General Permit - Practicable Alternatives Analysis Information

ALTERNATIVES TO AVOID & MINIMIZE WETLAND IMPACTS
UTILITY PROJECTS

SUPPLEMENT 3 (July 2013)

This document outlines the Wisconsin Department of Natural Resources (DNR) supplemental information required from the applicant for Section 2 of the Informational Requirements for Practicable Alternatives Analysis for Projects Impacting Wetlands (PAA) specifically for utility projects (e.g. pipelines, transmission lines, telecommunications, sanitary sewer, etc.). This information will also be used by the U.S. Army Corps of Engineers (ACOE) during the federal review process. The information you provide for this supplement is in addition to the information you are required to provide as outlined in the four sections of the PAA. Your PAA will be used by DNR and ACOE staff to assist with their responsibility to determine the overall project purpose and need, and least environmentally damaging practicable project alternative.

The term "practicable" means reasonably available and capable of being implemented after taking into consideration cost, site availability, available technology, logistics and proximity to the proposed project site, in light of overall purpose and scope of project.

Note: Should your project impact other aquatic resources regulated by the ACOE, such as lakes, rivers, and streams, you may use this supplement to describe practicable alternatives to impacting those resources.

DIRECTIONS: For proposed utility projects applicants are required to consider the following avoid and minimize project alternatives outlined below. The alternatives listed below are the minimum set of project alternatives the applicant must consider. Given that each site and project is different there may also be project specific alternatives the applicant should consider, in addition to the standard alternatives listed below. For each alternative analyzed, please show the location of the alternatives on an aerial photograph and clearly label each alternative.

TIP: If federal, other state or local requirements limit your ability to avoid and minimize wetland impacts, it can be helpful to request a meeting with all parties to determine possible options available to avoid and/or minimize wetland impacts that may be acceptable to the parties.

ASSISTANCE: If you have questions about this PAA Supplement please contact the DNR Bureau of Energy, Transportation, and Environmental Analysis, and the U.S. Army Corps of Engineers Project Manager for the county where your project is located for assistance. For sanitary sewer or smaller water utility projects, contact the local DNR Water Management Specialist. You may also request a pre-application meeting with DNR and ACOE permit reviewers to help you further understand the PAA process, the minimum project alternatives required and any project specific alternatives that should be considered for your project.

DEVELOPING PROJECT ALTERNATIVES

STEP 1: PROJECT ALTERNATIVES THAT AVOID WETLAND IMPACTS

The first step in the alternatives analysis process is to determine if a practicable alternative is available that completely avoids wetland impacts. If a practicable avoid alternative exists that meets the overall project purpose, this is the project alternative the applicant should select, unless this alternative would result in other significant adverse environmental consequences. The overall project purpose is to install or maintain utility infrastructure.

The following project alternatives should be analyzed by the applicant to determine if the project can avoid wetlands, even if these are not your preferred alternatives. In Section 3 of the PAA you will be

asked to evaluate and provide information as to why each of the alternatives analyzed is or is not practicable to meet your overall project purpose.

1. **Existing Utility.** Is there an existing utility facility that can be used to provide utility service without impacting wetlands?
2. **Relocate Utility**. Are there locations where the utility facility could be moved that would avoid wetland impacts?
3. **Reconfigure Development.** If other structures or development features are proposed as part of the project, such as a substation, business or home, can they be shifted or reconfigured so both the structure(s) and the utility avoid wetlands?
4. **Reduce Utility Footprint.** Decreasing the footprint of the construction or permanent utility right-of-way may be enough to avoid impacting the edge of a wetland.
5. **Direction Bore Utility**. Is it practicable o avoid direct wetland impacts by directionally drilling the utility underneath the wetland?
6. **Access from Adjacent Parcel**. Avoid wetland impacts by constructing a portion of a utility on an adjacent parcel. This may require obtaining an access easement from adjacent property owner or the purchase of additional right-of-way.
7. **Other Properties**. What other properties were considered at the time the project plans were first considered that would have avoided wetland impacts? These properties include properties you currently own or recently have owned and other properties that are available for sale in the area? Provide the geographic area(s) you searched for an alternative site and the specific location of other properties considered. For each of the properties considered, indicate why they were not selected. If no other sites were considered, please explain why.

STEP 2: PROJECT ALTERNATIVES THAT MINIMIZE WETLAND IMPACTS

If wetland impacts are not avoidable, the second step in the alternatives analysis process is for the applicant to determine if there is a practicable alternative available that minimizes wetland impacts and still meets the overall project purpose. The following project alternatives should be analyzed by the applicant to determine how the project can minimize fill into the wetland and limit project impacts to the lower quality and functioning wetlands on the site. To qualify for the wetland general permit, the applicant is required to select the project alternative that minimizes wetland impacts to the maximum amount practicable if no avoid alternative is available to meet the overall project purpose.

The project alternative that results in the least amount of impact to wetlands will likely include a combination of the alternatives listed above and below. For example, the applicant selects a project alternative that avoids wetland encroachment to the maximum extent practicable and the impact is minimized to occur along the edge of the wetland and/or within a degraded portion of the wetland complex (e.g. dominated by non-native invasive plants such as reed canary grass).

1. **Existing Utility.** Is there an existing utility facility that can be upgraded or improved to meet needs to minimize wetland impacts?
2. **Reconfigure Development or Other Proposed Structures.** If other structures are proposed as part of a development, such as a substation, business or home, can they be shifted or reconfigured to minimize wetland impacts?
3. **Reduce Utility Footprint or Construction Corridor.** Can the footprint of the construction or permanent utility right-of-way through the wetland be decreased to minimize wetland impacts? For example, is it possible to use fewer poles or a single pole structure instead of a 4-legged tower?
4. **Relocate Utility to Narrowest Portion of Wetland**. Using the most accurate wetland information available, such as a wetland delineation, find locations where the utility can cross the wetland at the narrowest location that would result in the least amount of wetland impact.
5. **Place Utility at Wetland Edge**. Using the most accurate wetland information available, such as a wetland delineation, find locations where the utility can be installed along the edge of the wetland rather than right through the middle of the wetland complex. It is preferred to cross or impact the edge of a wetland rather than through the middle of a wetland complex as it minimizes habitat fragmentation impacts.

6. **Locate Utility with Other Linear Features**. Are there other utility or transportation corridors the proposed utility could be co-located with to minimize wetland impacts?
7. **Limit Impacts to Degraded Wetlands & Avoid High Quality Wetlands.** Using the most accurate wetland information available, such as a wetland delineation, and in consultation with a DNR Water Management Specialist or ACOE Project Manager determine which wetlands on the site are considered degraded and those that are high quality, including rare or difficult to replace wetlands and shoreland wetlands. Limit the temporary and permanent impacts from a utility structure or crossing to the portion of wetland that is degraded, for example, dominated by non-native invasive plants such as reed canary grass and avoid intact wetland communities such as a forested wetland. For example, a utility may be installed via open trench or vibratory plow through degraded wetlands and high quality wetlands would be directionally bored. It is also preferred that impacts to wooded wetlands be avoided as utility corridors are often required to be maintained free of woody vegetation
8. **Low Impact Construction Methods and Practices**. Are there construction methods that minimize impacts to the wetlands? For example, is it possible to reduce the construction footprint in wetland for an open trench method? Trenching in wetlands will require that soils be removed and segregated by horizon and returned back to the trench in that same order to preserve original conditions and seed source. Other examples include construction during frozen ground or dry ground conditions and using matting for construction access.
9. **Maintain Wetland Hydrology**. To minimize impacts to wetland hydrology at the utility crossing trench breakers or similar structures should be installed as appropriate around an underground pipe to prevent groundwater from flowing along the utility corridor effectively draining the wetland.

STEP 3: EVALUATING THE ALTERNATIVES

In Section 3 of the Informational Requirements for PAA you are required to evaluate each of the alternatives considered and explain why the alternative would or would not meet the overall project purpose and address the following issues, including, but not limited to cost, location, access, transportation, technological concerns and other logistics. **Please reference the detailed outline in Section 3 of the PAA for more detailed requirements.**

To verify the reasons outlined for why an alternative is or is not feasible, you are also required to submit quantitative and reliable supporting documentation. Below are a few examples of supporting documentation that are typically provided for utility crossings:

- Cost Comparison (e.g. cost per linear foot of directional bore vs. open trench vs. vibratory plow and costs for different easements)
- Design and/or Construction Method Limitations (directional bore, vibratory plow)
- Safety Requirements and/or Hazards
- Needs Assessment (include pertinent information on existing facilities, capacity, overloads, outages, etc.)
- Applicable Local, State or Federal Requirements
- Contact with Adjacent Landowners for Easement Request