Minnesota State Permitting Processes for Large Electric Power Facilities

October 3, 2012

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Energy Facility Permitting
Minnesota Department of Commerce

Minnesota
Energy Facility Permitting

Large Wind Energy Conversion Systems

STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION

Large Electric Power Generating Plants

MINNESOTA
DEPARTMENT OF
COMMERCE

High Voltage Transmission Lines

Pipelines

Technical Assistance & Guidance Materials

Guidance for Developing and e-Filing an LWECS Noise Study Protocol and Report

June 2012

Plan and Profile Guidance for Transmission Lines

Guidance for the development of Plan and Profile and route change request submittals to the Public Utilities Commission

*This document can be made available in alternative formats (i.e. large print or audio tape) by calling **651.296.0391** (voice). Persons with hearing or speech disabilities may call us through Minnesota Relay at 1.800.627.3529 or by dialing 711.*

Commerce provides technical assistance to PUC and Applicants

SEPT 2012

Guidance for Large Wind Energy Conversion System Pre-Construction Compliance

Guidance for Preparation and e-Filing of Pre-Construction Compliance Submittals to the Public Utilities Commission (DRAFT)

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Minnesota Department of Comm
Energy Facilities Permitting, DRAF
9/12/2012

Application Guidance for Site Permitting of Large Wind Energy Conversion Systems in Minnesota

Minnesota Department of Commerce
Office of Energy Security-Energy Facilities Permitting

August 2010

Power Lines and Power Plants

Power Plant Siting Act – Minnesota Statute 216E

- Locate large electric power facilities in an orderly manner compatible with environmental preservation and efficient use of resources

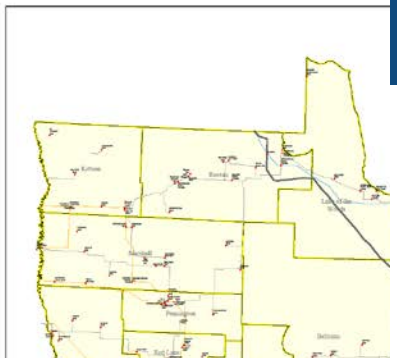
- Covers transmission lines ≥ 100 kV and plants ≥ 50 MW

- Locations must:
  - Minimize adverse human and environmental impacts
  - Insure electric power system reliability and integrity
  - Meet electric energy needs in orderly and timely fashion

PPSA Combines Permitting and MEPA Review

- Environmental review conducted within permitting process
- Documents submitted into PUC's permit decision-making record
- Commerce is RGU
- No EAW
  - Alternative Process – EA, no draft
  - Full Process – EIS, draft and final

CapX and More



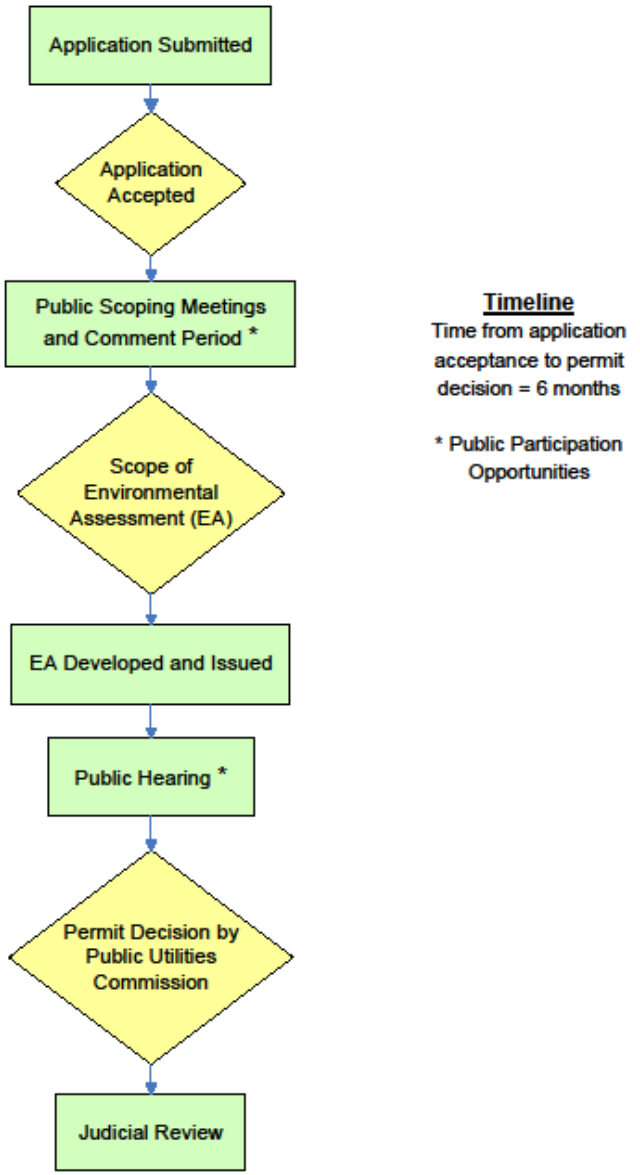
Year	Power Plants	Power Lines
2008	2 for 245 MW	6 for 74.5 miles
2009	1 for 164 MW	5 for 73 miles
2010	1 for 1,200 MW	8 for 400 miles
2011	0	8 for 300 miles
2012	0	7 for 285 miles
Total	**5 for 2,059 MW**	**39 for 1,183 miles**

Alternative Process

Applicant's choice

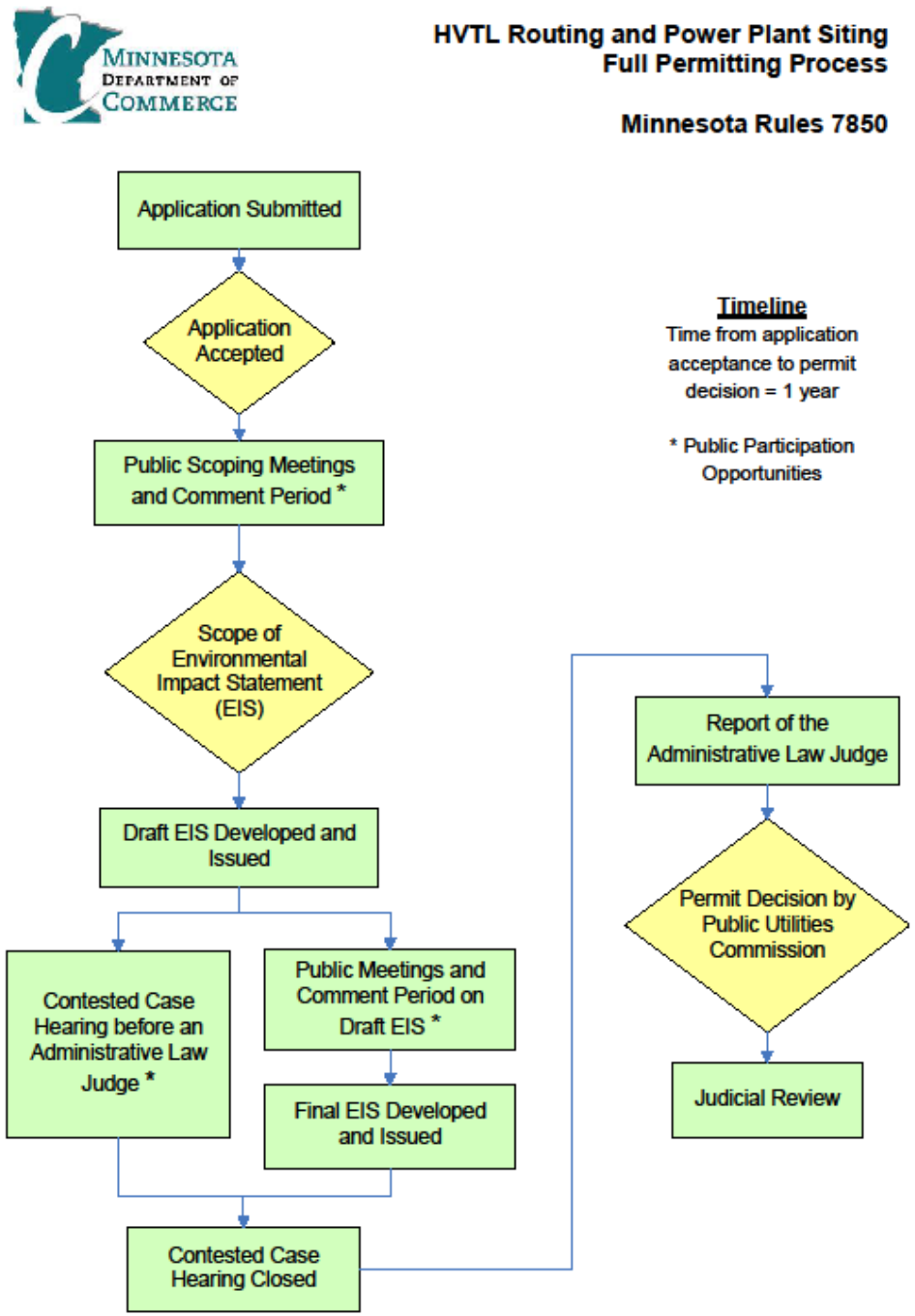
Smaller, less complex projects

- <80 MW or natural gas
- 100 to 200 kV
- >200 kV and <5 miles
- 80% existing ROW, <10 miles
- Single customer



Full Process

Often requires Certificate of Need



Comment Points

- Application – comments to PUC on missing or inaccurate info
- Environmental document scoping process – comments to Commerce on issues to address and alternative sites or routes to include in EA or EIS
- Draft EIS (no draft EA) – comments to Commerce on accuracy, content relative to scope
- Hearing – comments to ALJ on preferences as to sites or routes and mitigation/permit conditions to impose to address impacts
- Conversations – Commerce EFP staff is available at any time during process to discuss issues, concerns

PPSA Exclusion Areas

HVTL

- State and national wilderness areas
- State and national parks, state SNAs, unless no material damage, impairment and no feasible and prudent alternative

Power Plants

- Prohibited sites: national and state parks and wilderness areas, national historic sites and monuments, wild/scenic/recreational rivers, SNAs
- Excluded when alternative exists: WMAs, state historic sites, county/metro parks, state/federal trails
- Prime farmland exclusion – ≤ .5 acres
- Sufficient water supply required

Factors Considered in Site/Route Selection

- Public health and safety
- Human settlement
- Land-based economies
- Archaeological and historic resources
- Natural environment, including air and water quality, flora and fauna
- Rare and unique natural resources
- Design options to maximize efficiencies, mitigate effects
- Use or paralleling of existing ROWs (including transportation, pipeline, and HVTL systems), survey lines
- Use of existing power plant sites
- Electrical system reliability
- Design and route dependent costs of construction, O&M
- Unavoidable human, natural environmental effects
- Irreversible and irretrievable commitments of resources.

Balance Flexibility, Predictability

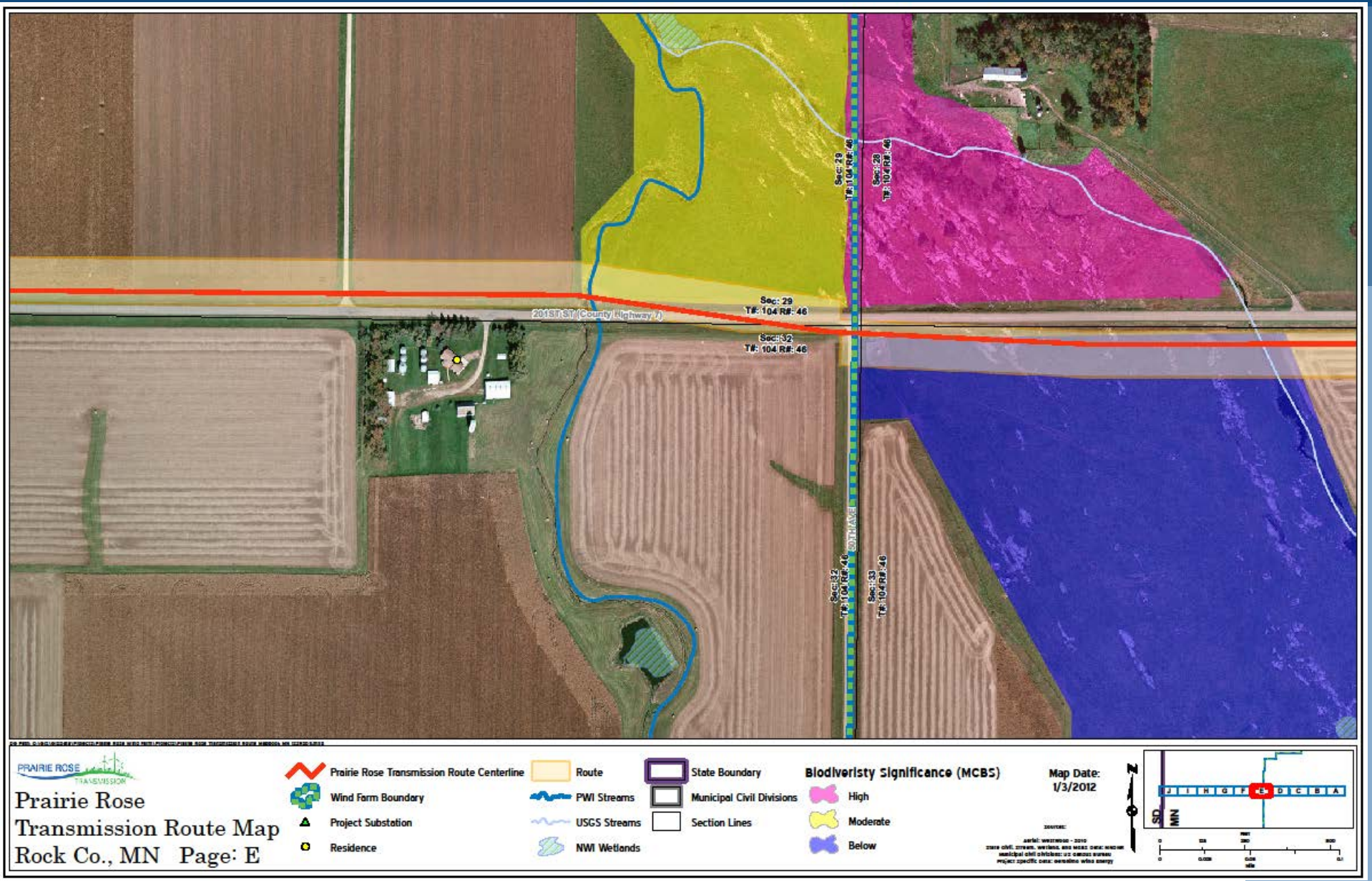
Designate route and anticipated alignment

Provide process for modifying alignment, but impacts relative to factors must be comparable

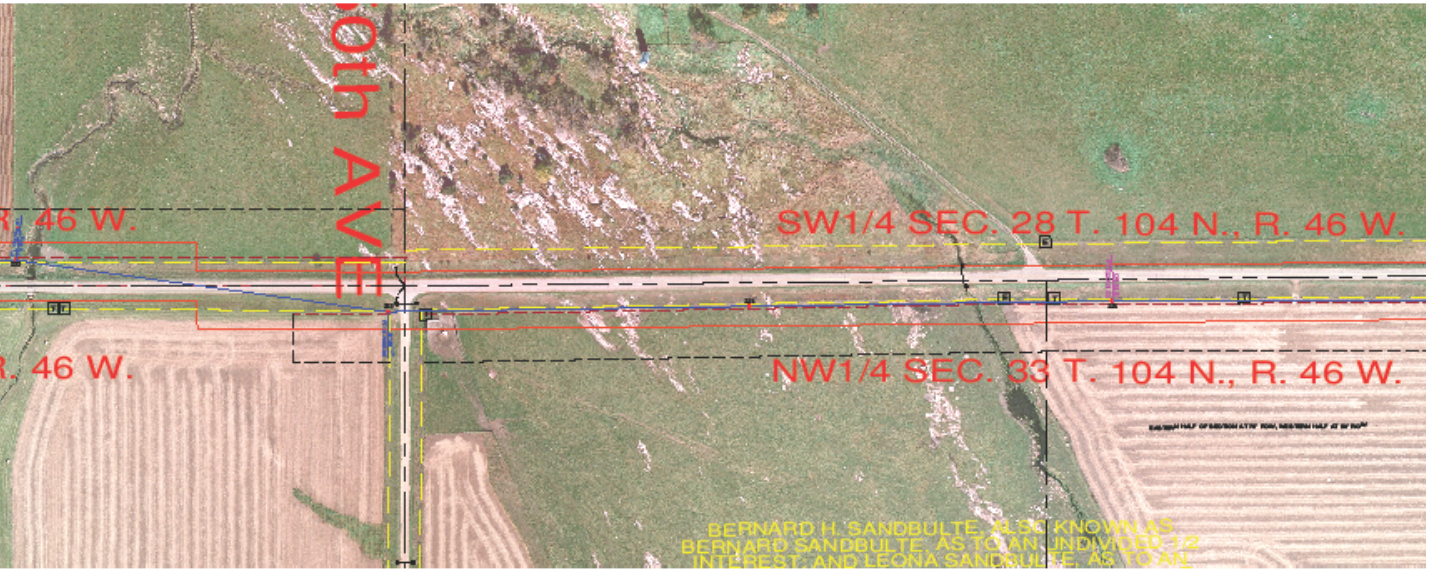
Impose conditions to protect sensitive resources

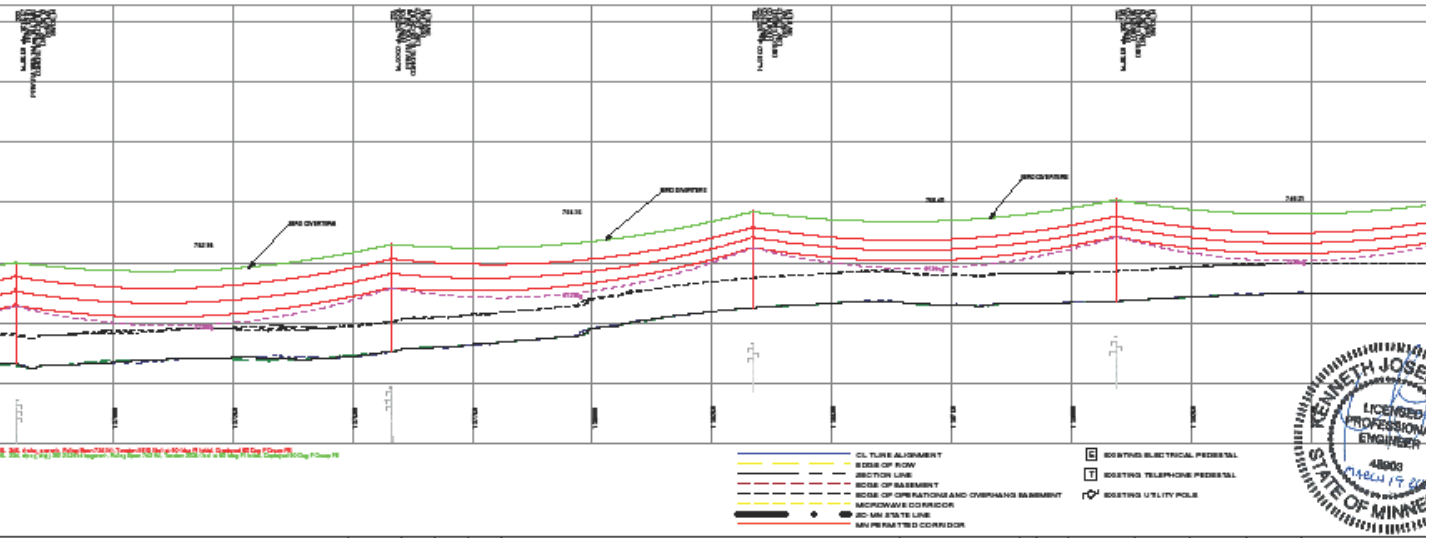
- Birds, other protected wildlife
- Wetlands
- Biologically significant areas
- Infrastructure

Alignment Reflects Record



PnP & ROW Must Match Permit





CL TURE ALIGNMENT
EDGE OF ROW
SECTION LINE
EDGE OF EASEMENT
EDGE OF OPERATIONS AND OVERHANG EASEMENT
MICROWAVE CORRIDOR
20-MN STATE LINE
MN PERMITTED CORRIDOR

EXISTING ELECTRICAL PEDESTAL
EXISTING TELEPHONE PEDESTAL
EXISTING UTILITY POLE

KENNETH JOSE
LICENSED PROFESSIONAL ENGINEER
STATE OF MINNE

REVISIONS	DATE	ENG	DSN/DFT	CHK
D FOR CONSTRUCTION	05/10/12			

PRAIRIE ROSE TRANSMISSION

MICKELSON

Stantec

Enel Green Power

ENGINEERING & CONSTRUCTION
ENGINEERING

D 2 7 U S W 4 1 0 3 7 1 8 1 5 6 0 0

ENGINEERING R
DES/DRFT BY:
ENGINEERED BY:
CHECKED BY:

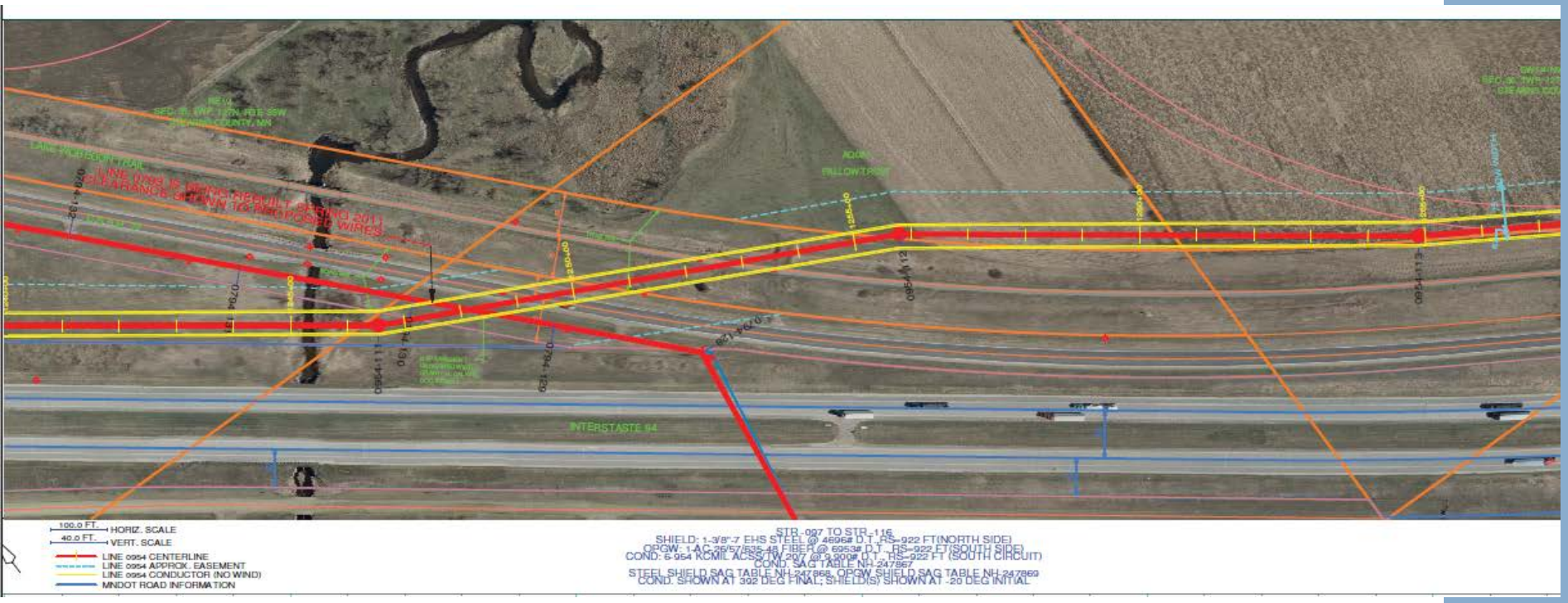
ROW Sharing Optimized

Safety codes dictate right-of-way widths for HVTLs

Clear zones required

Transmission line can share or occupy a portion of a road ROW, but:

- Road safety must be maintained
- Private easement still likely needed



State Agencies' Role in PPSA

- Participate in PUC process – application review, scoping, hearings
- Identify "fatal flaws" – could a necessary permit from your agency be issued for this site or route?
- Identify possible conflicts – would site or route be in compliance with agencies' standards, rules, policies?
- Identify impacts on areas of concern or interest – are there resources of particular concern? Could mitigative measures or selection of a particular site or route address these concerns?

Local Government, Public Role

- Participate in process – application review, scoping, hearings
- Identify possible conflicts – would site or route conflict with comprehensive plans, current or future projects?
- Identify impacts on areas of concern or interest – are there resources of particular concern? Could mitigative measures or selection of a particular site or route address these concerns?
- Advocate for preferred site or route

Local Review under PPSA

Local Review for Transmission Lines

- Minn. Stat. § 216E.05, Minn. Rule 7850.5300
  - HVTL between 100 and 200 kV
  - Substations with a voltage designed ≥ 100 kV
  - Must have ordinance or other provisions for reviewing and authorizing project
  - Within 10 days of notifying local government, applicant must notify PUC
  - Local government can request PUC to assume jurisdiction within 60 days.
  - Requires Environmental Review with scoping
  - Can consider alternative routes, conditions

State Agencies, Local Governments Bound by PUC Decision

"the issuance of a site permit or route permit and subsequent purchase and use of such site or route locations for large electric power generating plant and high-voltage transmission line purposes shall be the sole site or route approval required to be obtained by the utility. Such permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose government." [216E. 10, subd. 1.]

"A state agency in processing a utility's facility permit application shall be bound to the decisions of the commission, with respect to the site or route designation" [216E. 10, subd. 2.]

Questions?

Discussion, questions on power plants and transmission lines

- See website for samples, examples of applications, environmental documents, permits
- Sign up of project lists, RSS feeds or search site for projects in your county
- Feel free to contact us to discuss projects and processes

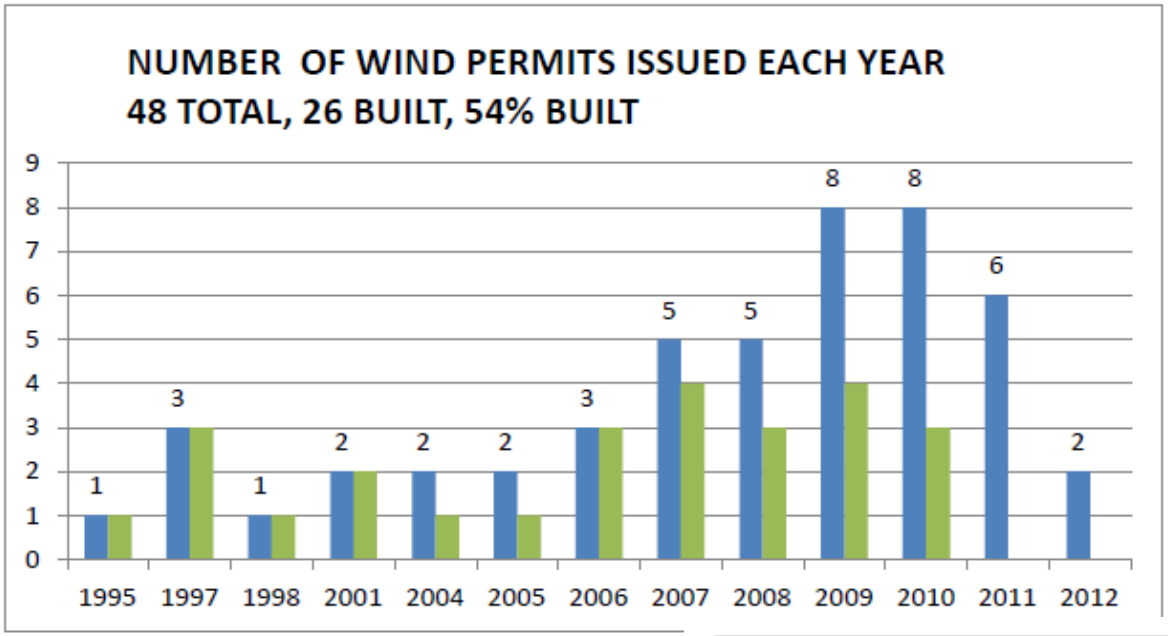
Wind – Program Began in 1995

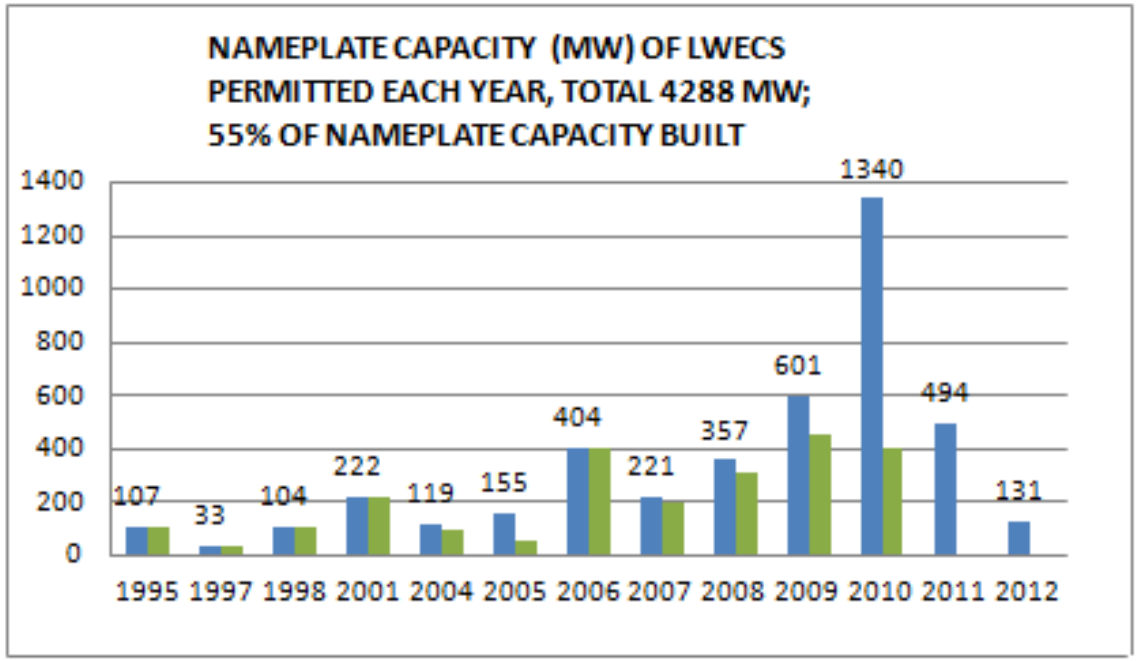
Wind Siting Act – Minnesota Statute 216F

- The siting of Large Wind Energy Conversion Systems (LWECS) – projects of 5 MW or more – is to be made in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources (Minn. Stat. § 216F.03).

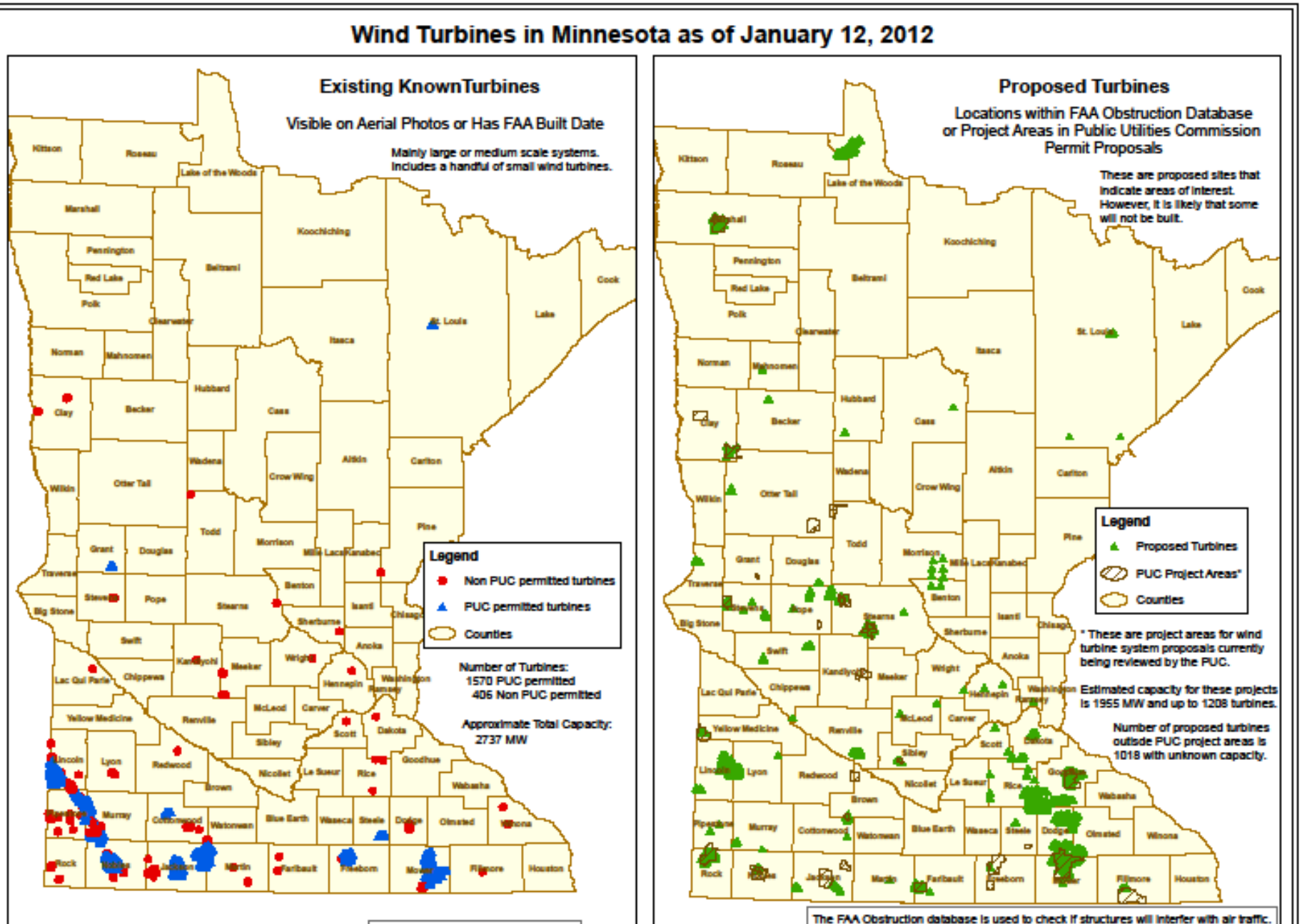
- Local government may regulate projects less than 25 MW in combined nameplate capacity.
  - Less than 5 MW is a Small Wind Energy Conversion Systems.
  - Between 5 MW and 25 MW if assume authority to regulate LWECS via Minn. Stat. § 216F.08.

Wind Permit Summary – August 2012





Wind Development in Minnesota



Wind Permitting Process Includes MEPA Review

- Provides consistent process and standards statewide
- Up to 6 month process
- Alternate form of Environmental Review – no separate EIS, EA or EAW prepared
- Public notice, participation, comments
- Site permits issued for up to 30 years and may be amended

Wind Process

Days After Acceptance

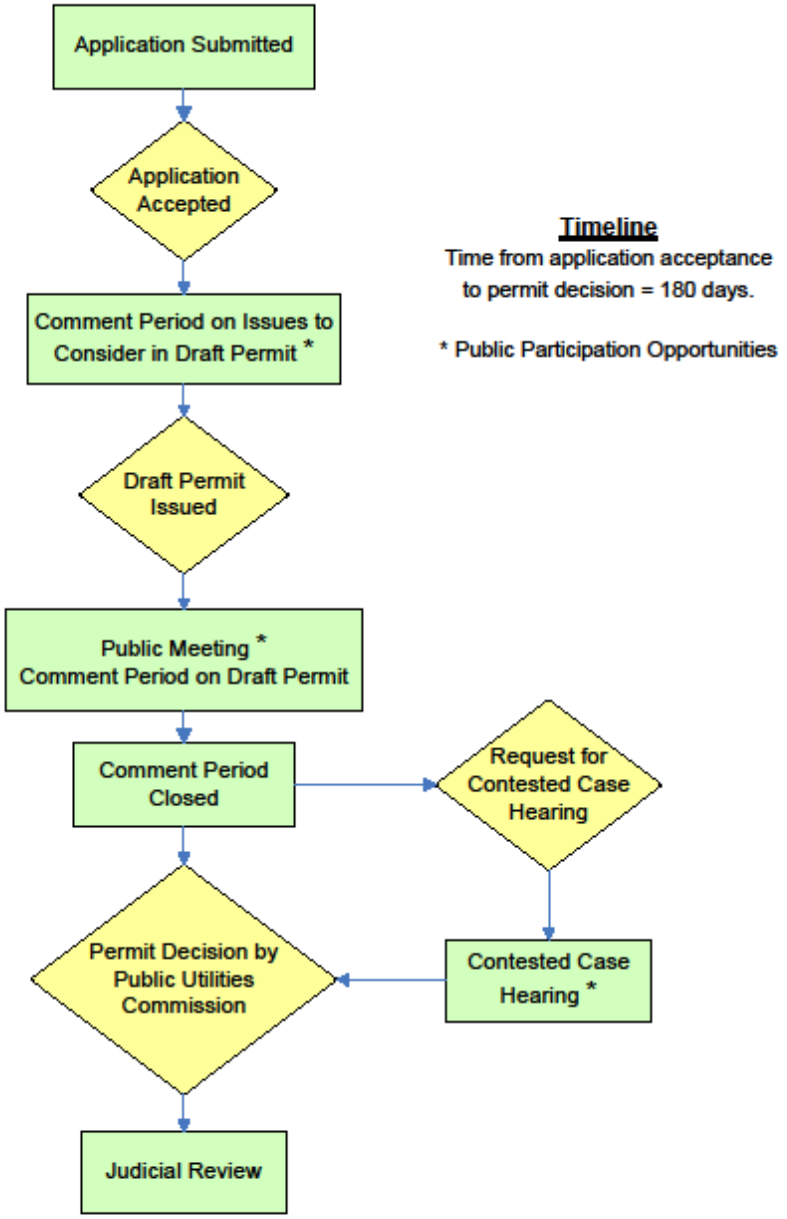
00
15
45
60
75
180

Minnesota Rules 7854

MINNESOTA DEPARTMENT OF COMMERCE

Large Energy Wind Conversion Systems Permitting Process

Minnesota Rules 7854



Timeline

Time from application acceptance to permit decision = 180 days.

* Public Participation Opportunities

County Delegation (Minnesota Statutes Chapter 216F)

County Delegation Program Overview

- PUC General permit standards for wind developed
- Standards apply to projects < 25 MW, variance allowed
- Counties may be more restrictive by ordinance
- Technical assistance to counties

How to Assume Authority

- Adopt standards by ordinance and pass resolution
- Written notice to PUC

Clarified Project Size Definition

- Established project sized determination procedure
- Applications to counties must include the determination

LWECS Permitting Requirements

General Permit Standards

- Minn. Stat. § 216F.08 directed PUC to adopt standards for projects less than 25 MW
- PUC Order, January 11, 2008 (Docket #: 07-1102)
- Establishes minimum standards.
  - Setbacks
  - Size Determination
  - Permittee Responsibilities
  - Studies/Surveys/Plans
  - Reporting
  - Pre-Construction Meeting

County LWECS Permitting Approach

Amend existing ordinances to:

- Incorporate General Permit Standards
- Adopt more restrictive standards, such as:
  - Larger setbacks
  - Setbacks from additional features
  - Exclusion areas
- Can be different for commercial, non-commercial sized turbines

PUC General Permit Setbacks

Issue	PUC General Permit Setback Minimums
Wind Access Buffer (setback from lands not in permittee's control)	3 RD (760 – 985 ft) on non-prevailing axis 5 RD (1280 – 1640 ft) on prevailing axis (RD = rotor diameter = 78 – 100 m)
Homes	500 feet + distance to meet state noise standard.
Noise Standard	750 – 1500 ft typically required to meet state noise standard. (Minnesota Rules Chapter 7030).
Public Roads	250 ft from edge of public road ROW.
Wetlands	No turbines in wetlands and no setback; but Wind Access Buffer setback applies to public lands.

Additional Standards Include

- Native prairie, biological and archeological surveys.
- Public road permits required and repair construction related damages.
- NPDES storm water permit for construction projects.
- Utility scale, monopole design turbines, not prototypes. Off white or white in color.
- Lighting and safety marking limited to FAA requirements.
- Conditions for crop damage and restoration; drain tile avoidance, repair.
- Preconstruction emergency plan.
- Tower identification and “as-built” GIS data submitted to PUC.
- TV signal strength study (baseline) and preconstruction microwave beam path analysis.
- Decommissioning plan.
- Special Conditions.

Docket Records Define Conditions

- General Permit Standards Docket
- Health Effects Docket
- Natural Resource, including Avian and Bat Impacts
- Individual Project Dockets

If PUC's state permitting authority is to be used to establish conditions, record for these conditions must be developed within PUC's process.

Avian and Bat Protection

PRAIRIE ROSE
WIND FARM
Rock & Pipestone Counties, MN

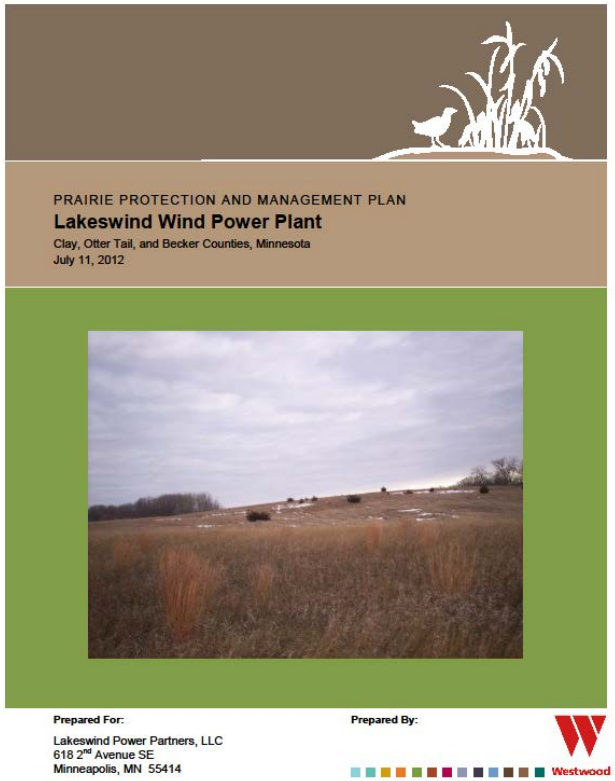
Prairie Rose Wind, LLC
Prairie Rose Transmission, LLC
7650 Edinborough Way, Suite 725
Edina, MN 55435

- Protection plans and pre- and post-construction monitoring routinely required
- Applicants expected to follow USFWS tiered analysis approach

Evaluate impacts through:

- Permittee reports
- Commerce/DNR 4-year study of bat fatalities

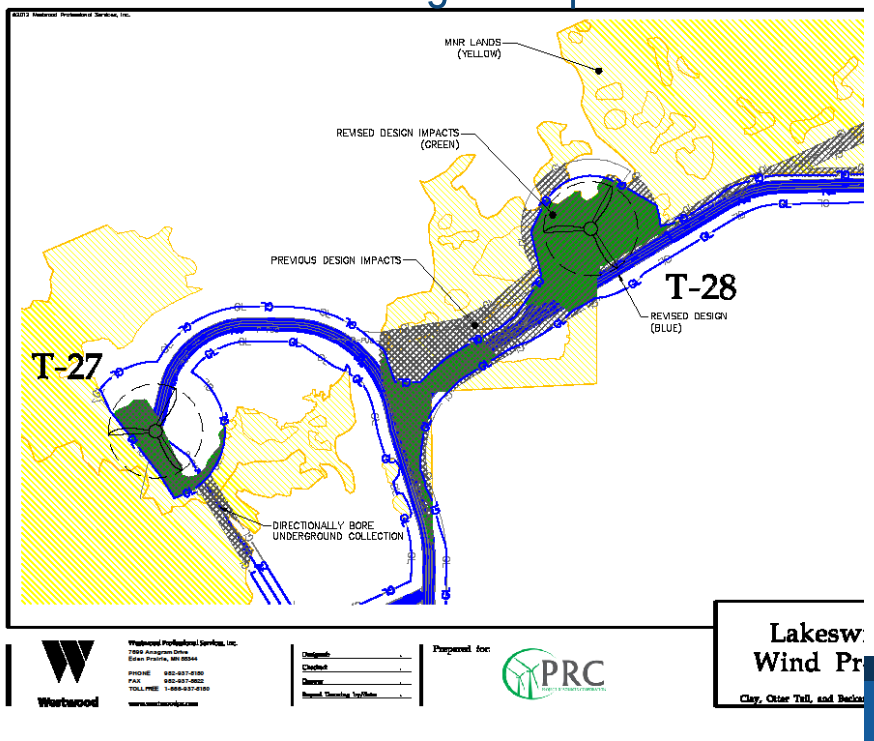
Prairie Protection



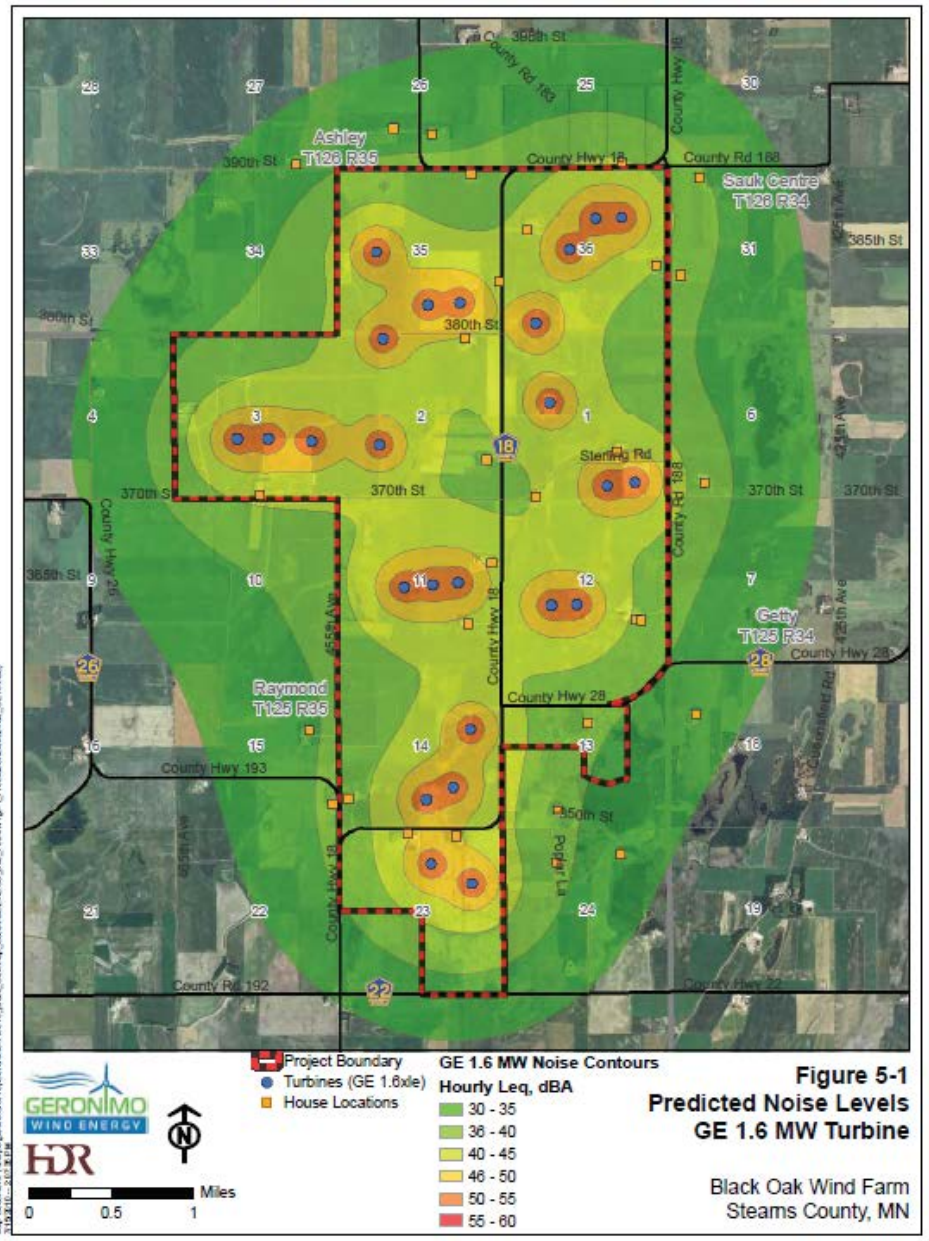
"Wind turbines and all associated facilities shall not be placed in native prairie unless addressed in the prairie protection and management plan"

If required, a PPMP must address:

- steps taken to identify native prairie
- measures to avoid impacts
- measures to mitigate impacts if unavoidable



Noise Modeling and Monitoring



Pre-permit issuance

Estimate (model) and map projected noise levels

State noise standards (MR Chpt 7030) apply at receptors – typically 750-1500 ft setback from homes is required

Post-construction

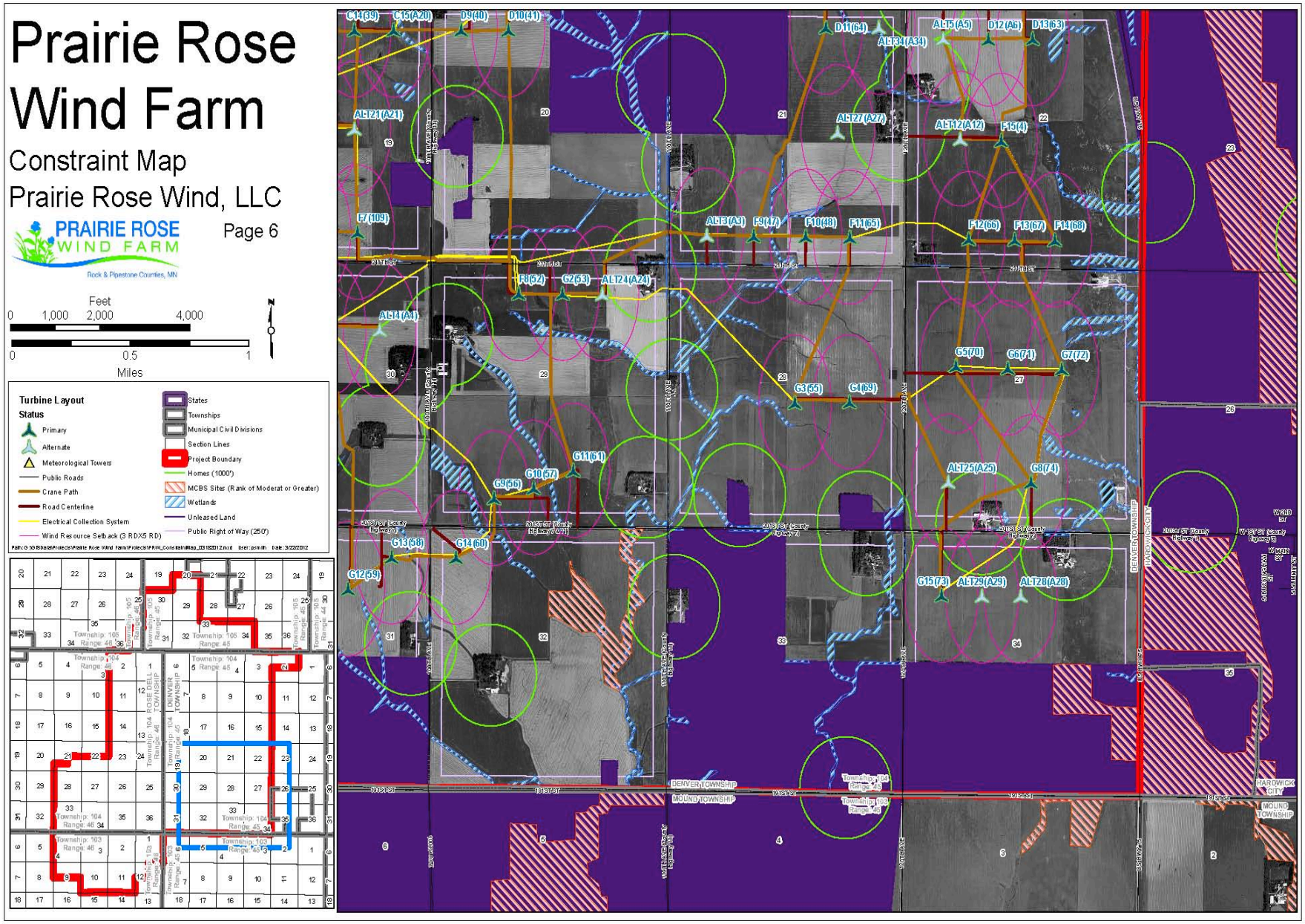
Measure sound at receptors

Confirm validity of noise modeling

Assess modeling as predictor of compliance with standards

Determine noise levels at different frequencies, distances and wind directions and speeds

Site Plan Constraint Maps



PUC Permit Prevails

PUC's permits preempt local planning and zoning – LWECS permit is the only site approval required.

Local governments encouraged to comment during the state permitting process – PUC must apply county standards for LWECS unless PUC finds good cause to not apply those setbacks.

Other Permits (most apply to PPSA too)

Wetland and Water Impacts

- Section 404 (COE), WCA (SWCD), PWI (DNR)
- License to cross public waters (DNR)

Turbine Location and Lighting

- Proposed Construction or Alteration (FAA)

Sediment Control

- NPDES storm water permit for construction projects

Transportation and Road Permits

- State, County, Township – oversize/overweight, driveway access, utility crossing.

Other Project Specific Permits

- Additional permitting maybe be required for the interconnection, O&M building, and other project components.

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Discussion, questions on wind

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For Further Information on Minnesota's Permitting Process for Large Electric Power Facilities see:

http://mn.gov/commerce/energyfacilities/

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