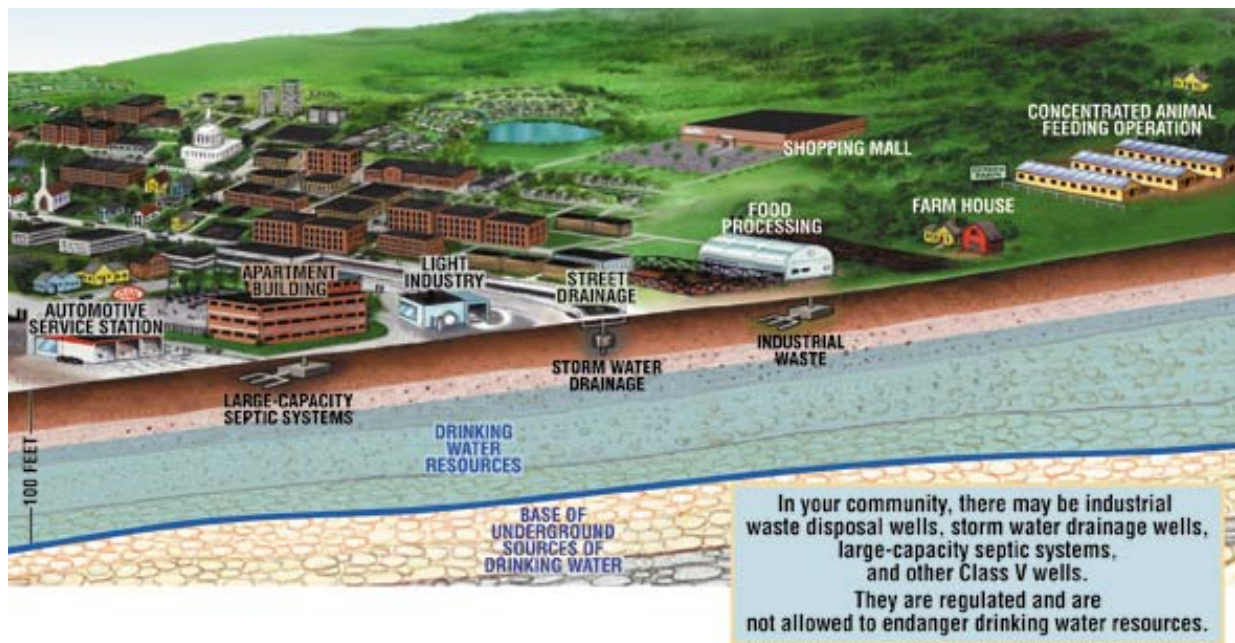


Figure 3.1 Class V Wells

Source: <https://www.epa.gov/sites/production/files/styles/large/public/2015-07/classv.jpg>

INDOT activities that may fall under the Class V well regulations may include large-capacity septic systems (LCSSs) in use at rest areas and storm water drainage wells. An LCSS is an on-site method for partially treating and disposing of sanitary wastewater and includes only those systems that have the capacity to serve 20 or more persons-per-day. Conventional LCSSs consist of gravity fed, underground septic tank or tanks, an effluent distribution system, and a soil absorption system. LCSSs are vulnerable to contamination from materials spilled or dumped down sinks, toilets, or floor drains connected to the system.

Storm water drainage wells are used to remove storm water or urban runoff (includes rainwater and snow melt) from impervious surfaces such as roadways, roofs, and other paved surfaces. Storm water drainage wells are primarily bored wells, dug wells, and improved sinkholes. It includes any subsurface drain field that releases fluid underground including French drains, tile drains, infiltration sumps, and percolation areas with vertical drainage. An improved sinkhole (a natural karst depression or open fracture that has been intentionally altered to accept and drain storm water runoff) is also included. EPA regulation over this type of well must be considered when working in the Indiana karst region. See the [INDOT Ecology Manual](#) for more information on karst resources and [INDOT Protection of Karst Features During Project](#)

Development and Construction. Storm water drainage wells are vulnerable to spills or illicit discharges of hazardous substances due to their proximity to roadways, parking lots and facilities where the substances are handled. In addition, the runoff may be contaminated with sediments, nutrients, metals, salts, fertilizers, pesticides, and microorganisms.

There are two infiltration systems that are not storm water drainage wells: infiltration trenches and surface impoundments or ditches. An infiltration trench is an excavated trench that is filled with stone to create an underground reservoir. It is usually wider than it is deep and may not contain any piping or drain tiles. A surface impoundment or ditch is an excavated pond, lagoon, or ditch with an open surface. The ditch can either be lined or unlined, but it must not contain piping or drainage tile. If either of these systems contained a subsurface fluid distribution system, it would be considered a Class V injection well.

Application Process

If the proposed INDOT project includes a Class V injection well, the project designer should verify with the EWPO the required level of coordination with the USEPA. A Class V injection well, which includes storm water drainage wells, are “authorized by rule” (40 CFR § 144.24). No permit is required if they do not endanger USDWs and they comply with the federal UIC program requirements. Endangerment would occur if the storm water contaminant resulted in a violation of drinking water standards or otherwise endangered human health. INDOT is required to account for these features as part of the Rule 13 program and conduct appropriate inspection and maintenance activity.

3.3 SOLE SOURCE AQUIFER

Background

An aquifer is a geological formation, group of formations, or part of a formation that can yield a significant amount of water to a well or spring. The Sole Source Aquifer (SSA) Protection Program is authorized by the SDWA (Section 1424(e)). USEPA defines a SSA as one that supplies at least 50 percent of the drinking water for its service area and for which there are no reasonably available alternative drinking water sources should the aquifer become contaminated. An SSA is protected through USEPA review of proposed projects located within the SSA that may have the potential to impact it.

Indiana’s only SSA is in St. Joseph, Elkhart, LaGrange, Kosciusko, and Noble Counties (Figure 3.2). The St. Joseph Aquifer (53 FR 23682, published 06/23/88) is an unconfined aquifer that is open to contamination from the infiltration of surface water.

A Memorandum of Understanding (MOU) regarding [Sole Source Aquifers in the State of Indiana](#) was signed in July 2021 by the Federal Highway Administration, EPA Region 5 and INDOT. The goal of the MOU is to ensure that each project receiving federal-aid highway funding is planned, designed, and constructed to prevent the introduction of contaminants into the SSA in quantities that may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health.

See the MOU for the project review procedure and exemptions.

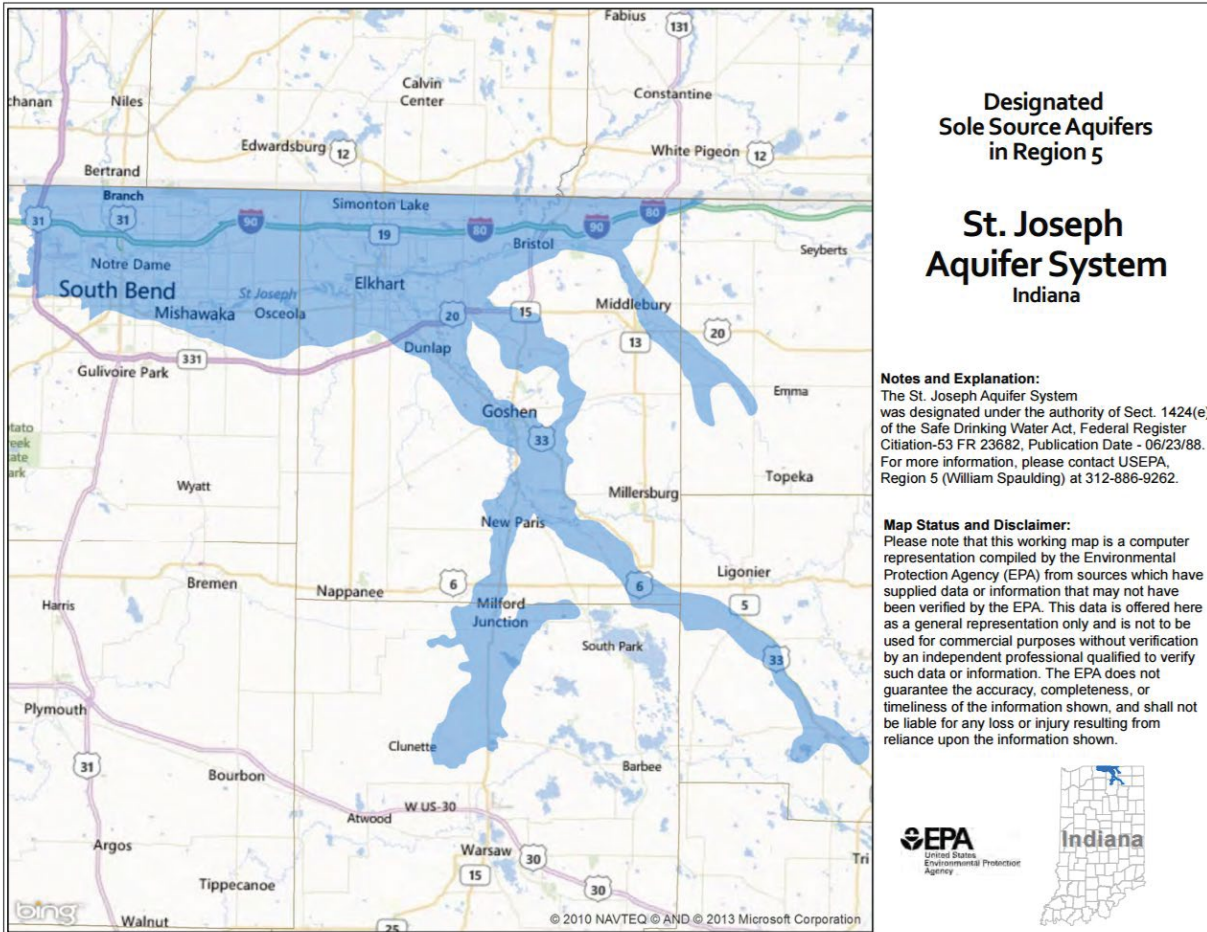


Figure 3.2 St. Joseph Aquifer System

3.4 USEPA COORDINATION SCENARIOS

The following examples are provided to illustrate where coordination with the USEPA may be required. The final coordination need, and resulting project requirements, are determined by the USEPA.

- INDOT proposes a new rest area in Wayne County. All wastewater generated by this facility will be discharged to a septic tank system. Since this is a Class V injection well, coordination with the USEPA is required.
- INDOT proposes a resurfacing project in St. Joseph County. The project is located within the SSA and is federally funded. Work will be limited to the existing pavement. No coordination is required with the USEPA regarding potential SSA impacts.
- INDOT proposes a road widening project in St. Joseph County. The project is located within the SSA and is federally funded. Work will include added travel lanes and a new interchange. If the project is not classified as a CE it will require further evaluation to determine if coordination with the USEPA is required.

CHAPTER 4 - UNITED STATES ARMY CORPS OF ENGINEERS PERMITTING

4.1 INTRODUCTION

There are three USACE districts with jurisdiction in Indiana: Louisville, Detroit, and Chicago (see Figure 4.1). Common permitting programs that are administered by the USACE in Indiana include CWA Section 404, Section 10, and levee permits. Section 404 jurisdiction is based on county and Section 10 jurisdiction is based on watershed. Each of these programs will be discussed in detail below.

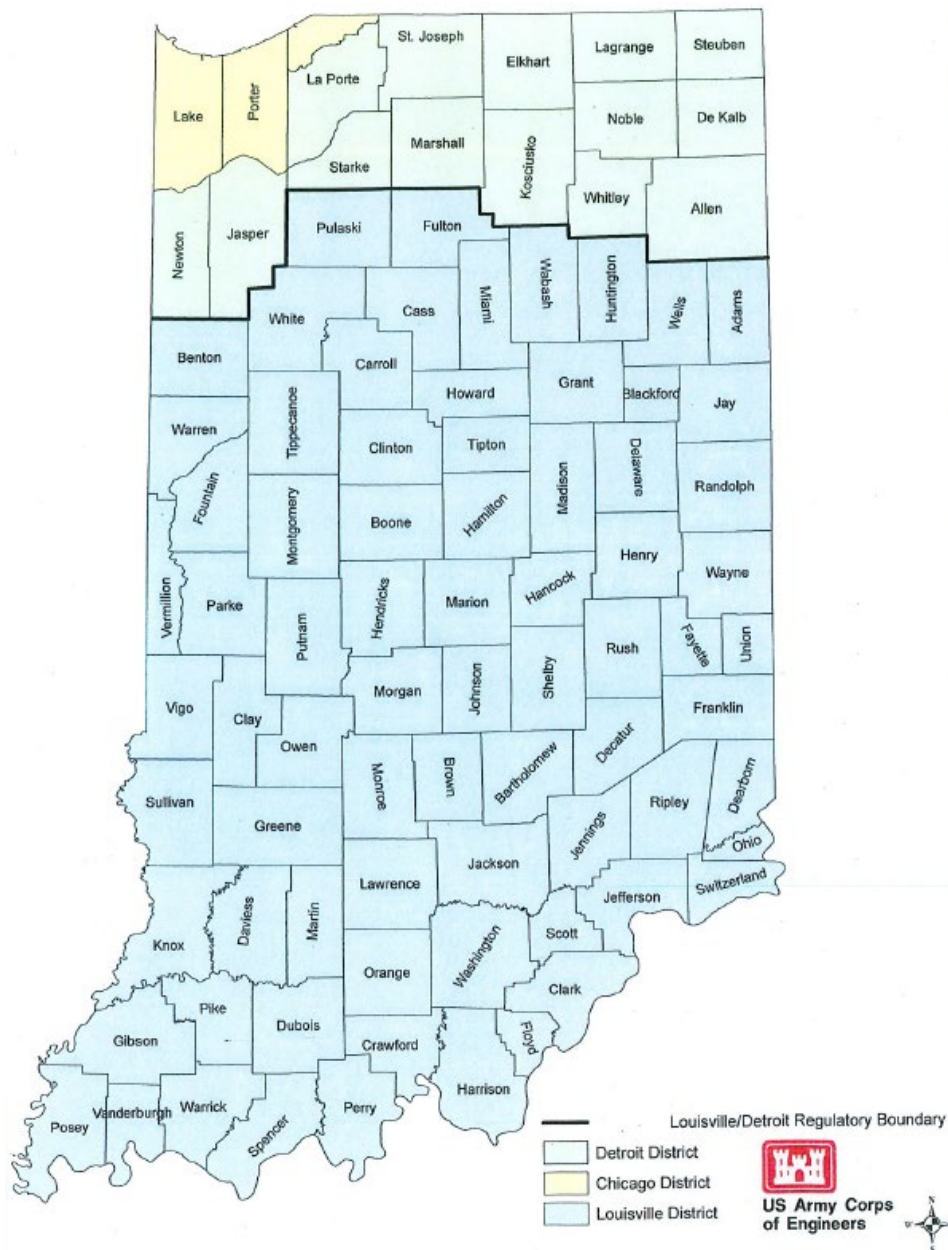


Figure 4.1 U.S. Army Corps of Engineers Districts Section 404 Jurisdiction (Revised 12/16/2013)

4.2 SECTION 404 OF THE CLEAN WATER ACT

The U.S. Army Corps of Engineers is responsible for implementing Section 404 of the Clean Water Act with regulatory oversight provided by the EPA. 33 USC 1344. Section 404 requires a permit for the discharge of dredged or fill material into navigable waters of the United States and wetlands connected to navigable waters unless the activity is exempt from Section 404 regulation. Some of the non-prohibited discharges under 33 USC 1344 (f) include those from normal farming, silviculture and ranching activities, maintenance of recently damaged transportation structures, construction or maintenance of drainage ditches, and construction of temporary sediment basins on a construction site. If the disposal site would be denied or restricted if the discharge into the area would have an “unacceptable adverse effect” on municipal water supplies, shellfish beds and fishery areas, wildlife, or recreational areas. 33 USC 1344 (c). Under the Clean Water Act the USACE can issue general permits on a state, regional, or nationwide basis. The discharges under the general permits must be similar in nature, will cause only minimal adverse environmental effects when performed separately, and will have only minimal cumulative adverse environmental effect. 33 USC 1344 (e)(1). General permits are limited to a period of five years. 33 USC 1344 (e)(2). The Nationwide and Regional General permits will be discussed in this chapter.

Navigable Waters of the U.S.

“Navigable Waters of the U.S.” is defined by the USACE as:

[T]hose waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigational capacity. 33 CFR 329.4

There are three conditions that must be examined when making a determination that a waterbody is a navigable water of the United States: (a) past, present, or potential presence of interstate or foreign commerce; (b) physical capabilities for use by commerce; and (c) defined geographic limits of the waterbody. 33 CFR 329.5. It is a waterbody’s capability of use by the public for purposes of transportation of commerce, not the time, extent, or manner of the use. Use may include historical use by canoes or other frontier craft common to the place and period. It is only necessary that goods may be brought from or eventually be destined to go to another state. 33 CFR 329.6. A waterbody may be entirely within a state, yet still be capable of carrying interstate commerce. There may be situations where a waterbody extends through one or more states, but the portion capable of bearing interstate commerce, is located in only one state. In those circumstances, the entire waterway up to the head or upper limit of navigation is subject to federal jurisdiction. 33 CFR 329.7. In addition, determinations are not limited to the natural or original condition of the waterbody and past or potential non-existing improvements may also be considered. 33 CFR 329.8.

A waterbody will retain its character as “navigable in law” even though it is not presently used for commerce or is presently incapable of such use because of changed conditions or the presence of obstructions. 33 CFR 329.9. Federal regulatory jurisdiction extends laterally to the entire water surface and bed of a navigable waterbody. This includes all the land and waters below the ordinary high water mark (OHWM) regardless of ownership. 33 CFR 329.11. For non-tidal rivers the “ordinary high water mark” is defined as:

The line on the shore established by the fluctuation of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or

other appropriate means that consider the characteristics of the surrounding areas. 33
CFR 329.11

In 2005, the USACE issued Regulatory Guidance Letter 05-05 “[Ordinary High Water Mark Identification](#)” that is a good reference.

The USACE’s jurisdiction for wetlands extends to the wetland/upland boundary. A wetland must meet all three criteria outlined by the [U.S. Army Corps of Engineers Wetland Delineation Manual \(January 1987\)](#) and applicable regional supplements. These criteria are hydrophytic vegetation, hydric soils, and hydrology. OHWM and wetland criteria are discussed in greater detail in the [INDOT Ecology Manual](#) and in the [USACE regional supplements](#).

Waters of the United States

Waters of the United States are defined in 33 CFR 328.3 (a) as:

- (a) (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (iii) Which are used or could be used for industrial purpose by industries in interstate commerce;
- (4) All impoundments of waters otherwise defined as waters of the United States under the definition;
- (5) Tributaries of waters identified in paragraphs (a) (1) through (4) of this section;
- (6) The territorial seas;
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1) through (6) of this section.
- (8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.
Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Permitting Overview

In general, the USACE will consider each water resource impact separately. For instance, a linear transportation project may cross several waterways, and each may meet the thresholds for a separate NWP. However, the USACE can evaluate multiple impacts cumulatively if they occur to the same resource and near each other, such as, one stream that is crossed and impacted several times may be viewed cumulatively. However, impacted resources in proximity, such as a stream and its adjacent

wetland, will typically be viewed as separate resources. See Section 4.6 for example projects that would require a 404 NWP.

Mitigation is required for most projects where impacts exceed 0.1 acre to waters of the U.S. or 300 linear feet of stream. An area or stream may require restoration after construction, such as a wetland with temporary impacts or the shift of a portion of a stream. The agencies may require monitoring and maintenance and have associated success criteria to ensure that erosion, invasive species, or other concerns are addressed.

Several NWPs have been suspended for the state of Indiana because of the development of Indiana RGP #1. Suspended NWPs applicable to transportation include:

- NWP 13 Bank Stabilization
- NWP 14 Linear Transportation Projects
- NWP 18 Minor Discharges
- NWP 41 Reshaping Existing Drainage Ditches
- NWP 43 Stormwater Management Facilities

It is possible for a project to be covered under the Section 404 NWP while exceeding the thresholds of (or not meeting the general conditions of) the IDEM 401 WQC NWP or RGP. In this case, an IDEM 401 WQC IP would be required in conjunction with the USACE 404 NWP. IDEM has denied Section 401 WQCs for certain 404 NWPs. Because of this, an IDEM 401 WQC IP is required for work that fits under these categories. If a project has impacts outside of that allowed by the available Section 404 NWPs, a RGP or an IP application must be submitted to IDEM.

4.3 SECTION 404 NATIONWIDE PERMIT

The Nationwide Permit program authorizes activities with minor impacts to waters of the U.S. with the goal of expediting projects which, individually and cumulatively, have little or no adverse effect on the environment. The 404 NWP program was authorized on March 19, 2017 and will expire on March 18, 2022. In addition to USACE NWP general conditions, IDEM has general conditions specific to each approved NWP (see Chapter 6). NWPs that require pre-construction notification (PCN) can take up to a month for agency review.

The NWP program authorizes activities associated with repair, rehabilitation, or replacement of previously authorized structures or fill provided that the fill is not being put to different uses than originally permitted. Requirements of the current authorization of this program include:

- Discharges of dredged or fill material will impact **less than 1.0 acre** of waters of the U.S. (including wetlands);
- Fill placement in streams is limited to **less than 1,500 feet** of stream channel; and
- All [general permit conditions of the NWP program](#) are met.

INDOT most frequently uses the following Section 404 Nationwide Permits:

- NWP #3 - Maintenance;
- NWP #27 - Aquatic Habitat Restoration, Establishment, and Enhancement Activities; and
- NWP #33 - Temporary Construction, Access, and Dewatering.

NWP #3 - Maintenance

There are three types of 404 NWP #3 permits. **404 NWP #3(a)** authorizes the repair, rehabilitation, or replacement of any previously authorized, currently serviceable, structure or fill provided that the structure or fill is not put to uses differing from those specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations to the structure's configuration or filled area are allowed including changes due to construction techniques, materials, requirements of other agencies, or current safety standards. No new or additional fill can be placed outside of the original fill footprint. This NWP also authorizes the removal of previously authorized structures or fills. No PCN is required for this permit, although INDOT is still required to follow the conditions of the NWP.

404 NWP #3(b) authorizes the removal of accumulated sediments and debris in the vicinity (and within) existing structures. Sediment removal is limited to the minimum necessary to restore the waterway to the condition that existing when the structure was built and cannot exceed 200 feet from either side of the structure. PCN is required for this permit.

404 NWP #3(c) can only be issued in conjunction with either a (a) or (b). It authorizes temporary structures, fill, and work, including the use of temporary mats, necessary to conduct a maintenance activity. This permit requires that normal downstream flow be maintained as well as complete restoration of all temporary impacts. Temporary fill examples include, but are not limited to, cofferdams, dikes, and dewatering materials.

The previous NWP included additional riprap under #3(b). The current NWP does not discuss riprap under #3(a) or (b). The three regulatory agencies in Indiana have two different permitting approaches. The Indianapolis Regulatory Office includes additional riprap under #3(a). The Detroit and Chicago districts require projects that have additional riprap to obtain an RGP.

NWP #27 - Aquatic Habitat Restoration, Establishment, and Enhancement Activities

The 404 NWP #27 is typically used for remediation work within INDOT mitigation sites. Activities that can be permitted under this NWP include removal of accumulated sediments, installation of water control structures, installation of current deflectors or riffle/pool stream structures, modifications of stream beds or banks, and activities to reestablish vegetation. PCN is required for this permit.

NWP #33 - Temporary Construction, Access, and Dewatering

The 404 NWP #33 authorizes temporary fill discharges necessary for construction activities. This permit requires that the primary activity associated with the construction project be previously authorized by the USACE (i.e. no permanent impacts will be permitted under this NWP). Temporary work includes cofferdams, causeways, stream crossings, and pump-arounds. This NWP is most commonly applied for during project construction when the contractor needs permission to enter jurisdictional wetlands or streams to complete the contracted work. PCN is required for this permit.

4.4 SECTION 404 REGIONAL GENERAL PERMIT

The Regional General Permit program is the USACE's programmatic approach to issuing permits for activities that are similar in nature and cause minimal environmental impact (both individually and cumulatively). On Dec. 15, 2014, the USACE reissued the RGP for Indiana. This program will expire on Dec. 15, 2019. The RGP authorizes activities associated with the construction or installation of new facilities or structures. Requirements of this program include:

- Discharges of dredged or fill material will impact **less than 1.0 acre** of waters of the United States (including wetlands);
- Fill placement in streams is limited to **less than 1,500 feet** of stream channel; and
- All other general permit conditions of the [404 RGP program](#) are met.

4.5 SECTION 404 INDIVIDUAL PERMIT

Section 404 individual permits are required for all projects that do not qualify for a 404 RGP or NWP. Individual 404 permits authorize projects that have more than a minimal adverse effect on the aquatic environment. Projects will require an IP if they meet the following:

- Impact more than one (1.0) acre of any single waters of the U.S. (or USACE makes a cumulative impact determination for multiple resources);
- Impact more than 1,500 linear feet of any one stream resource (or USACE makes a cumulative impact determination for multiple resources); or
- Project does not meet any general condition of the RGP or NWP programs.

In general, 404 IP permits have the longest average agency review time of the waterway permits applied for by INDOT (12-18 months). Projects requiring 404 IPs are likely to require compensatory stream and/or wetland mitigation. The availability of mitigation banks and the IN SWMP In-lieu Fee program will reduce the risk of project delay that may occur if permittee responsible mitigation is proposed.

4.6 SECTION 10 OF THE RIVERS AND HARBORS ACT

Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) prohibits the unauthorized obstruction or alteration to the navigable capacity of any waters of the U.S. without authorization. It requires approval by the USACE for any work in or over navigable waters of the U.S., or which affects the course, location, condition, or capacity of such waters. Federal jurisdiction under Section 10 on traditional navigable waterways is limited to the lateral extent of the OHWM. See Figure 4.2 for a comparison of regulatory boundaries of the Section 404 and Section 10 programs.

The law applies to construction, dredging or disposal of dredged materials in, over, or under navigable waters, excavation, re-channelization, or any other modification of a navigable water of the United States and applies to all structures. It includes:

- Any weir, wharf, bank protection (e.g. riprap, revetment, bulkhead), jetty, mooring structure, ramp, intake or outfall pipe, aids to navigation, aerial or subaqueous transmission line; and
- Any other permanent or semi-permanent obstacle or obstruction.

A listing of Section 10 waters for each USACE district in Indiana are provided through the links below:

- [USACE – Louisville District](#)
- [USACE – Detroit District](#)
- [USACE – Chicago District](#)

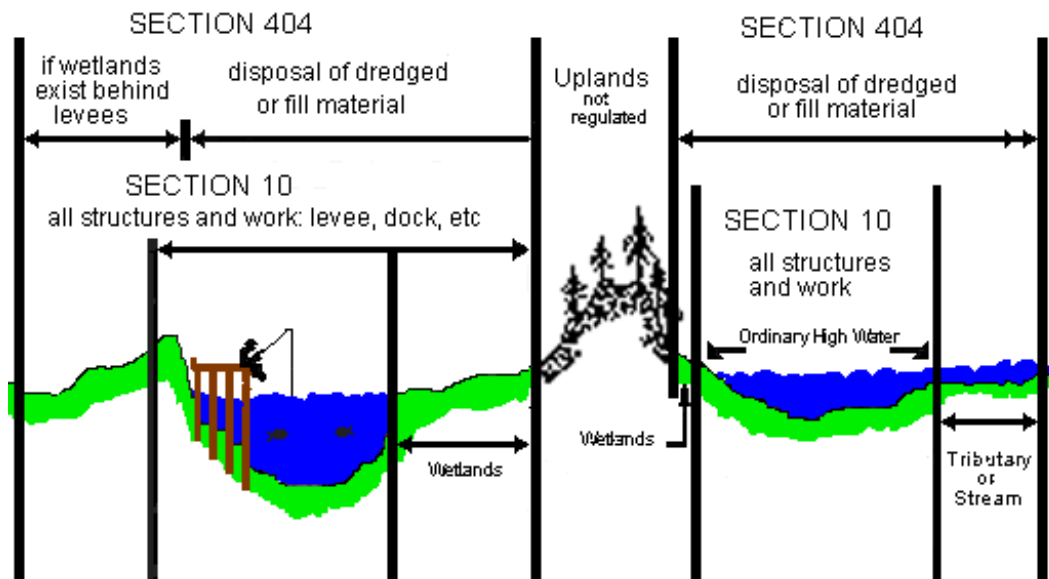


Figure 4.2 Crosscut View of Regulatory Jurisdiction of Section 404 and Section 10
Source:

https://www.lrl.usace.army.mil/Portals/64/siteimages/Regulatory/Crosscut_RegJurisdiction.gif

4.7 USACE LEVEE PERMITS

A USACE Levee Permit is required when a project affects a levee system owned by the USACE. A permit from USACE is required before any work can be initiated which may affect the levee. The purpose of this permit program is to ensure continuous levee system integrity. The actual permit form varies depending on the USACE District where work is proposed.

Levees may be owned by a local levee authority (for example: Evansville Levee Authority). If so, the permit application is submitted to the local levee authority for approval of the proposed project. When approved, the local authority forwards the application onto the USACE for final approval. USACE's acceptance and approval of a levee permit application is generally assured once the local levee authority approves the plans.

A levee is an earthen embankment, floodwall, or structure along a water course whose purpose is flood risk reduction or water conveyance. Levees are normally subject to water loading for only a few days of the year and have a base ten times as wide as the height. There is no single agency responsible for levee oversight nationwide. The USACE has specific and limited authorities for approximately 2,500 levees covering more than 14,500 miles of the estimated 100,000 miles of levees in the nation. USACE roles and responsibilities come from the Flood Control and Coastal Emergency Act (PL 84-99). The USACE maintains a [National Levee Database](#) that includes the levees within the USACE Levee Safety Program and will continue to integrate information related to levees outside of that program.

There are three types of levees: federally authorized, non-federally authorized, and private or corporation owned. A federally authorized levee is a levee designed and built by the USACE or authorized to be part of the USACE federal program, but locally operated and maintained in accordance with standards established by the USACE. A non-federally authorized levee is one that is designed, built and managed by a non-federal entity. A private or corporate-owned levee is designed and built by a private citizen, company, or other public entity, which is responsible for the operation, maintenance, repair, and

replacement of the levee. The USACE has no responsibility for these non-federally authorized or private levees. The USACE partners with local authorities in levee safety, land use planning and development, building codes and operations, maintenance, repair, rehabilitation, and placement of the levee.

4.8 PERMIT EVALUATION

The general policies that the USACE will use for evaluating INDOT permit applications are:

- Public interest - probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest;
- Effect on wetlands - whether the benefits of the proposed alteration outweigh the damage to the wetland resource based on the 404(b)(1) guidelines;
- Fish and wildlife - whether the activity will result in direct or indirect loss and damage;
- Water quality - activity compliance with effluent limitations during construction and subsequent operation;
- Historic, cultural, scenic, and recreational values;
- Other federal, state or local requirements;
- Floodplain management;
- Navigation;
- Environmental benefits; and
- Mitigation - includes avoiding, minimizing, rectifying, reducing, or compensating for resource losses. 33 CFR 320.4

4.9 USACE PERMITTING SCENARIOS

The following are example projects provided to illustrate the types of USACE permits typically encountered by INDOT. The USACE is responsible for determining the final permit need for each project.

- INDOT is proposing to replace a 65'L x 36"D corrugated metal pipe with a CMP of the same dimensions. Riprap outlet protection already exists and will not need to modification. A pump-around will be required during construction to isolate the work area. INDOT can execute the work using the **404 NWP #3 (a) and (c)** for all USACE districts since no new riprap is required.
- INDOT is proposing to line a 65'L x 36"D corrugated metal pipe. The pipe liner will be 65'L x 32"D. The outlet will require additional riprap due to increased water velocity for an additional 12 LF of impacts. A pump-around will be required during construction to isolate the work area. If the project is located in the Louisville district INDOT can complete the work using the **404 NWP #3 (a) and (c)** that do not require formal notification to the USACE. Detroit and Chicago districts would require an **RGP** because of the additional riprap.
- A stream mitigation site requires repair of portions of the bank that are unstable. The work will require the letting of a remediation contract. The scope of work includes the installation of several j-hooks (a mitigation measure constructed out of boulders) to direct water away from the compromised bank. Since fill will be placed in an existing mitigation site, a **404 NWP #27** will be required. This requires formal notification to the USACE.
- INDOT is proposing to reconstruct an arch. All the structure work will occur above the OHWM. The contractor indicates that a temporary causeway in the stream will be required so that equipment can reach portions of the arch. Because only temporary impacts are occurring below

the OHWM, INDOT will need to apply for a **404 NWP #33**. Notification is required to IDEM if impacts exceed 0.10 acres of temporary impacts.

- INDOT is proposing a project to correct sight distance that will include the construction of a new bridge upstream of an existing structure. The new bridge will impact 0.02 acre and 275 linear feet of a jurisdictional stream (piers and riprap scour protection). Construction will also impact a small jurisdictional emergent wetland (0.05 acre) directly adjacent to the stream. The existing bridge will be demolished, and banks revegetated without any permanent impacts below OHWM. Cumulative impacts at this crossing total 0.07 acre to waters of the U.S. and are below 300', so INDOT can apply for a **404 RGP**. No mitigation should be required.
- INDOT is proposing to construct a bridge on a new alignment over the Wabash River. Impacts to the river below the OHWM amount to 0.30 acre (piers and riprap scour protection). The new approach roads will also impact an adjacent forested jurisdictional wetland (0.55 acre). Since the total impact acreage is 0.85 acre the project will require a **404 RGP** and a **401 IP**. Mitigation may be required.
- INDOT is proposing to widen a bridge. The project will have minor impacts to a jurisdictional stream (0.02 acre and 450') and jurisdictional wetland (0.2 acre). The approach roads to the bridge will be widened and result in the taking of a historic barn eligible for listing in the National Register of Historic Places. Both the NWP and RGP conditions prohibit the impact to a listed historic property, or a property eligible for listing, in the National Register of Historic Places. INDOT cannot demonstrate that the construction activity complies with the National Historic Preservation Act and must submit a **404 IP**.
- INDOT is proposing to construct an interchange for a new road alignment. The interchange will fill a 1.6 acre jurisdictional wetland. A **404 IP** will be required since impacts are greater than 1.0 acres to waters of the U.S. The road alignment project should be evaluated for cumulative impacts. Mitigation will be required.
- INDOT is proposing to construct a new overpass to carry a county road over a U.S. highway. The approach roads for the overpass will result in the relocation of a county regulated drain and 2,500 LF of waters of the U.S. Since the stream relocation exceeds 1,500 LF a **404 IP** is required. Mitigation may also be required.
- INDOT is proposing to replace an existing bridge over the Ohio River. Work will include demolishing the existing bridge and piers and construction of the new bridge. Since this river is a navigable water, a **Section 10 permit** will be required. The type of **Section 404** permit will be determined by the level of impacts to the Ohio River.
- INDOT is proposing a bridge widening project near the Ohio River that will disturb a USACE levee. A **levee permit** will be required due to impacts to the levee from the expansion of the armored bridge cone and riprap turnouts.

CHAPTER 5 - INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT PERMITTING

5.1 INTRODUCTION

The CWA requires an applicant for a “Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge to the navigable waters” to provide a “certification from the State” in which the discharge originates or will originate. The federal license or permit cannot be granted without the state certification or if the state denies certification. 33 USC 1341 (1).

IDEM administers several programs that require waterway permits. INDOT projects frequently require Section 401 Water Quality Certifications (WQC) and Rule 5 permits. The need for an isolated wetland or Section 402 permit is less frequent.

5.2 WATER QUALITY CERTIFICATION

A 401 WQC is a license under the Indiana Administrative Orders and Procedures Act that contains conditions which INDOT must follow to assure that impacts comply with state water quality standards. Under the 401 program, IDEM regulates activities that impact lakes, rivers, streams, and wetlands to ensure that those activities maintain the chemical, physical, and biological integrity of these waters. Typical activities that require a 401 permit are as follows:

- Filling or excavating in a wetland;
- Mechanical clearing of a wetland;
- Streambank or shoreline stabilization;
- Constructing a roadway crossing in/over a stream;
- Filling or dredging a stream, lake, or river;
- Channelization of any stream, ditch, or river; and
- Construction of any permanent or temporary dam, causeway, or other related structure.

Typically, a project that requires a Section 404 permit from the USACE (see Chapter 4) will also require a 401 WQC. IDEM works closely with the USACE and coordinates the application processes as much as possible. IDEM will review the 401 application and determine whether or not the activities comply with Indiana law, including water quality standards.

There are three types of 401 WQCs: Nationwide Permit, Regional General Permit and Individual Permit. IDEM evaluates projects based on cumulative impacts. A project with multiple stream and wetland impacts should consider total impacts when evaluating the level of 401 WQC required. IDEM typically looks at the 12-digit HUC watershed as the boundary when evaluating cumulative impacts. For example, if a contract has three projects that will be impacting three separate streams within the same 12-digit HUC watershed then IDEM may view those impacts cumulatively. Compensatory mitigation may be required based on the extent of impacts and must be located within the same watershed.

401 Nationwide Permit

A 401 WQC is required for any project that will impact a wetland, stream, river, lake, or other Water of the U.S. This includes any project that will discharge fill material, excavate, open-trench cutting, or conduct mechanical clearing. The 401 WQC NWP will cover small structure replacement of stream encapsulation, placement of plastic liners, and other maintenance activities if they meet the requirements

listed below. IDEM reissued its 401 WQC NWP program on March 15, 2017, and this program will expire on March 18, 2022. An INDOT project can apply for a 401 WQC NWP if it meets the following requirements:

- Cumulative project impacts total **less than 0.1 acre** waters of the U.S. (streams, wetlands, etc.);
- Cumulative project impacts total **less than 300 linear feet** of impact to waters of the U.S.; and
- All USACE and IDEM specific and general [permit conditions of the NWP Program](#) are met.

Typically, NWPs are for maintenance of existing structures or placement of small amounts of fill. Only permanent impacts are counted toward fill impact totals in the application; however, temporary impacts must be included in the permit exhibits. No PCN is required for this permit, although INDOT is still required to follow the conditions of this NWP. PCN is required for this permit if temporary impacts will exceed 0.10 acre. INDOT projects will typically fall under 401 WQC NWP #3, however a full list of all of the NWPs is provided in the link above.

401 Regional General Permit

A 401 WQC is required for any project that will impact a wetland, stream, river, lake, or other Water of the U.S. This includes any project that will discharge fill material, excavate, open-trench cutting, or conduct mechanical clearing. IDEM reissued its 401 RGP program on Dec. 15, 2014. This program will expire on Dec. 15, 2019. All work in jurisdictional waters must be completed by the permit's expiration date. If work has already started when the RGP program expires, IDEM will typically grant a one-year extension. If work has not been completed within this timeframe, the INDOT EWPO must be notified so a written request can be made to IDEM for reissuance of the RGP. An INDOT project can apply for a 401 RGP if it meets the following requirements:

- Cumulative project impacts total less than 0.1 acre waters of the U.S. (streams, wetlands, etc.);
- Cumulative project impacts total less than 300 linear feet of impact to waters of the U.S.; and
- All [general permit conditions of the RGP](#) are met.

RGPs are typically required for new structures and/or fill placement. Only permanent impacts are counted toward fill impact totals; however, temporary impacts must be included in permit application attachments.

401 Individual Permit

When an INDOT project does not meet the conditions of either the 401 NWP or RGP program, a 401 Individual Permit is required. IDEM 401 IPs may require compensatory mitigation for the project's impacts to water resources. INDOT must demonstrate that potential project impacts were avoided and minimized prior to pursuing mitigation for the remaining impacts.

5.3 STATE REGULATED WETLANDS

In Indiana, wetlands that are not under the federal jurisdiction of the USACE (i.e. isolated wetlands, state regulated wetlands (SRW) or Waters of the State) are regulated by IDEM under the Indiana State Isolated Wetlands law (Indiana Code 13-18-22). To apply for a State Isolated Wetland Permit, the applicant must have a jurisdictional determination from the USACE stating the wetland is not under their jurisdiction. As with the 401 WQC, a permit application is submitted to IDEM for review and approval. One fundamental difference between the 401 program and the Isolated Wetland Program is the mitigation requirements, which include different ratios associated with each wetland type.

An isolated wetland is a wetland that is not subject to regulation under Section 404 of the Clean Water Act. It is a wetland that is not hydrologically connected to a waters of the U.S. and is therefore not under

USACE jurisdiction. Isolated wetlands are regulated under Indiana's State Isolated Wetlands Law (IC 13-18-22). Only the USACE can decide the jurisdictional status of a wetland and the applicant must have a jurisdiction determination from the USACE for each impacted wetland.

There are three types of isolated wetlands defined in the Indiana Code 13-11-2-25.8: Class I, Class II, and Class III. At least 50 percent of a Class I wetland has been disturbed or affected by human activity or development and it supports only minimal wildlife or aquatic habitat or hydrologic function. A Class III wetland is located in a setting undisturbed or minimally disturbed by human activity or development and supports more than minimal wildlife or aquatic habitat or function. A Class III wetland is a rare and an ecologically important wetland type. A Class II wetland is not a Class I or Class III wetland, or it could meet Class I criteria if it were not a rare and ecologically important type of wetland. See [Appendix L](#) of the Waters of the US chapter of the ecology manual for more information.

IDEM can issue one of two permits for isolated wetland impacts: an Isolated Wetland General Permit (IWGP) or an Isolated Wetland Individual Permit (IWIP). Generally, projects that can be authorized under the IWGP include those with:

- Significant impacts to Class I regulated wetlands (generally >0.10 acre);
- Minimal impacts to Class I and II regulated wetlands such as:
 - Repair, replacement, or rehabilitation of any previously authorized structure or fill;
 - New construction limited to 0.1 acre or less of impact.

Activities that cannot meet the above criteria will need to apply for an IWIP. An IWIP is required for any impacts to a Class III isolated wetland, regardless of the acreage of the wetland or the proposed acreage of the impacts.

Compensatory mitigation could be required for isolated wetland impacts depending on the size of the wetland, the impacted amount, and the type of wetland. Mitigation ratios differ from those typically associated with 404/401 permits.

Some isolated wetlands are exempt from the definition under the Indiana Administrative Code (327 IAC 17-1-7). Exempted isolated wetlands include an isolated wetland that is:

- An incidental feature in a residential, commercial or governmental lawn, agricultural land, roadside or irrigation ditch, or a manmade drainage control feature;
- A fringe wetland associated with a private pond;
- Associated with a manmade body of surface water;
- A Class I wetland with a delineated area of one-half (1/2) acre or less;
- A Class II wetland with a delineated area of one-quarter (1/4) acre or less; and
- An isolated wetland subject to United States Department of Agriculture (USDA) wetland conservation rules (Swampbuster).

[IDEM's State Regulated Wetlands Program](#) can be viewed in full on their website.

5.4 RULE 5 GENERAL PERMIT

IDEM's Rule 5 program ([327 IAC 15-5](#)) protects water quality by regulating the discharge of sediment and other construction related pollutants into surface waters. All projects that will disturb land are required to incorporate appropriate erosion and sediment control measures into project design and construction. Land disturbing activity is any manmade change of the land surface, including removing

vegetative cover that exposes the underlying soil, excavating, filling, transporting, and grading (327 IAC 15-5-4 (17)). Soil is defined as the unconsolidated mineral and organic material on the surface of the earth that serves as the natural medium for the growth of plants (327 IAC 15-5-4 (30)).

A Rule 5 General Permit is a combination of the Storm Water Pollution Prevention Plan and the Notice of Intent. The submittal of the NOI to IDEM notifies them of the applicants' intent to operate the proposed construction project in a manner consistent with 327 IAC 15-5. Projects that are projected to be one (1) acre or more of land disturbance are required to apply to IDEM for approval. If the land disturbing activity results in the disturbance of less than 1.0 acre of total land area but is part of a larger project whose total land area of disturbance is greater than 1.0 acre, it is still required to comply with Rule 5. When the estimated disturbance one (1) acre or greater in size, INDOT ESD requires the submittal of a formal application to IDEM. All potential land disturbance activities should be included in this estimated acreage.

IDEM defines "Land disturbing activity" means any manmade change of the land surface, including removing vegetative cover that exposes the underlying soil, excavating, filling, transporting, and grading. IDEM also defines "Construction activity" means land disturbing activities and land disturbing activities associated with the construction of infrastructure and structures. This term does not include routine ditch or road maintenance or minor landscaping projects.

If the activity results in the disturbance of less than one acre but is part of a larger corridor whose total land area of disturbance is greater than one acre, IDEM will view the disturbed soil cumulatively and require a NOI. All INDOT projects must incorporate best management practices (BMPs), including erosion and sediment control measures, to prevent pollution discharge during construction and during the post-construction use of the property.

To complete the NOI obligation the applicant must complete a Notice of Termination (NOT). An NOT can be submitted when all land disturbing activities have ceased, temporary BMPs have been removed, and the site is stable with 70 percent density permanent ground cover.

Other environmental laws may be violated by the off-site discharge of construction related pollutants. For instance, USACE 404, IDEM 401, and IDNR floodway permits all prohibit the discharge of sediment into streams and wetlands. By incorporating these measures into all INDOT projects there is a reduced risk for violating environmental regulations during construction.

Refer to Section 7.6 for more information on the Rule 5 permitting process.

5.5 SECTION 402

The goal of Section 402 of the CWA (National Pollutant Discharge Elimination System (NPDES)) is to maintain and enhance the quality and integrity of the nation's waters by limiting the discharge of degrading substances to waters of the U.S. The Section 402 program only applies to point sources. In Indiana, USEPA has delegated responsibility for the daily execution of the permit program to IDEM.

Section 402 permits are generally only required for INDOT projects involving rest areas and weigh stations. The EWPO is responsible for obtaining permits for these types of activities. Currently, storm water runoff from mainline pavement, shoulders, ramps, etc. does not fall under jurisdiction of the Section 402 permit program.

Due to the rarity of this permit, it is not described in detail within this chapter. The project designer should contact the EWPO if a Section 402 permit may be needed.

5.6 RULE 13

Rule 13 is a general storm water permit administered by IDEM that regulates municipal separate storm sewer systems (MS4s). MS4s are defined as a conveyance (or system of conveyances) owned by a state, city, town, or other public entity that discharges to waters of the U.S. and is designed/used for collecting or conveying storm water. Regulated conveyance systems include roads with drains, municipal streets, catch basins, curbs, gutters, storm drains, piping, channels, ditches, tunnels, and conduits. These systems do not include combined sewer overflows and publicly owned treatment works. INDOT operates as an MS4. Therefore, it must reapply from time to time for a statewide Rule 13 permit and follow the required permit conditions.

5.7 IDEM PERMITTING SCENARIOS

The following examples are provided to illustrate when a permit may be required from IDEM. The final determination on what permits are required will be made by IDEM.

- INDOT is proposing to replace a corrugated metal pipe. The existing structure is 40'L x 36"D and will be replaced with a pipe of the same dimensions. Riprap will be added to the outlet of this structure for an additional 15' of impact. Total impacts below the OHWM are 55' and 0.003 acre. For projects located in the USACE Chicago and Detroit districts, the work will require 404 and 401 RGPs because of the riprap. The USACE Louisville district will permit the project under the NWP #3 no notification and therefore no PCN to IDEM is required.
- INDOT is proposing a project that requires the construction of a new bridge upstream of an existing bridge. The existing bridge will be removed, and all bare soil stabilized with vegetation. New bridge piers and riprap will be placed below the OHWM for a total impact of 250' and 0.02 acre. The new approach road will also impact an emergent wetland (0.04 ac). Total project impacts to aquatic resources are 250' and 0.06 acre. Since the project meets all the RGP general conditions INDOT will apply for a **401 RGP**.
- INDOT is proposing to widen a roadway, to include travel lanes and shoulders, to update the corridor to current safety standards. The project crosses five streams located in the same eight-digit watershed. Five structures will be replaced and extended an additional 415' and will impact 0.07 acre below the OHWM. The work will impact a small, forested wetland (0.07 acre). Since cumulative impacts (415' and 0.14 acre) are above the NWP and RGP thresholds, a **401 IP** will be required. This will require stream and wetland mitigation.
- INDOT is proposing an intersection improvement project that will impact 0.8 acre of wetland. The USACE approved jurisdiction determination, requested during the project development process, determined that the wetland is not jurisdictional. IDEM has classified the wetland as a Class III isolated wetland and an **IWIP** is required.
- INDOT is proposing a project to modify an interchange that is estimated to disturb 0.97 acre of land. After discussing the project with the EWPO Storm Water Team, INDOT decides to apply for a formal **Rule 5 permit** since the contractor access and staging areas will likely result in a cumulative land disturbance greater than 1.0 acre.
- A slide correction project will disturb approximately 0.7 acre of land. No Rule 5 permit is required. However, the designer is required by INDOT to incorporate adequate erosion/sediment control measures into the project plans and contract.

- INDOT is proposing to construct a road on a new alignment that will disturb approximately 40 acres of land. A **Rule 5 permit** will be required.
- INDOT is proposing to construct a project that requires over 800 lbs/acre of seed to revegetate the disturbed area. The permit determination indicated that less than 1.0 acre of land disturbance would occur. The Rule 5 permit determination should be reviewed. The amount of seed required indicates that there will be more than 1.0 acre of land disturbance.

CHAPTER 6 - INDIANA DEPARTMENT OF NATURAL RESOURCES PERMITTING

6.1 INTRODUCTION

The Indiana Department of Natural Resources administers several regulatory programs overseeing construction activities within, over, and/or under state waterways. The goal of these programs is to ensure water resources are used in a prudent manner while minimizing floodway related damages and protecting environmental and cultural resources. The four programs that INDOT typically encounters (from most to least common) are the Flood Control Act, the Navigable Waterways Act, the Lakes Preservation Act, and the Lowering of the Ten Acre Lakes Act. These regulatory programs are summarized on [IDNR's website](#).

Flood Control Act

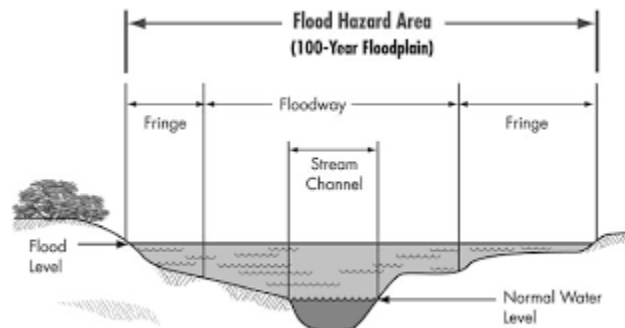
The [Flood Control Act \(IC 14-28-1\)](#) regulates development activities (i.e. structures, obstructions, deposits, and/or excavations) within the 100-year floodway of any waterway. Flood control is the prevention of floods, the control, regulation, diversion or confinement flood water or flow and the protection from flood water. The goal of flood control is to minimize the extent of floods and the death, damage, and destruction caused by floods. IC 14-28-1-2. Permits will be issued when the structure, obstruction, or excavation will not:

- (1) Adversely affect the efficiency of or unduly restrict the capacity of the floodway.
- (2) Constitute an unreasonable hazard to the safety of life or property.
- (3) Result in unreasonably detrimental effects upon fish, wildlife, or botanical resources.

IC 14-28-1-22(e)

The rules implementing the act can be found under 312 IAC Article 10, [Flood Plain Management](#).

The flood plain is the area adjoining a river or stream that has been or may be covered by flood water. 312 IAC 1-1-15. The floodway is the channel of a river or stream and those portions of the flood plain adjoining the channel which are reasonably required to efficiently carry and discharge the peak flow of the regulatory flood of any river or stream. 312 IAC 1-1-16. The floodway is a portion of the flood plain. Many floodways have been mapped through studies for the National Flood Insurance Program. However, floodways exist for all waterways even if they have not been formally mapped.



Source: <https://source.wustl.edu/wp-content/uploads/2016/02/images.png>

Navigable Waterways Act

The [Navigable Waterways Act \(IC 14-29-1\)](#) regulates development activities associated with navigable waterways by requiring a permit from IDNR prior to the start of construction. Under the Act, a “person” may not (1) place, fill, or erect a permanent structure in, (2) remove water from, or (3) remove material from a navigable waterway without a permit. IC 14-29-1-8(a). Riparian landowners are allowed to build and maintain on the premises bordering the stream or on submerged land beneath the stream a pier, wharf, dock or harbor that aids navigation and commerce. The pier, dock, or wharf may not extend into the stream further than is necessary to accommodate nor may it obstruct shipping and navigation. IC 14-29-1-4. The activity will be evaluated to ensure that it does not unreasonably impair the navigability of the water, cause significant harm to the environment, or pose an unreasonable hazard to life or property. IC 14-29-1-8(c). IDNR maintains a list of their navigable waterways on their [website](#). An IDNR navigable waterway may or may not also be a USCG navigable waterway.

Lake Preservation Act

The [Lake Preservation Act \(IC 14-26-2\)](#) requires approval from IDNR before modifications can be made to the level or shoreline of any public freshwater lake. A “lake” is a reasonably permanent body of water that (1) existed on March 12, 1947; (2) is substantially at rest in a depression in the surface of the earth that is naturally created; (3) is of natural origin or part of a watercourse, including a watercourse that has been dammed; and (4) covers an area of at least five (5) acres within the shoreline and waterline, including bays and coves. IC 14-26-2-1.5. A “public freshwater lake” is a lake that has been used by the public with the acquiescence of a riparian owner. IC 14-26-2-3. Modifications that may require a permit includes seawalls, dredging, and fill material placement. IDNR maintains a list of all public freshwater lakes on their [website](#).

There are three types of activities that require a permit under this act. First, a permit must be obtained to excavate, place fill, or place, modify, or repair a temporary or permanent structure over, along, or lakeward of the shoreline or water line of a public freshwater lake. IC 14-26-2-23 (a)(1). Second, a permit must be obtained to construct a wall whose lowest point would be below the elevation of the shoreline or water line and within ten (10) feet landward of the shoreline or water line of a public freshwater lake. IC 14-26-2-23 (a)(2). Finally, a permit must be obtained to change the water level, area, or depth of a public freshwater lake or the location of the shoreline or water line. IC 14-26-2-23 (a)(3).

The activity will be evaluated to include, but not be limited to, the cumulative effects on (1) the shoreline, water line, or bed of the public freshwater lake; (2) the fish, wildlife, or botanical resources; (3) public rights; (4) management of watercraft operations; and (5) interests of landowner with abutting property rights. IC 14-26-2-23 (c)(3).

Lowering of Ten Acre Lakes Act

The [Lowering of Ten Acre Lakes Act \(IC 14-26-5\)](#) regulates all ditch or drain work that is both located within one-half mile of a freshwater lake’s shoreline and has a bottom depth lower than the lake’s normal water level. The “normal water level of a lake” is either established by law or the “level where the presence and action of the water has been so constant as to give to the bed of the lake a character distinct from that of the surrounding land with regard to vegetation and the nature of the soil.” IC 14-26-5-2. Activity that requires a permit includes location, establishment, construction, reconstruction, repair, or recleaning of a regulated ditch or drain. IC 14-26-5-3(b). The activity will be evaluated to determine if the proposed work will not endanger the legally established water level of a lake or the normal water level of a lake whose water level had not been legally established or will not result in unreasonably detrimental effects upon fish, wildlife or botanical resources. IC 14-26-5-6.

Regulation of Dams

INDOT may be listed as the owner of a dam. When any of the following criteria are met a permit under the Flood Control Act (IC 14-28-1) and the [Regulation of Dams](#) (IC 14-27-7.5) will be required:

- The structure was not built for the sole purpose of erosion control, watering livestock, recreation, or providing a haven or refuge for fish or wildlife.
- The drainage area above the dam is more than one (1) square mile.
- The structure exceeds twenty (20) feet in height measured from the lowest point in the natural streambed or watercourse under the centerline to the top of the structure.
- The structure impounds a volume of more than one hundred (100) acre-feet of water: (1) at or below the elevation of the top of the structure; or (2) at or below the maximum design flood pool elevation; whichever is lower.
- The structure, based on a petition from a downstream property owner or resident, is declared to be a high hazard structure under IC 14-27-7.5-16.

A high hazard structure is a structure the failure of which may cause the loss of life and serious damage to homes, industrial and commercial buildings, public utilities, major highways, or railroads. IC 14-27-7.5-8.

Changes in Watercourses Involving Highway Construction

Under Chapter 5 (IC 14-29-5), agencies responsible for the construction, maintenance, and repair of public highways may:

- Change the course of a stream, watercourse, or drainage ditch.
- Restore to the original or former channel a stream, watercourse, or drainage ditch if it has meandered from the original or former course.
- Perform construction work to protect the banks or slopes of a stream, watercourse, or ditch to prevent wash, caving, slides, or erosion if the water if it is causing or threatening injury to, damage to or destruction of a public highway or bridge by erosion, wash, slides, change of course or overflow, to include construction of walls or levees if that is more practicable or less expensive.
- Protect public highways against injury, damage or destruction caused or threatened by landslides.

A permit or waiver must be obtained from the federal and state agencies with jurisdiction.

6.2 CONSTRUCTION IN A FLOODWAY PERMIT

Background

Permits issued under the [Flood Control Act \(IC 14-28-1\)](#) are called Construction in a Floodway permits. IDNR evaluates projects to protect the flood plains from undue restrictions and environmental impacts. Flood plains subject to regulation are those along waterways having a drainage area of at least one (1.0) square mile. 312 IAC 10-1-2(c). There are several general permits available to include wetland restoration measures (312 IAC 10-5-1), qualified utility line crossings (312 IAC 10-5-4), removal of logjams or masses of woody debris (312 IAC 10-5-6 & 6.5), qualified logjam and sandbar removal from beneath bridges (312 IAC 10-5-7), and qualified outfall projects (312 IAC 10-5-8).

In addition, INDOT has an MOU with IDNR that exempts certain maintenance activities from CIF permitting requirements. If a project meets the criteria for a specific exemption, it then falls under the general license provided by statute.

Rural Bridge Exemption

The rural bridge exemption can be found under IC 14-28-1-22 (b)(2). For a project to qualify for the exemption, the project must be:

- a construction or reconstruction project on a state or county highway bridge;
- in a rural area;
 - the lowest floor elevation (including basement) of any residential, commercial, or industrial building impacted by the project is above the 100-year flood elevation;
 - located outside the corporate boundaries of a consolidated or an incorporated city or town; and
 - located outside of the territorial authority for comprehensive planning defined as the contiguous unincorporated area within two (2) miles from the corporate boundaries of a municipality. 312 IAC 10-2-36
- that crosses a stream having an upstream drainage area of not more than fifty (50) square miles; and
- the relocation of utility lines associated with the construction or reconstruction project must be confined to an area not more than one hundred (100) feet from the limits of the highway construction right-of-way.

Documentation that the project meets the exemption must be kept in the EWPO project file.

Wetland Restoration Exemption

A license to place a wetland restoration measure in or on a floodway is required under IC 14-28-1, IC 14-29-1, and 312 IAC 1-3. To qualify for the wetland restoration exemption under 312 IAC 10-5-1 the following conditions must be met:

- Provide written notification and modifications, if required, sufficient for the IDNR to determine that the exemption requirements are met.
- The measure does not obstruct more than five (5) percent of the cross section of the flood plain during a regulatory flood.
- The measure will not remove more than one (1.0) acre of forest.
- Following completion of construction, disturbed areas will be reclaimed and revegetated.
- Any excavation that blocks a drain tile does not permanently alter the natural ground elevation.
- The streamward toe of a constructed berm or levee is at least 100 feet landward from the top of the bank of the waterway.
- The construction of a berm or levee is limited to one side of the waterway and there is no other berm or levee within 2,000 feet on the same waterway.
- The elevation of a berm or levee is no more than two (2) feet higher than the natural ground surface measured at the lowest point along the berm or levee.

The IDNR will evaluate the notification to determine that it does not: adversely affect the efficiency of, or unduly restrict the capacity of, the floodway, constitute an unreasonable hazard to the safety of life or property; and result in unreasonable detrimental effects upon fish, wildlife, or botanical resources. 312 IAC 10-5-1(c)(2). In addition, if the measure is in a navigable waterway, it must not unreasonably impair the navigability of the waterway, cause significant harm to the environment or pose an unreasonable risk

to life or property under IC 14-29-1-8(c) or violate the navigable waters rule (312 IAC 6). The IDNR has ten business days to respond with objections. If no objection is raised the project is deemed qualified for the exemption.

Qualified Utility Line Crossings, General License

In order for a project to qualify for the qualified utility line crossing general license under 312 IAC 10-5-4, the following conditions must be met:

- Tree removal and brush clearing shall be contained and minimized within the utility crossing area and no more than one (1.0) acre of trees shall be removed from the floodway.
- Construction activities within the waterway from April 1 through June 30 shall not exceed a total of two calendar days.
- Best management practices shall be used during and after construction to minimize erosion and sedimentation.
- Following the completion of construction, disturbed areas shall be reclaimed and revegetated.
- Disturbed areas with slopes of 3:1 or steeper, or areas where run-off is conveyed through a channel or swale, shall be stabilized with erosion control blankets or suitable structural armament.
- No pesticides will be used on the banks.
- If a utility line transports a substance that may cause water pollution as defined in IC 13-11-2-260, the utility line will be equipped with an emergency closure system.
- If a utility line is placed beneath the bed of a river or stream it must meet the cover conditions in 312 IAC 10-5-4(b)(8).
- If a utility line is placed above the bed of a river or stream it must meet the minimum clearance conditions in 312 IAC 10-5-4(b)(8).
- The utility line is not placed in a regulated dam or levee.

A utility line crossing general license must be obtained by the utility company.

Logjam and Sandbar Removal, General License

A construction permit under IC 14-28-1-22 is not required for the removal of a logjam or mass of wood debris that has accumulated in a river or stream if the following conditions are met:

- Work is not proposed within a [salmonid stream](#) designated under 327 IAC 2-1.5.5.
- Work is not proposed in a [natural, scenic, or recreational river](#) designated under 312 IAC 7-2.
- Free logs or affixed logs that are crossways in the channel must be cut, relocated, and removed from the floodplain. Logs may be maintained in the floodplain if properly anchored or otherwise secured to resist flotation or dislodging by the flow of water and placement in an area that is not a wetland. Logs must be removed and secured with a minimum of damage to vegetation.
- Isolated or single logs that are embedded, lodged, or rooted in the channel, and that do not span the channel or cause flow problems, must not be removed unless the logs are either (1) associated with or near larger obstructions or posing a hazard to navigation.
- A leaning or severely damaged tree that is in immediate danger of falling into the waterway may be cut and removed if the tree is associated with or near an obstruction. The root system and stump of the tree must be left in place.
- To the extent practicable, the construction of access roads must be minimized, and should not result in the elevation of the floodplain.
- To the extent practicable, work should be performed exclusively from one (1) side of a waterway. Crossing the bed of a waterway is prohibited.

- To prevent the flow of sediment laden water back into the waterway, appropriate sediment control measures must be installed.
- Within fifteen (15) days, all bare and disturbed areas must be revegetated with a mixture of grasses and legumes. Tall fescue should not be used.

The general license for the removal of qualified logjam and sandbars from beneath bridges can be found at [312 IAC 10-5-7](#). For a project to qualify under the general license (no written license issued), the following conditions must be met:

- Equipment is operated from the bridge or the bank within the right-of-way, with no equipment placed in the river or stream.
- An access corridor for the placement of equipment extends no more than fifty (50) feet beyond the right-of-way.
- The logjam or sandbar to be removed is located partially or exclusively within the right-of-way.

See the [DNR Regulatory Guide for Removal of a Logjam or a Mass of Wood Debris from a Floodway](#).

Removal of logjams or masses of wood debris from a natural, scenic, or recreational river requires a general license with notice under 312 IAC 10-5-6.5. See 312 IAC 10-5-6.5(c) for the specific conditions of this license.

Removal of logjams or masses of wood debris from a salmonid stream requires a general license with notice under 312 IAC 10-5-6. See 312 IAC 10-5-6(c) for the specific conditions of this license.

Qualified Outfall Projects, General License

An outfall structure is a closed conduit facility used for the transport and discharge of surface runoff or treated effluent to a waterway or swale. The facility includes all appurtenant channels, supply lines, energy dissipation, and erosion control systems. The term does not include a system where the conduit is placed beneath the bed. 312 IAC 10-2-31. For a project to qualify under the general license (no written license issued), the following conditions must be met:

- Tree removal and brush clearing shall be contained and minimized within the outfall project area. No more than one (1) acre of trees shall be removed within the floodway.
- Construction activities within the waterway between April 1 and June 30 shall not exceed a total of two (2) calendar days.
- Best management practices shall be used during and after construction to minimize erosion and sedimentation.
- Following the completion of construction, disturbed areas shall be reclaimed and revegetated.
- Disturbed areas with slopes of 3:1 or steeper, or areas where run-off is conveyed through a channel or swale, shall be stabilized with erosion control blankets or suitable structural armament.
- Areas in the vicinity of concentrated discharge points shall be protected with structural armament to the normal water level of the water. Any riprap must have an average minimum diameter of six (6) inches and extend below the normal water level.
- The size of the outfall shall not exceed any of the following dimensions:
 - Ten (10) square feet in cross-sectional flow area as determined by the summation of cross-sectional area of conduits within the outfall project area for an outfall structure.
 - Five (5) feet deep as determined by the difference in elevation between lowest bank elevation and the bottom of the swale for an outfall structure.
 - An area of disturbance thirty (30) feet wide.

- Adequate cover shall be provided to ensure the structural integrity of the outfall conduit and to allow suitable vegetative growth.
- Within the project area, the post-construction ground surface elevation shall be less than six (6) inches above the preconstruction elevation.
- The outfall structure shall:
 - Be supported by a headwall, slopewall, or anchored end section; and
 - Conform to the bank of the waterway.
- If flow passing through the outfall project in a reverse direction would induce flood damages during a regulatory flood, the outfall project shall be equipped with a closure mechanism.
- Construction debris and material not used as backfill shall be removed from the floodway.

The project must also meet the general criteria for a general license found under 312 IAC 10-5-0.3 (b):

- Work is not within a river or stream on the [Outstanding Rivers List](#).
- Work is not within a [salmonid stream](#).
- Work is not within a [natural, scenic, or recreational river](#).
- The project does not require an individual permit from the USACE under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.

Maintenance Memorandum of Understanding

The Memorandum of Understanding between INDOT and IDNR signed in March 1997, exempts maintenance projects, that will occur within existing INDOT right-of-way, which will have minimal impact to the environment from compliance with the permitting requirements of the Flood Control and Navigable Waterways acts. Exempted activities include bridge maintenance work such as hand cleaning, repair, flushing, deck patching, deck patching, minor bridge repair, clearing of waterway openings and channel maintenance. Exempt roadside maintenance work includes machine mowing, brush cutting, herbicide treatment, seeding and/or fertilizing, topping, trimming or removal of large trees, stump removal, spot mowing and hand trimming, and right-of-way fence repair. Exempt drainage maintenance work includes clean and reshape ditches, inspecting minor drainage structures, pipe replacement, minor patrol ditching, cleaning minor drainage structures, inspection and cleaning of underdrains and minor ditch maintenance activity. Exempt roadway and shoulder maintenance work includes shallow patching, deep patching, leveling, sealing, repair of longitudinal cracks and joints, crack sealing and other spot repairs.

If a project does not meet the criteria listed in an exemption or general license, a CIF permit will be required.

Navigable Waterways Act Permit

[Navigable Waterways Act \(IC 14-29-1\)](#) permits are issued by IDNR for development activities in navigable waterways. The limit of IDNR jurisdiction on a navigable waterway is the OHWM. Refer to the [INDOT Ecology Manual](#) for more information on the OHWM.

Typical INDOT projects requiring IDNR approval include, but are not limited to the following:

- Channel modification and/or relocation;
- Bridge and/or culvert construction or widening;
- Stream bank stabilization;
- Temporary runaround construction; and
- Construction of access bridges and/or causeways.

An IDNR CIF permit can be combined with the Navigable Waterways permit. However, exemptions from the CIF permit do not exempt INDOT from obtaining a Navigable Waterways permit.

Lake Preservation Act Permit

[Lake Preservation Act \(IC 14-26-2\)](#) permits are issued by IDNR for development activities which occur at or lakeward of a public freshwater lakes' average normal shoreline. Typical work included in INDOT projects that may require permits under this act include:

- Dredging;
- Construction of seawalls;
- Re-facing of seawalls in public freshwater lakes; and
- Permanent fill material viewed as degrading the integrity of the resource.

The following water bodies are exempt from the requirements of the Act:

- Lake Michigan;
- Wolf Lake and Lake George in Hammond;
- Lake Shafer and Lake Freeman;
- Lakes created by or used for surface mining;
- Off-stream, privately-owned water impoundments constructed for the reduction of pollutants before discharge to public waters; and
- Public water supply reservoirs.

An IDNR CIF permit can be combined with a Lake Preservation Act permit. However, exemptions from the CIF permit do not exempt INDOT from obtaining a Lake Preservation Act permit.

Lowering of Ten Acre Lakes Act Permit

IDNR issues permits under the [Lowering of Ten Acre Lakes Act \(IC 14-26-5\)](#) to provide safeguards against the lowering of a freshwater lake's water level as the result of a ditch and/or drain activity. Typical INDOT activities that may require a permit under the Lowering of the Ten Acre Lakes Act include:

- Ditch construction;
- Ditch reconstruction/maintenance;
- Tile drain installation; and
- Tile drain repair.

An IDNR CIF permit can be combined with a Lowering of the Ten Acre Lakes Act permit. However, exemptions from the CIF permit do not exempt INDOT from obtaining a Lowering of the Ten Acre Lakes Act permit.

6.3 IDNR PERMITTING SCENARIOS

The following examples are provided to illustrate when a permit may be required from IDNR. The final determination on what permits are required will be made by the IDNR.

- INDOT is proposing to replace a corrugated metal pipe (36"D x 60'L). The upstream drainage area from this structure is 0.85 square mile. No public lakes are located within one-half mile

radius. No IDNR permit is required since the drainage area is less than one (1) square mile, there is no navigable waterway, no lake impacts, and no public lake within close proximity.

- INDOT is proposing to replace a culvert. The existing box culvert (80'L x 8'W x 5'H) will be replaced with a box culvert (90'L x 10'W x 5'H). The approach roads will not change from their existing configuration. The location meets the rural definition requirements from IDNR. The upstream drainage area from the structure is 27 square miles. No public lakes are located within a one-half mile radius of the project. This work is not covered under the INDOT-IDNR Maintenance MOU. This project meets the rural bridge exemption and will therefore not require a CIF permit. Since there is no navigable waterway, lake impacts, and/or public lake within close proximity, no other IDNR permits are required.
- INDOT is proposing to replace a culvert. The existing box culvert (80'L x 8'W x 5'H) will be replaced with a new box culvert (90'L x 10'W x 5'H). The approach roads will not change from their existing configuration. The location is within Bloomington city limits. The upstream drainage area from the structure is 33 square miles. No public lakes are located within one-half mile radius of the project. In addition, this work is not covered under the INDOT-IDNR Maintenance MOU. This project will require an **IDNR CIF permit** since it does not meet the rural bridge exemption. Lack of a navigable waterway, lake impact, and close proximity of a public lake rules out other IDNR permitting needs.
- INDOT is proposing to widen a road. Shoulder and lane widening will result in the replacement of an existing box culvert (80'L x 8'W x 5'H) with a new box culvert (150'L x 10'W x 5'H). The approach roads will be widened resulting in additional floodway impacts, including tree clearing and the relocation of a captured stream located within the existing roadside ditch. The location meets IDNR's rural definition. The upstream drainage area is 27 square miles. No lake impacts will occur and no public freshwater lakes are located within one-half mile radius of the project. All of the project's floodway impacts cannot fit under the rural bridge exemption, which only covers structure work and not the approach widening and stream relocation. This work is not covered under the INDOT-IDNR Maintenance MOU because proposed work is construction. An **IDNR CIF permit** will be required and should include mitigation for the tree clearing. Since there are no navigable waterway, lake impacts, and or public lake within close proximity, no other IDNR permits are required.
- INDOT is proposing to line a pipe within the Indianapolis city limits. The drainage area upstream from the structure is four square miles. No lake impacts will occur, and the project is not located within a half mile radius of any public freshwater lake. This work is covered by the INDOT-IDNR Maintenance MOU, so no CIF will be required. Since there is no navigable waterway, lake impacts, and or public lake within close proximity, no other IDNR permits are required.
- INDOT is proposing to construct a new bridge over the Ohio River. Work in the floodway will include the placement of piers within the river as well as the construction of approach roads. The upstream drainage area from the new bridge is 2,500 square miles. The project is in an area that meets the IDNR rural definition. No lake impacts will occur and no public freshwater lake is within one-half mile radius. This project will require an **IDNR CIF permit** and a **Navigable Waterways Act** permit. It does not meet the requirements of a general license or the Maintenance MOU.
- INDOT is proposing to widen a road adjacent to a public freshwater lake. Work will include road widening and the installation of a sea wall at the toe of slope. No roadside ditches will be

constructed within one-half mile of the lake. No work will be conducted in a 100-year floodway. A **Lake Preservation Act** permit will be required due to the project's lake impacts. The absence of a floodway, navigable waterway, and roadside ditch construction (or other scoped work) that would lower the lake level rules out other IDNR permitting needs.

- INDOT is proposing to reconstruct a portion of an existing U.S. highway. Work will include replacement of the pavement and construction of new roadside ditches along both sides of the highway to improve drainage. No 100-year floodway will be impacted by this project. However, a public freshwater lake is located within one-quarter mile from the ditch construction and the ditches will be below the lakes normal water level. A **Lowering of the Ten Acre Lakes Act** permit will be required. The absence of a floodway, navigable waterway, and lake impact rules out other IDNR permitting needs.
- INDOT is proposing a bridge rehabilitation project. Work will include repair of the bridge and approach slabs, end bents, joints, and railing. In addition, riprap for scour protection will be added along the piers below the existing flow line. The bridge is in an urban area and the upstream drainage area is 232 square miles. The project does not qualify for the Rural Bridge Exemption. The Bridge Replacement-in-Kind Non-modeling Worksheet indicates that the original structure waterway opening will be maintained. This project will require an **IDNR CIF** permit.

CHAPTER 7 - USACE, IDEM AND IDNR PERMIT APPLICATION PROCESS

7.1 404/401 GENERAL APPLICATION REQUIREMENTS

All permit applications have similar general requirements for the application packet. A discussion of the variances from the general process and additional requirements for each permit will follow the general requirement discussion. For example, an NWP that does not require pre-construction notification will be documented with less information than a permit that requires notification. There are three forms that are used for permit applications: State Form 51937, State Form 51821, and USACE Eng Form 4345. The USACE Chicago District requires all permit applications be submitted on the USACE Eng Form 4345. Both the USACE and IDEM form must be completed for projects in the Chicago District.

In addition to the application form, the following information may be required:

- Waters report with signed preliminary jurisdictional determination (Pre-JD) form or approved JD (see the [INDOT Ecology Manual](#));
- Description of the proposed project, its purpose, and impacts to waters of the U.S. (acres and linear feet);
- Project impacts, includes acres and linear feet of impact to each water of the U.S. and volume of fill to be placed in these resources, presented in a summary table if multiple locations are impacted;
- Project plans showing the proposed impacts to waters of the U.S.
 - Cross sections of all areas where fill will be placed with labels for the wetland boundaries, flow line elevations, and OHWM elevations;
 - All streams, wetlands, and other waters labeled using the same nomenclature as provided in the waters report;
- INDOT approved Hydraulic Review memo;
- IDNR Early Coordination/Environmental Assessment (ETR species documentation);
- USFWS Section 7 IPAC coordination forms and any other ETR coordination letters or emails;
- Scoping Worksheets for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat;
- IDNR Section 106 coordination or MPPA category; and
- Compensatory mitigation plan following the 2008 USACE Mitigation Rule (if required).

The EWPO requires designers evaluate and include the most likely measures needed to construct a project. For instance, if a bridge deck will be removed, the contractor will likely need a temporary stream crossing during construction. This should be detailed in the permit application exhibits. Inclusion of this information in the permit application reduces delays during construction from permit modifications. It also reduces permit violations resulting from contractor failure to obtain the necessary permit modifications. Items to include for each temporary measure are the:

- Type of fill material (must be non-erosive);
- Volume (cubic yards) and area (acres) associated with the temporary measures below OHWM;
- Temporary acres of impact to any wetland(s);
- Plan or drawing showing the approximate location and dimensions of the proposed temporary measure(s);
- Expected amount of time the temporary measures will be in place;
- Temporary impacts (pump-arounds, stream crossings, coffer dams, causeways, etc.) associated with the proposed project and quantification of these impacts;

- Plan or drawing showing the approximate location and dimensions of the proposed temporary measure(s);
- Restoration plan which includes an appropriate seed mix.

The designer should provide the documents or information to the Specialist and Team Lead assigned to the area. The EWPO map is available [online](#). Uploading the documents to the Electronic Records Management System (ERMS) or ProjectWise may be required for larger files.

7.2 404/401 NATIONWIDE PERMIT

A checklist for all permits requiring [State Form 51937](#) can be used to assist the designer with application preparation. The EWPO will review the application and request revisions if required. The EWPO will verify that all the 401 NWP conditions have been met. If one or more of the 401 NWP conditions cannot be met, the EWPO office will ask the designer to prepare an application for either a 401 WQC RGP or 401 WQC IP.

If the project requires pre-construction notification, the completed application will be submitted to the USACE by the EWPO. Refer to Chapter 2 for more detailed information on the INDOT review and permit application submittal process. If required, the USACE will issue a permit upon their approval of the application. The average agency review time for an NWP is two months.

An [IDEM Section 401 WQC RGP Notification Form 51937](#) can be used for NWP applications. In some circumstances, the [USACE ENG FORM 4345](#), Application for Department of the Army Permit can be used as it requires less information. If a project does not require a PCN to the USACE, and also meets IDEM's 401 NWP conditions, no notification is required to either IDEM or the USACE. The application will be kept on file and provided to either agency upon request. Most 401 WQC NWPs do not require pre-construction notification to IDEM. PCN is only required if temporary impacts exceed 0.1 acre or if the general permit conditions cannot be met.

NWPs authorized under the 2017 Nationwide Permit program are valid through March 18, 2022. All work in jurisdictional waters must be completed by the NWP's expiration date. If work will not be completed, the EWPO must be notified so a formal request can be made to the USACE for reissuance of the permit. If work has already started or is under contract to start when the NWP program expires, the USACE typically allows a one-year extension of the expiration date.

7.3 404/401 REGIONAL GENERAL PERMIT

The USACE Louisville and Detroit districts accepts [IDEM Section 401 WQC RGP Notification Form 51937](#) in lieu of Form 4345 for the RGP application. The designer should follow the instructions on the form. It includes the supplemental material required to complete the application. The EWPO will review the information required for a 401 RGP and verify that all the conditions have been met. If all are met, the EWPO will sign and submit the permit application. If one or more of the 401 RGP conditions cannot be met by the project, the EWPO office will ask the designer to prepare an application for a 401 WQC IP. The average agency review time for an RGP is four months.

IDEM must act on all 401 RGPs applications within 30 days of receipt of a complete application. If IDEM does not respond after 30 days, then the project is authorized under the RGP program. If IDEM does respond during the 30 day period, IDEM's review clock pauses until all issues have been resolved.

The RGPs expiration date is the date of the program's expiration. For the current program, the expiration date is Dec. 15, 2019. All work in jurisdictional waters must be completed by the RGP's expiration date.

If work has already started or is under contract to start when the RGP program expires, the USACE typically allows a one-year extension. If work will not be completed within this timeframe, the EWPO must be notified so a written request can be made to the USACE for reissuance of the permit.

7.4 404/401 INDIVIDUAL PERMIT

As with RGPs and NWP, 404 IPs are issued through the appropriate USACE district. Pre-application coordination with the agencies is essential to ensure a smoother permitting process. A 404 IP will require a USACE Eng Form 4345. EWPO has a [checklist](#) for State Form 51821 to assist the designer with preparation of the application. EWPO staff will review the application for completeness and request necessary revisions. Once all necessary revisions have been incorporated, EWPO staff will sign and submit the application to the regulatory agencies.

Once submitted to the agencies, they will review the application for completeness and contact INDOT EWPO regarding questions or comments. After these are addressed, the agencies will prepare and issue a public notice. The USACE public notice comment period ranges from 15 to 30 days, while IDEM's is 21 days. The maps and plans submitted with the application should include one at a scale that can be used with the public notices. The public at large, as well as interested federal, state, and local agencies, have an opportunity to comment on the proposed activity. For instance, comments are frequently received from the USFWS. The agencies may ask INDOT to assist in addressing any public comments or concerns. In some cases, USACE might hold a public hearing if substantial comments are received, and comments cannot be resolved informally. In most cases, a permit will be granted unless the project is found to be contrary to the public interest.

Once the USACE approves the project, a provisional 404 permit will be issued to the applicant (INDOT). The provisional permit contains the proposed terms and conditions of the IP and requires INDOT to agree to the terms and conditions by signature. The signed provisional permit is returned to the USACE for their signature. The permit is not in effect until the USACE signs the form. The final 404 IP is then sent to INDOT and contains special conditions that must be followed during construction. 404 IPs are valid for three years.

A proof of permit yellow placard will be included with the final permit. INDOT ESD will forward the placard to the PM and/or designer. They are responsible for providing it to the construction PE/PS for posting along with the permit on the project site during construction. See Figure 7.1 for an example of the placard.

IDEM must act on all 401 WQC IPs within 120 days of receipt of a complete application. Any requests for additional information will pause IDEM's review clock. After IDEM has a complete application, they will publish a 21-day public notice. Once the public notice period has passed and all comments have been addressed by INDOT, IDEM will issue the permit. This permit will include special conditions that must be followed during construction as well as special conditions regarding any required compensatory mitigation (such as success criteria). 401 IPs are valid for two years.

7.5 STATE REGULATED WETLAND PERMITS

The need for an Isolated Wetland Permit will be evaluated after the USACE has made a jurisdictional determination that the wetland(s) are not under federal jurisdiction initiated by INDOT's request for an approved jurisdictional determination. If a Pre-JD is used, the USACE has jurisdiction of all wetlands, and all wetland impacts will be permitted through the 404/401 process. See Section 5.3 above and [Appendix L](#) of the Waters of the U.S. chapter of the ecology manual for more information.

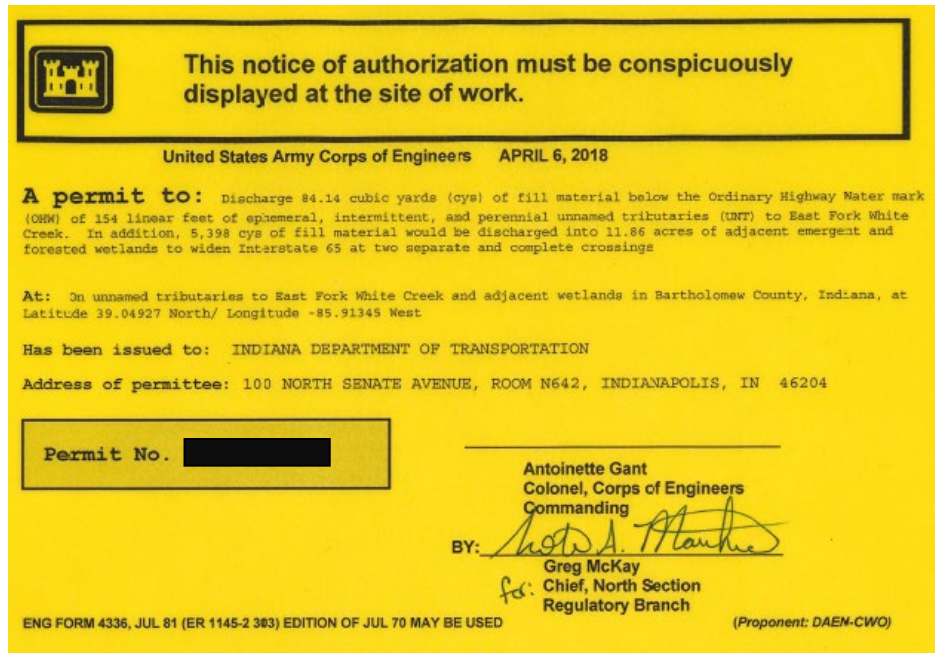


Figure 7.1 Example USACE 404 IP yellow placard that must be displayed at the project site.

If there are isolated wetlands in the project area, State Form 51821 should be used to apply for an Isolated Wetland Permit. The application should only include impacts to isolated wetlands. Impacts to jurisdictional streams and wetlands will require a separate application. EWPO staff will review the application and submit it to IDEM.

IDEM will review the application for completeness and may request additional information. An Isolated Wetlands Individual Permit application must be reviewed within 30 days from the date of receipt. INDOT will receive a formal letter from IDEM which indicates whether the project falls within the scope of the terms and conditions of the IWGP. IDEM is required to publish a 21-day public notice. Notice is served to adjacent property owners, other state and federal agencies, and any person who has requested to receive public notices for IWIP applications. Any person may request that a public hearing be held to discuss the potential water quality impacts of the project. Public hearings are held at IDEM's discretion. No decision can be made until the 21-day public notice period has expired and all comments have been addressed. IDEM has 120 days from the receipt of a complete IWIP application to make an agency decision (approval or denial). Applicants will receive a formal agency decision through certified mail. The permit is valid for two years and may be extended.

7.6 RULE 5 PERMIT

A Rule 5 application has three components: a Notice of Intent (NOI), a Storm Water Pollution Prevention Plan (SWPPP), and project plans. The NOI should be prepared using [State Form 47487, Rule 5 – Notice of Intent \(NOI\)](#).

The SWPPP has three components: basic plan elements (A1-A23), construction components (B1-B15), and post construction components (C1-C5). Requirements for each item are available on [IDEM's website](#). In addition to sediment, this plan should address other types of pollutants that are associated with construction activities (equipment fuel, sanitary waste, litter, etc.).

Project plans should also be included in each Rule 5 application. The project designer should consult the [INDOT Design Manual](#), [INDOT Standard Specifications](#), and the [Indiana Storm Water Quality Manual](#) for details and specifications of erosion and sediment control measures. Considerations for the Rule 5 applications include:

- Local drainage patterns and topography;
- Water volumes entering and leaving the construction site;
- Utility features that may traverse the project;
- Construction clear zone limitations on erosion and sediment control measures; and
- Construction sequencing including necessary measures during different construction phases.

Providing vegetated ground cover is the most effective means of preventing erosion. If possible, the project should be phased to keep the amount of exposed soil to a minimum. Designers and contractors should avoid exposing soil over the entire project as this creates a high potential for off-site movement of sediment. Where possible, designers should plan for and designate areas on the plan for maintaining vegetative buffers. If the existing vegetation must be disturbed, appropriate erosion and sediment control measures should be used.

At least four (4) months prior to the Ready for Contracts (RFC) date, the designer should submit the Rule 5 application through ERMS and copy the EWPO's Storm Water Team. EWPO staff will review the application for completeness and request revisions when necessary. Upon completion of INDOT's review, the EWPO will initiate the two-step application process required by IDEM.

Step one involves the submittal of the first page of the NOI, the SWPPP, and project plans to IDEM. IDEM has 28 days to review this application. IDEM will issue a review letter (or waiver of review letter) to INDOT. Once the items listed as deficient in the review letter are addressed, INDOT EWPO will publish a Rule 5 public notice in a local newspaper. The proof of publication from the newspaper is provided to IDEM in the second step of the Rule 5 application process.

The second step of the application process is initiated when INDOT has addressed the comments received IDEM's review letter and the public notice has been made. The EWPO will submit the NOI package to IDEM. This package contains a signed NOI, the IDEM review letter (or waiver of review letter), a publisher's affidavit, and a payment voucher. The required payment for submission to IDEM is handled internally between the sister agencies. There are three types of projects where the submittal and fee payment is provided by other entities. Two types being Design Build projects and projects with a Lump Sum Erosion Control pay item both of which require the contractor to obtain the Rule 5 permits with INDOT as a cosignatory. The third type is Local Planning Authority (LPA) contracts where the responsibility is on the local agency to acquire needed permit unless INDOT agrees to take over that responsibility on behalf of LPA. INDOT does not pay fees for routine permits with the exception by law given for Rule 5 permits. The Rule 5 permit is valid within 48 hours of NOI submittal.

The designer may consider using multiple NOI permits for contracts setup as Design Build or a Lump Sum Erosion Control component. This option may allow the contractor to start earth moving operations which are time sensitive or less critical and easier to gain acceptance from IDEM. Designer must be specific in defining the work being accomplished and the location, so IDEM will be able to distinguish permit coverages during site compliance inspections.

In response to INDOT's NOI package, IDEM will issue a Notice of Sufficiency (NOS). This document lists the expiration date for the Rule 5 authorization, generally set at five years from the date of NOI

submission. It also provides the IDEM permit number, which is used when completing the Notice of Termination (NOT) form upon completion of the project. A Rule 5 permit cannot be extended. INDOT must submit a new NOI, with proof of new publication notice and payment voucher, 90 days prior to the original NOI's expiration if additional time is needed during construction.

For projects with Rule 5 permits, the contractor must submit, as outlined in [Standard Specification Section 205](#), a written construction plan that discusses the sequencing of construction activities and other requirements to IDEM following the contract award. The approved construction plan must be implemented before, during, and after construction activities occur. A copy of this plan should also be sent to the EWPO Storm Water Team for incorporation into the permit file.

When construction is complete, the EWPO receives a memo from INDOT district construction notifying the office that the project is progressing toward final inspection. The district should only send this notification when permanent vegetative stabilization of the site is achieved. By Rule the site has reached permanent stability when a minimum permanent vegetation density of 70 percent is achieved. [312 IAC 15-5-4](#) The NOT should be prepared using the current [State Form 51514](#), Rule 5 – Notice of termination (NOT). The EWPO, except for those permits obtained by other entities, will then complete a NOT form and submit this to IDEM. When submitting to IDEM, EWPO will have the NOT submittal date and time stamped and request a copy for incorporation into the permit file. IDEM will respond to the submittal in approximately two weeks with a NOT signed by the appropriate IDEM official terminating the permit. After the NOT is received notification is sent out to district construction for their use.

7.7 DNR PERMIT APPLICATION PROCESS

For all IDNR CIF permits, the most current [State Form 42946, Permit Application for Construction](#), should be used. Instructions for completing this document are included on the form. This form is used for Navigable Waterways, Flood Control, Lake Preservation and Lowering of Ten Acres Lake Act permits. IDNR also provides an [Application Assistance Manual](#) with detailed information on the submittal requirements. The IDNR uses this form for all IDNR permits discussed in this chapter.

An [IDNR CIF checklist](#) has been developed to assist the project designer with application preparation. In general, IDNR applications will require the following information:

- Project plans including:
 - Labels for streams, wetlands, existing vegetation, and boundary of 100-year floodway;
 - Property limits (including property owner names);
 - Existing and proposed structures;
 - Existing and proposed approach roads;
 - Construction limits;
 - Limits of channel work;
 - Vertical benchmarks for structures (Q100 elevation, flow-line elevation, bottom of structure elevation, and top of structure elevation) shown on cross sections;
 - Disturbed area drawing; and
 - Hydraulic data table.
- IDNR and USFWS early coordination documents;
- Photographs;
- Maps (location map and photo-orientation map);
- Public notice documents ([State Forms 52086 and 50354](#));
- Hydraulic modeling and modeling checklist (if necessary);
- Mitigation and monitoring plan (if necessary); and

- Description of temporary impacts associated with the project (stream crossings, pump-arounds, cofferdams, etc.).

EWPO requires that designers evaluate and include the most likely measures needed to construct a project. Inclusion of this information in the permit application reduces delays during construction when pursuing modifications to IDNR permits. It also reduces permit violations when the contractor fails to obtain the necessary permit modifications. Items to include for temporary measures are:

- Type of fill material (must be non-erosive);
- Volume (cubic yards) and area (acres) associated with the temporary measures below Q100;
- Temporary acres of impact to any wetland(s);
- Plan or drawing showing the approximate location and dimensions of the proposed temporary measure(s);
- Expected amount of time the temporary measures will remain in place;
- Number and dimensions (diameter and length) of pipes required for a temporary stream crossing (if applicable); and
- Restoration plan which include an appropriate seed mix.

A separate IDNR CIF application should be prepared for each floodway that is impacted by the project. Therefore, if a project impacts two separate 100-year floodways, it will require two CIF permits.

Following the designer's submittal of the completed application to the EWPO, they will review the document and ask for any necessary revisions. Once all revisions have been incorporated into the application, EWPO staff will sign and submit it to IDNR. No filing fee is required for INDOT application submittals. IDNR processing time is dependent upon the magnitude of the project and the completeness of the submittal. Typically, six to nine months from the date of submittal is required. This includes a mandatory 21-day public notice that the INDOT EWPO will initiate and complete. For the public notice, the project designer should submit [IDNR Form N4 \(State Form 52086 and IDNR Form N-2 \(State Form 50354\)\)](#) to the EWPO, who will process these once IDNR has issued a project number.

As mandated by the regulations of the Flood Control Act, IC 14-28-1 and the Floodplain Management Rules, 312 IAC 10, a construction project in a floodway requires a permit application review that includes a hydrologic and hydraulic evaluation to determine the effect a project may have on the base flood elevation. The Construction in a Floodway Assessment documents required for permit submittal can be found on the [IDNR forms](#) webpage.

For federally funded INDOT projects, the CIF permit will be valid for five (5) years from the date of issuance. For state funded INDOT projects, the CIF will be valid for two (2) years. A one-time permit renewal may be issued for a period of two (2) years if requested prior to expiration of the initial permit.

7.8 SECTION 10 PERMIT

Section 10 permits are managed by watershed. Section 10 and Section 404 permits are reviewed with the same application and follow the same approval process. The need for a Section 10 permit is noted by the EWPO on the cover letter with the 404 application. INDOT will coordinate Section 9 clearance with the USCG. See Chapter 8 for more information on Section 9 permitting.

Following INDOT EWPO approval of the Section 10 permit application, the permit application will be submitted to the USACE. Their review process may include the publication of a 30-day public notice. The

USACE will not issue a permit until completion of this public notice process. Section 10 permits will remain in effect until they automatically expire or are modified, suspended, or revoked.



7.9 LEVEE PERMIT

When a project involves construction on or near a levee, it is the responsibility of the designer to determine who is responsible for operation and maintenance of the levee. This can be a public entity or the landowner. The designer should coordinate with the landowner regarding the proposed activity. The public entity should be contacted to determine the information that they require to review and approve the proposed work. This information may include an application form, design plans, hydraulic analysis, and/or other documentation. Early coordination is necessary to ensure adequate review time. Permit applications must be reviewed by EWPO. EWPO will review, sign, and submit the application to the responsible entity. The designer and EWPO will coordinate regarding additional information or changes that are requested. The responsible entity will issue a permit or provide other documentation of their review and approval of the project. No alteration to an embankment or other structure that is functioning as a levee should occur without prior coordination with the USACE, the responsible entity, and INDOT Hydraulics and Real Estate.

CHAPTER 8 - UNITED STATES COAST GUARD PERMITTING

8.1 INTRODUCTION

The United States Coast Guard (USCG) approves the location and plans for bridges and causeways on navigable waters of the U.S. federal law prohibits the construction of these structures, or their modifications, without USCG approval.

The majority of Indiana lies within the Eighth Coast Guard District with portions of northern Indiana falling under the jurisdiction of the Ninth Coast Guard District (above the 41st parallel). Figure 5.1 provides a map of the U.S. Coast Guard jurisdiction in Indiana.

8.2 SECTION 9 PERMITS

Section 9 of the Rivers and Harbors Act of 1899 prohibits the unauthorized construction of any bridge, causeway, dam, or dike over or in navigable waterways of the U.S. without Congressional approval. 33 USC 401. The USCG has responsibility for administration of Section 9. A Section 9 bridge permit is written approval from the USCG for work proposed in a navigable waterway. This includes territorial seas of the U.S., internal waters of the U.S. subject to tidal influence, and:

Internal waters of the United States not subject to tidal influence that: (i) Are or have been used, or are or have been susceptible for use, by themselves or in connection with other waters, as highways for substantial interstate or foreign commerce, notwithstanding natural or man-made obstructions that require portage. 33 CFR 2.36 (a)(3)

Coordination is required and a permit may be needed for work in a waterway that meets the definition of navigable waters of the U.S. under 33 CFR 2.36.

Section 9 waters located in the USCG [Ninth District](#) can be found through this link. District 8 Section 9 waters in Indiana only include the Ohio and Wabash Rivers. The following INDOT projects typically require USCG Section 9 permits:

- New bridge construction across any navigable waters; and
- Bridge maintenance and repair on navigable waters depending on the scope of work and impacts to navigation.

Some maintenance and repair on structures over navigable waterways can be conducted without a Section 9 permit. For example, in many instances, bridge painting will not require a permit even though false work (suspended platforms) may be required to access portions of the structure. The USCG, however, should be consulted on all projects in navigable waterways to determine whether or not a permit is needed.

The project designer should submit early coordination correspondence to the EWPO for review and submittal to the USCG for all projects located on navigable waterways. The early coordination correspondence should include:

- Location maps (topography and aerial) of the proposed project;
- Project plans;

- Project scope including potential impacts to navigation (if any); and
- Plan to avoid potential impacts to navigation (i.e., communication with drawbridge operators to move equipment barged in the waterway to allow passage of vessels, marker lights on equipment barges, measures to prevent material from entering the channel, etc.).

After review, EWPO staff will submit the early coordination correspondence to the USCG for their permit determination. The USCG will determine if a Section 9 permit is required. If a permit is not required, the USCG may request notification prior to construction initiation or provide additional measures that must be implemented during the work. If a Section 9 Permit is required, EWPO will review the application completed by the designer and submit it to the USCG. This [USCG website](#) contains links that outlines the application process, contains their Bridge Permit Application Guide, and other useful USCG permitting information.

The USCG publishes a public notice for each Section 9 application. It will not issue a permit until the end of the public notice period. The NEPA document should be completed prior to submission of the permit.

8.3 USCG PERMITTING SCENARIOS

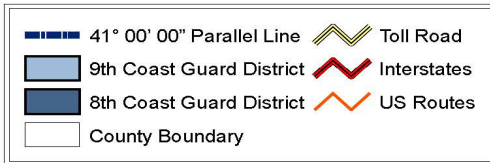
The following examples illustrate when a Section 9 permit may be required. This list is not all inclusive. The USCG makes the final decision regarding any permit requirements.

- INDOT is proposing to paint an existing interstate highway bridge over the Ohio River. To reach the beams and understory of the structure, falsework will be required. No impact to navigation is expected to occur. INDOT coordinated with the USCG and received a ruling that a Section 9 permit will not be required. The USCG does request notification prior to the initiation of work.
- INDOT is proposing to rehabilitate an existing bridge over the Indiana Harbor canal. Work will include demolition of the structure, which requires barges in the river to collect demolition debris. INDOT coordinated with the USCG and received a ruling that a Section 9 permit will be required.
- INDOT is proposing to construct of a new bridge over the Ohio River. INDOT coordinated with the USCG and received a determination that a Section 9 permit will be required.

U.S. Coast Guard District Map

U.S. Coast Guard Eighth (8th) District
Sector Ohio Valley

U.S. Coast Guard Ninth (9th) District
Sector Lake Michigan



This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Sources: **Non Orthophotography Data** - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

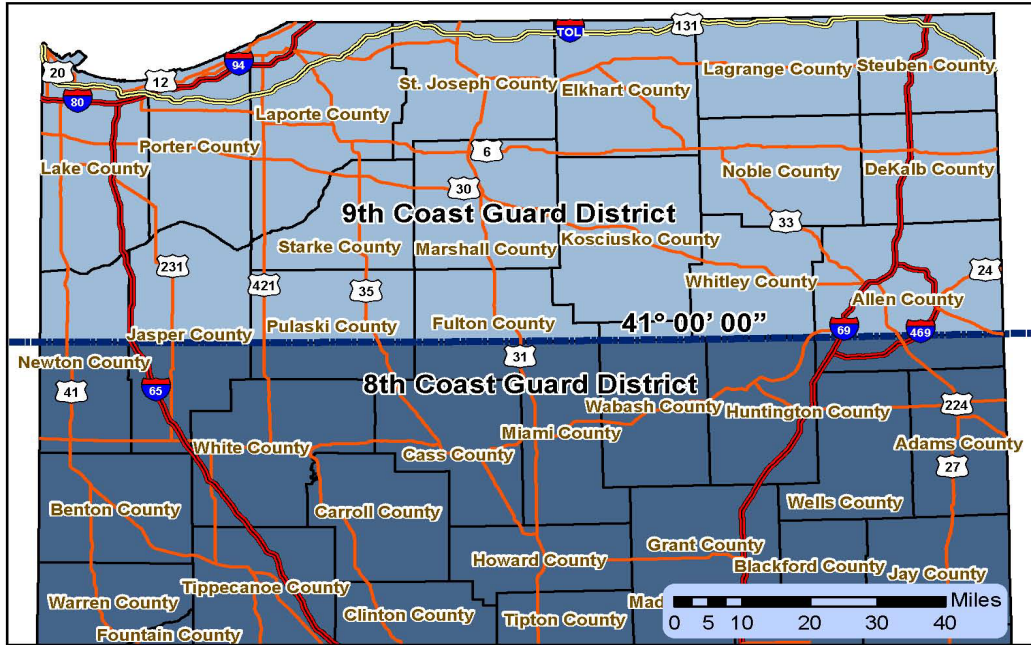


Figure 8.1: U.S. Coast Guard Districts in Indiana

CHAPTER 9 - COUNTY REGULATED DRAIN PERMITTING

9.1 INTRODUCTION

County regulated drains are established by state drainage law (IC 36-9-27). Each county has its own regulations with only five counties (Allen, Elkhart, Hamilton, Lake, and LaPorte) that require a county regulated drain permit. Each county has an elected surveyor who administers the county's drainage code and oversees maintenance of legal drains. INDOT is required to notify county surveyors of any proposed construction that impacts a regulated drain and conduct any necessary permit coordination prior to the start of construction.

9.2 COUNTY REGULATED DRAIN PERMITS

A regulated drain is an open drain, a tiled drain or a combination of the two. IC 36-9-27-2. For all INDOT projects where work is proposed in (or associated with) a regulated drain, regardless of county, the designer should conduct early coordination with the county surveyor. A permit may be required for work that may not directly impact a regulated drain, such as a structure replacement or for using the regulated drain as an outfall. The surveyor should be sent a copy of the plan set as well as an invitation to the preliminary field check. The designer should evaluate the comments from the surveyor for inclusion into the final project design. Comments that cannot be incorporated into the design should be discussed with the INDOT Project Manager, Hydraulics Office and the assigned EWPO permit specialist.

The state drainage law allows surveyors to clear and maintain legal drains and all land within 75' of each stream bank. As a result, it is difficult to use a county regulated drain for compensatory mitigation. An easement can be obtained from the surveyor, but pre-approval should be obtained from the Corps and IDEM Project Managers. The designer should coordinate with INDOT's EWPO early in project development if mitigation is being considered on a regulated drain in any Indiana county.

For projects located in the five counties that require a permit, the designer should coordinate with the surveyor for application requirements. In general, each submittal will include a permit application form, scope of work, and the project plan set. It may also include hydraulic modeling if requested from the surveyor. Copies of application forms can be obtained by contacting the county surveyor's office or the county website.

The permit request will require approval by the county drainage board. Coordination with the surveyor should include a discussion of the drainage board meeting schedule and review timeline. Additional time may also be required to allow for permit review and recommendation by contracted engineering firm. Drainage board meetings are held infrequently (monthly, bi-monthly, or as needed) and this may delay approval.

The application should be sent to the EWPO for review and submittal to the county surveyor. The surveyor will coordinate the project discussion at the next county drainage board meeting. Regulated drain permits generally do not have an expiration date. The surveyor may notification prior to the initiation of construction.

9.3 COUNTY REGULATED DRAIN PERMITTING SCENARIOS

The following examples illustrate when a permit may be required from a county surveyor. The final determination on if a permit is required will be made by the county.

- INDOT is proposing a small structure replacement project on Sugar Creek in Benton County. The project designer researched the project location with the county surveyor and determined that the creek is not a county regulated drain. No county regulated drain permit will be required.
- INDOT is proposing a small structure replacement project on an Unnamed Tributary (UNT) to Pine Creek in Benton County. The project designer researched the project location with the county surveyor and determined that this creek is a county regulated drain. No county regulated drain permit will be required; however, early coordination on the project's design with the surveyor is required.
- INDOT is proposing a small structure replacement project on an Unnamed Tributary (UNT) to Buck Creek in Hamilton County. The project designer researched the project location with the county surveyor and determined that this creek is a county regulated drain. A **county regulated drain permit** will be required.
- INDOT is proposing an interchange modification project in LaPorte County. As part of the project, new roadside drainage will be cut and allowed to outlet to a county regulated drain located at the terminus of the proposed project. No direct impacts are anticipated to the drain itself. This project will likely require a **county regulated drain permit**.

CHAPTER 10 - MITIGATION

10.1 INTRODUCTION

Mitigation will be required for impacts to wetlands, streams, floodways, bat habitat, and other types of protected property such as wetlands protected under the NRCS Wetland Reserve Program (WRP).

10.2 MITIGATION FOR STREAM AND WETLAND IMPACTS FOR 404/401 PERMITS

The standards and criteria for compensatory mitigation for impacts under Section 404(b)(1) of the CWA can be found at 40 CFR Subpart J - [Compensatory Mitigation for Losses of Aquatic Resources](#). The first requirement for all projects is to “take all appropriate and practicable steps to avoid and minimize adverse impacts to waters of the United States. Practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.” 40 CFR 230.91 (c)(2) Compensatory mitigation may be required for the remaining unavoidable impacts if the impacts exceed the thresholds.

There are four types of mitigation:

- **Enhancement** - The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Selected aquatic resource functions may increase while others may decline. There is no gain in aquatic resource area,
- **Establishment** (creation) - The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist in an upland site. It results in a gain of aquatic resource area and function,
- **Preservation** - The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near the aquatic resource. Includes legal and physical mechanisms. There is no gain in aquatic resource area or function, and
- **Restoration** - The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Restoration is broken into two categories:
 - **Re-establishment** - Results in rebuilding former aquatic resources and results in a gain of aquatic resource area and functions.
 - **Rehabilitation** - Results in a gain of aquatic resource function but not area.

40 CFR 230.92

Restoration is the preferred option because it has a greater likelihood of success, has reduced impacts to other resource types, and it will have the greater gain in aquatic resource functions.

The three mitigation program types, in the preferred order of use, include:

- **Mitigation bank** - A site, or suite of sites, where resources such as wetlands, streams or riparian areas are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation. The credits are approved by the USACE prior to sale to a permittee. Permittee has fulfilled the mitigation requirement by credit purchase.

- In-lieu fee program - Involves the restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity. The credits may or may not be created and approved prior to the purchase of credits by the permittee. Permittee has fulfilled the mitigation requirement by credit purchase.
- Permittee-responsible - An aquatic resource restoration, establishment, enhancement, and/or preservation activity undertaken by the permittee. The permittee retains full responsibility for the success of the mitigation site until acceptance by the regulatory agencies. Permittee-responsible on-site and in-kind mitigation is preferred over off-site and/or out-of-kind mitigation (40 CFR 230.93(b)). 40 CFR 230.92

As of May 28, 2018, Indiana has an in-lieu fee program - Indiana Stream and Wetland Mitigation Program (IN SWMP). IN SWMP is administered by the Department of Natural Resources. The IN SWMP instrument broke the state into eleven service areas. Each service area has stream credit prices (by LF) and wetland credit price (by acre). See the [IN SWMP webpage](#) for more information and current credit prices.

The amount of compensatory mitigation must be, to the extent practicable, sufficient to replace the lost aquatic resource functions. A functional or conditional assessment can be used to determine the amount and if not available a minimum of a one-to-one acreage or linear foot ratio is required. Factors that would increase the ratio are:

- the method of mitigation (e.g. preservation);
- likelihood of success;
- differences between the functions lost at the impact site and the functions expected to be produced by the mitigation project;
- temporal loss (time lag between loss of aquatic resource functions caused by the permitted impacts and their replacement) of aquatic resource functions;
- the difficulty of restoring or establishing the desired aquatic resource type and functions; and/or
- the distance between the affected aquatic resource and the impacted site. 40 CFR 230.93(f)

Riparian areas and/or buffers around aquatic resources may be required where they are necessary to ensure the long-term viability of the resource. In addition, the buffer will also provide habitat or corridors that are necessary for the ecological functioning of the aquatic resource. Where required by the USACE, mitigation credit should be provided for buffers. 40 CFR 230.93(i)

The process for determining the compensatory mitigation required for a project consists of six steps:

- Step 1.** Verify the type and quantity of impacts and the mitigation requirements with the regulatory agencies. This includes the USACE and IDEM (to include isolated wetland impacts).
- Step 2.** Check the USACE Regulatory in-lieu Fee and Bank Information Tracking System ([RIBITS](#)) web site to determine if the type and amount of credits are available in the required service area(s).
- Step 3.** Contact the mitigation bank provider or the DNR to verify that the credits are available.
- Step 4.** Include the proposed compensatory mitigation plan in the permit application.
- Step 5.** Purchase the credits from the bank or in-lieu fee program based on the regulatory agency permit requirement. Payment must be made prior to the start of construction.
- Step 6.** If neither bank nor in-lieu fee credits are available or appropriate for the project, develop a permittee-responsible plan following the guidelines in 40 CFR Part 230, Subpart J.

Block 5 - Avoidance, Minimization, and Mitigation of SF 51821 should indicate the type of mitigation provided. For mitigation bank or in-lieu fee credit purchases include the following information:

The [Road and Project Description] project will impact a total of ___ acres of wetlands [describe by wetland type] and ___ LF of streams. The total mitigation required by USACE is [___ acres of wetlands and ___ LF of streams] and by IDEM is [___ acres of wetlands, ___ acres of state isolated wetlands and ___ LF of streams]. The availability of [mitigation bank credits/ IN SWPP] was received on (date). See attached [letter/email]. INDOT will purchase [___ wetland credits for \$___ and ___ LF stream credits for \$___].

In some circumstances a project may require a stream channel to be shifted to allow for road widening or other activity. In these situations, it is important to begin coordination with the regulatory agencies early in the design process. The mitigation and/or restoration requirements will be based on the quality of the resource and other considerations. There may be considerations that can reduce the amount or need for mitigation that can be incorporated into the design.

10.3 MITIGATION FOR STATE ISOLATED WETLAND IMPACTS

If state isolated wetlands are impacted in the project area, mitigation for permanent impacts to those resources may be required. This mitigation may be in addition to mitigation required for impacts to wetlands under federal jurisdiction. A state-regulated wetland (SRW) is an isolated wetland that is not an exempt isolated wetland (327 IAC 17-1-3 (10)). It is a feature that is classified as a wetland under the 1987 Corps Wetlands Delineation manual and the appropriate regional supplement. This includes features that meet the three wetland criteria (hydrophytic vegetation, hydric soils and hydrology) and problematic wetlands. The USACE, through the approved jurisdiction determination process, has not taken jurisdiction of the feature(s) under Section 404(a) of the Clean Water Act (CWA). Under 327 IAC 17 (Wetland Activity Permits) the state may take jurisdiction of the feature(s) as an isolated wetland.

Appendix L of the Waters of the U.S. chapter of the ecology manual outlines the process for determining the mitigation requirements for impacts to isolated wetlands. The process consists of five steps:

Step 1. Wetland delineation completed based on the 1987 Corps Wetland Delineation manual and the appropriate regional supplement. The entire isolated wetland must be delineated, to include off ROW.

Step 2. USACE, through the approved Jurisdiction Determination (JD) process, does not take jurisdiction of the feature under CWA Section 404(a).

Step 3. Permittee proposal to IDEM whether the features qualify as an exempt isolated wetland under 327 IAC 17.

Step 4. IDEM verifies and classifies features as exempt isolated wetlands and as Class I, II, and III wetlands.

Step 5. Mitigation acreage and class determined based on 327 IAC 17-1-5. See Table 10.1.

A proposed determination of the exemption status of each wetland should be prepared with the waters report following the table included in Appendix L and submitted to the IDEM INDOT Project Manager for review. The compensatory mitigation ratio is lowered to 1:1 if it is completed before the initiation of the wetland impacting activity under 327 IAC 17-1-5 (b). The IN SWPP in-lieu fee program may be used to compensate for the impacts.

Wetland Class	Replacement Class	On-Site Ratio	Off-Site Ratio
Class I	Class II or III	1 to 1	1 to 1
Class I	Class I	1.5 to 1	1.5 to 1
Class II	Class II or III	1.5:1 Non-forested 2:1 Forested	2:1 Non-forested 2.5:1 Forested
Class III	Class III	2:1 Non-forested 2.5:1 Forested	2.5:1 Non-forested 3:1 Forested

Table 10.1 State Isolated Wetlands Mitigation Ratios

10.4 MITIGATION FOR FLOODWAY IMPACTS

Compensatory mitigation may be required for permits under the IC 14-28-1 (the “Flood Control Act”) or under IC 14-29-1 (the “Navigable Waters Act”). Mitigation may be required when a construction project is likely to reduce or degrade an existing habitat in a floodway or floodplain. The Natural Resources Commission, [Information Bulletin #17](#), Habitat Mitigation Guidelines, provides guidance for the assessment and determination of compensatory mitigation. The goal of mitigation is to provide similar or better benefits to the resources compared to the impacted area. The mitigation site should be located within the same HUC and preferably within the floodway of the same river or stream as the project site.

Habitat Category	Standard Minimum Mitigation Ratio
Palustrine Emergent Wetland	2:1
Palustrine Scrub-Shrub Wetland	3:1
Palustrine Forested	4:1
Non-wetland forest (at least one acre of disturbance)	2:1
Non-wetland forest (less than one acre of disturbance in a rural area)	1:1
Non-wetland forest (less than one acre of disturbance in an urban area)	5:1 based on trees a least ten (10) inches in diameter-at-breast-height (dbh)

Table 10.2 DNR Floodway/Floodplain Mitigation Ratios

As with all mitigation for resource impacts, we must show that avoidance and minimization measures were implemented and that mitigation is required only for those impacts that could not be avoided. The preferred mitigation method is habitat restoration, but mitigation can also include creation, enhancement, and preservation. Mitigation ratios are based on restoration by habitat category and are higher for mitigation that is more difficult to establish and takes longer time to reach a similar type of resource that was impacted. Higher mitigation ratios may be required for creation, enhancement, and preservation. The ratios may also be adjusted for habitat quality and cumulative effects.

Mitigation for in-stream habitat is evaluated on a case-by-case basis. Mitigation requirements are based on the length of stream impacted. Mitigation ratios may be adjusted based on the quality of habitat or the fish and wildlife resources impacted. An example would be a project that had a mussel bed in the stream that would be impacted. The length of impacts can be for a single project or an accumulation of projects.

Length of Stream Impacted	In-Stream Mitigation Ratio
Less than 50 feet	In-stream mitigation may not be required, depends on quality of resource impacted
50 to 300 feet	1:1
Over 300 feet	2:1

Table 10.3 DNR In-Stream Habitat Mitigation Ratios

The DNR IN-Lieu Fee (ILF) Mitigation program provides an alternative to permittee responsible mitigation for floodway impacts. An assessment must be completed to verify that ILF mitigation is the best mitigation option for the project. See [INDOT Use of In-lieu Fee Program for CIF Mitigation](#) for additional details. The Permit Specialist will review [State Form 56964](#) Request for In-Lieu Fee (ILF) Mitigation completed by the consultant and coordinate with the DNR biologist who must approve the use of ILF prior to submittal of the permit application to the DNR. Credit price will follow IN SWMP prices.

10.5 MITIGATION FOR IMPACTS TO BAT HABITAT

The U.S. Fish and Wildlife Service and the Federal Highway Administration developed a standardized approach to assessing impacts to Indiana bats and northern long-eared bats from highway construction and expansion projects. The [Section 7 Consultation and Conservation Strategy](#) includes a Biological Opinion and Biological Assessment, an Information for Planning and Consultation (IPaC) project planning tool and an in-lieu fee mitigation program.

The Programmatic Biological Assessment for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat (BA) analyzed typical transportation actions of the Federal Highway Administration, Federal Railroad Administration and Federal Transit Administration, and their potential to impact the two bat species with the goal of stream-lining the consultation process with the USFWS. The Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat (BO) is the opinion of the USFWS as to whether federal actions of the transportation agencies would jeopardize the continued existence of the two bat species and provided non-discretionary measures that must be implemented by the agencies.

The goal of the in-lieu fee program is to offset adverse impacts to Indiana bat and northern long-eared bat habitat. The program will focus on forest habitat restoration and protection, and winter habitat protection or restoration. The program sponsor, [The Conservation Fund](#) (TCF), will use the in-lieu fee payments to protect or restore summer and winter habitat in the state where the impacts occurred.

The process for determining the compensatory mitigation required for project impacts is provided in the [User's Guide](#). Unavoidable impacts to habitat functions resulting from the project will be quantified into acres of habitat lost to determine the total number of compensatory mitigation acres needed to offset impacts. The payment will be calculated using the current county multiplier and cost per acre figures found in the User's Guide.

For example, a project will impact 0.675 acres of forested habitat. This was calculated based on the plans and included impacts in the area between 100 and 300 feet from the edge of pavement. The impacted acreage is multiplied by the "county multiplier" and by the state "cost per acre" found in the current user's guide. In this example, a county multiplier of 1.75 and a cost per acre of \$10,609 would result in a

payment of \$12,532. The USFWS will provide a consistency letter that verifies that the project qualifies for the Programmatic Rangeland BO, the amount of impacts requiring mitigation and the required ILF payment.

10.6 MITIGATION FOR IMPACTS TO NRCS PROTECTED SITES

The Wetland Reserve Program ([WRP](#)) was a voluntary program that offered private landowners the opportunity to protect, restore, and enhance wetlands on their property. The U.S. Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) provided technical and financial support to help landowners with their wetland restoration efforts through the WRP. This program offered landowners an opportunity to establish long-term conservation and wildlife practices and protection. The goal of the NRCS was to achieve the greatest wetland functions and values, and optimum wildlife habitat, on every acre enrolled in the program. Typical lands that were eligible for WRP included: wetlands farmed under natural conditions; farmed wetlands; prior converted cropland; lands that had the potential to become a wetland as a result of flooding; and riparian areas that linked protected wetlands. Subsequent to the WRP program, the Agricultural Act of 2014 established the Agricultural Conservation Easement Program that repealed WRP but did not affect the validity or terms of any WRP contract, agreement, or easement entered into prior to the date of enactment.

INDOT projects that will potentially impact WRP easements must conduct early coordination with the USDA-NRCS. If impacts to a WRP easement will occur, specific mitigation will be required. USDA-NRCS mitigation cannot be purchased from a mitigation bank or the DNR In-Lieu Fee Program and cannot be coupled with any other IDEM, USACE, or DNR mitigation. USDA-NRCS typically requires the mitigation acreage be equivalent to the total acreage taken of the WRP property and not just the area classified as wetland. The replacement is a minimum of a 1:1 ratio, however 3:1 or 5:1 replacement is typical on WRP takings. INDOT must propose a WRP replacement property where the mitigation will take place, which must then undergo a functional assessment by USDA-NRCS. USDA-NRCS requests that all replacement properties occur within the same 8-digit HUC watershed. A full packet that includes property appraisals, NEPA documentation, functional assessments, and any other relevant information is then forwarded to the USDA-NRCS headquarters where it will undergo a full review to see if the WRP impacts by INDOT will be approved.

RESOURCES

REFERENCES

- Environmental Law Institute, *The Clean Water Act Jurisdictional Handbook, Second Edition*, May 2012, Washington, DC. http://www.eli.org/New_Books/cwa_handbook.cfm
- U.S. Army Corps of Engineers, *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0)*, April 2012, Washington, DC. ERDC/EL TR-12-9
- U.S. Army Corps of Engineers, *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*, August 2010, Washington, DC. ERDC/EL TR-10-16
- U.S. Army Corps of Engineers, *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*, January 2012, Washington, DC. ERDC/EL TR-12-1
- http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/reg_sup_p.aspx

EPA

- [Section 404\(b\)\(1\) Guidelines](#) for Specification of Disposal Sites for Dredged or Fill Material
44 CFR Part 230
- [Compensatory Mitigation for Losses of Aquatic Resources](#) 40 CFR Subpart J

IDEM

- [IDEM Section 401 WQC RGP Notification Form 51937](#)
[State Form 51821, Application for Authorization to Discharge Dredged or Fill Material to Isolated Wetlands and/or Waters of the State](#)
[INDOT State Form Checklists](#)

Rule 5

- [State Form 47487, Rule 5 – Notice of Intent \(NOI\)](#)
[Storm Water Permitting](#) Webpage

IDNR

[Forms](#) Webpage

- State Form 42946, Permit Application for Construction
State Form 50354, Public Notice - N2 (Adjacent Property Owner)
State Form 52086, Adjacent Property Owners Listing - Form N4
State Form 55236, Change in Effective Cross Sectional Flow Area Modeling Worksheet
State Form 55237, Change in Effective Cross Sectional Flow Area Modeling Worksheet - Companion Worksheet
State Form 55238, No Change in Effective Cross Sectional Area Non-Modeling Worksheet
[State Form 56964](#), Request for In-Lieu Fee (ILF) Mitigation
Indiana Stream and Wetland Mitigation Program (IN-SWMP) [IN-SWMP webpage](#)

[Permit Application Assistance Manual](#)

Natural Resources Commission [Information Bulletins](#)

#3 - Roster of Indiana Waterways Declared Navigable or Nonnavigable

#17 - Floodway Habitat Mitigation

#57 - Cumulative Effects under the Flood Control Act

#61 - Listing of Public Freshwater Lakes

#71 - Bioengineered Materials and Techniques for Public Freshwater Lakes, Rivers, and Streams

[Regulatory Guide](#) for Removal of a Logjam or a Mass of Wood Debris from a Floodway
INDOTs Construction in a Floodway (CIF) Permit [Checklist](#)

INDOT

Environmental Policy Office ([EPO website](#))

Ecology and Waterway Permit Office ([EWPO website](#))

USACE

[USACE ENG FORM 4345](#)

[82 FR 1860](#) - Issuance and Reissuance of Nationwide Permits

[RIBITS](#) - Regulatory in-lieu Fee and Bank Information Tracking System

[1987 U.S. Army Corps of Engineers Wetland Delineation Manual](#)

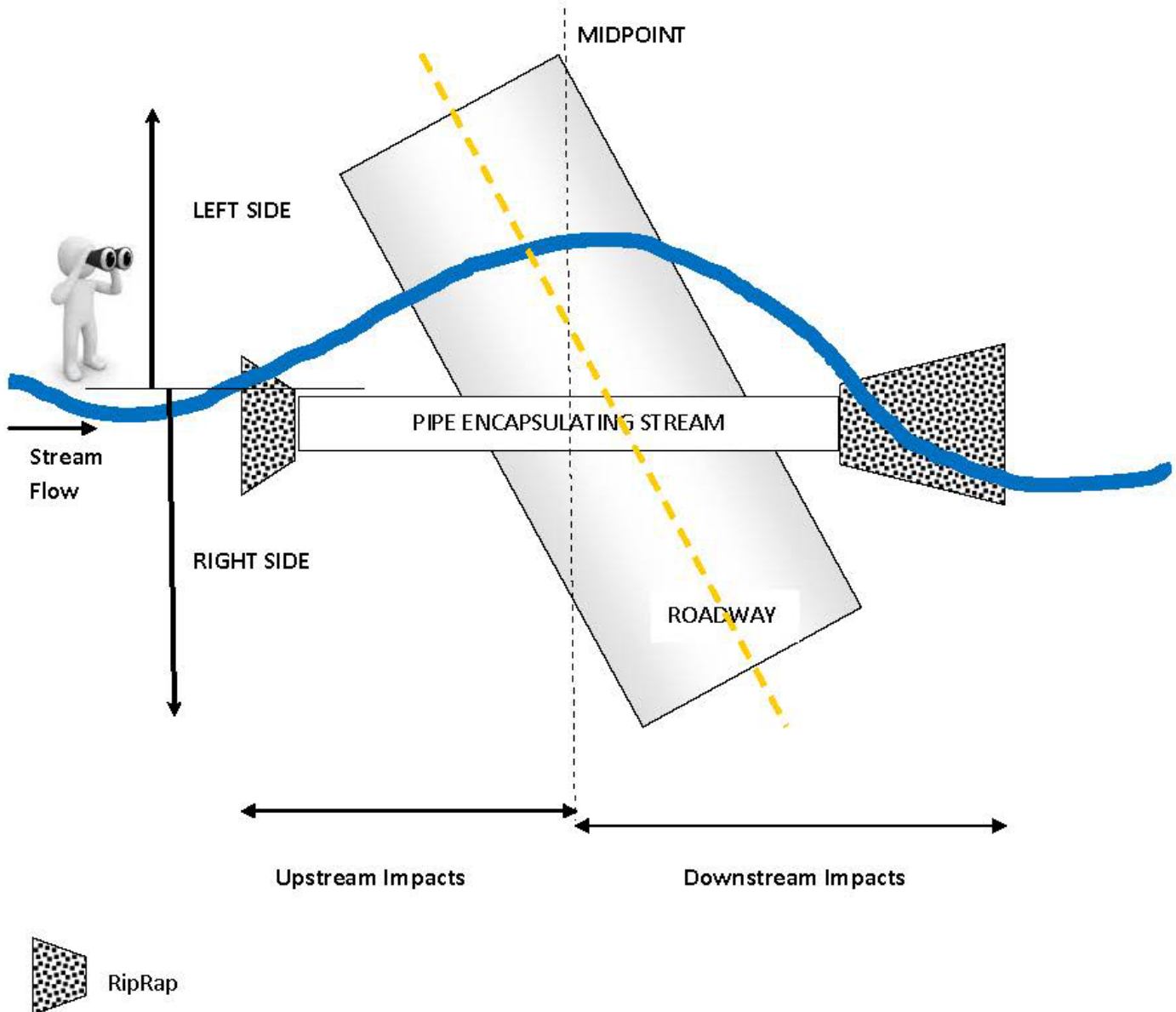
[Section 404\(b\)\(1\) Guidelines for the Specification of Disposal Sites for Dredged or Fill Material](#)

USCG

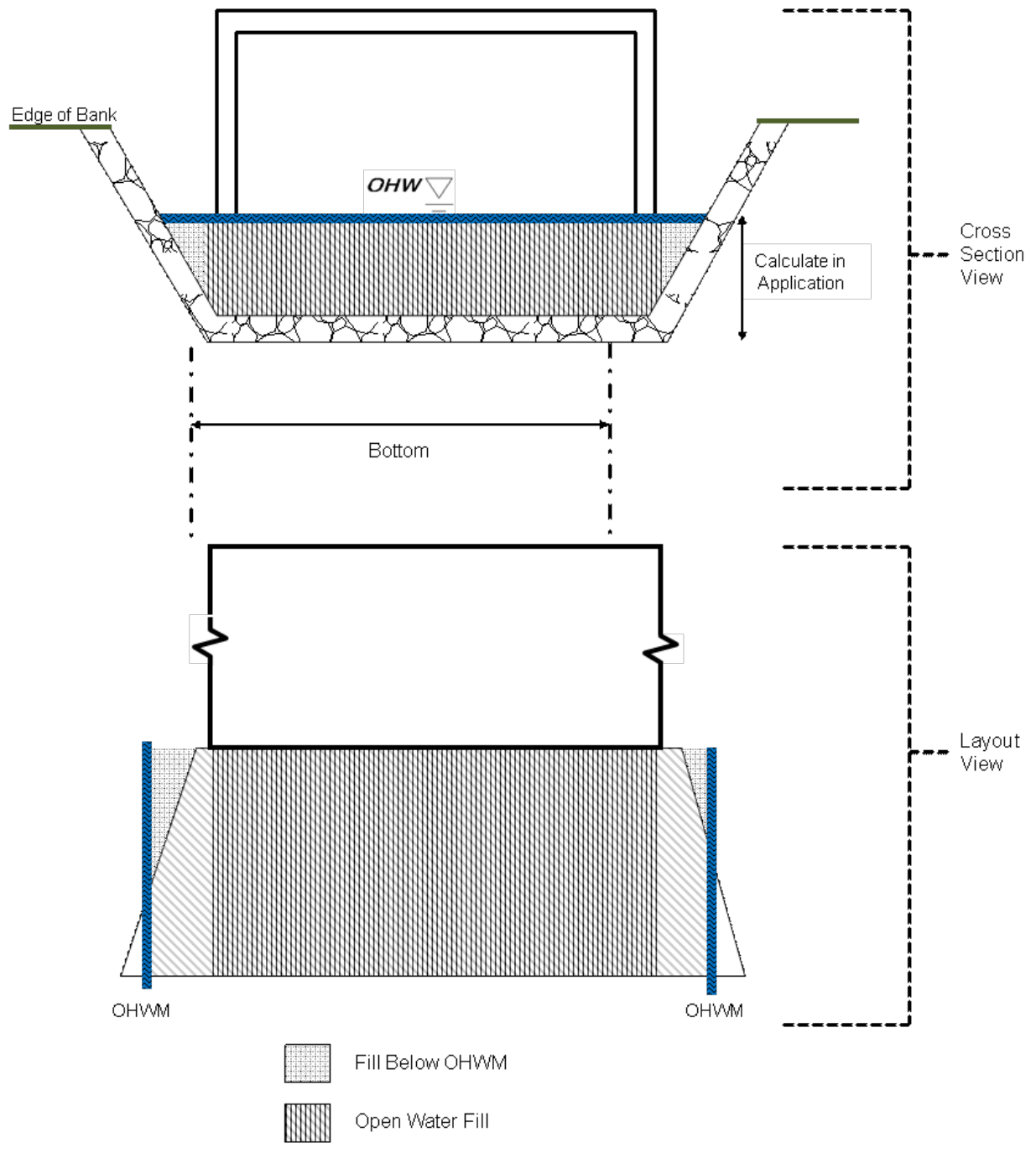
[USCG website](#)

CALCULATING UPSTREAM AND DOWNSTREAM IMPACTS

for
SF 51821 Worksheet Section C



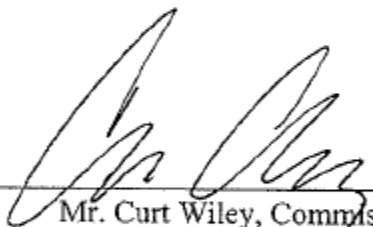
- Mitigation is required for the lost stream length and the encapsulation.
- Left and right are determined looking downstream.
- Fill includes, but is not limited to, the structure, backfill, riprap, footings, liner, and grout.



MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is made and between the Indiana Department of Transportation (INDOT) and the Indiana Department of Natural Resources (IDNR) on the dates indicated below for the purpose of providing certain INDOT maintenance activity exemptions under the Flood Control Act and Navigable Waterways Act.

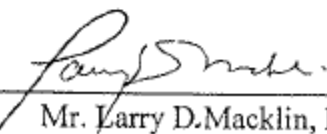
Whereas, INDOT and IDNR wish to cooperate in the elimination of unnecessary paperwork and the expeditious processing of certain INDOT maintenance actives which have minimal impact to the environment, the attached *INDOT Maintenance Activity Exemption from the Flood Control and Navigable Waterways Act* is hereby established.



Mr. Curt Wiley, Commissioner
Indiana Department of Transportation

March 9, 1997

Date



Mr. Larry D. Macklin, Director
Indiana Department of Natural Resources

March 13, 1997

Date

INDOT Maintenance Activity Exemption from the Flood Control and Navigable Waterways Act

March 3, 1997

Certain maintenance activities are exempted from the permit requirements of IC 14-28-1 and IC 14-29-1 if INDOT does or establishes the following:

- (1) Maintenance activities will not occur within the channel of a river or stream, except where the activities are limited to work that does not disturb the channel:
 - (A) From March 15 through June 30 and from July 15 through November 30, for a salmonid water designated under 327 IAC 2-1-6 (c)(1); or
 - (B) From April 1 through June 30, for any other river or stream.

However, INDOT may request a waiver from the requirements of this subdivision. A written request to waive a portion of the restrictive dates must be submitted to the Environmental Supervisor with the Division of Fish and Wildlife no sooner than two (2) weeks prior to initiating the proposed maintenance project. A decision regarding the request will be provided in approximately five (5) days after the receipt by the Environmental Supervisor.

- (2) Best management practices will be used during and after construction to minimize erosion and sedimentation.
- (3) Following the completion of maintenance activities, disturbed areas will be reclaimed and revegetated. Disturbed areas will be mulched with straw, wood fiber, or other suitable material. To prevent erosion until revegetated species are established:
 - (A) Mulch shall be anchored by crimping, tackifiers, or netting; or
 - (B) Erosion control blankets shall be applied.
 - (C) Revegetation shall be accomplished in compliance with the Memorandum of Understanding dated February 22, 1993 between INDOT and IDNR that establishes revegetation guidelines.

- (4) Pesticide will not be used on the banks.
- (5) The INDOT maintenance activity must not fill or drain a wetland or alter the water table of any wetland.
- (6) Logjam and debris removal shall be:
 - (A) Performed with equipment capable of being operated from a bridge or from a bank rather than using equipment in stream.
 - (B) In conformance with IDNR's Emergency Rule for "*General Permit for the Removal of Obstructions from Rivers and Streams*" (effective until July 14, 1997) or any subsequent similar enactments.
- 7) The maintenance activity must occur within existing INDOT right-of-way.
 - (A) An access corridor of fifty (50) feet beyond the existing right-of-way shall be allowed for placement of equipment only.
 - (B) Removal of waterway obstructions caused by sandbars, logjams, and debris that occur both in existing INDOT right-of-way and extend outside of the right-of-way is allowed. Removal of these obstructions that are solely outside of the right-of-way is not allowed.

log jam exemption

Maintenance Activities Defined

The following maintenance operations activities are exempted from the permitting requirements of the Flood Control Act and the Navigable Waterway Act where "maintenance operations" means

(1) **Bridge maintenance activities**

(A) A **bridge** is a structure, including supports, erected over a depression or an obstruction such as water, highway, or a railway having a track or passageway for carrying traffic or other moving loads, and having a length measured along the center of the roadway of more than 6.1 meters (20 feet) between undercopings of abutments or extreme ends of opening for multiple boxes.

(B) **Bridge maintenance activities** include the following:

Hand cleaning bridges - This means the cleaning of bridge deck surfaces, expansion joints, drain holes, bridge seats and sidewalks by hand shoveling, sweeping and air blasting to remove accumulations of sand, chemicals and debris. It is accomplished by breaking loose the material as required, sweeping the material, loading the material into dump trucks and disposing of the material at proper disposal areas.

Bridge repair - This means minor repairs to bridge structures including repair, replacement or painting of handrails, curbs or sidewalk repair, minor joint and deck repair, timber deck repair, support repair, deck sealing and other minor repairs. It also includes emergency deck or support repair and minor maintenance of lift bridges.

Flushing bridges - This means the cleaning of bridge seats and shoe assemblies, drain holes, expansion joints, bottom chords of steel trusses, connection of vertical or diagonal truss members, truss members and gutter lines. This is accomplished by flushing to remove accumulation of sand, chemicals and debris.

Patching bridge decks - This includes the patching of bridge decks using a Portland Cement, concrete, or approved epoxy adhesive. It also includes marking, sawing and breaking out old

concrete with jack hammers. It is accomplished by breaking out and cleaning with air the areas to be patched, mixing the concrete, placing and finishing the concrete, and covering the patches with wet burlap or curing compound. None of the old concrete will fall or be placed within the channel.

Other bridge maintenance - This includes other routine bridge maintenance activities within right-of-way such as **replacing rip rap or repairing slope paving to the original configuration, clearing of water way openings (includes removal of undesirable materials including sand bars, log jams and debris removal), channel maintenance (reestablishing natural channel, flow lines and slopes)** and the removal of writing or painting on the structure.

- (2) **Roadside maintenance activities** which includes the following:

Machine mowing - This means the cutting of grasses within the right-of-way. Roadside vegetation is machine mowed within designated mowing limits using tractor mowers and hand trimming, as required, to maintain an attractive roadside and control erosion and drainage. Additional special spot mowing is done to control Johnson grass and Canadian thistle.

Brush cutting - This is the cutting, trimming and removal of brush, small trees, tree branches and limbs within the right-of-way using power or hand tools to restore sight distances, eliminate traffic hazards and remove encroaching vegetation. This is accomplished by cutting the brush, tree branches and limbs within the right-of-way, cutting the brush flush to the ground, applying herbicides to sprouts in accordance with INDOT policy as directed by the District Landscape Supervisor, loading the brush on trucks using a chipper when available, hauling to a proper disposal area and clearing the roadway of debris.

Herbicide treatment - This is the **application of chemicals to roadside vegetation and soil along shoulders, guardrail sections, around sign posts, delineators, mail boxes, bridge ends and other areas** to eliminate or control undesirable vegetation. This is accomplished by the proper handling, mixing and application of the herbicide to the designated areas.

Seeding and/or fertilizing - This is the **seeding, reseeding, and fertilizing of shoulders, front and back slopes, medians and other designated areas** to restore vegetation for erosion control and beautification. It is done following clipping unpaved shoulders, reconditioning unpaved shoulders, motor patrol ditching, and the cleaning and reshaping of ditches in addition to areas damaged due to erosion or other causes. It is accomplished by using hydro seeder or fertilizer spreaders.

Spraying only occurs on calm days when the temperature is not too high. Only those areas are sprayed which can be sprayed without damage to surrounding crops, trees, etc.

Topping, trimming or removal of large trees - This is the topping, trimming or removal of large trees. It is accomplished using equipment such as bucket trucks and boom trucks. The sawn limbs are loaded into a dump truck. A chipper is to be used when available. The residue to be hauled to a proper disposal area. The work area is then to be cleaned.

Stump removal - This means the removal of stumps within the right-of-way to eliminate traffic hazards or improve efficiency of other maintenance activities. It is accomplished by using a stump cutter to cut the stump, loading and hauling chips to a proper disposal area, and then cleaning and smoothing the work area.

Spot mowing and hand trimming - This activity immediately follows machine mowing described above. It involves the spot or hand mowing to control Johnson grass, Canadian thistle and other noxious weeds, and hand trimming or mowing needed in addition to that performed during machine mowing. It is accomplished by using hand mowers or hand tools, trimming around signs, guardrail and other locations that cannot be mowed by tractor mowers. This activity also include the use of tractor mowing or hand mowers for noxious weeds.

Right-of-way fence repair - This activity means the repair of damaged, state-owned right-of-way fencing to maintain delineation of the right-of-way. It includes the rebuilding of existing fence using in place materials and/or replacing short sections of damaged fencing with new materials. It is accomplished by removing any damaged fence and salvage materials, if possible, rebuilding the fence using new and/or salvaged material, and loading unusable material and cleaning up the work area.

Other roadside maintenance - This includes such activities as rock cut maintenance, **slope spot slope repairs**, **slope mowing**, removal of unauthorized or illegal signs from within the right-of-way, sodding, preparing for seeding and fertilizing, mulching, **slide repair to the original slope**, mowing of state-owned property outside of right-of-way, repair of wheel ruts in grass medians.

(3) **Drainage maintenance activities.**

(A) The following data provides definitions of terminology used in drainage and special maintenance activities:

A **culvert** is a structure not classified as a bridge which provides an opening under the roadway. A **box culvert** is a culvert that is precast or cast in place with four sides, a concrete flow line, shaped like a rectangle or square. A **pipe culvert** is a culvert that is made of metal, plastic, or concrete, with either a tubular or deformed tubular shape. The structure should be placed to fit existing ground conditions with the upstream end of the structure under the roadway 0.2' to 0.5' below the lowest ground, ditch or tile ditch to be drained. The grade should then be approximately straight to the point where the water will leave the right-of-way.

A **ditch** should be interpreted to mean open ditches and channel changes parallel to and adjacent to the roadbed. They are constructed so they will drain and be free of water pockets. At the ends of cuts it is policy to flare the side ditches out to prevent ditch water from being spilled onto the fill embankment. Abrupt changes in alignment of side ditches should be avoided. The work consists of shaping and dressing of shoulders, ditches and slopes by machine or hand methods or both, to the required smoothness, elevation and cross section.

A **catch basin** is a receptacle at the entrance of a sewer designed to keep out large or obstructive matter or a reservoir for collecting surface drainage or run-off, having at its base a sediment sump designed to retain grit and detritus below the point of overflow. Their placement is accomplished by excavating to the established bottom of the proposed foundation. The finished surface should be firm and smooth. Holes may be formed or field cut in catch basins to receive pipe structures. Grade and location adjustments shall be made as necessary. The outlet of the pipe catch basins should be of smaller diameter than the catch basin.

A **berm** is a slightly canted shelf cut into or added onto a side or back slope. Berms should be clear of obstructions.

Tile drains. When farm drains cross the roadway, every effort should be made to preserve them in their original state of efficiency. If a farm tile is intercepted by ditches which provide adequate drainage for the tile, at least two sections of sewer pipe and a sod collar should be placed on the outlet end. The balance of the tile under the road shall be removed or sealed if they are 12" in diameter or larger.

A **ditch check** is a dam utilized to impede the movement of water so that sediment can settle out. It is constructed at specific intervals in the ditch based on the grade of the ditch. Ditch checks must be constructed wide enough to traverse the ditch section so that the water will flow over the check instead of around the ends.

An **inlet** is similar to a catch basin except it does not have a sediment sump designed to retain debris.

Paved side ditches are drainage ditches with a Portland cement concrete lining or gutter.

A **flume** is a channel lined with erosion-resistant materials used to convey water on steep grades without erosion. Except for these features, both of these drainage ways are constructed in the same manner as regular ditches.

(B) **Drainage maintenance activities include the following:**

Clean and reshape ditches - This involves the **machine cleaning of roadside ditches with excavating equipment to restore original grade and maintain adequate drainage.** It also includes the **loading, hauling and disposal of excess materials, reshaping front and back slopes, pipe culvert replacement and shoulder restoration as relating to ditching.** This work should occur **where existing ditches are ponding water, have minor obstructions, have lost their cross sections, have excessive silting and blocked drainage structures.** This work is accomplished by **reestablishing uniform flow lines, taking care to avoid low spots which will accumulate water, dressing foreslopes and back slopes where necessary, cleaning the area, and removing dirt and debris with an excavator and loading it onto trucks and hauling the excess material to a proper disposal area.**

Inspecting minor drainage structures - This involves **inspecting and minor cleaning of all minor drainage structures including box culverts, pipe culverts, catch basins, inlets and paved side ditches with emphasis on small cross culverts.** The drainage structures are to be inspected to determine both structural and drainage adequacy. Defects are to be reported for corrections at a future date. **Hand shovels are to be used to remove undesirable vegetation, obstructions and to repair minor eroded areas.**

Hazardous conditions and outlets of subsurface drains are to be marked with posts.

Pipe replacement - This means cross pipe culvert replacement required as a result of damage or deterioration in order to maintain adequate drainage. **It does not include pipe replacement projects for pipes carrying a waterway with a drainage area of greater than 50 square miles in a rural area or one square mile in a non rural area.** It is accomplished by cutting the pavement over the culvert to be replaced, excavating and removing the culvert that has failed, **cleaning out and replacing the pipe bed to the original grade**, placing the culvert in the trench beginning at the downstream end, backfilling over the culvert (small installation - using suitable material and compact in layers not exceeding 6" - large installations - backfilling and compacting using saturation method), and placing a bituminous patch over the excavation and compact.

rural bridge exemption

Minor patrol ditching - This means machine cleaning of roadside ditches with motor patrol to restore original grade and maintain adequate drainage. It includes the **loading, hauling, and disposal of excess material, reshaping front and back slopes, pipe culvert replacement and shoulder restoration** as related to drainage. **It does not include pipe replacement projects for pipes carrying a waterway with a drainage area of greater than 50 square miles in a rural area or one square mile in a non rural area.** It is accomplished by **removing the dirt and debris with motor patrol and windrowing the excess to be picked up with a loader.** A uniform flow line is reestablished taking care to avoid low spots which will accumulate water. **The foreslopes and back slopes are dressed,** and pipe is replaced or retain as required. Excess material is to be loaded and hauled to a proper designated disposal area, and the work area is cleaned.

Cleaning minor drainage structures - This means manual or machine cleaning and removal of debris from **box culverts, pipe culverts, catch basins, inlets, out falls and paved ditches** to maintain adequate drainage. This is accomplished by **removing debris and undesirable vegetation from inlet and outlet channels and restoring inlet and outlet ditch flow lines,** cleaning out debris and silt from the structures, and **correcting any eroded areas around the inlet and outlet pipes and paved**

ditches. Excess material is to be loaded and hauled to a proper designated disposal area, and the work area is cleaned.

Inspect/clean under drains - This means the inspection and cleaning of pavement under drain structures. They are inspected to determine both structural and drainage adequacy. This is accomplished by using a hand shovel to remove undesirable vegetation, obstructions, and repair minor eroded areas. A clean-out device is to be used to remove sod or debris in the pipe. Hazardous conditions, and outlets of subsurface drains are to be marked with posts.

Other drainage maintenance - This includes the following activities, minor relocation of ditches, hand ditching, scour and washout repairs, repair of minor drainage structures including paved side ditches, pipe extensions, installations of French drains, removal of unauthorized culvert pipes, repair of subsurface drains or drainage tiles, cutting in preparation of pipe replacement, marking of catch basins or pipes with delineators, rebuilding or repairing catch basins and installing pipe liners.

(4) **Special maintenance activities** which include the following:

Minor surface and shoulder improvements - This activity includes minor roadway reconstruction, widening by adding turn lanes, climbing lanes, speed change lanes or crossovers, major leveling of the roadway, and adding shoulder material after resurfacing to eliminate shoulder drop off. This is non-routine work not requiring special funding that is to be performed by maintenance forces throughout the year as resources are available after routine maintenance work has been scheduled.

Minor roadside improvements - This means flattening back slopes and fills, planting trees and shrubbery, and the construction of roadside parks and picnic table sites.

Minor drainage improvements - This means the installation of new structures at new locations -- culverts, ditches, catch basins, berms, tile drains, ditch checks, inlets, paved ditches and flumes, and drainage curbs and major repair of paved side ditches. (See the Section 3, Drainage Maintenance Activities for definitions of these terms).

Minor bridge improvements - This includes widening of bridges and the installation of new guardrail or new bridge rail. This is non-routine work not requiring special funding that is to be performed by maintenance forces throughout the year as resources are available after routine maintenance work has been scheduled.

(5) **Roadway and shoulder maintenance** which includes the following:

Shallow patching - This means minor patching of small areas of bituminous roadway or paved shoulder surface with hot or cold bituminous mixtures and hand tools to correct potholes, **edge failures**, and **other potential surface hazards**. This activity also includes temporary patching of bituminous and concrete surfaces and the use of hot liquid bituminous material and aggregate for patching bituminous surfaces or crack and joint spalling of concrete surfaces. It is accomplished by repairing the surface failures exceeding 2" in depth and 1" in diameter as soon as possible after they are reported. The sides of the hole are prepared for the patch, removing all loose material and water. The bituminous mixture and aggregate are placed in the hole and compacted to make sure the patch is level and smooth. If appropriate the surface is sealed with bituminous material and sand and the area is then cleaned up.

Deep patching - This means major patching on roadway surface to correct extensive surface failure caused by **base failure, blowup, or settlement**. It includes the full depth removal of surface and base material and the replacement with compacted bituminous mixture. The work is accomplished by scheduling the repair as soon as possible after they are reported. Unsuitable material should be removed, under drains installed where necessary and the remaining materials recompacted. The bituminous mixture should be spread, compacting each layer, and making sure the final layer is flush with the adjacent surface. The work area is then cleaned.

Premix leveling - This means minor machine or hand leveling and wedging of small isolated areas of bituminous or concrete roadway and shoulder surfaces with bituminous mixtures to correct depressions at bridge ends, **surface failures and depressions caused by settlement** at pipe replacements and deep patches. It is accomplished by marking and cleaning the area to be leveled, applying light bituminous tack coat, spreading the bituminous mixture, hand raking the premix and feathering the edges before rolling, compacting the mixture making sure the final layer matches the exiting surface and pavement edge and cleaning up the work area.

Full width shoulder seal - This means the seal coating of continuous full width section of the paved shoulder surface with bituminous material and

sealing/covering aggregate to correct extensive cracking, sealing the surface and restoring the shoulder life. It is accomplished by cleaning the pavement, applying heated liquid bituminous material and squeegeeing if necessary, spreading the seal/cover aggregate immediately to cover the bituminous material and roll sealing the area.

Seal coating - chip - This means seal coating the continuous full width section of the roadway surface with hot bituminous material and coarse aggregate to correct extensive cracking, raveling, spalling, and shallow surface failures to prevent deterioration of the surface. It is accomplished by cleaning the pavement, applying heated liquid bituminous material, squeegeeing if necessary, spreading the aggregate with a mechanical spreader, hand brooming the aggregate where necessary, rolling the sealed area, and removing excess aggregate from the pavement.

Sealing longitudinal cracks and joints - This means the mechanical cleaning and sealing of longitudinal cracks and joints with a liquid bituminous sealant to prevent the entry of edge cracks between concrete surface and bituminous shoulder, the widening cracks and the centerline joint. This is accomplished by routing the joints as needed, cleaning the joint or cracking with a compressor, applying the material to the joints and cracks, and dusting the squeegeed areas lightly with sand.

Sealing cracks - This means the cleaning and sealing of open cracks and joints in bituminous and concrete roadways and paved shoulder surfaces to prevent the entry of moisture and debris which leads to surface and base failure. This activity also includes sealing short sections or isolated areas of alligatored, raveled, or spalled bituminous surfaces. It is accomplished by cleaning the crack, applying bituminous material to the crack, squeegeeing the material to force it into the cracks and surface voids, removing the surplus materials, and dusting the area lightly with cover aggregate.

Seal coating - sand - Same as seal coating - chip above except this method uses sand rather than chip seal.

Spot repair of unpaved shoulder - This means the repair of small areas of unpaved shoulders by adding aggregate, reshaping and compacting to correct edge ruts, potholes, corrugations and replace lost material at **washouts**, around mailboxes, and public road approaches. It is accomplished by blading off the high spots, adding material to low spots or at intervals along the shoulder, blading the material into the low spots and **shaping so the shoulder slope permits drainage to the ditch**, rolling the material with truck tires, and cleaning the work area.

ACRONYMS

AE	Area Engineer
BFE	Base Flood Elevation
BMP	Best Management Practice
CE	Categorical Exclusion
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CIB	Contract Information Book
CIF	Construction in a Floodway
CRO	Cultural Resources Office
CRP	Conservation Reserve Program
CWA	Clean Water Act
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPO	Environmental Policy Office
ERMS	Electronic Records Management System
ESD	Environmental Services Division
ESA	Endangered Species Act
ESC	Erosion and Sediment Control
ESD	Environmental Services Division
EWPO	Ecology and Waterway Permitting Office
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FTP	File Transfer Protocol
IC	Indiana Code
IDEM	Indiana Department of Environmental Management
IDNR	Indiana Department of Natural Resources
IN SWMP	Indiana Stream and Wetland Mitigation Program
INDOT	Indiana Department of Transportation
IP	Individual Permit
IWGP	Isolated Wetland General Permit
IWIP	Isolated Wetland Individual Permit
LCSS	Large-Capacity Septic System
LEDPA	Least Environmentally Damaging Practicable Alternative
LPA	Local Planning Authority
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
NEPA	National Environmental Policy Act
NOD	Notice of Deficiency
NOI	Notice of Intent
NOS	Notice of Sufficiency
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWP	Nationwide Permit
SRW	State Regulated Wetland
OHWM	Ordinary High Water Mark
PCN	Pre-construction Notification
PD	Permit Determination
PE	Project Engineer
PRECON	Preconstruction
PS	Project Supervisor

Q100	100-year flood
RFC	Ready for Contracts
RGP	Regional General Permit
ROW	Right of Way
SDWA	Safe Drinking Water Act
SRW	State Regulated Wetland
SSA	Sole Source Aquifer
SWPPP	Storm Water Pollution Prevention Plan
SWQMP	Storm Water Quality Management Plan
TDS	Total Dissolved Solid
UIC	Underground Injection Control
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USDW	Underground Source of Drinking Water
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WQC	Water Quality Certification
WRP	Wetland Reserve Program

DEFINITIONS

Abode. A structure that used or may be used primarily as a living quarters or residence and includes any of the following: (1) house; (2) manufactured home; (3) hotel or motel; (4) hospital, nursing home or dormitory; or (5) similar structure that provides permanent or temporary overnight lodging.

Source: 312 IAC 10-2-1

Adjacent. Bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are “adjacent wetlands.”

Source: 40 CFR 230.3 (b), 33 CFR 328.3 (c)

Advance credits. Any credits of an in-lieu fee program that are available for sale prior to being fulfilled in accordance with an approved mitigation project plan. Advance credit sales require an approved in-lieu fee program instrument that meets all applicable requirements included a specific allocation of advanced credits, but service area where applicable. The instrument must also contain a schedule for fulfillment of advance credit sales.

Source: 40 CFR 230.92

Adversely affect the efficiency of, or unduly restrict the capacity of, the floodway. An increase in the elevation of the regulatory flood of at least 0.15 of a foot as determined by comparing the regulatory flood elevation under the project condition to that under the base condition. This definition does not, however, apply to: (1) a dam regulated under IC 14-27-7 and IC 14-28-1; (2) a flood control project authorized under IC 14-28-1-29; or (3) an area for which a flood easement is secured and recorded with the county recorder.

Source: 312 IAC 10-2-3

Aquatic environment/ecosystem. Waters of the United States, including wetlands that serve as habitat for interrelated and interacting communities and populations of plants and animals.

Source: 40 CFR 230.3 (c)

Aquifer. A geological formation, group of formations or part of a formation that is capable of yielding a significant amount of water to a well or spring.

Source: 40 CFR 146.2

Bank. The ground that borders or slopes upward from the bed of a waterway and that confines water to the channel during the normal course or flow.

Source: 312 IAC 10-2-4

Base condition. The condition of the flood plain on Jan. 1, 1973, but without any unauthorized dam or levee. If an activity after Dec. 31, 1972, lowered the regulatory flood profile, the flood plain under the lower profile is the base condition.

Source: 312 IAC 10-2-5

Base flood. The flood which has a 1 percent chance of being equaled or exceeded in any given year (also known as the 100-year flood). This term is used in the National Flood Insurance Program (NFIP) to indicate the minimum level of flooding to be used by a community in its floodplain management regulations.

Source: 44 CFR 9.4

Bed. The surface rock or soil underlying a waterway.

Source: 312 IAC 10-2-6

Best management practices.

Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality result from development. BMPs are categorized as structural or non-structural.

Source: 82 FR 1860

Those practices best suited to specific site conditions that will control soil erosion and the nonpoint source pollution associated with sediment run-off.

Source: 312 IAC 10-2-7

Any structural or nonstructural control measure [used] to improve the quality and, as appropriate,

reduce the quantity of storm water run-off. The term included schedules of activities, prohibitions of practice, treatment requirements, operation and maintenance procedures, use of containment facilities, land use planning, policy techniques, and other management practices.

Source: 327 IAC 15-13-5 (1)

Bridge. A structure placed over a waterway or other topographically depressed area that is designed to carry pedestrian, vehicular, or other traffic. The term includes a culvert or a ford.

Source: 312 IAC 10-2-8

Any structure over, on, or in navigable waters of the United States used for transporting persons, vehicles, commodities or other physical matter and providing for the passage or flow of water through or under the structure.

a. The term “bridge” includes all integral bridge elements: approaches and appurtenances, regardless of the materials used, whether natural or manufactured, or the construction methodology.

b. Types of “bridges” include: highway bridges, railroad bridges, pedestrian bridges, aqueducts, aerial tramways and conveyors, overhead pipelines, and similar structures of the same function with their approaches, bridge protective systems, foundations, and appurtenances (integral features).

c. The definition of “bridges” does not include: aerial power transmission lines, submerged pipelines, and other similar structures and works unless they are integral features of a bridge used in its construction, maintenance, operation or removal; or they are affixed to the bridge and affect the bridge clearances.

Source: USCG

Bridge Permit. An authorization issued by the U.S. Coast Guard, approving the location and plans of a bridge across a navigable waterway of the United States. A “bridge permit” includes the approved bridge project plans.

a. A “bridge permit” expresses the assent of the federal government as far as the project affects the public right of navigation, giving due consideration to the impacts on the quality of the human environment.

b. A “bridge permit” does not give any property rights, in either real estate or materials, or authorize any injury to private property or invasion of private rights. It does not remove the necessity of obtaining the assent of other agencies with cognizance of any aspect of the location, construction, or maintenance of a bridge.

c. Permits for completed bridges remain valid indefinitely, unless otherwise conditioned or amended, as long as the bridge remains in place, continues to be used for transportation purposes, and conforms to the original approved plans.

Source: USCG

Buffer. An upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses.

Source: 40 CFR 230.92

Buffer strip. An existing, variable width strip of vegetated land intended to protect water quality and terrestrial and aquatic habitat in an adjacent resource or area. *Source: 327 IAC 15-13-5 (2)*

Building. A walled and roofed permanent structure, a gas or liquid storage tank, or an abode.

Source: 312 IAC 10-2-9

Channel. The natural and artificial channel of a waterway.

Source: 312 10-2-10

An artificial channel; or the improved channel of a natural watercourse; connecting to any river or stream in Indiana for the purpose of providing access by boat or otherwise to public or private industrial, commercial, housing, recreational, or other facilities.

Source: IC 14-29-4-1

Class I wetland. An isolated wetland described by one (1) or both of the following:

(A) At least fifty percent (50%) of the wetland has been disturbed or affected by human activity or development by one (1) or more of the following:

(i) Removal or replacement of the natural vegetation.

(ii) Modification of the natural hydrology.

(B) The wetland supports only minimal wildlife or aquatic habitat or hydrologic function because the wetland does not provide critical habitat for threatened or endangered species listed in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) and the wetland is characterized by at least one (1) of the following:

(i) The wetland is typified by low species diversity.

(ii) The wetland contains greater than 50 percent (50%) areal coverage of nonnative invasive species of vegetation.

(iii) The wetland does not support significant wildlife or aquatic habitat.

(iv) The wetland does not possess significant hydrologic function. *Source: 327 IAC 17-1-3 (1)*

Class II wetland. Means either of the following:

(A) An isolated wetland that is not a Class I or Class III wetland.

(B) A type of wetland listed in subdivision (3)(B) that would meet the definition of Class I wetland if the wetland were not a rare or ecologically important type. *Source: 327 IAC 17-1-3 (2)*

Class III wetland. An isolated wetland:

(A) that

(i) is located in a setting undisturbed or minimally disturbed by human activity or development; and

(ii) supports more than minimal wildlife or aquatic habitat or hydrologic function; or

(B) unless classified as a Class II wetland under subdivision (2)(B), that is of one (1) of the following rare and ecologically important types:

(i) Acid bog.

(ii) Acid seep.

(iii) Circumneutral bog.

(iv) Circumneutral seep.

(v) Cypress swamp.

(vi) Dune and swale.

(vii) Fen.

(viii) Forested fen.

(ix) Forested swamp.

(x) Marl beach.

(xi) Muck flat.

(xii) Panne.

(xiii) Sand flat.

(xiv) Sedge meadow.

(xv) Shrub swamp.

(xvi) Sinkhole pond.

(xvii) Sinkhole swamp.

(xviii) Wet floodplain forest.

(xix) Wet prairie.

(xx) Wet sand prairie.

Source: 327 IAC 17-1-3 (3)

Class V well. Injection wells not included in Class I, II, III or IV. Class V wells include:

(4) Drainage wells used to drain surface fluid, primarily storm runoff, into a subsurface formation;

(9) Septic system wells used to inject the waste or effluent from a multiple dwelling, business establishment, community or regional business establishment septic tank.

Source: 40 CFR 146.5(e)

Compensatory mitigation. The (A) restoration; or (B) creation; of wetlands to offset or compensate for a loss of wetlands resulting from an authorized wetland activity. Wetlands enlargement, enhancement, and preservation may be considered compensatory mitigation on a case-by-case basis, particularly for Class III wetlands.

Source: 327 IAC 17-1-3 (5)

The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Source: 40 CFR 230.92, 82 FR 1860

Condition. The relative ability of an aquatic resource to support and maintain a community of organisms having a species composition, diversity, and functional organization comparable to reference aquatic resources in the region.

Source: 40 CFR 230.92

Construction activity. Land disturbing activities and land disturbing activities associated with the construction of infrastructure and structures. The term does not include routine ditch or road maintenance or minor landscaping projects.

Source: 327 IAC 15-5-4 (3)

Construction plan. A representation of a project site and all activities associated with the project. The plan includes the location of the project site, buildings and other infrastructure, grading activities, schedules for implementation and other pertinent information related to the project site. A storm water pollution prevention plan is part of the construction plan.

Source: 327 IAC 15-5-4 (4)

Construction site access. A stabilized stone surface at all points of ingress or egress to a project site for the purpose of capturing and detaining sediment carried by tires of vehicles or other equipment entering or exiting the project site.

Source: 327 IAC 15-5-4 (5)

Conveyance. Any structural process for transferring storm water between at least two (2) points. The term includes piping, ditches, swales, curbs, gutters, catch basins, channels, storm drains, and roadways.

Source: 327 IAC 15-13-5 (9)

Credit. A unit of measure (e.g., a functional or areal measure or other suitable metric) representing the accrual or attainment of aquatic functions at a compensatory mitigation site. The measure of aquatic functions is based on the resources restored, established, enhanced, or preserved.

Source: 40 CFR 230.92

Culvert. A closed conduit for the passage of run-off through an embankment.

Source: 312 IAC 10-2-17

Cumulative effects. The impact that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what person undertakes the other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. Each of the following elements is considered when assessing the impact of cumulative effects within a floodway: (1) adverse effects on the efficiency of, or undue restrictions on the capacity of, the floodway; (2) unreasonable hazards to the safety of life or property; (3) unreasonable detrimental effects upon fish, wildlife, or botanical resources.

Source: 312 IAC 10-2-18

Currently serviceable. Useable as is or with some maintenance, but not so degraded as to essentially

require reconstruction.

Source: 82 FR 1860

Detention basin. A type of storage practice used to detain or slow storm water runoff and then release it through a positive outlet.

Source: 327 IAC 15-13-5 (12)

Direct Effects. Effects that are caused by the activity and occur at the same time and place.

Source: 82 FR 1860

Discharge. Any discharge of dredged or fill material into waters of the United States.

Source: 82 FR 1860

Drainage area. The total land area measured in a horizontal plane and enclosed by a topographic divide from which surface run-off from precipitation normally drains by gravity into a waterway above a specified location. The term includes an area that is ineffective due to karst topography, subsurface drains, or diversions.

Source: 312 IAC 10-2-20

Dredged Material. Material that is dredged or excavated from an isolated wetland.

Source: 327 IAC 17-1-3 (6)

Ecological reference. A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Source: 82 FR 1860

Effective waterway area. The unobstructed flow area (measured perpendicularly to flow) below the regulatory flood elevation.

Source: 312 IAC 10-2-21

Enhancement. The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Source: 40 CFR 230.92, 82 FR 1860

Ephemeral stream. An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Source: 82 FR 1860

Erosion. The detachment and movement of soil, sediment, or rock fragments by water, wind, ice, or gravity.

Source: 327 IAC 15-5-4 (8)

Erosion and sediment control measure. A practice, or a combination of practices, to control erosion and resulting sedimentation.

Source: 327 IAC 15-5-4 (9)

Erosion and sediment control system. The use of appropriate erosion and sediment control measures to minimize sedimentation by first reducing or eliminating erosion at the source and then, as necessary, trapping sediment to prevent it from being discharged from or within a project site.

Establishment (creation). The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area. *Source: 40 CFR 230.92, 82 FR 1860*

Exempt isolated wetland.

- (A) An isolated wetland that is a voluntarily created wetland unless:
 - (i) the wetland is:
 - (AA) approved by the department for compensatory mitigation purposes in accordance with a permit issued under Section 404 of the Clean Water Act or IC 13-18-22; or
 - (BB) reclassified as an SRW under IC 13-18-22-6(c); or
 - (ii) the owner of the wetland declares, by a written instrument:
 - (AA) recorded in the office of the recorder of the county or counties in which the wetland is located; and
 - (BB) filed with the department; that the wetland is to be considered in all respects to be an SRW.
- (B) An isolated wetland that exists as an incidental feature in or on any of the following:
 - (i) A residential lawn.
 - (ii) A lawn or landscaped area of a commercial or governmental complex.
 - (iii) Agricultural land.
 - (iv) A roadside ditch.
 - (v) An irrigation ditch.
 - (vii) A manmade drainage control structure.
- (C) An isolated wetland that is a fringe wetland associated with a private pond.
- (D) An isolated wetland that is, or is associated with, a manmade body of surface water of any size created by:
 - (i) excavating;
 - (ii) diking; or
 - (iii) excavating and diking;dry land to collect and retain water for or incidental to agricultural, commercial, industrial, or aesthetic purposes.
- (E) An isolated wetland that is a Class I wetland with an area, as delineated, of one-half (1/2) acre or less.
- (F) An isolated wetland that is a Class II wetland with an area, as delineated, of one-fourth (1/4) acre or less.
- (G) An isolated wetland that is located on land:
 - (i) subject to regulation under the United States Department of Agriculture wetland conservation rules, also known as Swampbuster (16 U.S.C. 3801-3862), because of voluntary enrollment in a federal farm program; and
 - (ii) used for agricultural or associated purposes allowed under the rules referred to in this clause.
- (H) For purposes of clause (B), an isolated wetland exists as an incidental feature:
 - (i) if:
 - (AA) the owner or operator of the property or facility described in clause (B) does not intend the isolated wetland to be a wetland;
 - (BB) the isolated wetland is not essential to the function or use of the property or facility; and
 - (CC) the isolated wetland arises spontaneously as a result of damp soil conditions incidental to the function or use of the property or facility; and
 - (ii) if the isolated wetland satisfies any other factors or criteria established in rules that are:
 - (AA) adopted by the board; and
 - (BB) not inconsistent with the factors and criteria described in this clause.

(I) The total acreage of Class I wetlands on a tract to which the exemption described in clause (E) may apply is limited to the larger of the following:

(i) The acreage of the largest individual isolated wetland on the tract that qualifies for the exemption described in clause (E).

(ii) Fifty percent (50%) of the cumulative acreage of all individual isolated wetlands on the tract that would qualify for the exemption described in clause (E) but for the limitation of this subdivision.

(J) The total acreage of Class II wetlands on a tract to which the exemption described in clause (F) may apply is limited to the larger of the following:

(i) The acreage of the largest individual isolated wetland on the tract that qualifies for the exemption described in clause (F).

(ii) Thirty-three and one-third percent (33 1/3%) of the cumulative acreage of all individual isolated wetlands on the tract that would qualify for the exemption described in clause (F) but for the limitation of this subdivision.

(K) An isolated wetland described in clause (E) or (F) does not include an isolated wetland on a tract that contains more than one (1) of the same class of wetland until the owner of the tract notifies the department that the owner has selected the isolated wetland to be an exempt isolated wetland under clause (E) or (F) consistent with the applicable limitations described in clauses (I) and (J).

Source: 327 IAC 17-1-3 (7)

Filter strip. A type of vegetative practice used to filter storm water run-off through the use of planted or existing vegetation near disturbed or impervious surfaces. *Source: 327 IAC 15-13-5 (15)*

Final stabilization. The establishment of permanent vegetative cover or the application of a permanent non-erosive material to areas where all land disturbing activities have been completed and no additional land disturbing activities are planned under the current permit.

Source: 327 IAC 15-5-4 (11)

Flood, 100-year. A 100-year flood does not refer to a flood that occurs once every 100 years, but to a flood level with a 1 percent chance of being equaled or exceeded in any given year.

Source: <https://water.usgs.gov/edu/dictionary.html>

Flood control. The: (1) prevention of floods; (2) control, regulation, diversion, or confinement of flood water or flood flow; (3) protection from flood water, according to sound and accepted engineering practice and including all things incidental to or connected with the protection, to minimize the following: (a) extent of floods; and (b) death, damage, and destruction caused by floods.

Source: IC 14-28-1-2

Flood plain. The area adjoining a river or stream that has been or may be covered by flood water.

Source: 312 IAC 1-1-15

The lowland and relatively flat areas adjoining inland and coastal waters including, at a minimum, that area subject to a 1 percent or greater chance of flooding in any given year.

Source: 44 CFR Ch.1 § 9.4 [FEMA]

Flood protection grade. The elevation two (2) feet above the regulator flood measured according to (1) the elevation of the lowest floor of the building; or (2) dry flood-proofing of a building other than an abode.

Source: 312 IAC 10-2-24

Floodway. The (1) channel of a river or stream; and (2) the parts of the flood plain adjoining the channel that are reasonably required to efficiently carry and discharge the flood water or flood flow of a river or stream.

Source: 312 IAC 1-1-16

That portion of the floodplain which is effective in carrying flow, within which this carrying capacity must be preserved and where the flood hazard is generally highest, i.e. where water depths and velocities are the greatest. It is that area which provides for the discharge of the base flood so the cumulative increase in water surface elevation is no more than one foot.

Source: 44 CFR Ch.1 § 9.4 [FEMA]

Fringe. The portions of a flood plain lying outside the floodway. *Source: 312 IAC 10-2-24*

Functional capacity. The degree to which an area of aquatic resource performs a specific function. *Source: 40 CFR 230.92*

Functions. The physical, chemical, and biological processes that occur in ecosystems. *Source: 40 CFR 230.92*

Grading. The cutting and filing of the land surface to a desired slope or elevation. *Source: 327 IAC 15-5-4 (12)*

Height. The vertical dimension of a structure as measured from the lowest point in the natural streambed or watercourse under the centerline of the structure to the top of the structure. *Source: IC 14-27-7.5-3*

High hazard structure. A structure the failure of which may cause the loss of life and serious damage to homes, industrial and commercial buildings, public utilities, major highways, or railroads. *Source: IC 14-27-7.5-8.*

Impact. Adverse effect. *Source: 40 CFR 230.92*

Impervious surface. Surfaces, such as pavement and rooftops, that prevent the infiltration of storm water into the soil. *Source: 327 IAC 15-5-4 (13)*

In-kind. A resource of similar structural and functional type to the impacted resource. *Source: 40 CFR 230.92*

In-lieu fee program. A program involving the restoration, establishment, enhancement, and/or preservation of aquatic resources through funds paid to a government or non-profit natural resources management entity to satisfy compensatory mitigation requirements for DA permits. An in-lieu fee program sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu fee program sponsor. The operation and use of an in-lieu fee program are governed by an in lieu fee program instrument. *Source: 40 CFR 230.92*

Independent Utility. A test to determine what constitutes a single and complete non-linear project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility. *Source: 82 FR 1860*

Indirect effects. Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable. *Source: 82 FR 1860*

Injection well. A well into which fluids are being injected. A well is a bored, drilled or driven shaft whose depth is greater than the largest surface dimension; or, a dug hole whose depth is greater than the largest surface dimension; or, an improved sinkhole; or, a subsurface fluid distribution system. A fluid is any material or substance which flows or moves whether in a semisolid, liquid, sludge, gas or any other form or state. *Source: 40 CFR 144.3*

Intermittent stream. An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow. *Source: 82 FR 1860*

Isolated wetland. A wetland that is not subject to regulation under Section 404(a) of the Clean Water Act. *Source: 327 IAC 17-1-3 (8)*

Lake. A reasonably permanent body of water that: (1) existed on March 12, 1947; (2) is substantially at rest in a depression in the surface of the earth that is naturally created; (3) is of natural origin or is part of a watercourse, including a watercourse that has been dammed; and (4) covers an area of at least five (5) acres within the shoreline and water line, including bays and coves. *Source: IC 14-26-2-1.5*

A reasonably permanent body of water substantially at rest in a depression in the surface of the earth, if both the depression and the body of water are of natural origin or part of a watercourse. If part of a watercourse, a lake may be formed by damming a river or stream.

Source: 312 IAC 1-1-21

Land disturbing activity. Any manmade change of the land surface, including removing vegetative cover that exposes the underlying soil, excavating, filling, transporting, and grading. *Source: 327 IAC 15-5-4 (17)*

Large-capacity septic systems. An on-site Class V well for partially treating and disposing of sanitary waste water. Only those septic systems having the capacity to serve 20 or more persons-per-day are included within the scope of the underground injection control (UIC) regulations. Many conventional LCSSs consist of gravity fed, underground septic tank or tanks, an effluent distribution system, and a soil absorption system. *Source: USEPA*

Limits of jurisdiction in non-tidal waters of the United States.

1. In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or
 2. When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands.
 3. When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.
- Source: 33 CFR 328 (4)(c)*

Logjam. An accumulation of lodged trees, root wads, or other debris that impedes the ordinary flow of water through a waterway. The term does not include the development of sandbars, sedimentation, or accumulation of stone or gravel. Logjams are evidenced by a blockage that does any of the following: (1) traverses the waterway; (2) causes upstream ponding; or (3) results in significant bank erosion. *Source: 312 IAC 10-2-26*

Loss of waters of the United States. Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The

acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States. *Source: 82 FR 1860*

Low structure. Either the lowest point of a bridge or superstructure or the apex of an arch or pipe. *Source: 312 IAC 10-2-27*

Lowest floor. The lowest elevation described among the following: (1) the lowest floor of a building; (2) the basement floor; (3) the garage floor if the garage is connected to the building; (4) the first floor of a building elevated on pilings or constructed on a crawl space; or (5) the floor level of an enclosure below an elevated building where the walls of the enclosure provide some resistance to the flow of flood water, unless both of the following requirements are satisfied:
(A) the walls are designed to automatically equalize hydrostatic flood forces by allowing for the entry and exit of flood water.
(B) at least two (2) openings are designed and maintained for the entry and exit of flood water, and these openings provide a total of at least one (1) square inch for every square foot of enclosed floor area subject to flooding. The bottom of an opening can be no more than one (1) foot above grade. Doorways and windows do not qualify as openings under this clause. *Source: 312 IAC 10-2-28*

Mass of wood debris. An accumulation of lodged trees or other woody debris that is any of the following: (1) causing or threatening to cause flooding on a road or private property; (2) impeding navigation by a boat; or (3) reducing the capacity of a waterway to transport water. *Source: 312 IAC 10-2-29.5*

Measurable storm event. A precipitation event that results in a total measured precipitation accumulation equal to or greater than one-half (0.5) inch of rainfall. *Source: 327 IAC 15-5-4 (19)*

Mitigation. All steps necessary to minimize potentially adverse effects of the proposed action, and to restore and preserve the natural and beneficial floodplain values and to preserve and enhance natural values of wetlands. *Source: 44 CFR 9.4*

Actions taken to eliminate, lessen, or replace the loss of environmental benefits and ecological functions and values where those benefits, functions, and values are disturbed by human activities. *Source: NRC Information Bulletin #17*

See also compensatory mitigation.

Mitigation bank. A site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or reserved for the purpose of providing compensatory mitigation for impacts authorized by DA permits. In general, a mitigation bank sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the mitigation bank sponsor. The operation and use of a mitigation bank are governed by a mitigation banking instrument. *Source: 40 CFR 230.92*

Municipal separate storm sewer system. A conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains, that is:

(A) owned or operated by a:

(i) federal, state, city, town, county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over storm water ... that discharges into waters of the state ...

(B) designed or used for collecting or conveying storm water; ... *Source: 327 IAC 15-13-5 (42)*

Natural river. A river that, free of impoundments, is generally unpolluted, undeveloped, and inaccessible. *Source: IC 14-29-6-8(a)*

Navigable. A waterway that has been declared to be navigable or a public highway by one (1) or more of the following: (1) a court; (2) the Indiana general assembly; (3) the United States Army Corps of Engineers; (4) the Federal Energy Regulatory Commission; (5) a board of county commissioners under IC 14-29-1-2; (6) the commission following a completed proceeding under IC 4-21.4. See “Roster of Indiana Waterways Declared Navigable or Non-navigable.”

Source: 312 IAC 1-1-24(a)

Navigable waters of the United States. Those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigational capacity. [USACE] *Source: 33 CFR 329.4*

Internal waters of the United States not subject to tidal influence that: (i) Are or have been used, or are or have been susceptible for use, by themselves or in connection with other waters, as highways for substantial interstate or foreign commerce, notwithstanding natural or man-made obstructions that require portage. [USCG] *Source: 33 CFR 2.36 (a)(3)*

Normal water level of a lake. (1) the water level of the lake established by law; or (2) the level where the presence and action of the water has been so constant as to give to the bed of the lake a character distinct from that of the surrounding land with regard to vegetation and the nature of the soil.

Source: IC 14-26-5-2

Off-site. An area that is neither located on the same parcel of land as the impact site, nor on a parcel of land contiguous to the parcel containing the impact site. *Source: 40 CFR 230.92*

On-site. An area located on the same parcel of land as the impact site, or on a parcel of land contiguous to the parcel containing the impact site. *Source: 40 CFR 230.92*

Open drain. A natural or artificial open channel that: (1) carries surplus water; and (2) was established under or made subject to any drainage statute. *Source: IC 36-9-27-2*

Open water. For purposes of the NWRPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds. *Source: 82 FR 1860*

Ordinary high water mark. The line on the shore of a waterway established by the fluctuations of water and indicated by physical characteristics. Examples of these physical characteristics include the following: (1) a clear and natural line impressed on the bank; (2) shelving; (3) changes in the

character of the soil; (4) the destruction of terrestrial vegetation, and; (5) the presence of litter or debris.

Source: 312 IAC 1-1-26 (1)

That line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Source: 33 CFR 328.3 (e)

A line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas.

Source: 82 FR 1860

Out of kind. A resource of a different structural and functional type from the impacted resource.

Source: 40 CFR 230.92

Outfall structure. A closed conduit facility used for the transport and discharge of surface run-off or treated effluent to a waterway or swale. The facility includes all appurtenant channels, supply lines, energy dissipation, and erosion control systems. The term does not include a system where the delivery conduit is placed beneath the bed.

Source: 312 IAC 10-2-31

Outfall swale. An excavated depression in the surficial topography used for the transport and discharge of surface run-off or treated effluent to a waterway. The depression includes all appurtenant channels, swales, and energy dissipation or erosion control systems.

Source: 312 IAC 10-2-32

Peak discharge. The maximum rate of flow during a storm, usually in reference to a specific design storm event.

Source: 327 IAC 15-5-4 (3)

Perennial stream. A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Source: 82 FR 1860

Permanent stabilization. The establishment, at a uniform density of 70 percent across the disturbed area, of vegetative cover or permanent non-erosive material that will ensure the resistance of the soil to erosion, sliding, or other movement.

Source: 327 IAC 15-5-4 (24)

Phasing of construction. Sequential development of smaller portions of a large project site, stabilizing a portion before beginning land disturbance on subsequent portions, to minimize exposure of disturbed land to erosion.

Source: 327 IAC 15-5-4 (25)

Practicable. Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Source: 40 CFR 230.3 (g), 82 FR 1860

Pre-construction notification. A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not

required and the project proponent wants confirmation that the activity is authorized by nationwide permit. *Source: 82 FR 1860*

Preservation. The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions. *Source: 40 CFR 230.92, 82 FR 1860*

Public freshwater lake. A lake that has been used by the public with acquiescence of a riparian owner. It doesn't include Lake Michigan, a lake lying wholly or in part within the city of East Chicago, Gary, or Hammond, or a privately owned body of water used for the purpose of, or created as a result of surface coal mining. *Source: IC 14-26-2-3, 312 IAC 11-2-17*

Recreational river. A river that does not have the characteristic necessary to qualify as a natural or scenic river, but that still maintains scenic or recreational characteristics of unusual and significant value. *Source: IC 14-29-6-2*

Re-establishment. The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions. *Source: 40 CFR 230.92, 82 FR 1860*

Regulated drain. An open drain, a tiled drain, or a combination of the two. *Source: IC 36-9-27-2*

Regulatory flood. A flood having a 1 percent probability of being equaled or exceeded in a year as calculated by a method and procedure that is approved by the commission. The regulatory flood is equivalent to the base flood or the 100-year frequency flood. *Source: 312 IAC 10-2-35*

Rehabilitation. The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area. *Source: 40 CFR 230.92, 82 FR 1860*

Restoration. The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation. *Source: 40 CFR 230.92, 82 FR 1860*

Riffle and pool complex. Special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient section of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deep areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools. *Source: 82 FR 1860*

Riparian Areas. Lands adjacent to streams, rivers, lakes, and estuarine-marine shorelines. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. *Source: 40 CFR 230.92*

Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. *Source: 82 FR 1860*

River. Any flowing body of water and adjacent land or part of the body of water and adjacent land.
Source: IC 14-29-6-3

Rural area for a construction or reconstruction project on a state or county highway bridge that crosses a stream having an upstream drainage area of fifty (50) square miles or less. An area where (1) the flood protection grade of each residential, commercial, or industrial building impacted by the project is higher than the regulatory flood elevation under the project condition; and (2) the area lies outside: (A) the corporate boundaries of a consolidated city or an incorporated town; and (B) the territorial authority for comprehensive planning established under IC 36-7-4-205(b).
Source: 312 IAC 10-2-36

Scenic river. A river that: (1) is free of impoundments; (2) is accessible in several places; and (3) has minimal pollution and shoreline developments.
Source: IC 14-29-6-3

Sediment. Solid material (both mineral and organic) that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface.
Source: 327 IAC 15-5-4 (28)

Sedimentation. The settling and accumulation of unconsolidated sediment carried by storm water runoff.
Source: 327 IAC 15-5-4 (29)

Service area. The geographic area within which impacts can be mitigated at a specific mitigation bank or an in-lieu fee program, as designated in its instrument.
Source: 40 CFR 230.92

Shoreline or water line. (1) If the water level has been legally established, the line formed on the bank or shore by the water surface at the legally established average normal level; or (2) if the water level has not been legally established, the line formed by the water surface at the average level as determined by: (A) existing water level records; or (B) if water level records are not available, the action of the water that has marked upon the soil of the bed of the lake a character distinct from that of the bank with respect to vegetation as well as the nature of the soil. *Source: IC 14-26-2-4*

Significant environmental harm. Damage to natural or cultural resources, the individual or cumulative effect of which is found by the director or delegate to be obvious and measurable (based upon the opinion of a professional qualified to assess the damage) and that: (1) creates a condition where recovery of affected resources is not likely to occur within an acceptable period; and (2) cannot be adequately mitigated through the implementation of a mitigation plan approved by the director.
Source: 312 IAC 11-2-23

Single and complete linear project. A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or

individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately. *Source: 82 FR 1860*

Single and complete non-linear project. For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in an NWP authorization. *Source: 82 FR 1860*

Soil. The unconsolidated mineral and organic material on the surface of the earth that serves as the natural medium for the growth of plants. *Source: 327 IAC 15-5-4 (30)*

Sole or principal source aquifer. An aquifer which has been designated by the Administrator pursuant to section 1424 (a) or (e) of the SDWA. *Source 40 CFR 146.3*

A sole or principal source aquifer as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. These areas may have no alternative drinking water source(s) that could physically, legally and economically supply all those who depend on the aquifer for drinking water. For convenience, all designated sole or principal source aquifers are referred to as "sole source aquifers" (SSAs). *Source: USEPA*

State regulated wetland. An isolated wetland located in Indiana that is not an exempt isolated wetland. *Source: 327 IAC 17-1-3 (8)*

Storm water drainage wells. Class V underground injection control (UIC) wells used to remove storm water or urban runoff from impervious surfaces such as roadways, roofs, and paved surfaces to prevent flooding, infiltration into basements, etc. The primary types of storm water drainage wells are bored wells, dug wells, and improved sinkholes. *Source: USEPA*

Storm water management. The mechanism for controlling storm water runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment. *Source: 82 FR 1860*

Storm water management facilities. Those facilities, including but not limited to, storm water retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of storm water runoff. *Source: 82 FR 1860*

Storm water pollution prevention plan. A plan developed to minimize the impact of storm water pollutants associated with storm water runoff. *Source: 327 IAC 15-5-4 (31)*

Storm water quality measure. A practice, or combination of practices, to control or minimize pollutants associated with storm water run-off. *Source: 327 IAC 15-5-4 (32)*

Stream. A natural or an altered river, creek, slough, or artificial channel that has: (1) definable banks and a bed capable of conducting confined runoff; (2) visible evidence of the flow or occurrence of water; and (3) a watershed in excess of one (1) square mile. *Source: IC 14-29-8-1*

Stream bed. The substrate of the stream channel between the ordinary high water marks. The substrate

may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed. *Source: 82 FR 1860*

Stream channelization. The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a waters of the United States. *Source: 82 FR 1860*

Superstructure. The structural portion of a bridge on which the travel way is constructed, including all elements resting on an abutment or a pier. *Source: 312 IAC 10-2-37*

Surface water. All water occurring on the surface of the ground. The term includes the following: (1) water in a stream; (2) natural and artificial lakes; (3) ponds; (4) swales; (5) marshes, and; (6) diffused surface water. *Source: 312 IAC 1-1-28*

Temporal loss. The time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site. Higher compensation ratios may be required to compensate for temporal loss. *Source: 40 CFR 230.92*

Temporary stabilization. The covering of soil to ensure its resistance to erosion, sliding, or other movement. The term includes vegetative cover, anchored mulch, or other non-erosive material applied at a uniform density of 70 percent across the disturbed area. *Source: 327 IAC 15-5-4 (36)*

Tiled drain. A tiled channel that: (1) carries surplus water; and (2) was established under or made subject to any drainage statute. *Source: IC 36-9-27-2*

Tracking. The deposition of soil that is transported from one (1) location to another by tires, tracks of vehicles, or other equipment. *Source: 327 IAC 15-5-4 (37)*

Unconsolidated material. A sediment that is loosely arranged or stratified or whose particles are not cemented together. *Source: 312 IAC 10-2-37*

Underground source of drinking water (USDW). An aquifer or its portion: (a)(1) which supplies any public water system; or (2) which contains a sufficient quantity of ground water to supply a public water system; and (i) currently supplies drinking water for human consumption; or (ii) contains fewer than 10,000 mg/l total dissolved solids; and (b) which is not an exempted aquifer. *Source: 40 CFR § 144.3*

Unreasonable hazard to the safety of life or property. A condition which is likely to: (1) be caused by the design or construction of a project; and (2) result during a regulatory flood in either: (A) the loss of human life; or (B) damage to public or private property to which the license applicant has neither ownership nor a flood easement. *Source: 312 IAC 10-2-40*

Unreasonably detrimental effects upon fish, wildlife, or botanical resources. Damage to fish, wildlife, or botanical resources that is found likely to occur by the director based upon the opinion of a professional qualified to assess the damage and: (1) creates a condition where recovery of the affected resources is not likely to occur within an acceptable period; and (2) cannot be mitigated through the implementation of a mitigation plan approved by the director. *Source: 312 IAC 10-2-39*

Utility line. A (1) pipe or pipeline for the transportation of a gaseous, liquid, liquefiable, or slurry substance; or (2) cable line, wire, or fiber for the transmission of electricity, telephone, telegraph, radio, television, or similar energy or media. *Source: 312 IAC 10-2-41*

Utility line crossing. The utility crosses the waterway in a straight line at an angle of between 45 degrees and 135 degrees from the streambank and does not parallel the waterway for more than 50 feet in the floodway before crossing unless the parallel portion of the line is contained within existing road right-of-way. *Source: 312 IAC 10-2-42*

Vegetated shallows. Special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as ... a variety of vascular rooted plants in freshwater systems. *Source: 82 FR 1860*

Volume. The amount of water impounded by a structure: (1) at or below the elevation of the top of the structure; or (2) at or below the maximum design flood pool elevation; whichever is lower. *Source: IC 14-27-7.5-6*

Voluntarily created wetland. An isolated wetland that:

- (A) was restored or created in the absence of a governmental order, directive, or regulatory requirement concerning the restoration or creation of the wetland; and
- (B) has not been applied for or used as compensatory mitigation or another regulatory purpose that would have the effect of subjecting the wetland to regulation as waters by:
 - (i) the department; or
 - (ii) another governmental entity.

Source: 327 IAC 17-1-3 (12)

Waterbody. For the purposes of the NWP, a waterbody is a jurisdictional water of the United States. If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of “waterbodies” include streams, rivers, lakes, ponds, and wetlands. *Source: 82 FR 1860*

Watercourse. A surface or subterranean water body at least a part of which is characterized by a current or flow. A water body does not include diffused surface water. *Source: NRC Information Bulletin #61*

Waters. The accumulations of water, surface and underground, natural and artificial, public and private, or a part of the accumulations of water that are wholly or partially within, flow through, or border upon Indiana. The term does not include any of the following:

- (A) An exempt isolated wetland.
- (B) A private pond.
- (C) An off-stream pond, reservoir, wetland, or other facility built for reduction or control of pollution or cooling of water before discharge.

The term includes all waters of the United States, as defined in Section 502(7) of the federal Clean Water Act (33 U.S.C. 1362(7)), that are located in Indiana. *Source: 327 IAC 17-1-3 (13)*

Watershed. A land area that drains to a common waterway, such as a stream, lake, estuary, wetland, or ultimately the ocean. *Source: 40 CFR 230.92*

Waterway. A river, stream, creek, run, channel, ditch, lake, reservoir or an embayment. *Source: 312 IAC 1-1-29.5*

Waters of the United States.

- (a) (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
- (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
- (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
- (iii) Which are used or could be used for industrial purpose by industries in interstate commerce;
- (4) All impoundments of waters otherwise defined as waters of the United States under the definition;
- (5) Tributaries of waters identified in paragraphs (a) (1) through (4) of this section;
- (6) The territorial seas;
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1) through (6) of this section.
- (8) Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.
- Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. *Source: 33 CFR 328.3 (a)*

Watershed. An area of land from which water drains to a common point.

Source: 327 IAC 15-13-5 (85)

Well. A bored, drilled, or driven shaft whose depth is greater than the largest surface dimension; or, a dug hole whose depth is greater than the largest surface dimension; or, an improved sinkhole; or, a subsurface fluid distribution system.

Source: 40 CFR 144.3

Wetland. A transitional area between a terrestrial and deep water habitat (but not necessarily adjacent to a deep water habitat) where at most times the area is either covered by shallow water or the water table is at or near the surface and under normal circumstances any of the following conditions are met: (1) the area predominantly supports hydrophytes, at least periodically, or the substrate is predominantly undrained hydric soil, for example peat or muck; and/or (2) The substrate is not a soil but is instead saturated with water or covered by shallow water some time during the growing season, for example, marl beaches or sand bars.

Source: 312 IAC 10-2-44

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Source: 40 CFR 230.3 (b), 33 CFR 328.3 (b)

Wetland Activity. The discharge of: (A) dredged; or (B) fill; material into an isolated wetland.

Source: 327 IAC 17-1-3 (15)

Wetlands. Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and that, under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions. The term generally includes the following:

- (A) Swamps.
- (B) Marshes.
- (C) Bogs.
- (D) Similar areas.

Source: 327 IAC 17-1-3 (16)

Wetlands Delineation. A technical assessment of:

- (A) whether a wetland exists on an area of land; and
- (B) if so, the type and quality of the wetland based on the presence or absence of wetlands characteristics, as determined consistently with the Wetlands Delineation Manual, Technical Report Y-87-1 of the United States Army Corps of Engineers.

Source: 327 IAC 17-1-3 (17)

Wetland restoration measure. A practice or combination of practices to restore a degraded or filled wetland. The conversion of an unaltered wetland to another aquatic use is not included within the definition.

Source: 312 IAC 10-2-45