STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

SITE PERMIT FOR A
LARGE WIND ENERGY CONVERSION SYSTEM
IN
LINCOLN COUNTY, MINNESOTA

ISSUED TO
LAKE BENTON POWER PARTNERS, LLC AND
NORTHERN STATES POWER COMPANY D/B/A XCEL ENERGY

PUC DOCKET NO. IP6908/WS-13-294

In accordance with the requirements of Minnesota Statutes Chapter 216F and Minnesota Rules Chapter 7854, this site permit is hereby issued to:

LAKE BENTON POWER PARTNERS, LLC AND NORTHERN STATES POWER COMPANY D/B/A XCEL ENERGY

The Permittee is authorized by this site permit to construct and operate a 107.25-megawatt Large Wind Energy Conversation System and associated facilities in Lincoln County, Minnesota on the site identified in this Site Permit and as portrayed on the official site maps, and in compliance with the conditions specified in this permit.

This site permit shall expire on November 1, 2039.

The site permit was originally issued to Xcel Energy on October 31, 1995. The first amendment to include Lake Benton Power Partners, LLC as a permittee was issued on June 19, 1997. This second amendment updates certain permit conditions and extends the expiration date from November 1, 2029 to 2039.

Approved and adopted this 1st day of November, 2017

BY ORDER OF THE COMMISSION

Daniel P. Wolf

Daniel P. Wolf,
Executive Secretary

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Official Site Permit Map

Attachment A - Complaint Procedures for Permitted Energy Facilities

1.1 SITE PERMIT

The Minnesota Public Utilities Commission (Commission) hereby issues this site permit to Lake Benton Power Partners, LLC, a limited liability corporation (hereinafter LBPP) and Northern States Power Company d/b/a Xcel Energy (Permittees) pursuant to Minnesota Statutes Chapter 216F and Minnesota Rules Chapter 7854. This permit authorizes the Permittee to construct and operate the Lake Benton Power Partners Wind Project (Lake Benton I Wind Project), a 107.25 megawatt (MW) nameplate capacity Large Wind Energy Conversion System (LWECS) and associated facilities. The project is located in Lincoln County, northwest of the city of Lake Benton that encompasses approximately 11,200 acres. The LWECS and associated facilities shall be built within the site identified in this permit and as identified in the attached official site permit map(s), hereby incorporated into this document.

1.2 Preemption

Pursuant to Minn. Stat. § 216F.07, this permit shall be the sole site approval required for the location, construction, and operation of this project and this permit shall supersede and preempt all zoning, building, and land use rules, regulations, and ordinances adopted by regional, county, local, and special purpose governments.

2.1 PROJECT DESCRIPTION

The site boundary is more specifically shown on the map that is attached hereto as Exhibit 1. The site is of sufficient size to accommodate the Permittee's 107.25-MW LWECS and associated facilities which have the capability to convert wind power into 107.25-MW of electrical power for delivery to NSP's-electrical system. The 107.25 MW LWECS authorized under this permit is referred to as NSP's Phase II Project or Lake Benton I Wind Project. The project ~~originally consisted~~consists of 143 Zond wind turbines, identified as the Z 750 model with a 48-50-meter rotor diameter.

2.2 Associated Facilities

Associated facilities for the project include three switch yards, an operations and maintenance building, a storage building, access roads, meteorological towers, underground/overhead communication and electrical collection lines, and transformers.

2.3 Project Location

The project is located in the following:

County	Township Name	Township	Range	Section
Lincoln County	Drammen	110	46W	4,5,7-10,14-18,20,21,23-26,35,36
Lincoln County	Diamond Lake	110	45W	31
Lincoln County	Lake Benton	109	45W	6,7

3.1 DESIGNATED SITE

The site designated by the Commission for the Lake Benton I Wind Project is the site depicted on the official site permit maps attached to this permit.

3.2 Turbine Layout

The wind turbine and facility layouts are shown on the official site maps attached to this permit. The layout represents the approximate location of wind turbines and associated facilities within the project boundary and identifies a layout that seeks to minimize the overall potential human and environmental impacts of the project, which were evaluated in the permitting process.

4.1 SETBACKS AND SITE LAYOUT RESTRICTIONS

4.2 Wind Access Buffer

~~Wind turbine towers shall not be placed less than five rotor diameters from the perimeter of the site.~~

Wind turbine towers shall not be placed less than 5 rotor diameters (RD) from all project boundaries on the predominant wind axis and 3 rotor diameters (RD) on the secondary wind axis, with the following exceptions:

Turbine 1	Turbine 134
Turbine 2	Turbine 135
Turbine 9	Turbine 138
Turbine 20	Turbine 139
Turbine 21	Turbine 140
Turbine 41	Turbine 141
Turbine 68	Turbine 142
Turbine 76	Turbine 143

This setback applies to all parcels for which the permittee does not control land and wind rights, including all public lands.

4.3 Residences

Wind turbine towers shall not be located closer than 500 feet from all residences or the distance required to comply with the noise standards pursuant to Minn. R. 7030.0040, established by the Minnesota Pollution Control Agency, whichever is greater.

4.4 Noise

The wind turbine towers shall be placed such that the Permittee shall, at all times, comply with noise standards established by the Minnesota Pollution Control Agency as of the date of this permit and at all appropriate locations. The noise standards are found in Minnesota Rules Chapter 7030. Turbine operation shall be modified or turbines shall be removed from service if necessary to comply with these noise standards. The Permittee or its contractor may install and operate turbines as close as the minimum setback required in this permit, but in all cases shall comply with Minnesota Pollution Control Agency noise standards. The Permittee shall be required to comply with this condition with respect to all homes or other receptors in place as of the time of construction, but not with respect to such receptors built after construction of the towers.

4.5 Roads

Wind turbines and meteorological towers shall not be located closer than 250 feet from the edge of the nearest public road right-of-way.

4.6 Public Lands

Wind turbines and associated facilities including foundations, access roads, underground cable, and transformers, shall not be located in publicly-owned lands that have been designated for recreational or conservation purposes, including, but not limited to, Waterfowl Production Areas, State Wildlife Management Areas, Scientific and Natural Areas or county parks, except in the event that the public entity owning those lands enters into a land lease and easement with the Permittee. Wind turbines towers shall also comply with the setbacks of Section 4.1.

4.7 Wetlands

Wind turbines and associated facilities including foundations, access roads, underground cable and transformers, shall not be placed in public waters wetlands, as shown on the public water inventory maps prescribed by Minnesota Statutes Chapter 103G, except that electric collector or feeder lines may cross or be placed in public waters or public waters wetlands subject to permits

and approvals by the Minnesota Department of Natural Resources and the United States Army Corps of Engineers, and local units of government as implementers of the Minnesota Wetlands Conservation Act.

4.8 Native Prairie

Wind turbines and associated facilities including foundations, access roads, collector and feeder lines, underground cable, and transformers shall not be placed in native prairie, as defined in Minn. Stat. § 84.02, subd. 5, unless addressed in a prairie protection and management plan and shall not be located in areas enrolled in the Native Prairie Bank Program. Construction activities, as defined in Minn. Stat. § 216E.01, shall not impact native prairie unless addressed in a prairie protection and management plan.

The Permittee has prepared a prairie protection and management plan in consultation with the Minnesota Department of Natural Resources as native prairie, as defined in Minn. Stat. § 84.02, subd. 5, was identified within the site boundaries.

4.9 Sand and Gravel Operations

Wind turbines and all associated facilities, including foundations, access roads, underground cable, and transformers shall not be located within active sand and gravel operations, unless otherwise negotiated with the landowner.

4.10 Wind Turbine Towers

Structures for wind turbines shall be self-supporting tubular towers. The towers shall not be more than 170 feet above grade.

4.11 Turbine Spacing

The turbine towers shall be constructed within the site boundary as shown in the official site maps. The turbine towers shall be spaced no closer than 3.6 rotor diameters (RD) within a string and 10 RDs between strings. If required during final micro-siting of the turbine towers to account for topographic conditions, up to 10 percent of the towers (14 towers) may be sited closer than the above spacing but the Permittee shall minimize the need to site the turbine towers closer.

4.12 Meteorological Towers

Meteorological Towers installed after issuance of this 2017 amendment:

> Permanent towers for meteorological equipment shall be free standing. Permanent meteorological towers shall not be placed less than 250 feet from the edge of the nearest public road right-of-way and from the boundary of the Permittee's site control, or in

compliance with the county ordinance regulating meteorological towers in the county the tower is built, whichever is more restrictive. Meteorological towers shall be placed on property the Permittee holds the wind or other development rights.

Meteorological towers shall be marked as required by the Federal Aviation Administration. There shall be no lights on the meteorological towers other than what is required by the Federal Aviation Administration. This restriction shall not apply to infrared heating devices used to protect the wind monitoring equipment.

Meteorological towers installed prior to the issuance of the 2017 amendment:

Permanent towers up to 100 feet high for meteorological equipment shall be free standing. Existing temporary meteorological towers, which are those that will be removed after completion of construction, and all meteorological towers over 100 feet high may be guyed if the landowner has given written permission and the guys are properly marked.

4.13 Aviation

The Permittee shall not place wind turbines or associated facilities in a location that could create an obstruction to navigable airspace of public and private airports (as defined in Minn. R. 8800.0100, subp. 24(a) and 24(b)) in Minnesota, adjacent states, or provinces. The Permittee shall apply the minimum obstruction clearance for private airports pursuant to Minn. R. 8800.1900, subp. 5. Setbacks or other limitations shall be followed in accordance with the Minnesota Department of Transportation, Department of Aviation, and the Federal Aviation Administration.

4.14 Footprint Minimization

The Permittee shall design and construct the LWECS so as to minimize the amount of land that is impacted by the LWECS. Associated facilities in the vicinity of turbines such as electrical/electronic boxes, transformers, and monitoring systems shall, to the greatest extent feasible, be mounted on the foundations used for turbine towers or inside the towers unless otherwise negotiated with the affected landowner.

5.1 GENERAL CONDITIONS

The Permittee shall comply with the following conditions during construction and operation of the LWECS and associated facilities over the life of this permit.

5.2 Notification

Within 30 days of the amended permit issuance, the Permittee shall send a copy of the amended permit and the complaint procedures to any regional development commission, county auditor

and environmental office, and city and township clerk in which any part of the site is located. Within 30 days of the permit amendment issuance, the Permittee shall provide all affected landowners with a copy of this permit and the complaint procedures. The Permittee shall contact landowners prior to entering the property or conducting maintenance within the site, unless otherwise negotiated with the affected landowner.

5.3 Construction and Operation Practices

The Permittee shall comply with the construction practices, operation and maintenance practices, and material specifications described in the record of the proceedings unless this permit establishes a different requirement in which case this permit shall prevail.

5.3.1 Field Representative

The Permittee had designated a field representative responsible for overseeing compliance with the conditions of this permit during construction of the project.

5.3.2 Site Manager / Project Contact

The Permittee shall designate a site manager and/or project contact responsible for overseeing compliance with the conditions of this permit during the commercial operation and decommissioning phases of the project. This person shall be accessible by telephone or other means during normal business hours for the life of this permit.

The Permittee has filed with the Commission the name, address, email, phone number, and emergency phone number of a the site manager. The Permittee shall provide the site manager's contact information to affected landowners, residents, local government units and other interested persons within 30-days of the amended permit issuance. The Permittee may change the site manager at any time upon notice to the Commission, affected landowners, residents, local government units and other interested persons.

5.3.3 Employee Training and Education of Permit Terms and Conditions

The Permittee shall inform all employees, contractors, and other persons involved in the construction and ongoing operation of the LWECS of the terms and conditions of this permit.

5.3.4 Topsoil Protection

The Permittee shall implement measures to protect and segregate topsoil from subsoil on all lands unless otherwise negotiated with the affected landowner.

5.3.5 Soil Compaction

The Permittee shall implement measures to minimize soil compaction of all lands during all phases of the project's life and shall confine compaction to as small an area as practicable.

5.3.6 Soil Erosion and Sediment Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the Minnesota Pollution Control Agency Construction Stormwater Program.

If construction of the facility disturbs more than one acre of land, or is sited in an area designated by the Minnesota Pollution Control Agency as having potential for impacts to water resources, the Permittee shall obtain a National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Construction Stormwater Permit from the Minnesota Pollution Control Agency that provides for the development of a Stormwater Pollution Prevention Plan (SWPPP) that describes methods to control erosion and runoff.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. All areas disturbed during construction of the facilities shall be returned to pre-construction conditions.

5.3.7 Wetlands

Construction in wetland areas shall occur during frozen ground conditions to minimize impacts, to the extent feasible. When construction during winter is not possible, wooden or composite mats shall be used to protect wetland vegetation. Soil excavated from the wetlands and riparian areas shall be contained and managed in accordance with all applicable wetland permits. Wetlands and riparian areas shall be accessed using the shortest route possible in order to minimize travel through wetland areas and prevent unnecessary impacts.

Wetland and water resource areas disturbed by construction activities shall be restored to pre-construction conditions, in accordance with all applicable wetland permits. Restoration of the wetlands will be performed by the Permittee in accordance with the requirements of applicable state and federal permits or laws and landowner agreements.

5.3.8 Vegetation Management

The Permittee shall disturb or clear the project site only to the extent necessary to assure suitable access for construction, safe operation and maintenance of the project. The Permittee shall

minimize the number of trees to be removed in selecting the site layout specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and vegetation, to the extent that such actions do not violate sound engineering principles.

5.3.9 Application of Pesticides

The Permittee shall restrict pesticide use to those pesticides and methods of application approved by the Minnesota Department of Agriculture, Minnesota Department of Natural Resources, and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. All pesticides shall be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. The Permittee shall contact the landowner or designee to obtain approval for the use of pesticide at least 14 days prior to any application on their property. The landowner may request that there be no application of pesticides on any part of the site within the landowner's property. The Permittee shall provide notice of pesticide application to affected landowners, and known beekeepers operating apiaries within three miles of the project site at least 14 days prior to such application.

5.3.10 Invasive Species

The Permittee shall employ best management practices to avoid the potential spread of invasive species on lands disturbed by project construction activities.

5.3.11 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil, the Permittee shall select site appropriate seed certified to be free of noxious weeds. The Permittee shall consult with landowners on the selection and use of seed for replanting. To the extent possible, the Permittee shall use native seed mixes.

5.3.12 Public Roads

Where practical, existing roadways shall be used for all activities associated with the project. Where practical, all-weather roads shall be used to deliver cement, turbines, towers, assembled nacelles, and all other heavy components to and from the turbine sites.

The Permittee shall prior to the use of such roads, make satisfactory arrangements with the appropriate state, county, or township governmental body having jurisdiction over roads to be used for construction of the project, for maintenance and repair of roads that may be subject to

increased impacts due to transportation of equipment and project components. The Permittee shall notify the Commission of such arrangements upon request.

5.3.13 Turbine Access Roads

The Permittee shall construct the least number of turbine access roads necessary to safely and efficiently operate the project and satisfy landowner requests. Access roads shall be low profile roads so that farming equipment can cross them and shall be covered with Class 5 gravel or similar material. Access roads shall not be constructed across streams and drainage ditches without required permits and approvals. When access roads are constructed across streams, drainage ways, or drainage ditches, the access roads shall be designed and constructed in a manner so runoff from the upper portions of the watershed can readily flow to the lower portion of the watershed. Any access roads that are constructed across streams or drainage ditches shall be designed and constructed in a manner that maintains existing fish passage. Access roads that are constructed across grassed waterways, which provide drainage for surface waters that are ephemeral in nature, are not required to maintain or provide fish passage. Access roads shall be constructed in accordance with all necessary township, county or state road requirements and permits.

5.3.14 Private Roads

The Permittee shall promptly repair private roads or lanes damaged when moving equipment or when obtaining access to the site, unless otherwise negotiated with the affected landowner.

5.3.15 Archaeological and Historic Resources

The Permittee shall make every effort to avoid impacts to identified archaeological and historic resources when constructing the LWECS. In the event that a resource is encountered, the Permittee shall contact and consult with the State Historic Preservation Office and the State Archaeologist. Where feasible, avoidance of the resource is required. Where not feasible, mitigation must include an effort to minimize project impacts on the resource consistent with State Historic Preservation Office and State Archaeologist requirements.

Prior to construction, workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction at such location and promptly notify local law enforcement and the State Archaeologist. Construction at such location shall not proceed until authorized by local law enforcement and the State Archaeologist.

5.3.16 Interference

The Permittee shall not operate the project so as to cause microwave, television, radio, telecommunications, or navigation interference in violation of Federal Communications Commission regulations or other law. In the event the project or its operations cause such interference, the Permittee shall take timely measures necessary to correct the problem.

5.3.17 Livestock Protection

The Permittee shall take precautions to protect livestock during all phases of the project's life.

5.3.18 Fences

The Permittee shall promptly replace or repair all fences and gates removed or damaged during all phases of the project's life unless otherwise negotiated with the affected landowner. When the Permittee installs a gate where electric fences are present, the Permittee shall provide for continuity in the electric fence circuit.

5.3.19 Drainage Tiles

The Permittee shall take into account, avoid, promptly repair or replace all drainage tiles broken or damaged during all phases of project’s life unless otherwise negotiated with affected landowner.

5.3.20 Equipment Storage

The Permittee shall not locate temporary equipment staging areas on cultivated lands unless otherwise negotiated with affected landowner. Temporary equipment staging areas shall not be located in wetlands or native prairie as defined in Sections 4.6 and 4.7.

5.3.21 Restoration

The Permittee shall, as soon as practical following construction of each turbine, restore the areas affected by construction to the condition that existed immediately before construction began, to the extent possible. The time period to complete restoration may be no longer than 12 months after completion of the construction, unless otherwise negotiated with the affected landowner. Restoration shall be compatible with the safe operation, maintenance and inspection of the project.

5.3.22 Cleanup

All waste and scrap that is the product of construction shall be removed from the site and all premises on which construction activities were conducted and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.

5.3.23 Pollution and Hazardous Waste

All appropriate precautions to protect against pollution of the environment shall be taken by the Permittee. The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of all wastes generated during construction and restoration of the site.

5.3.24 Damages

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction.

5.3.25 Public Safety

The Permittee shall provide educational materials to landowners adjacent to the site and, upon request, to interested persons about the project and any restrictions or dangers associated with the project. The Permittee shall also provide any necessary safety measures such as warning signs and gates for traffic control or to restrict public access. The Permittee shall submit the location of all underground facilities, as defined in Minn. Stat. § 216D.01, subd. 11, to Gopher State One Call within 6 months following the issuance of this amended site permit unless already completed.

5.3.26 Tower Identification

All turbine towers shall be marked with a visible identification number.

5.3.27 Federal Aviation Administration Lighting

Towers shall be marked as required by the Federal Aviation Administration. There shall be no lights on the towers other than what is required by the Federal Aviation Administration. This restriction shall not apply to infrared heating devices used to protect the wind monitoring equipment.

5.4 Communication Cables

The Permittee shall place all communication and supervisory control and data acquisition cables underground and within or adjacent to the land necessary for turbine access roads to the extent practicable or unless otherwise negotiated with the affected landowner.

5.5 Electrical Collector and Feeder Lines

Collector lines that carry electrical power from each individual transformer associated with a wind turbine to an internal project interconnection point shall be buried underground. Collector lines shall be placed within or adjacent to the land necessary for turbine access roads unless otherwise negotiated with the affected landowner.

Feeder lines that carry power from an internal project interconnection point to the project substation or interconnection point on the electrical grid may be overhead or underground. Feeder line locations shall be negotiated with the affected landowner. Any overhead or underground feeder lines that parallel public roads shall be placed within the public rights-of-way or on private land immediately adjacent to public roads. If overhead feeder lines are located within public rights-of-way, the Permittee shall obtain approval from the governmental unit responsible for the affected right-of-way.

Collector and feeder line locations shall be located in such a manner as to minimize interference with agricultural operations including, but not limited, to existing drainage patterns, drain tile, future tiling plans, and ditches. Safety shields shall be placed on all guy wires associated with overhead feeder lines. The Permittee shall submit the engineering drawings of all collector and feeder lines in the site plan pursuant to Section 10.3.

5.6 Other Requirements

5.6.1 Safety Codes and Design Requirements

The LWECS and associated facilities shall be designed to meet or exceed all relevant local and state codes, Institute of Electrical and Electronics Engineers, Inc. standards, the National Electric Safety Code, and North American Electric Reliability Corporation requirements. The Permittee shall provide a copy of such permits and authorizations to the Commission upon request.

5.6.2 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the project and comply with the conditions of those permits unless those permits conflict with or are preempted by federal or state permits and regulations.

The Permittee shall comply with all terms and conditions of permits or licenses issued by the counties, cities, and municipalities affected by the project that do not conflict with or are not pre-empted by federal or state permits and regulations.

6.0 SPECIAL CONDITIONS

Special conditions shall take precedence over other conditions of this permit should there be a conflict.

No Special Conditions exist for this project.

7.1 SURVEYS AND REPORTING

7.2 Biological and Natural Resource Inventories

The Permittee, in consultation with the Commission and the Department of Natural Resources, shall design and conduct pre-construction desktop and field inventories of existing wildlife management areas, scientific and natural areas, recreation areas, native prairies and forests, wetlands, and any other biologically sensitive areas within the project site and assess the presence of state- or federally-listed or threatened species. The results of the inventories shall be filed with the Commission at least 30 days prior to the pre-construction meeting to confirm compliance of conditions in this permit. The Permittee shall file with the Commission, any biological surveys or studies conducted on this project, including those not required under this permit.

7.3 Shadow Flicker

Upon request, the Permittee shall provide any documentation on its efforts to avoid, minimize and mitigate shadow flicker exposure. The results of any shadow flicker modeling shall be filed with the Commission 60 days after completion of the modeling.

7.4 Wake Loss Studies

As part of the annual report on project energy production required under Section 10.8 of the permit the Permittee shall file with the Commission any operational wake loss studies conducted on this project during the calendar year preceding the report.

7.5 Noise Studies

The permittees have submitted a pre- and post- construction noise study.

7.6 Avian and Bat Protection

7.6.1 Avian and Bat Protection Plan

The Permittees shall file within 6 months of the issuance of this amended site permit an updated ABPP that addresses steps to be taken to identify and mitigate impacts to avian and bat species during the operation phase of the project. The updated ABPP shall be approved by the Executive Secretary.

The ABPP shall also include formal and incidental post-construction fatality monitoring, training, wildlife handling, documentation (e.g., photographs), and reporting protocols for each phase of the project.

The Permittee shall, by the 15th of March following each complete or partial calendar year of operation, file with the Commission an annual report detailing findings of its annual audit of ABPP practices. The annual report shall include summarized and raw data of bird and bat fatalities and injuries and shall include bird and bat fatality estimates for the project using agreed upon estimators from the prior calendar year. The annual report shall also identify any deficiencies or recommended changes in the operation of the project or in the ABPP to reduce avian and bat fatalities and shall provide a schedule for implementing the corrective or modified actions. The Permittee shall provide a copy of the report to the Minnesota Department of Natural Resources and to the U.S. Fish and Wildlife Service at the time of filing with the Commission.

7.6.2 Quarterly Incident Reports

The Permittee shall submit quarterly avian and bat reports to the Commission commencing upon approval of the ABPP by the Commission Executive Secretary. Quarterly reports are due by the 15th of January, April, July, and October commencing the day following commercial operation and terminating upon the expiration of this permit. Each report shall identify any dead or injured avian and bat species, location of find by turbine number, and date of find for the reporting

period in accordance with the reporting protocols. If a dead or injured avian or bat species is found, the report shall describe the potential cause of the occurrence (if known) and the steps taken to address future occurrences. The Permittee shall provide a copy of the report to the Minnesota Department of Natural Resources and to the U.S. Fish and Wildlife Service at the time of filing with the Commission.

7.6.3 Immediate Incident Reports

The Permittee shall notify the Commission, U.S. Fish and Wildlife Service, and the Minnesota Department of Natural Resources within 24 hours of the discovery of any of the following:

(a) five or more dead or injured birds or bats within a five day reporting period;

(b) one or more dead or injured state threatened, endangered, or species of special concern;

(c) one or more dead or injured federally listed species, including species proposed for listing; or

(d) one or more dead or injured bald or golden eagle(s).

In the event that one of the four discoveries listed above should be made, the Permittee must file with the Commission within seven days, a compliance report identifying the details of what was discovered, the turbine where the discovery was made, a detailed log of agencies and individuals contacted, and current plans being undertaken to address the issue.

8.1 AUTHORITY TO CONSTRUCT LWECS

8.2 Wind Rights

Upon request by the Commission, the Permittee shall demonstrate that it has obtained the wind rights and any other rights necessary to construct and operate the project within the boundaries authorized by this permit. Nothing in this permit shall be construed to preclude any other person from seeking a permit to construct a wind energy conversion system in any area within the boundaries of the project covered by this permit if the Permittee does not hold exclusive wind rights for such areas.

8.3 Power Purchase Agreement

If the Permittees no longer have a contract for the sale of electricity or some other enforceable mechanism for the sale of electricity from the project, the Permittee shall file a notice to the

Commission within 90 days of the termination of that contract. The Permittee must advise the Commission of the reason for not having such commitment. In such event, the Commission may determine whether this permit should be amended or revoked. No amendment or revocation of this permit may be undertaken except in accordance with Minn. R. 7854.1300.

9.0 COMPLAINT PROCEDURES

Within 60 days of issuance of this amended site permit, the Permittee shall submit to the Commission updated procedures that will be used to receive and respond to complaints. The procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this permit (Attachment A).

10.1 COMPLIANCE REQUIREMENTS

Failure to timely and properly make compliance filings required by this permit is a failure to comply with the conditions of this permit. Compliance filings must be electronically filed with the Commission.

10.2 Status Reports

The Permittee shall file notification with the Commission regarding any site construction activities.

10.3 As-Builts

The Permittee has submitted copies of final as-built plans and specifications developed during the project.

10.4 GPS Data

Within 6 months of the date of the issued amended site permit, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the large wind energy generating system.

10.5 Project Energy Production

The Permittee shall, by July 15 following each complete or partial year of project operation, file a report with the Commission on the monthly energy production of the project including:

(a) the installed nameplate capacity of the permitted project;

(b) the total monthly energy generated by the project in MW hours;

(c) the monthly capacity factor of the project;

(d) yearly energy production and capacity factor for the project;

(e) the operational status of the project and any major outages, major repairs, or turbine performance improvements occurring in the previous year; and

(f) any other information reasonably requested by the Commission.

This information shall be considered public and must be filed electronically.

10.6 Wind Resource Use

The Permittee shall, file annually with the Commission, following each complete or partial calendar year of operation the average monthly and average annual wind speed collected at one permanent meteorological tower during the preceding year or partial year of operation. This information shall be considered public and must be filed electronically.

10.7 Emergency Response

The Permittee shall prepare an Emergency Response Plan in consultation with the emergency responders having jurisdiction over the facility within 6 months of the issuance of this amended site permit. The Permittee shall submit a copy of the plan, along with any comments from emergency responders, to the Commission. The Permittee shall provide as a compliance filing confirmation that the Emergency Response Plan was provided to the emergency responders and Public Safety Answering Points (PSAP) with jurisdiction over the facility prior to commencement of construction. The Permittee shall obtain and register the facility address or other location indicators acceptable to the emergency responders and PSAP having jurisdiction over the facility.

10.8 Extraordinary Events

Within 24 hours of discovery of an occurrence, the Permittee shall notify the Commission of any extraordinary event. Extraordinary events include but shall not be limited to: fires, tower collapse, thrown blade, acts of sabotage, collector or feeder line failure, and injured worker or private person. The Permittee shall, within 30 days of the occurrence, file a report with the

Commission describing the cause of the occurrence and the steps taken to avoid future occurrences.

11.1 DECOMMISSIONING, RESTORATION, AND ABANDONMENT

11.2 Decommissioning Plan

The Permittee shall within 6 months following the issuance of this amended site permit submit an updateddecommissioning plan to the Commission and provide updates to the plan every five years thereafter. The plan shall provide information identifying all surety and financial securities established for decommissioning and site restoration of the project in accordance with the requirements of Minn. R. 7854.0500, subp. 13. The decommissioning plan shall provide an itemized breakdown of costs of decommissioning all project components, which shall include labor and equipment. The plan shall identify cost estimates for the removal of turbines, turbine foundations, underground collection cables, access roads, crane pads, substations, and other project components. The plan may also include anticipated costs for the replacement of turbines or repowering the project by upgrading equipment.

The Permittee shall also submit the decommissioning plan to the local unit of government having direct zoning authority over the area in which the project is located. The Permittee shall ensure that it carries out its obligations to provide for the resources necessary to fulfill its requirements to properly decommission the project at the appropriate time. The Commission may at any time request the Permittee to file a report with the Commission describing how the Permittee is fulfilling this obligation.

11.3 Site Restoration

Upon expiration of this permit, or upon earlier termination of operation of the project, or any turbine within the project, the Permittee shall have the obligation to dismantle and remove from the site all towers, turbine generators, transformers, overhead and underground cables and lines, foundations, buildings, and ancillary equipment to a depth of four feet. Any agreement for removal to a lesser depth or no removal shall be recorded with the county and shall show the locations of all such foundations. To the extent feasible, the Permittee shall restore and reclaim the site to its pre-project topography and topsoil quality. All access roads shall be removed unless written approval is given by the affected landowner requesting that one or more roads, or portions thereof, be retained. All such agreements between the Permittee and the affected landowner shall be submitted to the Commission prior to completion of restoration activities. The site shall be restored in accordance with the requirements of this condition within 18 months of termination.

11.4 Abandoned Turbines

The Permittee shall advise the Commission of any turbines that are abandoned prior to termination of operation of the project. The project, or any turbine within the project, shall be considered abandoned after one year without energy production and the land restored pursuant to Section 11.2 unless a plan is developed and submitted to the Commission outlining the steps and schedule for returning the project, or any turbine within the project, to service.

12.1 COMMISSION AUTHORITY AFTER PERMIT ISSUANCE

12.2 Final Boundaries

After completion of construction, the Commission shall determine the need to adjust the final boundaries of the site required for this project in accordance with Minn. R. 7854.1300, subp. 1.

12.3 Expansion of Site Boundaries

No expansion of the site boundaries described in this permit shall be authorized without the approval of the Commission. The Permittee may submit to the Commission a request for a change in the boundaries of the site for the project. The Commission will respond to the requested change in accordance with applicable statutes and rules.

12.4 Periodic Review

The Commission shall initiate a review of this permit and the applicable conditions at least once every five years. The purpose of the periodic review is to allow the Commission, the Permittee, and other interested persons an opportunity to consider modifications in the conditions of this permit. No modification may be made except in accordance with applicable statutes and rules.

12.5 Modification of Conditions

After notice and opportunity for hearing, this permit may be modified or amended for cause, including but not limited to the following:

(a) violation of any condition in this permit;

(b) endangerment of human health or the environment by operation of the project; or

(c) existence of other grounds established by rule.

12.6 More Stringent Rules

The Commission's issuance of this permit does not prevent the future adoption by the Commission of rules or orders more stringent than those now in existence and does not prevent the enforcement of these more stringent rules and orders against the Permittee.

12.7 Right of Entry

Upon reasonable notice, presentation of credentials, and at all times in compliance with the Permittee's site safety standards, the Permittee shall allow representatives of the Commission to perform the following:

(a) to enter upon the facilities easement of the site property for the purpose of obtaining information, examining records, and conducting surveys or investigations;

(b) to bring such equipment upon the facilities easement of the property as is necessary to conduct such surveys and investigations;

(c) to sample and monitor upon the facilities easement of the property; and

(d) to examine and copy any documents pertaining to compliance with the conditions of this permit.

12.8 Proprietary Information

Certain information required to be filed with the Commission under this permit may constitute trade secret information or other type of proprietary information under the Data Practices Act or other law. The Permittee must satisfy requirements of applicable law to obtain the protection afforded by the law.

13.0 PERMIT AMENDMENT

This permit may be amended at any time by the Commission in accordance with Minn. R. 7854.1300, subp. 2. Any person may request an amendment of the conditions of this permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required.

14.1 TRANSFER OF PERMIT

The Permittee may request at any time that the Commission transfer this permit to another person or entity. The Permittee shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer. The person to whom the permit is to be transferred shall provide the Commission with such information as the Commission shall require to determine whether the new Permittee can comply with the conditions of the permit. The Commission may authorize transfer of the permit after affording the Permittee, the new Permittee, and interested persons such process as is required. The Commission may impose additional conditions on any new permittee as part of the approval of the transfer.

Within 20 days after the date of the notice provided in Section 10.5, the Permittee shall file a notice describing its ownership structure, identifying, as applicable:

(a) the owner(s) of the financial and governance interests of the Permittee;

(b) the owner(s) of the majority financial and governance interests of the Permittee's owners; and

(c) the Permittee's ultimate parent entity (meaning the entity which is not controlled by any other entity).

The Permittee shall immediately notify the Commission of:

(a) a change in owner(s) of the majority* financial or governance interests in the Permittee;

(b) a change in owner(s) of the majority* financial or governance interests of the Permittee's owners; or

(c) a sale which changes the parent entity of the Permittee.

**When there are only co-equal 50/50 percent interests, any change shall be considered a change in majority interest.*

15.1 REVOCATION OR SUSPENSION OF PERMIT

The Commission may take action to suspend or revoke this permit upon the grounds that:

(a) a false statement was knowingly made in the application or in accompanying statements or studies required of the Permittee, and a true statement would have warranted a change in the Commission's findings;

(b) there has been a failure to comply with material conditions of this permit, or there has been a failure to maintain health and safety standards;

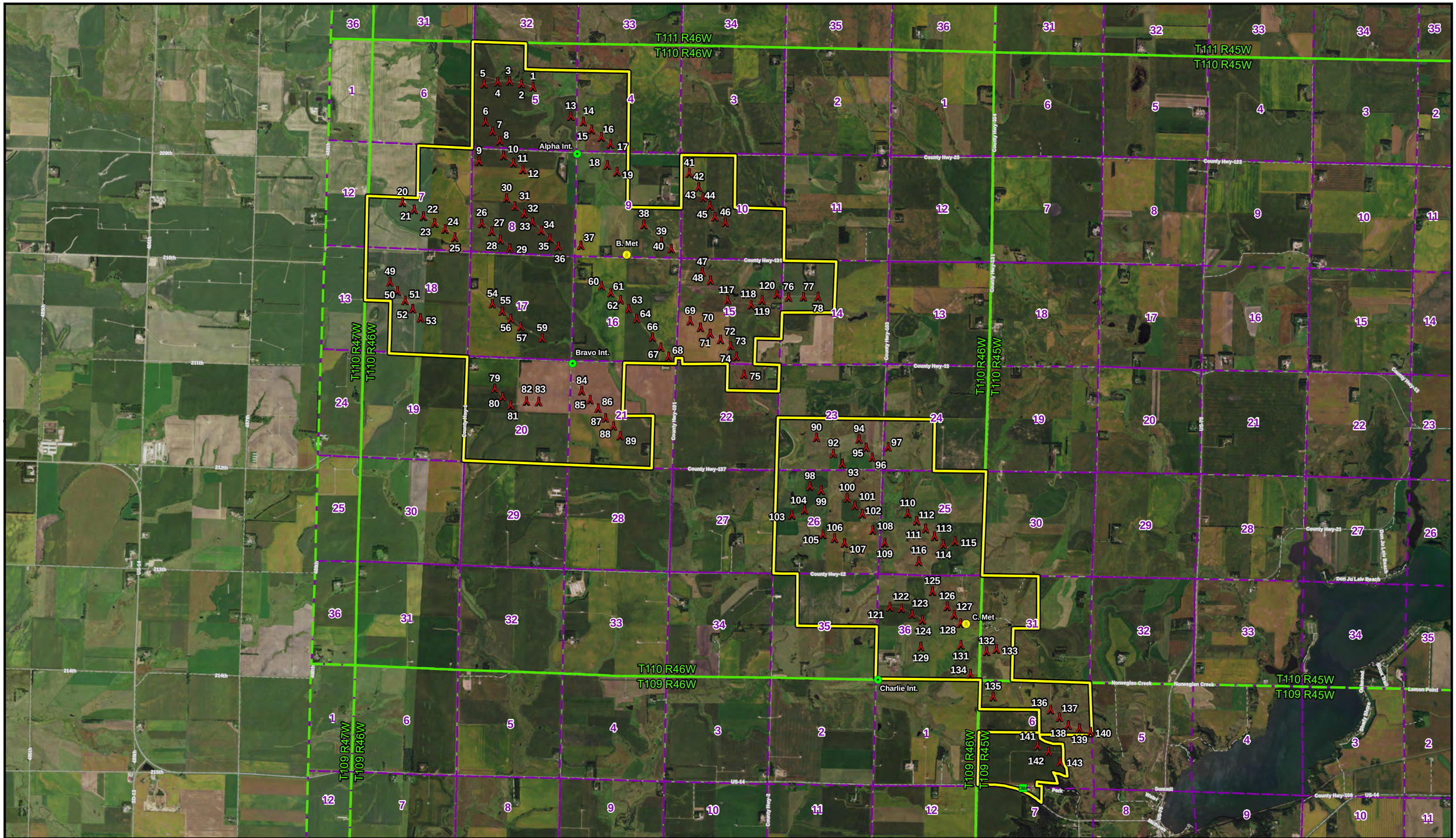
(c) there has been a material violation of a provision of an applicable statute, rule, or an order of the Commission; or

(d) the Permittee has filed a petition with the Commission requesting that the permit be revoked or terminated.

In the event the Commission determines that it is appropriate to consider revocation or suspension of this permit, the Commission shall proceed in accordance with the requirements of Minn. R. 7854.1300 to determine the appropriate action. Upon a finding of any of the above, the Commission may require the Permittee to undertake corrective measures in lieu of having this permit suspended or revoked.

16.0 EXPIRATION DATE

This permit shall expire on November 1, 2039.



LEGEND

- Project Boundary
- Section Line
- Township and Range Line
- Streets
- Wind Turbine
- Met Tower
- Substation
- O&M Building

REFERENCE

0 0.5 1 MILES

0 0.5 1 KILOMETERS

N

SK MB ON ND MN MI SD WI MI IA

LAKE BENTON WIND FARM
Project Overview

LOCATION:	Lincoln County, Minnesota
CLIENT:	ALLETE Clean Energy
PROJ. NO.:	96908
CREATED:	09/27/2017

BURNS McDONNELL
www.burnsmcd.com

Path: Z:\Clients\BTS\AlleteClean\E\96908_GenSupport\2017\Studies\Geospatial\DataFiles\ArcDocs\LakeBentonOverview.mxd • Coordinate System: NAD 1983 StatePlane Minnesota Central FIPS 2202 Feet • Units: Foot US

resourceful. naturally.
engineering and environmental consultants

BARR

Memorandum

To: Lake Benton Power Partners, LLC
From: Andrew Skoglund
Subject: Noise Analysis Summary
Date: November 9, 2017
Project: 23411005.00
c: Rachael Shetka, Dan Flo, Nick Nelson

Lake Benton Power Partners, LLC retained Barr Engineering to assess projected noise levels generated by the refurbished units and compare levels from existing units. Initial intentions were to model the noise impacts of the existing and refurbished units for comparison. However, the original manufacturer is no longer in business and noise performance specifications are no longer available. Instead, literature on the effects of rotor speed and size were consulted to provide a comparative assessment of levels. This memorandum summarizes the results of that analysis.

Calculation Method

Subsequent to the initial review of available monitoring and modeling data for the facility, no noise level inputs were found. The original manufacturer is no longer in business. As there is no source for noise performance data suitable for modeling, an alternative approach was developed.

For most modern wind turbines, the dominant noise source is aerodynamic noise from the blades. As part of the refurbishment the units will be updated to 50 meter rotors from the original 48 meters. As part of this increased diameter, the rotor target RPM will be slowed slightly and will result in a slightly lower overall rotor tip speed. As the bulk of rotor noise is generated near the rotor tips and is primarily a factor of tip speed, the slight reduction in tip speed is projected to yield a very minor decrease in noise levels from the updated units. A screening calculation method was used to calculate the approximate sound power level of an individual turbine, for both turbine rotor diameters. Comparative noise levels were calculated based on the methods described in Wagner 1996[1]:

$$L_{WA} = 50 \log_{10} (V_{tip}) + 10 \log_{10}(D) - 4$$

Where:

L_{WA} = Source sound power level

[1] Wagner, Siegfried et al (1996). *Wind Turbine Noise*. Berlin. Springer Eqn. 5.3

V_{tip} = Tip speed at rotor blade (m/s) = π * D * RPM / 60

D = Rotor diameter

For a 48 meter rotor, and RPM of 34.44, calculated L_{WA} is 109.7 dBA

For a 50 meter rotor, and RPM of 32.3, calculated L_{WA} is 109.3 dBA.

Given the very minor overall projected decrease in source sound power levels, no significant change to the noise impacts of the facility is expected, and the compliant post-construction monitoring of 1998 is expected to remain a reasonable assessment of compliance from the facility. Overall background noise in the region may have changed somewhat over the years, but the impact of the turbines themselves is not expected to deviate significantly from the earlier post-construction monitoring.

Impact Summary

Noise standards in Minnesota are represented by the percentage of the hour a given level is exceeded, expressed as L_{NN}, where NN is the % of the hour in question. According to Minnesota noise regulations, the Daytime noise levels at a residential receptor may not exceed 60 dBA for more than 30 minutes (50% of the time, L_{50}) in any given daytime hour nor exceed 65 dBA for more than six minutes (10% of the time, L_{10}) in a given daytime hour. Daytime for the purposes of the regulation is defined as the hours between 7:00 am to 10:00 pm. Nighttime comprises the remaining hours (10:00pm to 7:00am). The Minnesota noise standards are summarized in Table 2.

Table 1 Minnesota Noise Standards

Receiver Noise Area Classification	Daytime (dBA)		Nighttime (dBA)	
	L_{50}	L_{10}	L_{50}	L_{10}
1 (Residential)	60	65	50	55
2 (Commercial)	65	70	65	70
3 (Industrial)	75	80	75	80

Discussion in the July 1998 Post-construction monitoring report[2] indicated that levels both monitored and modeled were below the state standards, with observed levels several dBA below the modeled levels. The noise limit mentioned in the 1998 post-construction report is 50 dBA (L_{50}) with 15 mph turbine level winds. This is consistent with the state residential nighttime L_{50} threshold of 50 dBA. It is assumed that the post-construction monitoring provides a representative selection of the nearby receptors. Given the

[2] Walker, Bruce (July 31, 1998). *Lake Benton NSP Phase II Wind Development – Acoustical Measurement and Analysis Summary*. Westlake, CA: Hersh Acoustical Engineering, Inc.

pairing of increased rotor diameter and reduced RPM yields no significant change in noise level, the overall impact to noise levels from those originally modeled and permitted is expected to be minimal. Since the state noise regulation (MN Rules 7030) has not changed since the original modeling effort, it is assumed that unchanged impacts from the original analysis will yield compliant levels in the present as well.

In summary, the proposed refurbishment of the units is not expected to significantly change the noise impacts of the facility. The reduced RPM associated with the increased rotor diameter is expected to offset any potential noise increase from the increased rotor diameter. Based on the literature calculations, no significant change in noise levels is expected. No additional modeling or monitoring is proposed to demonstrate ongoing compliance as part of the refurbishment.