

Memorandum

Environmental
Resources
Management

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Date: December 14, 2012

Subject: Big Stone South to Brookings County Project
Grant, Deuel, and Brookings Counties, South Dakota

Environmental Information

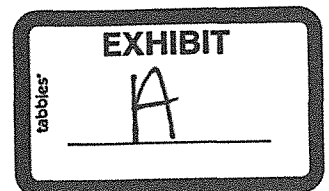


The information contained herein is intended to supplement the Applicant's request for certification by providing updated and/or additional environmental information associated with the Project, as applicable or appropriate. As identified within the Applicant's request for certification, Project components include a portion of the Morris Transmission Line, the Big Stone South Substation, and the Granite Falls Transmission Line (collectively referred to as the 'Project' from this point forward).

The Applicant is proposing the predominant use of single shaft steel pole structures, and H-frame structures for certain sections of the Project. Poles would range in height between 100 and 195 feet. Poles would typically be spaced 700 to 1000 feet apart depending on site-specific considerations.

Xcel Energy, on behalf of Otter Tail Power, retained Environmental Resources Management (ERM) to review the original application (sections 10 through 17 and section 19) and provide updated/additional environmental information, where applicable or appropriate. Below is ERM's summary of updates or additions to the environmental information provided in the original permit application.

ERM has found that there have been no significant changes to the environmental data presented in the original application for the Permit. Additionally, ERM has found no detrimental environmental impacts from construction or operation of the proposed transmission facility that would significantly alter the Findings of Fact and Conclusions of Law presented in the previous Order (January 2007). Where existing conditions have not changed since the prior issuing of the Facility Permit, or there is no anticipated change in the type or extent of potential impacts relative to any resource, this resource is not specifically addressed below. The same



impact assessment methodology and approach utilized for the original permit application has been utilized for this assessment as well.

Protected Species/Habitats

Terrestrial Ecosystems

The South Dakota Game, Fish, and Parks Department (GFPD) and U.S. Fish and Wildlife Service (USFWS) have been reengaged to reaffirm past conclusions related to potential impacts and appropriate mitigation measures associated with protected species or their habitat. The attached Appendix A includes copies of recent GFPD and USFWS correspondences.

Previously, the GFPD did not provide any occurrences of state threatened, endangered, rare, or special concern terrestrial species within proximity to the recertification portion of the Project. Graham Environmental Services, Inc. (GES) conducted an investigation of threatened, endangered, and rare species and communities within the proposed Project area in Grant and Deuel counties in June 2005. No special status species were observed within one mile of the proposed project at that time, nor have any been more recently identified by the GFPD.

Previously, the USFWS noted one federally listed species, one candidate species, and one species of special concern within proximity to the Project. These species included the threatened Western prairie fringed orchid (*Platanthera praeclara*), the candidate Dakota skipper (*Hesperia dacotae*), and the Bald eagle (*Haliaeetus leucocephalus*), which is not endangered or threatened but receives protection through the Bald and Golden Eagle Protection Act.

No recent records of the Western prairie fringed orchid in South Dakota were previously identified. The Western prairie fringed orchid is no longer listed as a threatened species in Grant or Deuel counties.

Bald eagles occur throughout South Dakota. However, no nesting sites are known to occur along the transmission line route.

Based on a current review of the USFWS' threatened and endangered species list, the endangered Topeka shiner (*Notropis topeka*) and candidate species Poweshiek skipperling (*Oarisma Poweshiek*) are also known to have the potential to occur within proximity to the Project. The Topeka shiner

would be associated with surface waterbodies such as the Whetstone and Yellow Bank Rivers. As proposed in the previous application, no construction will occur within the Whetstone River or North and South Forks of the Yellow Bank River.

Both the Dakota skipper and the Poweshiek skipperling are found in high quality prairie ranging from wet-mesic tallgrass prairie to dry-mesic mixed grass prairie. The 2005 GES survey identified remnant mesic prairies and dry prairies as the principal natural community types encountered within the Project area. GES identified one mesic prairie remnant and two dry prairie remnants adjacent to the Granite Falls 345 kV transmission line. All of the native plant communities identified by GES were found to be affected by the presence of invasive species. Each community type varied in the abundance and location of native species present. Given the limited number, their adjacent location, and the lower quality prairie remnants identified, no significant impacts to either of these candidate species are anticipated to occur as a result of Project implementation.

In addition, to mitigate any avian collisions with the transmission lines, Otter Tail and Xcel Energy will work with the GFPD and USFWS to identify appropriate mitigation measures and locations where these measures may be implemented. Design standards will provide adequate spacing between conductors, or between a conductor and a grounding device, to mitigate or eliminate the risk of electrocution of birds with large wingspans, such as raptors.

No significant impacts to any protected terrestrial species or their habitat are anticipated to occur.

Aquatic Ecosystems

Based on previous consultation, the GFPD provided information associated with the potential for occurrence of state threatened, endangered, rare, or special concern aquatic species within proximity to the Project. The identified species were associated with surface waterbodies such as the Whetstone and Yellow Bank Rivers. These species included the state-endangered Central mudminnow (*Umbra limi*), the state-threatened Northern river otter (*Lontra canadensis*) and the state-threatened Northern redbelly dace (*Phoxinus eos*).

As discussed above and proposed in the previous application for a Permit, the Project will minimize impacts to aquatic ecosystems by spanning wetlands and waterways whenever reasonably possible. Additionally, the Project will implement appropriate best management practices (BMPs) to minimize the amount of erosion and sedimentation that could potentially impact waterbodies and wetlands. Specific plans to address these issues will be developed prior to construction, based on the locations of Project facilities and construction access. No significant impacts to any protected aquatic species or their habitat are anticipated to occur.

Community Impact

Project plans have not changed since the original application for a Permit. The populations of Big Stone City and Gary, Grant and Deuel counties have marginally decreased since Census 2000.

Impacts to agricultural use areas are anticipated to occur. These impacts will be minimal and will occur primarily due to pole placement. During construction, temporary impacts such as soil compaction and crop damages are likely to occur during construction. Up to 304 acres of agricultural land are anticipated to be temporarily impacted. The placement of poles will result in less than 0.7 acres of permanent impact.

Cultural Resources

While there is no anticipated change in the type or extent of potential impacts relative to cultural resources, the Applicant has reengaged the South Dakota State Historic Preservation Office (SHPO) to reaffirm past conclusions regarding the potential for impact and appropriate mitigation measures. Included in Appendix A is a copy of recent correspondence from the SHPO.

Conclusion

As a result of the analysis and assessment of the original permit application and any changes to the existing environment since 2006, ERM has found that there have been no significant changes to the environmental data presented in the original permit application. Additionally, ERM finds no newly anticipated detrimental environmental impacts from construction or operation of the proposed transmission facility that would significantly alter the Findings of Fact and Conclusions of Law presented in the previous Order.

Appendix A
