## 10.40 WETLANDS AND SECTION 404 PERMITS - INTRODUCTION

The Iowa DOT is required to comply with all requirements of Section 404 of the Clean Water Act when constructing transportation projects. The Water Resources Section of the Office of Location and Environment (OLE) reviews preliminary plans and project concepts for all projects likely to be affected by Section 404. Project types that typically require Section 404 review include:

- Grading
- Widening and Resurfacing
- Culvert extensions
- Bridge/culvert replacements
- Riprap placement and/or flood emergency repairs
- Any construction on new alignment
- Any construction in or around streams or wet areas

A good rule of thumb is any project that includes new ROW purchase and/or impacts an aquatic resource should be reviewed for Section 404 requirements.

## 10.41 WETLANDS – DEFINITION AND REGULATION

The federal regulatory definition of a wetland is: “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 are protected in Iowa by federal law (33 CFR Part 323), executive order (EO 11990), state law (§314.23-24), and Iowa DOT policy (PPM 500.03).

Wetlands are regulated in Iowa by the U.S. Army Corps of Engineers (Corps), who authorize projects in compliance with Section 404 of the Clean Water Act; U.S. Environmental Protection Agency (EPA), who enforce Section 404; and the Iowa Department of Natural Resources (DNR), who issue Section 401 Water Quality Certifications for all Section 404 Permits. In addition, the U.S. Fish & Wildlife Service, Natural Resource Conservation Service, Federal Highway Administration, and State Historical Preservation Officer all play important roles in the wetland permitting process.

## 10.42 PERMIT PROCESS

To obtain authorization to disturb regulated aquatic resources, the Iowa DOT, as the permit applicant, must identify the jurisdictional waters present (wetland delineation/stream determination), avoid the protected resources where possible, minimize the unavoidable impacts, and then provide compensatory mitigation for any remaining impacts.

The Corps issues two types of Section 404 permits, General and Individual. General Permits include Nationwide Permits and Regional General Permits and are issued periodically for categories of activities that result in only minimal adverse affects to the aquatic environment. Individual Permits are issued for projects with more significant adverse impacts on a case-by-case basis. Individual Permit authorizations are based on a public interest review that includes a comment period for resource agencies and the public. Section 401 Water Quality Certifications are issued for the entire Nationwide Permit program as well as for specific Regional General Permits. Individual Permits require project specific Section 401 Water Quality Certifications.

Section 404 Authorization is requested by preparing either a Pre-Construction Notice, in the case of a General Permit, or an Individual Permit Application. Both documents contain project concept, locations, history, schedule, plans, cross-sections, wetland avoidance and minimization efforts, wetland delineations and other detailed site data, a proposed mitigation plan, and many other types of information.

General Permits are reviewed in-house by the Corps and are typically issued within 45 days of submittal. Individual Permits require 90-120 day review time, including a 30-day Public Notice period.

A Section 404 authorization contains requirements and conditions specific to the proposed construction project. **It is imperative that the Iowa DOT field construction staff AND the contractor are aware of all permit requirements and work together to ensure compliance.** Failure to comply with a Section 404 permit may result in an enforcement action against the Department including a cease and desist order to stop all project work and fines of up to $25,000 per day until compliance is met. Corps and DNR inspectors may and do visit construction projects without prior notice.

Upon issuance of a Section 404 authorization, the Water Resources project manager will prepare a cover memo highlighting any issues of particular concern and forward the memo and 404 permit to the District Construction Engineer The Office of Contracts may include the 404 permit in the contract documents at the request of the Office of Location and Environment for environmentally sensitive projects. Copies of the permit should be kept at the primary project site, mitigation project site and the Construction Residency at all times until completion of both the primary project and the mitigation site. The memo and permit can also be found in the Electronic Records Management System.

Other types of permits may be required for any given project and are generally administered separately. Other permits may include floodplain, sovereign lands, storm water (NPDES) and structure permits.

## 10.43 MITIGATION

Mitigation for impacts to wetlands and streams must occur in a specific sequence. The first step of mitigation is to avoid impacts to wetlands or streams. When impacts cannot be avoided, the second step is to minimize impacts as much as possible. The last step of mitigation is compensation. Compensation, or compensatory mitigation, is when DOT restores, creates, enhances, or in exceptional circumstances, preserves a wetland and/or other aquatic resource for the purpose of compensating for unavoidable adverse impacts resulting from construction of highway projects. Currently, DOT compensates at a minimum 1.5:1 ratio, meaning 1.5 acres of wetland are replaced for every 1 acre of wetland impacted. Special circumstances may require DOT to compensate at a higher mitigation ratio.

Compensatory mitigation is required for most projects requiring Section 404 authorization. Typically, a proposed site and development concept is identified in the permit application or pre-construction notice. Following authorization, the mitigation project is designed by OLE or OLE's wetland consultants and let as a separate project. In some cases, mitigation may be accomplished in conjunction with the primary project by modifying a project feature such as a stream crossing, ditch, or borrow. The Corps requires that mitigation must be completed prior to or concurrent with wetland fill activities along the primary project.

Mitigation projects may be restorations of previously drained wetlands, creations of new wetland areas, enhancements of degraded areas, or preservation of resources likely to be developed. Mitigation may also include improvements to streams or other resources.

Mitigation projects may include site grading, construction of water control structures, removal of existing drainage features, planting of both uplands and wetlands with native seed, live plugs, and/or trees. It is important for the contractor to understand that mitigation projects often require work in wet soil conditions.

One of the most critical elements for mitigation success is construction to the proper elevations. This ensures that the water necessary to sustain the mitigation wetlands will be available as designed. Sometimes, it is generally desirable to leave finish grades rough and uneven with shallow and variable slopes and to create undulating bottom surfaces with diverse water depths. Removal of tile from wetland areas works best if the tile line is removed in its entirety. Wetland seeding is most successful when performed in the spring time on moist soil. These types of important activities will be identified in project plans; therefore, plan reference notes should be carefully followed.

The Water Resources Section in the Office of Location and Environment have biological and engineering staff available to discuss wetland mitigation projects. When in doubt, please check with the Water Resources Section.

## 10.44 MITIGATION POST CONSTRUCTION REPORT

The Corps of Engineers' Section 404 Permit requires that a Post Construction Report (PCR) be submitted to the Corps of Engineers' within 30 days of the completion of the mitigation site. These drawings are separate from the usual DOT "As-Built" plans. The PCR typically includes before/after cross-sections, location and elevation of water control structures, monitoring sites, final boundary of constructed wetlands, list of plant species, photos, depth of transplanted topsoil, geometry and treatment of buffer areas, ditch plugs, drain tiles and boundary markers.

The PCR's are reviewed by the regulatory agencies to ensure that the regulated resources were adequately mitigated. Preparation of the PCR's is coordinated by OLE's engineers in cooperation with the Water Resources project manager. Post Construction Reports do not need a signature by a licensed engineer.

Projects utilizing consultant inspection will likely include mitigation Post Construction preparation as a work order task.

## 10.45 MITIGATION MONITORING

Mitigation projects must be monitored annually by the Water Resources project manager for a minimum of five years. Monitoring involves regular site visits and investigation to document development of project features, primarily hydrology, vegetation, and soil characteristics. Monitoring also includes inspection of constructed features to identify needed remedial actions. Open construction contracts may be utilized for remedial actions when appropriate.

## 10.46 PRECONSTRUCTION CONFERENCE

All construction projects requiring a Section 404 Permit as well as all mitigation projects should include a discussion of the permit conditions and responsibilities at the preconstruction conference. It is important to invite Water Resources staff to attend the conference to explain the permit requirements and the responsibilities and obligations of the Department and contractor, as well as to answer any questions.

## 10.47 COMPLETED WORK CERTIFICATION FORM

A Section 404 Permit may contain a Completed Work Certification Form to be completed by the Water Resources Section upon completion of both the primary and mitigation projects. The Resident Construction Engineer should notify the Water Resources Section of the completion of the highway project.

## 10.48 CONSTRUCTION WORK NOT SHOWN ON PLANS

Occasionally, a contractor may propose work beyond that shown on the project plans such as an alternative borrow, temporary stream crossing, causeway, work pads or alternative construction technique. If that work affects areas outside the ROW and/or includes additional impacts to aquatic resources, the Water Resources project manager should be consulted to ensure permit compliance.