

December 30, 2015

Daniel P. Wolf  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7th Place East, Suite 350  
Saint Paul, MN 55101-2147

**Re: In the Matter of Flat Hill Windpark I, LLC's Site Permit for a 201 Megawatt Large Energy Conversion System and Associated Facilities in Clay County, Minnesota  
Docket Nos. IP-6687/WS-08-1134 and IP-6687/CN-08-951**

Dear Mr. Wolf:

On behalf of Flat Hill Windpark I, LLC ("Flat Hill"), enclosed for filing in the above-captioned matter is an updated Natural Heritage Inventory System ("NHIS") review summary report prepared for Flat Hill by Tetra Tech Inc. The NHIS report also includes the associated NHIS review results provided by the Minnesota Department of Natural Resources. This filing is being made in compliance with the Minnesota Public Utilities Commission's ("Commission") October 6, 2015 *Order Postponing Decision on Permit Amendment and Requiring Filings* (the "Order"). Flat Hill will address other requirements of the Order in subsequent filings with the Commission.

Thank you for your attention to this matter.

Sincerely,

Stinson Leonard Street LLP

*Andrew J. Gibbons*

Andrew J. Gibbons

AJG:SLS

Enclosure



December 23, 2015

Mr. Suriyun Sukduang, Vice President  
Quantum Utility Generation, LLC  
1401 McKinney Street, Suite 1800  
Houston, Texas 77010

Subject: Technical Memorandum – Updated Natural Heritage Inventory System (NHIS) Review  
Flat Hill Windpark I  
Clay County, Minnesota

Dear Mr. Sukduang:

This memo presents the findings of the updated Natural Heritage Inventory System Review (NHIS) completed by the Minnesota Department of Natural Resources (MN DNR). An initial NHIS review was submitted and the results were reported in a response dated January 9, 2007 for the proposed Flat Hill Windpark I & II. This review covered two proposed 200 megawatt (MW) wind farms, totaling two 20,000-acre portions of Clay and Wilkin County. Since the initial NHIS review, the proposed project layout and boundary have been revised. The revised Flat Hill Windpark I will include a 200 MW wind farm totaling approximately 20,000 acres within a portion of Clay County (dependent upon final layout for turbine, associated access roads, electrical collection systems, substations, and a transmission line) (See Figure 1 and Figure 2). Tetra Tech submitted an updated NHIS request for the revised project boundaries to the MN DNR on October 23, 2015 and received an updated response in a letter dated December 10, 2015. The following appendices support this narrative:

- Appendix A    Figure 1 – Project Boundary Topographic Map, Clay County, Minnesota
- Figure 2 – Project Area Aerial Map, Clay County, Minnesota
- Figure 3 – Areas Identified by NHIS, Clay County, Minnesota
- Appendix B    Correspondence with the MN DNR
  - 2015 NHIS Response
  - 2015 NHIS Data Request Form
  - 2007 NHIS Response
  - 2007 NHIS Data Request Form

### ***Natural Heritage Inventory System Review (NHIS) Results***

In the initial 2007 NHIS review, the MN DNR stated that several “Sites of Biodiversity Significance” were identified within and adjacent to the proposed project area, including the Bluestem Scientific and Natural Area, Buffalo River State Park, and a Site of Outstanding Biodiversity Significance. The MN DNR recommended considering alternatives to avoid direct or indirect impacts to these Sites of Biodiversity Significance. These Sites of Biodiversity Significance are located outside the revised project boundaries and were not identified as concerns in the updated 2015 NHIS review (See Figure 3).

The MN DNR stated the Bluestem Prairie/Buffalo River State Park area and the Felton Prairie Complex Important Bird Area provided habitat for several state listed bird species in their 2007 NHIS review. The MN DNR recommended wind turbines not be placed within at least ¼ mile, and preferably ½ mile, of prairie remnants. The MN DNR also recommended pre and post-development avian monitoring. Tetra

**Tetra Tech Inc.**

2001 Killebrew Drive, Suite 141, Bloomington, MN 55425  
Tel 612-643-2200 Fax 612-643-2201 [tetratech.com](http://tetratech.com)

Tech completed pre-development avian monitoring in 2008 and results were submitted to the MN DNR. In the updated 2015 NHIS review, the MN DNR stated the Felton Prairie Important Bird Area (IBA) is located immediately to the northeast of the proposed project area and several state-listed endangered and threatened birds have been documented in the vicinity of the project area. The MN DNR continues to recommend post-construction avian fatality monitoring.

In 2007, the MN DNR stated greater prairie-chicken booming grounds (*Tymphanuchus cupido*) have been documented within the project boundary. Because booming grounds can change from year to year, the MN DNR recommended contacting the Area Wildlife Manager for current information on prairie chicken use within the project area. If active booming grounds are located within the project boundary, the MN DNR recommended no construction work be completed near the booming grounds from April 1-May 15. The MN DNR also recommended minimizing roads, fences, and other infrastructure in the vicinity of known booming grounds. MN DNR referenced a study from Hagen et al. (Wildlife Society Bulletin 2004, 32:69-82) which recommended that wind turbines be placed at least 1.25 miles from lesser prairie-chicken (*Tympanuchus pallicinctus*) habitat. For all prairie grouse, the U.S. Fish and Wildlife Service recommended that, where feasible, turbines not be placed within 5 miles of known booming grounds. In the 2015 NHIS review, the MN DNR continues to recommend contacting the Area Wildlife Manager, Don Schultz, at 218-739-7576 for current information on prairie chicken activity within the project area. If there are active booming grounds within the project boundary, the MN DNR still recommends that no construction work be completed near the booming grounds from April 1-May 15. The MN DNR also continues to recommend minimizing roads, fences, and other infrastructure in the vicinity of known booming grounds.

Native prairie remnants including a railroad right-of way prairie are located within the proposed project boundary. In 2007, the MN DNR stated turbine locations, access roads, and utility routes should avoid all native prairie remnants. If any prairie would be impacted by the proposed project, biological surveys for rare butterflies and rare plants, such as the western prairie fringed orchids, would be required, and endangered species permits would likely be necessary. The MN DNR requested Lisa Joyal be contacted before any survey work was initiated and a native prairie protection and management plan be submitted to the Natural Heritage and Nongame Research Program. DNR Prairie Management Specialist, Shelley Becklund, should also be contacted to discuss this project and the prairie protection plan.

The updated 2015 NHIS review also identified native prairie remnants in the railroad right-of-way between the roadway and the railroad within the project area (see 2015 NHIS Response). The MN DNR recommended the following:

- Avoid ground disturbance within the railroad right-of-way,
- Do not park equipment or stockpile supplies within the railroad right-of-way,
- Divert runoff away from the native prairie remnants,
- Revegetate disturbed soil with native prairie species immediately following construction, and
- Use only weed-free mulches, topsoils, and seed mixes.

Several mussel species including the black sandshell (*Ligumia recta*), a state-listed species of special concern, have been documented in the Buffalo River in the vicinity of the proposed project. The MN DNR requested in both 2007 and 2015 that erosion prevention and sediment control practices be implemented and maintained near the river.

The potential for federally listed bat species exists within the project area. The updated 2015 NHIS review requests coordination with the USFWS regarding effects specifically to the northern long-eared bat.

In 2007, the MN DNR requested that Rich Baker, Minnesota Endangered Species Coordinator, be contacted to discuss the endangered species permitting process if the project will impact any species listed as either

endangered or threatened. Given the presence of federally-listed species within the project area, the MN DNR also recommended contacting Laurie Fairchild with the U.S. Fish & Wildlife Service, to discuss all applicable federal regulations. The MN DNR requested a copy of the Preconstruction Biological Preservation Survey required by the Public Utilities Commission (PUC) be sent to Lisa Joyal. Additionally, the MN DNR encouraged the consideration of alternate locations for the proposed Flat Hill I wind farm, so that the most appropriate site in this area may be selected. The Natural Heritage and Nongame Research Program did not have any concerns regarding the Flat Hill II project area in 2007.

In their 2015 NHIS review, the MN DNR requested that the potential impacts to the above rare features are addressed in the PUC Site Permit Application. The Avian and Bat Protection Plan should also include measures to minimize impacts to rare birds and bats. The MN DNR also requested a copy of their response letter dated December 10, 2015 be included in any state license or permit application.

**Summary of Species Identified by NHIS**

In their 2007 NHIS review, the MN DNR identified 27 listed species of concern with occurrences within a one mile radius of the Flat Hill I and Flat Hill II Windparks. In their 2015 NHIS review, the MN DNR identified 9 species of concern with occurrences documented within a one mile radius of the revised Flat Hill Windpark I project area. The greater prairie chicken (*Tymphanuchus cupido*) and the black sandshell (*Ligumia recta*) were previously discussed above. The remaining seven species include the upland sandpiper (*Bartramia longicauda*), the small white lady’s slipper (*Cypripedium candidum*), the felwort (*Gentianella amarella*), the sandhill crane (*Grus Canadensis*), marbled godwit (*Limosa fedoa*), the Wilson’s phalarope (*Phalaropus tricolor*), and the alkali grass (*Puccinellia nuttalliana*).

**Table 1. Species Identified by NHIS Rare Features Database**

Species	2007 NHIS Review	2015 NHIS Review
<i>Ammodramus henslowii</i> (Henslow's Sparrow)	END	-
<i>Bartramia longicauda</i> (Upland Sandpiper)	-	Watchlist
<i>Botrychium campestre</i> (Prairie Moonwort)	SPC	-
<i>Botrychium simplex</i> (Least Moonwort)	SPC	-
<i>Calamagrostis montanensis</i> (Plains Reedgrass)	SPC	-
<i>Calcarius ornatus</i> (Chestnut-collared Longspur)	END	-
<i>Carex hallii</i> (Hall's Sedge)	SPC	-
<i>Carex scirpoidea</i> (Northern Singlespike Sedge)	SPC	-
<i>Carex sterilis</i> (Sterile Sedge)	THR	-
<i>Cypripedium candidum</i> (Small White Lady's-slipper)	SPC	SPC
<i>Gaillardia aristata</i> (Blanket-flower)	SPC	-
<i>Gentiana affinis</i> (Northern Gentian)	SPC	-
<i>Gentianella amarella</i> (Felwort)	SPC	SPC
<i>Gentianella amarella ssp. acuta</i> (Felwort)	SPC	-
<i>Grus canadensis</i> (Sandhill Crane)	-	Watchlist
<i>Helianthus nuttallii ssp. rydbergii</i> (Nuttall's Sunflower)	SPC	-
<i>Helictotrichon hookeri</i> (Oat-grass)	SPC	-
<i>Hesperia comma assiniboia</i> (Assiniboia Skipper)	END	-
<i>Hesperia dacotae</i> (Dakota Skipper)	THR	-

<i>Heterodon nasicus</i> (Western Hognose Snake)	SPC	-
<i>Lanius ludovicianus</i> (Loggerhead Shrike)	THR	-
<i>Ligumia recta</i> (Black Sandshell)	-	SPC
<i>Limosa fedoa</i> (Marbled Godwit)	-	SPC
<i>Microtus ochrogaster</i> (Prairie Vole)	SPC	-
<i>Oarisma powesheik</i> (Powesheik Skipper)	SPC	-
<i>Oeneis uhleri varuna</i> (Uhler's Arctic)	END	-
<i>Orobanche fasciculata</i> (Clustered Broomrape)	SPC	-
<i>Orobanche ludoviciana</i> (Louisiana Broomrape)	SPC	-
<i>Perognathus flavescens</i> (Plains Pocket Mouse)	SPC	-
<i>Phalaropus tricolor</i> (Wilson's Phalarope)	-	THR
<i>Platanthera praeclara</i> (Western Prairie Fringed Orchid)	END	-
<i>Puccinellia nuttalliana</i> (Alkali Grass)	-	Watchlist
<i>Speyeria idalia</i> (Regal Fritillary)	SPC	-
<i>Tympanuchus cupido</i> (Greater Prairie-chicken)	SPC	SPC

END= Endangered  
 THR= Threatened

Watchlist= Tracked, but no legal status  
 SPC= Special Concern

### **Summary of 2015 NHIS Recommendations**

The MN DNR recommends post-construction avian fatality monitoring.

The MN DNR recommends contacting Area Wildlife Manager, Don Schultz, at 218-739-7576 for current information on prairie chicken activity within the project area. If there are active booming grounds within the project boundary, the MN DNR recommends that no construction work be completed near the booming grounds from April 1-May 15. The MN DNR also recommends minimizing roads, fences, and other infrastructure in the vicinity of known booming grounds.

The MN DNR recommends the following to avoid affecting native prairie remnants:

- Avoid ground disturbance within the railroad right-of-way,
- Do not park equipment or stockpile supplies within the railroad right-of-way,
- Divert runoff away from the native prairie remnants,
- Revegetate disturbed soil with native prairie species immediately following construction, and
- Use only weed-free mulches, topsoils, and seed mixes.

The MN DNR requests erosion prevention and sediment control practices be implemented and maintained near the river to avoid impacts to the black sandshell (*Ligumia recta*), a state listed species of concern.

The MN DNR requests coordination with the USFWS regarding effects specifically to the northern long-eared bat.

The MN DNR requests that the potential impacts to the above rare features are addressed in the Public Utilities Commission (PUC) Site Permit Application. The Avian and Bat Protection Plan should also include measures to minimize impacts to rare birds and bats. The MN DNR also requests a copy of their response letter dated December 10, 2015 be included in any state license or permit application.

The results of this Natural Heritage Review are valid for one year; the results are only valid for the project location and the project description identified on the NHIS Data Request Form.

If you have questions or comments concerning this submittal, please feel free to contact our office at (612) 643-2224 or [kim.gorman@tetrattech.com](mailto:kim.gorman@tetrattech.com).

Sincerely,

**TETRA TECH**

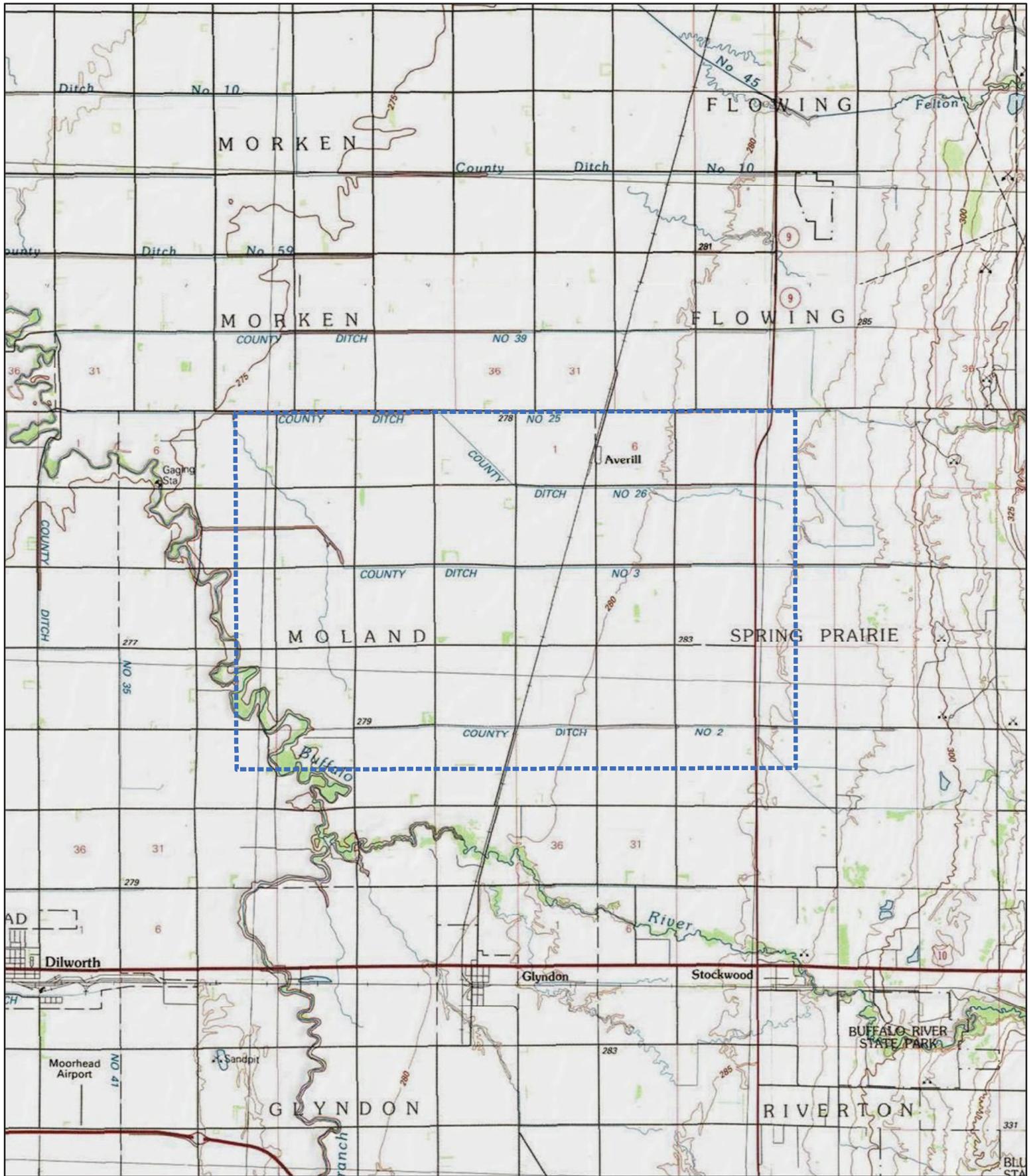


Molly Kuisle  
Environmental Scientist



Kimberely Gorman  
Senior Project Manager

**APPENDIX A: FIGURES 1 – 3**



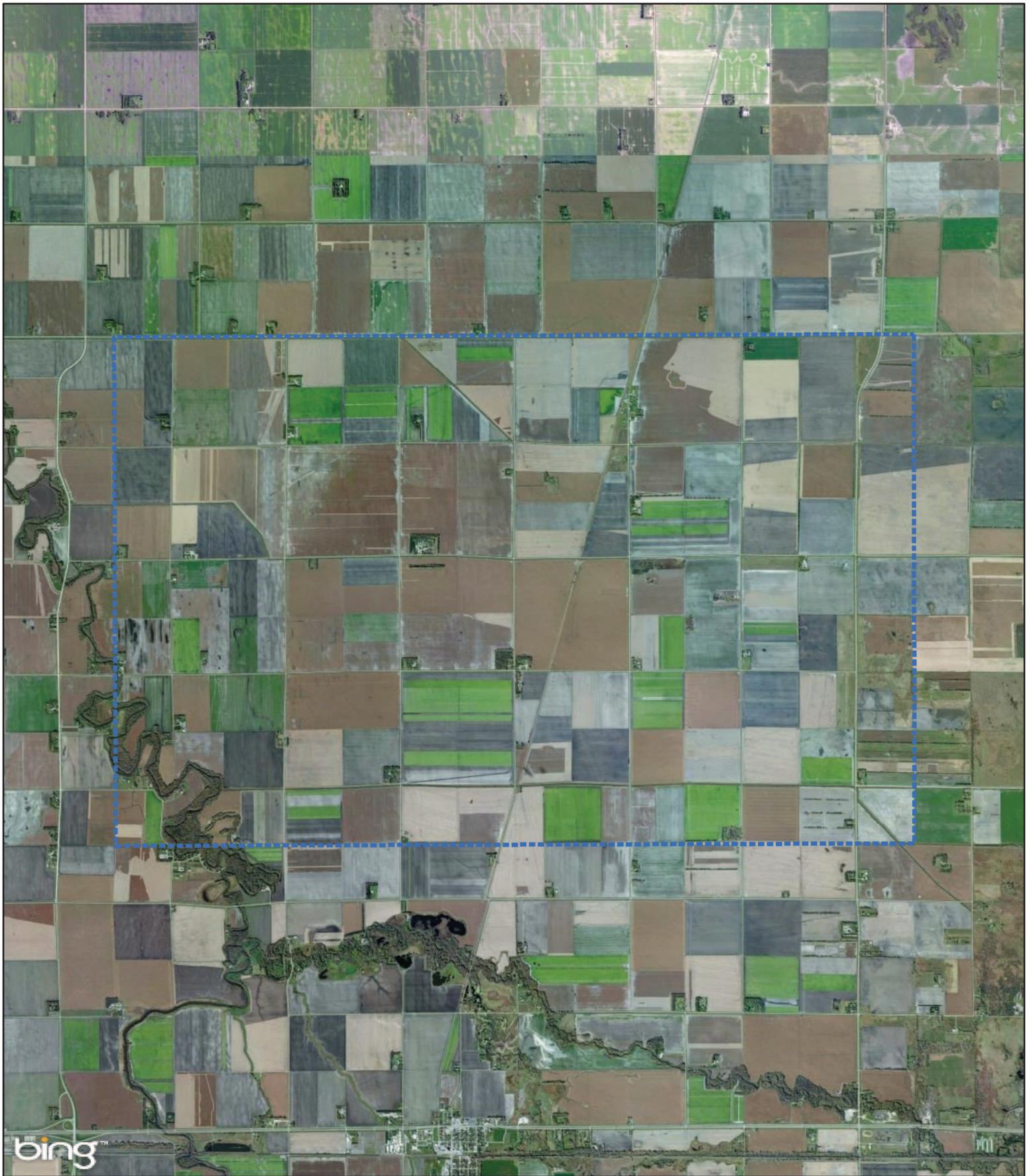
Source: Map adapted from USGS 30 X 60 Minute topographic quadrangle: Fargo, North Dakota - Minnesota (1985).



 Project Boundary

Figure 1  
Project Boundary  
Flat Hill Windpark I  
Quantum Utility Generation, LLC





Source: Map adapted from Bing Aerial Map Server.

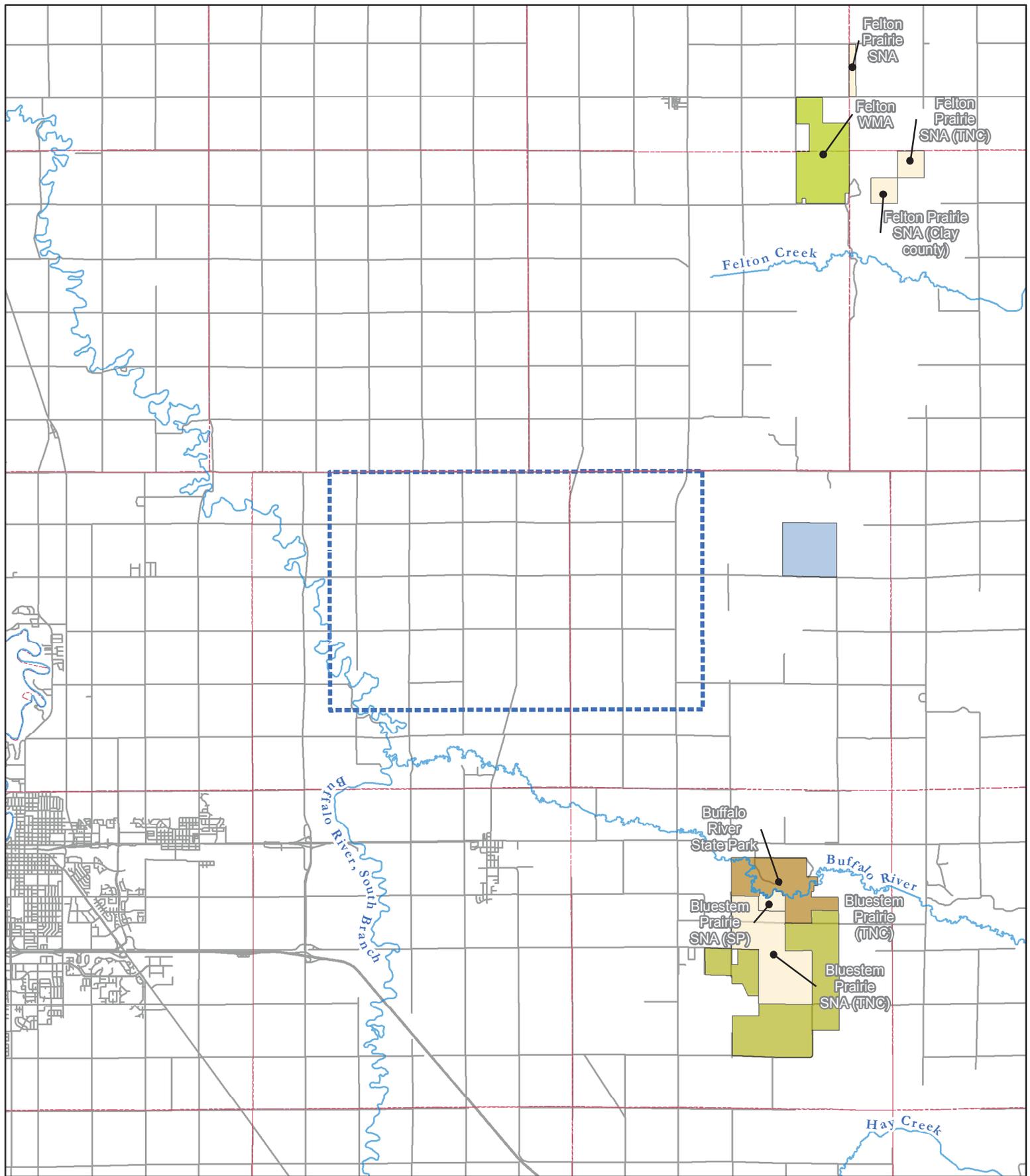


 Project Boundary



Figure 2  
Project Area  
Flat Hill Windpark I  
Quantum Utility Generation, LLC





Source: Map adapted from Bing Aerial Map Server, MN DNR State WMA.



-  Project Boundary
-  Site of Outstanding Biodiversity
-  State Park
-  Scientific and Natural Area
-  The Nature Conservancy
-  Wildlife Management Area

Figure 3  
Areas Identified by NHIS  
Flat Hill Windpark I Project Boundary  
Quantum Utility Generation, LLC



**APPENDIX B: Correspondence with the MN DNR**



# Minnesota Department of Natural Resources

Division of Ecological and Water Resources, Box 25

500 Lafayette Road

St. Paul, Minnesota 55155-4025

Phone: (651) 259-5091 E-mail: [samantha.bump@state.mn.us](mailto:samantha.bump@state.mn.us)

December 10, 2015

**Correspondence # ERDB 20080394-0013**

Ms. Molly Kuisle  
Tetra Tech EMI, Inc.  
2001 Killebrew Drive, Suite 141  
Bloomington, MN 55425

RE: Natural Heritage Review of the proposed Flat Hill Windpark I, Clay County

Township (N)	Range (W)	Section(s)
140	46	4-9,16-21,28-30
140	47	1-5,8-17,20-29
140	46	31-33
140	47	36

Dear Ms. Kuisle,

As requested, the Minnesota Natural Heritage Information System has been queried to determine if any rare species or other significant natural features are known to occur within an approximate one-mile radius of the proposed project. Based on this query, rare features have been documented within the search area (for details, see the enclosed database reports; please visit the Rare Species Guide at <http://www.dnr.state.mn.us/rsg/index.html> for more information on the biology, habitat use, and conservation measures of these rare species). Please note that the following **rare features may be adversely affected** by the proposed project:

### *Native Prairie Remnants*

- The Minnesota Biological Survey (MBS) has identified native prairie remnants in the railroad right-of-way between the roadway and the railroad within the project area (see attached maps). The 1997 Minnesota State Legislature directed the DNR to conduct a field review of active railroad rights-of-way (ROW) to identify native prairie. The DNR surveyed 3240 miles of railroad ROW, of which 487 discontinuous miles of native prairie were identified. The prairie fragments were ranked *very good*, *good*, or *fair* based on the coverage of native prairie plant species, abundance of woody shrubs, and level of disturbance (such as herbicide use or equipment storage). In 1998 the prairie remnants in the vicinity of the project area was considered to be in *good* condition. Given that more than 99% of the prairie that was present in the state before settlement has been destroyed, and more than one-third of Minnesota's endangered, threatened, and special concern species are now dependent on the remaining small fragments of Minnesota's prairie ecosystem, we feel that all prairie remnants merit protection. Although current conditions at these sites are unknown, we offer the following recommendations:
  - Avoid ground disturbance within the railroad right-of-way,
  - Do not park equipment or stockpile supplies within the railroad right-of-way,
  - Divert runoff away from the native prairie remnants,
  - Revegetate disturbed soil with native prairie species immediately following construction, and
  - Use only weed-free mulches, topsoils, and seed mixes.

*State-listed Species*

- The black sandshell (*Ligumia recta*), a state-listed mussel species of special concern, has been documented in the Buffalo River in the vicinity of the proposed project. As mussels are particularly vulnerable to deterioration in water quality, especially increased siltation, it is important that effective erosion prevention and sediment control practices be implemented and maintained near the river.
- The Felton Prairie Important Bird Area (IBA) is immediately northeast of the proposed project. Important Birds Areas, identified by Audubon Minnesota in partnership with the DNR, are part of an international conservation effort aimed at conserving critical bird habitats. They are voluntary and non-regulatory, but the designation does demonstrate the importance of this area to birds. The Felton Prairie IBA is a unique gravel prairie area which lies in a beach-ridge complex of Glacial Lake Agassiz. It contains large high quality tracts of habitat that support healthy bird communities. A minimum of 151 species of birds have been observed within the IBA boundaries, including several state-listed species and Species in Greatest Conservation Need (SGCN; as identified in Minnesota's State Wildlife Action Plan (<http://www.dnr.state.mn.us/cwcs/index.html>)). Please note that many SGCN are not tracked in the Natural Heritage Information System (NHIS). It should also be noted that the NHIS does not include records of migrating birds.

The Natural Heritage Information System does contain records for the following state-listed species in the vicinity of the proposed project:

Chestnut-collared Longspur ( <i>Calcarius ornatus</i> )	Endangered
Henslow's Sparrow ( <i>Ammodramus henslowii</i> )	Endangered
Loggerhead Shrike ( <i>Lanius ludovicianus</i> )	Endangered
Wilson's Phalarope ( <i>Phalaropus tricolor</i> )	Threatened
Marbled Godwit ( <i>Limosa fedoa</i> )	Species of Special Concern
Greater Prairie-chicken ( <i>Tympanuchus cupido</i> )	Species of Special Concern

The spring and fall surveys conducted by Tetra Tech in 2008 also documented the following state-listed species within or near the proposed project area:

Sprague's Pipit ( <i>Anthus spragueii</i> )	Endangered
Wilson's Phalarope ( <i>Phalaropus tricolor</i> )	Threatened
Marbled Godwit ( <i>Limosa fedoa</i> )	Species of Special Concern
Greater Prairie-chicken ( <i>Tympanuchus cupido</i> )	Species of Special Concern
Franklin's Gull ( <i>Leucophaeus pipixcan</i> )	Species of Special Concern

Wind farms can affect birds due to collision mortality, displacement due to disturbance, habitat fragmentation, and habitat loss. Even if collision mortality rates are low, the additional mortality may be significant for rare species. Given the wind project's proximity to this ecologically significant area, the occurrence of state-listed endangered and threatened birds in the vicinity, and the potential for wind turbines to cause avian fatalities, we also recommend post-construction avian fatality monitoring.

- Greater prairie-chicken booming grounds have been documented within the project boundary, and the Felton Prairie IBA to the northeast is an important habitat complex for this species. As the NHIS data is not current and booming grounds can change from year to year, please contact

the Area Wildlife Manager, Don Schultz, at 218-739-7576 for current information on prairie-chicken activity within the project area. If there are active booming grounds within the project boundary, we recommend that there be no construction work near the booming grounds from April 1-May 15. We also recommend minimizing roads, fences, and other infrastructure in the vicinity of known booming grounds.

### *Federally Listed Species*

- The Natural Heritage Information System (NHIS) tracks bat roost trees and hibernacula plus some acoustic data, but this information is not exhaustive. Although there are no NHIS records for bats in the vicinity of the proposed project, all seven of Minnesota's bats can be found throughout Minnesota and based on the acoustic data collected by Tetra Tech in 2008 likely use the project area. The northern long-eared bat (*Myotis septentrionalis*), tricolored bat (*Perimyotis subflavus*), big brown bat (*Eptesicus fuscus*), and little brown bat (*Myotis lucifugus*) are all state-listed species of special concern.

Effective May 4, 2015, the U.S. Fish and Wildlife Service (USFWS) listed the northern long-eared bat as threatened under the Endangered Species Act (ESA). As wind farms have the potential to adversely affect ("take") the northern long-eared bat, please coordinate with the USFWS regarding this species.

### *Environmental Review and Permitting*

- Please address potential impacts to the above rare features in the Public Utilities Commission (PUC) Site Permit Application. The Avian and Bat Protection Plan should also include measures to minimize impacts to rare birds and bats.
- Please include a copy of this letter in any state license or permit application.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area. **If additional information becomes available regarding rare features in the vicinity of the project, further review may be necessary.**

The enclosed results include an Index Report of records in the Rare Features Database, the main database of the NHIS. To control the release of specific location data, the report is copyrighted and only provides rare features locations to the nearest section. The Index Report may be reprinted, unaltered, in any environmental review document (e.g., EAW or EIS), municipal natural resource plan, or report compiled by your company for the project listed above. If you wish to reproduce the Index Report for any other purpose, please contact me to request written permission.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location (noted above) and the project description provided on the NHIS Data Request Form. Please contact me if project details change or for an updated review if construction has not occurred within one year.

The Natural Heritage Review does not constitute review or approval by the Department of Natural Resources as a whole. Instead, it identifies issues regarding known occurrences of rare features

and potential effects to these rare features. To determine whether there are other natural resource concerns associated with the proposed project, please contact your DNR Regional Environmental Assessment Ecologist (contact information available at [http://www.dnr.state.mn.us/eco/ereview/erp\\_regioncontacts.html](http://www.dnr.state.mn.us/eco/ereview/erp_regioncontacts.html)). Please be aware that additional site assessments or review may be required.

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources. An invoice will be mailed to you under separate cover.

Sincerely,

A handwritten signature in cursive script that reads "Lisa Joyal".

Lisa Joyal  
Endangered Species Review Coordinator

enc: Rare Features Database: Index Report  
Map (2)

cc: Jamie Schrenzel, DNR  
Theresa Olson, DNR  
Deborah Pile, OES  
Mags Rheude, USFWS

Minnesota Natural Heritage Information System  
Index Report of records within 1 mile radius of:  
ERDB# 20080394-013 - Flat Hill Windpark 1  
Multiple TRS  
Clay County

Rare Features Database:

Element Name and Occurrence Number	Federal Status	MN Status	Draft Status	SGCN Status	State Rank	Global Rank	Last Obs Date	EO ID #
<b>Vertebrate Animal</b>								
<u>Bartramia longicauda</u> (Upland Sandpiper) #72 T141N R45W S19, T141N R45W S8, T141N R46W S11, T141N R46W S24, T [...]; Clay County		Watchlist		SGCN	S4B	G5	2012-07-07	8547
<u>Grus canadensis</u> (Sandhill Crane) #486 T141N R45W S19, T141N R46W S24, T141N R45W S8, T139N R46W S25, T [...]; Clay County		Watchlist			S4B,SNR	G5	2012-07-07	36691
<u>Limosa fedoa</u> (Marbled Godwit) #94 T140N R47W S12, T140N R47W S11, T140N R47W S1, T140N R47W S2; Clay County		SPC		SGCN	S3B	G5	1978-06-06	9498
<u>Limosa fedoa</u> (Marbled Godwit) #95 T140N R47W S12, T140N R47W S1; Clay County		SPC		SGCN	S3B	G5	1980-07-02	9499
<u>Limosa fedoa</u> (Marbled Godwit) #96 T140N R46W S8, T140N R46W S5; Clay County		SPC		SGCN	S3B	G5	1978-06-06	9500
<u>Limosa fedoa</u> (Marbled Godwit) #97 T140N R46W S8, T140N R46W S9; Clay County		SPC		SGCN	S3B	G5	1978-06-06	9501
<u>Limosa fedoa</u> (Marbled Godwit) #98 T140N R46W S16, T140N R46W S9; Clay County		SPC		SGCN	S3B	G5	1980-07-02	9502
<u>Phalaropus tricolor</u> (Wilson's Phalarope) #108 T140N R46W S22; Clay County		THR		SGCN	S2B	G5	2007-06-12	34442
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #72 T141N R46W S34, T140N R46W S3, T141N R46W S35, T140N R46W S2; Clay County		SPC		SGCN	S3	G4	1991	3227
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #73 T140N R46W S14, T140N R46W S10, T140N R46W S15; Clay County		SPC		SGCN	S3	G4	2001	3228
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #74 T140N R46W S22, T140N R46W S23, T140N R46W S15; Clay County		SPC		SGCN	S3	G4	2001	3229
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #75 T140N R46W S27, T140N R46W S35, T140N R46W S34; Clay County		SPC		SGCN	S3	G4	1982	3230
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #99 T140N R46W S27, T140N R46W S22, T140N R46W S26; Clay County		SPC		SGCN	S3	G4	1982	3254

Minnesota Natural Heritage Information System  
Index Report of records within 1 mile radius of:  
ERDB# 20080394-013 - Flat Hill Windpark 1  
Multiple TRS  
Clay County

Rare Features Database:

Element Name and Occurrence Number	Federal Status	MN Status	Draft Status	SGCN Status	State Rank	Global Rank	Last Obs Date	EO ID #
<b>Vertebrate Animal</b>								
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #410 T140N R46W S4, T140N R46W S9, T140N R46W S10; Clay County		SPC		SGCN	S3	G4	1992	11437
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #411 T140N R46W S16, T140N R46W S9, T140N R46W S17; Clay County		SPC		SGCN	S3	G4	1992	11438
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #492 T140N R46W S3, T140N R46W S10; Clay County		SPC		SGCN	S3	G4	2001	18257
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #532 T141N R46W S31, T140N R46W S5, T140N R46W S6, T141N R46W S32; Clay County		SPC		SGCN	S3	G4	1998	21736
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #675 T141N R46W S35; Clay County		SPC		SGCN	S3	G4	2002	31137
<b>Invertebrate Animal</b>								
<u>Ligumia recta</u> (Black Sandshell) #485 T140N R47W S8, T140N R47W S18, T140N R47W S7, T140N R47W S17; Clay County		SPC		SGCN	S3	G4G5	2003-08-19	33935
<u>Ligumia recta</u> (Black Sandshell) #488 T140N R47W S28, T140N R47W S33; Clay County		SPC		SGCN	S3	G4G5	2003-08-20	33938
<b>Vascular Plant</b>								
<u>Cypripedium candidum</u> (Small White Lady's-slipper) #374 T140N R46W S27, T140N R46W S34; Clay County		SPC			S3	G4	1981-05-29	34391
<u>Gentianella amarella</u> (Felwort) #4 T140N R46W S22; Clay County		SPC			S3	G5	1987-09-17	7682
<u>Puccinellia nuttalliana</u> (Alkali Grass) #12 T141N R46W S31, T140N R47W S1, T140N R46W S6, T141N R46W S32; Clay County		Watchlist			SNR	G5	1985-07-10	5404
<u>Puccinellia nuttalliana</u> (Alkali Grass) #18 T140N R46W S4, T140N R46W S8, T140N R46W S9, T140N R46W S5; Clay County		Watchlist			SNR	G5	1987-06-13	7860

Minnesota Natural Heritage Information System  
Index Report of records within 1 mile radius of:  
ERDB# 20080394-013 - Flat Hill Windpark 1  
Multiple TRS  
Clay County

Rare Features Database:

Element Name and Occurrence Number	Federal Status	MN Status	Draft Status	SGCN Status	State Rank	Global Rank	Last Obs Date	EO ID #
<b>Native Plant Community (This may not represent a complete list. Also see MCBS Native Plant Communities at <a href="http://deli.dnr.state.mn.us">http://deli.dnr.state.mn.us</a>.)</b>								
<u>Mesic Prairie (Northern) Type #26</u> T140N R46W S27, T140N R46W S33, T140N R46W S34, T140N R46W S28; Clay County		(NPC Code: UPn23b) N/A			S2	GNR	1985-07-16	346
<u>Wet Prairie (Northern) Type #88</u> T140N R46W S21, T140N R46W S22; Clay County		(NPC Code: WPn53c) N/A			S3	GNR	1987-09-17	7748
<u>Wet Prairie (Northern) Type #168</u> T140N R46W S22, T140N R46W S27; Clay County		(NPC Code: WPn53c) N/A			S3	GNR	1987-09-17	5911

Records Printed = 27

Minnesota's endangered species law (*Minnesota Statutes*, section 84.0895) and associated rules (*Minnesota Rules*, part 6212.1800 to 6212.2300 and 6134) prohibit the taking of threatened or endangered species without a permit. For plants, taking includes digging or destroying. For animals, taking includes pursuing, capturing, or killing.

An Explanation of Fields:

**Element Name and Occurrence Number:** The Element is the name of the rare feature. For plant and animal species records, this field holds the scientific name followed by the common name in parentheses; for all other elements it is solely the element name. Native plant community names correspond to Minnesota's Native Plant Community Classification (Version 2.0). The Occurrence Number, in combination with the Element Name, uniquely identifies each record.

**Federal Status:** The status of the species under the U.S. Endangered Species Act: LE = endangered; LT = threatened; LE,LT = listed endangered in part of its range, listed threatened in another part of its range; LT,PDL = listed threatened, proposed for delisting; C = candidate for listing. If null or 'No Status,' the species has no federal status.

**MN Status:** The legal status of the plant or animal species under the Minnesota Endangered Species Law: END = endangered; THR = threatened; SPC = special concern; NON = tracked, but no legal status. Native plant communities, geological features, and colonial waterbird nesting sites do not have any legal status under the Endangered Species Law and are represented by a N/A.

**Draft Status:** Proposed change to the legal status of the plant or animal species under the Minnesota Endangered Species Law: END = endangered; THR = threatened; SPC = special concern; Watchlist = tracked, but no legal status.

**SGCN Status:** SGCN = The species is a Species in Greatest Conservation Need as identified in Minnesota's State Wildlife Action Plan (<http://www.dnr.state.mn.us/cwcs/index.html>). This designation applies to animals only.

**State Rank:** Rank that best characterizes the relative rarity or endangerment of the taxon or plant community in Minnesota. The ranks do not represent a legal status. They are used by the Minnesota Department of Natural Resources to set priorities for research, inventory and conservation planning. The state ranks are updated as inventory information becomes available. S1 = Critically imperiled in Minnesota because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. S2 = Imperiled in Minnesota because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. S3 = Vulnerable in Minnesota either because rare or uncommon, or found in a restricted range, or because of other factors making it vulnerable to extirpation. S4 = Apparently secure in Minnesota, usually widespread. S5 = Demonstrably secure in Minnesota, essentially ineradicable under present conditions. SH =

Minnesota Natural Heritage Information System  
Index Report of records within 1 mile radius of:  
ERDB# 20080394-013 - Flat Hill Windpark 1  
Multiple TRS  
Clay County

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Of historical occurrence in the state, perhaps having not been verified in the past 20 years, but suspected to be still extant. An element would become SH without the 20-year delay if the only known occurrences in the state were destroyed or if it had been extensively and unsuccessfully looked for. SNR = Rank not yet assessed. SU = Unable to rank. SX = Presumed extinct in Minnesota. SNA = Rank not applicable. S#S# = Range Rank: a numeric range rank (e.g., S2S3) is used to indicate the range of uncertainty about the exact status of the element. S#B, S#N = Used only for migratory animals, whereby B refers to the breeding population of the element in Minnesota and N refers to the non-breeding population of the element in Minnesota.

**Global Rank:** The global (i.e., range-wide) assessment of the relative rarity or imperilment of the species or community. Ranges from G1 (critically imperiled due to extreme rarity on a world-wide basis) to G5 (demonstrably secure, though perhaps rare in parts of its range). Global ranks are determined by NatureServe, an international network of natural heritage programs and conservation data centers.

**Last Observed Date:** Date that the Element Occurrence was last observed to be extant at the site in format YYYY-MM-DD.

**EO ID #:** Unique identifier for each Element Occurrence record.

**Element Occurrence:** An area of land and/or water in which an Element (i.e., a rare species or community) is, or was, present, and which has practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location. Specifications for each species determine whether multiple observations should be considered 1 Element Occurrence or 2, based on minimum separation distance and barriers to movement.

# ERDB# 20080394-013 - Flat Hill Windpark 1

## Multiple TRS

### Clay County

GIS shapefiles of MBS Sites of Biodiversity Significance and DNR Native Plant Communities can be downloaded from the MN Geospatial Commons at <https://gisdata.mn.gov/>.



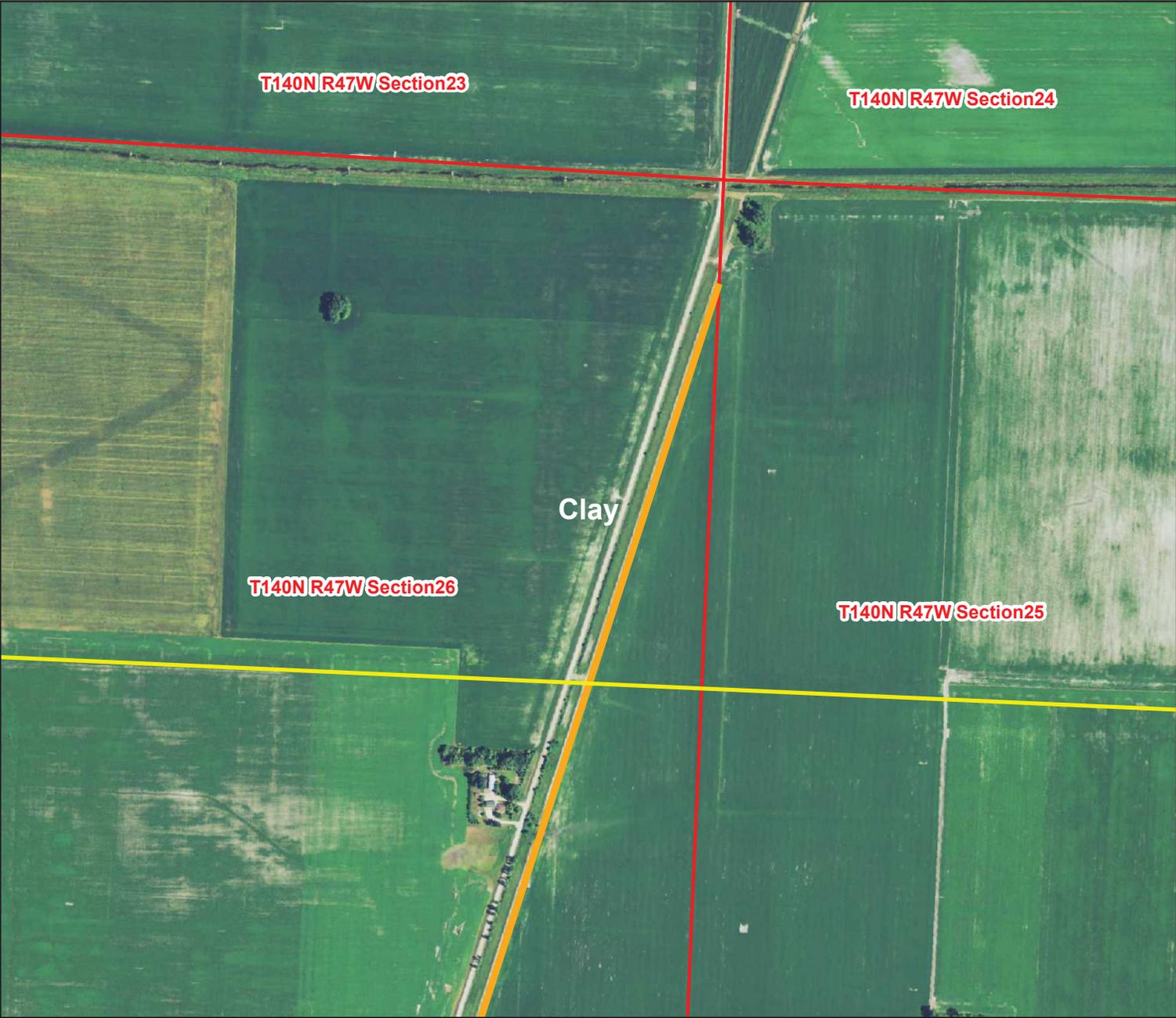
- Legend**
- SP\_Project\_061909
  - MBS Railroad Rights-of-Way Prairies**
    - Very Good
    - Good
    - Fair
  - County Boundries
  - PLS Section



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Rare Feature, Prairie Railroad Survey, Native Plant Community, and Sites of Biodiversity Significance data are from the Natural Heritage Information System. The absence of rare features for a particular location should not be construed to mean that the DNR is confident rare features are absent from that location.

# ERDB# 20080394-013 - Flat Hill Windpark 1 Multiple TRS Clay County

GIS shapefiles of MBS Sites of Biodiversity Significance and DNR Native Plant Communities can be downloaded from the MN Geospatial Commons at <https://gisdata.mn.gov/>.



### Legend

- SP\_Project\_061909
- MBS Railroad Rights-of-Way Prairies
  - Very Good
  - Good
  - Fair
- County Boundries
- PLS Section



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and Sites of Biodiversity Significance data are from the  
Natural Heritage Information System. The absence of rare features  
for a particular location should not be construed to mean that the  
DNR is confident rare features are absent from that location.



## Kuisle, Molly

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**From:** Kuisle, Molly  
**Sent:** Friday, October 23, 2015 2:45 PM  
**To:** Review.NHIS@state.mn.us  
**Subject:** NHIS Data Request Form: Flat Hill Windpark I  
**Attachments:** NHIS Data Request Form\_10232015.pdf; Project\_Area\_102315.zip

Dear Ms. Joyal,

Attached is the completed Natural Heritage Information System (NHIS) Data Request Form and a zipped GIS shapefile for the proposed Flat Hill Windpark I site. An NHIS review for this project was completed in 2007, however the project boundaries have since changed.

Please let me know if you have any questions or require any additional information.

Thank you,  
Molly

**Molly Kuisle | Environmental Scientist**

**Direct:** 612.643.2231 | **Main:** 612.643.2200 **Fax:** 612.643.2201  
molly.kuisle@tetrattech.com

**Tetra Tech | Complex World, Clear Solutions™**

2001 Killebrew Drive, Suite 141. | Bloomington, MN 55425

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2012	<b>For Agency Use Only:</b>	#Sec _____	Contact Rqsted? _____
	Received _____ Due _____	Inv _____	#EOs _____
	Search Radius _____mi. L / I / D EM	Map'd _____	Survey Rqsted? _____
	NoR / NoF / NoE / Std / Sub	Let _____	Log out _____
		Related ERDB# _____	

### NATURAL HERITAGE INFORMATION SYSTEM (NHIS) DATA REQUEST FORM

Please read the instructions on page 3 before filling out the form. Thank you!

#### WHO IS REQUESTING THE INFORMATION?

Mr. Name and Title Molly Kuisle  
 Ms. Agency/Company Tetra Tech

Mailing Address 2001 Killebrew Drive Suite 141 Bloomington MN 55425  
(Street) (City) (State) (Zip Code)

Phone 612-643-2231 e-mail molly.kuisle@tetrattech.com Responses will be sent via email. If you prefer US Mail check here:

#### THIS INFORMATION IS BEING REQUESTED FOR A:

- Federal EA     State EAW     PUC Site or Route Application     Watershed Plan     BER  
 Federal EIS     State EIS     Local Government Permit     Research Project  
 NEPA Checklist     Other (describe) \_\_\_\_\_
- Check here if this project is funded through any of the following grant programs: Lessard-Sams Outdoor Heritage Council (L-SOHC), Conservation Partners Legacy (CPL), or Legislative-Citizen Commission on Minnesota Resources (LCCMR).

#### INFORMATION WE NEED FROM YOU:

- 1) Enclose a map of the project boundary/area of interest (topographic maps or aerial photos are preferred).
- 2) Please provide a GIS shapefile\* (NAD 83, UTM Zone 15N) of the project boundary/area of interest.
- 3) List the following locational information\* (attach additional sheets if necessary):

For Agency Use: Region / MCBS Status	County _____	Township # _____	Range # _____	Section(s) (please list <b>all</b> sections) _____	For Agency Use: TRS Confirmed <input type="checkbox"/>
	_____	_____	_____	See attached listing of County Township, Range, Sections of Project Area	
	_____	_____	_____	_____	
	_____	_____	_____	_____	

- 4) Please provide the following information (attach additional sheets if necessary):

Project Name: Flat Hill Windpark I

Project Proposer: Quantum Utility Generation, LLC

Description of Project (including types of disturbance anticipated from the project):  
Quantum Utility Generation, LLC proposes to construct an approximately 200 MW windpark within a portion of Clay County.

---

Describe the existing land use of the project site. What types of land cover / habitat will be impacted by the proposed project? Land use within the project boundary is primarily agricultural with scattered farmsteads and roadways located throughout.

---

List any waterbodies (e.g., rivers, intermittent streams, lakes, wetlands) that may be affected by the proposed project, and discuss how they may be impacted (e.g., dewatering, discharge, riverbed disturbance).

The Buffalo River intersects the southwest corner of the project area. Several wetlands and intermittent streams have been identified throughout the project area. Wetland surveys have been completed for the project and impacts to water bodies are anticipated to be avoided.

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Does the project have the potential to affect any groundwater resources (e.g., groundwater appropriation, change in recharge, or contamination)?

None

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To your knowledge, has the project undergone a previous Natural Heritage review? If so, please list the correspondence #: ERDB # 20080394. How does this request differ from the previous request (e.g., change in scope, change in boundary, project being revived, project expansion, different phase)?

Change in project boundary

---

To your knowledge, have any native plant community or rare species surveys been conducted within the site? If so, please list: No

---

List any DNR Permits or Licenses that you will be applying for or have already applied for as part of this project:

---

#### INFORMATION WE PROVIDE TO YOU:

1) The response will include a Natural Heritage letter. If applicable, the letter will discuss potential effects to rare features.

- Check here if you are interested in a list of rare features in the vicinity of the area of interest but you do **not** need a review of potential effects to rare features. Please list the reason a review is not needed:

---

2) Depending on the results of the query or review, the response may include an Index Report of known aggregation sites and known occurrences of federally and state-listed plants and animals\* within an approximate one-mile radius of the project boundary/area of interest. The Index Report and Natural Heritage letter can be included in any public environmental review document.

3) A Detailed Report that contains more information on each occurrence may also be requested. Please note that the Detailed Report may contain specific location information that is protected under *Minnesota Statutes*, section 84.0872, subd. 2, and, as such, the Detailed Report may not be included in any public document (e.g., an EAW).

- Check here if you would like to request a Detailed Report. Please note that if the results of the review are 'No Effects' or a standard comment, a Detailed Report may not be available.

#### FEES / TURNAROUND TIME

There is a fee\* for this service. Requests generally take **3-4 weeks** from date of receipt to process, and are processed in the order received.

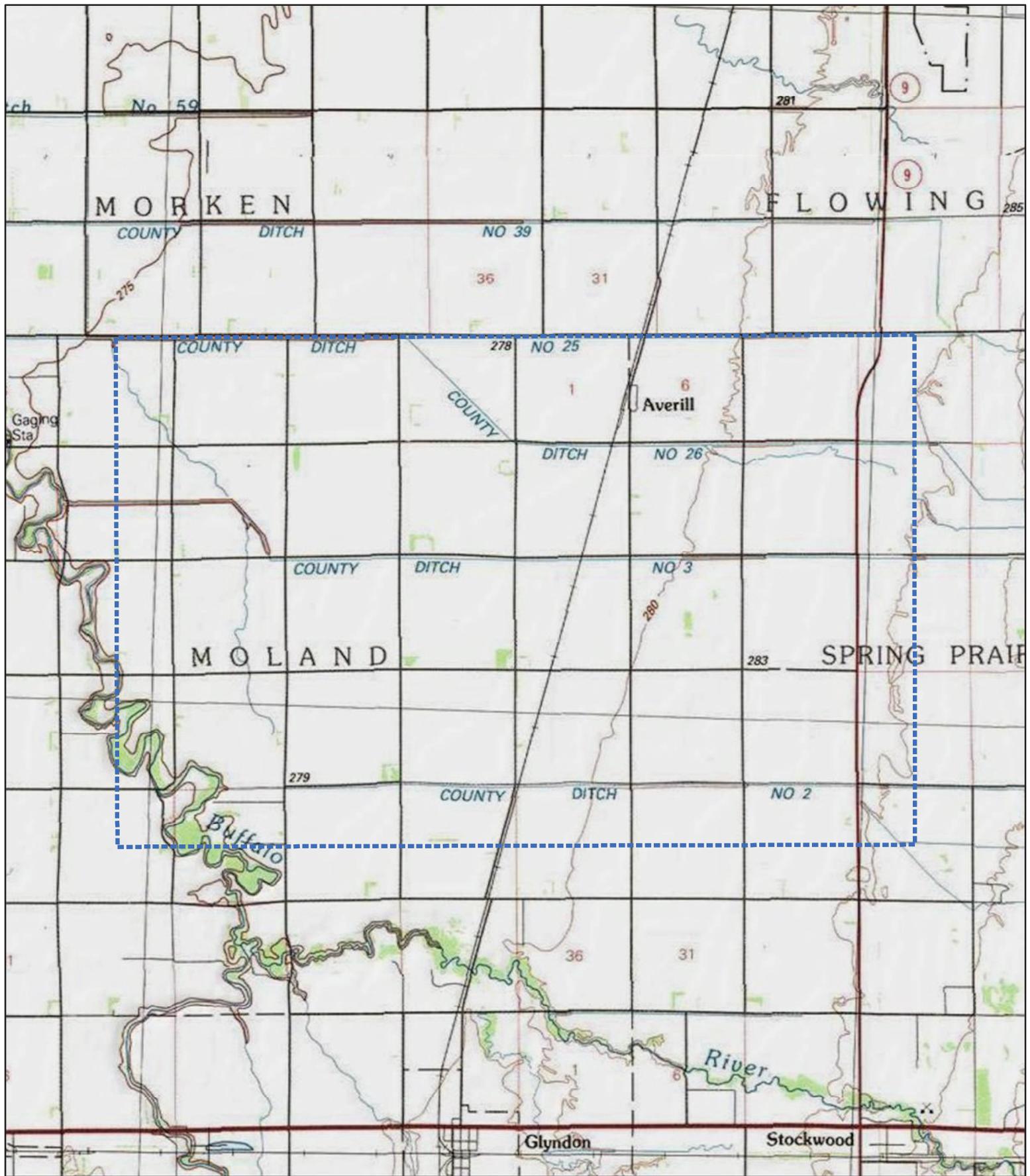
I have read the entire form and instructions, and the information supplied above is complete and accurate. I understand that material supplied to me from the Natural Heritage Information System is copyrighted and that I am not permitted to reproduce or publish any of this copyrighted material without prior written permission from the DNR. Further, if permission to publish is given, I understand that I must credit the Minnesota Division of Ecological and Water Resources, Minnesota Department of Natural Resources, as the source of the material.	
--	--

Signature (required)	Note: Digital signatures representing the name of a person shall be sufficient to show that such person has signed this document.
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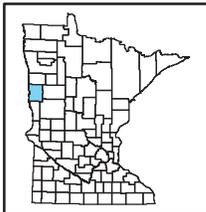
Mail or email completed form to:  
Lisa Joyal, Endangered Species Review Coordinator  
Division of Ecological and Water Resources  
Minnesota Department of Natural Resources  
500 Lafayette Road, Box 25  
St. Paul, Minnesota 55155  
[Review.NHIS@state.mn.us](mailto:Review.NHIS@state.mn.us)

Form is available at  
[http://files.dnr.state.mn.us/eco/nhnrp/nhis\\_data\\_request.pdf](http://files.dnr.state.mn.us/eco/nhnrp/nhis_data_request.pdf)

Revised March 2, 2012



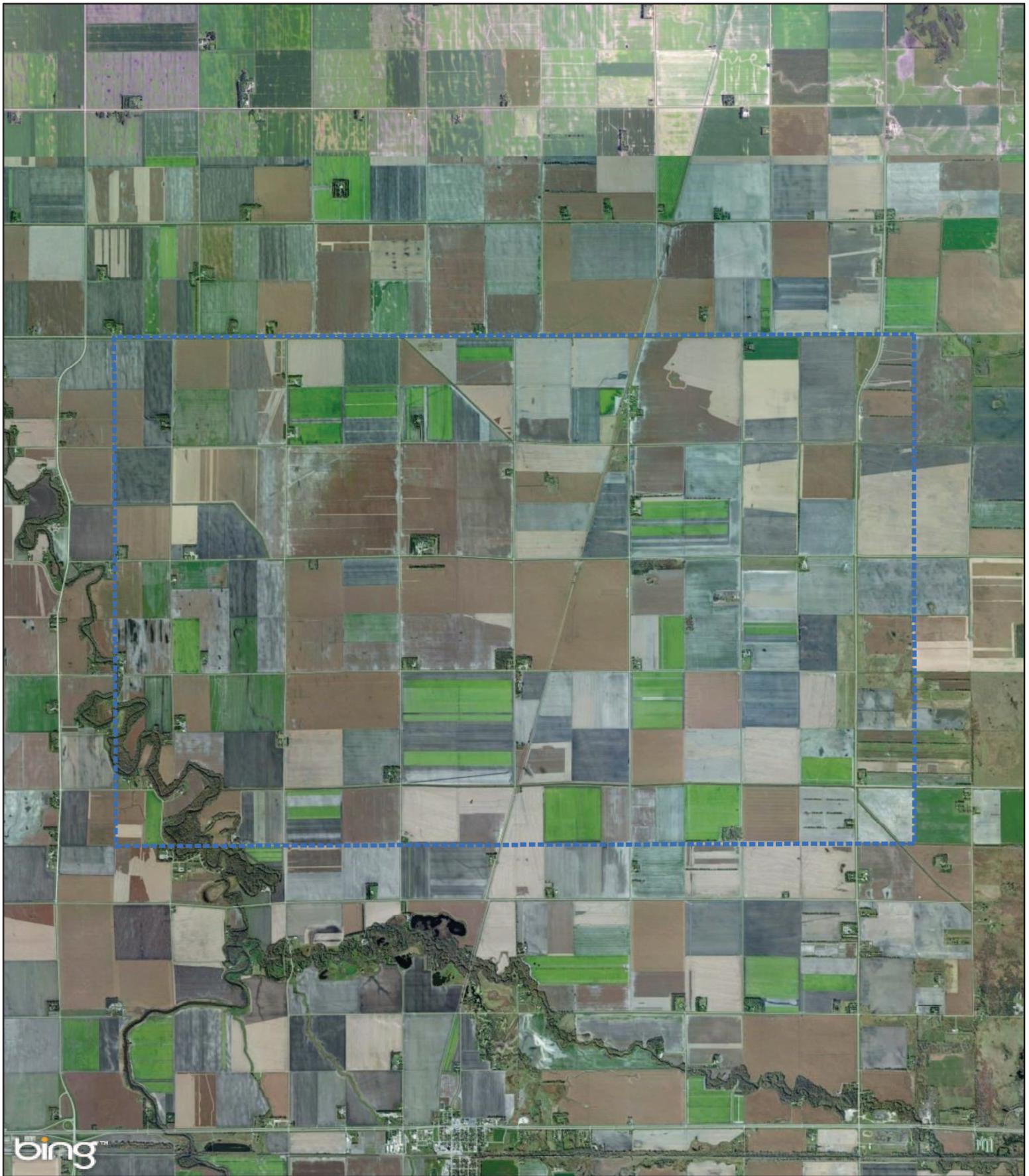
Source: Map adapted from USGS 30 X 60 Minute topographic quadrangle: Fargo, North Dakota - Minnesota (1985).



 Project Boundary

Figure 1  
Flat Hill Windpark I Project Boundary  
Quantum Utility Generation, LLC





Source: Map adapted from USGS 30 X 60 Minute topographic quadrangle: Fargo, North Dakota – Minnesota (1985).



 Project Boundary



Figure 2  
Flat Hill Windpark I Project Boundary  
Quantum Utility Generation, LLC

**Flat Hill Windpark I Project Area Quad Sections**

<b>TOWNSHIP</b>	<b>RANGE</b>	<b>SECTION</b>	<b>TRS</b>
140	46	4	T140N R46W S4
140	46	5	T140N R46W S5
140	46	6	T140N R46W S6
140	46	7	T140N R46W S7
140	46	8	T140N R46W S8
140	46	9	T140N R46W S9
140	46	16	T140N R46W S16
140	46	17	T140N R46W S17
140	46	18	T140N R46W S18
140	46	19	T140N R46W S19
140	46	20	T140N R46W S20
140	46	21	T140N R46W S21
140	46	28	T140N R46W S28
140	46	29	T140N R46W S29
140	46	30	T140N R46W S30
140	47	1	T140N R47W S1
140	47	2	T140N R47W S2
140	47	3	T140N R47W S3
140	47	4	T140N R47W S4
140	47	5	T140N R47W S5
140	47	8	T140N R47W S8
140	47	9	T140N R47W S9
140	47	10	T140N R47W S10
140	47	11	T140N R47W S11
140	47	12	T140N R47W S12
140	47	13	T140N R47W S13
140	47	14	T140N R47W S14
140	47	15	T140N R47W S15
140	47	16	T140N R47W S16
140	47	17	T140N R47W S17
140	47	20	T140N R47W S20
140	47	21	T140N R47W S21
140	47	22	T140N R47W S22
140	47	23	T140N R47W S23
140	47	24	T140N R47W S24
140	47	25	T140N R47W S25
140	47	26	T140N R47W S26
140	47	27	T140N R47W S27
140	47	28	T140N R47W S28
140	47	29	T140N R47W S29
141	46	31	T141N R46W S31
141	46	32	T141N R46W S32
141	46	33	T141N R46W S33
141	47	36	T141N R47W S36

County Distribution of Federally-Listed Threatened, Endangered, Proposed and Candidate Species

	Winged mapleleaf <i>(Quadrula fragosa)</i>	Endangered	St. Croix River
<b>Clay</b>	Northern long-eared bat <i>Myotis septentrionalis</i>	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
	Sprague's pipit <i>(Anthus spragueii)</i>	Candidate	Large (>350 acre) patches of grassland - prefer native grassland, but also use non-native planted grasslands.
	Dakota skipper <i>(Hesperia dacotae)</i>	Threatened  Critical Habitat <i>Maps of Critical Habitat</i>	Native prairie habitat
	Poweshiek skipperling <i>(Oarisma poweshiek)</i>	Endangered  Critical Habitat <i>Maps of Critical Habitat</i>	Native Prairie
	Western prairie fringed orchid <i>(Platanthera praeclara)</i>	Threatened	Wet prairies and sedge meadow
<b>Clearwater</b>	Canada lynx <i>(Lynx canadensis)</i>	Threatened	Northern forest
	Gray wolf <i>Canis lupus</i>	Threatened	Northern forest
	Northern long-eared bat <i>Myotis septentrionalis</i>	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
<b>Cook</b>	Canada lynx <i>(Lynx canadensis)</i>	Threatened	Northern forest
	Canada lynx <i>(Lynx canadensis)</i>	Critical Habitat	Map of critical habitat in Minnesota
	Gray wolf <i>Canis lupus</i>	Threatened	Northern forest
	Northern long-eared bat <i>Myotis septentrionalis</i>	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
<b>Cottonwood</b>	Northern long-eared bat <i>Myotis septentrionalis</i>	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
	Poweshiek skipperling <i>(Oarisma poweshiek)</i>	Endangered  Critical Habitat <i>Maps of Critical Habitat</i>	Native Prairie

[Keyword Search](#) | [A-Z Search](#) | [Filtered Search](#)

## Rare Species Guide: Filtered Search

**50 result(s)** for **Locations:** *Clay; minnesota endangered; minnesota threatened; minnesota special concern;*

<b><u>Common name</u></b>	<b><u>Scientific name</u></b>	<b><u>Group</u></b>	<b><u>Federal status</u></b>	<b><u>State status</u></b>
Assiniboia Skipper	<b><u><i>Hesperia assiniboia</i></u></b>	insect	none	endangered
Baird's Sparrow	<b><u><i>Ammodramus bairdii</i></u></b>	bird	none	endangered
Bald Eagle	<b><u><i>Haliaeetus leucocephalus</i></u></b>	bird	none	special concern
Black Sandshell	<b><u><i>Ligumia recta</i></u></b>	mussel	none	special concern
Blanket-flower	<b><u><i>Gaillardia aristata</i></u></b>	vascular plant	none	special concern
Blunt Sedge	<b><u><i>Carex obtusata</i></u></b>	vascular plant	none	special concern
Burrowing Owl	<b><u><i>Athene cunicularia</i></u></b>	bird	none	endangered
Chestnut-collared Longspur	<b><u><i>Calcarius ornatus</i></u></b>	bird	none	endangered
Clustered Broomrape	<b><u><i>Orobanche fasciculata</i></u></b>	vascular plant	none	special concern
Creek Heelsplitter	<b><u><i>Lasmigona compressa</i></u></b>	mussel	none	special concern
Dakota Skipper	<b><u><i>Hesperia dacotae</i></u></b>	insect	candidate	threatened
Drummond's Campion	<b><u><i>Silene drummondii ssp. drummondii</i></u></b>	vascular plant	none	special concern
Dry Sedge	<b><u><i>Carex xerantica</i></u></b>	vascular plant	none	special concern
Felwort	<b><u><i>Gentianella amarella</i></u></b>	vascular plant	none	special concern
Few-flowered Spike-rush	<b><u><i>Eleocharis quinqueflora</i></u></b>	vascular plant	none	special concern
Garita Skipper	<b><u><i>Oarisma garita</i></u></b>	insect	none	threatened
Greater Prairie-chicken	<b><u><i>Tympanuchus cupido</i></u></b>	bird	none	special concern
Hair-like Beak-rush	<b><u><i>Rhynchospora capillacea</i></u></b>	vascular plant	none	threatened
Hall's Sedge	<b><u><i>Carex hallii</i></u></b>	vascular plant	none	special concern
Henslow's Sparrow	<b><u><i>Ammodramus henslowii</i></u></b>	bird	none	endangered

Hill's Thistle	<b><u>Cirsium pumilum var. hillii</u></b>	vascular plant	none	special concern
Iowa Skipper	<b><u>Atrytone arogos iowa</u></b>	insect	none	special concern
Lake Sturgeon	<b><u>Acipenser fulvescens</u></b>	fish	none	special concern
Least Moonwort	<b><u>Botrychium simplex</u></b>	vascular plant	none	special concern
Leonard's Skipper	<b><u>Hesperia leonardus</u></b>	insect	none	special concern
Loggerhead Shrike	<b><u>Lanius ludovicianus</u></b>	bird	none	threatened
Louisiana Broomrape	<b><u>Orobanche ludoviciana var. ludoviciana</u></b>	vascular plant	none	special concern
Marbled Godwit	<b><u>Limosa fedoa</u></b>	bird	none	special concern
Nelson's Sparrow	<b><u>Ammodramus nelsoni</u></b>	bird	none	special concern
Northern Gentian	<b><u>Gentiana affinis</u></b>	vascular plant	none	special concern
Northern Singlespike Sedge	<b><u>Carex scirpoidea</u></b>	vascular plant	none	special concern
Nuttall's Sunflower	<b><u>Helianthus nuttallii ssp. rydbergii</u></b>	vascular plant	none	special concern
Oat-grass	<b><u>Avenula hookeri</u></b>	vascular plant	none	special concern
Plains Hog-nosed Snake	<b><u>Heterodon nasicus</u></b>	reptile	none	special concern
Plains Pocket Mouse	<b><u>Perognathus flavescens</u></b>	mammal	none	special concern
Plains Reedgrass	<b><u>Calamagrostis montanensis</u></b>	vascular plant	none	special concern
Powesheik Skipper	<b><u>Oarisma poweshiek</u></b>	insect	candidate	special concern
Prairie Moonwort	<b><u>Botrychium campestre</u></b>	vascular plant	none	special concern
Prairie Vole	<b><u>Microtus ochrogaster</u></b>	mammal	none	special concern
Red Three-awn	<b><u>Aristida purpurea var. longiseta</u></b>	vascular plant	none	special concern
Red-Tailed Prairie Leafhopper	<b><u>Aflexia rubranura</u></b>	insect	none	special concern
Regal Fritillary	<b><u>Speyeria idalia</u></b>	insect	none	special concern
Small White Lady's-slipper	<b><u>Cypripedium candidum</u></b>	vascular plant	none	special concern
Sprague's Pipit	<b><u>Anthus spragueii</u></b>	bird	candidate	endangered
Sterile Sedge	<b><u>Carex sterilis</u></b>	vascular plant	none	threatened

Uhler's Arctic	<b><u>Oeneis uhleri varuna</u></b>	insect	none	endangered
Western Prairie Fringed Orchid	<b><u>Platanthera praeclara</u></b>	vascular plant	threatened	endangered
Whorled Nut-rush	<b><u>Scleria verticillata</u></b>	vascular plant	none	threatened
Wilson's Phalarope	<b><u>Phalaropus tricolor</u></b>	bird	none	threatened
Yellow Rail	<b><u>Coturnicops noveboracensis</u></b>	bird	none	special concern

**Filter by group (select one or more)**

- |   |                                    |                                 |                                  |                                 |                                 |   |
|---|------------------------------------|---------------------------------|----------------------------------|---------------------------------|---------------------------------|---|
| <input checked="" type="checkbox"/> all | <input type="checkbox"/> amphibian | <input type="checkbox"/> bird   | <input type="checkbox"/> fish    | <input type="checkbox"/> fungus | <input type="checkbox"/> insect | <input type="checkbox"/> lichen         |
| <input type="checkbox"/> mammal         | <input type="checkbox"/> moss      | <input type="checkbox"/> mussel | <input type="checkbox"/> reptile | <input type="checkbox"/> snail  | <input type="checkbox"/> spider | <input type="checkbox"/> vascular plant |

**Filter by status (select one or more)**

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> federal endangered          | <input type="checkbox"/> federal threatened          | <input type="checkbox"/> federal candidate                |
| <input checked="" type="checkbox"/> state endangered | <input checked="" type="checkbox"/> state threatened | <input checked="" type="checkbox"/> state special concern |
| <input type="checkbox"/> CITES                       | <input type="checkbox"/> USFS Sensitive              | <input type="checkbox"/> all                              |

**Filter by location (optional)**

**Filter by habitat (optional)**

<b><u>Select counties</u></b>	<b><i>Selected</i></b>	<b><u>Select Habitat</u></b>	<b><i>Selected Habitats:</i></b>
<b><u>Select ECS subsections</u></b>	<b><i>Areas:</i></b>	<b><u>(s)</u></b>	
<b><u>Select watersheds</u></b>	Clay (14)		



# Minnesota Department of Natural Resources

Natural Heritage and Nongame Research Program, Box 25

500 Lafayette Road

St. Paul, Minnesota 55155-4025

Phone: (651) 259-5109 Fax: (651) 296-1811 E-mail: [lisa.joyal@dnr.state.mn.us](mailto:lisa.joyal@dnr.state.mn.us)

January 9, 2007

Ms. Melissa Doperalski  
Tetra Tech EM, Inc.  
2001 Killebrew Drive, Suite 141  
Bloomington, MN 55425

Re: Request for Natural Heritage information for vicinity of proposed Flat Hill I & Flat Hill II Windparks;  
Clay and Wilkin Counties  
NHNRP Contact #: ERDB 20080394

Dear Ms. Doperalski,

The Minnesota Natural Heritage database has been reviewed to determine if any rare plant or animal species or other significant natural features are known to occur within an approximate one-mile radius of the area indicated on the map enclosed with your information request. Based on this review, there are 157 known occurrences of rare species or native plant communities in the area searched (for details, please see the enclosed database printouts and the explanation of selected fields). Please address the following issues in the Public Utilities Commission (PUC) Site Permit Application for this project.

- The Minnesota County Biological Survey has identified several "Sites of Biodiversity Significance" within and adjacent to the proposed project area, including Bluestem Scientific and Natural Area, Buffalo River State Park, and a Site of Outstanding Biodiversity Significance within the project boundary in T140N R46W Section 11. "Sites of Biodiversity Significance" are areas with varying levels of native biodiversity that may contain high quality native plant communities, rare plants, rare animals, and/or animal aggregations. Outstanding ranking sites are defined as sites containing the best occurrences of the rarest species, the most outstanding examples of the rarest native plant communities, and/or the largest, most intact functional landscapes present in the state. These particular Sites, as discussed below, contain many native plant communities that provide habitat for several rare features. (GIS shapefiles of MCBS Sites of Biodiversity Significance and MCBS Native Plant Communities can be downloaded from the DNR's Data Deli website at [http://deli.dnr.state.mn.us/data\\_search.html](http://deli.dnr.state.mn.us/data_search.html).) We encourage you to consider project alternatives that would avoid direct or indirect impacts to these ecologically significant areas.

Bluestem Prairie Scientific and Natural Area is located within and adjacent to the Flat Hill I project area in T139N R46W Sections 15, 21, 22, 27, 28, 33, & 34. Scientific and Natural Areas (SNA) are legally designated public nature preserves established to protect the state's rarest natural features and sensitive resources. These natural areas are given the highest level of protection and the utmost consideration in assessing potential impacts from nearby projects. The PUC Site Permit Application should include a determination of whether or not the project as proposed has the potential to impact the SNA, the rare features the SNA supports, or public use of the SNA. If so, avoidance and protection measures must be proposed. This particular SNA is owned by The Nature Conservancy. It is one of the largest continuous, undisturbed grasslands in Minnesota, and it is one of the highest quality prairie sites in the United States. If you have not

done so already, I recommend that you contact the Conservancy's Northern Tallgrass Prairie Office at 218-498-2679 to discuss this project.

Buffalo River State Park is located adjacent to the Flat Hill I project area in T139N R46W Sections 10, 11, 14, & 15. (Shapefiles of State Park Statutory Boundaries can be downloaded from the DNR's Data Deli website at <http://deli.dnr.state.mn.us/index.html>.) Please contact Park Manager, Brian Nelson at 218-498-2124, to discuss any concerns he may have regarding the project as it relates to the state park.

- The above Sites provide essential habitat for several rare birds including the Henslow's sparrow (*Ammodramus henslowii*) and chestnut-collared longspur (*Calcarius ornatus*), both state-listed as endangered; the loggerhead shrike (*Lanius ludovicianus*) and Wilson's phalarope (*Phalaropus tricolor*), both state-listed as threatened; and the marbled godwit (*Limosa fedoa*) and greater prairie-chicken (*Tympanuchus cupido*), both state-listed species of special concern. Wind farms can affect birds due to collision mortality, displacement due to disturbance, habitat fragmentation, and habitat loss. Even if collision mortality rates are low, the additional mortality may be significant for rare species. There is also some evidence to suggest that grassland birds are deterred from nesting in otherwise appropriate habitat by the presence of tall structures in the vicinity. As such, we recommend that wind turbines not be placed within at least ¼ mile, and preferably ½ mile, of prairie remnants.

The Bluestem Prairie/Buffalo River State Park area and the Felton Prairie Complex north of the project area have been identified by Audubon Minnesota and the DNR Nongame Program as Important Bird Areas. Important Bird Areas (IBA) are part of an international conservation effort aimed at conserving critical bird habitats. They are voluntary and non-regulatory, but the designation does demonstrate the biological value of this area.

Given the wind project's proximity to this ecologically significant area, the occurrence of endangered and threatened birds in the vicinity, and the potential for wind turbines to cause avian mortality, we strongly encourage pre- and post-development avian monitoring. Any cumulative impact assessment should also address the issue of avian mortality.

- The project area also contains known booming grounds of the greater prairie-chicken. Because booming grounds may move slightly from year to year, please contact the Area Wildlife Manager Don Schultz, at 218-739-7576, for the most recent data on prairie-chicken use of this area.

If the project area is still used as a booming ground, we recommend that there be no construction work in the area from April 1 - May 15 in order to avoid disturbing prairie chickens during their critical booming period. In addition, because other species of prairie grouse exhibit extreme avoidance of vertical features and/or structural habitat fragmentation, we recommend minimizing roads, fences, and other infrastructure. Hagen et al. (Wildlife Society Bulletin 2004, 32:69-82) recommend that wind turbines be placed at least 1.25 miles from lesser prairie-chicken (*Tympanuchus pallicinctus*) habitat. For all prairie grouse, the U.S. Fish and Wildlife Service recommends that, where feasible, turbines not be placed within 5 miles of known booming grounds.

- Several rare butterflies have been documented within native prairie in the vicinity of the proposed project, including the assiniboia skipper (*Hesperia comma assiniboia*), a state-listed endangered species; the dakota skipper (*Hesperia dacotea*), a state-listed threatened species; and the powesheik skipper (*Oarisma powesheik*) and regal fritillary (*Speyeria idalia*), both state-listed species of special concern. The dakota skipper has also been designated by the U. S. Fish

and Wildlife Service as a candidate species for protection under the federal Endangered Species Act. These butterflies are completely dependent upon the survival of native prairie habitat. Yet, less than 1% of Minnesota's native prairie remains and this remaining prairie mostly consists of widely scattered small fragments surrounded by agriculture and development. As a result, small colony sizes (due to past habitat loss) and further habitat destruction are the primary threats facing these rare species in Minnesota. The use of herbicides to control weeds or shrubs can also eliminate critical nectar sources, and insecticide drift from nearby agricultural fields may kill these butterflies.

To protect the assiniboia and dakota skippers, and other prairie obligate butterfly species, it is imperative that destruction and disturbance of native prairie remnants be avoided. **Please contact me** if project planning within any prairie areas proceeds, as potential impacts to the assiniboia skipper and the dakota skipper will need to be addressed and further survey work will be required. We will need to discuss potential contractors, survey protocol, and other requirements **before any survey work is initiated**.

- Western prairie fringed orchids, a federally-listed threatened and state-listed endangered plant species, have been documented in the Bluestem Prairie SNA and may occur in suitable habitat within the project boundary. Western prairie fringed orchids usually occur in remnant native tallgrass prairies and sedge meadows, but have also been observed at disturbed sites. The majority of known sites in Minnesota are on coarse calcareous till or sandy soils.

Given the extreme rarity and protected status of this species, any suitable habitat for this species within the project area will need to be identified. We recommend marking and avoiding these areas. If this is not possible and suitable habitat will be disturbed by the proposed project, a botanical survey for this species will be needed. If this is the case, **please contact me before any survey work is initiated**, as we will need to first discuss potential contractors, survey protocol, and other requirements.

- In the mid-1800s, eighteen million acres of prairie covered Minnesota. Given that more than 99% of this prairie habitat has been destroyed and more than one-third of Minnesota's endangered, threatened, and special concern species are now dependent on the remaining small fragments of Minnesota's prairie ecosystem, we feel that all prairie remnants merit protection. The proposed project boundary contains many native prairie remnants including a railroad right-of-way prairie. (GIS shapefiles of MCBS Native Plant Communities and MCBS Railroad Rights-of-Way Prairies can be downloaded from the DNR's Data Deli website at [http://deli.dnr.state.mn.us/data\\_search.html](http://deli.dnr.state.mn.us/data_search.html).) Sterile sedge (*Carex sterilis*), a state-listed threatened species, and several plant species of special concern have been documented within these prairies. As such, turbine locations, access roads, and utility routes should avoid all native prairie remnants. **If any prairie will be impacted by the proposed project, biological surveys for rare butterflies (as mentioned above) and rare plants will be required, and endangered species permits will likely be necessary.** Please contact me before any survey work is initiated.

We request that a native prairie protection and management plan be submitted to the Natural Heritage and Nongame Research Program. The plan should include measures to avoid impacts to native prairie and measures to mitigate for impacts if unavoidable. If you have not done so already, please contact DNR Prairie Management Specialist Shelley Becklund, at 218-739-7576 ext. 262, to discuss this project and the prairie protection plan.

- Several mussel species including the black sandshell (*Ligumia recta*), a state-listed species of special concern, have been documented in the Buffalo River in the immediate vicinity of the

proposed project. Because they are declining nationwide, freshwater mussels are considered one of North America's most imperiled groups of animals. In Minnesota, 25 of our 48 native mussel species are listed as either endangered, threatened, or of special concern. The primary reason behind the decline is the degradation of our lakes and rivers due to runoff and physical changes such as damming, channelization, and dredging. Mussels are particularly vulnerable to deterioration in water quality, especially increased siltation. As such, it is important that sound erosion and sediment control practices be implemented and maintained near the river.

- If it is determined that the project will impact any species listed as either endangered or threatened, you will need to contact Rich Baker, Minnesota Endangered Species Coordinator, at 651-259-5073 to discuss the endangered species permitting process. Minnesota's endangered species law (MS 84.0895) and associated rules (MR 6212.1800 -6212.2300 and 6134) prohibit the taking of threatened or endangered species without a permit. For animals, taking includes pursuing, capturing, or killing. I have enclosed some additional information on the permitting process for your reference.
- Please send me a copy of the Preconstruction Biological Preservation Survey required by the PUC.
- We encourage you to also consider alternate locations for the proposed Flat Hill I wind farm, so that the most appropriate site in this area may be selected. Further guidance on wind farm siting can be found at [http://www.fws.gov/midwest/eco\\_serv/wind/guidance/](http://www.fws.gov/midwest/eco_serv/wind/guidance/).
- The Natural Heritage and Nongame Research Program does not have any concerns regarding the Flat Hill II project area.
- Given the presence of federally-listed species within the project area, I also recommend that you contact Laurie Fairchild with the U.S. Fish & Wildlife Service, at 612 725-3548 ext. 214, to discuss all applicable federal regulations.

The Natural Heritage database is maintained by the Natural Heritage and Nongame Research Program, a unit within the Division of Ecological Resources, Department of Natural Resources. It is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. Its purpose is to foster better understanding and protection of these features.

Because our information is not based on a comprehensive inventory, there may be rare or otherwise significant natural features in the state that are not represented in the database. A county-by-county survey of rare natural features is now underway, and has been completed for Clay and Wilkin Counties. Our information about native plant communities is, therefore, quite thorough for these counties. However, because survey work for rare plants and animals is less exhaustive, and because there has not been an on-site survey of all areas of each county, ecologically significant features for which we have no records may exist on the project area.

The enclosed results of the database search are provided in two formats: short record report and long record report. To control the release of locational information, which might result in the damage or destruction of a rare element, both printout formats are copyrighted.

The short record report provides rare feature locations only to the nearest section, and may be reprinted, unaltered, in an Environmental Assessment Worksheet, municipal natural resource plan, or report compiled by your company for the project listed above. If you wish to reproduce the short record report for any other purpose, please contact me to request written permission. **The long record report includes more detailed locational information, and is for your personal use only. If you wish to reprint the long record report for any purpose, please contact me to request written permission.**

Please be aware that review by the Natural Heritage and Nongame Research Program focuses only on *rare natural features*. It does not constitute review or approval by the Department of Natural Resources as a whole. If you require further information on the environmental review process for other natural resource-related issues, you may contact your Regional Environmental Assessment Ecologist, Paul Stolen, at (218) 308-2672.

An invoice in the amount of \$241.29 will be mailed to you under separate cover within two weeks of the date of this letter. You are being billed for the database search and printouts, and staff scientist review. Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources.

Sincerely,



Lisa Joyal  
Endangered Species Environmental Review Coordinator

encl: Database search results  
Rare Feature Database Print-Outs: An Explanation of Fields  
Endangered Species Permitting Process

cc: Brian Nelson, DNR  
Don Schulz, DNR  
Shelley Becklund, DNR  
Paul Stolen, DNR  
Katie Haws, DNR  
Becky Marty, DNR  
Matt Langan, DNR  
Laurie Fairchild, USFWS

Minnesota Natural Heritage & Nongame Research Program  
Short Record Report of Element Occurrences within 1 mile radius of:  
Flat Hill I and Flat Hill II Windpark  
Multiple TRS  
Clay and Wilkin Counties

Element Name and Occurrence Number	Federal Status	MN Status	State Rank	Global Rank	Last Observed Date	EO ID #
<b>Clay County, MN</b>						
<u>Ammodramus henslowii</u> (Henslow's Sparrow) #3 Location Description: T139N R46W S23, T139N R46W S15, T139N R46W S10, T139N R46W S22		END	S1B	G4	2001-06-02	1427
<u>Ammodramus henslowii</u> (Henslow's Sparrow) #13 Location Description: T140N R46W S14, T140N R46W S11		END	S1B	G4	1980-07	8696
<u>Botrychium campestre</u> (Prairie Moonwort) #29 Location Description: T141N R46W S36, T141N R45W S31		SPC	S3	G3G4	1995-05-30	24845
<u>Botrychium simplex</u> (Least Moonwort) #23 Location Description: T141N R46W S36, T141N R45W S31		SPC	S3	G5	1988-06-08	22899
<u>Calamagrostis montanensis</u> (Plains Reedgrass) #3 Location Description: T139N R46W S16, T139N R46W S9, T139N R46W S11, T139N R46W S10, T139N R46W S15, T139N R46W S2, T139N R46W S3, T139N R46W S14		SPC	S3	G5	1962-06-30	3891
<u>Calamagrostis montanensis</u> (Plains Reedgrass) #6 Location Description: T139N R46W S15		SPC	S3	G5	1985-07-10	3894
<u>Calcarius ornatus</u> (Chestnut-collared Longspur) #1 Location Description: Legal description is too lengthy to fit in allotted space.		END	S1B	G5	1992-05-24	1463
<u>Carex hallii</u> (Hall's Sedge) #27 Location Description: T140N R46W S11		SPC	S3	G4?Q	1986-08-25	8673
<u>Carex scirpoidea</u> (Northern Single-spiked Sedge) #1 Location Description: T138N R46W S8, T139N R46W S33, T138N R46W S5, T138N R46W S4, T139N R46W S32, T138N R46W S10, T138N R46W S9, T138N R46W S3, T139N R46W S34		SPC	S3	G5	1964-06-02	4081
<u>Carex scirpoidea</u> (Northern Single-spiked Sedge) #7 Location Description: T139N R46W S22, T139N R46W S15		SPC	S3	G5	1980-06-23	4087
<u>Carex sterilis</u> (Sterile Sedge) #19 Location Description: T140N R46W S26		THR	S2	G4	1985-07-16	7689
<u>Carex sterilis</u> (Sterile Sedge) #20 Location Description: T140N R46W S26, T140N R46W S22, T140N R46W S27, T140N R46W S23		THR	S2	G4	1985-06-28	7679
<u>Carex sterilis</u> (Sterile Sedge) #33 Location Description: T140N R46W S11		THR	S2	G4	1986-08-25	8669
<u>Cypripedium candidum</u> (Small White Lady's-slipper) #18 Location Description: T139N R46W S23, T139N R46W S16, T139N R46W S15, T139N R46W S27, T139N R46W S14, T139N R46W S21, T139N R46W S22		SPC	S3	G4	1988-06-09	4300

Minnesota Natural Heritage & Nongame Research Program  
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Flat Hill I and Flat Hill II Windpark  
Multiple TRS  
Clay and Wilkin Counties

Element Name and Occurrence Number	Federal Status	MN Status	State Rank	Global Rank	Last Observed Date	EO ID #
<b>Clay County, MN</b>						
<u>Cypripedium candidum</u> (Small White Lady's-slipper) #149 Location Description: T139N R46W S3, T139N R46W S10		SPC	S3	G4	1987-05-15	7717
<u>Cypripedium candidum</u> (Small White Lady's-slipper) #172 Location Description: T140N R45W S6, T141N R45W S33, T141N R45W S32, T140N R45W S5		SPC	S3	G4	1988-06-09	9163
<u>Cypripedium candidum</u> (Small White Lady's-slipper) #189 Location Description: T139N R46W S28, T139N R46W S27		SPC	S3	G4	1992-07-	13899
<u>Cypripedium candidum</u> (Small White Lady's-slipper) #219 Location Description: T139N R46W S11, T139N R46W S10		SPC	S3	G4	1993	18148
<u>Cypripedium candidum</u> (Small White Lady's-slipper) #374 Location Description: T140N R46W S34, T140N R46W S27		SPC	S3	G4	1981-05-29	34391
<u>Dry Hill Prairie (Northern) Type</u> #6 Location Description: T139N R46W S15, T139N R46W S11, T139N R46W S10, T139N R46W S14		N/A	S1	GNR	1988-06-14	6682
<u>Dry Sand - Gravel Prairie (Northern) Type</u> #16 Location Description: T140N R46W S10, T140N R46W S11		N/A	S2	GNR	1986-08-25	1324
<u>Dry Sand - Gravel Prairie (Northern) Type</u> #19 Location Description: T139N R46W S15		N/A	S2	GNR	1985-07-11	6680
<u>Dry Sand - Gravel Prairie (Northern) Type</u> #24 Location Description: T141N R46W S36, T141N R45W S31		N/A	S2	GNR	1987-09-17	7763
<u>Dry Sand - Gravel Prairie (Northern) Type</u> #28 Location Description: T141N R46W S26, T141N R46W S25		N/A	S2	GNR	1988-06-16	9555
<u>Dry Sand - Gravel Prairie (Northern) Type</u> #53 Location Description: T140N R46W S2, T140N R46W S11		N/A	S2	GNR	1987	12508
<u>Gaillardia aristata</u> (Blanket-flower) #11 Location Description: T139N R46W S22		SPC	S3	G5	1980-06-10	12759
<u>Gentiana affinis</u> (Northern Gentian) #5 Location Description: T139N R46W S22, T139N R46W S21, T139N R46W S15, T139N R46W S16		SPC	S3	G5	1982-08-13	4726
<u>Gentiana affinis</u> (Northern Gentian) #30 Location Description: T140N R46W S11		SPC	S3	G5	1986-08-25	8670
<u>Gentianella amarella ssp. acuta</u> (Felwort) #4 Location Description: T140N R46W S22		SPC	S3	G5T5	1987-09-17	7682

Minnesota Natural Heritage & Nongame Research Program  
Short Record Report of Element Occurrences within 1 mile radius of:  
Flat Hill I and Flat Hill II Windpark  
Multiple TRS  
Clay and Wilkin Counties

Element Name and Occurrence Number	Federal Status	MN Status	State Rank	Global Rank	Last Observed Date	EO ID #
<b>Clay County, MN</b>						
<u>Gentianella amarella ssp. acuta</u> (Felwort) #5 Location Description: T140N R46W S2, T140N R46W S11		SPC	S3	G5T5	1986-08-25	8671
<u>Helianthus nuttallii ssp. rydbergii</u> (Nuttall's Sunflower) #2 Location Description: T139N R46W S3, T139N R46W S16, T139N R46W S9, T139N R46W S11, T139N R46W S14, T139N R46W S15, T139N R46W S10, T139N R46W S2		SPC	S3	G5T5	1962-08-30	4791
<u>Helictotrichon hookeri</u> (Oat-grass) #15 Location Description: T139N R46W S16, T139N R46W S9, T139N R46W S10, T139N R46W S15		SPC	S3	G5	1962-07-11	11100
<u>Hesperia comma assiniboia</u> (Assiniboia Skipper) #10 Location Description: T140N R46W S11		END	S1	G5	1988-08-22	6272
<u>Hesperia dacotae</u> (Dakota Skipper) #6 Location Description: T139N R46W S15, T139N R46W S14	C	THR	S2	G2	1996-07-07	2414
<u>Hesperia dacotae</u> (Dakota Skipper) #7 Location Description: Legal description is too lengthy to fit in allotted space.	C	THR	S2	G2	2005-07-15	2415
<u>Heterodon nasicus</u> (Western Hognose Snake) #24 Location Description: T139N R46W S22, T139N R46W S15		SPC	S3	G5	1993-04-	18670
<u>Heterodon nasicus</u> (Western Hognose Snake) #26 Location Description: T139N R46W S15		SPC	S3	G5	1995-06-22	21109
<u>Lanius ludovicianus</u> (Loggerhead Shrike) #11 Location Description: T139N R46W S16, T139N R46W S9, T139N R46W S11, T139N R46W S10, T139N R46W S14, T139N R46W S15, T139N R46W S13, T139N R46W S22, T139N R46W S26, T139N R46W S23, T139N R46W S27, T139N R46W S24	No Status	THR	S2B	G4	1995-06	2498
<u>Lanius ludovicianus</u> (Loggerhead Shrike) #43 Location Description: T140N R45W S6, T141N R45W S32, T141N R45W S33, T140N R45W S5, T140N R46W S2, T141N R46W S36, T140N R46W S1, T141N R46W S35	No Status	THR	S2B	G4	2006-04-17	6811
<u>Lanius ludovicianus</u> (Loggerhead Shrike) #45 Location Description: T140N R46W S26, T140N R46W S27, T140N R46W S23, T140N R46W S25, T140N R45W S30, T140N R46W S14	No Status	THR	S2B	G4	1995-06-15	6813
<u>Ligumia recta</u> (Black Sandshell) #361 Location Description: T139N R46W S10		SPC	S3	G5	2004-08-26	32692
<u>Limosa fedoa</u> (Marbled Godwit) #55 Location Description: T141N R46W S26		SPC	S3B	G5	1988-05-29	8708

Minnesota Natural Heritage & Nongame Research Program  
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Multiple TRS  
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Element Name and Occurrence Number	Federal Status	MN Status	State Rank	Global Rank	Last Observed Date	EO ID #
<b>Clay County, MN</b>						
<u>Limosa fedoa</u> (Marbled Godwit) #56 Location Description: T140N R46W S11		SPC	S3B	G5	1988-05-28	8709
<u>Limosa fedoa</u> (Marbled Godwit) #57 Location Description: T140N R46W S12, T140N R46W S11		SPC	S3B	G5	1988-05-28	8710
<u>Limosa fedoa</u> (Marbled Godwit) #58 Location Description: T140N R46W S12, T140N R46W S11		SPC	S3B	G5	1988-05-28	8634
<u>Limosa fedoa</u> (Marbled Godwit) #61 Location Description: T139N R46W S23, T139N R46W S15, T139N R46W S11, T139N R46W S10, T139N R46W S14, T139N R46W S22		SPC	S3B	G5	1988-06-05	8712
<u>Limosa fedoa</u> (Marbled Godwit) #63 Location Description: T141N R46W S35, T141N R46W S26		SPC	S3B	G5	1988-06-13	8714
<u>Limosa fedoa</u> (Marbled Godwit) #94 Location Description: T140N R47W S12, T140N R47W S2, T140N R47W S1, T140N R47W S11		SPC	S3B	G5	1978-06-06	9498
<u>Limosa fedoa</u> (Marbled Godwit) #95 Location Description: T140N R47W S12, T140N R47W S1		SPC	S3B	G5	1980-07-02	9499
<u>Limosa fedoa</u> (Marbled Godwit) #96 Location Description: T140N R46W S8, T140N R46W S5		SPC	S3B	G5	1978-06-06	9500
<u>Limosa fedoa</u> (Marbled Godwit) #97 Location Description: T140N R46W S9, T140N R46W S8		SPC	S3B	G5	1978-06-06	9501
<u>Limosa fedoa</u> (Marbled Godwit) #98 Location Description: T140N R46W S9, T140N R46W S16		SPC	S3B	G5	1980-07-02	9502
<u>Limosa fedoa</u> (Marbled Godwit) #99 Location Description: T140N R46W S10, T140N R46W S14, T140N R46W S11, T140N R46W S15		SPC	S3B	G5	1978-06-06	9503
<u>Limosa fedoa</u> (Marbled Godwit) #100 Location Description: T140N R46W S14, T140N R46W S11		SPC	S3B	G5	1978-06-06	9504
<u>Mesic Prairie (Northern) Type</u> #24 Location Description: T141N R46W S36, T140N R46W S2, T141N R46W S35		N/A	S2	GNR	1985-07-10	344
<u>Mesic Prairie (Northern) Type</u> #25 Location Description: T140N R46W S2, T140N R46W S11		N/A	S2	GNR	1985-07-12	345

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Element Name and Occurrence Number	Federal Status	MN Status	State Rank	Global Rank	Last Observed Date	EO ID #
<b>Clay County, MN</b>						
<u>Mesic Prairie (Northern) Type #26</u> Location Description: T140N R46W S33, T140N R46W S27, T140N R46W S34, T140N R46W S28		N/A	S2	GNR	1985-07-16	346
<u>Mesic Prairie (Northern) Type #27</u> Location Description: T140N R46W S26, T140N R46W S27		N/A	S2	GNR	1985-07-16	347
<u>Mesic Prairie (Northern) Type #33</u> Location Description: T139N R46W S22, T139N R46W S21		N/A	S2	GNR	1985-07-11	354
<u>Mesic Prairie (Northern) Type #89</u> Location Description: T139N R46W S11, T139N R46W S10		N/A	S2	GNR	1988-06-14	6681
<u>Mesic Prairie (Northern) Type #97</u> Location Description: T139N R46W S15		N/A	S2	GNR	1995-08-09	6683
<u>Mesic Prairie (Northern) Type #137</u> Location Description: T140N R46W S34		N/A	S2	GNR	1987-09-23	7736
<u>Mesic Prairie (Northern) Type #139</u> Location Description: T141N R45W S30, T141N R46W S25, T141N R45W S31, T141N R46W S36		N/A	S2	GNR	1987-09-17	7734
<u>Mesic Prairie (Northern) Type #140</u> Location Description: T140N R45W S6		N/A	S2	GNR	1994-08-24	7739
<u>Mesic Prairie (Northern) Type #146</u> Location Description: T139N R46W S9, T139N R46W S10		N/A	S2	GNR	1988-06-14	7847
<u>Mesic Prairie (Northern) Type #147</u> Location Description: T139N R46W S15, T139N R46W S11, T139N R46W S10, T139N R46W S14		N/A	S2	GNR	1988-06-15	7848
<u>Mesic Prairie (Northern) Type #148</u> Location Description: T139N R46W S3, T140N R46W S34		N/A	S2	GNR	1988-08-12	7853
<u>Mesic Prairie (Northern) Type #149</u> Location Description: T140N R46W S2, T140N R46W S11		N/A	S2	GNR	1973	7851
<u>Mesic Prairie (Northern) Type #150</u> Location Description: T141N R46W S36, T141N R46W S26, T141N R46W S25, T141N R46W S35		N/A	S2	GNR	1988-06-16	7852
<u>Mesic Prairie (Northern) Type #170</u> Location Description: T139N R46W S27, T139N R46W S26		N/A	S2	GNR	1988-08-21	9557
<u>Mesic Prairie (Northern) Type #255</u> Location Description: T139N R46W S22		N/A	S2	GNR	1985-07-11	22185

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<b>Clay County, MN</b>						
<u>Mesic Prairie (Northern) Type</u> #257 Location Description: T139N R46W S22, T139N R46W S15		N/A	S2	GNR	1989-08-24	15999
<u>Mesic Prairie (Northern) Type</u> #262 Location Description: T139N R46W S23, T139N R46W S14, T139N R46W S15		N/A	S2	GNR	1989-08-24	22190
<u>Mesic Prairie (Northern) Type</u> #263 Location Description: T139N R46W S15, T139N R46W S11, T139N R46W S10, T139N R46W S14		N/A	S2	GNR	1988-06-14	22191
<u>Mesic Prairie (Northern) Type</u> #264 Location Description: T139N R46W S3, T139N R46W S10		N/A	S2	GNR	1996-06-16	22194
<u>Mesic Prairie (Northern) Type</u> #266 Location Description: T141N R46W S35		N/A	S2	GNR	1994	12507
<u>Mesic Prairie (Northern) Type</u> #267 Location Description: T141N R45W S32		N/A	S2	GNR	1994-08-24	21881
<u>Microtus ochrogaster</u> (Prairie Vole) #38 Location Description: T139N R46W S22		SPC	S3	G5	1991	13610
<u>Microtus ochrogaster</u> (Prairie Vole) #39 Location Description: T139N R46W S23, T139N R46W S22		SPC	S3	G5	1991	13607
<u>Microtus ochrogaster</u> (Prairie Vole) #43 Location Description: T141N R46W S36, T141N R45W S31, T141N R46W S25		SPC	S3	G5	1995	18136
<u>Native Plant Community, Undetermined Class</u> #771 Location Description: T140N R46W S2, T140N R46W S12, T140N R46W S11, T140N R46W S1		N/A	SNR	GNR	1986-08-25	6689
<u>Native Plant Community, Undetermined Class</u> #1456 Location Description: T139N R46W S27, T139N R46W S26		N/A	SNR	GNR	1988-08-21	22186
<u>Native Plant Community, Undetermined Class</u> #1524 Location Description: T139N R46W S3, T140N R46W S33, T140N R46W S34		N/A	SNR	GNR	1994-08-03	21770
<u>Native Plant Community, Undetermined Class</u> #1908 Location Description: T139N R46W S15, T139N R46W S11, T139N R46W S10, T139N R46W S14		N/A	SNR	GNR	1988-06-14	22192
<u>Oarisma powesheik</u> (Powersheik Skipper) #43 Location Description: T139N R46W S15		SPC	S3	G2G3	1996-07-13	2713
<u>Oarisma powesheik</u> (Powersheik Skipper) #162 Location Description: T139N R46W S16, T139N R46W S15		SPC	S3	G2G3	1996-07-07	5374

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<b>Clay County, MN</b>						
<u>Oarisma powesheik</u> (Powesheik Skipper) #163 Location Description: T139N R46W S15		SPC	S3	G2G3	1996-07-08	5369
<u>Oarisma powesheik</u> (Powesheik Skipper) #164 Location Description: T139N R46W S23, T139N R46W S27, T139N R46W S26, T139N R46W S22		SPC	S3	G2G3	1996-07-12	5370
<u>Oarisma powesheik</u> (Powesheik Skipper) #165 Location Description: T139N R46W S15, T139N R46W S27, T139N R46W S26, T139N R46W S14, T139N R46W S22, T139N R46W S23		SPC	S3	G2G3	1996-07-12	5371
<u>Oeneis uhleri varuna</u> (Uhler's Arctic) #5 Location Description: T139N R46W S10, T139N R46W S15, T139N R46W S14, T139N R46W S16		END	S1	G5T4	1968-06-15	2734
<u>Orobanche fasciculata</u> (Clustered Broomrape) #1 Location Description: T139N R46W S16, T139N R46W S9, T139N R46W S11, T139N R46W S10, T139N R46W S15, T139N R46W S2, T139N R46W S3, T139N R46W S14		SPC	S3	G4	1947-06-27	5110
<u>Orobanche ludoviciana</u> (Louisiana Broomrape) #11 Location Description: T140N R46W S10, T140N R46W S11		SPC	S3	G5	1986-08-25	8672
<u>Orobanche ludoviciana</u> (Louisiana Broomrape) #12 Location Description: T139N R46W S15, T139N R46W S10		SPC	S3	G5	1988-06-14	9576
<u>Perognathus flavescens</u> (Plains Pocket Mouse) #18 Location Description: T139N R46W S23, T139N R46W S14, T139N R46W S26, T139N R46W S22		SPC	S3	G5	1980-08-05	15923
<u>Phalaropus tricolor</u> (Wilson's Phalarope) #108 Location Description: T140N R46W S22		THR	S2B	G5	2007-06-12	34442
<u>Platanthera praeclara</u> (Western Prairie Fringed Orchid) #26 Location Description: T139N R46W S23, T139N R46W S26, T139N R46W S22, T139N R46W S13	LT	END	S1	G2	2007-07-09	10337
<u>Speyeria idalia</u> (Regal Fritillary) #145 Location Description: T139N R46W S22, T139N R46W S14, T139N R46W S10, T139N R46W S11, T139N R46W S16, T139N R46W S15, T139N R46W S9		SPC	S3	G3	1968-09-02	23670
<u>Speyeria idalia</u> (Regal Fritillary) #152 Location Description: T139N R46W S23, T139N R46W S15, T139N R46W S14, T139N R46W S22		SPC	S3	G3	1980-07-14	23678
<u>Speyeria idalia</u> (Regal Fritillary) #153 Location Description: T139N R46W S15, T139N R46W S14		SPC	S3	G3	1996-07-07	23679
<u>Speyeria idalia</u> (Regal Fritillary) #177 Location Description: T139N R46W S16, T139N R46W S10, T139N R46W S15		SPC	S3	G3	1995-07-13	25090

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<b>Clay County, MN</b>						
<u>Speyeria idalia</u> (Regal Fritillary) #178 Location Description: T139N R46W S22, T139N R46W S15		SPC	S3	G3	1995-07-13	25092
<u>Speyeria idalia</u> (Regal Fritillary) #179 Location Description: T139N R46W S23, T139N R46W S27, T139N R46W S26, T139N R46W S22		SPC	S3	G3	1995-07-13	25298
<u>Speyeria idalia</u> (Regal Fritillary) #258 Location Description: T140N R46W S11		SPC	S3	G3	1988-08-12	32851
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #72 Location Description: T141N R46W S35, T140N R46W S3, T140N R46W S2, T141N R46W S34	No Status	SPC	S3	G4	1991	3227
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #73 Location Description: T140N R46W S10, T140N R46W S14, T140N R46W S15	No Status	SPC	S3	G4	2001	3228
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #74 Location Description: T140N R46W S23, T140N R46W S15, T140N R46W S22	No Status	SPC	S3	G4	2001	3229
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #75 Location Description: T140N R46W S35, T140N R46W S27, T140N R46W S34	No Status	SPC	S3	G4	1982	3230
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #76 Location Description: T140N R45W S20, T140N R45W S21, T140N R45W S17	No Status	SPC	S3	G4	1976	3231
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #77 Location Description: T139N R46W S16, T139N R46W S10, T139N R46W S9	No Status	SPC	S3	G4	1983	3232
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #98 Location Description: T139N R46W S27, T139N R46W S34	No Status	SPC	S3	G4	2005-06-09	3253
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #99 Location Description: T140N R46W S26, T140N R46W S27, T140N R46W S22	No Status	SPC	S3	G4	1982	3254
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #100 Location Description: T141N R46W S36, T141N R46W S25	No Status	SPC	S3	G4	1991	3255
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #193 Location Description: T139N R46W S22, T139N R46W S27	No Status	SPC	S3	G4	2005-06-09	6901
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #194 Location Description: T140N R46W S14, T140N R46W S11, T140N R46W S13	No Status	SPC	S3	G4	1996	6902
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #195 Location Description: T140N R46W S26, T140N R46W S27, T140N R46W S23	No Status	SPC	S3	G4	1999	6903

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<b>Clay County, MN</b>						
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #197 Location Description: T141N R46W S35, T141N R46W S26, T141N R46W S27	No Status	SPC	S3	G4	2001	6905
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #200 Location Description: T140N R46W S10, T140N R46W S11, T140N R46W S2	No Status	SPC	S3	G4	2001	6908
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #403 Location Description: T139N R46W S15, T139N R46W S11, T139N R46W S14	No Status	SPC	S3	G4	2001	10234
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #410 Location Description: T140N R46W S10, T140N R46W S4, T140N R46W S9	No Status	SPC	S3	G4	1992	11437
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #411 Location Description: T140N R46W S9, T140N R46W S16, T140N R46W S17	No Status	SPC	S3	G4	1992	11438
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #463 Location Description: T141N R46W S36, T141N R45W S31, T141N R46W S25	No Status	SPC	S3	G4	2000	13942
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #490 Location Description: T140N R45W S6, T141N R45W S32, T140N R46W S1, T140N R45W S5	No Status	SPC	S3	G4	1994	18255
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #492 Location Description: T140N R46W S10, T140N R46W S3	No Status	SPC	S3	G4	2001	18257
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #525 Location Description: T141N R45W S20, T141N R45W S28, T141N R45W S29	No Status	SPC	S3	G4	1994	20728
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #532 Location Description: T141N R46W S32, T141N R46W S31, T140N R46W S5, T140N R46W S6	No Status	SPC	S3	G4	1998	21736
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #533 Location Description: T140N R46W S26, T140N R46W S35, T140N R46W S36	No Status	SPC	S3	G4	2001	21737
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #555 Location Description: T139N R46W S34, T139N R46W S33, T139N R46W S28	No Status	SPC	S3	G4	1996	12753
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #599 Location Description: T141N R46W S36, T140N R46W S1, T140N R46W S2	No Status	SPC	S3	G4	2001	23970
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #620 Location Description: T139N R46W S16, T139N R46W S9, T139N R46W S15	No Status	SPC	S3	G4	2000	28442
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #675 Location Description: T141N R46W S35	No Status	SPC	S3	G4	2002	31137

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<b>Clay County, MN</b>						
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #702 Location Description: T140N R46W S24, T140N R46W S13, T140N R45W S18, T140N R45W S19	No Status	SPC	S3	G4	2003	32003
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #703 Location Description: T140N R46W S26, T140N R46W S24, T140N R46W S23, T140N R46W S25	No Status	SPC	S3	G4	2003	32004
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #735 Location Description: T139N R46W S14, T139N R46W S15	No Status	SPC	S3	G4	2005-06-09	32723
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #780 Location Description: T139N R46W S30	No Status	SPC	S3	G4		33339
<u>Tympanuchus cupido</u> (Greater Prairie-chicken) #821 Location Description: T140N R46W S12, T140N R46W S13	No Status	SPC	S3	G4	2007	34344
<u>Wet Brush-Prairie (Northern) Type</u> #43 Location Description: T140N R46W S34		N/A	S3	GNR	1994-08-03	21769
<u>Wet Prairie (Northern) Type</u> #17 Location Description: T140N R46W S11		N/A	S3	GNR	1985-07-12	433
<u>Wet Prairie (Northern) Type</u> #48 Location Description: T139N R46W S22, T139N R46W S15		N/A	S3	GNR	1989-08-24	6677
<u>Wet Prairie (Northern) Type</u> #87 Location Description: T140N R46W S34, T140N R46W S27		N/A	S3	GNR	1987-09-23	7742
<u>Wet Prairie (Northern) Type</u> #88 Location Description: T140N R46W S22, T140N R46W S21		N/A	S3	GNR	1987-09-17	7748
<u>Wet Prairie (Northern) Type</u> #100 Location Description: T139N R46W S22		N/A	S3	GNR	1985-07-11	7957
<u>Wet Prairie (Northern) Type</u> #103 Location Description: T141N R46W S26		N/A	S3	GNR	1988-06-16	9558
<u>Wet Prairie (Northern) Type</u> #104 Location Description: T139N R46W S3, T139N R46W S4		N/A	S3	GNR	1988-08-12	9559
<u>Wet Prairie (Northern) Type</u> #105 Location Description: T139N R46W S34, T139N R46W S27		N/A	S3	GNR	1988-08-21	9560
<u>Wet Prairie (Northern) Type</u> #106 Location Description: T139N R46W S15, T139N R46W S11, T139N R46W S10, T139N R46W S14		N/A	S3	GNR	1988-06-15	9561

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<b>Clay County, MN</b>						
<u>Wet Prairie (Northern) Type</u> #108 Location Description: T139N R46W S11, T139N R46W S10		N/A	S3	GNR	1988-06-14	9578
<u>Wet Prairie (Northern) Type</u> #153 Location Description: T141N R45W S29		N/A	S3	GNR	1994-08-24	21941
<u>Wet Prairie (Northern) Type</u> #160 Location Description: T139N R46W S35, T139N R46W S26, T139N R46W S27		N/A	S3	GNR	1988-08-21	7849
<u>Wet Prairie (Northern) Type</u> #166 Location Description: T139N R46W S10		N/A	S3	GNR	1988-06-14	22193
<u>Wet Prairie (Northern) Type</u> #167 Location Description: T140N R46W S34, T140N R46W S33		N/A	S3	GNR	1994-08-03	21768
<u>Wet Prairie (Northern) Type</u> #168 Location Description: T140N R46W S22, T140N R46W S27		N/A	S3	GNR	1987-09-17	5911
<u>Wet Prairie (Northern) Type</u> #169 Location Description: T140N R46W S36, T140N R46W S35, T139N R46W S1, T139N R46W S2		N/A	S3	GNR	1985-07-16	349
<u>Wet Saline Prairie (Northern) Type</u> #8 Location Description: T140N R46W S11		N/A	S2	GNR	1986-08-25	6392
<u>Wet Seepage Prairie (Northern) Type</u> #6 Location Description: T140N R46W S26		N/A	S2	GNR	1985-07-16	434
<u>Wet Seepage Prairie (Northern) Type</u> #12 Location Description: T140N R46W S23, T140N R46W S22		N/A	S2	GNR	1987-09-17	6675
<u>Wet Seepage Prairie (Northern) Type</u> #37 Location Description: T140N R46W S14, T140N R46W S12, T140N R46W S11, T140N R46W S13		N/A	S2	GNR	1985-07-12	12332
<b>Wilkin County, MN</b>						
<u>Mesic Prairie (Northern) Type</u> #145 Location Description: T136N R47W S27, T136N R47W S23, T136N R47W S26		N/A	S2	GNR	1988-06-16	7765

Records Printed = 157

The Natural Heritage & Nongame Research Program recently adopted a new database system called Biotics. As a result of this change, the layout and contents of the database reports have been revised. Many of the fields included in the new reports are the same or similar to the previous report fields, however there are several new fields and some of the field definitions have been slightly modified. We recommend that you familiarize yourself with the latest field explanations.

## Rare Features Database Reports: An Explanation of Fields

The Rare Features database (Biotics) is part of the Natural Heritage Information System, and is maintained by the Natural Heritage and Nongame Research Program, a unit within the Division of Ecological Resources, Minnesota Department of Natural Resources (DNR).

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### **Field Name: [Full (non-abbreviated) field name, if different]. Further explanation of field.**

#### **-E-**

**Element Name and Occ #:** [Element Name and Occurrence Number]. The Element is the name of the rare feature. For plant and animal species records, this field holds the scientific name followed by the common name in parentheses; for all other elements (such as native plant communities, which have no scientific name) it is solely the element name. Native plant community names correspond to Minnesota's Native Plant Community Classification (Version 2.0). The Occurrence Number, in combination with the Element Name, uniquely identifies each record.

**EO Data:** [Element Occurrence Data]. For species elements, this field contains data collected on the biology of the Element Occurrence\* (EO), including the number of individuals, vigor, habitat, soils, associated species, peculiar characteristics, etc. For native plant community elements, this field is a summary text description of the vegetation of the EO, including structure (strata) and composition (dominant/characteristic species), heterogeneity, successional stage/dynamics, any unique aspects of the community or additional noteworthy species (including animals). Note that this is a new field and it has not been filled out for many of the records that were collected prior to conversion to the new database system. Some of the information meeting the field definition may be found in the General Description field.

**EO ID#:** [Element Occurrence Identification Number]. Unique identifier for each Element Occurrence record.

**EO Rank:** [Element Occurrence Rank]. An evaluation of the quality and condition of an Element Occurrence (EO) from A (highest) to D (lowest). Represents a comparative evaluation of: 1) quality as determined by representativeness of the occurrence especially as compared to EO specifications and including maturity, size, numbers, etc. 2) condition (how much has the site and the EO itself been damaged or altered from its optimal condition and character). 3) viability (the long-term prospects for continued existence of this occurrence - used in ranking species only). EO Ranks are assigned based on recent fieldwork by knowledgeable individuals.

**Extent Known?:** A value that indicates whether the full extent of the Element is known (i.e., it has been determined through field survey) at that location. If null, the value has not been determined.

#### **-F-**

**Federal Status:** Status of species under the U.S. Endangered Species Act: LE = endangered; LT = threatened; LE,LT = listed endangered in part of its range, listed threatened in another part of its range; LT,PDL = listed threatened, proposed for delisting; C = candidate for listing. If null or "No Status" the species has no federal status.

**First Observed Date:** Date that the Element Occurrence was first reported at the site in format YYYY-MM-DD. A year followed by "Pre" indicates that the observed date was sometime prior to the date listed, but the exact date is unknown.

#### **-G-**

**General Description:** General description or word picture of the area where the Element Occurrence (EO) is located (i.e., the physical setting/context surrounding the EO), including a list of adjacent communities. When available, information on surrounding land use may be included. Note that the information tracked in this field is now more narrowly defined than it was in the old database system, and some of the information still in this field more accurately meets the definition of the new EO Data field. We are working to clean up the records so that the information in the two fields corresponds to the current field explanations described herein. Also note that the use of uppercase in sentences in this field is not significant but rather an artifact of transferring data from the old database system to the new system.

**Global Rank:** The global (i.e., range-wide) assessment of the relative rarity or imperilment of the species or community. Ranges from G1 (critically imperiled due to extreme rarity on a world-wide basis) to G5 (demonstrably secure, though perhaps rare in parts of its range). Global ranks are determined by NatureServe, an international network of natural heritage programs and conservation data centers.

#### **-L-**

**Last Observed Date:** Date that the Element Occurrence was last observed to be extant at the site in format YYYY-MM-DD.

**Last Survey Date:** Date of the most recent field survey for the Element Occurrence, regardless of whether it was found during the visit. If the field is blank, assume the date is the same as the Last Observed Date.

**Location Description:** County or Counties in which the Element Occurrence was documented followed by Township, Range, and Section information (not listed in any particular order). Each unique Township, Range, and Section combination is separated by a comma. In some cases, there are too many Township, Range, and Section combinations to list in the field, in which case, the information will be replaced with, "Legal description is too lengthy to fit in allotted space".

**-M-**

**Managed Area(s):** Name of the federally, state, locally, or privately managed park, forest, refuge, preserve, etc., containing the occurrence, if any. If this field is blank, the element probably occurs on private land. If "(Statutory Boundary)" occurs after the name of a managed area, the location may be a private inholding within the statutory boundary of a state forest or park.

**MN Status:** [Minnesota Status]. Legal status of plant and animal species under the Minnesota Endangered Species Law: END = endangered; THR = threatened; SPC = special concern; NON = tracked, but no legal status. Native plant communities, geological features, and colonial waterbird nesting sites do not have any legal status under the Endangered Species Law and are represented by a N/A.

**-N-**

**NPC Classification (v1.5):** Native plant community name in Minnesota's Native Vegetation: A Key to Natural Communities (Version 1.5). This earlier classification has been replaced by Minnesota's Native Plant Community Classification (Version 2.0).

**-O-**

**Observed Area:** The total area of the Element Occurrence, in acres, which is measured or estimated during fieldwork. If null, the value has not been determined.

**Ownership Type:** Indicates whether the land on which the Element Occurrence was located was publicly or privately owned; for publicly owned land, the agency with management responsibility is listed, if known.

**-S-**

**Site Name:** The name of the site(s) where the Element Occurrence is located. Sites are natural areas of land with boundaries determined and mapped according to biological and ecological considerations.

**Survey Site #/Name:** The name of the survey site, if applicable, where the Element Occurrence is located. Survey sites are sites that provide a geographic framework for recording and storing data, but their boundaries are not based on biological and ecological considerations. Minnesota County Biological Survey site numbers, if applicable, are also listed in this field.

**Survey Type:** Information on the type of survey used to collect information on the Element Occurrence.

**Surveyor(s):** Name(s) of the person(s) that collected survey information on the Element Occurrence.

**State Rank:** Rank that best characterizes the relative rarity or endangerment of the taxon or plant community in Minnesota. The ranks do not represent a legal status. They are used by the Minnesota Department of Natural Resources to set priorities for research, inventory and conservation planning. The state ranks are updated as inventory information becomes available. S1 = Critically imperiled in Minnesota because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. S2 = Imperiled in Minnesota because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. S3 = Vulnerable in Minnesota either because rare or uncommon, or found in a restricted range, or because of other factors making it vulnerable to extirpation. S4 = Apparently secure in Minnesota, usually widespread. S5 = Demonstrably secure in Minnesota, essentially ineradicable under present conditions. SH = Of historical occurrence in the state, perhaps having not been verified in the past 20 years, but suspected to be still extant. An element would become SH without the 20-year delay if the only known occurrences in the state were destroyed or if it had been extensively and unsuccessfully looked for. SNR = Rank not yet assessed. SU = Unable to rank. SX = Presumed extinct in Minnesota. SNA = Rank not applicable. S#S# = Range Rank: a numeric range rank (e.g., S2S3) is used to indicate the range of uncertainty about the exact status of the element. S#B, S#N = Used only for migratory animals, whereby B refers to the breeding population of the element in Minnesota and N refers to the non-breeding population of the element in Minnesota.

**-V-**

**Vegetation Plot:** Code(s) for any vegetation plot data that have been collected within this Element Occurrence (i.e., either Releve Number or the word "RELEVE" indicates that a releve has been collected).

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\* Element Occurrence – an area of land and/or water in which an Element (i.e., a rare species or community) is, or was, present, and which has practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location. Specifications for each species determine whether multiple observations should be considered 1 Element Occurrence or 2, based on minimum separation distance and barriers to movement.

## Data Security

Locations of some rare features must be treated as sensitive information because widespread knowledge of these locations could result in harm to the rare features. For example, wildflowers such as orchids and economically valuable plants such as ginseng are vulnerable to exploitation by collectors; other species, such as bald eagles, are sensitive to disturbance by observers. For this reason, we prefer that publications not identify the precise locations of vulnerable species. We suggest describing the location only to the nearest section. If this is not acceptable for your purposes, please call and discuss this issue with the Endangered Species Environmental Review Coordinator for the Natural Heritage and Nongame Research Program at (651) 259-5109.

## State of Minnesota Endangered Species Permits

Minnesota's endangered species law (MS 84.0895) and associated rules (Chapter 6212.1800 - 6212.2300 and 6134) impose a variety of restrictions, a permit program, and several exemptions pertaining to species designated as endangered or threatened. The current list of species designated under MS 84.0895 can be found at [http://files.dnr.state.mn.us/natural\\_resources/ets/endlist.pdf](http://files.dnr.state.mn.us/natural_resources/ets/endlist.pdf). The law and rules prohibit taking, purchasing, importing, possessing, transporting, or selling endangered or threatened plant or animal, including their parts or seeds, without a permit. For animals, taking includes pursuing, capturing, or killing. For plants, taking includes picking, digging, or destroying. The law and rules specify conditions under which the Commissioner of the Department of Natural Resources may issue permits to allow taking and possession of endangered or threatened species. In order to understand all regulations pertaining to species that are designated as endangered, threatened or species of special concern, persons are advised to read the full text of the law and rules, which can be accessed at <http://www.leg.state.mn.us/leg/statutes.htm>.

### PERMITS

**Permits may be issued for taking only under certain conditions:**

- **for scientific study,**
- **for educational programs,**
- **to enhance propagation or survival of the species,**
- **to prevent injury to people or property, or**
- **when the social and economic benefit of the taking outweigh the harm caused by it.**

Permitting decisions must be consistent with the intent of the law, which is to retain or restore healthy populations of native plants and animals. The responsibility for making permitting decisions has been delegated by the Commissioner to the Division of Ecological Resources. **Permit issuance is discretionary and based on DNR's assessment of all relevant information.**

Some species listed under Minnesota law are also listed under the Federal Endangered Species Act. If species that are federally listed as endangered or threatened are to be taken, the USFWS should be contacted at 612/725-3276, ext. 250 or see <http://www.fws.gov/endangered/esasum.html>.

### APPLYING FOR PERMITS

**Permit requests must be submitted in writing to:**

Minnesota Department of Natural Resources  
Attn. Endangered Species Permits  
500 Lafayette Rd., Box 25  
St. Paul, MN 55155.

For species to be taken from the wild in Minnesota, the applicant must document the **justification for the taking, location, species, number of individuals** to be taken or possessed, that there are **no feasible alternatives to the taking**, and provide assurance that **the taking will not negatively affect the species' status in Minnesota.**

**When taking is proposed in connection with a scientific study**, the request must be accompanied by a research proposal that outlines the **justification, methodology** (including the **species and number of individuals** to be taken), the **location** of the project, and the **qualifications** of the researcher. If the research is judged to provide important information about the species that will foster its conservation, the researcher is qualified to do the work, and the proposed taking will not have a significant negative effect on the species population in the state, a permit may be issued. Permits will specify that final disposition of specimens acquired for the purposes of scientific study is to the University of Minnesota Bell Museum of Natural History. Alternative repositories may be considered if compelling justification is provided.

**For permits to possess living or dead specimens for scientific or educational purposes**, the request must indicate that the permittee is **currently conducting scientific or educational programs** in the field of biology or natural history, and that they or their institution **have appropriate and adequate facilities for the care,**

**exhibition, or storage of the particular species** that are sought to be taken, acquired or possessed. The request must also indicate the **proposed source of the specimens**, and for specimens to be acquired from a secondary source, **documentation that they were legally acquired**. For **possession of living specimens**, the request must indicate **the qualifications and experience of the person(s) who will be caring for the species**, and demonstrate **an understanding of the specific needs of the species, and how they will be met**.

Requests for **permits for propagation** must be accompanied by a project proposal that outlines the **justification, methodology** (including the **species and number of individuals or their parts or propagules** to be taken), the **locations** of both the proposed collection and propagation facilities, and the **qualifications** of the permittee relevant to propagation of endangered or threatened species. The proposal should also describe in detail the **methods of propagation and conditions under which it will occur**, and plans for **disposition of offspring** propagated under the permit. If offspring are to be released into the wild, the proposal must include **coordinates of locations for release, quantitative information about pre-release habitat and species populations at the release site, a risk analysis** of potential negative effects on habitat and species populations at the release site, and a **post-release monitoring plan** for evaluating both the target species populations, and the health of the community into which the release is done. Permits for propagation for conservation purposes will be considered only when the proposal provides convincing justification that propagation is required for the recovery of the species, the protocol is judged to be appropriate, and the permittee is qualified to do the work.

**When taking is proposed in connection with a development project**, the request can be in the form of a letter that outlines the **nature of the project**, the **location** and the **species and number of individuals** that would be taken. Before a permit can be issued, **the project proposer is asked to explore project alternatives**, including other locations or designs, which would avoid or minimize taking.

## **MITIGATION**

**If it is determined that there are no feasible alternatives to taking in connection with a development project**, the applicant must propose compensatory mitigation to reduce the impact of the taking to an acceptable level. The magnitude of the compensation required is related to the degree of impact on the species, (for example, will the whole population at a site be destroyed, or just a few individuals?), and also to the statewide significance of the population on the site. Examples of types of compensatory mitigation that have been done for taking endangered or threatened species in Minnesota include:

- funding state acquisition of another site where the species occurs that is currently unprotected and vulnerable to destruction,
- funding additional survey work to locate other sites, and/or
- funding research to improve our understanding of the habitat requirements or protection needs of the species.

**Transplantation generally has not been considered by MNDNR to be acceptable mitigation** for taking of endangered or threatened species for several reasons. First, conservation of species in their native habitats is our first priority. Transplantation into an artificial habitat is not a sustainable strategy for native plant and animal conservation. Second, it is necessary to understand the life history, habitat requirements, and genetic structure of natural populations in order to determine the feasibility and advisability of transplantation. This information is unknown for most rare species, and acquiring it is the responsibility of the applicant. Third, transplantation may have unanticipated effects on other organisms on the new site through disturbance or competition. Finally, it would be necessary to establish the species on the new site and monitor it for several years to determine whether the species survived and persisted on the new site before taking on the project site could proceed. Most project proposers are not willing or able to defer their projects to determine the success of such an experiment.

**For further information contact: Rich Baker** at 651-259-5073, or [rich.baker@dnr.state.mn.us](mailto:rich.baker@dnr.state.mn.us)

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request documents

For Agency Use Only	
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Related ES#	
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Quads	
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### MINNESOTA NATURAL HERITAGE INFORMATION SYSTEM DATA REQUEST FORM

DATE OF REQUEST: November 30, 2007

#### WHO IS REQUESTING THE INFORMATION?

Name and Title: **Melissa Doperalski, Wildlife and Conservation Biologist**  
Agency/Company: **Tetra Tech EM, Inc. (MN)**  
Address: **2001 Killebrew Drive, Suite 141** **Bloomington** **MN 55425**  
Phone: **612-643-2227** FAX: **612-643-2201** E-mail: **melissa.doperalski@ttemi.com**

THIS INFORMATION IS BEING REQUESTED ON BEHALF OF (if applicable): **Noble Environmental Power, LLC**

#### WHAT INFORMATION DO YOU NEED?

- Printouts of known occurrences of federally and state listed plants and animals; native plant communities; critical habitat areas, and aggregation sites such as bat hibernacula, colonial waterbird nesting sites, and prairie chicken booming grounds.
- Information listed above, plus geological features and state rare species with no legal status.
- Other (specify): **State Recreation and/or Natural Areas**
- Frequent applicants: Check here if you DO NOT need a copy of the field-by-field explanation of the printout: \_\_\_\_\_

WHERE IS THE AREA OF INTEREST? 1) **ENCLOSE A MAP** showing detailed boundaries of the project area (topographic or aerial photos are preferred.) 2) If a GIS shapefile of the project area is available, please provide a copy.

For Agency Use Only:	<b>PROVIDE THE FOLLOWING REQUIRED PROJECT INFORMATION</b>
<u>Region</u>	County    Township#    Range#    Section(s) (and half-section, quarter-section, etc. if known)
	<b><u>See attached listing of County Township, Range, and Sections for target area.</u></b>
	Project name: <b>Flat Hill I Windpark and Flat Hill II Windpark</b>
	Project Proposer: <b>Noble Environmental Power, LLC</b>
	Project Description: <b>Noble Environmental Power, LLC proposes to construct a 200 MW Windpark (Flat Hill I) within a 20,000-acre portion of Clay County and a 200 MW Windpark (Flat Hill II) within a 20,000-acre portion of Wilkin County.</b>
	Past Land-Use of Project Site: <b>Variety of land uses associated with the target area.</b>

HOW WILL THE INFORMATION BE USED? Describe planned use of information, including in what form and detail you wish to publish this information, if any. **Information provided will be written into a Critical Issues Analysis Report to be provided to the Project Proposer. The report will document any significant findings related to Natural Resources, as identified by the Minnesota Department of Natural Resources and other agencies.**

**TURN-AROUND TIME**

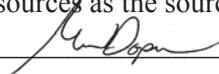
Requests generally take 2 to 3 weeks from date of receipt to process, and are processed in the order received.

**FEES**

For-profit organizations are charged a fee for this service. In addition, a fee may be charged for large requests from any source. A surcharge (currently \$50) is applied for rush orders; if this is a rush order, please check the blank below. Fees subject to change. A fee schedule is available upon request. Please do **not** include payment with your request; an invoice will be included with our response letter.

\_\_\_\_\_ Rush

"The information supplied above is complete and accurate. I understand that material supplied to me from the Minnesota Natural Heritage Information System is copyrighted and that I am not permitted to reproduce or publish any of the copyrighted material without prior written permission from the Minnesota DNR. Further, if permission to publish is given, I understand that I must credit the Minnesota Natural Heritage and Nongame Research Program, Minnesota Department of Natural Resources as the source of the material"

Signature \_\_\_\_\_ 

Mail completed forms to:

Endangered Species Environmental Review  
Coordinator  
Sarah.hoffman@(dnr.state.mn.us)

*(for project reviews)*

For further information call:

(651) 296-8319 or 296-8279

**or**

Assistant Database Manager  
Sharron.nelson@(dnr.state.mn.us)

*(for general requests)*

(651) 296-8324

**at**

Natural Heritage and Nongame Research Program  
Department of Natural Resources  
500 Lafayette Road, Box 25  
St. Paul, Minnesota 55155

Or FAX completed forms to: (651) 296-1811

Additional information about the Natural Heritage & Nongame Research Program is available at  
[http://www.dnr.state.mn.us/ecological\\_services/nhnrp/index.html](http://www.dnr.state.mn.us/ecological_services/nhnrp/index.html)

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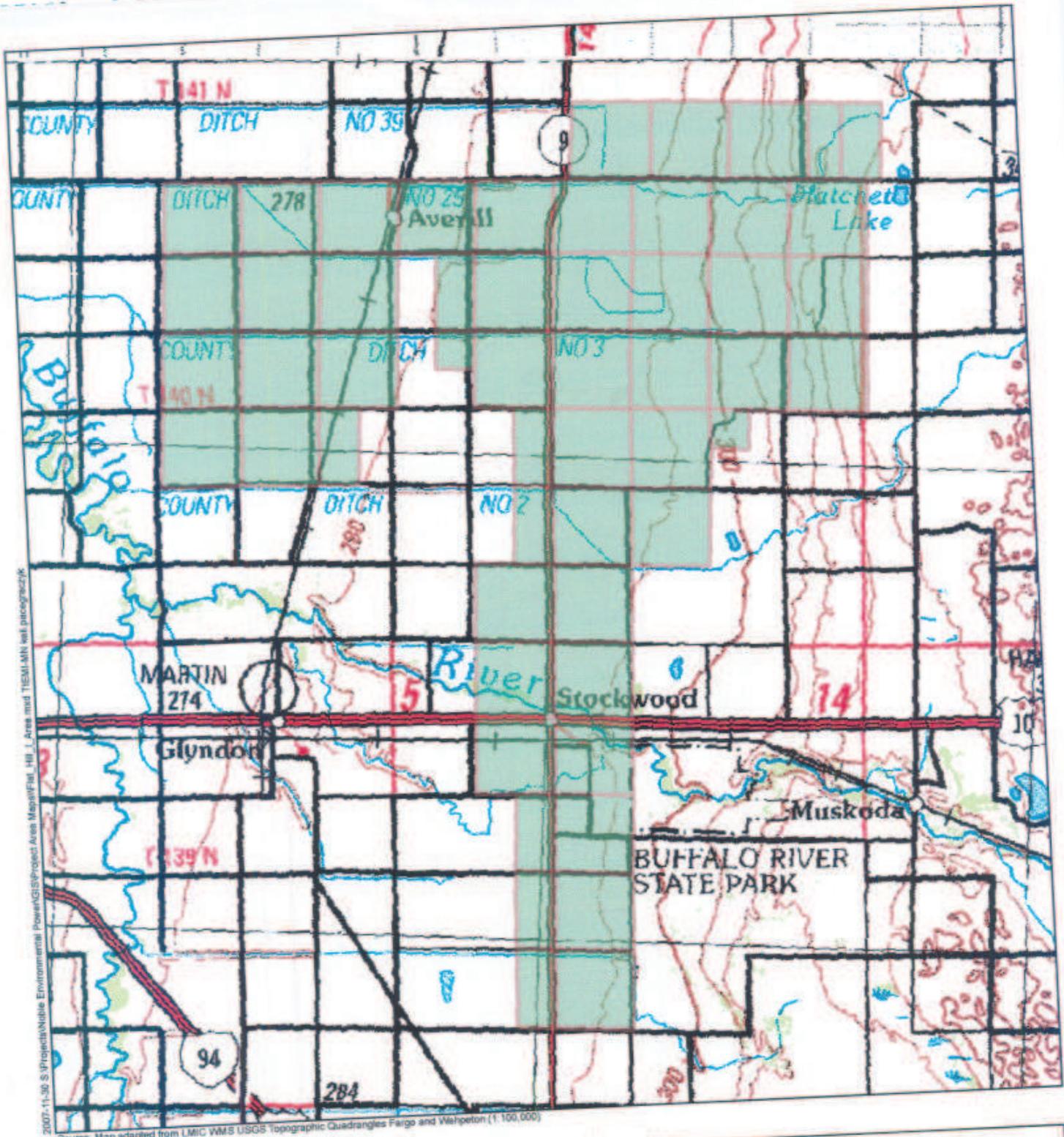
For Agency Use Only:

EO's requiring comment

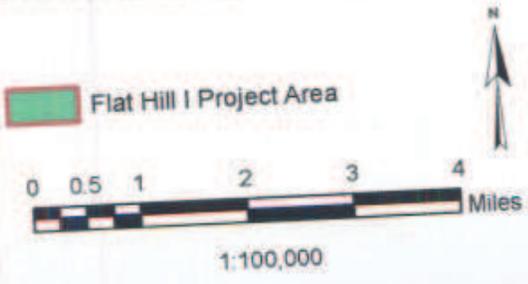
Sources contacted	Topic	Response
_____	_____	_____
_____	_____	_____
_____	_____	_____

Response Summary \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Responder \_\_\_\_\_



2007-11-30 S:\Projects\Noble Environmental Power\GIS\Project Area Maps\Flat\_Hill\_Area.mxd T139M1.MXD and p139m221K  
 Source: Map adapted from LMIC WMS USGS Topographic Quadrangles Fargo and Wahpeton (1:100,000)



Noble Environmental Power
Figure 1 Flat Hill I Project Area
 TETRA TECH, INC.

## Flat Hill I Project Area Quad Sections

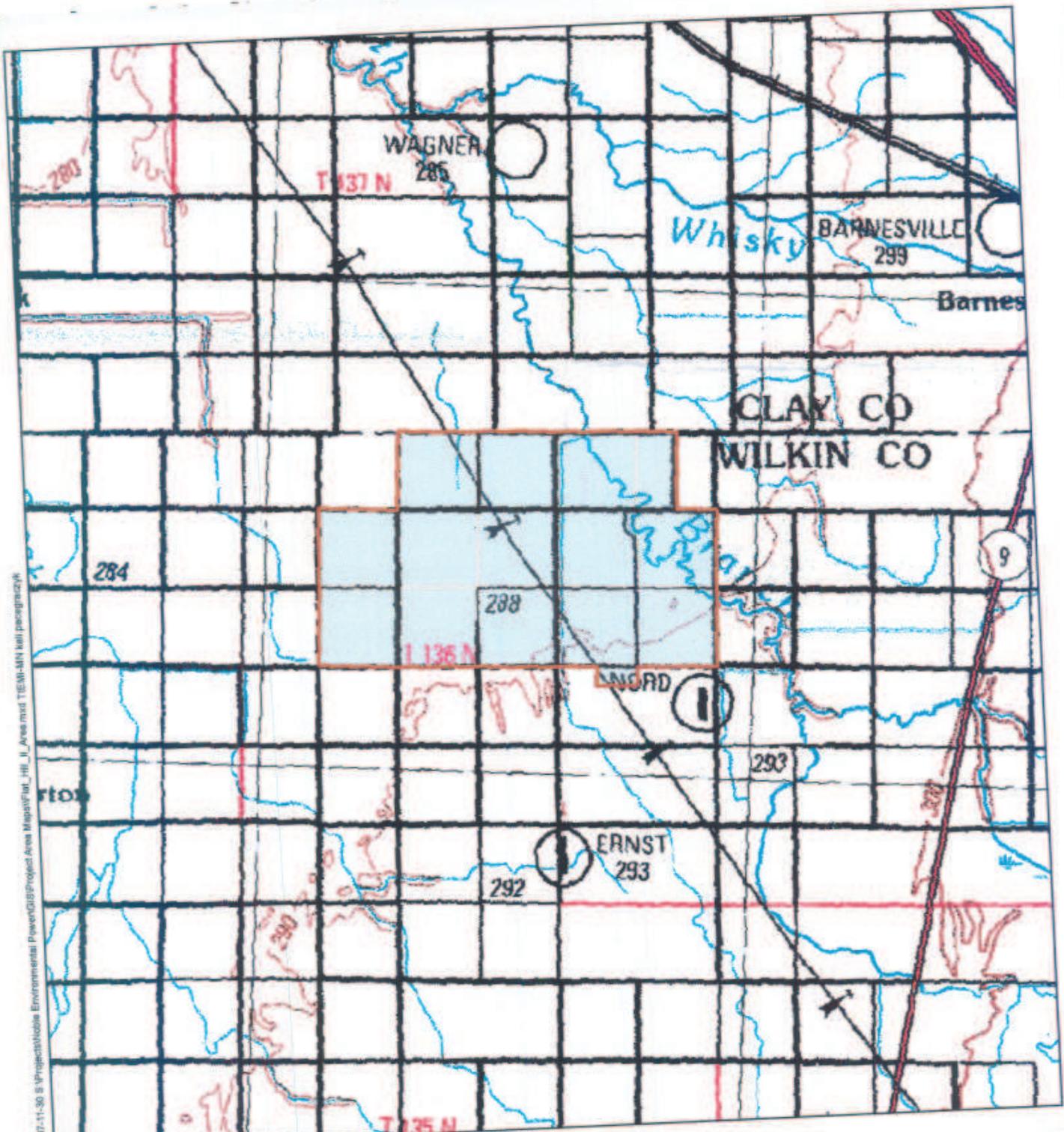
COUNTY	TOWN	RANGE	SECTION	TRS
CLAY	141	46	25	T141N R46W S25
CLAY	141	45	30	T141N R45W S30
CLAY	141	46	33	T141N R46W S33
CLAY	141	46	34	T141N R46W S34
CLAY	141	46	35	T141N R46W S35
CLAY	141	46	36	T141N R46W S36
CLAY	141	45	31	T141N R45W S31
CLAY	141	45	32	T141N R45W S32
CLAY	140	47	4	T140N R47W S4
CLAY	140	47	3	T140N R47W S3
CLAY	140	47	2	T140N R47W S2
CLAY	140	47	1	T140N R47W S1
CLAY	140	46	6	T140N R46W S6
CLAY	140	46	5	T140N R46W S5
CLAY	140	46	4	T140N R46W S4
CLAY	140	46	3	T140N R46W S3
CLAY	140	46	2	T140N R46W S2
CLAY	140	46	1	T140N R46W S1
CLAY	140	45	6	T140N R45W S6
CLAY	140	47	9	T140N R47W S9
CLAY	140	47	10	T140N R47W S10
CLAY	140	47	11	T140N R47W S11
CLAY	140	47	12	T140N R47W S12
CLAY	140	46	7	T140N R46W S7
CLAY	140	46	8	T140N R46W S8
CLAY	140	46	9	T140N R46W S9
CLAY	140	46	10	T140N R46W S10
CLAY	140	46	11	T140N R46W S11
CLAY	140	46	12	T140N R46W S12
CLAY	140	47	16	T140N R47W S16
CLAY	140	47	15	T140N R47W S15
CLAY	140	47	14	T140N R47W S14
CLAY	140	47	13	T140N R47W S13
CLAY	140	46	18	T140N R46W S18
CLAY	140	46	17	T140N R46W S17
CLAY	140	46	16	T140N R46W S16
CLAY	140	46	15	T140N R46W S15
CLAY	140	46	14	T140N R46W S14
CLAY	140	46	13	T140N R46W S13
CLAY	140	47	21	T140N R47W S21
CLAY	140	47	22	T140N R47W S22
CLAY	140	47	23	T140N R47W S23
CLAY	140	47	24	T140N R47W S24
CLAY	140	46	19	T140N R46W S19
CLAY	140	46	20	T140N R46W S20
CLAY	140	46	21	T140N R46W S21
CLAY	140	46	22	T140N R46W S22

## Flat Hill I Project Area Quad Sections

COUNTY	TOWN	RANGE	SECTION	TRS
CLAY	140	46	23	T140N R46W S23
CLAY	140	46	24	T140N R46W S24
CLAY	140	47	27	T140N R47W S27
CLAY	140	47	26	T140N R47W S26
CLAY	140	46	30	T140N R46W S30
CLAY	140	46	29	T140N R46W S29
CLAY	140	46	28	T140N R46W S28
CLAY	140	46	27	T140N R46W S27
CLAY	140	46	31	T140N R46W S31
CLAY	140	46	32	T140N R46W S32
CLAY	140	46	33	T140N R46W S33
CLAY	140	46	34	T140N R46W S34
CLAY	139	46	6	T139N R46W S6
CLAY	139	46	5	T139N R46W S5
CLAY	139	46	4	T139N R46W S4
CLAY	139	46	7	T139N R46W S7
CLAY	139	46	8	T139N R46W S8
CLAY	139	46	9	T139N R46W S9
CLAY	139	46	18	T139N R46W S18
CLAY	139	46	17	T139N R46W S17
CLAY	139	46	16	T139N R46W S16
CLAY	139	46	20	T139N R46W S20
CLAY	139	46	21	T139N R46W S21
CLAY	139	46	29	T139N R46W S29
CLAY	139	46	28	T139N R46W S28
CLAY	139	46	32	T139N R46W S32
CLAY	139	46	33	T139N R46W S33

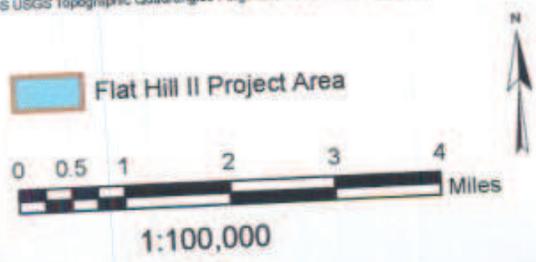
## Flat Hill II Project Area Quad Sections

COUNTY	TOWN	RANGE	SECTION	TRS
CLAY	137	46	31	T137N R46W S31
CLAY	137	47	33	T137N R47W S33
CLAY	137	47	34	T137N R47W S34
CLAY	137	47	36	T137N R47W S36
WILK	136	46	7	T136N R46W S7
WILK	136	46	18	T136N R46W S18
WILK	136	47	5	T136N R47W S5
WILK	136	47	4	T136N R47W S4
WILK	136	47	3	T136N R47W S3
WILK	136	47	2	T136N R47W S2
WILK	136	47	1	T136N R47W S1
WILK	136	47	7	T136N R47W S7
WILK	136	47	8	T136N R47W S8
WILK	136	47	9	T136N R47W S9
WILK	136	47	10	T136N R47W S10
WILK	136	47	11	T136N R47W S11
WILK	136	47	12	T136N R47W S12
WILK	136	47	18	T136N R47W S18
WILK	136	47	17	T136N R47W S17
WILK	136	47	16	T136N R47W S16
WILK	136	47	15	T136N R47W S15
WILK	136	47	14	T136N R47W S14
WILK	136	47	13	T136N R47W S13
WILK	136	47	20	T136N R47W S20
WILK	136	47	21	T136N R47W S21
WILK	136	47	22	T136N R47W S22
WILK	136	47	23	T136N R47W S23



2007-11-30 8 VProjectNoble Environmental PowerGISProject Area Maps\Flat\_Hill\_Area.mxd TSCM-MN.kml pacapgrazh

Source: Map adapted from LMIC WMS USGS Topographic Quadrangles Fargo and Wahpeton (1:100,000)



Noble Environmental Power
Figure 2 Flat Hill II Project Area
 TETRA TECH, INC.

**STATE OF MINNESOTA  
BEFORE THE  
MINNESOTA PUBLIC UTILITIES COMMISSION**

*In the Matter of Flat Hill Windpark I, LLC's  
Site Permit for a 201 Megawatt Large  
Energy Conversion System and Associated  
Facilities in Clay County, Minnesota*

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)

Docket Nos. IP-6687/WS-08-1134 and  
IP-6687/CN-08-951

**CERTIFICATE OF SERVICE**

Catherine M. Wood, certifies that on December 30, 2015, she served true and correct copies of the **UPDATED NATURAL HERITAGE INVENTORY SYSTEM REVIEW SUMMARY REPORT OF FLAT HILL WINDPARK I, LLC** upon the following parties via e-filing and/or U.S. Mail:

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*/s/ Catherine M. Wood*

Catherine M. Wood