

Appendix I

Draft Avian Mitigation Plan

**Avian Mitigation Plan
FOR
Bemidji to Grand Rapids
230 kV Transmission Project**

DRAFT

August 2010

Prepared for
**Otter Tail Power Company
Minnesota Power
Minnkota Power Cooperative**

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1.0 INTRODUCTION

BACKGROUND

Otter Tail Power Company (Otter Tail Power), Minnesota Power, and Minnkota Power Cooperative, Inc. (Minnkota Power), on behalf of themselves and Northern States Power Company, a Minnesota corporation (Xcel Energy) and Great River Energy, a Minnesota cooperative association, (collectively referred to as “the Utilities”), are proposing to construct and operate a 230 kV transmission line between Bemidji, Minnesota, and Grand Rapids, Minnesota, (Bemidji-Grand Rapids Line or “the Project”). The line would be approximately 70 miles long.

It is widely recognized that construction and operation of transmission lines can result in direct and indirect impacts on avian wildlife. Direct impacts include mortality from wildlife striking power lines and related infrastructure, electrocution from overhead collector and transmission lines, and loss of habitat.

The Utilities have voluntarily developed this Avian Mitigation Plan (AMP) to outline how they would reduce the risk of avian impacts associated with the Project. This AMP includes a series of best practices that would be implemented to avoid or minimize the risk of impacting birds and their habitats. Additionally, the AMP is intended to demonstrate a level of compliance with applicable laws, regulations, and permits related to avian species. The AMP is intended to be periodically updated and improved upon as new information becomes available.

APPLICABLE REGULATIONS

There are three primary federal laws pertaining to the protection of birds in the United States: (1) the Migratory Bird Treaty Act (16 USC 703-712), (2) the Bald and Golden Eagle Protection Act (16 USC 668), and (3) the Endangered Species Act (16 USC 1538). Additionally, the Chippewa National Forest (CNF) has adopted a Regional Forester’s Sensitive Species (Forest Service Manual 2670.00) list to identify unique or sensitive species in need of special management. The Leech Lake Department of Resource Management (DRM) has also developed the Leech Lake Reservation Sensitive Species List, which identifies plant and animal species important to the Tribe. The State of Minnesota also regulates the protection of wildlife, primarily through the Minnesota Endangered Species Statute (Minnesota Statutes section 84.0895), and laws regulating hunting and fishing.

The Migratory Bird Treaty Act (MBTA), which is administered by the U.S. Fish and Wildlife Service (USFWS), is the cornerstone of migratory bird conservation and protection in the United States. Generally speaking, the MBTA protects all birds occurring in the U.S. in the wild except for house (English) sparrows, European starlings, rock doves (pigeons), any recently listed unprotected species in the federal register, and non migratory upland game birds. The Bald and Golden Eagle Protection Act (BGEPA) also provides additional legal protections specific to bald and golden eagles. Both the MBTA and BGEPA prohibit the

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“take” of protected species, and specify possible penalties for doing so. The MBTA defines “take” as to “pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect any . . . bird, or any part, nest or egg.” Similarly, the BGEPA defines “take” as to “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb a bald or golden eagle including any part, nest, or egg thereof....”

Species at risk of extinction are further protected under the federal Endangered Species Act (ESA). The ESA was passed by Congress in 1973 in recognition that many of our nation’s native plants and animals were in danger of becoming extinct. The purpose of the ESA is to protect these endangered and threatened species and to provide a means to conserve their ecosystems. “Take” under ESA is defined as “... to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” “Harm” is an act which actually kills or injures the wildlife, which includes significant habitat modification or degradation; whereas “harass” is defined as an intentional or negligent actor or omission that creates the likelihood of injury to wildlife by annoying it where it significantly disrupts normal behavioral patterns such as breeding, feeding, or sheltering. The ESA authorizes the USFWS to permit an “incidental take,” or a take resulting from an otherwise legal activity.

The Chippewa National Forest has identified 16 avian species for which “Population viability is a concern as evidenced by a significant current or predicted downward trend in numbers or density,” and “habitat capability that would reduce a species existing distribution.” Land uses that may negatively affect these species are typically required to adopt management practices designed to reduce or eliminate the risk of negative effects.

The Leech Lake DRM has developed the Leech Lake Reservation Sensitive Species List, which identifies species that have at risk populations or have cultural importance to the Tribe.

Minnesota has adopted the Minnesota State Endangered Species Act allowing the Department of Natural Resources (DNR) to identify species meeting the statutory definitions of “endangered,” “threatened,” or “special concern,” and apply special regulations toward their management. Species listed as threatened or endangered may not be removed or harmed without prior approval by the DNR via a take permit.

CORPORATE POLICY

The Utilities are committed to siting, designing, constructing, and operating the transmission facilities in a way that minimizes adverse environmental impacts, consistent with state and federal regulations. The Utilities have developed and implemented this AMP to support their commitment to comply with key wildlife laws by undertaking consistent procedures and practices to minimize adverse impacts on birds and their habitats.

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2.0 SITE AND ROUTE SUITABILITY ASSESSMENTS

In support of the Project, the Utilities have completed appropriate site and/or route studies to assess potential impacts on wildlife. Studies included:

- endangered, threatened, or other special status species present on or likely to use the proposed site/route;
- species of birds that are likely to use a proposed site based on an assessment of site attributes;
- critical areas of habitat where wildlife could congregate (e.g., maternity roosts, staging areas, winter ranges, nesting sites, migration stopovers or corridors, etc.); and
- large areas of intact habitat with the potential for fragmentation.

The Utilities would complete final design in a manner that is consistent with the guidelines and recommendations in the Avian Power Line Interaction Committee's (APLIC) *Suggested Practices for Avian Protection on Power Lines* (APLIC 2006).

3.0 ADVANCED CONSERVATION PRACTICES

The following advanced conservation practices would be used to reduce potential avian impacts. Use of these practices minimizes potential adverse impacts to most avian species and habitats present along the transmission line.

GENERAL CONSTRUCTION PRACTICES

- Minimize Construction Footprint – Construction footprints and staging areas would be the smallest possible to safely and efficiently complete construction. Construction work areas would be sited to avoid and/or minimize impacts to sensitive avian habitats whenever practicable.
- Rare Species Avoidance
 - Bald eagles - Clear cutting would be avoided within 330 ft of bald eagle nests; construction activity would not take place within 660 ft of an active nest during the breeding season. These restrictions were established in the 2007 National Bald Eagle Management Guidelines. The USFWS is in the process of updating these guidelines to better identify the measures required to minimize and avoid impacts to bald eagles, as well as criteria for obtaining a Take Permit. The Utilities would continue to work with the USFWS to refine this AMP as may be required by future guidance.
 - Northern goshawk - Tree removal and construction activities would not take place within 1,640 feet (500 meters) of a northern goshawk nest during the breeding season. Currently, no known nests are located within this distance of the Project's anticipated right of way (ROW). If these avoidance measures cannot be implemented, the appropriate state and/or federal agency would be consulted prior to conducting the activity.

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TRANSMISSION LINE DESIGN STANDARDS

The Project would be designed per APLIC's current standards in *Suggested Practices for Avian Protection on Power Lines, the State of the Art in 2006* and *Mitigating Bird Collisions with Power Lines: the State of the Art in 1994*. Both documents are available from APLIC at <http://www.aplic.org/>.

- General Design Standards – Design would comply with the following standards:
 - minimum separation of 150 cm (60 inches) between phase conductors, and between phase conductor and grounded hardware;
 - where such separation is not feasible, insulation would be used to prevent electrocution.

These design standards will minimize the potential for avian electrocution for all species identified within the project area, including bald eagles and other large birds.

- Flight Diverters – Flight diverters would be installed and maintained on the shield wire spans only where the transmission line would cross known flyways or near large wetlands, impoundments, and lakes. The diverters would be placed on the span that is located within the flyway, and may be placed on adjacent spans depending on vegetation characteristics. Generally, flight diverters would be placed on adjacent spans that have low growing vegetation, such as grasslands, emergent wetlands, and shrublands. Adjacent spans would not be marked if forested vegetation is present. The preliminary locations identified as avian use areas include: Lake Winnibigoshish, Ball Club Lake, Ball Club River, White Oak Lake, Little White Oak Lake, Blackwater Lake, Boswell Energy settling ponds, Bass Lake, and the Mississippi River floodplain. Review of aerial mapping and field surveys conducted in June 2010 indicate that line marking may be appropriate at the following locations:
 - Channel between Pike Bay and Cass Lake
 - Between Sucker Lakes and Grass Lake
 - Channel north of Portage Lake
 - Mississippi River southwest of Ball Club Lake
 - Channel between Ball Club Lake and Mississippi River

Additional locations may also merit consideration as flyways. These locations would be identified based on discussion with state and local agencies. Annual monitoring along the transmission line may also identify other locations where flight diverters may be required.

- Anti-Perching Devices – Anti-perching devices are not proposed for use. However, they may be installed if perching by avian species is identified as an issue for the operation and maintenance of the line or because of predation by perching raptors. In particular, anti-perching devices may be necessary if osprey attempt to nest on H-frame structures, which have the potential of impacting the birds or the operation and maintenance of the line.

4.0 OPERATIONAL PRACTICES

After Project construction has been completed, the Utilities would implement operational practices that would reduce the potential for the Project to adversely impact wildlife.

- Regular Site Inspection – the Utilities typically monitor the transmission line on an annual basis. Operational staff would be trained to identify, record, and respond to avian issues. Annual site inspections would be completed to identify dead or injured avian species found along the transmission line and/or signs of bird (particularly raptor) nesting. These inspections would be completed as part of the operational staff's regular duties, and would focus on areas considered to have an elevated collision risk, such as the flyways identified above.
- Avian Issues Reporting – Operational staff would be trained to record and respond to dead or injured avian species found along the Project. An avian incident report would be completed to track injuries and mortalities. The report would include location of incident, probable cause of incident, and the type of bird involved. The report would be forwarded to the Utilities' Senior Environmental Compliance Specialist (or designee) for compilation into an annual report for submission to the USFWS, CNF, DRM, and the DNR. This report would summarize the avian mortality that occurred, in addition to any related observations or recommendations.
- Nest Management – Where avian species are likely to nest in human-made structures, and such use could impede operation or maintenance of the structures or jeopardize the safety of the birds, the structures would be equipped with either (1) devices engineered to discourage birds from building nests, or (2) nesting platforms that would safely accommodate nests without interfering with structure performance. Potential nesting activity would be identified during early spring by conducting an over-flight of the transmission line. If nest construction is apparent, the Utilities would work with the appropriate state and/or federal agency to permanently remove the nest material and develop an alternative nest site, as appropriate. Nests will only be moved or removed if permitted by applicable laws and regulations.
- Adaptive Management – Through the course of operating the proposed facility and gathering information related to avian incidents, the Utilities would respond to reduce impacts on birds, as appropriate. For example, additional flight diverters may be needed to mark transmission lines and or tower guy wires if high levels of mortality are observed in particular areas or facilities. Additionally, anti-perching and/or nesting devices may need to be added at particular locations if periodic perching/nesting is observed and the perching activity is identified as a problem. The Utilities would consult with the appropriate state and/or federal agencies, as appropriate, if particular issues of concern become evident.

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5.0 PERMIT COMPLIANCE

The Utilities would obtain and comply with all avian-specific permits associated with construction and operation of their transmission facility. This may include incidental take permits, nest relocation, and scientific collection. The results of this AMP would be incorporated into project-specific training and operational practices, as necessary.

6.0 TRAINING

The Utilities would prepare a worker environmental training program to ensure construction and operation personnel clearly understand all environmental permit requirements and the commitments the Utilities have made as a part of a permit application and this AMP. The training program would include an electronic presentation that would be available at appropriate facilities. Contractors and/or vendors working at facilities operated by the Utilities for extended periods would also be required to review the training materials.

The Utilities would monitor construction and operation staff to ensure compliance with environmental mitigation measures.

7.0 KEY CONTACTS

For questions regarding implementing this AMP and other environmental/permitting issues, please contact:

Otter Tail Power Company:

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Fergus Falls, MN 56537
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Minnesota Power/ ALLETE, Inc.:

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Minnkota Power Cooperative:

John Graves
Environmental Manager
P.O. Box 13200
Grand Forks, N.D. 58208
Phone: (701) 795-4221
jgraves@minnkota.com

Federal contacts for federally listed threatened and endangered species and Regional Forester's Sensitive Species include:

U.S. Fish and Wildlife Service:

Nick Rowse
Ecological Services
4101 E. 80th Street
Bloomington, MN 55425-1665
(612) 725-3548
nick_rowse@fws.gov

U.S. F.S. Chippewa National Forest:

Todd Tisler
200 Ash Avenue NW
Cass Lake, MN 56633
(218) 335-8629
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Leech Lake Reservation contact for issues regarding general wildlife and DRM-listed sensitive species is:

LL Department of Resource Management:

Steve Mortensen
Fish, Wildlife, and Plant Resources Program
Leech Lake Band of Ojibwe
115, 6th St. NW, Suite E
Cass Lake, MN 56633
218-335-7423
smortensen@lldrm.org

State contact for issues regarding general wildlife and state-listed threatened or endangered species is:

Minnesota Department of Natural Resources:

Rich Baker
Ecological Services
500 Lafayette Rd
St Paul, MN 551554025
651-259-5073
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The Utilities would also maintain internal files for staff to access that would include documents such as the AMP, reporting forms, project permits, and any other relevant information.