



85 7th Place East, Suite 500, St. Paul, MN 55101-2198
main: 651.296.4026 tty: 651.296.2860 fax: 651.297.7891
www.commerce.state.mn.us

February 25, 2010

Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
127 7th Place East, Suite 350
St. Paul, MN 55101-2147

**RE: Comments and Recommendations of Office of Energy Security
Energy Facility Permitting Staff
Docket No. IP-6829/WS-09-1239**

Dear Dr. Haar:

Attached are the Comments and Recommendations of Office of Energy Security Energy Facility Permitting Staff in the following matter:

In the Matter of the Application of Lakefield Wind Project, LLC for a Large Wind Energy Conversion System (LWECS) Site Permit for the 205.5 MW Lakefield Wind Project Wind Project in Jackson County.

The OES EFP staff is providing you with:

- A. Comments and Recommendations
- B. Proposed Draft Site Permit

OES EFP staff recommends issuance of a draft site permit for the Lakefield Wind Project Project. Staff is available to answer any questions the Commission may have.

Sincerely,

/s/ LARRY B. HARTMAN
OES EFP Staff

LBH/sm
Attachment



BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

**COMMENTS AND RECOMMENDATIONS OF THE
MINNESOTA OFFICE OF ENERGY SECURITY
ENERGY FACILITY PERMITTING STAFF**

DOCKET No. IP-6829/WS-09-1239

Meeting Date: March 4, 2010 Agenda Item # _____

Company: **Lakefield Wind Project, LLC, (a subsidiary of enXco Development Corporation (enXco; eDC))**

Docket No. **IP-6829/WS-09-1239
In the Matter of the Application of Lakefield Wind, LLC, for a Large Wind Energy Conversion System (LWECS) Site Permit for the 205.5 MW Lakefield Wind Project in Jackson County.**

Issue(s): **Should the Public Utilities Commission (Commission) issue a draft site permit for public comment?**

OES Staff: **Larry B. Hartman651-296-5089**

Relevant Documents

Site Permit Application.....November 4, 2009
DNR Comment Letter and Attachments..... February 17, 2010
Ecological Risk Assessment February 19, 2010

The enclosed materials are the work papers of the Office of Energy Security (OES) Energy Facility Permitting Staff (EFP). They are intended for use by the Public Utilities Commission and are based on information already in the record unless otherwise noted.

This document can be made available in alternative formats, i.e., large print or audio tape by calling (651) 201-2202 (Voice) or 1-800-627-3529 (TTY relay service).

Document Attached

1. Proposed Lakefield Site Map
2. Lakefield Wind Project Easement/Public Lands/Constraint Map
3. DNR Proposed Exclusion Area Air Photo
4. Proposed Draft Site Permit

See eDocket filings (09-1239) at <https://www.edockets.state.mn.us/EFiling/search.jsp>, or the Commission website at: <http://energyfacilities.puc.state.mn.us/Docket.html?Id=25684> for project related documents.

Statement of the Issues

Should the Commission make a preliminary determination to issue a draft large wind energy conversion system (LWECS) site permit for distribution and public comment?

Introduction and Background

Lakefield Wind Project, LLC, submitted a site permit application to construct the proposed 205.5 megawatt (MW) Lakefield Wind Project in Jackson County. The application was filed on November 4, 2009, and accepted by the Commission on December 21, 2009.

Project Location

The proposed Lakefield Wind Project will be located in east-central Jackson County on agricultural land in Des Moines, Hunter, Belmont and Heron Lake townships. The project area is located several miles west of the city of Jackson and just to the east, north and south of the city of Lakefield. The original project area, approximately 32,445 acres in size, included lands primarily north of I-90, with a smaller portion on the south side of I-90, as shown on the accompanying map. The revised Lakefield Wind site boundary not contains approximately 28,622 acres. The east side of the site permit boundary was pulled in to eliminate conflicts with the Jackson Municipal Airport. See Attachment 1 in the Commissioner's packet. Lakefield Wind currently has wind rights on over approximately 19,780 acres of private lands within the 28,622 acre Project site boundary. See Attachment 2 in the Commissioner's packet. Assuming, representative buffer setbacks based on rotor diameters (RDs) and distances of 1,000 feet from homes, and other setback requirements, the wind easements under Lakefield Wind's control should be sufficiently large enough to provide Lakefield Wind with some flexibility in the micro-siting process.

Project Description

The Project for which a permit is being requested includes the following associated facilities:

1. A wind turbine layout consisting of up to 137 General Electric 1.5 MW wind turbine generators mounted on 80 meter (262.5 foot) towers, with a rotor diameter of 77 meters (252.6 feet);
2. Gravel access roads;

3. Electrical collection system, project substation and permanent meteorological towers; and
4. Operations and maintenance building located next to the project substation.

The Applicant's stated goal is to complete the construction of the Project and achieve commercial operation prior to December 31, 2010.

Regulatory Process and Procedures

A site permit from the Commission is required to construct a Large Wind Energy Conversion System, which is any combination of wind turbines and associated facilities with the capacity to generate five megawatts or more of electricity (Minn. Stat. 216F). This requirement became law in 1995. The rules to implement the permitting requirement for LWECS are now in Minnesota Rules Chapter 7854.

Certificate of Need

On June 22, 2009, Lakefield Wind Project, LLC, entered into a 20-year Power Purchase Agreement) with Indianapolis Power & Light Company.

A Certificate of Need (CN) is required for the Project because it is a 205.5 MW Large Wind Energy Conversion System (LWECS) and a "large energy facility" as defined by Minn. Stat. 216B.2421, subd. 2 (1). The Applicant applied for a CN from the Commission (September 2, 2009) prior to filing its site permit application. See Docket No. 6829/CN-09-1046.

On December 3, 2009, a Commission Order accepted Lakefield's CN application, provided for use of the informal review process to develop the CN record, using comment and reply, and addressed exemption requests and a variance to the 45-day timing requirement in Minn. Rules, part 7849.0200, subp. 6.

As part of the CN process, public notices are issued and OES EFP conducts a public meeting and prepares an Environmental Report evaluating the human and environmental impacts of the proposed project. A public hearing is also held for the CN proceeding.

Public Comments

An OES notice of site permit application acceptance was issued on December 28, 2009. The applicant distributed the site permit application and notice of application acceptance to local, state and federal governmental agencies and to landowners. Public comments on information in the application and issues to be considered in development of a draft site permit were accepted through January 27, 2010. OES EFP staff received one comment letter and a report titled "Ecological Risk Assessment Rare Species, Birds, Bats, Wetlands and Managed Lands." The Ecological Risk Assessment (ERA) and comment letter received are discussed and reviewed under the heading: **OES EFP Staff Analysis and Comments.**

Preliminary Determination on Draft Site Permit

If the preliminary determination is to issue a permit, the Commission shall prepare a draft site permit for the project. However, issuing a draft site permit does not authorize a person to construct a LWECS. The Commission may change, amend or modify the draft site permit in any respect before final issuance or may deny the site permit at a later date.

Public Participation Process

If the Commission makes a preliminary determination that a draft site permit may be issued, the OES EFP staff will implement the public participation process identified in Minnesota Rule 7854.0900. The public will be notified that a draft site permit has been issued, a public comment period will be established, and a public information meeting will be held near the project location. OES EFP staff will work with the public, local governmental units, state agencies and the applicant to identify issues, impacts and potential mitigation measures prior to bringing this matter back to the Commission for a final permit decision upon conclusion of both the CN proceeding and conclusion of the LLWECS site permit process.

Minnesota Rule 7854.0900, Subpart 5, provides the opportunity for any person to request that a contested case hearing be held on the proposed LWECS project. The request must be filed within the time period established for submitting draft site permit comments and must include the issues to be addressed in a contested case hearing and the reasons a hearing is required to resolve these issues.

OES EFP Staff Analysis and Comments

As noted above, OES EFP staff received one written comment on the site permit application and proposed Project. The comment letter from the Minnesota Department of Natural Resources (DNR), dated, January 27, 2010, is comprised of a four page letter, two brochures (one on “Working Lands for Wildlife Initiative” and the other on “Important Bird Areas” from the National Audubon Society) and an aerial photo identifying three separate contiguous areas within and outside of the proposed project site boundaries that DNR has recommended treating as exclusion areas for turbine placement (See Relevant Documents and Attachment 3 in the Commissioner’s packet).

While only one comment was received, another document was filed by the Applicant with the DNR and the OES EFP around January 27, 2010, and posted to eDockets (09-1239) on February 23, 2010. This document, titled “Ecological Risk Assessment Rare Species, Birds Bats, Wetland and Managed Lands,” dated October 26, 2009, was prepared by Westwood Professional Services for the Lakefield Wind Project.

It should be noted that when DNR submitted its comment letter, that the Ecological Risk Assessment (ERA) had not been yet made available to DNR and OES EFP staff. EFP staff is not in a position to speak for DNR as to whether review of the ERA would have led them to alter their comments or indicate that the ERA addresses some of their concerns.

Ecological Risk Assessment

The ERA is a five-part report designed to assess the risk that the Lakefield Wind Project could have on: (1) species of federal and state conservation importance, including threatened and endangered species; (2 and 3) birds, bats, their mortality, and their habitats; (4) wetlands regulated by federal, state, and local agencies; and (5) sensitive habitats such as managed areas.

The ERA is based on a desktop study supported by a field review completed between August 11 through 13, 2009. No point counts of avian species, acoustic monitoring of bats, wetland delineations, or native plant community inventories was performed during field review.

The ERA was prepared using the interim guidelines (dated 2003, 2007 and 2009) prepared by the United State Fish and Wildlife Service (USFWS) for wind energy site development. Although the Guidelines are voluntary, the Wind Turbine Guidelines Advisory Committee (WTGAC) has explored legal and financial incentives for their implementation and noted that the Guidelines are “designed to be used by all prospective developers of wind energy projects.” The USFWS and the WTGAC view compliance with the Migratory Bird Treaty Act (MBTA) and the Endangered Species Act as incentives for consistent adherence to the Guidelines. The Guidelines are intended to reduce the risk of liability exposure under federal wildlife laws. ERA, p. 16-17. Westwood used those guidelines and tailored it to the known features of the Lakefield Wind Project where appropriate. See page 15-16 of the ERA for guidelines tailored to the Lakefield Wind Project.

As Westwood noted, the Guidelines outline a sequence of five tiers of activities and studies ranging from pre-construction coordination and studies to post-construction monitoring and mitigation. Westwood indicated that the ERA completes Tiers 1 and 2. The determination of whether Tier 3 (Field Studies) should proceed after Tier 2 (Site Characterization) depends on the answers to five questions (Wind Turbines Guidelines Advisory Committee WTGAC 2009a), the risks to wildlife, and the outcome of coordination with wildlife agencies. Those five questions and the answers with respect to the Lakefield Wind Project (See ERA, p.17-18) lead Westwood to conclude that:

Given the proximity of the project area to the potential migration corridor of the Des Moines Rive and the records of state-listed species in the project area and vicinity, the project marginally meets proposed criteria for wildlife field studies. Habitat studies might possibly be accepted in lieu of wildlife field studies. Field protocols should be negotiated and coordinated with wildlife agencies.

Westwood, in its ERA, indicated that the potential for rare species to occur on the project site is somewhat low, because the predominant land use in the project site is cultivated row crops, primarily corn and soybeans, and forage land. Livestock (hogs, cattle and chickens) are other significant agricultural components. Cultivated cropland accounts for approximately 88 percent of the project area. Grasslands, pasture and hayfields accounts for about 2.6 percent of the land covered in the project areas. Wetlands scattered throughout the project area comprise

approximately 1.5 percent of the project area. Woodlands are limited primarily to farmsteads. Developed lands, which includes roads and farmsteads account for about 6.0 percent of land use within the project area.

In the ERA (p. 17-19), Westwood stated that the “The predominance of intensive cultivation makes the project area an appropriate site for wind energy development from an ecological perspective. Although this factor helps mitigate the need for field surveys, all wind projects have the potential to affect wildlife. Field surveys will be appropriate to assess the ecological integrity of wetlands, grasslands, particularly in proximity to proposed project.”

The ERA notes that the listing for Jackson County includes 13 federal or state threatened or endangered species and 14 species in need of conservation. Of these, four bird species are threatened or endangered and four other birds are special concern species. The other species are vascular plants, mollusks, butterflies, and a spider. Many of the listed rare species are associated with wetlands; some are associated with grasslands or native plants.

As indicated in the ERA, Westwood mapped 260 wetlands in the project area; however, onsite wetlands are mostly streams and jurisdictional ditches. Westwood also commented that “Small isolated wetlands have marginal wetland hydrology and tend to be partially drained” and that the “most highly regulated water resources within the project area include the five DNR Public Waters and the stretch of Public Watercourse located in the southwestern portion of the project area.” ERA. p.1

The ERA also noted that “managed lands and lands in conservation easements can be categorized into exclusion areas, avoidance areas, and permitted areas. These categories have progressively lower levels of restrictions.”

The ERA also includes a review of rare species known to occur in or near the project area, bird and bat species lists, a summary of relevant literature concerning wind power and bird and bat interactions, wetland mapping, a regulatory analysis of wetlands, and a review of managed lands and other sensitive habitats. All of the natural agencies correspondence is included in the ERA.

Ecological Risk Assessment Conclusions and Recommendations

The ERA provided 23 separate conclusions in three categories: For rare species, bats and birds, 12 conclusions were provided; eight were provided for wetlands and three for managed lands. The ERA also made 18 recommendations regarding advancement of the project. EFP has highlighted what it considers to be the more significant conclusions and recommendations.

Rare Species, Birds and Bats

- The most predominant bird groups using the project area, based on county data from the Minnesota Ornithologists’ Union, are songbirds, waterfowl and shorebirds.
- The birds most likely to cause concern from the perspective of habitat impacts or fatality risk are shorebirds and grassland breeding birds.

- The bat species with the highest potential to occur in the project area are relatively common in the state and do not have specific conservation status. The two bat species listed as having conservation priority by the state have a low potential to occur in the project area because the project area lacks their preferred habitat type.
- The risk of direct bird fatality due to collisions with wind turbines and associated infrastructure is estimated to be relatively low, comparable to that found at wind farms in southwestern Minnesota (i.e., approximately 2.86 bird/turbine/year or 4.21 birds/MW/yr).
- The risk of direct fatality to bats is also expected to be relatively low, comparable to fatality rates at other wind farms in agricultural landscapes (0.74 to 2.32 bats/turbine/year).

Recommendations – Rare Species, Birds and Bats

- Evaluate grassland, pasture, and hay field habitat in the project area for natural integrity and native prairie.
- Conduct a field survey that focuses on habitat use patterns by avian species and evaluate the potential regional migration corridor along the Des Moines River.
- Because project characteristics marginally meet proposed criteria for wildlife field studies, Westwood recommends reviewing those criteria in coordination with wildlife agencies to determine the extent to which field surveys of birds and/or bats are actually warranted.
- Determine whether habitat studies will be accepted in lieu of wildlife field studies and negotiate and coordinate filed protocols with wildlife agencies.

Wetlands

- Wetlands identified within the project area during the site visit were observed to be primarily Type 1 and 2 wetlands located on agricultural fields, and most showed signs of partial drainage.
- The most highly regulated water resources within the project area include the five MN DNR Public Waters and the stretch of Public Watercourse located in the southwestern portion of the project area.

Wetlands – Recommendations

- Avoid wetlands wherever practicable.
- Conduct a wetland assessment to determine the highest quality wetlands for avoidance if wetlands appear to be unavoidable.

- Avoid impacts to MN DNR Public Waters, Wetlands and Watercourses, if feasible.

Managed Lands

- Preliminary review indicated that there are few conservation easement lands within and around the project areas.

Managed Lands – Recommendations

- Obtain landowner consent to release CRP enrollment and FSA real estate mortgage encumbrances.
- Follow up with USFS staff regarding mapping of potential USFWS wetland easements lands, which are not likely to occur in the project area.
- Follow up with BWSR staff to obtain current mapping of all RIM easements in the project area.
- Complete the State Park view shed analysis recommended by the DNR.

Department of Natural Resources

The Minnesota Department of Natural Resources (DNR) comments in its January 27, 2009, letter focused on two main topics: exclusion areas and natural resource surveys and studies. DNR proposed exclusion areas comprised of DNR Working Lands Initiative (WLI) target areas within the project study area that have been identified by various conservation groups as important for wildlife, Important Bird Areas (IBA) that the Audubon Society is in the process of nominating in the vicinity of South Heron Lake and grasslands. They also recommended pre and post-construction avian and bat surveys and studies. Other comments addressed the identification of six Wildlife Management Areas (WMA's), which are managed to enhance wildlife habitat and hunting opportunities, a DNR Wildlife Designated Lake (South Heron Lake), grassland habitat, the presence of a calcareous fen, native prairie remnants and Kilen Woods State Park.

Exclusions areas

The DNR recommended that the Site Permit incorporate exclusion areas that would prevent turbine placement within the WLI target areas and the proposed IBA area in order to avoid and potentially mitigate the project's effect to wildlife. The attached map identifies the areas that are recommended for exclusion. These are private property.

DNR commented that these areas have been identified by various state, federal and non-profit organizations as important for wildlife conservation, and notes that several separate programs and agencies have invested in preservation and conservation within this area is an indicator that the area has landscape features that are of high value for wildlife and wildlife habitat. They further comment that these conservation areas should not be considered separately because the wildlife in the area is using the entire landscape for nesting, breeding, foraging, resting, migration, and other important life cycle functions.

Three of the WLI target areas are within the Lakefield LWECS project boundaries. The Audubon Society is in the process of nominating a new Important Bird Area (IBA) in the vicinity of South Heron Lake. An IBA is a site that provides essential habitat for one or more breeding, wintering, and migrating species of bird. DNR suggested that the nomination of this area as an IBA is another indication of the high value habitat that is present in and adjoining the Lakefield LWECS.

DNR further recommended that turbines not be placed in or immediately adjacent to large grassland habitat areas. The concern centers on the risk of mortality to birds and bats and displacement of wildlife from their habitat. They note that grassland habitat that is greater than 40 acres in size has been shown to have an increased diversity of species and provide habitat for area sensitive species. They suggest that consideration also be given to a complex of smaller sized grassland patches that are in close proximity to each other and when combined provide suitable habitat for colonization by grassland birds. Areas in Conservation Reserve Program, Conservation Reserve Enhancement Program, Reinvest In Minnesota (RIM), restored prairie, and other easement program are mentioned.

EFP Response: EFP staff believes that incorporation of exclusive areas into a Draft Site Permit is not appropriate, based on the record to date. Staff offers several comments with regard to DNR's suggested exclusions areas.

The DNR comment letter was the first time EFP was made aware of the WLI and IBA initiatives. These initiatives were not discussed with the Applicant during its pre-application consultation with the agency, or in subsequent correspondence. Therefore, Lakefield Wind based their preliminary layout on the information provided by DNR in a letter dated August 17, 2009 and at an August 25, 2009, meeting with DNR staff. DNR offered recommendations on setbacks in its August 17, 2009, letter and those setbacks (5 Rotor Diameters in all directions, rather than the typical five by three setback) was used by Lakefield Wind in its preliminary layout.

Site Permits to date have not precluded development on private lands beyond that required to meet setback required under Permit Conditions III.C.1-7. Within the revised proposed site there are 204 participating landowners who have granted Lakefield Winds easements on 250 parcels of land within the site. The WLI suggested by DNR for exclusion would affect the location of 30 turbines on 75 parcels owned by approximately 50 landowners. Another 11 turbine locations would be affected on 14 parcels of lands controlled by 11 landowners. The fact that these landowners have granted easements to Lakefield Wind would indicate that landowners have exercised their right to allow the placement of wind turbines and associated facilities on land they own and control the rights to.

The "Working Lands for Wildlife Initiative" brochure provided by DNR indicates that its goals are to provide "Sustainable and increasing wildlife populations and Agronomic enhancement for landowners." The brochure also summarized several guiding principles. Notable among them are: 1. Private lands hold the key to the wildlife population in the Prairie Pothole Region of Minnesota; 2. Food and energy production on agricultural land will be preserved; 3. In some

cases wildlife and agriculture share the same acres, while in others they complement one another; and 4. Private landowners assume a wildlife management role. The WLI in this area would focus primarily on maintaining or establishing grasslands and wetland restoration.

These WLI principles are not necessarily incompatible with wind turbines and associated infrastructure. In some cases, there may be mutual long-term benefits to both landowners and conservation resource programs and initiatives. EFP believes the presence of one should not necessarily preclude the other.

With regard to grassland, grasslands, pastures and hay fields cover up to 160 acres in certain areas within the project site and account for about 2.6 percent of the land cover within the site. Lakefield Wind's site permit application indicates in several areas that all wind farm facilities will be sited on cultivated land. This is done to minimize habitat impacts. The draft permit requires that the permittee comply with all practices set forth in its Site Permit Application (Draft Permit at III. M.1.)

Finally, wind turbines and associated facilities are precluded from being located in WMA's, WP's, Scientific and Natural Areas (Draft Permit at III.C.4). Wind turbines must also be set back at least five rotor diameters on the prevailing wind access and three rotor diameters on the non-prevailing wind access from areas where the permittee does not hold wind rights (Draft Permit at III.C.1). Thus, habitat in and near the WPAs, WMAs will be afforded protection. In addition, where landowners have entered into easement agreements with the State of Minnesota or its agents for conservation or wildlife easements, landowners are precluded from entering into easement agreements with wind developers for those lands covered by the conservation easement agreements.

Natural Resource Surveys and Studies

The DNR comments also addressed what they believe to be the need for additional survey and studies. The DNR recommended that the Biological Survey/Inventory condition of the Site Permit should include identification of sensitive areas in order to identify setback requirements. They also recommended that CRP, RIM, WMA and WPA areas be surveyed for breeding birds as part of the Biological Survey permit condition to determine if any rare or listed species are present or any area sensitive birds.

DNR commented that they consider this site to be high risk for mortality from operational turbines due to the presence of: five WMA's in the project area and others in close proximity, large blocks of CRP and RIM properties, five public waters, South Heron Lake-DNR Wildlife Designated Lake and IBA nominated, and Waterfowl Production Areas. In addition, direct observations have been made of high numbers of numerous avian species in the project area as indicated in the letter provided by the DNR dated August 17, 2009. They state that the potential for mortality is exacerbated by the proposed turbine locations surrounding the WMAs and being located in the natural flight paths the species use to satisfy their life requirements and that this project is more problematic than others due to the high concentration of turbines throughout the majority of the project area. They believe that the high concentration of turbines has the potential to alter avian use of this area due to displacement and disruption to normal flight paths to wetlands and fields for feeding.

EFP Response: Again, OES staff would like to point out that DNR's comment letter was sent prior to DNR staff receiving a copy of the ERA for its internal review and that these written comments do not reflect any of the information contained in the ERA. Whether review of this document would have lead DNR to make different comments is unknown.

As Lakefield Wind noted in its application, it applied a 5 RD setback to publically owned lands (federal, state and local) as recommended in DNR's letter dated August 17, 2009, and that its site layout reflected that DNR recommended setback. Attachment 2 in the Commissioner's packet, for illustration purposes, identifies most of the features that DNR commented on in its January 27, 2010, letter and illustrates the locations of WMAs, RIM, CRP, WPAs, as well as the WLI and IBA initiatives. So most, if not all, of these constraints with setbacks are already identified. For accuracy purposes DNR should review this information and identify any additional areas they believe have been excluded.

CRP lands are scattered throughout the project area and cover a quarter of a mile in one location. CRP lands within the project area total approximately 420 acres. There are also several easement programs included within the Reinvest in Minnesota (RIM) program and they are as follows: Conservation Reserve Easement Program (CREP), Reinvest in Minnesota-Wetland Reserve Program (RIM-WRP, and Permanent Wetland Preserve (PRW). The 2009 RIM easement mapping indicates that approximately 290 acres of land in the study area are enrolled in RIM. The ERA noted that these easements are isolated to the northwest corner of the project area and no single RIM easement covers more than 120 acres. (ERA, p. 29).

The EFP staff agrees with DNR's comment that a 2010 breeding bird survey should be performed. The ERA also alluded to this in its conclusions and recommendations that were highlighted earlier under the ERA discussion. EFP recommends that a 2010 breeding bird survey be prepared and submitted into the record of this proceeding prior to the Commission making a determination on final site conditions and a final site permit boundary so that the results can inform those decisions.

The ERA, reviewed above, also suggested several courses of action, including surveys or limited studies before next steps are implemented. For example, on page 17 of the ERA it states "Field surveys will be appropriate to assess the ecological integrity of wetlands and grasslands, particularly in proximity to proposed project infrastructure. "The ERA at p. 18 states: "Based on the predominance of cultivated agricultural fields in the project area, a pre-construction avian survey conducted during the spring or fall migration period would likely be sufficient." The ERA suggested coordinating acceptance of a field survey protocol with the USFWS and the DNR.

EFP believes that both the DNR and the Applicant have identified areas where more information would be helpful; however, there appears to be questions on how to move forward. It is the intention EFP staff to work with the Applicant and DNR too specifically: 1) identify next steps; 2) implementation approaches; 3) protocol approval; and 4) specific parameters with regard to studies and surveys that may be needed to inform the record in this matter.

EFP staff is not aware of any information or studies that contravene the earlier avian and bat studies done on Buffalo Ridge and northern Iowa with respect to wind energy development. Those numbers were provided in the ERA and are summarized above. The DNR comments do not mention, discuss or review fatality numbers associated with bird and bat kills, or draw reference to any other studies. Thus, when DNR comments that “the potential is high” or “the potential for mortality is exacerbated,” there is no context or backdrop for the statements. As noted in the ERA, “The risk of direct fatality due to collisions with wind turbines and associated infrastructure is estimated to be relatively low, comparable to that found at wind farms in southwestern Minnesota (i.e., approximately 2.86 birds/turbine/year or 4.21 birds/MW/yr). The risk of direct fatality to bats is also expected to be relatively low, comparable to fatality rates at other wind farms in agricultural landscapes (0.74 to 2.32 bats/turbine/yr).

With respect to post-construction mortality studies, OES EFP staff does not believe that the record at this time supports monitoring requirements in the draft site permit beyond those typically required for LWECS projects in Minnesota (Draft Permit at III.H.3, “Extraordinary Events”). Results of the studies completed between now and final permit consideration will inform the decision on the need for such studies.

* * * * *

OES EFP staff has used the information in the site permit application, the DNR comment letter, the Environmental Risk Assessment and experience with other LWECS projects as a guide for evaluating whether a draft site permit may be issued for this project or should be denied, pursuant to Minnesota Rules 7854.0800, Subpart 1. OES EFP finds that the available information is sufficient to conclude that it is appropriate to make a preliminary determination that a site permit may be issued for the project. The applicant will continue to provide additional necessary information as requested by the OES EFP staff. EFP staff will also initiate meetings with the Applicant and the DNR to determine the scope of reports and studies to be carried out and introduced into the record of this proceeding in order to assist the Commission in its deliberations as to whether a final site permit may be issued and the conditions it should include to mitigate project impacts on the human and natural environment.

OES EFP staff has prepared a draft site permit identifying the permittee, the proposed LWECS, and proposed permit conditions. The proposed draft site permit is attached to these Comments and Recommendations. Commission approval of the draft site permit will allow for distribution of the draft site permit and initiation of the public review process, which includes a formal public comment period and a hearing for the CN proceeding.

Commission Decision Options

A. Exclusion Areas

1. Take no action on the DNR proposed exclusion areas as shown in attachment 3 at this time.
2. Include the DNR proposed exclusion areas in the Draft Site Permit.
3. Make another decision deemed more appropriate.

B. Natural Resource Surveys and Studies

1. Require the Applicant to work with EFP and DNR staff to identify and conduct studies to assess the need for exclusion areas and avian and bat specific permit conditions.
2. Include the DNR proposed breeding bird survey and 2 year post-construction mortality studies in the Draft Site Permit.
3. Make another decision deemed more appropriate.

C. Preliminary Determination to issue a Draft Site Permit

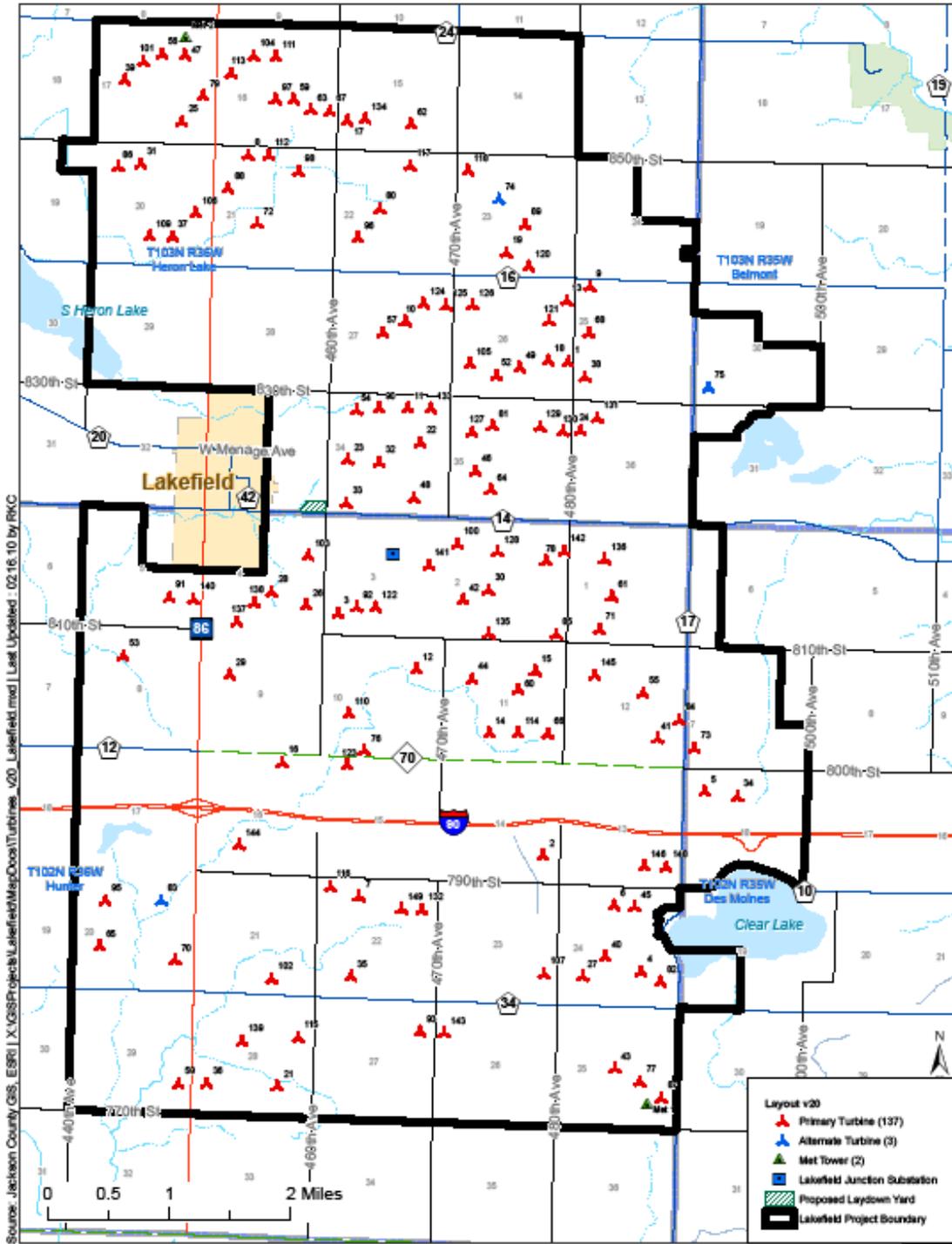
1. Make a preliminary determination that a draft site permit may be issued.
2. Make a preliminary determination that the draft site permit should be denied.
3. Make another decision deemed more appropriate.

D. Approve the proposed Draft Site Permit for distribution and public comment

1. Approve the proposed draft site permit for the Lakefield Wind Project for distribution and public comment. Authorize OES EFP staff to implement the public participation process found in Minnesota Rules 7854.0900.
2. Amend or modify the proposed draft site permit for the Lakefield Wind Project for distribution and public comment. Authorize OES EFP staff to implement the public participation process found in Minnesota Rules 7854.0900.
3. Make another decision deemed more appropriate.

EFP Staff Recommendation: Staff recommends option **A1, B1, C1, and D1.**

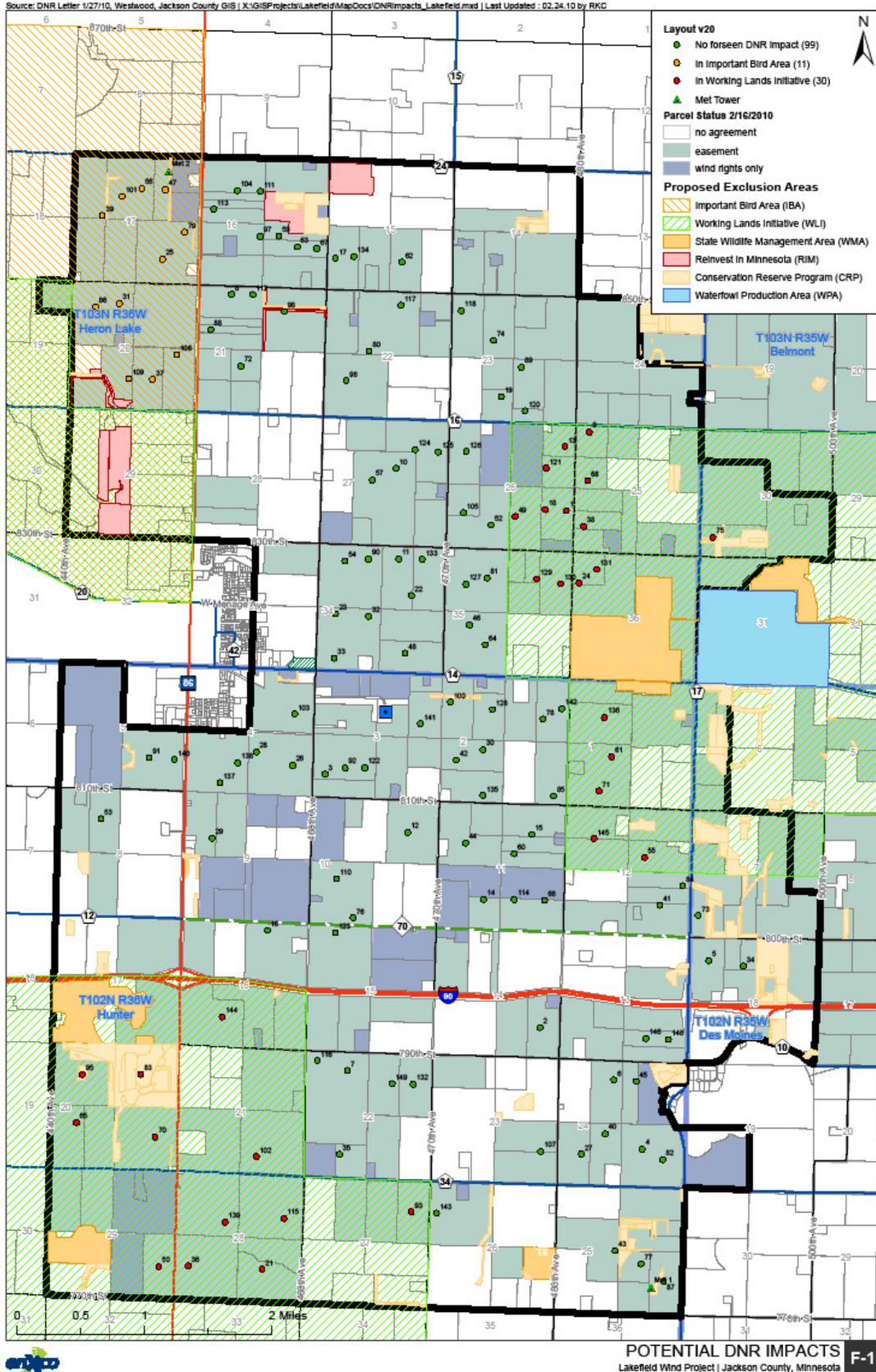
ATTACHMENT 1: SITE PERMIT MAP



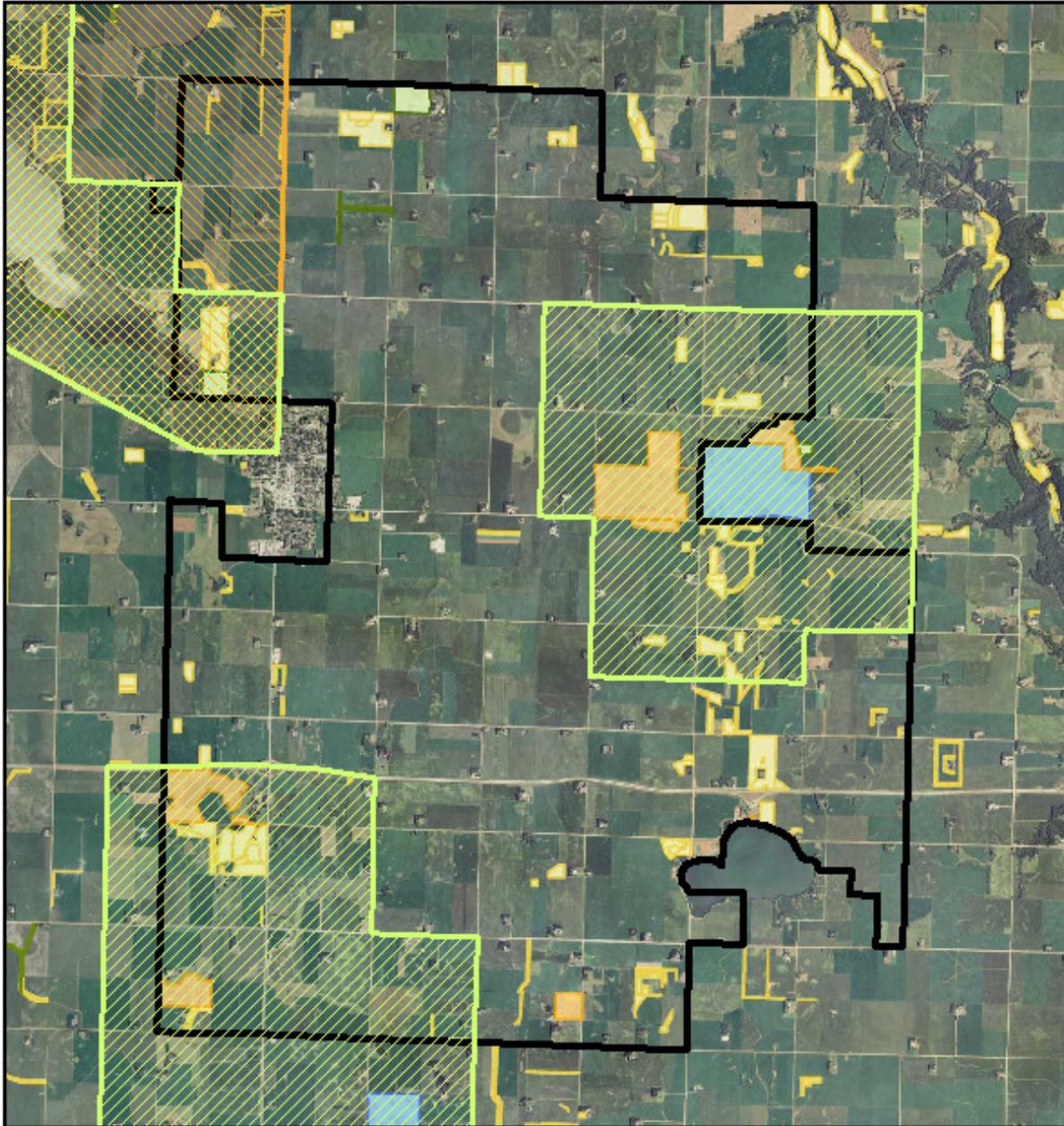
Source: Jackson County GIS, ESRI | X:\GIS\Projects\Lakefield\Misc\Docs\Turbines_v20_Lakefield.mxd | Last Updated: 02.16.10 by RKC



ATTACHMENT 2



ATTACHMENT 3



**Lakefield LWECs
Jackson County**



Copyright 2010, State of Minnesota, DNR



Legend

-  Working Lands Initiative (WLI)
-  Important Bird Area (IBA)
-  Project Boundary
-  State Wildlife Management Area (WMA)
-  Reinvest in Minnesota (RIM)
-  Conservation Reserve Program (CRP)
-  USFWS Waterfowl Production Areas

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

LARGE WIND ENERGY CONVERSION SYSTEM

SITE PERMIT

FOR THE

LAKEFIELD WIND PROJECT

IN

JACKSON COUNTY

ISSUED TO

LAKEFIELD WIND PROJECT, LLC

DOCKET NO. IP-6829/WS-09-1239

In accordance with Minnesota Statutes Section 216F.04, this Site Permit is hereby issued to:

Lakefield Wind Project, LLC

The Permittee is authorized to construct and operate up to a 205.5 Megawatt Large Wind Energy Conversion System on the site identified in this Site Permit and in compliance with the conditions contained in this Permit.

This Permit shall expire on _____.

Approved and adopted this ____ day of _____
BY ORDER OF THE COMMISSION

BURL W. HAAR
Executive Secretary

(S E A L)

Table of Contents

I.	SITE PERMIT	1
II.	PROJECT DESCRIPTION	1
III.	CONDITIONS	1
	A. GENERAL CONSTRUCTION CONDITIONS	1
	1. Site Plan	1
	2. Field Representative	2
	3. Preconstruction Meeting	2
	4. Notice of Permit Conditions	2
	B. MITIGATION MEASURES	2
	1. Site Clearance	2
	2. Topsoil Protection	2
	3. Soil Compaction	2
	4. Livestock Protection	2
	5. Fences	3
	6. Drainage Tiles	3
	7. Equipment Storage	3
	8. Roads	3
	9. Soil Erosion and Sediment Control	4
	10. Cleanup	4
	11. Tree Removal	4
	12. Restoration	5
	13. Hazardous Waste	5
	14. Application of Herbicides	5
	15. Public Safety	5
	16. Fire Protection	5
	17. Tower Identification	5
	C. SETBACKS	6
	1. Wind Access Buffer	6
	2. Residences	6
	3. Roads	6
	4. Wildlife Management Areas	6
	5. Wetlands	6
	6. Native Prairie	6
	7. Sand and Gravel Operations	7
	D. PRECONSTRUCTION SURVEYS	7
	1. Biological Inventory/Survey	7
	2. Archaeological Resources	7
	3. Interference	8

E. SITE LAYOUT RESTRICTIONS	8
1. Wind Turbine Towers	8
2. Meteorological Towers	8
3. Noise	9
4. Federal Aviation Administration	9
5. Turbine Spacing	9
6. Footprint Minimization	9
7. Electrical Cables	9
8. Feeder Lines	10
F. STUDIES	10
1. Wake Loss Studies	10
2. Noise	10
G. DECOMMISSIONING/RESTORATION/ABANDONMENT	10
1. Decommissioning Plan	10
2. Site Restoration	11
3. Abandoned Turbines	11
H. REPORTING	11
1. Project Energy Production	11
2. Wind Resource Use	11
3. Extraordinary Events	12
4. Complaints	12
I. FINAL CONSTRUCTION	12
1. As-Built Plans and Specifications	12
2. Final Boundaries	12
3. Expansion of Site Boundaries	12
J. AUTHORITY TO CONSTRUCT LW ECS	13
1. Wind Rights	13
2. Other Permit Applications	13
3. Preemption of Other Laws	13
4. Power Purchase Agreement	13
K. MISCELLANEOUS	13
1. Periodic Review	13
2. Failure to Commence Construction	14
3. Modification of Conditions	14
4. Revocation or Suspension of the Permit	14
5. Proprietary Information	14
6. Transfer of Permit	15
7. Other Permits	15
8. Site Manager	15
9. Notice to Local Residents	15
10. Right of Entry	15
11. More Stringent Rules	16
12. Permit Compliance Meeting	16

L. EXPIRATION DATE.....	16
M. APPLICATION/PERMIT COMPLIANCE.....	16
1. Application Compliance	16
2. Compliance with Federal and State Agency Permit	16
3. Compliance with County, City or Municipal Permits	16
N. SPECIAL CONDITIONS	17
1. Shadow Flicker	17
ATTACHMENT 1: Site Permit Map	1
ATTACHMENT 2: Complaint and Handling Procedures for Large Wind Energy Conversion Systems	1-3
ATTACHMENT 3: Compliance Filing Procedure for Permitted Energy Facilities	1
ATTACHMENT 4: Permit Compliance Filings	1-2

DRAFT

I. SITE PERMIT

This Site Permit for a Large Wind Energy Conversion System (LWECS) authorizes Lakefield Wind Project, LLC, (hereinafter "Permittee") to construct the Lakefield Wind Project, a 205.5 Megawatt (MW) nameplate capacity LWECS and associated facilities in Jackson County, on a site of approximately 32,445 acres in accordance with the conditions contained in this Permit. The project boundary is shown on the map that is attached hereto as Attachment 1.

II. PROJECT DESCRIPTION

The up to 205.5 MW nameplate capacity LWECS authorized to be constructed in this Permit (Lakefield Wind Project) will be developed and constructed by the Permittee. The Project will consist of up to 137 General Electric 1.5 MW wind turbine generators mounted on 262.5 foot (80 meter) towers having a combined nominal nameplate capacity of approximately 205.5 MW. The rotor diameter is 252.5 feet (77 meters). Associated facilities will include wind turbine access roads, underground collection lines, SCADA wiring, feeder lines, pad mounted turbine transformers, and meteorological towers. Turbines are interconnected by communication and underground electrical power collection facilities within the wind farm that will deliver wind-generated power to the collection substation. Power will ultimately be delivered from the Project substation to the existing Lakefield Junction Substation on the east side of Lakefield.

III. CONDITIONS

The following conditions shall apply to site preparation, construction, cleanup, restoration, operation, maintenance, abandonment, decommissioning and all other phases of the LWECS. The Commission preserves all available remedies for violation of any of these Permit conditions, including revocation or modification of the Permit.

A. GENERAL CONSTRUCTION CONDITIONS

1. SITE PLAN

Prior to commencing construction, the Permittee shall submit to the Commission a site plan for all turbines, roads, electrical equipment, collector and feeder lines and other associated facilities to be constructed and engineering drawings for site preparation, construction of the facilities, and a plan for restoration of the site due to construction. The Permittee shall document compliance with the setbacks and site layout restrictions required by the permit. The Permittee may submit a site plan and engineering drawings for only a portion of the LWECS if the Permittee is prepared to commence construction on certain parts of the Project before completing the site plan and engineering drawings for other parts of the LWECS. In the event that previously unidentified environmental conditions are discovered during construction which by law or pursuant to conditions outlined in this Permit would preclude the use of that site as a turbine site, the Permittee shall have the right to move or relocate turbine sites. The Permittee shall notify the

Commission of any turbines that are to be relocated before the turbine is constructed on the new site and demonstrate compliance with the setbacks and site layout restrictions required by the permit.

2. FIELD REPRESENTATIVE

Prior to the start of construction and continuously throughout construction and site restoration, the Permittee shall designate a field representative responsible for overseeing compliance with the conditions of this Permit. This person (or a designee) shall be accessible by telephone during normal business hours. This person's address, phone number and emergency phone number shall be provided to the Commission, who may make the number available to local residents and officials and other interested persons. The Permittee may change the field representative by notification to the Commission.

3. PRECONSTRUCTION MEETING

Prior to the start of any construction, the Permittee shall conduct a preconstruction meeting with the person designated by the Commission to coordinate field monitoring of construction activities.

4. NOTICE OF PERMIT 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.

B. MITIGATION MEASURES

1. SITE CLEARANCE

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

2. TOPSOIL PROTECTION

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

3. 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.

4. LIVESTOCK PROTECTION

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

5. 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.

6. DRAINAGE TILES

The Permittee shall take into account the location of drainage tiles during project layout and construction. The Permittee shall promptly repair or replace all drainage tiles broken or damaged during all phases of the Project's life unless otherwise negotiated with the affected landowner.

7. EQUIPMENT STORAGE

The Permittee shall not locate temporary equipment staging areas on lands under its control unless negotiated with landowner. Temporary staging areas shall not be located in wetlands or native prairie.

8. ROADS

(a) Public Roads

Prior to commencement of construction, the Permittee shall identify all state, county or township roads that will be used for the LWECS Project and shall notify the Commission and the state, county or township governing body having jurisdiction over the roads to determine if the governmental body needs to inspect the roads prior to use of these roads. Where practical, existing roadways shall be used for all activities associated with the LWECS. 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 LWECS for maintenance and repair of roads that will be subject to extra wear and tear due to transportation of equipment and LWECS components. The Permittee shall notify the Commission of such arrangements upon request of the Commission.

(b) Turbine Access Roads

The Permittee shall construct the smallest number of turbine access roads it can. 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 ways without required permits and approvals from the Minnesota Department of Natural Resources (DNR), United States Fish and Wildlife Services (USFWS), and/or United States Army Corps of Engineers (USACOE). When access roads are constructed across streams and drainage ways, the access roads shall be designed in a manner so runoff from the upper

portions of the watershed can readily flow to the lower portion of the watershed. Access roads shall also be constructed in accordance with all necessary township, county or state road requirements and permits.

(c) 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.

9. SOIL EROSION AND SEDIMENT CONTROL

The Permittee shall develop a Soil Erosion and Sediment Control Plan prior to construction and submit the Plan to the Commission. This Plan may be the same as the Storm Water Pollution Prevention Plan (SWPPP) submitted to the Minnesota Pollution Control Agency (MPCA) as part of the National Pollutant Discharge Elimination System (NPDES) permit application. A goal of the Soil Erosion and Sediment Control Plan is to minimize soil erosion, to revegetate non-cropland and range areas disturbed by construction with wildlife conservation species, and, wherever possible, to plant appropriate native species in cooperation with landowners.

The Soil Erosion and Sediment Control Plan shall address what types of erosion control measures will be implemented during each Project phase, and shall at a minimum identify plans for grading, construction and drainage of roads and turbine pads; necessary soil information; detailed design features to maintain downstream water quality; a comprehensive re-vegetation plan to maintain and ensure adequate erosion control and slope stability and to restore the site after temporary Project activities; and measures to minimize the area of surface disturbance. Other practices shall include containing excavated material, protecting exposed soil, and stabilizing restored material and removal of silt fences or barriers when the area is stabilized. The plan shall identify methods for disposal or storage of excavated material. Erosion and sedimentation control measures shall be installed prior to construction and maintained throughout the Project's life.

10. CLEANUP

The Permittee shall remove all waste and scrap that is the product of construction, operation, restoration and maintenance from the site and properly dispose of it upon completion of each task. Personal litter, bottles, and paper deposited by site personnel shall be removed on a daily basis.

11. TREE REMOVAL

The Permittee shall minimize the removal of trees and the Permittee shall not remove groves of trees or shelter belts without notification to the Commission and the approval of the affected landowner.

12. RESTORATION

The Permittee shall, as soon as practical following construction of each turbine, considering the weather and preferences of the landowner, restore the area affected by any LWECS activities to the condition that existed immediately before construction began, to the extent possible. The time period may be no longer than twelve months after completion of construction of the turbine, unless otherwise negotiated with the landowner. Restoration shall be compatible with the safe operation, maintenance, and inspection of the LWECS.

13. HAZARDOUS WASTE

The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean-up and disposal of hazardous wastes generated during any phase of the Project's life.

14. APPLICATION OF HERBICIDES

The Permittee shall restrict herbicide use to those herbicides and methods of application approved by the Minnesota Department of Agriculture and the U.S. Environmental Protection Agency. Selective foliage or basal application shall be used when practicable. The Permittee shall contact the landowner or his designee to obtain approval for the use of herbicide prior to any application on their property. The landowner may request that there be no application of herbicides on any part of the site within the landowner's property. All herbicides shall be applied in a safe and cautious manner so as to not damage crops, orchards, tree farms, or gardens. The Permittee shall also, at least ten days prior to the application, notify beekeepers with an active apiary within one mile of the proposed application site of the day the company intends to apply herbicide so that precautionary measures may be taken by the beekeeper.

15. PUBLIC SAFETY

The Permittee shall provide educational materials to landowners within the site boundaries and, upon request, to interested persons, about the Project and any restrictions or dangers associated with the LWECS 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 Minnesota Statute 216D.01, Subdivision 11, to Gopher State One Call.

16. FIRE PROTECTION

The Permittee shall prepare a fire protection and medical emergency plan in consultation with the fire department having jurisdiction over the area prior to LWECS construction. The Permittee shall submit a copy of the plan to the Commission upon request. The Permittee shall also register the LWECS with the local governments' emergency 911 services.

17. TOWER IDENTIFICATION

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

C. SETBACKS

1. WIND ACCESS BUFFER

Wind turbine towers shall not be placed less than 5 rotor diameters (RD) on the prevailing wind directions and 3 RD on the non-prevailing wind directions from the perimeter of the lands where the Permittee does not hold the wind rights, without the approval of the Commission.

2. RESIDENCES

Wind turbine towers shall not be located closer than 1000 feet from the nearest residence unless a waiver has been signed by the property owners, or the distance required to comply with the noise standards established by the MPCA at paragraph I.E.3, whichever is greater.

3. ROADS

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

4. WILDLIFE MANAGEMENT AREAS

Wind turbines and associated facilities including foundations, access roads, underground cable, and transformers, shall not be located in Waterfowl Production Areas, State Wildlife Management Areas or Scientific and Natural Areas or in county parks and shall also comply with the setbacks of III.C.1.

5. WETLANDS

Wind turbines and associated facilities including foundations, access roads, underground cable and transformers, shall not be placed in public waters wetlands, as defined in Minnesota Statutes section 103G.005, subp. 15a. However, electric collector or feeder lines may cross or be placed in public waters or public waters wetlands subject to DNR, United States Fish and Wildlife Service (FWS) and/or United States Army Corps of Engineers (USACE) permits and approvals.

6. NATIVE PRAIRIE

The Permittee shall, with the advice of the DNR, Commission and any others selected by the Permittee, prepare a prairie protection and management plan and submit it to the Commission and DNR Commissioner 30 days prior to the start of Project construction. The plan shall address steps to be taken to identify native prairie within the Project area, measures to avoid impacts to native prairie, and measures to mitigate for impacts if unavoidable. Wind turbines and all associated facilities, including foundations, access roads, underground cable and transformers, shall not be placed in native prairie unless addressed in the prairie protection and management plan. Unavoidable impacts to native prairie shall be mitigated by restoration or management of other native prairie areas that are in degraded condition, or by conveyance of conservation easements, or by other means agreed to by the Permittee and Commission.

7. 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 with notice given to the owner of the sand and gravel operation.

D. PRECONSTRUCTION SURVEYS

1. BIOLOGICAL INVENTORY/SURVEY

The Permittee, in consultation with DNR and Commission, shall conduct a pre-construction desktop and field inventory of existing, if any, native prairies, wetlands, streams, CRP lands, publically owned (county, state and federal) conservation lands and any other biologically sensitive areas within the site and assess the presence of state- or federally-listed or threatened species. The results shall be submitted to the Commission and DNR 30 days prior to the preconstruction meeting.

2. ARCHAEOLOGICAL RESOURCES

The Permittee shall work with the State Historic Preservation Office (SHPO) at the Minnesota Historical Society and the State Archaeologist. The Permittee shall carry out a Phase 1 or 1A Archaeology survey for all proposed turbine locations, access roads, junction boxes and other areas of project construction impact to determine whether additional archaeological work is necessary for any part of the proposed Project. The Permittee will contract with a qualified archaeologist to complete such surveys, and will submit the results to the Commission, the SHPO and the State Archaeologist.

The SHPO and the State Archaeologist will make recommendations for the treatment of any significant archaeological sites which are identified. Any issues in the implementation of these recommendations will be resolved by the Commission in consultation with SHPO and the State Archaeologist. In addition, the Permittee shall mark and preserve any previously unrecorded archaeological sites that are found during construction and shall promptly notify the SHPO, the State Archaeologist, and the Commission of such discovery. The Permittee shall not excavate at such locations until so authorized by the Commission in consultation with the SHPO and the State Archaeologist.

If human remains are encountered during construction, the Permittee shall immediately halt construction at that location and promptly notify local law enforcement authorities and the State Archaeologist. Construction at the human remains location shall not proceed until authorized by local law enforcement authorities or the State Archaeologist.

If any federal funding, permit or license is involved or required, the Permittee shall notify the MHS as soon as possible in the planning process to coordinate section 106 (36 C.F.R 800) review.

Prior to construction, 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 any archaeological sites are found during construction, the Permittee shall immediately stop work at the site and shall mark and preserve the site and notify the Commission and the MHS about the discovery. The Commission and the MHS shall have three working days from the time the agency is notified to conduct an inspection of the site if either agency shall choose to do so. On the fourth day after notification, the Permittee may begin work on the site unless the MHS has directed that work shall cease. In such event, work shall not continue until the MHS determines that construction can proceed.

3. INTERFERENCE

Prior to beginning construction, the Permittee shall submit a plan to the Commission for conducting an assessment of television signal reception and microwave signal patterns in the Project area prior to commencement of construction of the Project. The assessment shall be designed to provide data that can be used in the future to determine whether the turbines and associated facilities are the cause of disruption or interference of television reception or microwave patterns in the event residents should complain about such disruption or interference after the turbines are placed in operation. The assessment shall be completed prior to installation of the turbines. The Permittee shall be responsible for alleviating any disruption or interference of these services caused by the turbines or any associated facilities.

The Permittee shall not operate the LWECS and associated facilities so as to cause microwave, television, radio, telecommunications or navigation interference contrary to Federal Communications Commission (FCC) regulations or other law. In the event the LWECS and its associated facilities or its operations cause such interference, the Permittee shall take timely measures necessary to correct the problem.

E. SITE LAYOUT RESTRICTIONS

1. WIND TURBINE TOWERS

Structures for wind turbines shall be self-supporting tubular towers. The towers may be up to 80 meters (262.5 feet) above grade measured at the hub.

2. METEOROLOGICAL TOWERS

Permanent towers for meteorological equipment shall be free standing. Temporary meteorological towers, which are those that will be removed no more than one year after the Project in-service date, may be guyed if the landowner has given written permission and the guys are properly marked with safety shields.

New temporary and 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 lands the Permittee holds the wind or other development rights.

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

3. NOISE

The wind turbine towers shall be placed such that the Permittee shall comply with noise standards established as of the date of this Permit by the Minnesota Pollution Control Agency at all times 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 this condition. 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 PCA 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. FEDERAL AVIATION ADMINISTRATION

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

5. TURBINE SPACING

The turbine towers shall be constructed within the site boundary as shown in Attachment 1. The turbine towers shall be spaced no closer than 3 RD in the non-prevailing wind directions and 5 RD on the prevailing wind directions. If required during final micro siting of the turbine towers to account for topographic conditions, up to 20 percent of the towers may be sited closer than the above spacing but the Permittee shall minimize the need to site the turbine towers closer.

6. 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.

7. ELECTRICAL CABLES

The Permittee shall place electrical lines, known as collectors, and communication cables underground when located on private property. Collectors and cables shall also be placed within or adjacent to the land necessary for turbine access roads unless otherwise negotiated with the affected landowner. This paragraph does not apply to feeder lines.

8. FEEDER LINES

The Permittee shall place overhead or underground electric lines, known as feeders, within public rights-of-way or on private land immediately adjacent to public rights-of-way if a public right-of-way exists, except as necessary to avoid or minimize human, agricultural, or environmental impacts. A change in feeder line locations may be made as long as feeders remain on public rights-of-way and approval has been obtained from the governmental unit responsible for the affected right-of-way. When placing feeders on private property, the Permittee shall place the feeder in accordance with easements negotiated with the affected landowner. In all cases, the Permittee shall avoid routing feeder lines in locations which may interfere with agricultural operations. Notwithstanding any of the requirements in paragraph III.D. to conduct surveys before any construction can commence, the Permittee may begin immediately upon issuance of this permit to construct the feeder lines that will be required as part of this Project. The Permittee shall submit the site plan and engineering drawings required under paragraph III.A.1. for the feeder lines before commencing construction. Any guy wires on the structures for feeder lines shall be marked with safety shields.

The Permittee must fulfill, comply with, and satisfy all Institute of Electrical and Electronics Engineers, Inc. (IEEE) standards applicable to this Project, including but not limited to IEEE 776, IEEE 519, and IEEE 367, provided the telephone service provider(s) have complied with any obligations imposed on it pursuant to these standards. Upon request by the Commission, the Permittee shall report to the Commission on compliance with these standards.

F. STUDIES

1. WAKE LOSS STUDIES

The Permittee shall provide to the Commission with the site plan required by paragraph III.A.1. the preconstruction micro siting analysis leading to the final tower locations and an estimate of total Project wake losses. The Permittee shall provide to the Commission any operational wake loss studies conducted on this Project.

2. NOISE

The Permittee shall submit a proposal to the Commission for the conduct of a noise study. Upon the approval of the Commission, the Permittee shall carryout the study. The study shall be designed to determine the noise levels at different frequencies and at various distances from the turbines at various wind directions and speeds.

G. DECOMMISSIONING/RESTORATION/ABANDONMENT

1. DECOMMISSIONING PLAN

Prior to commercial operation, the Permittee shall submit to the Commission a Decommissioning Plan documenting the manner in which the Permittee anticipates decommissioning the Project in accordance with the requirements of Minnesota Rules part 7854.0500, subp.13. 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.

2. SITE RESTORATION

Upon expiration of this Permit, or upon earlier termination of operation of the LWECS, the Permittee shall have the obligation to dismantle and remove from the site all towers, turbine generators, transformers, overhead and underground cables, foundations, buildings and ancillary equipment to a depth of four feet. A LWECS shall be considered a discontinued use after one year without energy production, unless a plan is developed and submitted to the Commission outlining the steps and schedule for returning the LWECS to service. To the extent possible 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. Any agreement for removal to a lesser depth or for no removal shall be recorded with the county and shall show the locations of all such foundations. 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 after expiration.

3. ABANDONED TURBINES

The Permittee shall advise the Commission of any turbines that are abandoned prior to termination of operation of the LWECS. The Commission may require the Permittee to decommission any abandoned turbine.

H. REPORTING

1. PROJECT ENERGY PRODUCTION

The Permittee shall submit a report no later than February 1st following each complete year of project operation. The report shall include: a) the rated nameplate capacity of the permitted LWECS project; b) the total monthly energy generated by the LWECS in Megawatt Hours; c) the monthly capacity factor; d) yearly energy production and capacity factor; e) the operational status of the Project and any major outages, major repairs, or turbine performance improvements occurring in the previous year; and any other information reasonably requested by the Commission. This information will be considered public and must be submitted electronically.

2. WIND RESOURCE USE

The Permittee shall upon the request of the Commission report to the Commission on the monthly energy production of the Project and the average monthly wind speed collected at one permanent meteorological tower selected by the Commission during the preceding year or partial year of operation.

The provisions of paragraph III.K.5 shall apply to the Commission's review of data provided pursuant to III.H.2.

3. EXTRAORDINARY EVENTS

Within 24 hours 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, collector or feeder line failure, injured LWECS worker or private person, kills of migratory, threatened or endangered species, or discovery of a large number dead birds or bats of any variety on site. In the event of avian mortality the DNR shall also be notified within 24 hours. The Permittee shall, within 30 days of the occurrence, submit a report to the Commission describing the cause of the occurrence and the steps taken to avoid future occurrences.

4. COMPLAINTS

Prior to the start of construction, the Permittee shall submit to the Commission the company's procedures to be used to receive and respond to complaints. The Permittee shall report to the Commission all complaints received concerning any part of the LWECS in accordance with the procedures provided in Attachments 2 and 3 of this Permit.

I. FINAL CONSTRUCTION

1. AS-BUILT PLANS AND SPECIFICATIONS

Within 60 days after completion of construction, the Permittee shall submit to the Commission a copy of the as-built plans and specifications. The Permittee must also submit this data in a geographic information system (GIS) compatible format so that the Commission can place it into the Minnesota Geospatial Information Office's (MnGeo) geographic data clearinghouse located in the Department of Administration.

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. If done, this Permit may be modified, after notice and opportunity for public hearing, to represent the actual site required by the Permittee to operate the Project authorized by this Permit.

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 LWECS. The Commission will respond to the requested change in accordance with applicable statutes and rules.

J. AUTHORITY TO CONSTRUCT LWECS

1. WIND RIGHTS

The Permittee shall advise the Commission of the obtaining of exclusive wind rights within the boundaries of the LWECS authorized by this Permit within 30 days of receiving such wind rights. The Permittee shall submit documentation of such exclusive wind rights if requested by the Commission.

2. OTHER PERMIT APPLICATIONS

Nothing in this Permit shall be construed to preclude any other person from seeking a site permit to construct a large 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.

3. PREEMPTION OF OTHER LAWS

Pursuant to Minnesota Statute 216F.07, this Site Permit shall be the only site approval required for the location 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. Nothing in this Permit shall release the Permittee from any obligation imposed by law that is not superseded or preempted by law.

4. POWER PURCHASE AGREEMENT

This Permit does not authorize construction of the Project until the Permittee has obtained a power purchase agreement or some other enforceable mechanism for sale of the electricity to be generated by the Project. In the event the Permittee does not obtain a power purchase agreement or some other enforceable mechanism for sale of the electricity to be generated by the Project within two years of the issuance of this Permit, the Permittee must advise the PUC of the reason for not having such power purchase agreement or enforceable mechanism. In such event, the PUC may determine whether this Permit should be amended or revoked. No amendment or revocation of this Permit may be undertaken except in accordance with applicable statutes and rules, including Minnesota Statute 216F.05 and Minnesota Rule 7836.1300.

K. MISCELLANEOUS

1. 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 the Permit. No modification may be made except in accordance with applicable statutes and rules.

2. FAILURE TO COMMENCE CONSTRUCTION

If the Permittee has not completed the pre-construction surveys required in paragraph III.D and commenced construction of the LWECS within two years of the issuance of this Permit, the Permittee must advise the COMMISSION of the reason construction has not commenced. In such event, the Commission shall make a determination as to whether this Permit should be amended or revoked. No revocation of this Permit may be undertaken except in accordance with applicable statutes and rules, including Minnesota Statute 216F.05 and Minnesota Rule 7854.1300.

3. 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 facility; or
- (c) Existence of other grounds established by rule.

4. REVOCATION OR SUSPENSION OF THE 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; or
- (c) There has been a material violation of a provision of an applicable statute, rule or an order of the Commission.

In the event the Commission shall determine that it is appropriate to consider revocation or suspension of this Permit, the Commission shall proceed in accordance with the requirements of Minnesota Statute 216F.05 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 the Permit suspended or revoked.

5. PROPRIETARY INFORMATION

Certain information required to be submitted to the Commission under this Permit, including energy production and wake loss data, may constitute trade secret information or other type of proprietary information under the Data Practices Act or other law and is not to be made available

by the Commission. The Permittee must satisfy requirements of applicable law to obtain the protection afforded by the law.

6. TRANSFER OF PERMIT

The Permittee may not transfer this Permit without the approval of the Commission. If the Permittee desires to transfer this Permit, the holder shall advise the Commission in writing of such desire. The Permittee shall provide the Commission with such information about the transfer as the Commission requires to reach a decision. The Commission may impose additional conditions on any new Permittee as part of the approval of the transfer.

7. OTHER PERMITS

The Permittee shall be responsible for acquiring any other federal, state, or local permits or authorizations that may be required to construct and operate a LWECs within the authorized site. The Permittee shall submit a copy of such permits and authorizations to the Commission upon request.

8. SITE MANAGER

The Permittee shall designate a site manager who shall be the contact person for the Commission to contact with questions about the LWECs. The Permittee shall provide the Commission with the name, address, and phone numbers of the site manager prior to placing any turbine into operation. This information shall be maintained current by informing the Commission of any changes, as they become effective.

9. NOTICE TO LOCAL RESIDENTS

The Permittee shall, within ten working days of receipt of this Permit, send a copy of the Permit to the office of the auditor of each county in which the site is located and to the clerk of each city and township within the site boundaries. If applicable, the Permittee shall also, within 10 working days of issuance, send a copy of this Permit to each regional development commission, local fire district, soil and water conservation district, watershed district, and watershed management district office with jurisdiction in the county where the site is located. Within 30 days of issuance of this Permit, the Permittee shall send a copy of the Permit to each affected landowner within the site. In no case shall the affected landowner receive the site permit and complaint procedure less than five days prior to the start of construction on their property.

10. RIGHT OF ENTRY

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

- (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.

11. MORE STRINGENT RULES

The Commission's issuance of this Site 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. PERMIT COMPLIANCE MEETING

Prior to the start of commercial operation, the Permittee shall conduct a permit compliance meeting with the person designated by the Commission to coordinate permit compliance activities.

L. EXPIRATION DATE

This Permit shall expire on DATE [30 years after final permit issuance].

M. APPLICATION/PERMIT COMPLIANCE

1. APPLICATION COMPLIANCE

The Permittee shall comply with those practices set forth in its Site Permit Application, dated November 4, 2009, unless this Permit establishes a different requirement in which case this Permit shall prevail.

2. COMPLIANCE WITH FEDERAL AND STATE AGENCY PERMITS

The Permittee shall comply with all terms and conditions of permits or licenses issued by Federal, State, or Tribal authorities including but not limited to the requirements of the Minnesota Pollution Control Agency (Section 401 Water Quality Certification, SDS Discharge/Construction Storm Water, Site Specific Discharge Approvals); Department of Natural Resources (License to Cross Public Water, State Protected Species Consultation, and Public Water Works); MN State Historic Preservation Office (Section 106 Historic Consultation Act); MnDOT (Utility Access Permit, Highway Access Permit and Oversize and Overweight Permit).

3. COMPLIANCE WITH COUNTY, CITY OR MUNICIPAL PERMITS

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 or are not preempted by Federal or State permits and regulations.

N. SPECIAL CONDITIONS

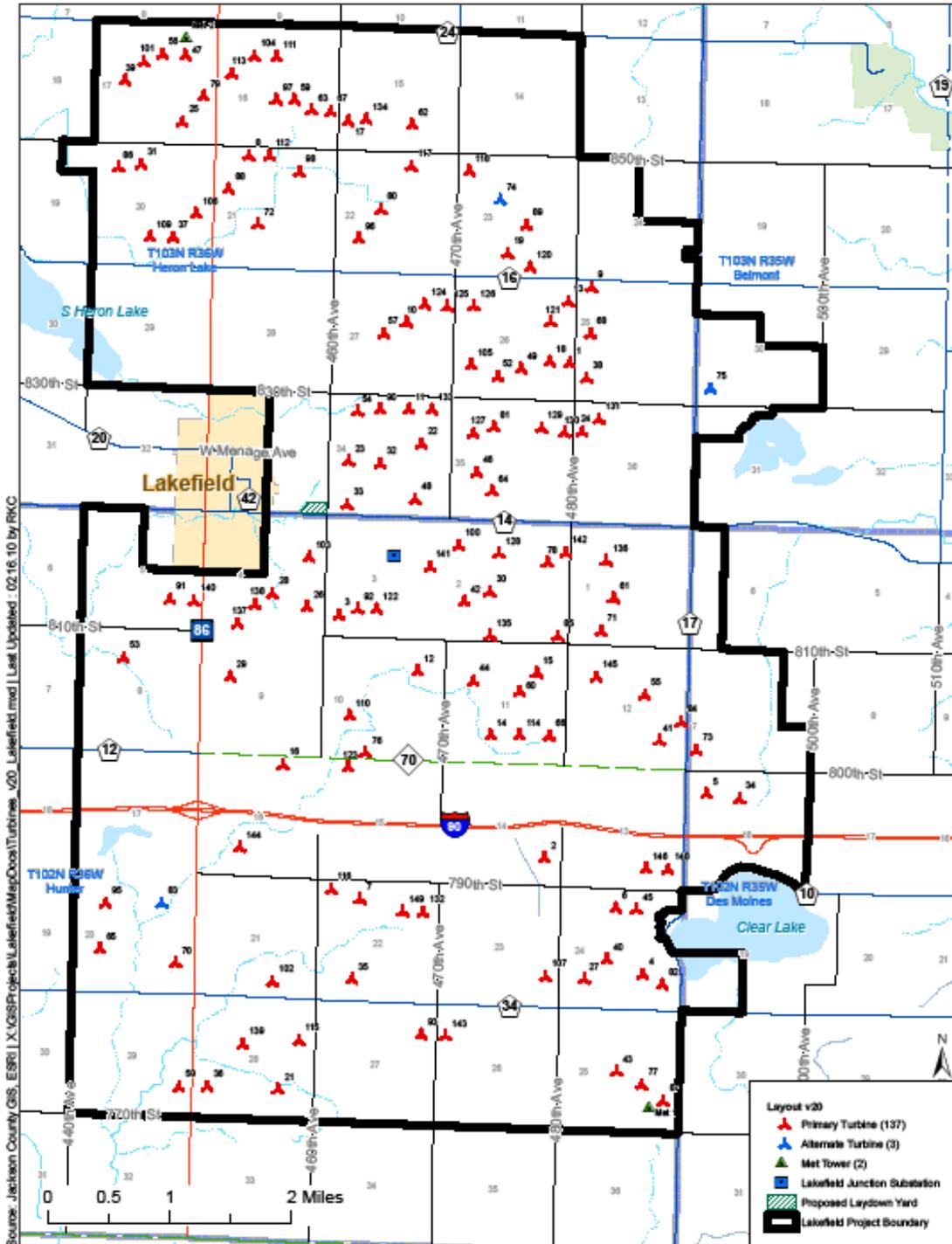
Special conditions shall take precedence over any of the other conditions of this Permit if there should be a conflict between the two.

1. SHADOW FLICKER

The applicant shall provide data on shadow flicker impacts at the time it submits the final site plan and profile. Information should include, but not be limited to, the results of modeling used (if any), assumptions made, and the anticipated levels of impact from turbine shadow flicker. Adoption of this special condition is based on facts unique to this case and provides no precedent or prediction regarding the information to be requested on shadow flicker that the Commission may deem appropriate and reasonable to require in future dockets.

DRAFT

ATTACHMENT 1: SITE PERMIT MAP



**MINNESOTA PUBLIC UTILITIES COMMISSION
COMPLAINT HANDLING PROCEDURES
FOR
LARGE WIND ENERGY CONVERSION SYSTEMS**

A. Purpose:

To establish a uniform and timely method of reporting complaints received by the Permittee concerning Permit conditions for site preparation, construction, cleanup and restoration, operation and resolution of such complaints.

B. Scope:

This document describes Complaint reporting procedures and frequency.

C. Applicability:

The procedures shall be used for all complaints received by the Permittee.

D. Definitions:

Complaint: A verbal or written statement presented to the permittee by a person expressing dissatisfaction or concern regarding site preparation, cleanup or restoration or other LWECS and associated facilities site permit conditions. Complaints do not include requests, inquiries, questions or general comments.

Substantial Complaint: A written Complaint alleging a violation of a specific Site Permit condition that, if substantiated, could result in Permit modification or suspension pursuant to the applicable regulations.

Unresolved Complaint: A Complaint which, despite the good faith efforts of the permittee and a person(s), remains to both or one of the parties unresolved or unsatisfactorily resolved.

Person: An individual, partnership, joint venture, private or public corporation, association, firm, public service company, cooperative, political subdivision, municipal corporation, government agency, public utility district, or any other entity, public or private, however organized.

E. Complaint Documentation and Processing:

1. The Permittee shall document all Complaints by maintaining a record of all applicable information concerning the Complaint, including the following:

- a. Name of complainant, address, phone number, and e-mail address.
 - b. Precise property description or parcel number.
 - c. Name of Permittee representative receiving Complaint and date of receipt.
 - d. Nature of Complaint and the applicable Site Permit conditions(s).
 - e. Activities undertaken to resolve the Complaint.
 - f. Final disposition of the Complaint.
2. The Permittee shall designate an individual to summarize Complaints for substantial to the Commission. This person's name, phone number and e-mail address shall accompany all complaint submittals.
 3. A Person presenting the Complaint should to the extent possible, include the following information in their communications:
 - a. Name, address, phone number, and e-mail address.
 - b. Date
 - c. Tract or parcel
 - d. Whether the complaint relates to (1) a Site Permit matter, (2) a LWECS and associated facility issue, or (3) a compliance issue.

F. Reporting Requirements:

The Permittee shall report all complaints to the Commission according to the following schedule:

Immediate Reports: All substantial complaints shall be reported to the Commission the same day received, or on the following working day for complaints received after working hours. Such reports are to be directed to Wind Permit Compliance, 1-800-657-3794, or by e-mail to: DOC.energypermitcompliance@state.mn.us, or. Voice messages are acceptable.

Monthly Reports: By the 15th of each month, a summary of all complaints, including substantial complaints received or resolved during the preceding month, shall be Filed to Dr. Burl W. Haar, Executive Secretary, Public Utilities Commission, using the Minnesota Department of Commerce eDocket system (see eFiling instructions attached to this permit).

If no Complaints were received during the preceding month, the permittee shall submit (eFile) a summary indicating that no complaints were received.

G. Complaints Received by the Commission or OES:

Complaints received directly by the Commission from aggrieved persons regarding site preparation, construction, cleanup, restoration, operation and maintenance shall be promptly sent to the Permittee.

H. Commission Process for Unresolved Complaints:

Initial Screening: Commission staff shall perform an initial evaluation of unresolved Complaints submitted to the Commission. Complaints raising substantial LWECS Site Permit issues shall be processed and resolved by the Commission. Staff shall notify Permittee and appropriate person(s) if it determines that the Complaint is a Substantial Complaint. With respect to such Complaints, each party shall submit a written summary of its position to the Commission no later than ten days after receipt of the Staff notification. Staff shall present Briefing Papers to the Commission, which shall resolve the Complaint within twenty days of submission of the Briefing Papers.

I. Permittee Contacts for Complaints:

Mailing Address: Complaints filed by mail shall be sent to one of the addresses below:

Lakefield Wind Project
enXco Development Corporation
10 Second St NE, Ste 107
Minneapolis, MN 55413

Tel: 612-746-0770

eMail:

**MINNESOTA PUBLIC UTILITIES COMMISSION
COMPLIANCE FILING PROCEDURE
FOR PERMITTED ENERGY FACILITIES**

1. Purpose

To establish a uniform and timely method of submitting information required by the Commission energy facility permits.

2. Scope and Applicability

This procedure encompasses all compliance filings required by permit.

3. Definitions

Compliance Filing – A sending (filing) of information to the Commission, where the information is required by a Commission site or route permit.

4. Responsibilities

- A) The permittee shall eFile all compliance filings with Dr. Burl Haar, Executive Secretary, Public Utilities Commission, through the Department of Commerce (DOC) eDocket system. The system is located on the DOC website:
<https://www.edockets.state.mn.us/EFiling/home.jsp>

General instructions are provided on the website. Permittees must register on the website to eFile documents.

- B) All filings must have a cover sheet that includes:

- 1) Date
- 2) Name of submitter / permittee
- 3) Type of Permit (Site or Route)
- 4) Project Location
- 5) Project Docket Number
- 6) Permit Section Under Which the Filing is Made
- 7) Short Description of the Filing

- C) Filings that are graphic intensive (e.g., maps, plan and profile) must, in addition to being eFiled, be submitted as paper copies and on CD. Copies and CDs should be sent to: 1) Dr. Burl W. Haar, Executive Secretary, Minnesota Public Utilities Commission, 121 7th Place East, Suite 350, St. Paul, MN, 55101-2147, and 2) Department of Commerce, Energy Facility Permitting, 85 7th Place East, Suite 500, St. Paul, MN, 55101-2198. Additionally, the Commission may request a paper copy of any eFiled document.

PERMIT COMPLIANCE FILINGS¹

PERMITTEE: Lakefield Wind Project, LLC
PERMIT TYPE: LWECS Site Permit
PROJECT LOCATION: Jackson County
COMMISSION DOCKET NUMBER: IP-6629/WS-09-1239

Filing Number	Condition	Description	Due Date	Notes
1	A.1.	Site Plan	Prior to starting construction	
2	A.2.	Field Representative	Prior to and throughout construction	
3	B.8.	Roads	Identify access roads and obtain road damage agreements before starting construction	
4	B.9.	Soil Erosion and Sediment Control Plan	NDPES Stormwater Runoff Control Permit	
5	B.15	Educational Materials	Submit Upon Request	
6	B.16	Fire Protection Plan	Submit Upon Request. Must Register in 911 Program	
7	C.6.	Native Prairie Protection Plan	60 days prior to the start of construction	
8	D.1.	Biological Survey	Pre-construction Meeting	
9	D.2	Archaeological Resources	Pre-construction Meeting and as Recommended by the State Historic Preservation Office	
10	D.3.	Electromagnetic Interference	Pre-construction Meeting	

¹ This compilation of permit compliance filings is provided for the convenience of the permittee and the Commission. However, it is not a substitute for the permit; the language of the permit controls.

Filing Number	Condition	Description	Due Date	Notes
11	F.1	Wake Loss	Include with site plan or operation studies if performed	
12	F.2	Noise Study	Pre-Construction Meeting	
13	G.1.	Decommissioning Study	Prior to commercial operation	
14	H.1	Project Energy Production	Due 2/1 each year or quarterly	
15	H.2	Wind Resource Use	Within 3 months after Operation or SCADA Access	
16	I.1.	As Builts	Within 60 days of Completions of Construction	
17	J.1.	Wind Rights	Within 30 days of Acquiring. Upon Request.	
18	K.2.	Failure to Start Construction	Within 2 years of Permit Issuance	
19	K.8	Site Manager	Prior to Operation	
20	Complaints	Report	Due Each Month or within 24 hours	
21	C.2	Map and Text	Illustrating Setbacks from Residences and Roads Pre-construction Meeting	
22	F.2	Noise Study Results	Within 18 months of Commercial Operation	
23	N.1	Shadow Flicker	Pre-construction Meeting	
24				