



BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

**COMMENTS AND RECOMMENDATIONS OF THE
MINNESOTA DEPARTMENT OF COMMERCE
ENERGY FACILITY PERMITTING STAFF**

DOCKET No. IP6646/WS-07-839

Meeting Date: July 26, 2007

Agenda Item # _____

Company: enXco Development Corporation—Wapsipinicon and Grand Meadow Wind Project(s)

Docket No. IP6646/WS-07-839

In the Matter of the Application of enXco Development Corporation for a Large Wind Energy Conversion System Site Permit for the 200.5-Megawatt Wapsipinicon Wind Project in Mower County.

Issue(s): Should the Commission accept Wapsipinicon Site Permit Application and issue a draft site permit?

DOC Staff: Larry Hartman

651-296-5089

Relevant Documents (in Commission Packet)

Wapsipinicon Wind Project LWECs Site Permit Application

June 25, 2007

The enclosed materials are work papers of the Department of Commerce Energy Facility Permitting Staff. 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).

Documents Attached

1. Wapsipinicon Site Map
2. Schematic of Permitting Process for Large Wind Energy Conversion Systems
3. Wapsipinicon/Grand Meadow Wind Project Draft Site Permit.

-End of Documents Attached-

Note: Relevant documents and additional information for this project can be found on eDockets (07-839) or the PUC website at:

<http://energyfacilities.puc.state.mn.us/Docket.html?Id=19234>

Statement of the Issues

1. Should the Public Utilities Commission (the PUC or Commission) accept, conditionally accept, or reject the application of enXco Development Corporation for the Wapsipinicon Wind Farm?

If the application is accepted, should the PUC:

2. Authorize the Department to appoint a public advisor?
3. Make a preliminary determination on whether a Site Permit may be issued or denied and authorize a Draft Site Permit for distribution and public comments?
4. Take any additional action at this time?

Introduction and Background

The Applicant (enXco Development Corporation) has submitted a site permit application. enXco will initially own the Project including all equipment up to the high side of the 161 kV busbar at the Project substation, as well as, the 161 kV transmission line interconnecting the Project to the Pleasant Valley Substation.

Project Location

The proposed project site is located in central Mower County in Clayton, Marshall, Dexter, Grand Meadow, Pleasant Valley and Sargeant townships about 20 miles east of Austin. See Attachment 1 in the Commissioner's packet. The cities of Elkton and Dexter are within the site boundary. enXco has proposed a site approximately 80 square miles as the permit area to provide turbine siting flexibility and to allow sufficient room for a buffer with I-90; various microwave beam paths which have been identified, existing wind projects, and avoidance of recreation areas. Interstate 90 bisects the project area.

The proposed site is comprised primarily of agricultural lands. Construction of the turbine sites and access roads will involve temporarily disturbing at the most of approximately 5 to 10 acres of land per turbine. This equates to 670 to 1,340 acres of temporary disturbance. Upon completion of the project, approximately 137 acres of land will be converted to turbines and associated facilities and access roads. The Applicant has easements or options on the land necessary within the site to build the project. enXco land rights will encompass the proposed wind farm and all associated facilities, including but not limited to wind and buffer easements, wind turbines, access roads, electrical collection system, and transmission lines located on public roads when necessary.

Wapsipinicon Wind Project Description

The proposed project involves constructing up to 205.5 MW of nameplate capacity. Currently, enXco anticipates using up to 137 General Electric 1.5 MW turbines. The turbine has a hub height of 80 meters (262 feet) and a rotor diameter of 77 meters (252.6 ft). The rotor consists of three blades mounted to a rotor hub. The hub is attached to the nacelle, which houses the gearbox, generator, brake, cooling system, and other electrical and mechanical systems. The rotor swept area is 4,654 meters² (56,095 feet²). The rotational speed of the turbine will be between 11 to 20 revolutions per minute. Maximum rotor tip speed is 183 miles per hour.

The foundation design that is ultimately chosen will be certified by a registered structural engineer who has designed several generations of wind turbine towers and foundations systems that have proven themselves in some of the most aggressive wind regions of the world.

The electrical collector system will consist of underground 34.5 kV collection lines and facilities providing step-up transformation at the project substation. Should conditions arrive that would require the use of overhead lines, they will be located so as to minimize the impact to the landowners.

Other project components include:

- Graveled access roads branching from existing graveled section line roads to provide access to the various rows of turbines. In some areas new roads will be designed to allow for the transportation of heavy equipment to the project area. Permanent gravel roads will be low-profile and approximately 16 feet in width.
- The project may contain up to five permanent meteorological towers which will be used to provide redundancy to the sensors located on the turbines as well as an independent source of wind speed and other information. The permanent met towers are typically located upwind of turbines on leading edges of the project and monitor the wind speed at hub height, 80 meters or 262.5 feet in this case.
- An operations and maintenance facility will be constructed to serve as a center for the O&M efforts associated with the project, house the Supervisory Control and Data Acquisition (SCADA) system, and potentially serve as a visitor center/viewing area.

Power from the project will be delivered to the Pleasant Valley Substation at the Pleasant Valley Generation Plant owned by Great River Energy and located in section 19 of Pleasant Valley Township.

enXco is also proposing to build a 161/34.5 kV project substation which will consist generally of 2 161/34.5 transformers, and associated switching and protection equipment as well as metering equipment and a small control house. Power from the turbines will be collected at this substation and transmitted to the Pleasant Valley Substation via approximately 6 miles of overhead 161 kV transmission line. This 161 kV transmission line will be reviewed and permitted by Mower County and does not require a route permit from the PUC. Mower County permitted the 161 kV transmission lines for the High Prairie I and II projects.

Regulatory Process and Procedures

A site permit from the Public Utilities Commission is required to construct a Large Wind Energy Conversion System (LWECS), which is any combination of wind turbines and associated facilities with the capacity to generate five megawatts or more of electricity. This requirement became law in 1995. The Minnesota Wind Siting Act is found at Minnesota Statutes Chapter 216F. The rules to implement the permitting requirement for LWECS are in Minnesota Rules Chapter 4401. A schematic of the permitting process is enclosed for illustration purposes. See Attachment 2.

Application Acceptance

Minnesota Rules, part 4401.0460 states that: “Within 30 days after receipt of an application for a site permit, the PUC shall accept, conditionally accept, or reject the application.” On June 25, 2007, enXco Development Corporation filed the Application with the Public Utilities Commission for the Wapsipinicon Wind Project. Xcel Energy anticipates purchasing 100.5 Mw of this project for the Grand Meadow Wind Farm project. The required contents of a site permit application are specified in Minnesota Rule part 4401.0450.

Public Advisor

Minnesota Rule part 4401.0460 states: “Upon acceptance of an application for a site permit, the PUC shall designate a staff person to act as the public advisor on the project.” The Commission can authorize the Department to name a staff member from the EFP staff as the public advisor or assign a PUC staff member.

Preliminary Determination

Minnesota Rules, part 4401 0500 Subpart 1. states that: “Within 45 days after acceptance of the application by the PUC, the PUC shall make a preliminary determination whether a permit may be issued or should be denied. If the preliminary determination is to issue a permit, the PUC shall prepare a draft site permit for the project. The Draft Site Permit must identify the permittee, the proposed LWECS, and proposed permit conditions.”

Issuing a draft site permit does not authorize a person to construct an LWECS. The PUC may change, amend or modify the draft site permit before in any respect before final issuance or may deny the site permit at a later date. Upon completion of the review process EFP staff will bring the record in this matter back to the Commission for final action.

Certificate of Need

A Certificate of Need from the Minnesota Public Utilities Commission (PUC) is required for a project larger than 50 MW. In this instance Xcel Energy on June 25, 2007, filed a Certificate of Need for 100.5-Megawatts of the proposed 205.5 MW project, which Xcel will purchase as a turnkey project. Xcel Energy refers to the part of the project they will purchase from enXco as the Grand Meadow Wind Farm. See PUC Docket No. E002/CN-07-873. The Department of Commerce will prepare an Environmental Report (ER) for this project pursuant to Minnesota Rules 4410.7020.

enXco is exploring options for selling the remainder of the project or the energy produced by the remainder of the project to parties looking to acquire wind generated electricity. If a CON is required by the purchaser of the 105 MW, it will be applied for and must be issued by the PUC before the permit for the project may be issued.

DOC EFP Staff Analysis and Comments

The DOC EFP Staff has completed a review of the Wapsipinicon Wind Project application pursuant to the requirements of Minnesota Rules Chapter 4401 (Wind Siting Rules). The application provides all of the information required by Minnesota Rules, part 4401.0450. Acceptance of the application allows staff to initiate the review requirements of Chapter 4401.

Draft Site Permit

The DOC EFP Staff has used the information in the application and experience with other LWECS projects as a guide for recommending to the Commission that a preliminary determination be made to issue a draft site permit. EFP staff is recommending that the Commission make a preliminary determination to issue a draft site permit for the project. EFP staff has prepared a Draft Site Permit and is requesting Commission approval of the Draft Site Permit. See Attachment 3 “Wapsipinicon Wind Project/Grand Meadow Draft Site Permit”. Commission approval of the Draft Site Permit will allow for distribution and public comment on the Draft Site Permit by units of government and the public. In this instance the name(s) of the Permittee may change or multiple site permits may be issued with the same conditions. This is a procedural matter that may be addressed in more detail as necessary in the review and permitting process for this project before it comes back to the Commission for a final determination.

Commission Decision Options

A. Application Acceptance

1. Accept the Wapsipinicon Wind Project Application for up to a 205.5 Megawatt Large Wind Energy Conversion System (LWECS) in Mower County.

2. Reject the Application as incomplete and issue an order indicating the specific deficiencies to be remedied before the Application can be accepted.
3. Find the Application complete upon the submission of supplementary information.
4. Make some other decision deemed more appropriate.

B. Public Advisor

1. Authorize the Minnesota Department of Commerce Energy Facility Permitting staff to name a public advisor for this project.
2. Appoint a PUC staff person as the public advisor.
3. Make another decision deemed more appropriate.

C. Preliminary Determination and Authorization of a Draft Site Permit

1. Make a preliminary determination that a draft site permit may be issued; and approve the Draft Site Permit (Attachment 3) for the Wapsipinicon/Grand Meadow Wind Project for distribution and public comment. Authorize EFP staff to initiate the public participation process in Minnesota Rule part 4401.0550.
2. Make a preliminary determination that a draft site permit may be issued; and amend or modify the attached draft site permit for the Wapsipinicon/Grand Meadow Wind Project for distribution and public comment. Authorize EFP staff to initiate the public participation process in Minnesota Rule part 4401.0550.
3. Decide to make the preliminary determination on a draft site permit within 45 days after the application acceptance.
4. Make a preliminary determination that a draft site permit should be denied.
5. Make some other determination deemed more appropriate.

DOC Staff Recommendation. Staff recommends decision options A-1, B-1, and C-1.

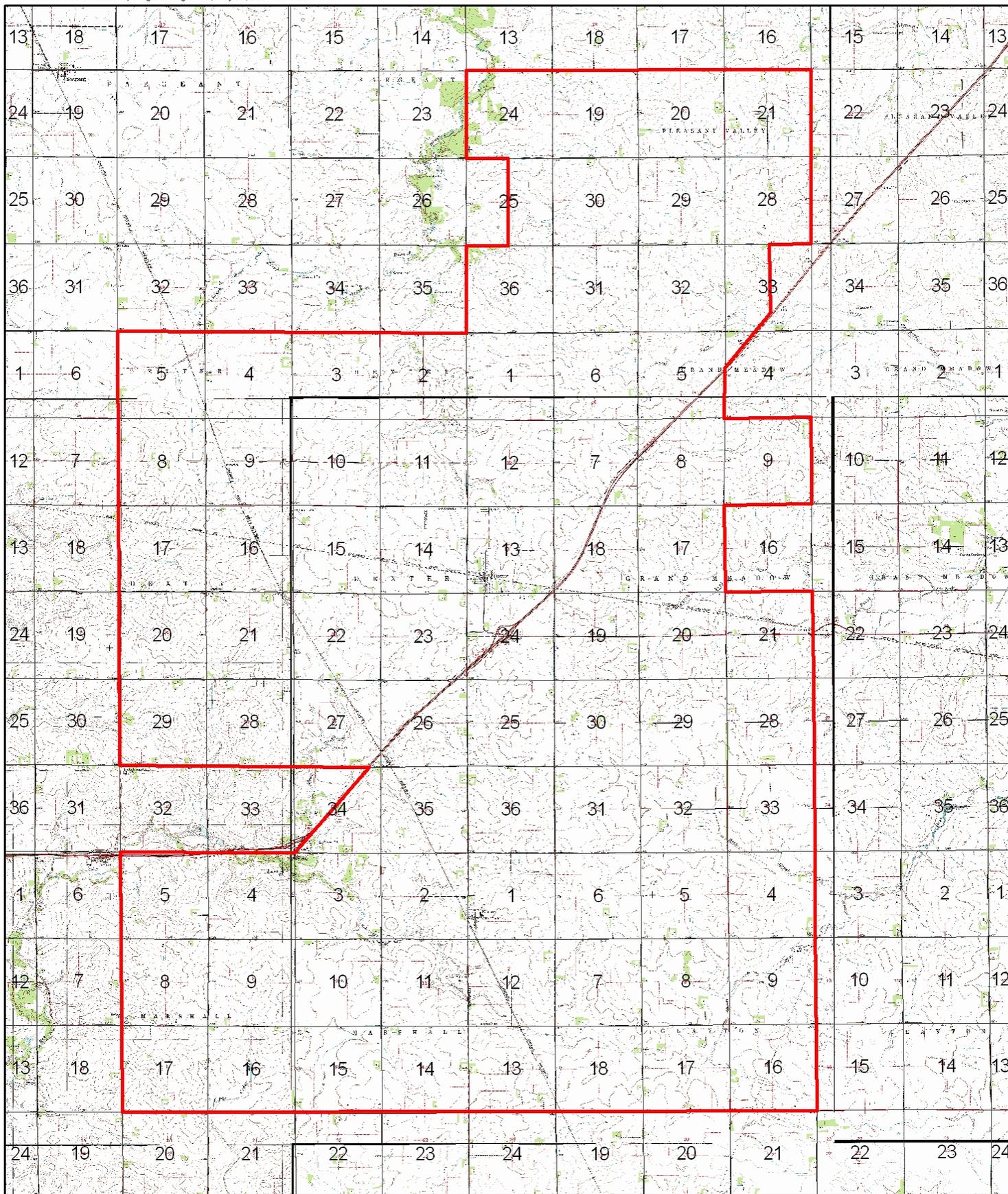
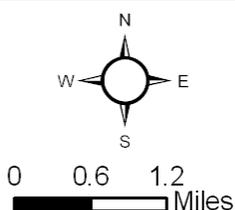
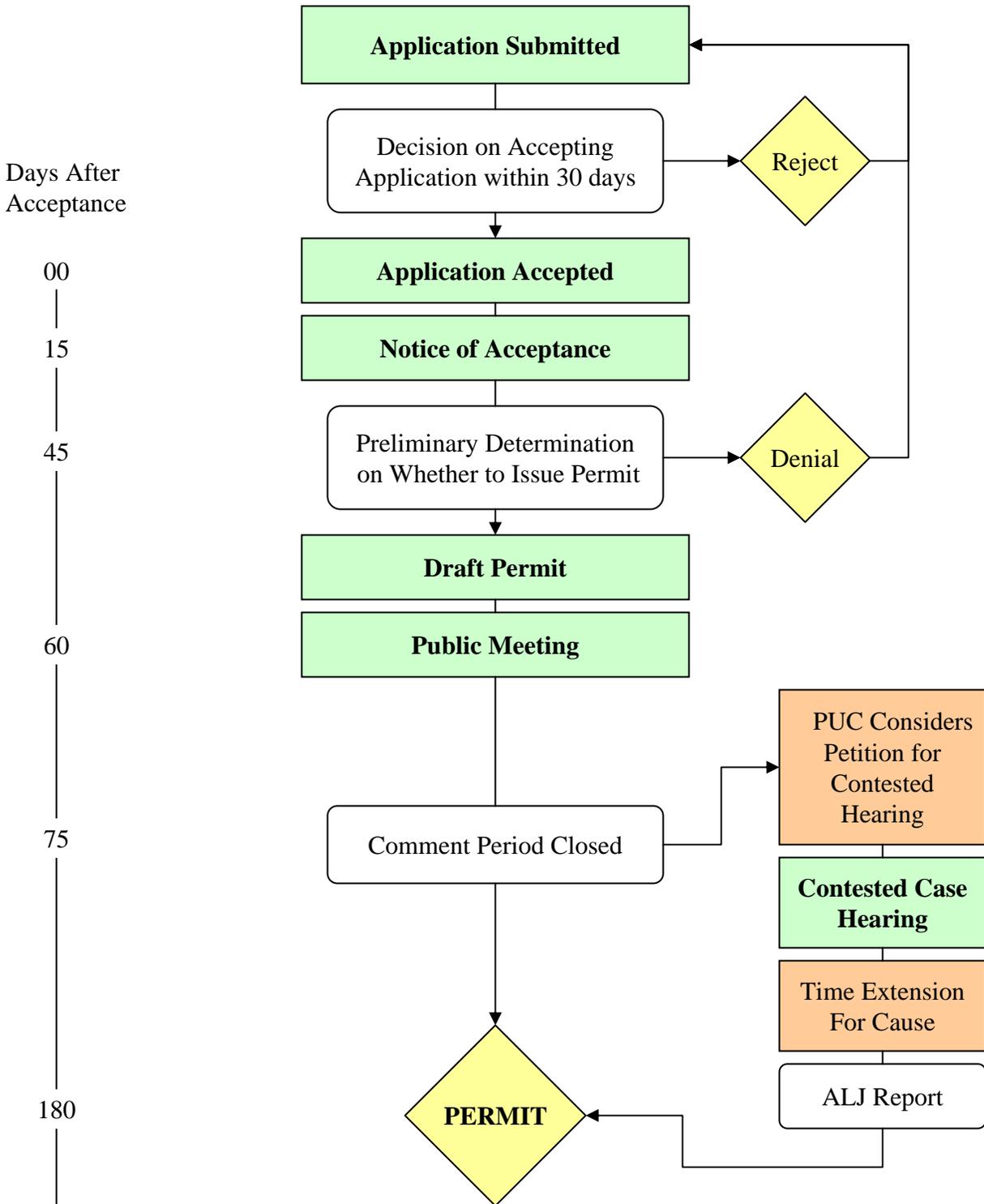


Figure 2
USGS Map
Wapsipinicon Wind Farm
Mower County, MN

Legend
Project Boundary



Permitting Process for Large Wind Energy Conversion Systems



**Minnesota Rules 4401
PUC Energy Facility
Permitting**