ENVIRONMENTAL ASSESSMENT

SUMMITWIND FARM
GRANT AND ROBERTS COUNTIES,
SOUTH DAKOTA

DOE/EA-1979
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1. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

1.1 Site Description

The proposed SummitWind Farm (the Project) is a community wind farm developed by SummitWind Farm, LLC (the Project proponent). The proposed Project would consist of up to 41 wind turbine generators with a maximum generating capacity of up to 90 megawatts (MW). The proposed Project area encompasses approximately 11,616 acres in Grant County, which is located south of the Town of Summit, South Dakota along the Coteau des Prairies. *See* Figure 1.1.1: Regional Location Map. The proposed area, comprised of grasslands, lakes and wetlands, was historically classified as rural residential or agricultural land and was used for cropland, hay field and pasture purposes. Interstate-29 runs north-south through the middle of the Project area. Although the majority of the Project lies within the historic Sisseton-Wahpeton Oyate Reservation, the entire Project is on privately owned land and is therefore not governed by the Tribal Planning Council.

The Project proponent selected the Project area for a number of reasons including presence of a superior wind resource, access to transmission interconnection, and community support for wind energy development.

1.2 The Federal Actions

The Project proponent seeks to interconnect the Project to the United States Department of Energy (DOE) Western Area Power Administration (Western) transmission system via a tap configuration at the existing Summit-Watertown 115kV Transmission Line.

The Project would require certain actions from the United States Fish and Wildlife Service (USFWS) because many landowners in the Project area have USFWS-managed grassland and wetland easements on their properties. There are approximately 1210.7 acres of grassland easements and 223.9 acres of wetland easements in the Project area. Although the proposed Project would not disturb any wetland easements, construction of the Project would affect grassland easements both temporarily and permanently. *See* Table 1.2-1: Proposed USFWS Easement Disturbance and Table 1.2-2: Proposed Acreage per Type of Disturbance on USFWS-managed Easements.

Table 1.2-1: Proposed USFWS Easement Disturbance

	Grassland Easement	**Wetland Easement**
Total Area (acres)	1210.7	223.9
Temporary Disturbed (acres)	10.13	0.00
Permanent Disturbed (acres)	1.27	0
Temporary Disturbed (%)	0.84%	0.00%
Permanent Disturbed (%)	0.10%	0.00%

The USFWS has two options available to address potential impacts to its grassland easements: (1) Exchange USFWS-managed grassland easements for grassland easement acreage permanently impacted by wind turbines; or (2) Obtain a Special Use Permit for temporary construction disturbance to USFWS-managed grassland easements.

Table 1.2-2: Proposed Acreage per Type of Disturbance on USFWS-managed Easements

Type	**Temporary Disturbance (Acres)**	**Permanent Disturbance (Acres)**	**Temporary + Permanent Disturbance (Acres)**
Grassland Easement	10.13	1.27	11.40
Wetland Easement	0.00	0.00	0.00
Private Land not under Easement	212.51	26.10	238.61
Total	222.64	27.37	250.01

The Project proponent has completed field wetland delineations and construction of the Project would have minor impacts to wetlands in the Project area; therefore, the Project would require a Clean Water Act (CWA) Section 404 Wetland Permit from the United States Army Corps of Engineers (under the Nationwide Permit Program).

The Project is a federal action under section 102(2) of the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508), DOE NEPA Implementing Procedures (10 CFR Part 1021), and other applicable regulations. Western prepared this Environmental Assessment (EA) under these regulations to describe the analysis of environmental effects of the proposed Project and alternatives, including the No Action Alternative.

At the request of Western, the USFWS is participating as a cooperating agency in the preparation of this EA.

Western and the USFWS have prepared a Programmatic Environmental Impact Statement (PEIS) to evaluate the impacts of wind energy development in Western's Upper Great Plains Region (all or parts of Iowa, Minnesota, Montana, Nebraska, North Dakota, and South Dakota), and on the USFWS's grassland and wetland easements in North Dakota, South Dakota, and Montana (available online at http://www.plainswindeis.anl.gov/documents/fpeis/index.cfm). The Final Upper Great Plains (UGP) Wind Energy PEIS identifies conservation strategies, best management practices (BMPs), and comprehensive environmental review procedures for evaluating future wind energy projects. This SummitWind EA will reference the final PEIS as appropriate.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires federal agencies to take into account the effects of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The actions taken to satisfy Section 106 consultation requirements for this Project are discussed in Section 2.12, Existing Conditions, Anticipated Impacts and Anticipated Conservation Measures for Cultural Resources. A list of the state agencies (including the South Dakota State Historic Preservation Office), Native American Tribes and associated entities contacted to date can be found in Section 3.0, Agencies Contacted/Consulted.

1.3 Proposed Action

The proposed Project is located in Grant County within the Township of Summit, South Dakota, approximately 30 miles north of Watertown, South Dakota.

The proposed action would consist of the following components:

- Up to 41 SWT-2.3-108 (2.3) MW Siemens turbines;
- 1 or 2 permanent meteorological (met) towers;
- Underground electrical collection lines;
- Access roads and public road improvements;
- Operations and maintenance (O&M) facility; and
- Point of Interconnection (POI).

1.3.1 Proposed Facilities

The Project would consist of wind turbine generators and transformers connected by new private access roads, a system of buried electrical collection lines and a POI where power would enter the Western transmission system. Western and the Project proponent would have ongoing discussions and studies to determine the final electrical system design and interconnection details. The Project would also include a communications system that permits programmed independent operation and remote supervision of the Project wind turbines.

Turbines

The Project would consist of up to 41 SWT 2.3-108 (2.3 MW) Siemens turbines. The turbines operate automatically and self-start when the wind speed reaches an average of about 3 to 4 meters per second (m/s). The output increases, at an approximately linear rate, with the wind speed until the wind speed reaches 11 to 12 m/s. At this point, the power is regulated at rated power. If the average wind speed exceeds the maximum operational limit of 25 m/s, the wind turbine is shut down by feathering of the blades. When the average wind speed drops back below the restart average wind speed, the system resets automatically.

All turbines would be equipped with a supervisory control and data acquisition (SCADA) system that allows operators to remotely control and monitor the turbines. Siemens WebWPS SCADA system offers remote control and a variety of status views and useful reports from a standard internet web browser. The status views present information including electrical and mechanical data, operation and fault status, meteorological data and grid station data.

All turbines would be equipped with a lightning protection system.

Rotor

The SWT 2.3-108 Siemens rotor consists of three blades mounted upwind of the tower. The power output is controlled by pitch regulation. The rotor speed is variable and is designed to maximize the aerodynamic efficiency.

The rotor diameter is 108 meters (354 feet), with a sweep area of 9,144 m^2 (2.3 acres) and a rotor speed of 6 to 16 revolutions per minute (rpm).

Tower

The SWT 2.3-108 tower has a hub height of 80 meters (262 feet) and is made of steel. The tower has internal ascent and direct access to the yaw system and nacelle.

Met Tower(s)

The Project would include one or two permanent met towers that are fitted with multiple sensors to track and monitor wind speed, direction and temperatures. These sensors collect wind data and support performance testing of the turbines. The met towers would be connected to the wind farm's central SCADA system. The permanent towers would consist of a central lattice structure supported by three to four sets of guy wires and would be 80 to 100 meters (262 to 328 feet) tall. The Project proponent anticipates that each tower would be a galvanized steel structure and would have wind monitoring instruments suspended at the end of booms attached perpendicular to the tower. The Project proponent would mount red aviation warning lights at the top of all towers, as required by the Federal Aviation Administration (FAA). Buried electrical lines would connect each tower directly to a power source at the nearest distribution line and provide the power necessary to run the warning lights and wind testing equipment. The Project proponent would site the met towers upwind of the prevailing wind direction within the Project area. Each met tower would also have a grounding system similar to that of the wind turbines.

Buried Cable Collection Systems

Where practical, the Project proponent would route buried electrical collection lines to follow Project access roads and field edges; however, portions of the buried electrical collection lines would cross agricultural fields. The high voltage underground cables would be fed through trenches and into conduits at the transformers at each turbine. The cables run to the transformers' high voltage (34.5-kV) compartment and are connected to the terminals. Low voltage cables would be fed through a set of underground conduits from the transformer pad to the bus cabinet inside the base of the wind turbine tower. The Project proponent would inspect and test the system prior to energization.

When possible, the Project proponent would install underground collection lines by performing direct burial via cable plow, rock saw, or trencher. An area 20 feet wide on either side of the cable path must be cleared of woody vegetation and would be partially disturbed by the tracks of the installation machinery. Where surface restoration is required, the Project proponent

would use a restoration Bobcat or small bulldozer to ride over and smooth out the disturbed area.

O&M Facility

The O&M facility would include a main building with offices, a storage yard for spare parts and maintenance equipment, restrooms, a workshop area, outdoor parking facilities, a turnaround area for larger vehicles, outdoor lighting and a gated access with partial or full perimeter fencing. The O&M facility area would be leveled and graded and would serve as a central base for Project operation. The main O&M building would house the command center of the Project's SCADA system. The building would be linked by fiber optic cables to each of the turbines through the SCADA system, which would allow an operator to control critical functions and monitor the overall performance of each turbine. The Project proponent estimates that the main O&M building would be up to 5,000 square feet in size and would require up to five acres of disturbance area. The Project proponent would determine the final design and architecture of the O&M facility prior to construction and comply with all required building standards and codes.

POI

The proposed POI would be a tap switchyard facility located at the existing Summit-Watertown 115kV Transmission Line, approximately 4.5 miles south of the Summit 115 kV Substation. The POI would mechanically connect the Project to the utility grid and provide fault protection. The exact footprint of the POI would depend largely on the utility requirements and the grid line characteristics at the POI. All of the main outdoor electrical equipment and control house would be installed on concrete foundations that are designed for the soil conditions at the substation.

1.3.2 Pre-Construction Process

The Project proponent conducted preconstruction surveys and studies to confirm the feasibility of the proposed actions and to show alternatives to minimize or avoid impacts to existing environmental resources.

Completed environmental studies:

- Site Characterization Study of the SummitWind Resource Area, inclusive of the Tier 1 and Tier 2 studies consistent with the Voluntary Land-based Wind Energy Guidelines;
- Fixed Point Bird Use Interim Report;
- Raptor Nest Survey;
- Microwave Beam Path Study;
- Visual Assessment;

- Shadow Flicker Study;
- Acoustic Analysis Study;
- Grassland Breeding Bird Survey;
- Bat Studies (Acoustic Monitoring);
- Butterfly Studies;
- Wetland Delineations;
- Biological Assessment;
- Fixed-Point Bird Use Surveys;
- Desktop Geotechnical Study;
- Desktop Archaeological Study; and
- Archaeological and Cultural Surveys (Area of Potential Effect as determined by WAPA and Sisseton Wahpeton Oyate).

Consultations:

- Consultation with the USFWS to avoid and minimize impacts to grassland and wetland easements; and
- Bird and Bat Conservation Strategy.

Other Due Diligence:

- Over 4 years of on-site met tower data from two 60 meter met towers; and
- Turbine setback considerations per Grant County zoning ordinance.

1.3.2.1 Construction Activities

Civil Works and Access Roads

Construction of the Project would consist of many civil works and physical improvements to the land, including:

- Installation of sediment and erosion controls and other conservation measures;
- Clearing and grading of laydown areas, work zones, and parking areas;
- Clearing and grading of areas where Project infrastructure would be installed;
- Public road improvements; and
- Creation of access roads.

Wherever possible, the Project proponent would upgrade existing roads and farm drives to use as Project access roads in order to minimize impacts to both active agricultural areas and wetlands. Where an existing road or farm drive is unavailable or unsuitable, the construction contractor would

construct new gravel-surfaced access roads. Road construction would typically involve installation of soil erosion and sediment control measures, topsoil stripping in agricultural lands and grubbing of stumps, as necessary. The construction contractor would stockpile stripped topsoil along the road corridor for use in site restoration. Any grubbed stumps would be chipped and spread, buried in upland non-agricultural/non-grassland areas, or otherwise appropriately disposed of with the approval of the landowner or environmental inspector. Following removal of topsoil, subsoil would be graded and compacted. As needed, geotextile fabric or grid would be laid down to provide additional support to overlaying rock. Once rough grade is achieved, base rock would be spread and compacted to create a road base. A capping rock would then be spread over the road base and roll compacted to finished grade.

During construction of the Project, access road installation and use could result in temporary disturbance of a maximum width of 50 feet, with temporary road corner radii of up to 150 feet. In agricultural areas, the construction contractor would strip and stockpile topsoil along the access road to prevent construction vehicles from driving over undisturbed soil and adjacent agricultural fields. Up to a 56-foot wide area may be disturbed for moving, or "walking," the tower erection crane. Maximum permanent road width including graded side-slopes would be 17 feet. Once construction is complete, the Project proponent would restore any temporarily disturbed areas, de-compact soil as necessary, remove rocks from agricultural areas, and reestablish pre-construction contours.

During the operation of the Project, access roads leading to the turbines would generally consist of a 17-foot wide compacted gravel surface and a 2-foot wide shoulder on either side to blend with the surrounding contours, allow for proper drainage and accommodate crane equipment moving safely between the individual turbine sites. Where roads are necessary on USFWS grassland easements, the Project proponent would make the roads the minimum size necessary for safe construction and operation. Temporary impacts would be downsized whenever practicable.

Foundation Design and Construction

The Project would require foundations for each turbine, transformer pad, junction box, substation equipment and the O&M facility. The construction contractor would typically install wind turbines by installing sediment and erosion control and then stripping and stockpiling topsoil within a 150-foot radius around each tower. After the construction contractor prepares a turbine workspace, it would construct a foundation in several stages, including: hole excavation, outer form setting, rebar and bolt cage assembly, casting and finishing of the concrete, removal of the forms, backfilling and

compacting, construction of the pad transformer foundation, and foundation site area restoration. The purpose of the foundation for a wind turbine is to give the tower stability below the pedestal, which connects it to the tower.

A wind turbine foundation may be either a concrete caisson or a spread footer or equivalent, as specified by the Project engineer. The Project proponent anticipates using a spread foot foundation containing approximately 350-400 cubic yards of concrete and measuring approximately 10-12 feet deep and approximately 50-60 feet in diameter. After it is cured, the construction contractor would bury and backfill the foundation with the excavated on-site material. The foundation pedestal would have a diameter about the size of the bottom tower section and would either be flush with the ground surface or extend above grade.

Turbine Erection

The construction contractor would deliver all turbine components to the Project site on flatbed transport trucks and would offload main components at the individual turbine sites. The construction contractor would use a large erection crane to erect the turbine. This crane would be based on a gravel rectangular crane pad measuring approximately 100 feet by 60 feet. The turbine erection process includes multiple stages:

- Setting of the bus cabinet and ground control panels on the foundation;
- Erection of the tower (in 3-4 sections);
- Erection of the nacelle, assembly and erection of the rotor, and connection and termination of the internal cables; and
- Inspection and testing of the electrical system prior to energization.

The erection crane(s) would move from one tower to another along a designated crane path. This path would generally follow Project access roads and would only cross or minimally affect existing public roads (where permitted and practical). Upon departure of the crane from each tower site, the construction contractor would undertake all required site restoration activities, including removal of all temporary material present in crane paths. In agricultural fields, restoration would also include subsoil de-compaction (as necessary), rock removal, spreading of stockpiled topsoil, and reestablishing preconstruction contours.

Whenever possible, the Project proponent would limit crane crossings of natural gas pipeline infrastructure to existing all-year roads. The Project proponent would plan and coordinate with facility owners/operators the use of heavy equipment near natural gas pipelines and ensure that everyone

takes proper precautions to protect the pipeline, construction personnel and equipment operators.

The Project proponent has planned one overland erection crane crossing on USFWS easement land between T45 and T5. The Project Proponent has coordinated with the USFWS regarding mitigation measures to address the potential temporary impacts associated with this crossing.

Cable Collection Systems

Installation of underground cables typically begins after the roads, turbine foundations and transformer pads are complete for a particular row of turbines. On USFWS easements, the construction contractor would trench the cables in the same footprint as the roads.

Direct burial via a trencher or rock saw involves the installation of bundled cable in a similar fashion to cable plow installation. The trencher or rock saw uses a large circular blade or “saw” to excavate a small open trench. The trencher blade creates an approximately 14-inch wide trench with a sidecast area immediately adjacent to the trench. Similar to a cable plow, this direct burial method installs the cable a minimum of 48 inches below the surface and requires only minor clearing and surface disturbance (up to 15 to 25 feet wide from the installation machinery and any stockpiled brush). In active agricultural land (crop, hay or pastureland), up to two parallel collection line circuits can be installed by trenching without the need to strip and segregate topsoil. The construction contractor would replace sidecast material via a Bobcat or small bulldozer fitted with an inverted blade. All areas would be returned to preconstruction grades, and restoration efforts would be as described above for cable plow installation. Although the Project proponent does not expect to run more than two circuits in parallel through active agricultural fields in the current collection system layout, doing so would require stripping the topsoil, soil stockpiling/segregation, soil replacement, soil re-grading, and soil stabilization (seeding and mulching) following installation. The construction contractor would repair any drainage tile lines that are inadvertently cut or damaged during installation of the buried cable as part of the restoration effort.

Where buried cable is proposed to cross buried natural gas facilities, the construction contractor would protect and preserve the staking, marking or other designations for underground facilities until they are no longer required for proper and safe excavation. The construction contractor would stop work and notify the on-call center for remarking if any facility mark is removed or is no longer visible. The construction contractor would have an observer assist the equipment operator when operating excavation equipment around known underground facilities. The equipment operator

performing the excavation would observe and protect the tolerance zone around underground natural gas facilities as determined by the crossing agreements and federal and state law. Protection of exposed underground facilities is as important as preventing damage to the facility while digging. The owners of natural gas pipeline infrastructure would likely have specific protocols that must be used for the exposure of buried natural gas facilities. There may also be restrictions placed upon how close powered equipment may be used in relation to natural gas facilities.

Substation and Point of Interconnection

The construction of the Project substation involves several stages of work including, but not limited to, grading of the area, construction of several foundations for the transformers, breakers, and control houses, erection and placement of the steel work and all outdoor equipment, and electrical work for all of the required terminations. Once complete, the Project proponent would perform a rigorous inspection and execute a commissioning test plan prior to energization of the substation.

Substation construction work requires the use of several pieces of heavy machinery, including: a bulldozer, a drill rig and concrete trucks for the foundations, a trencher, a backhoe, front-end loaders, dump trucks for import of clean back fill, transportation trucks for the materials, boom trucks and cranes for off-loading of the equipment and materials, concrete trucks for areas needing slurry backfill, and man-lift bucket trucks for the steel work and pole-line work. The construction schedule for the interconnection substation facilities is largely dictated by the delivery schedule of major equipment such as the main transformers, breakers, capacitors, outdoor relaying equipment, and the control house. The transmission owner (Western) is generally responsible for the construction of the interconnection facility, as it would own and maintain the facility.

The construction of the POI station should occur within the same timeframe as the Project substation. In general appearance, the POI station would be very similar to the substation, but would have more steel pole structures and high voltage switch breakers with no transformers.

Temporary and Permanent Construction Disturbance Impacts

Temporary construction impacts are those short-term impacts that occur during the period that a project is being built. Permanent impacts refer to impacts that are associated with the built and operating project. The assumptions used to calculate the temporary and permanent land disturbance impacts associated with the Project are provided in Table 1.3.2—1 below.

Table 1.3.2—1: Disturbance Assumptions

Project Component	Temporary Disturbance	Permanent Disturbance
Access Roads	50' Wide corridor less any temporary disturbance from collector, wind turbines, and permanent disturbance	17' wide corridor less permanent disturbance from wind turbines
Crane Walks	56' Wide corridor less any temporary disturbance from access road, collector, wind turbines, and permanent disturbance	None
Laydown Area	10 acres	None
O&M Building	All permanent	5000 sq. ft. plus 10,000 sq. ft. parking lot
Overhead Collection Lines	None	None
Substation	50' outside substation area	Approximate substation area
Turbines	150' radius less any permanent disturbance	30' radius
Underground Collection Lines	20' Wide corridor less any temporary disturbance from wind turbines, and permanent disturbance	None

The Project proponent estimates that the temporary disturbance for the Project is 222.65 acres, or 1.92 percent of the approximately 11,616 acre Project area. The Project proponent estimates that the permanent disturbance for the Project is 27.37 acres, or less than 0.24% of the Project area.

Commissioning

Plant commissioning follows mechanical completion of the Project. The Project proponent would begin commissioning of the Project by preparing a detailed plan that includes testing and energizing Project components by placing locks and tags on breakers to ensure safety and allow for fault detection prior to the energization of any one component of the system. Once the substation is energized, the Project proponent would test individual turbines extensively, commission them, and bring them online separately. Commissioning does not require any heavy machinery.

1.3.2.2 Construction Waste Management and Reclamation

Debris associated with construction may include construction materials such as packaging material, crates, reels, and parts wrapping. This debris may also include excess excavated soil and removed vegetation. The Project proponent would remove materials with salvage value from the Project area for reuse. Excavated soils would be back-filled within the area of permanent disturbance and restored. If necessary, the Project proponent would temporarily store solid waste, including topsoil or other excavated materials not otherwise disposed of, within the corridor or within the temporary construction easements and then transport it to appropriate disposal facilities in accordance with federal, state, and local regulations.

Project reclamation is generally completed during suitable weather after all construction activities have been completed. Reclamation would initially consist of grading to replace the approximate original contour and drainage of disturbed areas. Grading would include removal of any temporary structures. Following grading, the Project proponent would spread salvaged topsoil and blend it with adjacent areas to provide a growth medium for vegetation. Soil that has been compacted by equipment operation would be tilled to alleviate compaction. Where natural regrowth of vegetation is not anticipated, the Project proponent would reseed disturbed areas in accordance with landowner agreements or with regionally native species. The Project proponent would coordinate with USFWS regarding disturbance on grassland easements.

1.3.2.3 Project O&M

The O&M facility would serve as a central base for Project operation and would include a main building with offices, a storage yard for spare parts and maintenance equipment, restrooms, a workshop area, outdoor parking facilities, a turnaround area for larger vehicles, outdoor lighting, and a gated access with partial or full perimeter fencing. The Project proponent would level and grade the O&M facility area. The main O&M building would house the command center of the Project's SCADA system. The building would be linked by fiber optic cables to each of the turbines through the SCADA system, which would allow an operator to control critical functions and the overall performance of each turbine. The Project proponent expects the main O&M building to be approximately 5,000 square feet in size, plus a 10,000 square feet parking lot and up to five acres of disturbance area. The Project proponent would determine the final design and architecture of the O&M facility prior to construction and comply with all required building standards and codes.

The Project proponent would be responsible for maintenance of any new access roads.

Maintenance Schedule

The amount of downtime due to scheduled maintenance is predictable from year to year. The proposed Project operating plan would likely include a planned outage schedule cycle that consists of wind turbine generator inspections and maintenance after the first 3 months of operation, a break-in diagnostic inspection, and subsequent services every 6 months.

- First Service Inspection: Performed within 3 months of commissioning.
- Bi-Annual Service Inspection: Performed within 6 months of first inspection and every year the Project is operational.
- Annual Service Inspection: Performed within 1 year of commissioning and every year the Project is operational.

These rigorous 6-month routines include: inspections and testing of all safety systems; inspection of wear-and-tear on components such as seals, bearings, and bushings; lubrication of the mechanical systems; electronic diagnostics on the control systems; pre-tension verification of mechanical fasteners; and overall inspection of the structural components of the wind turbine generators. Blades are also inspected to maintain overall aerodynamic efficiency. Blade washing may be necessary to remove insect debris and grime that can diminish the Project's aesthetics.

Individual wind turbines are taken off-line for maintenance, leaving the remaining wind turbines in that string fully operational. Electrical equipment such as breakers, relays, and transformers generally require weekly visual inspections, which do not affect overall availability. Required testing and calibrations every 1-3 years may cause outages. To the extent practical, the Project proponent would schedule short-term off-line routine maintenance procedures to coincide with periods of little or no generation (i.e., low wind) to minimize the impact to the amount of overall generation.

Unscheduled Maintenance

Modern wind power projects are very reliable. However, several components and systems of an individual wind turbine, such as the mechanical, electrical, or computer controls, can require forced, non-routine outages. The majority of outages are caused by auxiliaries and controls, not the heavy rotating machinery. The Project proponent would complete frequent inspections of heavy machinery for early detection of problems and prevention of complete operational failure.

Although the newer control systems include a high level of detection and diagnostic capability, they normally require frequent minor adjustments in the first few months of operation. As a result, availabilities of a wind power project are generally lower in the first few months until they are fully tuned. Once a wind plant is properly tuned, unplanned outages are generally rare and downtime is generally limited to the routine service schedule.

The Project proponent would stock the O&M facility with sufficient spare parts to support maintenance efforts during operation. The modular design of modern wind turbines results in the majority of parts being "quick-change" in configuration, especially in the electrical and control systems. This modularity and the fact that all of the turbines are identical allows for the swapping of components quickly between turbines to determine root causes of failures. As part of their supply agreements, major turbine equipment vendors guarantee the availability of spare parts for 20 years.

1.3.3 Decommissioning

The term of the Power Purchase Agreement, the condition of the equipment, and evolution of power generation technology would ultimately determine the useful life of the turbines. Once constructed, the cost to operate and maintain a wind farm is comparable to other forms of power generation. Therefore, the strength of the Project's economics relies primarily on the creditworthiness of the entity purchasing the power and much less so on the financial strength of the Project's owner. Improvements in wind turbine design or efficiency gains from competing technologies may eventually trigger the decommissioning of individual units or the entire Project; however, the Project may repower with more advanced wind technology. The cost of decommissioning the wind turbines would be offset by the salvage value of the towers and the turbine components.

The Project proponent would follow Grant County's zoning ordinance for decommissioning, restoration and abandonment of the Project. During decommissioning, the Project proponent would restore the footprint of the permanently impacted grassland easements back to grasslands according to USFWS specifications and the area would revert back to full easement protection.

1.4 Alternatives

1.4.1 Preliminary Alternatives Screening

Development of a wind energy project is a highly iterative process. The Project proponent considered several alternative locations for Project

infrastructure and eliminated options due to economic and environmental reasons throughout the early stages of planning. The Project proponent developed the Project layout over a period of more than three years. The placement of wind turbines is based upon the wind energy resource, the availability of leasable land, the setback constraints in the zoning ordinance, the avoidance of sensitive environmental resources, and constructability considerations.

The Project proponent conducted many preliminary studies to aid in the selection process and eliminate inappropriate sites from consideration. For example, the Project proponent conducted a Tier 2 Site Characterization Study of the SummitWind Resource Area (Tier 2 Study) consistent with the requirements of Chapter 3 of the USFWS Land-Based Wind Energy Guidelines (USFWS 2012b). Section 1.3.2 of this EA lists other preconstruction studies that the Project proponent has completed or is currently undertaking. These studies have already led to layout modifications. For example, the Project proponent adjusted the locations of several turbines and associated access roads and buried electrical lines in order to significantly minimize impacts to delineated wetlands and USFWS wetland easements. After field consultation with the USFWS, the Project proponent also adjusted the locations of four proposed turbines, moving them away from an active bald eagle nest and off of native grassland.

In addition, the Project proponent considered two alternate interconnection approaches requiring construction of a 4.5 mile and a 30-mile overhead electric transmission line to the Summit 115kV Substation in Roberts County, North Dakota and the Big Stone Substation in Big Stone, South Dakota, respectively. These alternatives were eliminated after determining that it would result in greater ground disturbance and visual impacts than the onsite POI. However, should Western choose the No Action Alternative, described below, it is possible that the Project proponent would reconsider an alternative interconnection.

1.4.2 No Action Alternative

Under the No Action Alternative, Western would not grant an interconnection agreement to SummitWind Farm.

1.5 Purpose and Need for the Proposed Action

1.5.1 General Purpose and Need

South Dakota has a voluntary Renewable Portfolio Standard encouraging 10 percent of all retail electricity sales in the state be obtained from renewable

and recycled energy by 2015. Although South Dakota has already met its retail electricity targets, energy from the Project would significantly contribute to the state's overall energy needs and may help serve energy export goals to neighboring states over the next 30 years.

According to the Energy Information Administration (EIA), "South Dakota is one of the least-populated states, and its total energy consumption is among the lowest in the nation. However, it is among the top 10 in total energy consumption per capita." Although South Dakota has limited fossil fuel resources, it has significant renewable energy potential. More than one-fourth of the households in South Dakota use electricity as their primary energy source for home heating. The National Renewable Energy Laboratory (NREL) estimates that 88 percent of South Dakota's land area has high wind power potential and EIA estimates that South Dakota has the fifth-largest wind resource in the United States.

The Proposed Action would also provide much needed income to Grant County, South Dakota and its residents by way of landowner agreements, taxes and payments in lieu of taxes, construction expenses, and jobs. The Project proponent estimates that the Project's total capital investment (including turbine cost) would be approximately $155 million.

1.5.2 Applicant Purpose and Need

The Project proponent is an independent power producer in the business of developing renewable energy power generation facilities for profit. The purpose of the Project proponent is to help entrepreneurial individuals, companies and communities generate their own renewable wind power.

1.5.3 Agency Purpose and Need

The Project proponent, as an Interconnection Customer, requests to interconnect its proposed Project with Western's Summit-Watertown 115 kV transmission line at a tap configuration at the existing Summit-Watertown 115kV Transmission Line within the Project area. Western's purpose and need is to consider and respond to the interconnection request in accordance with its Open Access Transmission Service Tariff (Tariff) and the Federal Power Act. Western's Tariff is filed with the Federal Energy Regulatory Commission (FERC) for approval.

Under the Tariff, Western offers capacity on its transmission system to deliver electricity when capacity is available. The Tariff also contains terms for processing requests for the interconnection of generation facilities to Western's transmission system. In reviewing interconnection requests,

Western must ensure that existing reliability and service is not degraded. Western's Tariff provides for transmission and system studies to ensure that system reliability and service to existing customers are not adversely affected by new interconnections. These studies also identify system upgrades or additions necessary to accommodate the proposed project and address whether the upgrades/additions are within the project scope.

1.6 Authorizing Actions

Federal, state, and local agencies have jurisdiction over certain aspects of the Project. Authorizing actions and agencies are summarized in Table 1.6-1: SummitWind Farm Regulatory Authorizations.

Table 1.6-1: SummitWind Farm Regulatory Authorizations

Regulatory Action / Statute	**Agency**
Federal	
National Environmental Policy Act (NEPA)	Western
Large Generator Interconnection Agreement (LGIA)	Western
Section 7 of Endangered Species Act (ESA) Consultation	Western, U.S. Fish and Wildlife Service (USFWS)
Migratory Bird Treaty Act (MBTA)	Western, U.S. Fish and Wildlife Service (USFWS)
The Bald and Golden Eagle Protection Act (BGEPA)	Western, U.S. Fish and Wildlife Service (USFWS)
Special Use Permit (SUP), Right-of-Way Permit, Compatibility Analysis of Disturbed Easements, Exchange of Grassland and Wetland Easements	U.S. Fish and Wildlife Service (USFWS)
Section 404 Clean Water Act Permit	U.S. Army Corps of Engineers, Omaha District
Form 7460-1. Notice of Proposed Construction	Federal Aviation Administration (FAA)
Section 106 of National Historic Preservation Act Consultation	Western, State Historical Preservation Office (SHPO), and Tribal Nations
Native American Graves Protection and Repatriation Act (NAGPRA) Compliance	Western and Tribal Nations
American Indian Religious Freedom Act	Western and Tribal Nations
State	
Overweight/Oversized Permits	South Dakota Department Of Transportation (SDDOT)
Road Approach/Access Permit	South Dakota Department Of Transportation (SDDOT)

Regulatory Action / Statute	Agency
Utility Crossing Permit	South Dakota Department Of Transportation (SDDOT)
Aeronautical Hazard Permit	South Dakota Department Of Transportation (SDDOT)
National Pollutant Discharge Elimination System (NPDES), General Construction Storm Water and Spill Prevention Control and Countermeasures (SPCC) Plan	South Dakota Department of Environment and Natural Resources (DENR)
Section 401, Clean Water Act (CWA)	South Dakota Department of Environment and Natural Resources (DENR)
State Threatened and Endangered Species Consultation	South Dakota Game, Fish and Parks (GFP)
Notice to Telecommunications Companies	South Dakota Codified Law SDCL 49-32-3.1
Notice to the PUC	Public Utilities Commission (PUC) SDCL 49-41B-25.1
Local	
Right-of-Way	Grant County
Overweight and over width permit	Grant County
Conditional Use Permit: wind farm and transmission line.	Grant County
Building Permits: towers, collection lines, feeder lines, buildings, and substation.	Grant County
Soil Erosion and Sediment Control Plan	Grant County

1.7 Public Participation

Public involvement is one of the most important requirements of the NEPA process, especially for enabling the affected community to guide the scope of the NEPA analyses to be conducted.

Western and the Project proponent have consulted with several federal, state, local, and tribal agencies during the creation of this document. Western and the Project proponent invited local tribal officials to a meeting at the Dakota Magic Casino in Hankinson, North Dakota to discuss the Project and the scope of the EA on February 11, 2014. In addition, the Project proponent held a public scoping meeting on February 12, 2014 in Summit, South Dakota. A Public Scoping Report is attached as Appendix A of this EA.

The public had the opportunity to comment upon the draft EA document. Comments were open to be received until December 29, 2014. A summary of comments received on the draft are included as Appendix B.

2. EXISTING CONDITIONS, ANTICIPATED IMPACTS AND ANTICIPATED CONSERVATION MEASURES

2.1 Geology and Soils

This section evaluates the geological and soil resources in the vicinity of the proposed Project. The analysis presented in this section is supplemented by a Desktop Geological and Geotechnical Study prepared by Haley & Aldrich, Inc.

2.1.1 Existing Conditions

2.1.1.1 Regional Project Settings

The proposed Project encompasses approximately 11,616 acres in Grant County in the northeastern corner of South Dakota. The Project area is located in the Northern Glaciated Plains ecoregion in the Central Lowlands physiographic province (EPA 2013). The Central Lowlands province is characterized by a generally flat to gently rolling landscape composed of glacial drift and other glacially-deposited materials (WAPA 2013).

The Project area is situated on the Coteau des Prairie (Coteau), a regionally-extensive flatiron-shaped upland plateau that resulted from several advances and retreats of glacial ice lobes and rises from the surrounding Central Plains lowlands (DWNR 1986). The Coteau is approximately 100 miles wide, nearly 200 miles long, rises about 1,300 feet above the surrounding eastern lowlands drained by the Minnesota River, and rises about 700 feet above the James River lowlands located to the west, forming a regional hydrogeological divide between the two river basins (Gilbertson 1990).

Ground surface elevations across the Project area range from approximately 1,180 to 2,050 feet above sea level, with the more elevated portions of the Project situated along a southwest-to-northeast trending spine of a glacial moraine belt that generally forms the Project area borders to the northeast. From the moraine ridge, Project area elevations generally decrease and slope downward both to the southeast and to the northeast directions.

2.1.1.2 Geological Setting

Bedrock directly below the Project area is the Pierre Shale bedrock, the youngest bedrock unit in the region, part of a thick succession of undifferentiated Late Cretaceous-age marine and non-marine sedimentary rocks comprised of sandstones, marls, limestones, and shales (Gilbertson 1990). The Project proponent does not expect to encounter shallow bedrock as part of the excavation or construction of the Project.

According to South Dakota's Department of Environment and Natural Resources (DENR), beginning about 2 million years ago, continental glaciers extended generally southward across North America and covered eastern South Dakota several times. The South Dakota DENR claims that as each ice sheet advanced, it transported large volumes of rock debris frozen into the lower layers of ice. Glaciers with a very thick and heavy ice sheet scoured and smoothed off the terrain whereas thin glaciers overrode obstacles. As the ice melted, sediment called glacial drift was left behind. The majority of the geology in Grant County was created by Illinoian glacial sediments.

The Coteau plateau landform was constructed by these successional glacial ice advances and retreats which deposited layers of glacial tills and other glacial moraine deposits up to 700 feet thick in southern and western Grant County (Gilbertson 1990). The Project area is situated on three geomorphic areas reflecting different types of glacial till deposits or glacial moraine deposits.

The Toronto Till Plain on the western edge of the Project area is estimated to be 50 to 120 feet thick. It is characterized by broad, rounded hills separated by numerous stream valleys that lead to the Big Sioux River. The Toronto Till contains characteristic Cretaceous-age rock fragments and is overlain by an estimated 5 feet of loess soils, which are generally considered unsuitable for foundation support of wind turbine structures.

The Bemis Moraine Complex makes up the majority of the Project area and is composed of a narrow ridge (moraine) and an eastern belt of the related ground moraine (Gilbertson 1990). It is characteristically covered in cobbles and boulders, a factor influencing the ease of excavation. The kame and kettle topography found behind the moraine has few streams and closed depressions flanked by boulder-strewn ridges and low, somewhat linear hills (Gilbertson 1990).

The northeastern edge of the Project area is located on the Altamont-Gary Moraine Complex, a very stony glacial moraine surface littered with potholes, most of them filled with lakes (Gilbertson 1990). Ground surface elevations decline from west to east, and local relief varies by 75 to 80 feet.

The glacial moraine till at the surface is about 100 feet thick (Gilbertson 1990).

2.1.1.3 Soils

Soil formation results from the complex interactions between geologic material, climate, topography, vegetation, organisms, and time. The classification of soils is based on their degree of development (into distinct layers or horizons) and their dominant physical and chemical properties. Mollisols are the predominant soils in South Dakota and the proposed Project area. These soils have developed from loess parent materials and are commonly very dark-colored, organic-rich, mineral soils that are found in the plains of North and South Dakota and northern Montana. Mollisols are base-rich throughout and highly fertile. These soils typically develop under grasslands; however, some have formed under a forest ecosystem. These soils are typically present in subhumid to subarid climates that have a moderate to pronounced seasonal moisture deficit and are mainly used as cropland, pasture, or rangeland.

Soil associations in the Project area were derived from the United States Department of Agriculture National Resource Conservation Service (NRCS) on-line Soil Survey Geographic Soils Data (SSURGO) mapping tool (NRCS 2013). Soil associations consist of major and minor soil units which provide a broad perspective of the soils and landscapes in an area. The following three soil associations are located within the Project area:

- Forman-Buse-Aastad Association – This association developed on a glacial moraine and consists of deep well-drained and moderately well-drained loamy soils on uplands. Slopes range from nearly-level to hilly; they are steeper along the sides of entrenched drainageways. There are sloughs and closed depressions throughout the association. In some areas within the association, few-to-many stones are scattered on the ridgetops. In many areas, the drainage pattern is poorly defined, but can be well-defined in areas of rolling-to-steep soils associated with entrenched drainageways. Aastad soils are subject to flooding.

- Renshaw-Fordville-Devide Association – This association formed on glacial outwash plains and glacial moraines in uplands and terraces and consists of somewhat excessively drained to somewhat poorly drained loamy soils of variable thickness. The association is nearly level to moderately steep and is formed over sand and gravel substrate. The slopes are predominantly nearly-level to gently

undulating, and are steeper on the moraines and on side slopes of drainageways. Slopes are well-defined along the larger drainageways.

- Vienna-Lismore Association – This association makes up the majority of the Project area. Formed on upland glacial till plains, this association generally consists of deep well-drained and moderately well-drained, nearly-level to strongly-sloping silty soils. The landscape consists of gentle rises that have long smooth slopes leading to small drainageways. Slopes are predominantly nearly-level to moderately sloping, but they are strongly sloping in areas adjacent to entrenched drainageways. In some places, a few closed depressions dot the landscape. The drainage pattern is well defined.

2.1.1.4 Paleontological Resources

Based on the geology and depth-to-bedrock below the Project area, the possibility of encountering paleontological remains or fossils during Project development is considered unlikely. Fossils most commonly appear in sedimentary rock formations. As the Pierre Shale bedrock is inferred to be several hundred feet below the ground surface, it is unlikely to be impacted during Project construction.

2.1.1.5 Geological Hazards

The potential geologic hazards that could be significant at wind project sites include seismic ground shaking, ground rupture, liquefaction, slope instability subsidence and settlement, and expansive soils These hazards are described in detail in the Desktop Geological and Geotechnical Study and summarized below.

Based on the United States Geological Survey Quaternary Fault and Fold database, there are no recognized or mapped Quaternary faults in proximity to the Project area. Similarly, based on the United States Geological Survey's National Seismic Hazard Maps, there is a low risk of ground shaking due to seismic activity within the Project area. The peak horizontal acceleration, expressed as a percentage of acceleration due to the force of gravity with a 2 percent probability of exceedance in 50 years, is 0.0 to 0.02, which is considered insignificant ground shaking. Ground rupture, a break and planar slip within soils, and liquefaction, a loss in shear strength resulting in the soil acting like a liquid, typically result from earthquakes and seismic events.

The major determinants of slope stability are: slope angle; soil or rock structure; topography; precipitation; overall landslide susceptibility; and

previous landslide incidences (WAPA 2013). Because the Project is located in relatively flat areas of generally low relief, slope instability is not likely to be a significant hazard.

Ground subsidence and settling can be caused by: deep, collapsible soils; seismic activity; karst features; hydrocompaction from withdrawal of groundwater or hydrocarbons; or underground mining. Because the underlying soils at the Project are dense glacial tills and glacial moraines, subsidence and settling is considered unlikely. Additionally, expansive soils, which are soils that can shrink and swell in response to changes in moisture, have not been noted in the Project vicinity.

Since better wind conditions are present at higher elevations and wind turbines are generally placed outside of floodplain areas, flooding is not a likely hazard.

2.1.2 Potential Impacts of the Alternatives

Wind energy development would have a number of impacts on soils in and around the Project area, most of which relate to the effects of ground-disturbing activities. Impacts to bedrock are unlikely for this Project and therefore potential impacts to bedrock are not discussed.

The Project proponent expects the majority of impacts on soil resources to occur during the construction phase of the Project when there are ground-disturbing activities. Common impacts include soil compaction, soil horizon mixing, wind erosion, water erosion, sedimentation, and soil contamination. These impacts could affect other resources such as air, water, vegetation, and wildlife.

As noted in the final UGP Wind Energy PEIS, site characterization activities would be of short duration and would not require significant site modifications. The Project proponent would implement best management practices (BMPs) and mitigation measures to reduce soil compaction and control soil erosion and surface runoff to ensure that impacts would be negligible and would contribute to the success of future reclamation efforts.

Construction of a typical wind facility would result in impacts on soil resources in an area equivalent to the total area for all components (e.g., wind tower foundations, cable trays or trenches, control building, equipment storage areas, conditioning facilities, substations, roads, and temporary workspace areas). Direct adverse impacts of ground-disturbing activities relate mainly to the increased potential for soil compaction, soil horizon mixing, erosion, sedimentation of nearby lakes, rivers, and streams, and soil

contamination. The degree of impact depends on site-specific factors such as soil properties, slope, vegetation, weather, and distance to surface water. Erosional gullies formed on excavated land and the increased drainage may also contribute to soil erosion into natural drainages. Compaction by vehicles or heavy equipment reduces infiltration and promotes surface runoff. Soil erosion due to wind is also increased by ground disturbance. Ground disturbance and soil erosion rates would be potentially high during construction, but relatively local and temporary. Erosion rates and runoff potential are naturally lower at project sites located on relatively level terrain and in arid climates.

Because native tallgrass prairie is one of the most endangered ecosystems in the world, the Project proponent has minimized potential Project impacts by locating as many Project facilities as possible on cropland and previously farmed land.

After construction, the Project proponent would implement proper BMPs and mitigation measures to stabilize soil conditions during Project construction. Once the Project area is stabilized, adverse impacts are expected to be small because O&M activities would not substantially increase the potential for soil disturbance. By implementing BMPs and mitigation measures to reduce soil compaction and control soil erosion and surface runoff during the O&M of the Project, the Project proponent would reduce soil-related impacts to negligible or low levels.

Decommissioning would involve ground-disturbing activities that could increase the potential for soil disturbance. Ground disturbance and soil erosion rates would be potentially high during decommissioning (though less than during the construction phase), but would be temporary and local. Erosion rates and runoff potential are naturally lower at project sites located on relatively level terrain and in arid and semiarid climates. By implementing BMPs and conservation measures to minimize disturbance, the Project proponent would reduce soil-related impacts during decommissioning to negligible or low levels.

Overall, temporary impacts to geology and soils would be negligible. Only 1.92 percent of the approximately 11,616 acre Project area would be impacted during construction. Permanent impacts to geology and soils would be even smaller, impacting less than 0.24 percent of the Project area. Furthermore, by implementing the conservation measures from the final UGP Wind Energy PEIS during construction and operations, the Project proponent would prevent any significant environmental impacts to the project area.

The No Action Alternative would have no direct impact to geology or soils. However, selection of the No Action Alternative could potentially cause the Project proponent to reconsider an alternative interconnection, which could result in greater impacts to geology and soils.

2.1.3 Proposed Conservation Measures

The Project proponent has adopted conservation measures for the Project, as applicable, from the final UGP Wind Energy PEIS. The main objective of the mitigation measures for soil resources is to preserve the health and functioning of Project area soils by minimizing or controlling the ground-disturbing activities that cause impacts to the soil. Preserving the pre-construction condition of Project area soils is an essential step in reducing impacts on other important resources, especially water quality and vegetation.

The Applicant would prepare a Stormwater Pollution Prevention Plan (SWPPP) and seek coverage under the NPDES National Pollutant Discharge Elimination System (NPDES) for General Construction Stormwater Discharges. The SWPPP would include an erosion and sediment control plan. The Project proponent would base erosion-control measures on an assessment of site-specific conditions and would minimize the extent of disturbed areas, stabilize disturbed areas, and protect slopes and channels in the Project area. Measures to control sedimentation would focus on retaining sediment on-site and implementing controls along the Project perimeter.

Prior to construction, the Project would require the completion of geotechnical engineering and hydrology studies that characterize site conditions related to drainage patterns, soils (including erosion potential), vegetation, surface water bodies, land subsidence, and steep or unstable slopes. Many of the mitigation measures mentioned in the final UGP Wind Energy PEIS would be contained in the SWPPP and the other plans and permits required for the Project.

The conservation measures for soil resources from the final PEIS include:

- Avoiding placement of wind energy facilities in areas with unsuitable seismic, liquefaction, slope, subsidence, settling, and flooding conditions.
- Using existing roads and disturbed areas to the extent possible.
- Siting new roads to follow natural land contours avoiding excessive slopes.

- Siting new roads to avoid stream crossings and wetlands and minimize the need to cross drainage bottoms.
- Surfacing new roads with aggregate materials, wherever appropriate.
- Restricting heavy vehicles and equipment to improved roads to the extent practicable.
- Controlling vehicle and equipment speed on unpaved surfaces.
- Conducting construction and maintenance activities when the ground is frozen or when soils are dry and native vegetation is dormant.
- Stabilizing disturbed areas that are not actively under construction using methods such as erosion matting or soil aggregation, as site conditions warrant.
- Salvaging topsoil from all excavation and construction activities to reapply to disturbed areas once construction is completed.
- Disposing of excess excavation materials in approved areas to control erosion.
- Isolating excavation areas (and soil piles) from surface water bodies using silt fencing, bales, or other accepted appropriate methods to prevent sediment transport by surface runoff.
- Using earth dikes, swales, and lined ditches to divert local runoff around the work site.
- Reestablishing the original grade and drainage pattern to the extent practicable.
- Reseeding disturbed areas with a native seed mix and re-vegetate disturbed areas immediately following construction.

2.2 Air Resources

This section of the EA discusses the climate and air quality in the Project area. Specifically, this section analyzes the likely impacts of the Project on air quality during construction and operation. This section also proposes conservation measures for potentially adverse impacts.

2.2.1 Existing Conditions

South Dakota has a typical continental climate with extreme summer heat and cold winters. Temperature extremes have ranged from -58°F to 120°F. Large ranges of daily, monthly, and annual temperatures are the result of the State's geographical location and continental influence on regional weather patterns. According to South Dakota State University (SDSU), the 30 year average annual precipitation for Grant County from 1971-2000 was 21-23 inches (SDSU, 2014). Located in central North America, South Dakota is within a continental weather pattern that produces cyclones and anticyclones.

As of this writing, there are currently no designated nonattainment areas for all criteria pollutants in South Dakota. The air quality monitoring station closest to the Project area is located in Watertown, South Dakota. Only particulate matter (dust) is monitored at this location. South Dakota is located in the high plains, which are subject to periods of droughts and high winds. These are the main ingredients for fugitive dust problems. Fugitive dust is identified as dust from mining activity, gravel roads, construction activity, street sanding operations, and wind erosion from agricultural fields.

According to the EIA, in 2011 South Dakota ranked 47th in the U.S. for carbon dioxide emissions at 15.1 metric tons. In 2011, South Dakota received 77 percent of its total net electricity from renewable sources, wind and hydroelectric power (EIA, 2014).

2.2.2 Potential Impacts of the Alternatives

The Project proponent would obtain the appropriate permits from Grant County and state and federal agencies prior to construction. Grant County does not require air dispersion modeling for potential air quality impacts resulting from construction activities, which would be localized and temporary in nature. However, the Project proponent would be required to comply with conservation measures and BMPs as a result of the permits and plans required for the Project.

Air quality impacts could result from construction equipment emissions and fugitive dust from earth moving activities. These construction activities could release air emissions of criteria pollutants, volatile organic compounds (VOCs), greenhouse gases (GHGs) (e.g., carbon dioxide (CO_2)), and small amounts of hazardous air pollutants (HAPs) (e.g., mercury [Hg]). If a concrete batch plant is temporarily needed, the operation of diesel generators for the batch plant and storage piles of sand or aggregates might be additional air emission sources. The operation of ancillary equipment associated with concrete processing, such as small mixers, vibrators, and concrete pumps, would generate air emissions in small amounts. Construction activities for a wind energy development project would typically last for six to twelve months. Accordingly, potential impacts of construction activities on ambient air quality are expected to be minor and temporary in nature.

As noted in the final UGP Wind Energy PEIS, the greatest potential for air emissions and adverse air quality impacts would result from soil disturbances during the site preparation phase caused by the intense use of heavy equipment over a short time period (through release of fugitive dust).

However, the Project proponent can greatly reduce the potential for air quality impacts by implementing the appropriate conservation measures. For example, the Project proponent selected a remote agricultural area for the Project. Although construction activities could have some impacts at the nearest residence, the Town of Summit likely has heightened levels of particulates from agricultural activities and therefore construction is expected to make a negligible contribution to existing air concentration levels.

The No Action Alternative would have no direct impact on air quality. However, selection of the No Action Alternative could potentially cause the Project proponent to reconsider an alternative interconnection, which could result in greater construction-related impacts to air quality.

The Project proponent expects the operation of the proposed Project to have an overall benefit on air quality. Conventional power plants burning fossil fuels are major sources of criteria pollutants, VOCs, and GHGs. The burning of some fossil fuels, such as coal, also results in emissions of HAPs. There are no direct air emissions from operating wind turbines because no fossil fuels are combusted. Accordingly, wind energy facilities would generate very low levels of air emissions during the operation period.

During operations, emissions from the Project would include minor dust and engine exhaust emissions from vehicles and heavy equipment associated with maintenance activities as well as wind erosion from bare ground and access roads. The Project proponent expects negligible VOC emissions during the routine maintenance activities of applying lubricants, cooling fluids, and greases. A small amount of combustion-related emissions may be produced during periodic operation of diesel emergency generators as part of preventative maintenance (approximately two hours per month) and possibly from the heating system for space heating of O&M facilities including the office and maintenance shop. These emissions would not exceed air quality standards or have any appreciable impact on climate change.

The operation phase associated with the proposed transmission line would generate very small amounts of criteria pollutants, VOCs, GHGs, and HAPs from periodic site inspection and maintenance. In addition, transmission lines may produce minute amounts of ozone (O3) and nitrogen oxides associated with corona discharge (i.e., the breakdown of air near high-voltage conductors). All these emissions during the operation phase would be quite small; therefore, potential impacts on ambient air quality would be negligible.

Operation of the Project would avoid considerable amounts of criteria pollutants and HAP emissions that would otherwise have been generated from power plants burning nonrenewable and emission-producing fossil fuels. The Project could substantially improve adverse impacts on ambient air quality by reducing visibility impairment, ecological damage caused by acid rain, and elevated O3 and PM concentrations that are associated with respiratory and cardiovascular diseases.

According to DOE a single 1 MW wind turbine can displace 1,800 tons of CO_2 in 1 year (equivalent to planting 1 square mile of forest). This means the proposed 80-100 MW Project has the capability of avoiding up to 180,000 tons of CO_2 annually (DOE, 2011).

For the No Action Alternative, there would be no incidental air quality impacts associated with routine maintenance and operation activities of the wind farm and transmission line. However, the substantial air quality and climate benefits associated with the operation of the wind farm would not occur if the wind farm is not constructed.

In conclusion, the Project area is not in a sensitive, non-attainment zone. Temporary Project impacts for the POI associated with air quality would be negligible and would be minimized by applying the conservation measures from the final UGP Wind Energy PEIS. The Project would have an overall positive environmental impact on air quality during operations.

2.2.3 Proposed Conservation Measures

The Project proponent has applied conservation measures for the Project, as applicable, from the final UGP Wind Energy PEIS.

As mentioned in Section 1.4.1, the Project proponent has already avoided and minimized placement of wind energy facilities on USFWS grassland easement interests and has located facilities near existing roads to minimize the need for construction of new access roads to the greatest extent practicable.

General conservation measures applicable to multiple phases of Project development include the following:

- Use of surface access roads, on-site roads, and parking lots with aggregates or that maintain compacted soil conditions to reduce dust generation.
- Post and enforce lower speed limits on dirt and gravel access roads to minimize airborne fugitive dust.

- Minimize potential environmental impacts from the use of dust palliatives by taking the necessary measures to keep the chemicals out of sensitive terrestrial habitats and streams. The application of dust palliatives must comply with federal, state, and local laws and regulations.
- Ensure that all pieces of heavy equipment meet emission standards specified in the State Code of Regulations and conduct routine preventive maintenance, including tune-ups to manufacturer specification to ensure efficient combustion and minimum emissions.
- Employ fuel diesel engines in facility construction and maintenance that use ultra-low sulfur diesel, with a maximum 15 ppm sulfur content.
- Limit idling of diesel equipment to no more than 10 minutes unless necessary for proper operation.

Conservation measures applicable during construction activities include the following:

- Stage construction activities to limit the area of disturbed soils exposed at any particular time.
- Water unpaved roads, disturbed areas, and loose materials generated during project activities as necessary to minimize fugitive dust generation.
- Install wind fences around disturbed areas if windborne dust is likely to impact sensitive areas beyond the site boundaries (e.g., at nearby residences).
- Spray stockpiles of soils with water, cover with tarpaulins, or treat with appropriate dust suppressants, especially when high wind or storm conditions are likely. Vegetative plantings may also be used to limit dust generation for stockpiles that would be inactive for relatively long periods.
- Train workers to comply with speed limits, use good engineering practices, minimize the drop height of excavated materials, and minimize disturbed areas.
- Cover vehicles transporting loose materials when traveling on public roads and keep loads sufficiently wet and below the freeboard of the truck in order to minimize wind dispersal.
- Inspect and clean tires of construction-related vehicles, as necessary, so they are free of dirt/mud prior to entering paved public roadways.
- Clean (e.g., through street vacuum sweeping) visible trackout or runoff dirt from the construction site off public roadways.

The proposed Project would have few emission sources during operations. No additional mitigation measures are considered necessary, but some of

the dust control measures proposed for construction may be applicable to minimize fugitive dust emissions during routine maintenance activities.

Decommissioning activities generally mirror construction activities; thus, the same mitigation measures should be applied during decommissioning as would be applied during construction.

2.3 Water Resources

This section of the EA discusses the wetlands, surface waters, floodways/floodplains, and ground water resources in the Project area. Specifically, this section analyzes the likely impacts of the Project on water resources during construction and operation. This section also proposes conservation measures for potentially adverse impacts.

2.3.1 Existing Conditions

The proposed Project is located within the Upper Great Plains sub-region of the Upper Mississippi Hydrologic Region. Land use within this Hydrologic Region is primarily agricultural (70 percent) and forest (25 percent), with about 5 percent urbanized. Mean annual discharge (including tributaries) is 126,285 ft^3/s (3,576 m^3/s). Water quality is hard and slightly alkaline. Nitrate-N and total phosphorus (from fertilizers) are low in the headwaters and increase downstream.

Based on a desktop review of USFWS National Wetland Inventory (NWI) maps, National Hydrography Dataset (NHD), Google Earth imagery, and topographic maps, a number of relatively small freshwater emergent wetlands and ponds occur in the northeast portion of the Project area that appear hydrologically connected to a larger system of wetlands and lakes. This includes Summit Lake and Twin Lakes, which are located east of the Project area. The wetlands appear to be isolated prairie-pothole wetlands of various sizes, but are likely hydrologically connected via groundwater. In the north-central portion of the Project area, water drains to the north - northwest; drainage channels are intermittent. Upper tributaries appear to be primarily swales in farm fields and pastures while main-stem drainages appear to have defined channels. In this part of the Project area, water flows from the east side of Interstate 29 to the west side under bridges or culverts that allow uninterrupted flow into the Big Sioux River. In the western and southern parts of the Project area, water flows to the west via intermittent channels into the Indian River, which ultimately flows into the Big Sioux River. These intermittent channels appear to be primarily swales in farm fields and pastures with few adjacent wetlands or ponds along the channels.

Based on the NWI mapping data, there are approximately 308 acres of wetlands and ponds, not including streams and rivers, within the 11,616 acre Project area. Therefore, based on NWI data, less than 3 percent of the total Project area is mapped as wetlands or open water. The vast majority of these NWI mapped wetlands (approximately 87 percent) are characterized as freshwater emergent wetland, while most of the remaining NWI wetlands are freshwater ponds (approximately 12 percent). The Project proponent has completed field delineations to verify the NWI data because it can sometimes under-predict wetland resources. Thirty-one wetlands were delineated within the study corridor, totaling 7.13 acres. In most cases, the wetland within the survey corridor was part of a larger wetland that extended outside the corridor. In the few cases where wetlands were found in agricultural fields, the wetlands themselves were not farmed (WEST, 2014d).

According to GIS data from the Federal Emergency Management Agency (FEMA), the Project components are located entirely within FEMA Zone X. This is defined as: “Areas of minimal flood hazard, usually depicted on Flood Insurance Rate Maps as above the 500 year flood zone. Zone X may have ponding and local drainage problems that don’t warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500 year flood and protected by levee from 100 year flood.”

2.3.2 Potential Impacts of the Alternatives

The construction of the Project has the potential to impact water resources, such as wetlands and surface waters. Impacts primarily relate to construction phase activities, such as earthwork, grading and equipment access, that are temporary in nature and short in duration. Minor permanent impacts would also occur as a result of fill activities associated with access roads and permanent culverts. The construction of the Project has the potential to cause temporary impacts to 0.78 acres of wetlands within the Project area, while permanent impacts to wetlands are estimated at 0.02 acres. There would be no temporary or permanent impacts to federal wetland easements within the Project area.

Water would be needed for various construction activities, including drinking water for site workers, concrete mixing, dust suppression, and vehicle washing. If the Project proponent does not transport water to the site, it would likely obtain water during the construction phase from local surface water bodies or groundwater wells, depending on their availability. Water withdrawals from local streams or rivers could potentially reduce streamflow and groundwater recharge. Groundwater withdrawals could potentially lower the water table and change the direction of groundwater flow. The

magnitude of these impacts would depend on the volume of water required for the construction phase and the capacities of available water resources. Water use impacts during the construction phase would be localized and short in duration.

Water quality degradation of both surface water and groundwater resources is an important concern for any activity that involves land disturbance. For surface water bodies (rivers, streams, lakes, and wetlands), one of the leading water quality issues is soil erosion. Sediment loading in surface water is caused when ground disturbance occurs and the loosened material is transported off-site during storm water events. Increased sediment transport raises streambeds and fills in adjacent wetlands. Sediment that remains suspended in surface water can degrade aquatic wildlife habitat and damage commercial and recreational fisheries. Sediment loading also increases the cost of water treatment for municipal and industrial users. Soil erosion can also degrade the quality of surface water by introducing other kinds of contaminants (e.g., crop nutrients) and changing its pH.

Because turbines would be located on higher ground to take advantage of the wind resource, and the collection substation would be located away from water features, flood damage to these Project components would not occur, nor would these Project components be an obstacle to flood flows. Similarly, access roads, collector lines, and above ground lines would not affect floodplains or floodways, and these features or components would not be substantially affected by flooding of the areas in which they would be located. The proposed Project would therefore have negligible impacts, if any, on floodplains or floodways.

Groundwater quality degradation occurs mainly through infiltration at the recharge location. Shallow, unconfined aquifers with a high rate of recharge are generally more susceptible to contamination than deep aquifers with an overlying (impermeable) confining unit and a low rate of recharge. Recharge typically occurs in areas of high elevation (like hills or plateaus), but can also occur in stream valleys. Recharge areas for a given location may be in close proximity or some distance away; therefore, it is important to understand the groundwater flow regime for aquifers in the vicinity of a construction site, especially if they are sources of drinking water. Recharge rates are generally a function of climate (e.g., how much precipitation occurs in an area) and soil characteristics (e.g., porosity, degree of compaction, and ground slope). In an area where land disturbance has occurred, contamination can be introduced to groundwater directly through the leaching of soils and infiltration of spills or leaks at the surface, or indirectly through recharge by a surface water body that has been contaminated. Soil compaction, which also occurs in disturbed areas (mainly from the weight of

heavy vehicles and equipment), tends to reduce infiltration rates and increase surface runoff.

Ground-disturbing activities related to the excavation and installation of wind towers and construction of ancillary structures and related infrastructure could adversely impact surface water quality if not properly mitigated. Ground-disturbing activities that could contribute to adverse water quality impacts include vegetation clearing, excavating, trenching, dewatering sites, stockpiling excavated soil and building roads. Building access roads, with associated culverts within streams, could also affect water quality during the construction period due to increased soil erosion. Accidental spills or leaks from transformers and other liquid-filled devices at substations also have the potential to adversely impact the quality of nearby surface water bodies and shallow aquifers (although the potential for accidental releases is lessened by the standard use of spill containment systems at substations). Increased surface runoff resulting from soil compaction during access road construction could affect sediment loads in nearby surface water bodies. Erosion rates and runoff potential are naturally lower at project sites located on relatively level terrain and in arid and semiarid climates; however, implementing BMPs and mitigation measures to minimize soil compaction and control soil erosion and surface runoff would further reduce potential impacts to water quality.

Executive Order 11990, “Protection of Wetlands,” requires all federal agencies to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands (1977). Impacts to jurisdictional wetlands (those under the regulatory jurisdiction of section 404 of the CWA) would require permitting by the Corps; however, permitting for wetland impacts may also be required by state agencies. Because of these requirements, the Project proponent would avoid wetlands as much as possible when siting the Project. The Project proponent does not expect the large built components of the Project (including wind turbine generators, the staging area, the O&M facility, the collection station and the interconnection substation) to have significant impacts to wetlands in the Project area. The Project proponent has substantially rerouted the proposed Project to the greatest extent practicable in order to reduce the impacts to all mapped wetlands. The Project proponent would apply for a federal wetland permit and employ the wetland conservation measures from the final UGP Wind Energy PEIS.

Stormwater permits may be required for excavation sites where shallow groundwater is present and dewatering is necessary. Since only portable sanitary facilities would be used by site workers during the construction phase, discharge permits for managing sanitary discharges would not be required.

Water use during the O&M phase would be mainly for periodic cleaning of wind turbine rotor blades to eliminate dust and insect buildup. Water for cleaning blades is generally needed in only arid climates that do not get enough rainfall to keep the blades clean. The Project proponent may bring in water for this purpose from an offsite source, which means that there should not be any impacts to surface water or groundwater. For some wind energy projects, the Project proponent may construct O&M facilities that require the development of wells to provide water for drinking and sanitation purposes. In such cases, the water requirements would likely be relatively small and impacts on surface water or groundwater resources would also be small.

Accidental spills or leaks from transformers and other liquid-filled devices at substations may adversely impact the quality of nearby surface water bodies and shallow aquifers during the O&M phase (although the potential for accidental releases is lessened by the standard use of spill containment systems at substations). Herbicides, if they are used to control noxious weeds and vegetation growth around towers and access roads, could also degrade water quality in nearby surface water bodies and shallow aquifers.

Decommissioning would involve ground-disturbing activities that could increase the potential for soil compaction (e.g., soil erosion, surface runoff, and sedimentation of nearby lakes, rivers, and streams) and thus potentially affect the quality of water in nearby surface water bodies. Ground disturbance and soil erosion rates would be potentially high (although less than during the construction phase), but they would be temporary and local. Erosion rates and runoff potential are naturally lower at project sites located on relatively level terrain and in arid and semiarid climates. If a well is developed to supply drinking and sanitation water for an O&M facility, the Project proponent would cap the well during decommissioning unless the facility plans on continuing use for some other purpose. Implementing BMPs and mitigation measures to minimize soil compaction and control soil erosion and surface runoff, as well as following standard practices for capping wells, would reduce water quality or quantity impacts during decommissioning to negligible or low levels.

The No Action Alternative would have no direct impact to water resources. However, selection of the No Action Alternative could potentially cause the Project proponent to reconsider an alternative interconnection, which could result in greater impacts to water resources.

2.3.3 Proposed Conservation Measures

The following discussion on conservation measures for the Project has been drawn, as applicable, from the final UGP Wind Energy PEIS.

The main objective of the BMPs and minimization measures for water resources is to protect the quality and quantity of water in natural water bodies in and around a wind energy project. Many of the proposed conservation measures would be components of the various plans required by the State of South Dakota and local agencies to mitigate the impacts of the proposed Project, such as: the Drainage, Erosion, and Sedimentation Control Plan; the Vegetation Management Plan; the Habitat Restoration and Management Plan; and the Stormwater Pollution Protection Plan. The Project proponent would create, revise, or amend such plans as necessary to account for changes in site conditions as the proposed Project proceeds from construction through O&M to the decommissioning phase. The Project proponent would obtain all applicable federal, state, and county permits and fulfill permit conditions.

The following conservation measures for water resources are part of the proposed Project:

- Minimize the extent of land disturbance to the extent possible.
- Use existing roads and disturbed areas to the extent possible.
- Site new roads to avoid crossing streams and wetlands and minimize the number of drainage bottom crossings to the extent possible.
- Apply standard erosion control BMPs (e.g., sediment traps, water barriers, erosion control matting) to all construction activities and disturbed areas as applicable to minimize erosion and protect water quality.
- Apply erosion controls relative to possible soil erosion from vehicular traffic.
- Identify and avoid unstable slopes and local factors that can cause slope instability (groundwater conditions, precipitation, seismic activity, high slope angles, and certain geologic landforms).
- Identify areas of groundwater recharge and discharge and evaluate their potential relationship with surface water bodies and groundwater quality.
- Avoid creating hydrologic conduits between two aquifers (e.g., upper and lower).
- Construct drainage ditches only where necessary; use appropriate structures at culvert outlets to prevent erosion.
- Avoid altering existing drainage systems, especially in sensitive areas such as erodible soils or steep slopes.
- Clean and maintain catch basins, drainage ditches, and culverts regularly.

- Limit herbicide and pesticide use to non-persistent, immobile compounds and apply them using a properly licensed applicator in accordance with label requirements.
- Dispose of excess excavation materials in approved areas to control erosion and minimize leaching of hazardous materials.
- Reestablish the original grade and drainage pattern to the extent practicable.
- Reseed (non-cropland) disturbed areas with a native seed mix and revegetate disturbed areas immediately following construction.
- Ensure that any wells are properly filled and capped during decommissioning.

The Project proponent is not proposing any mitigation for direct, indirect or temporary impacts to wetlands or streams because the Project would not result in any significant loss of wetland acreage. However, the Project proponent has minimized temporary and permanent impacts to wetlands and streams identified during field delineations. During Project construction, appropriate construction methodologies, erosion and sedimentation control plans, and required natural resource protection measures, would be implemented as necessary. Additionally, the Applicant would prepare a SWPPP and seek coverage under the NPDES for General Construction Stormwater Discharges.

2.4 Vegetation

2.4.1 Existing Conditions

This section describes the general vegetation, including rare plants, invasive species and noxious weeds within the Project area, based on the Tier 2 Study, existing data and field observations.

2.4.1.1 Vegetation Communities

The proposed Project area is located in both the Prairie Coteau and Big Sioux Basin of the Northern Glaciated Plains ecoregions. The dominant land cover types within the Project area are grasslands (53 percent) consisting of pasture and hay fields. Cultivated cropland, consisting of soybeans (*Glycine max*), corn (*Zea mays*) and spring wheat (*Triticum aestivum*), comprises approximately 40 percent of land cover in the Project area. The Project area also contains a small amount of open water and emergent wetlands, shrubland and forestland, totaling approximately 3 percent of land cover (United States Department of Agriculture National Agricultural Statistics Service [NASS 2012]).

2.4.1.2 Rare Plant Population

According to the USFWS, there are no federally listed plant species with the potential to occur in the Project area.

The proposed Project occurs within the Northern Tallgrass Prairie ecoregion. Tallgrass prairie once covered more than 200 million acres (over 809,372.5 hectares [ha]). Today less than 4 percent of the original tallgrass prairie remains; people have converted the majority of tallgrass prairie to cropland. The U.S. Fish and Wildlife Service Dakota Tallgrass Prairie Wildlife Management Area was created to help maintain the biodiversity of this ecoregion and slow habitat fragmentation because fragmented areas are vulnerable to pesticide drift and contamination, soil erosion, and general degradation. The Tallgrass Prairie Wildlife Management Area occurs within or close to the SWRA (WEST, 2014).

The Project proponent understands that special care should be given to avoid damage to unfragmented landscapes and high quality prairie. The Project proponent would identify grasslands and grassland easements that may be disturbed as development efforts continue. A grasslands delineation study is the primary step to determine the exact size and extent of the grasslands in the Project area.

2.4.1.3 Noxious and Invasive Weeds

A noxious weed is any plant designated by a governmental agency as injurious to public health, agriculture, recreation, wildlife or property. An invasive species is an organism that is non-native and is able to rapidly spread, aggressively alter its new environment, and cause harm to the economy, environment, or human health. Prior to construction, the Project proponent would survey areas that would be disturbed for noxious and invasive weeds.

2.4.2 Potential Impacts of the Alternatives

The Project proponent anticipates that impacts to vegetation communities during construction and operation would be negligible because only a small portion of the Project area would be affected and the Project proponent would employ the conservation measures in the final UGP Wind Energy PEIS. While the footprint of permanent structures is expected to occupy approximately 0.24 percent of the Project area (Denholm et al. 2009), the area temporarily disturbed by construction activities would be approximately 1.92 percent of total Project area.

The proposed Project would temporarily affect 222.65 of the 11,616 acres within the Project area. The majority of non-agricultural plant communities within the Project area that would be affected are former pasture and prairie communities. (*See* Table 2.4.2-1: Proposed Temporary Disturbance Impacts on Vegetation Communities).

Table 2.4.2-1 Proposed Temporary Disturbance Impacts on Vegetation Communities

Vegetation Community	**Access Roads**	**Crane Walks**	**Laydown Area**	**Sub-station**	**Tur-bines**	**Permanent Met Tower**	**Underground Collection Lines**	**Total Distur-bance**
Agriculture (cropland, hayfields, pasture)	27.30	38.99	10.0	0.90	41.3	5.63	21.50	145.62
Developed	0.00	0.15	0.00	0.00	0.00	0.00	0.20	.35
Farmsteads/ Rural Homes	0.00	0.56	0.00	0.00	0.00	0.00	0.39	0.95
Grasslands	9.48	25.90	0.00	0.00	19.47	0.00	17.50	72.35
Grasslands Associated with Drainage	0.41	1.56	0.0	0.00	0.00	0.00	0.09	2.06
Grasslands Associated with Wetlands	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.14
Shrubs / Trees	0.02	0.08	0.00	0.00	0.00	0.00	0.28	0.38
Wetlands	0.07	0.42	0.00	0.00	0.03	0.00	0.21	0.78
Total (acres)	37.28	67.71	10.00	0.90	60.94	5.63	40.18	222.64

Factors associated with wind energy development that may result in impacts to plant communities include ground disturbance and modification, hydrologic changes, decreased water quality, changes in soil characteristics, deposition of fugitive dust, and accidental releases of hazardous materials.

Plant communities would experience long and short-term direct and indirect impacts from site preparation, earthmoving, and excavation activities associated with construction of staging areas, access roads, foundations, and electrical interconnect corridors. Vegetation may be adversely affected by injury or mortality of vegetation, fugitive dust, exposure to contaminants, and the introduction of invasive species.

Direct impacts would primarily be associated with the mortality of the vegetation and loss of habitat present within the footprint of permanent structures, including turbine towers and access roads. All vegetation would be cleared from the construction footprint, including construction laydown, equipment assembly, and staging areas. These areas may also require grading.

Indirect impacts to plant communities near construction areas may result from site development activities. Effects of habitat loss and modification include the fragmentation of remaining native habitat. Reductions in the size, number, or isolation of remaining habitat areas can result in long-term changes in species composition or structural changes and reductions in biodiversity. The fragmentation of larger undisturbed high quality habitat is more significant than construction in previously disturbed or fragmented habitat. Increased shading in prairie habitats adjacent to permanent structures could result in slight changes in species composition; however, any changes would likely be relatively insignificant. Changes in forest or woodland interiors from tree removal or clearing of adjacent areas can include result in increased light levels, reduced soil moisture, increased transpiration, introduction of shade-intolerant species, and increased browsing. Additional decline or mortality of trees near the construction boundary may subsequently occur. However, as noted above, there are few trees present within the Project area so tree removal would be limited.

Soils disturbed by construction activities may be a source of fugitive dust or sedimentation during the construction period. Soils excavated for tower foundations would be stockpiled for a period of time before excavations are backfilled. The deposition of airborne dust on plants in nearby habitats may result in reduced growth and reproduction; however, because deposition would generally be temporary and minimization measures would be implemented (e.g., mulch, silt fence) impacts to plant communities would likely be of short duration. In agricultural areas, the generation of fugitive dust as a result of wind energy development would only negligibly contribute to existing dust generation.

Erosion of exposed soils may result in sedimentation of wetlands near construction areas or downstream wetlands receiving storm water runoff.

However, the Project proponent would mitigate adverse effects by implementing appropriate erosion and sediment control mechanisms. Sedimentation may reduce plant growth, particularly to native species sensitive to disturbance. Biodiversity may be reduced in wetland communities as sensitive species are displaced by species more tolerant of disturbance. Changes in community composition may also include the increase or establishment of invasive plant species. Although the effects of sedimentation associated with a wind energy project may not be widespread, they could result in long-term impacts on local wetland communities in certain circumstances. However, because of regulatory requirements limiting the generation of fugitive dust and release of sediments it is likely that impacts from these factors would be minor.

Plant communities adjacent to Project construction areas could be affected by hydrologic changes such as reduced infiltration and increased runoff from exposed or compacted soils. Alterations of surface drainage patterns, including stream crossings along Project roads or access roads, could result in hydrologic changes in wetlands. Hydrologic changes could result in long-term changes in wetland plant community composition, including the increase or establishment of invasive species. Changes in local hydrology may also occur if the Project proponent withdraws water for the production of concrete at an on-site batch plant or performs dewatering excavations for tower foundations. Locally reduced groundwater levels may affect nearby wetlands that are supported by groundwater discharge; however, impacts from water use or dewatering during construction would be localized and temporary. Trenching for the installation of power cables may also alter surface and subsurface flows, resulting in long-term changes in the hydrology of wetlands along or near the cable line. The Project proponent expects excavations for foundations, roadways, and underground collector lines to be relatively shallow and occur in a minimal amount of land within the overall Project area. The Project proponent expects impacts to plant communities to be minimal since hydrologic changes would be very localized and temporary.

Construction equipment and vehicles brought to the Project site may introduce seeds or other propagules of invasive plant species. Such species can become established and spread rapidly, displacing native species and sometimes forming monocultures over extensive areas and decreasing habitat quality. Invasive species could also become established in undisturbed native communities near the Project, or become established on soils disturbed by Project activities and spread to adjacent areas. The Project proponent would utilize appropriate mitigation measures to minimize the spread of noxious weeds and invasive species within the Project area.

The Project proponent would reestablish plant communities following Project completion in temporary use areas, such as concrete batch plants, material laydown areas, and staging areas. Although native plant communities may be restored on disturbed sites, the species composition may vary considerably from local plant communities. Revegetation success and timeframe would depend on the climate, soils, and plant community types within the Project area. The Project proponent would use appropriate plant species and methods during the restoration processes for the Project.

Hazardous materials used and stored on the Project site may include diesel fuel, transmission fluid, glycol-based coolant, or dielectric fluids, as well as chemicals that may be used in turbine preparation or assembly. Accidental releases of these materials may impact plant communities in the vicinity of the spill. The magnitude of impacts would depend on the type and volume of material spilled, the location, and habitat affected. However, because only small volumes of these hazardous materials are kept at the Project area on a short-term basis, an uncontained spill would likely be relatively small and affect only a limited area. In addition, the Project proponent would implement required spill prevention and response plans to limit potential impacts from a spill, should one occur.

The proposed Project would have negligible permanent impacts on vegetation communities, permanently affecting 27.37 of the 11,616 acres within the Project area, or approximately 0.24 percent of the Project area. (*See* Table 2.4.2-2: Proposed Permanent Disturbance Impacts on Vegetation Communities).

2.4.2-2 Proposed Permanent Disturbance Impacts on Vegetation Communities

Vegetation Community	Access Roads	O&M Building	Permanent Met Tower	Substation	Turbines	Total Disturbance
Agriculture (cropland, hayfields, pasture)	16.31	0.35	0.13	1.50	1.77	20.06
Developed	0	0.00	0.00	0.00	0.00	0.00
Farmsteads/ Rural Homes	0	0.00	0.00	0.00	0.00	0.00
Grasslands	6.19	0.00	0.00	0.00	0.88	7.07
Grasslands Associated with Drainage	0.21	0.00	0.00	0.00	0.00	0.21
Grasslands Associated with Wetlands	0	0.00	0.00	0.00	0.00	0.00

Shrubs/ Trees	0	0.00	0.00	0.00	0.00	0.00
Wetlands	0.02	0.00	0.00	0.00	0.00	0.02
Total	22.74	0.35	0.13	1.50	2.65	27.37

Activities associated with the O&M of the proposed Project would include mowing and weed control as part of a site vegetation management program. Mowing is a limited aspect of maintenance of the Project and is typically concentrated around the O&M facility building, and associated parking and landscaping. Mowing would maintain plant communities in early stages of ecological succession and could prevent reestablishment of some desirable species. Plant community succession would remain restricted over the lifetime of the facility. The Project proponent may perform a licensed application of herbicides in addition to, or instead of, mowing to control vegetation near access roads, utility and transmission corridors, support buildings, and turbine towers. Herbicide applications could result in impacts to non-target species from aerial drift during application or from herbicides transported by surface water runoff. However, requirements that herbicides be applied by properly licensed applicators in accordance with label and application permit directions make such effects unlikely.

Hazardous materials, such as transmission lubricating oils, coolants, paints or other corrosion-control coatings, herbicides, solvents, and fuels would be present on the Project site in limited quantities during the O&M of the Project. An accidental spill of herbicides may result in environmental concentrations exceeding licensed levels, and these herbicides may migrate off-site and affect native vegetation in surrounding areas. Because of the relatively small amount of fuel and other chemicals expected to be stored and used at the Project, however, the Project proponent expects that an accidental release of these materials would impact only a small area of the Project site. Thus, the Project proponent expects impacts to vegetation from exposure to accidental fuel or pesticide releases to be very localized and minor. Similarly, the Project proponent expects to generate or store relatively small amounts of other hazardous materials at the Project site and therefore predicts that any resulting accidental releases would be small and primarily affect vegetation at the release location.

Impacts on plant communities during decommissioning would be similar in nature to the impacts resulting from original site development and construction. The Project proponent expects disturbance of habitats to primarily occur in previously disturbed areas. Storage and work areas would likely be required for decommissioning; however, the Project proponent may expand fuel or waste storage areas for these operations. Disturbance from excavation would be less than that associated with new construction at those locations where tower foundations and buried power cables are left in place.

Disturbed areas would be returned to original grade, compacted soils would be restored, and native plant communities would be reestablished. Ground disturbance and soil erosion rates would be potentially high (although less than during the construction phase), but they would be temporary and local.

The accidental release of fuels, lubricants, solvents, or hazardous materials during decommissioning has the potential to impact plant communities in the vicinity of a spill. The presence or storage of fuels, lubricants, solvents, or hazardous materials on site is minimal and only related to that required for project operation. If a release occurs, impacts would likely be small, temporary and localized. Impacts to plant communities caused by the accidental release of fuels and hazardous materials during decommissioning is not anticipated to be substantial.

The No Action Alternative would have no direct impact on vegetation resources. However, selection of the No Action Alternative could potentially cause the Project proponent to reconsider an alternative interconnection, which could result in greater impacts to vegetation resources.

2.4.3 Proposed Conservation Measures

During the construction phase, the final UGP Wind Energy PEIS provides a variety of conservation measures to minimize the potential for construction activities to affect vegetation resources. In addition to BMPs and mitigation measures identified for other resource areas such as soils, water, air quality, and noise, the following measures would be applicable during construction activities for wind energy projects:

- Minimize the size of areas in which soil would be disturbed or vegetation would be removed.
- Reduce habitat disturbance by keeping vehicles on access roads and minimizing foot and vehicle traffic through undisturbed areas.
- Initiate habitat restoration of disturbed soils and vegetation as soon as possible after construction activities are completed. Restore areas of disturbed soil using weed-free native grasses, forbs, and shrubs, in consultation with land managers and appropriate agencies such as State or County extension offices or weed boards.
- The Project Proponent would develop and implement a plan for control of noxious weeds and invasive plants that could occur as a result of new surface disturbance activities at the site. The plan should address monitoring, weed identification, the manner in which weeds spread, and methods for treating infestations. Require the use of certified weed-free mulching.

- Establish a controlled inspection and cleaning area for trucks and construction equipment arriving from locations with known invasive vegetation problems. Visually inspect construction equipment arriving at the project area and remove and contain seeds that may be adhering to tires and/or other equipment surfaces. Regularly monitor access roads and newly constructed utility and transmission line corridors for the establishment of invasive species. Initiate weed control measures immediately upon evidence of the introduction or establishment of invasive species.
- Do not use fill materials that originate from areas with known invasive vegetation problems.

During the operations phase, the final UGP Wind Energy PEIS provides a variety of conservation measures to minimize impacts on vegetation resources, including the following:

- Monitor access roads, utility and transmission line corridors, and tower site areas regularly for the establishment of invasive species. Implement weed control measures immediately upon evidence of the introduction of invasive species.
- Monitor tower site areas regularly for damage from erosion, washouts, and rutting. Initiate corrective measures immediately upon evidence of damage.

2.5 Wildlife

The evaluation of wildlife in this section is primarily focused on the Project area, but will also include some regional discussion because of the mobility of wildlife and presence of migratory birds. Existing literature and other information related to species distributions (with special focus on endangered, threatened, proposed, candidate, and sensitive species), migration pathways, wetlands and unique habitat within the Project area were reviewed. Information in this section is based upon the Tier 2 Study, Avian Use Surveys, Breeding Bird Surveys, Northern Long-Eared Bat Acoustic Survey, Bat Acoustic Survey Report, Butterfly Survey and the Biological Assessment (BA) (WAPA and USFWS, 2015).

2.5.1 Existing Wildlife Conditions

2.5.1.1 Existing Wildlife Species

The Project proponent has not compiled a comprehensive and detailed list of wildlife species for the Project. However, the species of greatest concern as they relate to wind energy projects throughout the U.S. and in the UGP

region (federal and state listed species, birds, and bats) are well known, and the Project proponent considered them in preparation of this EA and development of the Project. Extensive avian surveys have been conducted, the details of which are described below.

Based on the existing land cover, species associated with grasslands, shrublands, and croplands would likely be the most common species within the Project area and the surrounding region. In general, native land cover types that cover most of the Project area, including wetlands and grasslands, are not unique in the region. However, there are potential concerns regarding loss of native habitat. Because the land cover is not unique to the region, it is not likely to attract or concentrate bird or bat species compared to surrounding areas. However, several large wetland areas are located to the east and north of the Project area and several Dakota Tallgrass Prairie Wildlife Management Areas occur within or adjacent to the Project area. These areas are known habitats for local wildlife species.

Bats

According to WEST, seven species of bats are likely residents or migrants of the Project area, including the big brown bat (*Eptesicus* fuscus), eastern red bat (*Lasiurus borealis*), hoary bat (*Lasiurus cinereus*), silver-haired bat (*Lasionycteris noctivagans*), northern long-eared bat (*Myotis septentrionalis)*, little brown bat (*Myotis lucifugus*) and tricolored bat (*Perimyotis subflavus*) (WEST, 2014a). Bat acoustic monitoring took place for 238 detector nights, during which time 1,567 bat passes were recorded. Bat activity was higher at the three temporary monitoring stations within bat habitat (e.g., treed areas) which recorded 97% of all bat passes, compared with activity levels at the fixed stations. Overall, 52.6% of bat passes were classified as low-frequency (LF) (big brown bats, hoary bats, and silver-haired bats), and 47.4% of bat passes were classified as high-frequency (HF) (eastern red bats and *Myotis* species) (WEST, 2015).

Avian Species

WEST conducted fixed-point bird use surveys approximately once per week in the spring (March 1 to May 15) and fall (September 1 to November 15) and twice monthly during winter (November 16 to February 29 and summer (May 16 to August 31). Surveys were completed within the Project area from September 5, 2013 to August 28, 2014. The surveys included seven point locations throughout the Project area. Bird diversity was illustrated by the total number of unique species observed. A total of 231 fixed-point bird use surveys were conducted during 34 visits to the Project area. Fifty-five unique bird species totaling 1,833 observations in 397 groups were recorded. WEST

recorded 33 individual diurnal raptor observations within the Project area, representing five species. The most commonly recorded raptor species were red-tailed hawk (*Buteo jamaicensis*) (thirteen observations) and northern harriers (*Circus cyaneus*) (thirteen observations). Overall mean diurnal raptor use observed during this study was 0.12 raptors/800-m plot/20-min survey. Compared to other publicly available project data from the central and western US with similar study seasons, mean raptor use at Project area is near the lower end of the range of values. Of 49 projects with raptor use, Project area ranked 46th (WEST, 2014c).

WEST did not observe any bald eagles (*Haliaeetus leucocephalus*) during the point counts; however, WEST observed an active bald eagle nest east of the north central Project boundary. A survey point was established to monitor the known bald eagle nest (labeled HN-2 by the South Dakota Game, Fish, and Parks Department). The nest is located approximately 770 meters (842 yards) east of the proposed SummitWind Farm boundary. During observations of the known eagle nest the adult eagles were observed primarily perched in trees around the nest or sitting on the nest. Eagles were only observed in flight five times during the survey effort, with all flight paths north or east of the nest location (WEST, 2014f). The Project proponent is consulting with the USFWS and South Dakota Game, Fish and Parks (SDGFP). Additionally, the proponent is currently preparing a voluntary Bird and Bat Conservation Strategy (BBCS) following the USFWS Land-Based Wind Energy Guidelines (USFWS WEG) (USFWS, 2012a) to address avian species, including bald eagles, as further described in Section 2.5.3, below.

Two bird species known to be of interest to wind energy development in the central and north-central United States are whooping cranes (*Grus americana*) and sharp-tailed grouse (*Tympanuchus phasianellus*). The migratory path of the whooping crane is outside of the project area and therefore it is highly unlikely that the project would have an adverse effect on the species. WEST did not observe any whooping cranes or sharp-tailed grouse leks (mating displays) during the surveys, although it did see individual sharp-tailed grouse (WEST, 2014). The sharp-tailed grouse is not state or federally listed but is a species of interest and monitored by the SDGFP.

No federal or state threatened, endangered, candidate, or proposed bird species were recorded during breeding bird surveys. Three bird species designated as South Dakota Species of Greatest Conservation Need were observed during surveys. The most commonly observed sensitive species observed at any time or distance during the transect surveys was the American white pelican (25 individual observations), followed by the

chestnut-collared longspur (12 individual observations), and marbled godwit (four individual observations) (WEST, 2014e).

2.5.1.2 Federal and State Threatened and Endangered Species

The Endangered Species Act (ESA) and Bald and Golden Eagle Protection Act (BGEPA), as administered by the USFWS, mandate protection of species federally listed as threatened or endangered and their associated habitats. The ESA makes it unlawful to "take" a listed species without special exemption. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or attempt to engage in any such conduct." Significant modification or degradation of listed species' habitats is considered "harm" under ESA regulations and projects that have such potential require consultation with USFWS and may require the issuance of an incidental take permit or mitigation measures to avoid or reduce impacts to these species. Candidate species only receive statutory protection from the USFWS after they are listed as a threatened or endangered species. However, federal agencies may elect to provide candidate species with protection even when they are not listed, as Western currently does.

Seven species listed by the USFWS as federally endangered, threatened, proposed, or candidate species to be listed as endangered or threatened, are known to or have the potential to occur in Grant County. These species are: the endangered Topeka shiner (*Notropis topeka*), gray wolf (*Canis lupus*), and Poweshiek skipperling (*Oarisma poweshiek*); and the threatened piping plover (*Charadrius melodus*), Dakota skipper (*Hesperia dacotae*), rufa red knot (Calidris canutus rufa), and northern long-eared bat.

The Dakota skipper and Poweshiek skipperling may occur in tracts of native grassland habitat that surround the Project area. The northern long-eared bat may occur within or migrate through the Project area. However, there is limited roosting and foraging habitat potential in the Project area, it is unlikely that the northern long-eared bat is a summer resident, and it is unlikely that the bat would hibernate in or around the Project site due to the lack of caves and mines (WEST, 2014a).

In its technical services letter dated July 25, 2013 and its updated letter on January 14, 2015, the USFWS noted the potential for Dakota skipper, Poweshiek skipperling, and rufa red knot occurrence in the actual Project area. The USFWS also acknowledged Western's request for voluntary conferencing for the northern long-eared bat prior to the listing of the species.

South Dakota has an extensive list of state-listed endangered, threatened, and Species of Greatest Conservation Need, as designated by the SDGFP. WEST conducted a preliminary review of the birds and mammals (birds and bats are most likely impacted by wind facility development) from the State's list and found five bird species (Osprey, Bald Eagle, Peregrine Falcon, Whooping Crane, and Piping Plover) and one mammal species (the state threatened northern river otter), with the potential to occur in or near the Project area (WEST, 2014).

Topeka Shiner

The Topeka shiner is a federally-listed endangered species that is a small minnow native to the streams of the prairie. This small fish (up to about three inches in length) prefers small, quiet streams with clean gravel or sand substrates and vegetated banks. Declines in Topeka shiner abundance could be related to habitat degradation, sedimentation, impoundments of tributaries, and water quality declines. Although the shiner is not known to occur in the Project area, the predicted distribution does include the Project area and its immediate vicinity. Therefore, precautions should be exercised when working near waters in the Project area. As most wind projects are built on the higher ground, direct impacts from the turbines would not be expected. However, roads and power lines between turbines may cross these drainages. If impacts cannot be avoided to the streams, additional survey efforts and consultations with appropriate agencies may be needed. The BA determined that with the implementation of the BMPs, avoidance and minimization measures listed in the BA the Project may affect, but is not likely to adversely affect the Topeka Shiner.

Northern River Otter

The northern river otter (*Lontra canadensis*) is a state-listed threatened mammal. Riparian vegetation along a wetland margin is a key habitat feature. Such vegetation may attract beavers (*Castor canadensis*), which enhance areas for river otters by creating foraging habitat and denning areas. Beaver bank dens, either active or abandoned, are important sites for temporary otter denning or resting. River otters often use fallen trees or logjams for shelter or foraging. River otter sightings have been recorded in Grant county. The northern river otter has the potential to occur within the Project area, as river habitat is available, but impacts from the development of the Project are unlikely because the Project proponent does not expect any stream area impacts (WEST, 2014a).

Poweshiek Skipperling

The Poweshiek skipperling is a small moth-like butterfly dependent on high quality tallgrass prairie and riparian areas with sedges. The Poweshiek skipperling population is declining in part due to habitat loss and degradation, so the butterfly was federally listed as endangered under the ESA in October 2014 (USFWS 2014). It has been found in recent years in North and South Dakota, Iowa, Minnesota, Wisconsin, and Michigan. In South Dakota, the butterfly has been found throughout the northeastern counties, including Grant county; the South Dakota populations appear to be declining as well. Proposed critical habitat is present on USFWS fee-title land 5 miles outside the Project area.

No Poweshiek skipperlings were observed during the 2014 surveys on the Project site. Butterfly numbers were generally low for all butterfly species on Project lands where surveys took place (HDR 2014). The BA determined that with the implementation of the BMPs, avoidance and minimization measures listed in the BA, the Project may affect, but is not likely to adversely affect, the Poweshiek skipperling.

Dakota Skipper

The Dakota skipper butterfly is federally listed as threatened under the ESA (USFWS 2014). This small butterfly (1-1.5 inch [2.5-3.8 cm] wingspan) is found in the northeastern counties of South Dakota. The Dakota skipper is found in native tallgrass and alkaline prairie, particularly in rolling pastures near wetlands. Conservation efforts include protection of remaining tracts of undisturbed native prairie. Because the Project contains native grasslands, there is the possibility for this species to occur in the Project area, and populations are known to occur east of the Project area, including in Grant County (WEST, 2014a), (WAPA, 2013). Proposed critical habitat is present on USFWS fee-title land 3.7 miles outside the Project area. No Dakota Skippers were found during the 2014 Butterfly Survey within the Project area (HDR 2014). The BA determined that with the implementation of the BMPs and avoidance and minimization measures listed in the BA, the Project may affect, but is not likely to adversely affect, the Dakota skipper.

Northern Long-Eared Bat

The northern long-eared bat was recently federally listed as a threatened species (USFWS 2015a). The northern long-eared bat probably does not occur within the SWRA because there is limited roosting (i.e., trees and buildings) and foraging habitat potential although they may migrate through the area. It is unlikely that they hibernate in or around the site due to the lack of caves and mines. WEST performed a Northern Long-Eared Bat

Acoustic Survey for the species within a sample of potential northern long-eared bat habitat found in the SummitWind Project area. Data analysis with both Kaleidoscope Pro and Sonobat indicated that northern long-eared bat presence is considered unlikely at the site (WEST, 2015a). The BA determined that with the implementation of the BMPs and avoidance and minimization measures listed in the BA, the Project may affect, but is not likely to adversely affect, the Northern Long-Eared Bat.

Rufa Red Knot

The rufa red knot was recently federally listed as threatened under the ESA (USFWS, 2015). This medium-sized shorebird (9 to 11 inches long) is a long-distant migrant which breeds in the Canadian Arctic and winters as far south as coastal Argentina. Red knots occur mainly along ocean coasts during migration but have been documented in most US states. During spring migration, important stopover habitat includes the South American Atlantic coast, the Virginia barrier islands, and Delaware Bay. Non-breeding red knots remain south of the breeding grounds and may be observed in small numbers in the Northern Plains (and possibly in South Dakota). The BA determined that with the implementation of the BMPs and avoidance and minimization measures listed in the BA, the Project may affect, but is not likely to adversely affect, the rufa red knot.

Gray Wolf

The gray wolf was reinstated as a federally listed endangered species in February 2015 (USFWS 2015b). The closest wolf pack to South Dakota is in northwestern Minnesota (Licht and Fritts 1994); however, some wolves from the Rocky Mountain population may also roam into portions of South Dakota. Although gray wolves could be spotted anywhere in South Dakota, the likely areas would be the more remote and roadless areas of the state. There are no known sightings of the species within or near the Project Area. The BA determined that with the implementation of the BMPs and avoidance and minimization measures listed in the BA, the Project may affect, but is not likely to adversely affect, the gray wolf.

2.5.2 Potential Impacts of the Alternatives

Anticipated construction-related impacts to wildlife, with special attention to listed threatened and endangered species, are outlined in the following section based on the current Project area and studies conducted to date. The Project proponent expects impacts to wildlife to be limited to incidental injury and mortality due to construction activity and vehicular movement, construction-related silt and sedimentation impacts on aquatic organisms,

habitat disturbance or loss associated with clearing and earth-moving activities, and displacement of wildlife due to increased noise and human activities.

In general, most wildlife species known or suspected to be present within the Project area do not use disturbed agricultural land within the area as their primary habitat. As a result, there would be minimal impact to most species. Impacts to avian species include collisions with wind turbines, transmission lines, and guyed met towers. The Project proponent would limit the risk of collisions from the Project by using modern turbine and associated facility designs (e.g., tubular rather than lattice towers, buried electrical interconnect, and unguyed meteorological towers), developing a BBCS and by implementing applicable guidelines provided by the Avian Power Line Interaction Committee.

As discussed above, listed wildlife species documented in the vicinity of the Project area utilize a variety of habitats, including wetlands, water bodies, and grasslands. The Project proponent has sited project components to avoid wetlands, streams, and grasslands to the extent practicable. The agricultural lands being affected are generally not high quality grassland habitat; therefore, the habitat being impacted by Project construction is unlikely to receive significant use by listed threatened and endangered species. However, to the extent that these species occur in the area, Project construction may result in limited disturbance or displacement of these species due to human activity and noise, or direct mortality impacts, especially during the short term construction period.

Habitat alteration and disturbance resulting from the operation of turbines and other wind farm infrastructure can make a site unsuitable or less suitable for nesting, foraging, resting, or other wildlife use. Overall, the footprint of turbine pads, roads, and other Project infrastructure represents a very small percentage of the site following construction and restoration of the Project site. Therefore, overall land use is relatively unchanged by wind power development. However, the true amount of wildlife habitat altered by a wind power project can extend beyond the functional project footprint, due to the presence of tall structures and increased human activity.

The No Action Alternative would have no direct impact on wildlife. However, selection of the No Action Alternative could potentially cause the Project proponent to reconsider an alternative interconnection, which could result in greater impacts to wildlife.

2.5.3 Proposed Conservation Measures

The Project proponent would implement conservation measures to reduce impacts related to construction activity through careful site design (e.g., utilizing existing roads, avoiding sensitive habitat, and minimizing disturbance to the extent practicable), adherence to designated construction limits, and avoidance of wetlands, streams and native grasslands wherever possible.

The Project proponent would implement a variety of BMPs (final UGP Wind Energy PEIS Section 5.6.2) and avoidance and minimization measures to reduce potential ecological impacts during project construction, operation, and decommissioning. Many of the BMPs and conservation measures for soils (Section 2.1.3), air quality (section 2.2.3), water resources (Section 2.3.3), and vegetation (Section 2.4.3) would also reduce potential ecological impacts. In addition to BMPs and mitigation measures identified for other resource areas such as soils, water, air quality, and noise, the following measures would be applicable:

- Reduce habitat disturbance by keeping vehicles on access roads and minimizing foot and vehicle traffic through undisturbed areas.
- Instruct employees, contractors, and site visitors to avoid harassment and disturbance of wildlife, especially during reproductive (i.e., courtship and nesting) seasons. Pets would not be allowed in the Project area.
- Initiate habitat restoration of disturbed soils and vegetation as soon as possible after construction activities are completed. Restore areas of disturbed soil using weed-free native grasses, forbs, and shrubs.
- Develop a plan for control of noxious weeds and invasive plants that could occur as a result of new surface disturbance activities at the site. The plan would address monitoring, weed identification, the manner in which weeds spread, and methods for treating infestations.
- Promptly dispose of all garbage or human waste generated on site in order to avoid attracting nuisance wildlife.

SummitWind is currently developing a voluntary BBCS following the USFWS WEG which documents the voluntary following of the USFWS WEG and records measures to avoid, minimize and, where appropriate, compensate for potential adverse impacts to selected species. The BBCS will be project specific, and explain the steps the proponent has taken or will undertake to mitigate for adverse impacts to selected species. The BBCS will also address monitoring following the USFWS WEG that recommends a minimum of one year of post construction monitoring (USFWS, 2012a). In addition, the Project proponent may monitor the various phases of wind energy development to identify potential concerns and direct actions to address

those concerns. Monitoring data can be used to track the condition of ecological resources, to identify the onset of impacts, and to direct appropriate site management responses to address those impacts. The Project proponent would report the results of any required monitoring activities to the appropriate state or federal agencies in a timely manner.

The Project proponent has designed the Project to minimize bird and bat collision mortality to the greatest extent practicable and has followed the siting recommendations provided in the USFWS WEG (USFWS, 2012a). The turbines in modern projects are placed much farther apart than in older wind farms where higher numbers of avian mortality have been documented. The Project turbines would also be mounted on tubular towers (rather than lattice), which prevent perching by birds. In an effort to further reduce avian and bat impacts, electrical collection lines between the turbines would generally be buried. The Project proponent would minimize lighting of the turbines and other infrastructure to the extent allowed by the FAA, and would follow specific design guidelines to reduce collision risk (e.g., using blinking lights with the longest permissible off cycle). To minimize or completely avoid impacts to the active bald eagle nest observed approximately one mile east of the north central Project boundary, the Project proponent has changed the Project layout by moving 4 turbines away from the nest and off of native grassland.

The Project proponent is consulting with the USFWS regarding the appropriate bird and bat conservation strategies for this Project, including the potential for additional pre-construction avian or bat surveys and post-construction monitoring and reporting to the agencies.

To avoid and minimize impacts to aquatic resources resulting from construction-related siltation and sedimentation, the Project proponent would implement an approved sediment and erosion control plan and prepare a SWPPP (as described in Section 2.4). The Applicant would also seek coverage under NPDES for General Construction Stormwater Discharges. In addition, the Project proponent would develop and implement a SPCC Plan to minimize the potential for unintended releases of petroleum and other hazardous chemicals during Project construction and operation (also as described in Section 2.4).

2.6 Land Use

The proposed Project is located in Grant county, South Dakota approximately 30 miles north of Watertown and 25 miles west of Milbank. This section focuses on the land use within the Project area.

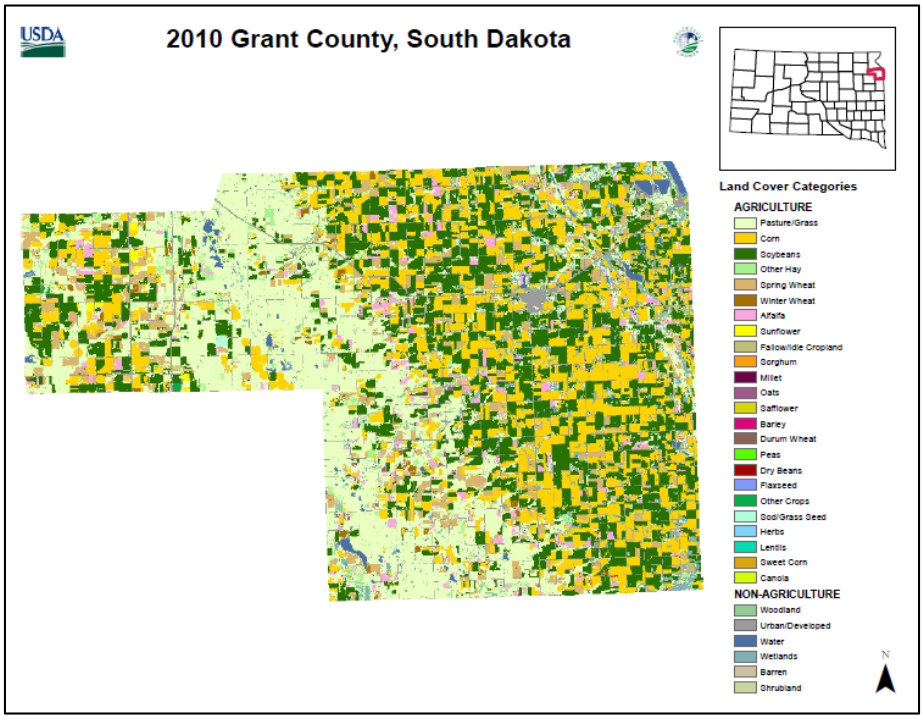
2.6.1 Existing Conditions

The Project encompasses approximately 11,616 acres in Grant county, along the Coteau des Prairies, south of the Town of Summit, South Dakota. The Project area is comprised of predominantly rural residential and agricultural land (cropland and grazing pasture). Interstate 29 runs north-south through the middle of the Project area. The Project lies on private land inside the Sisseton-Wahpeton Oyate Reservation, which is not governed by the Tribal Planning Council. There is a SDGFP Game Production Area abutting the Project area to the east.

The Project turbines would be located completely within Grant County, which has a population density of 12 people per square mile. The Project Proponent would not site the Project within any city limit and would site all turbines a minimum of 1,400 feet from occupied residences.

The Project area is predominantly rural land owned by private individuals. The majority of the land in the Project area is agricultural, with most of that land being utilized for the cultivation of corn and soybeans or pastureland.

Figure 2.6.1-1: Grant County Land Cover 2010



(NASS 2008)

Grant County has enacted a wind turbine siting ordinance, which requires:

- Distance from existing off-site residences, businesses, churches, and buildings owned and maintained by a governmental entity shall be at least 1,000 feet. Distance from on-site or lessor's residence shall be at least 500 feet.
- Distance from centerline of public roads shall be at least 500 feet or 110 percent of the height of the wind turbines, whichever distance is greater, measured from the ground surface to the tip of the blade when in a fully vertical position.
- Distance from any property line shall be at least 500 feet or 110 percent of the height of the wind turbine, whichever distance is greater, measured from the ground surface to the tip of the blade when in a fully vertical position unless wind easement has been obtained from adjoining property owner.
- Exception: The Board of Adjustment may allow setback distances to be less than the established distances identified above if the adjoining landowners agree to a lesser setback distance. If approved, such agreement is to be recorded and filed with the Register of Deeds.

Recreational uses in Grant County are primarily hunting, fishing, birding, snowmobiling, and camping. A birding trail is located outside of the Project area at the Reyelts/O'Farrell Wildlife Protection Area. The Project area is used for hunting purposes, and this recreational use is expected to continue. Countyline Campgrounds is located in the Town of Summit at the northern border of the Project. SDGFP's eastern snowmobile map shows a trail area approximately eight miles from the Project area. No trails are shown within the Project area.

2.6.2 Potential Impacts of the Alternatives

During construction, up to 145.69 acres of agricultural land may be temporarily impacted by the Project construction and activities may temporarily interfere with planting, cultivation, harvesting, or animal husbandry activities at discrete locations in the Project area at certain times. Because the Project would be built primarily on private agricultural land, the Project proponent would work closely with contracted landowners to ensure that temporary agricultural land use disturbance due to construction is minimized to the greatest extent possible. Any unavoidable temporary construction related loss of business opportunity to agricultural landowners who are participating in the Project is typically addressed contractually between the Project proponent and landowner prior to the start of construction.

During operation, the Project would have little impact on agricultural uses. The Project would permanently impact only 20.09 acres of agricultural land, all of which is under lease contract with farmers who have negotiated acceptable terms. The Project proponent designed the Project to allow for the continued productive agricultural use of the surrounding land. In fact, it has been postulated that the development of wind farms helps to keep land in agricultural use because once a wind farm becomes operational, the most compatible land use for the surrounding landscape would remain agricultural until the wind farm is decommissioned (DOE 2011).

Recreational vehicle (RV) campsites and motels may experience increased use by construction workers seeking temporary accommodations during Project construction, particularly on weekdays, which could displace recreational users. The Project proponent does not anticipate any impacts to RV campsite and motel usage during operation.

Anecdotally, some host communities report an increase in tourism after wind farms are built. In addition to curious individual local tourists, it is not unusual for other communities considering wind development to organize bus trips for landowners to visit operational wind farms (http://caladventures.com/listings/windfarmtoursnone/). According to a report prepared for the Welsh government, a number of studies point to the potential of the wind farms in their own right to attract visitors. These studies are often based on visitors' stated intentions in surveys rather than any observed positive impacts, however. There is little evidence that these positive effects occur in practice, as was borne out by case studies where there are established wind farms (Regeneris, 2014). The Regeneris study concludes that a majority of people do not react negatively to wind farm developments or change visiting behavior as a result and generally that wind farms do not negatively affect tourism.

The Project proponent does not anticipate any impacts to hunting within the Project area during the construction or operation of the Project. During operations, the small amount of land that is set aside for Project facilities is on private property and would not have any significant effect on the amount of land available for hunting in the vicinity. Further, construction and operations staff would always employ appropriate personal protective equipment while on the Project site, which would make them highly visible and keep them safe during hunting season.

Because there are no recorded snowmobile trails in the Project area, the Project proponent does not anticipate any impacts to snowmobiling.

The No Action Alternative would have no direct impact on agricultural or recreational land uses. The potential positive impacts on long term tourism in the Project area would not occur if the No Action Alternative were selected. However, selection of the No Action Alternative could potentially cause the Project proponent to reconsider an alternative interconnection, which could result in greater impacts to land use.

2.6.3 Proposed Conservation Measures

The Project proponent has followed the Grant County wind ordinance in creating the Project layout. The Project proponent also consulted with governmental agencies, tribes, property owners, and other stakeholders early in the planning process to identify potentially significant land use conflicts in order to avoid locating turbines in areas of unique or important recreation, wildlife, or visual resources. Whenever feasible, the Project proponent sited the Project on already altered landscapes. In addition, the Project layout consolidates infrastructure wherever possible to maximize efficient use of the land and minimize impacts. The proposed on-site POI makes the best use of existing transmission and market access while using existing facilities to the greatest extent possible.

Agricultural Uses

The Project proponent would coordinate construction activities with landowners to minimize interference with farming or livestock operations. Issues that would need to be addressed could include installation of gates and cattle guards where access roads cross existing fence lines, access control, signing of open range areas, traffic management (e.g., vehicle speed management), and location of livestock water sources.

Additionally, the final PEIS indicates the following conservation measures for agricultural lands:

- Construction debris should be removed from the site.
- Excess concrete (excluding belowground portions of decommissioned turbine foundations intentionally left in place) should not be buried or left in active agricultural areas.
- Vehicles should be washed outside of active agricultural areas to minimize the possibility of the spread of noxious weeds.
- Topsoil should be stripped from any agricultural area used for traffic or vehicle parking—segregating topsoil from excavated rock and subsoil—and replaced during restoration activities.
- Drainage problems caused by construction should be corrected to prevent damage to agricultural fields.

- Following completion of construction and during decommissioning, subsoil should be decompacted.

2.7 Socioeconomic and Environmental Justice

This section of the EA describes the socioeconomic and environmental justice status of Grant County, the Town of Summit, and Summit School District 54-6. It describes the anticipated socioeconomic and environmental justice impacts of the proposed Project and the No Action Alternative. Because the anticipated socioeconomic impacts of the Project are generally positive, the Project proponent is not proposing any conservation measures.

2.7.1 Existing Conditions

2.7.1.1 Socioeconomics

Employment

According to the U.S. Census Bureau, 2008-2012 American Community Survey, the majority of Grant County's workforce was associated with: educational services and health care, retail trade, and agriculture, forestry, fishing, hunting, and mining. (U.S. Census Bureau FactFinder).

The January 2014 unemployment rate for Grant County was 6.3 percent.

Table 2.7.1-1: Unemployment rates for 2011 and 2012

	2011	**2012**
Grant County	5.3	4.9
South Dakota	4.7	4.2

Source: U.S. Department of Labor (DOL)

Personal Income

From 2008-2012 the median household income was $46,273 in Grant County.

Table 2.7.1-2: Personal Income

	Grant County	**South Dakota**
Median household income, 2008-2012	$46,273	$49,091

Source: U.S. Census Bureau Quick Facts

Local Tax Revenue

In South Dakota, sales tax is collected at the city and town level rather than at the county level. The Town of Summit has a sales tax rate of 2 percent.

In 2012 sales tax revenue was $93,128 and in 2011 it was $89,189. The majority of the Town's sales tax revenue comes from the Coffee Cup Fuel Stop. Overall annual revenue for Grant County in 2012 was $5,741,451.24. Overall annual revenue for the Town of Summit in 2012 was $303,158 and $296,348 in 2011. Overall annual revenue for Summit School District 54-6 in 2012 was $1,612,768.92.

The Project proponent would pay an annual Production Tax of $0.00045 per kWh the wind farm produces. The Project proponent would also pay an annual tax equal to $3.00 per kW of nameplate capacity of the wind farm.

Table 2.7.1-3: Tax Valuations 2012

	Grant County
Ag Real Valuation	$384,965,622
Owner Occupied Valuation	$158,171,681
Other Valuations	$77,965,365
Total Real Valuation	$621,102,668

Source: South Dakota Department of Revenue (2012)

Population

The 2012 population of Grant County was 7,259. Population growth between 2010 and 2012 dropped -1.3 percent in Grant County. In 2012, the population of the Town of Summit was 292. The median age in Grant County is 45.1.

Table 2.7.1-4: Population

	2010	**2012**	**Population % change**
Grant County	7,356	7,259	-1.3%
South Dakota	814,180	833,354	2.4%

Source: U.S. Census Bureau FactFinder

Recreation

The proposed Project area is located entirely on private land and does not encompass any land set aside for recreational purposes.

Grant County has numerous creeks and watercourses flowing throughout its regions. Hunting, camping, fishing and snowmobiling provide the greatest recreational opportunities due to the area's rural nature and abundant water sources. County Line Campground, a privately operated RV park, with cabins

and tent areas, is located just south of Summit, South Dakota. In the larger region, Waubay National Wildlife Refuge, Enemy Swim Lake, and Bitter Lake are located over 15 miles west of the Project area. Hartford Beach State Park and Big Stone National Wildlife Refuge are located over 20 miles east of the Project area. A SDGFP Game Production Area abuts the Project area to the east. There are numerous lands owned by USFWS in the area. Both the state and federal areas are open to public hunting.

Seasonal activities in Grant County include the annual Farley Fest, which has traditional country fair activities, held each summer at Lake Farley Park in Milbank, South Dakota, which is located over 15 miles from the Project area. Milbank also hosts a Train Festival annually in August. Summit, South Dakota is known for its intense fog, which residents celebrate during Fog Fest.

2.7.1.2 Environmental Justice

The goal of environmental justice is to ensure the fair treatment and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of potentially adverse human health and environmental effects of a federal agency action, operation, or program. Meaningful involvement means that affected populations have the opportunity to participate in the decision process and their concerns are considered.

Executive Order 12898 was signed by President Clinton in 1994 and orders federal agencies to identify and address “disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low income populations in the United States” (EPA 1994). The analysis of potential environmental justice issues associated with the proposed Project followed guidelines described in the CEQ’s Environmental Justice Guidance under NEPA (CEQ 1997). The analysis method has three parts: (1) the geographic distribution of low-income and minority populations in the affected area is described; (2) an assessment of whether the impacts of construction and operation of the Project would produce impacts that are high and adverse is conducted; and (3) if impacts are high and adverse, a determination is made as to whether these impacts would disproportionately impact low-income or minority populations.

The majority of Grant County residents, 97.4 percent of the population, are Caucasian. From 2008 – 2012 the percentage of residents that lived below the poverty level was 13.8 percent in Grant County.

Table 2.7.1.2-1: Minority Populations by Percentage

	Grant County	**South Dakota**
White alone	97.4%	86.2%
Black or African American alone	0.4%	1.7%
Hispanic or Latino	2.5%	3.1%
American Indian and Alaska Native	0.8%	8.9%
Asian	0.4%	1.1%
Two or more races	0.9%	2.1%

Source: U.S. Census Bureau Quick Facts

Table 2.7.1.2-2: Poverty Level

	Grant County	**South Dakota**
Persons below poverty level, percent, 2008-2012	13.8%	13.8%

Source: U.S. Census Bureau Quick Facts

2.7.2 Potential Impacts of the Alternatives

Development, construction and operation of the proposed Project would produce direct and indirect socioeconomic and environmental justice impacts. These impacts are generally positive or neutral.

Revenue generation from wind energy development falls into several general categories: direct income to taxing entities, direct income to Project participants, employment opportunities during construction and operation, and increased spending in the Project area during all phases of Project development, construction and operation.

The Project is anticipated to create up to 300 construction-related jobs at the peak of construction. Although a national wind energy construction contractor would likely be chosen to construct the Project, hiring of construction crews would occur in the Project region to the greatest extent possible. During construction, there would also be the opportunity for local

businesses to share in the economic benefits of the Project. Transportation companies, vehicle and equipment rental companies, fuel supply companies, aggregate and materials supply companies, and heavy equipment repair and maintenance companies are among those companies that often participate directly in Project construction. Local packaging and postal services, gas stations, retail outlets, lodging facilities, restaurants, bars, and grocery stores would also experience economic benefits during construction.

The proposed Project is expected to create 5 to 10 permanent jobs during operation. In addition, the presence of a wind energy facility sometimes increases local tourism and ancillary economic benefits to local businesses that support tourism, such as gas stations, restaurants and lodging facilities.

In summary, the proposed Project, based on a per-MW estimate, would result in a total capital investment of $155 million (including the cost of turbines). The Project proponent anticipates that it would spend approximately $33 million locally during construction. In addition, The Project proponent anticipates making $500,000 per year in landowner payments and $700,000 per year in property and other taxes. Further, wind farms help landowners to maintain their agricultural property by providing an additional contribution to the taxes that keep communities rural.

The proposed Project would have at most a very limited impact on hunting, fishing, snowmobiling and camping, the most common recreational activities in the proposed Project area. This is due to the fact that the Project is located entirely on private property.

Property value concern is a common worry for residents at proposed wind farms. A 2013 study performed by the DOE's Lawrence Berkeley National Laboratory, "Spatial Hedonic Analysis of the Effects of Wind Energy Facilities on Surrounding Property Values in the United States," stated:

> We collected data from more than 50,000 home sales among 27 counties in nine states. These homes were within 10 miles of 67 different wind facilities, and 1,198 sales were within 1 mile of a turbine—many more than previous studies have collected. The data span the periods well before announcement of the wind facilities to well after their construction… we find no statistical evidence that home values near turbines were affected in the post-construction or post-announcement/pre-construction periods. Previous research on potentially analogous disamenities (e.g., high-voltage transmission lines,

> roads) suggests that the property-value effect of wind turbines is likely to be small, on average, if it is present at all (Berkeley).

If the No Action Alternative is chosen, the positive socioeconomic impacts associated with the Project may not occur because all other alternative interconnection options had been previously rejected by the Project proponent.

With regard to environmental justice, the Project's socioeconomic benefits are positive, so any impacts to minority or disadvantaged communities would likely improve the local standard of living. There is a very small minority and economically disadvantaged population in the Project area. The Project would not disproportionately impact these populations because the Project is primarily located on agricultural land.

2.7.3 Proposed Conservation Measures

Because there are no negative socioeconomic or environmental justice impacts associated with the proposed Project, the Project Proponent is not proposing any conservation measures.

2.8 Visual Resources

2.8.1 Existing Conditions

This section evaluates the existing visual setting in the vicinity of the proposed Project. The evaluation included areas within and adjacent to the Project area from which a person may be able to observe changes to the visual landscape resulting from development of the Project. The analysis presented in this section is supplemented by an Assessment of Project Visual Character and Visibility, prepared by Haley & Aldrich, Inc. and a Shadow Flicker Study prepared by Stantec.

Visual sensitivity is dependent on viewer attitudes, the types of activities in which people are engaged when viewing the Project, and the distance from which the Project would be seen. Overall, higher degrees of visual sensitivity are correlated with areas where people live, are engaged in recreational outdoor pursuits, or participate in scenic or pleasure driving. Lesser degrees of viewer sensitivity are anticipated for people living further away, participating landowners, workers who construct or maintain the Project, or people who are just traveling through the area.

2.8.2 Potential Impacts of the Alternatives

The Project visual area of potential effect (APE) is located in a rural, agricultural setting of generally open rolling grasslands interspersed with glacial lakes and streams. A high density of larger glacial lakes is located along the eastern Project boundary on the edge of the plateau. Vegetation in the APE is dominated by active agricultural land (pasture and active crop fields). Open fields are often interspersed with and bordered by hedgerows and small woodlots primarily used as screening around residential buildings. The Project APE lacks large forested areas. Deciduous forest is restricted to riparian and wetland areas.

The visual characteristics of the proposed Project area consist primarily of rural agricultural land with farming, livestock grazing, and related agricultural operations dominating the land use. The visual resources of the area are neither unique to the region nor entirely natural. Currently, no distinctive landscape features exist in the Project area that would require specific protection from visual impairment. Existing views are primarily agricultural activity and undeveloped land, along with transportation corridors within the Project APE that include a network of rural roads and larger roadways such as Interstate 29/US Highway 81 that intersect the Project APE in a north-south direction, and US Highway 12 which crosses the northern Project APE boundary in an east-west direction. An important commercial rail corridor (non-commuter line), the Burlington Northern Santa Fe Railroad, also crosses the northern portion of the APE parallel to US Highway 12.

The majority of the Project APE is comprised of cropland or pasture and herbaceous rangeland. One area of moderate density residential development is the Town of Summit located in the northern portion of the APE. According to the 2010 census, the Town of Summit is a small town consisting of mainly residential and commercial properties with a population of 288 people within the 0.56 square mile municipal boundary. Overall population density within the APE is very low, averaging 2.5 people per square mile outside of the Town of Summit, and 3.7 people per square mile overall (including the Town of Summit).

Topography within the APE is not distinctive, as the Project sits on a plateau surrounded by lower flatlands in the distance. Although the APE is scattered with streams and lakes, no significant change in topography is attributable to these features. Additionally, none of the features within the APE are classified as scenic resources. Only a handful of wooded areas are present as small isolated pockets of vegetation. Although the Project area is relatively undeveloped, buildings such as silos and grain elevators can be seen in the

typical landscape, along with the Town of Summit near the northern Project boundary. Additionally, there are no federal or state parks within the APE, nor does the APE contain any highly distinctive or important landscape features or unique viewsheds.

The APE is located on the Lake Traverse Indian Reservation, historically and currently inhabited by the Sisseton-Wahpeton Oyate, a branch of the Santee Dakota group of Native Americans. Western consulted with the Sisseton Wahpeton Oyate THPO and the tribal governments listed in Section 3.3 below to determine the cultural resource study area.

A review of the Sisseton Wahpeton Oyate website and the Oyate Tourism website indicates there are no historically or culturally sensitive tribal visual resources within the APE. The Project proponent reviewed the National Register of Historic Places (National Register) and the South Dakota State Historical Preservation Society (SHPO) Cultural Resource Geographic Research Information Display websites for the presence of culturally sensitive resources. There are no historic places currently listed on the National Register within the APE. However, two buildings within the Town of Summit, the Summit Water Tower and First State Bank, were reviewed by the state SHPO and determined eligible for National Register listing.

The No Action Alternative would have no direct impact on visual resources. However, selection of the No Action Alternative could potentially cause the Project proponent to reconsider an alternative interconnection, which could result in greater impacts to visual resources.

2.8.3 Proposed Conservation Measures

The Project proponent has limited conservation measures available for the operating Project. Wind turbines are very tall structures typically located in open fields at the highest locally available elevations. However, the Project proponent has selected conservation measures for the Project, as applicable, from the final UGP Wind Energy PEIS. The greatest potential for visual impacts associated with wind energy facilities and associated electricity transmission systems would occur as a result of decisions made during the siting and design of the projects. In many cases, the Project proponent may avoid or substantially reduce the visual impacts associated with these facilities with careful project siting.

The Project proponent used geographical information system tools and visual impact simulations to conduct visual analyses (including mapping), which analyzed the visual characteristics of landscapes and visualized the potential impacts of project siting and design. The visual analyses have provided data

that would be critical for identifying constraints and opportunities for siting projects to minimize visual impacts. The Project proponent has also sited wind turbines to minimize shadow flicker effects on nearby residences, as calculated using appropriate siting software and procedures.

The Project proponent has utilized site planning to locate turbines away from visually sensitive receptors and minimize site disturbance, including tree clearing and grading. Prior to finalization of the Project design, the Project proponent would explore, as practicable, opportunities for additional micro-siting or realignment of facilities that could reduce potential visual impacts.

During construction, the Project proponent would minimize the visual impacts associated with working construction equipment by adhering to a construction sequencing plan that minimizes impacts on local roads and residences. The Project proponent would develop and implement a dust control plan, which would minimize off-site visual impacts associated with construction activities. As described in the impacts discussion, any unavoidable construction-related visual impacts would be short term.

Following completion of construction, the Project proponent would perform site restoration activities. Restoration activities would include removal of excess road material from Project access roads, restoration of agricultural fields, and revegetating disturbed sites through seeding and mulching. These actions would assure that, to the greatest extent possible, the Project area is returned to its preconstruction condition and that long-term visual impacts are minimized.

2.9 Acoustics

Noise is generally defined as unwanted or excessive sound. Some land uses are considered more sensitive to intrusive noise than others due to the type of activities typically involved at the receptor location. According to the final UGP Wind Energy PEIS, any pressure variation that the human ear can detect is considered sound; noise is unwanted sound. Sound can be characterized in terms of amplitude (perceived as loudness), frequency (perceived as pitch), and time pattern.

The Grant County Zoning Ordinance requires that noise level originating from turbines shall not exceed 50 dBA at the perimeter of the principal and accessory structures of existing off-site residences, businesses, and buildings owned and/or maintained by a governmental entity. The Project proponent would also employ appropriate environmental noise criteria such as the guidelines provided by the U.S. Environmental Protection Agency (EPA).

2.9.1 Existing Conditions

The Project area would generally be characterized as a rural agricultural land use area sparsely populated with residences and farms. The Project proponent expects existing ambient sound levels to be relatively low, although sound levels may be sporadically elevated in localized areas due to roadway noise or periods of human activity. Sources of background noise to rural residents and occasional visitors to the area are primarily related to agricultural activity and vehicular traffic on Interstate Highway 29, County Highway 12, and low-traffic local roads such as 146th Street, 148th Street, and 455th Avenue. Rail traffic noise is also prominent in the areas adjacent to the railroad located in the northern extent of the Project area (south of County Road 12). Potential noise receptors in the vicinity of proposed facilities include scattered rural residences, the closest of which is approximately 1,400 feet from a proposed turbine location.

Background sound levels would vary both spatially and temporally depending on proximity to area sound sources, roadways and natural sounds. Principal contributors to the existing acoustic environment likely include motor vehicle traffic, mobile farming equipment, farming activities such as plowing and irrigation, all-terrain vehicles, local roadways, rail movements, periodic aircraft flyovers, and natural sounds.

2.9.2 Potential Impacts of the Alternatives

Construction of wind power projects requires the operation of heavy equipment and construction vehicles for various activities including construction of access roads, excavation and pouring of foundations, the installation of buried and above ground electrical interconnects, and the erection of turbine components. Construction activity would generate traffic having potential noise effects, such as trucks travelling to and from the site on public roads.

Most construction activities would occur during the day, when noise is tolerated due to the masking effect of background noise. Nighttime noise levels would drop to the background levels of the Project area. In general, construction activities for wind energy development would disturb smaller areas than those at other industrial facilities, and would persist for a short period. However, the periods of noise at any given residence in the Project area would likely only occur during brief periods for a few days as turbine construction activities would move elsewhere within the overall Project area as turbine sites are completed. Therefore, the potential noise and vibration impacts of construction activities would be local and temporary in nature,

and would not be substantially louder than everyday noise sources such as farm equipment and nearby traffic. The Project proponent would make all reasonable efforts to minimize the impact of noise resulting from construction activities.

During operation, the primary noise sources would be the wind turbines, the transformer and switchgear from the substation, as well as motorized travel within the Project area for O&M of the facility. The sources of sounds emitted from operating wind turbines can be divided into two categories: 1) mechanical sounds from the interaction of turbine components; and 2) aerodynamic sounds produced by the flow of air over the blades. Aerodynamic sound is typically the largest component of wind turbine acoustic emissions, and is generally characterized as a “swishing” or “whooshing” sound.

Maintenance activities involving periodic site visits to wind turbines, transmission lines, substations, and auxiliary structures would involve light- or medium-duty vehicle traffic with relatively low noise levels. The Project proponent anticipates infrequent but noisy activities, such as road maintenance work with heavy equipment or repair or replacement of old or inoperative wind turbines or auxiliary equipment. However, the anticipated level of noise impacts from maintenance activities would be far lower than that from construction activities. Overall, the noise levels of continuous site operation would be much lower than the noise levels associated with short-term construction activities.

The Project proponent retained Stantec to conduct a noise analysis for the proposed Project. Stantec performed the analysis to assess the potential sound levels that may be experienced at local residences (receptors) within the Project area. Stantec predicted the potential impact of noise on receptors within the Project area using a software program that considers the source sound power level from the wind turbines, along with the positions of the turbines and receptors within the area of impact. Stantec identified a total of 202 potential receptors and included them within the analysis. Stantec conservatively calculated the sound levels by using the maximum sound power level in a worst-case scenario. Results of the analysis indicate that the Project would cause minimal sound impact on receptors within the Project area. Stantec expects noise levels at all receptors within the Project area to comply with the Grant County Zoning regulation maximum noise level of 50 dBA at inhabited structures (Stantec, 2014).

The types and levels of decommissioning activities would be similar to (but shorter in duration) than those associated with construction. Thus, the noise

levels would be similar to or less than those for construction activities. Similar to the construction period, most decommissioning activities would occur during the day, when people are more tolerant of noise due to the masking effect of background noise. Nighttime noise levels would drop to the background levels of a rural environment because decommissioning activities would cease at night. Like construction activities, relative to wind turbine operation, decommissioning activities would last for a short period of time and the potential noise impacts would be local and temporary in nature.

The No Action Alternative would have no direct noise impacts. However, selection of the No Action Alternative could potentially cause the Project proponent to reconsider an alternative interconnection, which could result in greater impacts to temporary construction-related noise.

2.9.3 Proposed Conservation Measures

All Project activities would comply with applicable laws, ordinances, regulations, and standards. The Grant County Zoning Ordinance requires that noise level originating from turbines shall not exceed 50 dBA at the perimeter of the principal and accessory structures of existing off-site residences, businesses, and buildings owned and/or maintained by a governmental entity.

The Project proponent and the contractors would implement best management practices for sound abatement during construction, including use of appropriate mufflers and limiting hours of construction. Stationary construction equipment (e.g., compressors or generators) would be located as far as practical from nearby sensitive receptors. In addition, the Project proponent would notify landowners in advance of construction sound impacts and provide them with a complaint resolution procedure to assure that any complaints regarding construction sound are adequately addressed.

The Project proponent has sited the proposed turbines in accordance with all applicable local ordinances. Although the Project proponent does not anticipate that any impacts related to operational noise would be significant, the Project proponent would employ measures to minimize and mitigate operational related noise. The Project proponent and contractors would maintain turbines as necessary to keep them in good condition throughout the duration of the Project.

2.10 Transportation

This section considers the potential impacts the Project could have upon roadways, airfields, and railways within and immediately adjacent to the Project area.

2.10.1 Existing Conditions

The Project area is served by a network of state, county, and local roadways. Existing roads in the vicinity of the Project area range from two-lane highways with paved shoulders to seasonally maintained gravel roads. Interstate 29 is a north-south highway that bisects the Project area, and would likely be utilized for delivery of Project components to the Project area. The Project proponent would use county and local roads for delivery of components and equipment to the actual sites of Project components within the larger Project area.

The former Chicago Milwaukee St. Paul & Pacific railroad runs parallel to Highway 12, which traverses from northwest to southeast. The railroad is currently operated by the Burlington Northern Santa Fe Railroad.

Three airports were noted during a desktop analysis in the vicinity of the Project, including:

- Milbank Municipal Airport, located approximately 22 nautical miles to the east of the Project footprint and operated by the City of Milbank.
- Sisseton Municipal Airport, a publicly-owned airfield located approximately 30 nautical miles north of the Project area.
- A small landing strip located in Grant County, just south of the county line on the eastern portion of the Project area. A review of FAA-listed airports did not identify this landing strip.

In order to assess the existing traffic and road conditions within the Project area, the Project proponent would conduct a transportation study prior to final design to evaluate roadway safety, traffic capacity, structure inventory, and roadway geometry. The study would include a site visit to evaluate the anticipated delivery path(s) to the construction site, lateral clearances, vertical clearances, intersecting roadway control, speed limits, posted truck size and weight restrictions, major roadway intersection configurations, and primary and alternate route selections. Engineers would drive, measure and survey each potential delivery route to identify any areas of concern, including any bridges, culverts, and areas of poor road conditions. This would also include consultation with the State Department of Transportation and the local municipalities.

2.10.2 Potential Impacts of the Alternatives

The majority of transportation operations would involve material and equipment being moved to the site during the construction phase. The types and amounts of material and equipment required for construction of the Project would depend on site characteristics as well as the design selected. The following discussion provides a general overview of the expected transportation requirements during development, focusing on the unique considerations posed by the wind turbines, turbine towers, and rigging equipment necessary to erect them.

In general, the heavy equipment and materials needed for site access, site preparation, foundation construction, and construction of transmission lines are typical of construction projects and do not pose unique transportation considerations. Typically, flatbed combination trucks would move the equipment to the Project site and would remain on site through the duration of construction activities.

Transportation logistics have become a major consideration for wind energy development projects; the trend is toward larger rotors and taller turbine towers and the associated equipment needed to erect them. Depending on the design, some of the turbine components may be extremely long (e.g., blades) or heavy (e.g., the nacelle). The size and weight of these components would dictate the specifications for site access roads for required rights of way, turning radii, and fortified culverts or bridges. The Project proponent estimates that each wind turbine generator would require between 5 and 15 truck shipments of components, some of which could involve specialized trucks unique to the wind energy industry that are oversized or overweight. Congestion on local roadways should not be extremely worsened by construction traffic as existing traffic volumes are so low.

Once the Project is commissioned and operational, Project staff traffic would likely be concentrated around the O&M facility. Some of these personnel would need to visit certain turbine locations and return to this facility. Each turbine typically requires routine maintenance visits once every three months, but certain turbines or other Project improvements could require periods of more frequent service visits. Such service visits typically involve one to two pick-up trucks. The Project proponent does not expect operation of the Project to result in any traffic issues in the Project area because there would be only a minor increase in traffic.

With some exceptions, transportation activities during site decommissioning would be similar to those during site development and construction. Heavy

equipment and cranes would be required for dismantling turbines and towers, breaking up tower foundations, and regrading and recontouring the site to the original grade. With the possible exception of a main crane, the Project proponent does not expect any oversized and/or overweight shipments during decommissioning activities because the major turbine components can be disassembled, segmented, or size-reduced prior to shipment.

The Project proponent does not contemplate any impacts to the Burlington Northern Santa Fe Railroad railway by current Project plans.

The FAA has determined that no impacts to the aviation system or the three airports listed above would occur as a result of the Project. The FAA has issued a determination of no effect/hazard for each of the proposed turbine locations. Turbines would be lit according to FAA requirements to ensure aviation safety.

There would be no direct negative impacts on the transportation system associated with the No Action Alternative. However, if the Project is not built, any associated public road safety improvements that could be required for the delivery of Project requirements would not be made. In addition, selection of the No Action Alternative could potentially cause the Project proponent to reconsider an alternative interconnection, which could result in greater temporary construction impacts to transportation.

2.10.3 Proposed Conservation Measures

The Project proponent would work with the appropriate state and local authorities to address road access, safety, and traffic issues during final Project planning. It is possible that local public roads would require improvements to safely accommodate the larger, heavier vehicles associated with wind energy construction, such as widening or improving intersections. The Project proponent would be responsible for making any required safety improvements. The Project proponent would also be responsible for ensuring that the quality of local roadways after construction is at least the same as it was before construction began.

The United States Department of Transportation Federal Highway Administration and the South Dakota Department of Transportation have unique rules, regulations, and oversized permit requirements. This system requires transporters to evaluate the type of shipment being planned, its origin, and destination. Demonstrating to permit officials that all possible means have been assessed or used to either minimize travel distances or select appropriate bypass routes is critical in obtaining permits. Typically,

the transport company develops detailed transportation plans based on specific object sizes, weights, origin, destination, and unique handling requirements. The final transportation plan is developed after alternative approaches have been evaluated, costs refined, and adjustments made to comply with unique permit requirements.

Overweight permits are usually issued with specific dates during which transport is prohibited. These dates are state-specific but tend to eliminate periods during the spring when frozen ground is thawing. Over-dimension permits are likely to have travel time limits in congested areas, limiting movement to non-rush-hour periods. The construction company hired to build the proposed Project would obtain any necessary permits for transporting equipment.

2.11 Public Safety and Communications

This section of the EA discusses whether the development of the Project could have negative impacts upon public safety or the functioning of communications technology in the Project area.

2.11.1 Existing Conditions

The proposed Project is located near Summit, South Dakota, with a population of 288 people (U.S. Census Bureau FactFinder). The nearest fire department and ambulance service is located in downtown Summit, approximately one mile to the north of the Project area. The closest hospital to the Project is 23 miles away.

The Project proponent would meet with the Summit Volunteer Fire Department to discuss potential fire and safety hazards associated with the Project.

Table 2.11.1-1: Local Fire, Police and Medical Services

Fire and Police Protection Services	Approximate Distance from Project (miles)
Summit Volunteer Fire Department	1
Ortley Volunteer Fire Department	10
Corona Fire Department	20
Webster Fire Department	25
Milbank Volunteer Fire Department	25
Sisseton Fire Hall	30
Milbank Police Headquarters	25
Webster City Police Department	25
Sisseton City Police Department	30

Fire and Police Protection Services	Approximate Distance from Project (miles)
Watertown Police Department	30
Medical Services	
Summit Volunteer Fire Dept. Ambulance Service	1
Milbank Area Hospital	23
Coteau Des Prairies Hospital	30
Prairie Lakes Hospital (Watertown, SD)	30

Another important aspect of public safety is the security of the communications system. Microwave bands that may be affected by the installation of wind turbine facilities operate over a wide frequency range (900 MHz – 23 GHz). These systems are the telecommunication backbone of the country, providing long-distance and local telephone service, backhaul for cellular and personal communication services, data interconnects for mainframe computers and the Internet, network controls for utilities and railroads, and various video services.

A 406 foot cell tower is located in the town of Summit at 45655 140th St. There is also a 190 foot communication tower in Watertown, a city located approximately 30 miles south of the proposed Project area.

2.11.2 Potential Impacts of the Alternatives

The Project proponent has noted the potential impacts to public safety and communications, as applicable, from the final UGP Wind Energy PEIS. The following is a synopsis of the health and safety discussion in that document. Two topics that were discussed in the PEIS public Safety Section, Shadow Flicker and Sound, have been addressed in Sections 2.8 Visual Resources and 2.9 Acoustic Resources, respectively.

Physical Hazards: Although rare, there is the potential for physical hazards to occur during the construction and operation of wind projects. These impacts are best mitigated by adhering to appropriate setbacks from infrastructure and homes.

Occupational Hazards: Many of the occupational hazards associated with the construction and operation of wind energy projects are similar to those of the heavy construction and electric power industries (i.e., working at heights, exposure to weather extremes including temperature extremes and high winds, working around energized systems, working around lifting equipment and large moving vehicles, and working in proximity to rotating/spinning equipment).

Electric and Magnetic Fields: Electric and magnetic fields may exist within the substation and switchyard of the Project and along the transmission line that connects the facility to the grid. Portions of the Project where such fields may exist are generally not accessible to the public. Adequate physical barriers preventing access to hazardous areas by unauthorized individuals can be expected to keep exposures of the general public to well below applicable maximum permissible exposure.

Electromagnetic Interference to Communications: Wind turbines have the potential to interfere with electromagnetic signals that make up a large part of modern communication networks (Burton et al. 2001). Electromagnetic interference with other electromagnetic transmissions can occur when a large wind turbine is placed between a radio, television, or microwave transmitter and receiver (Manwell et al. 2002).

The Project proponent had a microwave study conducted by Comsearch. This study focused on the potential impact of wind turbines on licensed, proposed and applied non-federal government microwave systems. This type of study determines the Worst Case Fresnel Zone (WCFZ) boundaries for each path. The WCFZ is a swath along the microwave path where wind turbines could obstruct the path. The study identified six microwave paths intersecting the Project area. Comsearch calculated and mapped the Fresnel Zones for these microwave paths to assess the potential impact from the turbines. Comsearch considered a total of 46 turbines in the analysis (although only 41 are currently proposed), each with a rotor diameter of 354 feet and turbine hub height of 262.5 feet. Of those turbines, Comsearch found that none would potentially obstruct the microwave systems in the area.

Hazardous Materials/Waste: The Project would generate limited quantities of both solid and hazardous waste during the construction, operation, and decommissioning of the proposed Project. Because the Project proponent would employ appropriate waste handling and disposal measures there should be little to no impact to the environment.

Potential Impacts of Accidents, Sabotage, and Terrorism: The Project proponent is responsible for ensuring the operability and reliability of its systems. To do so, they must evaluate the potential risks from all credible events, including natural disasters (earthquakes, storms, etc.) as well as mechanical failure, human error, sabotage, cyber-attack, or deliberate destructive acts, recognizing intrinsic system vulnerabilities, the realistic potential for each threat, and the potential consequences. The Project

proponent does not anticipate that the proposed Project would be at any unusual risk for accidents or acts of sabotage or terrorism.

The No Action Alternative would have no direct public safety or communication system impacts. However, selection of the No Action Alternative could potentially cause the Project proponent to reconsider an alternative interconnection, which could result in greater temporary construction related impacts to public safety and communication systems.

2.11.3 Proposed Conservation Measures

The Project proponent has drawn conservation measures for Project impacts upon public safety and communications, as appropriate, from the final UGP Wind Energy PEIS.

The following conservation measures to protect wind energy facility and transmission line workers are applicable during all phases associated with the Project.

- Work at the Project would be in compliance with applicable federal and state occupational safety and health standards (e.g., the Occupational Health and Safety Administrations [OSHA's] Occupational Health and Safety Standards, CFR Parts 1910 and 1926, respectively).
- The Project proponent would conduct a safety assessment to describe potential safety issues during construction and operation and create a plan to mitigate them.
- The Project proponent would develop a health and safety program to protect workers during site characterization, construction, operation, and decommissioning of a wind energy project, as described in the final PEIS.
- Design for all electrical systems on the Project would meet all applicable safety standards (e.g., the National Electrical Safety Code) and comply with the interconnection requirements of the transmission system operator.
- In the event of an accidental release of hazardous substances to the environment, the Project proponent would document the event, including a root cause analysis, a description of appropriate corrective actions taken, and a characterization of the resulting environmental or health and safety impacts. Documentation of the event would be provided to permitting agencies and other appropriate federal and state agencies within 30 days, as required.

The following conservation measures for the protection of public health and safety would be applicable during all phases associated with the proposed Project:

- The Project proponent has complied with the setback requirements in the Grant County Ordinance in designing the Project layout.
- The Project proponent would develop a traffic management plan for the site access roads to control hazards that could result from increased truck traffic (most likely during construction or decommissioning), ensuring that traffic flow would not be adversely affected and that specific issues of concern (e.g., the locations of school bus routes and stops) are identified and addressed.
- The Project proponent would use proper signage and/or engineered barriers (e.g., fencing) to limit access to electrically energized equipment and conductors in order to prevent access to electrical hazards by unauthorized individuals or wildlife.
- The Project proponent has designed the Project to comply with FAA regulations, including lighting requirements, and to avoid potential safety issues associated with proximity to airports, military bases or training areas, or landing strips and has received confirmation from the FAA that the wind farm would not impact aviation safety.
- The Project proponent would work with the local fire and emergency services to develop a fire management and protection plan.
- The Project proponent would work with appropriate agencies (e.g., DOE and TSA) to address critical infrastructure and key resource vulnerabilities at wind energy facilities, and to minimize and plan for potential risks from natural events, sabotage, and terrorism.

2.12 Cultural Resources

Cultural resources include archaeological, historic, and architectural sites or structures, or places that are significant in understanding the history of the United States or North America, and may include definite locations (sites or places) of traditional cultural properties (TCPs) to specified social or cultural groups, such as Native American tribes' "properties of traditional religious or cultural importance". Cultural resources can be either man-made or natural physical features associated with human activity and, in most cases, are unique, fragile, and nonrenewable. Cultural resources that meet the eligibility criteria for listing in the National Register are termed "historic properties" under the NHPA.

2.12.1 Existing Conditions

The Project area has not been listed in the online National Register database (as of a search conducted July 12, 2011). The South Dakota State Historic Preservation Office (SHPO) is the state agency for historic preservation. It maintains an atlas of historical designations within the state of South Dakota. The SHPO identified one historical designation, the Burlington Northern Santa Fe Railroad bridge, in the Project area.

The majority of the Project area is located on land that was formerly part of the Sisseton-Whapeton Indian Reservation. All of the land has been deeded to local farmers, but additional research is required to ascertain the presence or absence of native artifacts, burial grounds, sites of ancient habitation and other pertinent resources.

Metcalf Archeological Consultants, Inc. (MAC) conducted a Class I file search of the site and manuscript files at the SHPO office. The search area included the APE and the surrounding one-mile radius. The APE is any area where temporary or permanent impacts may occur during construction of the Project. The search identified 47 cultural resources that were recorded in the APE, consisting of 40 architectural structures and cemeteries, six historic sites, and one prehistoric site. One historic site, the historic Chicago, Milwaukee, St. Paul, and Pacific Railroad was determined eligible for inclusion on the National Register. The APE includes a portion of the Town of Summit. Two additional architectural structures located in the Town of Summit are located outside of the APE. During the files search, MAC identified two sites, one structure and one unrecorded cemetery, that were not evaluated for inclusion in the National Register; these sites should be avoided during Project construction (MAC, 2014a).

MAC conducted a Level III cultural resource inventory from August 20, 2014 to August 25, 2014. As a result of the survey, MAC recommended to Western a finding of No Historic Properties Affected, provided that the two unevaluated sites are avoided (MAC, 2014b).

MAC also conducted an Architectural Inventory of the Project area. The architectural inventory of the proposed Summit Wind Farm project area returned two recommendations of eligibility for inclusion in the National Register. However, both sites recommended for eligibility will be avoided by construction activities and MAC returned a recommendation of No Historic Properties Affected (MAC, 2015).

2.12.2 Potential Impacts of the Alternatives

Construction has the greatest potential to impact cultural resources due to ground-disturbing activities, vegetation removal, and increased access to remote locations. Due to the weight and length of wind turbine components, the grade of access routes must be kept to a minimum. Maintaining minimal grades can require extensive grading, thus increasing the potential for impacts on cultural resources due to ground disturbance.

The creation of access roads also provides people with easier access to previously remote areas. Since one of the greatest threats to archaeological sites is from looting, increased access often leads to greater opportunities for looting to take place. However, since the Project would be located on private lands, the Project proponent anticipates that access levels by the general public would not change following development and therefore the overall effect of increased access on archeological sites within the Project area would be minimal. Although archaeological material is protected on public or state lands, archaeological sites and associated artifacts on private land are the property of the landowner.

The Project proponent would site project elements to avoid and minimize potential impacts to cultural resources, including any identified by Native Americans that have ancestral ties to the Project area, and would conduct cultural resource surveys in the Project area to identify areas requiring protection. The Project proponent would consider all identified cultural resources prior to finalizing the locations of Project infrastructure and beginning construction activities. As the construction of the access roads and wind turbines would not require demolition or other adverse impacts to historic and architectural resources, there would be no construction related impact on architectural resources.

Once the Project proponent constructs the proposed Project, no substantial earth-disturbing activities associated with operation and maintenance of the Project would occur. Therefore, Project operation would not have an adverse effect on archeological resources. Although minor impacts associated with operation could come from the looting of sites or by erosion of disturbed areas, these impacts would be localized and temporary in nature and would not have a significant effect on archeological resources.

It is likely that the proposed wind turbines would be visible from at least some of the 47 cultural resource sites identified in the MAC report. Studies conducted thus far have included an assessment of potential visual impacts on cultural and Native American resources. The Project's potential effect on a given historic property would be limited to a change in the visual setting of the property, if turbines are visible when the historic property is viewed from a publicly accessible vantage point and the visual setting is a defining

characteristic of the property's historical significance. The potential effect resulting from the introduction of wind turbines into the visual setting for any significant property is dependent on a number of factors including the number of visible turbines, distance, visual dominance, orientation of views, viewer context and activity, and the types and density of modern features in the existing view (such as silos, buildings, overhead electrical transmission lines, cellular towers, highways, development, etc.). Visual setting may or may not be an important factor contributing to a given property's historical significance. If the visual setting is not an important factor, then the Project would have no impact on the historic property. MAC does not identify scenic views and association with the landscape as contributing to the significance of any of the historic resources in the APE; therefore, the Project will not have a significant visual impact to cultural resources in the APE.

It is important to note that viewshed analyses conducted by MAC do not consider screening provided by buildings and trees, as well as characteristics of the proposed turbines that influence visibility (color, narrow profile, distance from viewer, etc.). Therefore, actual Project visibility would differ from the viewshed analyses. Visual screening provided by existing buildings, yard trees, silos, and other objects would likely limit views of the Project from some areas where viewshed mapping suggests the Project is potentially visible, especially within the Town of Summit.

The Project proponent expects very few impacts on cultural resources from decommissioning. Again, the majority of impacts would be associated with new ground disturbance during construction. Ground disturbance during decommissioning would be confined primarily to areas that were originally disturbed during construction. If new work areas were needed in areas that had not previously been disturbed, there would be a potential for impacts on additional cultural resources. Removal of structures would be necessary, but the Project proponent does not expect previously undisturbed areas to be affected.

The No Action Alternative would have no direct impact on cultural resources. However, selection of the No Action Alternative could potentially cause the Project proponent to reconsider an alternative interconnection, which could result in greater impacts to cultural resources due to increased temporary ground disturbance associated with transmission line construction.

2.12.3 Proposed Conservation Measures

The Project proponent has identified conservation measures for potential impacts upon cultural resources resulting from the construction and operation of the Project, as applicable, from the final UGP Wind Energy PEIS

and tailored them specifically for the specifics of this Project and its unique characteristics.

Consultation pursuant to the Section 106 of the NHPA established whether the Project is likely to disturb traditional cultural properties, affect access rights to particular locations, disrupt traditional cultural practices, or visually impact areas important to the tribe(s). Western consulted with SHPO, Sisseton Wahpeton Oyate THPO and the tribal governments listed in Section 3.3 below about the cultural resource study area and to identify cultural resources within the study area. The following cultural resource study parameters were agreed upon by Western and SHPO; additionally, all remaining project disturbances not included in the agreement were also surveyed for completeness.

1. All project disturbances east of Interstate 29 would be surveyed.
2. All project areas west of Interstate 29 that have not been disturbed by agriculture (grasslands, pasture, etc.) would be surveyed.
3. All project disturbances in the north half of Section 5, the north half of Section 8, and the NE ¼ of Section 29 would be surveyed.
4. Once the Level 1 search has been completed, aerial photographs or high resolution satellite images should be utilized to search for historic farmstead features within the entire APE west of Interstate 29. Identified site Locations west of Interstate 29 that do not fall under points 2 and 3 above would be investigated.

Western and the Project proponent held a nation-to-nation Section 106 consultation meeting on February 11, 2014 at the Dakota Magic Casino. Discussion centered on construction impacts within the Project area. Construction impacts to lands that were already being used for crop cultivation were of less concern than impacts to lands used for pasture or grassland and wetland areas. Tribal representatives at the meeting noted that South Shore (south of the Project area, along the Coteau) and the northern side of Summit Lake (northeast of the Project footprint) were areas they believe have the greatest potential for cultural and archaeological resources.

The Project proponent and Western would implement the following mitigation measures to address potential impacts on cultural resources:

- The presence of archaeological sites and historic properties in the APE would be determined based on a records search of recorded sites and properties in the area and an archaeological survey.

- Archaeological sites and historic properties present in locations that would be affected by Project activities would be reviewed to determine whether they meet the criteria of eligibility for listing in the National Register. Cultural resources listed in or eligible for listing in the National Register are considered “significant” resources and termed “historic properties”. The Project proponent would avoid these resources with siting of Project components.

- Cultural and Native American resources discovered during construction would immediately be brought to the attention of Western. Work would immediately halt in the vicinity of the find to avoid further disturbance to the resources while being evaluated and appropriate mitigation plans are being developed, if required. An Unanticipated Discovery Plan would be prepared.

- If human remains are found, work would cease immediately in the vicinity of the find. The appropriate law enforcement officials and Western would then be contacted. No material would be handled or removed from the find location. Once it is determined that the remains are archaeological, the South Dakota SHPO would be contacted to determine how the remains should be addressed. An Unanticipated Discovery Plan would be prepared.

- Significant cultural and Native American resources can be affected by soil erosion. The Project would employ all appropriate and necessary erosion and sedimentation controls to prevent damage to cultural and Native American resources.

2.13 Cumulative Impacts

Cumulative impact, as defined by the CEQ, “results from the incremental impact of [an] action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions.”

This analysis presents the potential cumulative impacts associated with the proposed Project, taking into account existing and potential future wind development in the region as well as possible construction actions taking place in the Project vicinity that may occur at the same time as construction of the Project. The goal of the cumulative impacts analysis is to identify potentially significant impacts early in the planning process to improve decisions and move toward more sustainable development.

Past and Present Wind Development in the Region

There are no existing wind energy facilities in Grant County. There are 8 operating wind farms within a 100 mile radius of the Project.

Table 2.13-1: Existing wind farms within a 100 mile radius of the Project

Project Name	**Approx. Distance from Project (miles)**	**Location**	**Project Capacity (MW)**
Day County Wind Farm	40	South Dakota	99
Buffalo Ridge Wind Farm I and II	60	South Dakota and Minnesota	300
MinnDakota Wind Farm	80	South Dakota and Minnesota	150
Lakota Ridge Wind Farm	90	Minnesota	11
Shaokatan Hills Wind Farm	90	Minnesota	12
Lake Benton 1 Wind Farm	95	Minnesota	107
Marshall Wind Farm	100	Minnesota	18.7

Reasonably Foreseeable Future Wind Development in the Region

There is only one known proposed wind farm within a 100 mile radius of the Project, the Northern Wind LLC wind farm located in Wilmot, South Dakota. This Project is approximately 20 miles from the proposed Project.

Other Potential Development in Grant County

Major construction projects in the vicinity of the Project being constructed at the same time may potentially affect the same resources (such as transportation routes) at approximately the same time as the Project.

The Project proponent contacted both Grant County and adjacent Roberts County to determine whether any major construction projects coincident with the Project area or general vicinity were planned for 2015, the intended year of construction for the proposed Project. There was only one project mentioned, a transmission project currently under development in Grant County called Big Stone South to Ellendale. The proposed transmission line is located a few miles south of the Project area and construction of that transmission line may occur sometime between 2016 and 2019. It is unlikely that the proposed transmission line would be in construction at the same time as the Project.

Cumulative Impacts Summary

The Project proponent expects the proposed Project to have a positive impact on socioeconomics and air quality in the Project area and no significant impacts to any other area of the affected environment. This is in part due to the careful planning and deliberate siting process employed for the Project, but it is also due to the adoption of the conservation measures recommended in the final UGP Wind Energy PEIS.

As noted in the final PEIS, if the Project proponent follows the conservation measures, wind energy is unlikely to have substantial negative cumulative impacts to any category of the affected environment. Wind energy development in the vicinity of the Project area, combined with past, present, and reasonably foreseeable future actions, may affect all resources in the UGP Region to some degree; however, over the long term, the most significant potential impacts would be to ecological and visual resources, which the Project proponent may avoid or reduce by employing the conservation measures in the final PEIS. Adverse incremental impacts associated with Project construction activities would be localized and short in duration (for the construction period) and therefore would not likely substantially contribute to cumulative impacts in the region.

3. AGENCIES CONTACTED / CONSULTED

3.1 Federal Agencies

The following United States federal agencies were contacted regarding the EA or the studies supporting the EA or Project design:

- US Army Corps of Engineers;
- US Department of Agriculture (Farm Service Agency and Rural Utilities Service);
- US Department of Energy Federal Energy Regulatory Commission;
- US Department of Homeland Security Federal Energy Management Agency;
- US Department of Transportation Federal Aviation Administration;
- US Department of Transportation Highway Administration;
- US Environmental Protection Agency;
- US Fish and Wildlife Service (Ecological Services and Refuges); and
- US Geological Survey.

3.2 State and Local Agencies

The following state and local agencies were contacted regarding the EA or the studies supporting the EA or Project design:

- South Dakota Department of Environment and Natural Resources;
- South Dakota Department of Transportation;
- South Dakota Game, Fish and Parks;
- South Dakota Historic Preservation Office;
- Grant County; and
- Town of Summit.

3.3 Native American Tribes and Associated Bodies

Western initiated Section 106 consultation for the Project with the letter dated January 15, 2014 to the following Tribal governments:

- Upper Sioux Indian Community;
- Prairie Island Indian Community;
- Lower Sioux Indian Community;
- Spirit Lake Tribal Council;
- Sisseton-Wahpeton Oyate;
- Flandreau Santee Sioux Executive Committee;
- Yankton Sioux Tribe;
- Santee Sioux Tribe of Nebraska;
- Rosebud Sioux Tribe of Indians;
- Crow Creek Sioux Tribe;
- Cheyenne River Sioux Tribe;
- Lower Brule Tribe;
- Standing Rock Sioux Tribe;
- Fort Peck Assiniboine and Sioux Tribes;
- Sac and Fox Nation (Oklahoma);
- Sac and Fox Nation of Missouri;
- Sac and Fox Nation of the Mississippi; and
- Oglala Sioux Tribe.

Western and the Project proponent held a Section 106 tribal consultation meeting on February 11, 2014 at the Dakota Magic Casino in Hankinson, North Dakota. Western invited all of the Tribal governments listed above. The following Tribes participated in the meeting:

- Sisseton Wahpeton Oyate;
- Prairie Island Indian Community; and
- Fort Peck Tribes.

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5. LIST OF PREPARERS

Western Area Power Administration – Lead Agency		
Name/Title	**Education**	**Role**
David Kluth, Upper Great Plains Region Archaeologist	M.A., Anthropology B.A., Anthropology	Tribal Manager; NEPA Compliance Reviewer
Matthew Marsh, Upper Great Plains Environmental Manager	M.S., Land Rehabilitation	NEPA Compliance Reviewer
Micah Reuber Upper Great Plains NEPA Coordinator	B.S. Biology	NEPA Project Manager
United States Fish and Wildlife Service – Cooperating Agency		

Name/Title	Education	Role
Connie Mueller Project Leader Waubay National Wildlife Refuge	B.S. Wildlife Biology	NEPA Compliance Reviewer
SummitWind Farm, LLC. – Project Proponent		
Name/Title	**Education**	**Role**
Scott Kuhlke, Development Manager	International MBA B.S., Mechanical Engineering	Project Manager; Review of NEPA Documentation
Russell Laplante, CFA Vice President	B.A., Economics	Project Executive; Review of NEPA Documentation
Jim Newcomb, CFP Project Developer	MBA M.S., Financial Planning	Project Developer; Review of NEPA Documentation
Haley & Aldrich, Inc. – Consultants for EA		
Name/Title	**Education/Experience**	**Role**
Anntonette Z. Alberti Senior Vice President	J.D., Law B.A., Political Science	Scoping; Review of NEPA Documentation
Chelsea Horn, Regulatory and Public Outreach Specialist	B.A., Political Science	Scoping; Project Description; Air Resources; Land Use; Socioeconomics and Environmental Justice; Public Safety and Communications; Cumulative Effects
James Pippin Senior Project Manager and Regulatory Specialist	B.S., Natural Resource Management A.A.S., Architectural Design and Drawing	Review of NEPA Documentation
Brian Schwabenbauer Senior Environmental Analyst	M.A., Environmental Policy B.A., Environmental Studies	Water Resources; Vegetation; Wildlife; Visual Resources; Acoustics; Transportation; Cultural Resources
Diane Sullivan Vice President and Program Manager	B.S., Biological Sciences and Environmental Studies	Review of NEPA Documentation
Lisa Telesca, CHMM Assistant Project	B.S., Geologic Sciences	Geology and Soils

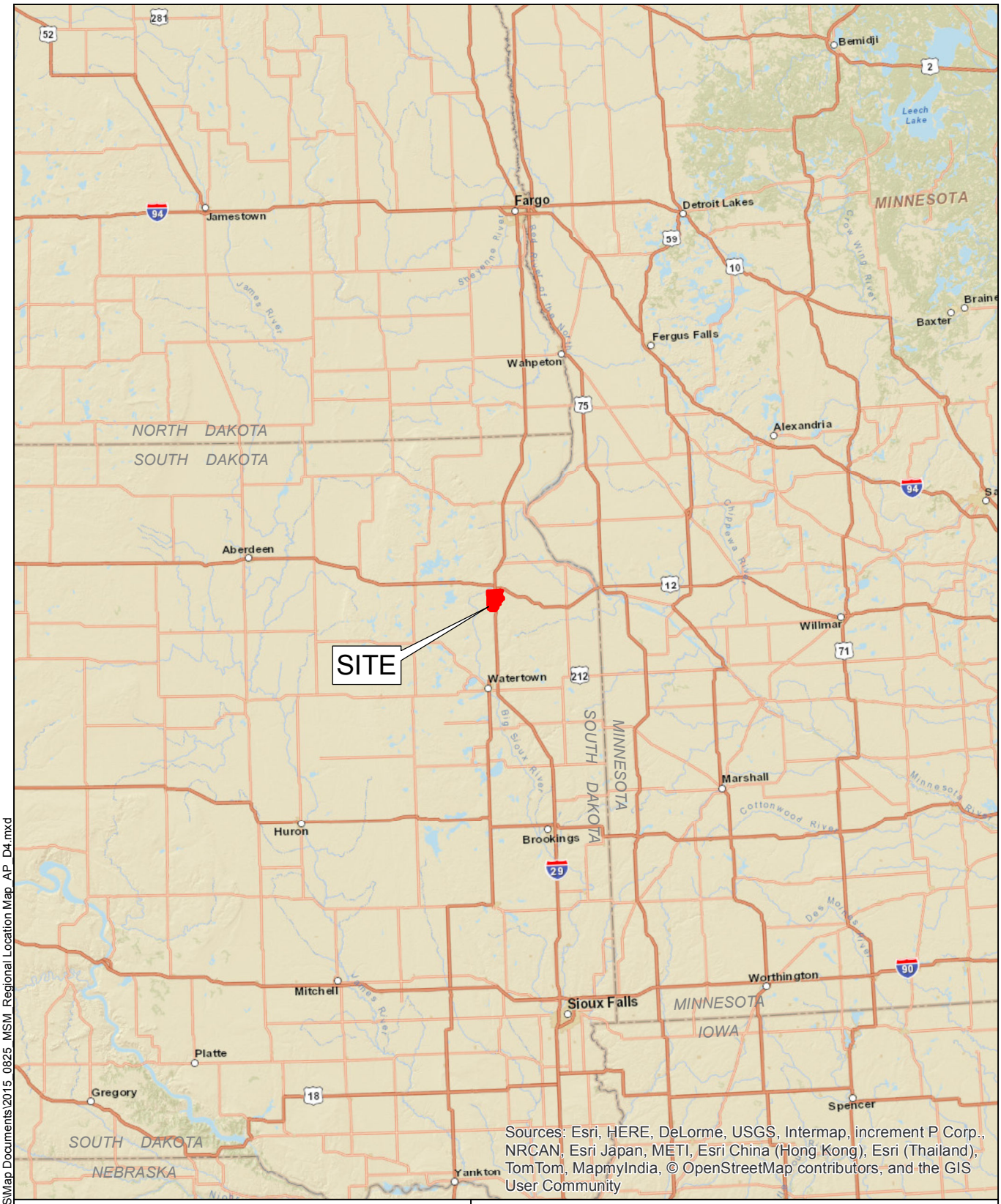
Manager		

6. LIST OF TABLES

7. LIST OF FIGURES

8. LIST OF APPENDICES

FIGURES



G:\40283 Summit Wind Farm\Global\GIS\Map Documents\2015_0825_MSM_Regional Location Map_AP_D4.mxd

SITE COORDINATES:
45° 15' 57.5" N, 97° 3' 15.9" W

U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLES:
SUMMIT, SOUTH DAKOTA AND
STILL LAKE NE, SOUTH DAKOTA

N
W E
S

0 20 40
SCALE IN MILES

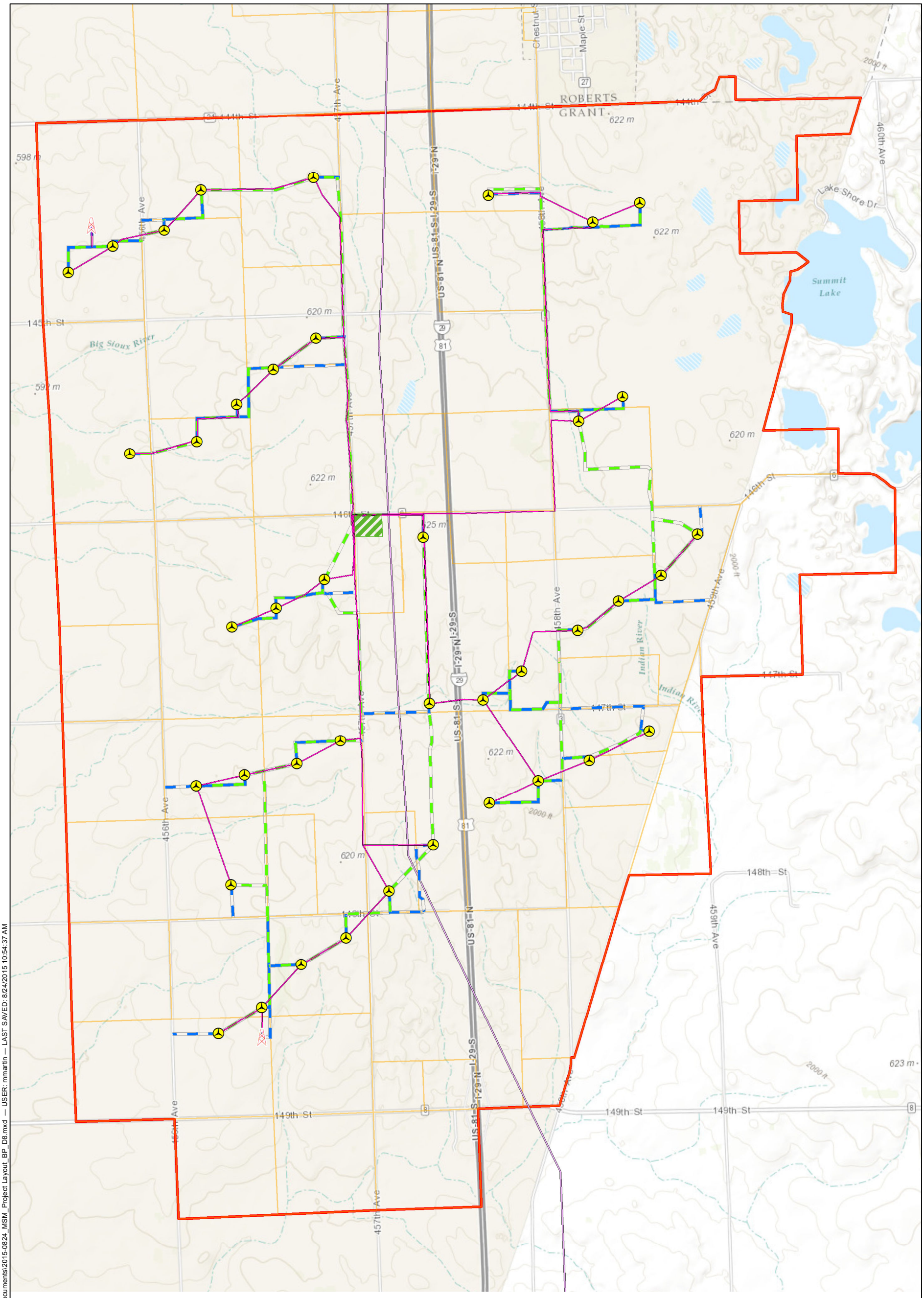
HALEY ALDRICH

SUMMITWIND FARM LLC
ROBERTS AND GRANT COUNTIES
SOUTH DAKOTA

REGIONAL LOCATION MAP

SCALE: AS SHOWN
AUGUST 2015

FIGURE 1.1-1



LEGEND

- PROJECT BOUNDARY
- PARCEL BOUNDARY
- TURBINE
- MET TOWER
- POINT OF INTERCONNECT
- COLLECTOR
- CRANE WALK
- ACCESS ROAD
- EXISTING TRANSMISSION LINE

N

0 2,400 4,800

SCALE IN FEET

HALEY ALDRICH

SUMMITWIND FARM
SUMMITWIND FARM, LLC
GRANT COUNTY, SOUTH DAKOTA

PROPOSED PROJECT LAYOUT

AUGUST 2015

FIGURE 1.2-1

GIS FILE PATH: G:\40283 Summit Wind Farm\Global\GIS\Map Documents\2015-0824_MSM_Project Layout_BP_D8.mxd — USER: mmartin — LAST SAVED: 8/24/2015 10:54:37 AM

APPENDIX A

Scoping Meeting Summary

APPENDIX A

Public Scoping Report

SummitWind Farm Environmental Assessment Public Scoping Report

Date: Wednesday, February 12th, 2014
Location: Summit Volunteer Fire House, Summit, SD.
Number of Public Attendees: 29 (signed in); 4 (declined to sign in)

Meeting Notice

Western Area Power Administration (Western) and OwnEnergy, Inc (the Project proponent) invited the general public to attend a Scoping Meeting for the National Environmental Policy Act (NEPA) Environmental Assessment (EA) that is being prepared for the proposed SummitWind Farm Project. The project proponent placed paid public notice advertisements in three local newspapers. The project proponent also placed paid radio advertisements on South Dakota Public Radio. Notice of the meeting was posted on the internet on local community calendars and public service announcement (PSA) press releases were submitted to the following radio stations: KWAT; KDLO; Power 106.3; Big Stone Radio; and KJKQ. Details of the timing of public notice in various venues are listed below:

Newspapers:

- Watertown Public Opinion (daily): 1/28/14 and 2/11/14
- South Shore Gazette (weekly): 1/23/14 and 2/6/14
- Grant County Review (weekly): 1/22/14 and 2/5/14

Radio:

- South Dakota Public Radio: 10 sec daily advertisements during National Native News 4:30 pm CT 2/3/14 – 2/11/14

Online Community Calendars:

- Watertown Public Opinion online community calendar
- South Dakota Public Radio online community calendar
- American Towns online community calendar

Copies of the published public notice are provided in Attachment 1.

In addition to the general meeting notice described above, the project proponent sent a letter to landowners in the project area, notifying them of the public scoping meeting.

Meeting Summary

The public scoping meeting was held near the proposed SummitWind Farm project area at the Summit Volunteer Fire House in Summit, South Dakota on February 12th, 2014 from 5:00 pm to 8:00 pm. The meeting was conducted in an open house format.

The room was set up with several illustrative posters to help the public understand the National Environmental Policy Act (NEPA) Environmental Assessment (EA) Scoping Process and to learn about the project. The

posters included two flow chart descriptions of aspects of the NEPA process provided by Western and two large maps depicting the proposed project layout, one on an aerial photography base and one on a topographic base. Western and the project proponent also supplied informative handouts for the sign in table. A copy of the maps and handouts that were available at the meeting can be found in Attachment 2.

Representatives from Western, the project proponent, and Haley & Aldrich, Inc., the consulting firm hired to draft the EA, were available to describe the NEPA scoping process, the proposed project, answer questions, and accept scoping comments:

- Matt Marsh, Western
- David Kluth, Western
- Micah Reuber, Western
- Scott Kuhlke, OwnEnergy, Inc.
- Russell Laplante, OwnEnergy, Inc.
- Anntonette Alberti, Haley & Aldrich
- Chelsea Horn, Haley & Aldrich

As each attendee came into the meeting room, he or she was asked to sign a sign-in sheet (Attachment 3). Most attendees complied with this request, although approximately four attendees declined to sign in.

Because the meeting was held as an open house format, there was no formal presentation. Attendees were encouraged to walk around the room to review the displays and discuss the proposed project with representatives from Western and the project proponent. Photos from the meeting can be found in Attachment 4.

Comments

Discussion at the scoping meeting covered a wide range of topics about the proposed project. There were no formal requests for study made or formal verbal comments received at the meeting.

Forms on which to record comments were made available to all attendees as they entered the meeting. Two completed comment forms were received at the public scoping meeting and two comment sheets were received after the meeting by mail. Copies of the comments received to-date are found in Appendix B of the SummitWind Farm EA. Three of the comment sheets received were requests to be added to the EA mailing list and to receive a draft copy of the EA document. The fourth comment sheet requested a copy of the proposed project layout. None of the comments addressed the EA scope.

Attachments

Attachment 1 – Copies of advertisements
Attachment 2 – Project maps and handouts
Attachment 3 – Completed sign-in sheets
Attachment 4 – Photos

Attachment 1 – Copies of Advertisements

Grant County Commission Proceedings

January 7, 2014

The Grant County Commission met at 8 AM with Commissioners Forrette, Dummann, Mann, Stengel and Tucholke present. Chairman Mann called the meeting to order. Motion by Dummann and seconded by Stengel to approve the minutes of the December 31, 2013, meeting. Motion carried 5-0. Minutes filed. Motion by Tucholke and seconded by Forrette to approve the agenda. Motion carried 5-0. There was not any final business to conduct for 2013.

Chairman Mann adjourned the meeting sine die and Auditor Layher assumed the chair. Nominations for Chairman were called. Motion by Tucholke and seconded by Stengel to nominate Dummann for Chairman and for nominations to cease and to cast a unanimous ballot for Dummann. Motion carried 5-0. Commissioner Dummann was seated as Chairman. Nominations for vice-chairman were called. Motion by Mann and seconded by Tucholke to nominate Forrette for vice-chairman and for nominations to cease and to cast a unanimous ballot for Forrette. Motion carried 5-0.

2014 Appointments: The reorganization of committees, boards, appointments and fees were reviewed for changes in 2014. Motion by Stengel and seconded by Tucholke to approve the following list of committee appointments. Motion carried 5-0.

COMMITTEES AND BOARDS

Paul Dummann: Mental Health, Law Enforcement

Dave Forrette: Development Corporation/ Sub Committees, Buildings, First District, Planning and Zoning

Doug Stengel: ICAP, Weed, Emergency Management

Clayton Tucholke: Insurance Alliance, Highway, Milbank Housing Authority, Community Transit

Auditor Layher: Christian Service, Library, Visiting Neighbor

Deputy Auditor Joan Czmowski: 4-H

Motion by Forrette and seconded by Tucholke to approve the following designations. Motion carried 5-0.

Designations:

Ambulance: Grant-Roberts

Depositories: First Bank & Trust in Milbank and Brookings (TIF), Wells Fargo, Great Western, First State Bank and Public Funds Investment

Official Newspaper: Grant County Review

Funeral Allowance: $3,000 plus the cost of opening and closing the grave for 2012-2014.

Election Precinct Workers Salary: $10.00 per hour

Election Precinct Locations: Same as 2012 – 18 voting locations

Motion by Mann and seconded by Stengel to approve the following appointments. Motion carried 5-0.

APPOINTMENTS:

Emergency Management: Sheryl Mogard

Planning and Zoning: Krista Atyeo-Gortmaker

Visiting Neighbor Coordinator: Wanda Koepke

Glacial Lakes Tourism: Milbank Chamber Director

Veterans Service Officer: Scott Malimanek – four year appointment for 2014-2017

Hwy. Supt: Kerwin Schultz: - two year appointment for 2013-2014

2014 Holidays: After a review of the holiday schedule for 2014, it was moved by Tucholke and seconded by Forrette to set the holiday schedule in accordance with SDCL 1-5-1 and to include Friday, December 26 and closing at noon on Wednesday, December 24 to the holiday schedule. Motion carried 5-0.

2014 Salary Resolution: After a final review of the salary schedule for 2014, it was moved by Tucholke and seconded by Forrette to adopt the 2014 salary resolution. Motion carried and resolution adopted. Motion carried 5-0.

2014-01
Salary Resolution

WHEREAS, the Grant County Commission must establish and publish salaries of all officials and employees of the county as per SDCL 6-1-10.

Payroll: Paul Dummann, 898.59; Dave Forrette, 898.59; Guy Mann, 898.59; Doug Stengel, 898.59; Clayton Tucholke, 898.59; Karen Layher, 4,329.85; John Gill, 18.10 per hr; Joan Czmowski, 15.55 per hr; Mary Fenhaus, 14.70 per hr; Raynelle Mueller, 3,530.52; Elaine Block, 15.00 per hr; Tamara Mach, 14.15 per hr; Mark Reedstrom, 7,526.91; Kathleen Strei, 13.80 per hr; David Larsen, 16.95 per hr; David Dashiell, 12.40 per hr; Kathy Steinlicht, 3,480.52; Ryan Gruba, 14.40 per hr; Krista Atyeo-Gortmaker, 16.15 per hr; Nancy Copeland, 3,530.52; Rebecca Wellnitz, 15.35 per hr; Jennifer VanHout, 14.20 per hr; Kevin Owen, 4,028.00; Mark Leusink, 19.30 per hr; William Newstrand, 19.30 per hr; Jeremy Steffensen 18.60 per hr; Jay Brakke 13.45 per hr; Susan Busk, 13.95 per hr; Rita German, 13.15 per hr; Mikel Grear, 13.95 per hr; Kevin Speaker, 12.55 per hr; Scott Malimanek, 14.00 per hr; Sheryl Ward, 17.35 per hr; Jenny Wellnitz, 13.00 per hr; Kerwin Schultz, 4,329.85; Daryl Dragt, 16.30 per hr; Blain Gatz, 16.10 per hr; David Green, 16.75 per hr; Brian Greiner, 16.30 per hr; Robert Grewing, 16.30 per hr; Ronald Grewing, 16.30 per hr; Justin Layher, 16.90 per hr; Jesse Morton, 16.55 per hr; Roy Nielsen, 17.55 per hr; Daren Peterson, 18.15 per hr; Sandra Ramsdell, 16.30 per hr; Michael Schaffer, 15.50 per hr; Donald Strege, 16.75 per hr; John Winquist, 16.20 per hr; Sharon Dearborn, 12.90 per hr; Nicole Hooth, 12.90 per hr; Wanda Koepke, 1,195.00; Kristi Dorneman, 12.10 per hr; Marie Loutsch, 11.30 per hr; Linda Raffety, 12.00 per hr; Jody Carlson, 14.10 per hr; Holly Johnston 11.95 per hr; Cindy Jungers, 12.05 per hr; Janelle Kelly, 12.15 per hr; Collette Krakow, 11.95 per hr; Mary Lee, 15.05 per hr; BobbieSue Leonard, 11.70 per hr; Shawna Przybycien, 11.45 per hr; Tammy Rufer, 11.70 per hr; Sharon Wieber, 11.90 per hr; Tammy Wollschlager, 11.45 per hr; Sara Koepke, 16.00 per hr; Nathan Mueller, 17.35 per hr; Edna Englund, 9.90 per hr.

NOW THEREFORE BE IT RESOLVED, that the Grant County Commission of Grant County does hereby adopt the Salary Resolution 2014-01 for the year 2014.

Dated this 7th day of January, 2014.

Paul Dummann, Chairman
Grant County Commission

ATTEST:
Karen M. Layher
Grant County Auditor

Highway: Supt. Schultz presented to the Commission for review the letter and resolution to be sent to the South Dakota Highway Patrol requesting assistance for the enforcement of a speed limit of 35 mph during spring thaw. Motion by Stengel and seconded by Mann to authorize the Chairman to sign the letter to be sent to the Motor Carrier Division. Motion carried 5-0. Motion by Forrette and seconded by Stengel to adopt the resolution for weight and speed limit restrictions during the spring thaw. Motion carried 5-0. Resolution adopted.

2014-02
GRANT COUNTY WEIGHT / SPEED LIMIT ENFORCEMENT RESOLUTION

WHEREAS, seasonal climatic changes can be detrimental to our highways, and

WHEREAS, The Grant County Board of County Commissioners desires to protect existing Grant County Highways, ultimately saving tax dollars, and

WHEREAS, the Grant County Board of County Commissioners desires the enforcement of weight limitations on Grant County roads as set forth and posted by the Grant County Highway Superintendent.

NOW THEREFORE BE IT RESOLVED:

WHEREAS the limits on Grant County roadways shall be set as thirty-five miles per hour (35 mph) for any vehicle over seventy-five hundred (7,500) pounds during the spring thaw period and when speed/weight limit signs are in place and the South Dakota Highway Patrol hereby is authorized and requested to enforce speed/weight limitations on Grant County roads.

BE IT FURTHER RESOLVED that the penalty for the violation of the load restrictions should be as set forth in SDCL 32-22-55.

Vote of Grant County Commission: AYE: 5 NAY: 0

Dated this 7th day of January, 2014 at Milbank, SD.

Paul Dummann
Commission Chairman

ATTEST:
Karen M. Layher
Grant County Auditor

BIDS FOR FUEL

12/03, UPI, 2.823 (Ethanol), 3.769 (Diesel #1), 3.367 (Diesel #2); Cenex, 3.00 (Ethanol), 3.59 (Diesel #1), 3.59 (Diesel #2); UPI was the low bidder for Ethanol at 2.823 and UPI was awarded the bid for a blend of Diesel 1 at 3.769 and Diesel 2 at 3.367 as the combined bid was the lowest bid.

12/24, UPI, 2.975 (Ethanol); Cenex, 2.98 (Ethanol). Cenex was given the bid for Ethanol at 2.98.

12/27, UPI, 4.012 (Diesel #1), 3.352 (Diesel #2); Cenex, 3.65 (Diesel #1), 3.42 (Diesel #2); Cenex was the low bidder for Diesel 1 at 3.65 and Diesel 2 at 3.42 as the combined bid was the lowest bid.

Consent Agenda: Motion by Stengel and seconded by Forrette to approve the consent agenda. Motion carried 5-0.

1. Approve SDPPA as workers comp carrier and Hagen Benefits as the General Liability and Property Insurance carrier for 2014

2. Approve letter of agreement with First District to provide hosting the GIS Website in 2014 for $2,000

3. Approve letter of agreement with First District to provide DOE Office with the parcel layer updates/splits in 2014 for $6,000

Travel: Motion by Stengel and seconded by Mann to approve travel for Weed Supervisor Nathan Mueller to attend the State Training Conference in Aberdeen. Motion carried 5-0.

Abatements: Auditor Layher presented a list of abatements for 2013 pay 2014 due to the property changing from exempt to non-exempt status or changing from non-exempt to exempt status.

1. Motion by Stengel and seconded by Tucholke to approve the abatement in the amount of $527.20 per SDCL 10-6A-4 on parcel 25.24.00.65A, Outlots Lot 1 of OL 65 EX W 20feet, Big Stone City. Motion carried 5-0.

2. Motion by Mann and seconded by Forrette to approve the abatement of $72.90 on Parcel 03.46.29.3000, legal of W ½ SW ¼ & SW ¼ NW ¼ 29-121-46 due to building being destroyed by wind storm. Motion carried 5-0.

3. Motion by Forrette and seconded by Stengel to approve an abatement of $4.36 on Parcel 23.02.01.09, Legal of Norton's Addition, Lot 9, Block 1, Strandburg, due to property change of exempt to non-exempt status. Motion carried 5-0.

4. Motion by Tucholke and seconded by Mann to approve an abatement of $5.18 on Parcel 23.02.01.08, Legal of Norton's Addition, Lots 7 & 8, Block 1, Strandburg, due to property change of exempt to non-exempt status. Motion carried 5-0.

5. Motion by Forrette and seconded by Tucholke to approve an abatement of $2.00 on Parcel 20.01.03.14, Legal of Davidson's Addition, EX RTY of Lot 11 & all of Lots 12-14, Block 3, Town of Marvin, due to property change of exempt to non-exempt status. Motion carried 5-0.

6. Motion by Mann and seconded by Tucholke to approve an abatement of $14.08 on Parcel 26.06.08.05A, Legal of Merriams & Kneals Addn, Lots 4A & 5 A, Block 8, City of Milbank, due to property change of non-exempt to exempt status. Motion carried 5-0.

7. Motion by Mann and seconded by Stengel to approve an abatement of $15.48 on Parcel 26.06.08.29C, Legal of Merriams & Kneals Addn, Lots 28B & 29 A, Block 8, City of Milbank, due to property change of non-exempt to exempt status. Motion carried 5-0.

8. Motion by Tucholke and seconded by Mann to approve an abatement of $46.56 on Parcel 26.06.08.09, Legal of Merriams & Kneals Addn, Lots 6B-6D & 7-9, Block 8, City of Milbank, due to property change of non-exempt to exempt status. Motion carried 5-0.

Visiting Neighbor: Motion by Forrette and seconded by Mann to change the Visiting Neighbor Coordinator position from a full-time position with benefits to a 19 hour per week position without benefits effective January 1, 2014. Motion carried 5-0.

Campaigning: Auditor Layher presented a resolution to designate the courthouse or any other early voting location as a polling location which places the location under SDCL 12-8-3 for no campaigning within 100' of the polling location. Motion by Tucholke and seconded by Stengel to adopt the following resolution. Motion carried 5-0. Resolution adopted.

RESOLUTION 2014-03
A Resolution Prohibiting Campaigning at a Polling Location

Whereas, SDCL 12-18-3 states that except for sample ballots and materials and supplies necessary for the conduct of the election, no person may, in any polling place or within or on any building in which a polling place is located or within one hundred feet from any entrance leading into a polling place, maintain an office or communications center or public address system or display campaign posters, signs, or other campaign materials or by any like means solicit any votes for or against any person or political party or position on a question submitted. No person may engage in any practice which interferes with the voter's free access to the polls or disrupts the administration of the polling place, or conduct, on the day of an election, any exit poll or public opinion poll with voters within one hundred feet of a polling place. A violation of this section is a Class 2 misdemeanor; and

Whereas, the courthouse and/or other locations may be designated as polling places for absentee voting; and

Whereas, the Grant County Commission considers any and all locations, whether for absentee voting or election day voting, designated as polling places to be in compliance with SDCL 12-18-3.

Now, therefore be it resolved that any and all locations designated as polling places, whether for absentee voting or on election day voting, will abide by SDCL 12-18-3.

Adopted this 7th day of January, 2014.

Paul Dummann
Chairman

ATTEST:
Karen M. Layher
Grant County Auditor

Rent: Motion by Forrette and seconded by Stengel to set the Abstract Office Rent at $650 per month and the EM Office rent at $215 per month beginning in January 2014. Motion carried 5-0.

Unfinished Business: None

New Business: None

Correspondence: None

Claims: Motion by Mann and seconded by Forrette to approve the claims as presented. Motion carried 5-0. ADAMSON POLICE PRODUCTS, equip, 1,600.00; COESTER LAW OFFICE, co assistance, 80.00; FAMILY DOLLAR STORE, supplies, 10.80; FIRST DISTRICT, prof serv, 8,000.00; THE FLOWER SHOPPE, supplies, 44.95; GRANT CTY CONSER DIST, alloca, 12,000.00; GRANT CO SHERIFF DEPT, postage, 6.11; GRANT/ROBERTS AMBULANCE, alloca, 2,458.33; GRANT-ROBERTS RURAL WATER, water, 39.55; INTERSTATE TELECOMM, 911, phone & internet, 367.46; JOSEPH W. KANTHAK, tower rent, 600.00; LIEBE DRUG, supplies, 12.06; MICROFILM IMAGING, rent, 295.00; NATL ASSN OF CO, dues, 450.00; ROY NIELSEN, reimburse, 2,000.00;

NORTHERN TRUCK EQUIP, supplies, 23.90; NORTHWESTERN ENERGY, nat gas, 505.08; RC COMMUN, tower rent, 95.96; RELIANCE, call cards, 500.00; SD ASSN CO COMM, CAT LEGAL, 3,082.88; SD STATE'S ATTORNEY ASSN, dues, 811.00; SDML WORKERS' COMP FUND, workers comp, 48,581.00; SD PUB ASSURANCE ALLIANCE, insurance, 73,533.52; SD ASSOC OF CO WEED/SUPERVISORS, dues, 50.00; SD ASSN COUNTY OFFICIALS, dues, 1,039.92; SDAAO, dues, 110.00; SDAE4-HP, dues, 105.00; SD SHERIFF'S ASSN, dues, 570.68; TYLER TECHNOLOGIES, support, 15,706.23; TYLER COMPUTER, computer, 1,140.00; THE VALLEY SHOPPER, publishing, 48.30;

VISA, tools, 93.29; WITTROCK & SON, garbage service, 159.00; WHETSTONE VALLEY ELECTRIC, electricity, 384.00; WOMEN'S RESOURCE CTR, alloca, 575.10. TOTAL: $175,079.12.

It is the policy of Grant County, South Dakota, not to discriminate against the handicapped in employment or the provision of service.

The next scheduled meeting dates will be January 15 and February 5 and 19, 2014, at 8 AM. Motion by Mann and seconded by Tucholke to adjourn the meeting. Motion carried 5-0. Meeting adjourned.

/s/ Paul Dummann, Chairman,
Grant County Commission
/s/ Karen M. Layher,
Grant County Auditor

Published once at an approximate cost of $150.18.

STATEMENT OF NONDISCRIMINATION

Whetstone Valley Electric Cooperative, Inc., Milbank, S.D., has filed with the Federal Government a Compliance Assurance in which it assures the Rural Utilities Service Administration that it will comply fully with all requirements of the Title VI of the Civil Rights Act of 1964, all requirements of Section 504 of the Rehabilitation Act of 1973, as amended, and all requirements of Age Discrimination Act of 1975, as amended, and all requirements of the rules and regulations of the U.S. Department of Agriculture to the end that no person in the United States shall, on the ground of race, color or national origin, or solely by reason of such person's handicap or on the basis of age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the conduct of its program or the operation of its facilities. Under the Assurance, this organization is committed not to discriminate against any person on the grounds of race, color or national origin, solely by reason of such person's handicap or on the basis of age, in its policies and practices relation to application for service or any other policies and practices relation to treatment of beneficiaries and participants including employment, rates, conditions and extension of service, admission or access to or use of any of its facilities, attendance at and participation in any meetings of beneficiaries and participants or the exercise of any rights of such beneficiaries and participants in the conduct of the operations of this organization. The person in this organization responsible for coordination of the nondiscrimination compliance efforts of this organization is Manager Steve Ahles.

Any individual, or any specific class of individuals, who feels subjected by this organization to discrimination prohibited by Title VI of the Civil Rights Act, by Section 504 of the Rehabilitation Act, by Age Discrimination Act or by the rules and regulations of the U.S. Department of Agriculture may personally or through a representative, file with the Office of the Secretary, U.S. Department of Agriculture, Washington, D.C. 20250; the Office of Advocacy and Enterprise, U.S. Department of Agriculture, Washington, D.C. 20250; or this organization, or all a written complaint. Such complaint must be filed not later than 180 days after the alleged discrimination, or by such later date to which the Secretary of Agriculture or the administrator of the Rural Utility Services extends the time for filing. Identity of complainants will be kept confidential except to the extent necessary to carry out the purposes of the rules and regulations of the U.S. Department of Agriculture.

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BULL SALE

WILKINSON RANCH BLACK ANGUS Yearling Bull Private Treaty Sale with equal opportunity to bid on each bull. Beginning Sat. February 8. For more information and a catalog, call Bill Wilkinson, 605-203-0379 or Mark Wilkinson, 605-203-0380 De Smet, S.D.

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PART-TIME POLICE OFFICER: Certified preferred, City of Tripp, Salary DOE, apply City of Tripp, Finance Office, 101 W. 1st St., Tripp, S.D. 57376, 605-935-1410.

FARM HELP WANTED: Full-time person for general farm work on cattle farm, tractor driver. Experience necessary. Call 605-547-2257 or 712-551-7828 for details.

SULLY COUNTY SHERIFF'S OFFICE accepting applications for a Deputy Sheriff. an EOE, Sully County Sheriff's Office, PO Box 189, Onida, SD 57564. 605-258-2244. SD591@VENTURECOMM.NET.

IMMEDIATE OPENING FOR JOURNEYMAN PLUMBER with valid driver's license & clean driving record. Wage DOEQ Winner Plumbing & Heating 31721 US Hwy 18, Winner, SD 57580 605-842-1487.

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CUSTER REGIONAL HOSPITAL has full-time RN opportunities available working in the beautiful southern Black Hills of SD. We are located just a short distance from Mount Rushmore, Wind Cave National Park, Custer State Park, Jewel Cave National Park and many other outdoor attractions. We offer competitive salary and excellent benefits. Please call 605-673-9418 for more information or log on to www.regionalhealth.com to apply. EOE.

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NYSTROM ELECTRICAL CONTRACTING currently has openings for journeyman and apprentice electricians. Positions are located at Pierre, SD. Competitive salary and benefit package. Contact Lisa at 605-224-8750 or lisa@nystromelectric. com or application forms.

FOR SALE

MOTOR GRADER FOR SALE: Sealed bids on 140-H 2007 CAT Motor Grader, S/N CCA03286 accepted until February 3. Information call: Faulk County Highway Department 1-605-598-6233.

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DRIVERS WANTED: CDL, owner operators, freight from Midwest up to 48 states, home regularly, newer equipment, Health, 401K, call Randy, A&A Express, 800-658-3549.

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Buying jackrabbits for Jack-a-lopes. $5 each. Contact Frank 605-484-0898 (Rapid City).

WANTED

SOMEONE TO FIX or repair an antique pump organ. Located in Madison, SD. Would be willing to transport. Call 605-256-6691.

States considering reviving old-fashioned executions

ST. LOUIS (AP) — With lethal-injection drugs in short supply and new questions looming about their effectiveness, lawmakers in some death penalty states are considering bringing back relics of a more gruesome past: firing squads, electrocutions and gas chambers.

Most states abandoned those execution methods more than a generation ago in a bid to make capital punishment more palatable to the public and to a judicial system worried about inflicting cruel and unusual punishments that violate the Constitution.

But to some elected officials, the drug shortages and recent legal challenges are beginning to make lethal injection seem too vulnerable to complications.

"This isn't an attempt to time-warp back into the 1850s or the wild, wild West or anything like that," said Missouri state Rep. Rick Brattin, who this month proposed making firing squads an option for executions. "It's just that I foresee a problem, and I'm trying to come up with a solution that will be the most humane yet most economical for our state."

Brattin, a Republican, said questions about the injection drugs are sure to end up in court, delaying executions and forcing states to examine alternatives. It's not fair, he said, for relatives of murder victims to wait years, even decades, to see justice served while lawmakers and judges debate execution methods.

Like Brattin, a Wyoming lawmaker this month offered a bill allowing the firing squad. Missouri's attorney general and a state lawmaker have raised the notion of rebuilding the state's gas chamber. And a Virginia lawmaker wants to make electrocution an option if lethal-injection drugs aren't available.

If adopted, those measures could return states to the more harrowing imagery of previous decades, when inmates were hanged, electrocuted or shot to death by marksmen.

States began moving to lethal injection in the 1980s in the belief that powerful sedatives and heart-stopping drugs would replace the violent spectacles with a more clinical affair while limiting, if not eliminating, an inmate's pain.

The total number of U.S. executions has declined in recent years — from a peak of 98 in 1999 to 39 last year. Some states have turned away from the death penalty entirely. Many have cases tied up in court. And those that carry on with executions find them increasingly difficult to conduct because of the scarcity of drugs and doubts about how well they work.

In recent years, European drug makers have stopped selling the lethal chemicals to prisons because they do not want their products used to kill.

Utah is phasing out its use, but the firing squad remains an option there for inmates sentenced prior to May 3, 2004.

Oklahoma maintains the firing squad as an option, but only if lethal injection and electrocution are deemed unconstitutional.

Farm bill deal would cut food stamps by 1 percent; Wednesday House vote looms

WASHINGTON (AP) — Farm-state lawmakers are pushing for final passage of the massive, five-year farm bill as it heads to the House floor Wednesday — member by member, vote by vote.

There are goodies scattered through the bill for members from all regions of the country: a boost in money for crop insurance popular in the Midwest; higher cotton and rice subsidies for Southern farmers; renewal of federal land payments for Western states. There are cuts to the food stamp program — $800 million a year, or around 1 percent — for Republicans who say the program is spending too much money, but they are low enough that some Democrats will support them.

Negotiators on the final deal also left out a repeal of a catfish program that would have angered Mississippi lawmakers and language that would have thwarted a California law requiring all eggs sold in the state to come from hens living in larger cages. Striking out that provision was a priority for California lawmakers who did not want to see the state law changed.

House passage of the farm bill, which would spend almost $100 billion a year and would save around $2.3 billion annually, isn't certain. But farm-state lawmakers have been working for more than two years to strike just the right balance to get the massive bill passed as congressional compromise has been rare.

Hoping to put the bill past them and build on a budget deal passed earlier this month, House Speaker John Boehner, R-Ohio, and House Majority Leader Eric Cantor, R-Va., endorsed the bill Monday. Both said they would like to see more reform but are encouraging colleagues to vote for it anyway.

The House Agriculture Committee chairman, Rep. Frank Lucas, R-Okla., who has been working on the bill since 2011, said late Monday that it was "nothing short of a miracle that we're at this point."

Lucas and his Senate counterpart, Sen. Debbie Stabenow, D-Mich., have touted the bill's overall savings and the elimination of a $4.5 billion-a-year farm subsidy called direct payments, which are now paid to farmers whether they farm or not. The bill would continue to heavily subsidize major crops — corn, soybeans, wheat, rice and cotton — while shifting many of those subsidies toward more politically defensible insurance programs. That means farmers would have to incur losses before they received a payout.

Still unclear, though, was how Republicans would get the votes they needed to pass the final bill on the House floor. The full House rejected an earlier version of the farm bill in June after conservative Republicans said cuts to food stamps weren't big enough — and that bill had more than two times the cuts than those in the compromise bill announced Monday. A bill the House passed in September with strong conservative support would have made even larger cuts to the program.

Some of those conservatives were certain to oppose the scaled-back cuts to food stamps, along with many of the farm subsidies the bill offered.

The final food stamp savings are generated by making it more difficult for states to give recipients a minimal amount of heating assistance in order to trigger higher food stamp benefits. The cuts were brought down to $800 million a year to come closer to the Senate version of the bill, which had $400 million in annual food stamp cuts.

Still, many liberal Democrats were also expected to vote against the bill, saying the food stamp cuts were too great.

Rep. Jim McGovern, D-Mass., a longtime proponent of food stamps, said he would vote against the bill and would encourage his colleagues to do the same.

"They are trying to ram this thing through before anyone has a chance to read it," he said after the bill was released late Monday and scheduled for a Wednesday vote.

A coalition of powerful meat and poultry groups, generally strong supporters of the legislation, also said Monday they would work against the bill after the heads of the agriculture panels did not include language to delay a labeling program that requires retailers to list the country of origin of meat. Meatpackers say it is too costly for the industry and have fought to have the program repealed in the farm bill.

Despite that opposition, Boehner and Cantor are hoping to corral enough votes to get the bill done. Cantor blamed the Senate for not accepting the House's attempted changes to the food stamp program but said he would support the bill. The legislation would "extend these important agriculture programs, achieve deficit reduction, and help give many Americans an opportunity to achieve independence and get back to work," he said.

Boehner said he had hoped reforms in the bill would go further, but the legislation was "worthy of the House's support."

Lucas helped win Boehner's support by jettisoning a portion of a dairy program overhaul that the speaker firmly opposed. Negotiators have spent the past few months figuring out how to work the dairy program so Boehner and other key lawmakers would support it.

The new program would do away with current price supports and allow farmers to purchase a new kind of insurance that pays out when the gap between the price they receive for milk and their feed costs narrows. But it would not include a so-called stabilization program that would have dictated production cuts when oversupply drives down prices. Boehner called that "Soviet-style" and made it clear it was a deal-breaker for him.

"If I should expire in the next three days I want a glass of milk on my tombstone because it's what's killed me," Lucas said Monday night of negotiations over the dairy program.

Southerners warned of icy mess in days ahead

ATLANTA (AP) — A blast of freezing precipitation expected to arrive Tuesday could scatter snow and ice across the Deep South, prompting officials from New Orleans to Virginia to ready road crews and close some schools.

Popular warm-weather tourist destinations including Charleston, S.C., Savannah, Ga., Pensacola, Fla., and New Orleans were expecting ice and even snow — both rare occurrences in places that seldom even see prolonged sub-freezing temperatures.

In coastal Charleston, for instance, it was a balmy 62 degrees Monday. But the approaching weather led the College of Charleston to cancel classes Tuesday as a "precautionary measure." There was a forecast of rain, and sleet in the late afternoon, with the first snow expected Wednesday morning.

Much of Georgia was placed under a winter storm watch for Tuesday and Wednesday. While some areas could see as much as 3 inches of snow, the bigger concern with plummeting temperatures was ice.

"The snowfall amounts are going to matter very little in this situation because of the ice potential," said Jason Deese, a meteorologist for the National Weather Service in Peachtree City, Ga. "Some parts of the state may end up seeing the greatest impact just because they get more ice than snow."

Delta Air Lines officials say more than 1,800 flights have been canceled ahead of a winter storm expected to pelt areas of the Southeast with sleet and snow. Delta spokeswoman Betsy Talton says 1,850 flights have been canceled system-wide Tuesday beginning at 11 a.m. Of that number, Talton says 840 flights from Atlanta have been affected.

The airline is offering travelers the opportunity to make one-time changes to their tickets without a fee if they're traveling through Georgia, Alabama, Florida, Louisiana, Mississippi, the Carolinas and Texas. Delta officials expected service to be affected between Jan. 28 and 29, and replacement tickets must be reissued by Feb. 1.

Forecasters were predicting snow and ice from Texas to Virginia by mid-week as precipitation moving in from the south met with cold air already chilling the region.

Meanwhile, in the Midwest, plummeting temperatures and increasing winds took root for another day even as the storm moved south. Several states in the central U.S. saw schools and other facilities close for a second consecutive day as dangerous wind chills were predicted. In Minnesota, forecasters said wind chills could reach 35 to 50 degrees below zero.

In the Carolinas, many school districts were running on half-day schedules Tuesday so students could head home before the worst of the storm system hit. In North Carolina's Outer Banks, barrier islands that are popular with tourists during the warm seasons, residents were bracing for as much as 8 inches of snow.

Several inches also were expected in South Carolina, where the state department of transportation planned to send crews out Tuesday to treat roads with sand and brine to ease any troubles caused by ice.

Elsewhere, some schools and government offices already closed in Mississippi ahead of the rare snow event.

"This is a very dangerous situation because snow and ice are very rare for extreme southern Mississippi," Robert Latham, executive director of the Mississippi Emergency Management Agency, said in a news release. "We need everyone to have an emergency plan together for this."

In Alabama, snow began falling before dawn Tuesday in the extreme northwest portion of the state.

In Virginia, snow was forecast to begin falling Tuesday afternoon, with up to a foot predicted for Virginia Beach, Norfolk, Portsmouth and Chesapeake.

In Louisiana, state Public Service Commission Chairman Eric Skrmetta told residents to be prepared by stocking up with food, fueling cars and making sure to have cash on hand, calling the icy forecast for the next couple of days "decidedly grim."

Donna Vidrine, a cashier at Simcoe Food World in Lafayette, said her store was already busy Monday.

"They're buying things like canned goods — nonperishable items — and bottles of water and diapers for their baby," she said.

Texas husband named brain-dead wife's fetus

DALLAS (AP) — Before a pregnant, brain-dead Texas woman was taken off life support over the weekend at the end of a long legal battle, her husband said he decided to name what would have been the couple's second child.

Erick Munoz said Monday he gave the 23-week-old fetus the name Nicole, the middle name of his late wife, Marlise Munoz. He would not say why he chose to name the fetus.

Munoz said doctors at John Peter Smith Hospital in Fort Worth indicated to him that the fetus would likely have been a girl, though his attorneys previously said the fetus suffered from lower body deformation that made it impossible to determine its sex.

"They think it was a female," Munoz said in a brief telephone interview with The Associated Press.

Munoz told WFAA-TV in an interview aired Monday evening that he has seen many negative comments about his decision, but he feels he made the right choice.

"I'm just glad they are not in my shoes. I hope every day that no one ever has to go through what I went through," he said.

Munoz said his wife will be cremated and there are no plans for memorial or funeral services because the family is concerned that protesters would show up.

"She made me a better man, and I thank her for it. I thank her very much," he said.

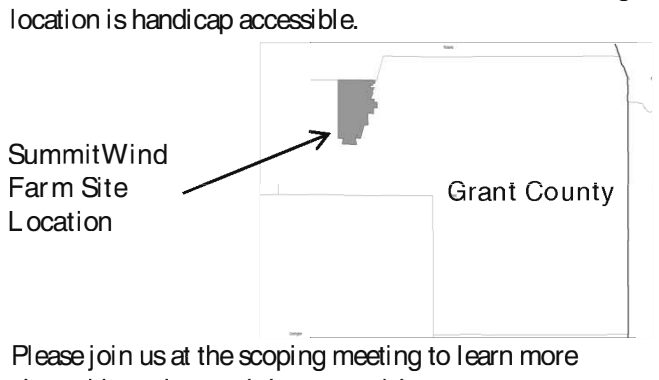
Both the hospital and his attorneys agreed the fetus could not have been born alive that early in the pregnancy, and the fetus was not delivered when John Peter Smith Hospital in Fort Worth complied Sunday with a judge's order to pull any life-sustaining treatment from Marlise Munoz.

Doctors said she was brain-dead in November after Erick Munoz found her unconscious in their Haltom City home, possibly due to a blood clot, but the hospital had kept on machines to keep her organs functioning for the sake of the fetus, which it said was per Texas law.

We need your input!

We need your comments to help us define the scope and alternatives for an Environmental Assessment on a proposal by SummitWind, LLC for the development of the SummitWind Farm located in Grant and Roberts Counties, near Summit, South Dakota. The proposed wind farm will include up to 40 turbine generators, a transmission line, and access roads. Construction is proposed to start in 2015.

Western Area Power Administration will host a public scoping meeting to help define the scope of the SummitWind Environmental Assessment. The meeting location is handicap accessible.



Please join us at the scoping meeting to learn more about this project and share your ideas:

5 to 8 PM, Wednesday, February 12th, 2014
Summit Volunteer Fire Department
101 E Sherman AVE
Summit, SD 57266-0924

398538

For more information or to be added to the project mailing list contact:
Matt Marsh, Environmental Protection Specialist
Western Area Power Administration
PO Box 35800
Billings, MT 59107-5800
Phone: 1-800-358-3415 Email: mmarsh@wapa.gov

We need your input!

We need your comments to help us define the scope and alternatives for an Environmental Assessment on a proposal by SummitWind, LLC for the development of the SummitWind Farm located in Grant and Roberts Counties, near Summit, South Dakota. The proposed wind farm will include up to 40 turbine generators, a transmission line, and access roads. Construction is proposed to start in 2015.

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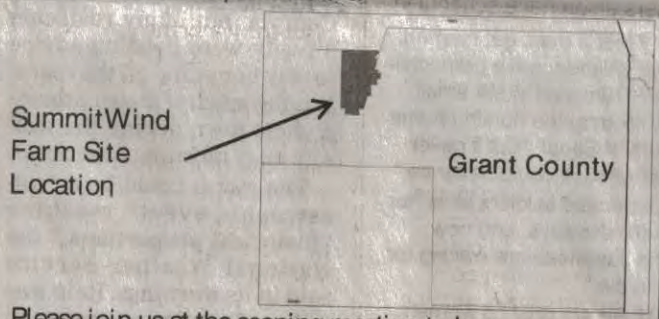

Please join us at the scoping meeting to learn more about this project and share your ideas:

5 to 8 PM, Wednesday, February 12th, 2014
Summit Volunteer Fire Department
101 E Sherman AVE
Summit, SD 57266-0924

398538

For more information or to be added to the project mailing list contact:
Matt Marsh, Environmental Protection Specialist
Western Area Power Administration
PO Box 35800
Billings, MT 59107-5800
Phone: 1-800-358-3415 Email: mmarsh@wapa.gov

mously, and the unanimous vote was repeated when it got to the House.

Another of my bills is being heard this week that makes it easier for veterans to get the veteran's emblem on their driver's license. The constituent will be the main proponent.

What I'm getting at is that the South Dakota legislature is

visited this past week. They were so impressed with the process, the professionalism, and the caucus meeting. I repeat, again and again, please feel free to visit.

Take care and keep in touch.

Rep. Kathy Tyler
kathytyler2012@gmail.com
rep.tyler@state.sd.us
605.237.0228

S. Shore Gazette – Feb 6, 2014

We need your input!

We need your comments to help us define the scope and alternatives for an Environmental Assessment on a proposal by SummitWind, LLC for the development of the SummitWind Farm located in Grant and Roberts Counties, near Summit, South Dakota. The proposed wind farm will include up to 40 turbine generators, a transmission line, and access roads. Construction is proposed to start in 2015.

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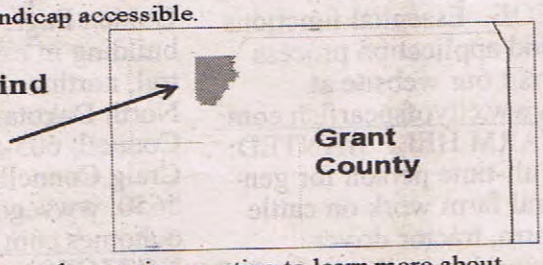

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Billings, MT 59107-5800
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Thursday, January 23, 2014

South Shore Gazette

We need your input!

We need your comments to help us define the scope and alternatives for a Environmental Assessment on a proposal by Summit Wind, LLC for the development of the Summit Wind Farm located in Grant and Roberts Counties, near Summit, South Dakota. The proposed wind farm will include up to 4 turbine generators, a transmission line, and access roads. Construction is proposed to start in 2015.

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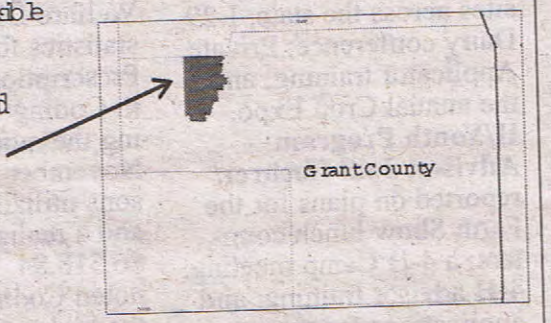

Please join us at the coping meeting to learn more about this project and share your ideas.

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101 E Sherman AVE
Summit, SD 57266-0924

Grant County Commission Proceedings

January 21, 2014

The Grant County Commission met at 8 AM with Commissioners Dummann, Forrette, Mann, Stengel and Tucholke present. Chairman Dummann called the meeting to order. Motion by Mann and seconded by Forrette to approve the minutes of the January 7, 2014, meeting. Motion carried 5-0. Minutes filed. Motion by Stengel and seconded by Mann to approve the agenda. Motion carried 5-0.

The Auditor's Account with the Treasurer for the month of December was noted.

AUDITOR'S ACCOUNT WITH THE COUNTY TREASURER

To the Honorable Board of County Commissioners, Grant County:

I hereby submit the following report of my examination of the cash and cash items in the hands of the County Treasurer of the County of Grant as of the last day of December, 2013.

Cash on Hand, $801.75

Checks in Treasurer's possession less than 3 days, $49,281.19

Cash Items, $0.00

TOTAL CASH ASSETS ON HAND $50,082.94

RECONCILED CHECKING

First Bank & Trust, $1,927.94; Credit Card Transactions, $60.00; First Bank & Trust (Svgs), $2,904,234.00.

CERTIFICATES OF DEPOSIT

First Bank & Trust, $0.00; First Bank & Trust (TIF), $353,200.73.

TOTAL CASH ASSETS $3,309,505.61

GENERAL LEDGER CASH BALANCES:

General, $1,761,837.64; General restricted cash, $516,152.00; Sp. Revenue, $368,830.99; Sp. Revenue restricted cash, $0.00; Henze Road District, $0.00; TIF Apportioning Northern Lights, $0.00; TIF Milbank, $0.00; TIF Northern Lights, $353,200.73; Trust & Agency, $309,484.25; (schools 39,478.31, twps 49,595.58, city/towns 12,348.80)

TOTAL GENERAL LEDGER CASH $3,309,505.61

Dated this 7th day of January, 2014

Karen M. Layher
County Auditor

The Sheriff's fees were $4,163.53 for December with $2,548.28 receipted into the county general fund. The Register of Deeds fees for the month of December were $13,175.00. The Clerk of Courts remittance fees for the month of December were $5,485.26. The Visiting Neighbor 2013 Year End report was noted.

Highway: Supt. Schultz presented the striping agreement with SD DOT for the striping of the center line of asphalt roads. The agreement is for approximately 49.5 miles of striping for a total project cost of $12,722.40. The county's 40% share is $1,985.75. The county's amount over the allocated limit is $7,758.03 for a total cost to the county of $9,743.78. Motion by Stengel and seconded by Tucholke to sign agreement number 2014-05 for the striping of 49.5 miles. Motion carried 5-0. Motion by Tucholke and seconded by Forrette to approve travel expense for Supt Schultz to attend the Highway Short Course workshop in Oacoma. Motion carried 5-0.

Abatements: Motion by Forrette and seconded by Stengel to approve the administrative abatements for mobile taxes collected one year in advance due to the trailer homes being moved and the 2013 payable 2014 taxes had to be paid in advance with a total adjustment credit to the tax account records of $127.12. Motion carried 5-0. The commission discussed an uncollected mobile home tax from the tax year 2006 to the present. All avenues of collection have been exhausted and the tax deemed uncollectable. Motion by Tucholke and seconded by Forrette to abate the taxes, interest and costs in the amount of $780.51 for a 1974 14 X 72 Rollohome Townhouse Mobile Home registered to Cliff Joslin as these taxes are deemed uncollectable. Motion carried 5-0.

Travel: Motion by Tucholke and seconded by Forrette to approve travel expense for the following requests. Motion carried 5-0.

1.VSO Scott Malimanek to attend an Orientation School in Sioux Falls

2.VSO Scott Malimanek to attend the NACVSO Accreditation Training in Pierre 3. For county personnel who need to travel to Pierre during the 2014 legislative session

EM: Director Sheryl Ward reported the next deadline for applying for the Haz Mat Mitigation grant is August of 2014. Mobile home park owner Ken Dahlgren had requested help in funding a storm shelter to be built for the mobile home park residents and other residents near the park. Sheryl is checking on the grant requirements as to ownership of the building when the structure is completed.

Historical Society: Present were Arlo and Paulette Levisen. Arlo, President of the Historical Society restated the Society's request to transfer ownership of the Carnegie Library Museum building and lot to the county historical society as they would like to build a structure on the lot and would prefer to have ownership of the land. States Attorney Reedstrom had prepared a quit claim deed for consideration. Motion by Stengel and seconded by Forrette to authorize Chairman Dummann to sign the quit claim deed transferring the museum building and lot with a legal description of Lot 7, Block 2, Original Townsite, City of Milbank, to the Grant County Historical Society per SDCL 6-5-2. Motion carried 5-0.

Sheriff: The following statistics for the month of December for the Detention Center and Sheriff's Office were presented by report. Average Daily inmate population 7; Number of bookings 13; Work release money collected $1,135.00; 24/7 Preliminary Breath Test (PBT) fees collected $261.00; SCRAM (alcohol detecting bracelet) fees collected $0.00; 24/7 PBT participants 4; SCRAM (Sobriety Program) participants 3; Calls for Service (does not include walk-in traffic) 78; Accidents investigated 3; Civil papers served 48; Cumulative miles traveled 4,990; 911 calls responded to (including Milbank) 62. Travel: Motion by Tucholke and seconded by Forrette to approve travel expense for Deputy Jeremy Steffensen to attend the renewal course for certified tazer instructor in Mitchell and to approve travel expense for Sheriff Owen and one deputy to attend annual conference in Deadwood. Motion carried 5-0.

Consent Agenda: Motion by Tucholke and seconded by Stengel to approve the consent agenda. Motion carried 5-0.

1. Approve Plat:

2014-04

Be it resolved by the Board of Commissioners of Grant County, South Dakota, that the plat know and described as: Lot 1. ROGGENBUCK FARM SUBDIVISION, located in the NE ¼ of Section 28, Township 119 North, Range 48 West of the 5th P.M., Grant County, South Dakota, is approved and the County Auditor is directed to endorse on such plat a copy of this resolution and certify the same thereon.

Paul Dummann, Chairman,
Board of Commissioners,
Grant County, South Dakota

ATTEST:
Karen M. Layher
County Auditor

2. Approve Marlene Dockter as Library Volunteer

3. Approve change in classification for Kevin Speaker from PT dispatcher with benefits to FT with benefits effective 1-1- 2014

4. Approve SD Broadband Initiative Grant Award, facilitated by the SD Bureau of Information in the amount of $9,113.60 for technology improvement at the Library

5. Approve list of books and audio materials to be declared surplus from the library for the months of October, November and December, 2013

6. Declare surplus a revolving hanger rack, fixed asset number 1751 from the library

7. Declare surplus (3) green task chairs (no arms), fixed asset number 8301, 8302 and 8303 from the library

8. Declare surplus a revolving 3 tier hand up rack, fixed asset number 2028 from the library

9. Declare surplus (2) padding reading chairs, fixed asset number 1508 and 1509 from the library

Unfinished Business: None

New Business: A discussion was held on gross receipts taxes for telephone exchanges in lieu of property taxes.

Correspondence: None

Claims: Motion by Mann and seconded by Stengel to approve the claims as presented. Motion carried 5-0. A-OX WELDING, cylinder rent & supplies, 541.65; AIO ACQUISITION, supplies, 15.90; AVERA QUEEN OF PEACE, lab, 55.40; BORNS GROUP, postage, 935.95; ROGER'S ELECTRIC MOTOR SERVICE, parts, 16.65; CENTER POINT, books, 298.98; CENTURYLINK, 911 & phone, 585.79; COLUMBIA BOOKS, subsc, 536.99; CRIMESTAR, support, 1,500.00; CUSTODIAN SERVICES, supplies, 112.00; EASTSIDE CAR WASH, car wash, 31.58; MILBANK REFRIGERATION, prof serv, 70.00; ENGELSTAD ELECTRIC, repair, 241.35;

FIRST DISTRICT, alloca, 6,643.50; G&R CONTROLS, maint, 2,045.50; GALL'S, supplies, 222.57; GLACIAL LAKES ASSN, alloca, 784.00; GLOBAL GOV/ED, comp supplies, 303.00; GRANT CO TREAS, postage, 46.00; HARTMAN'S, supplies, 11.07; SD MAGAZINE, books, 85.80; INGRAM, books & AV, 844.93; INTERLAKES COMM ACTION, worker, 1,950.67; INTERSTATE TELECOMM, internet, 85.16; MICROMARKETING, AV, 40.97; MILBANK COMMUNICATIONS, supplies, 118.57; NELSON LAW OFFICE, alloca, 3,527.16;

NORTHERN TRUCK EQUIP, parts, 249.71; OFFICE PEEPS, supplies, 163.09; OTTER TAIL POWER CO, electricity, 2,479.34; REED ELSEVIER, prof serv, 661.00; DELORIS J RUFER, rent, 100.00; SCHUNEMAN EQUIP, parts & service, 414.57; SD ASSN CO WEED/PEST BDS, regis, 170.00; SDACO, ROD Modernization fee, 274.00; SD ATTORNEY GEN, 24-7 fee, 10.00; SD DEPT OF REVENUE, sales & use tax, 61.12; ST WILLIAMS, prisoner meals & prof serv, 273.00; QUICK PRO LUBE, oil chg 76.54; T&T HEATING & AC, parts, 20.41; TRAPP PLUMBING, prof serv, 334.76; TYLER COMPUTER, supplies, 93.00;

VERIZON WIRELESS, phone, 96.92; CITY OF WATERTOWN, 911 surcharge, 6,454.32; WHETSTONE VALLEY ELEC COOP, electricity, 834.19; CAPITAL JOURNAL, subsc, 175.00; XEROX, copier rent, 585.96. TOTALS: $35,178.07.

It is the policy of Grant County, South Dakota, not to discriminate against the handicapped in employment or the provision of service.

The next scheduled meeting dates will be February 4 and 18, 2014, at 8 AM. Motion by Forrette and seconded by Stengel to adjourn the meeting. Motion carried 5-0. Meeting adjourned.

/s/ Paul Dummann, Chairman,
Grant County Commission

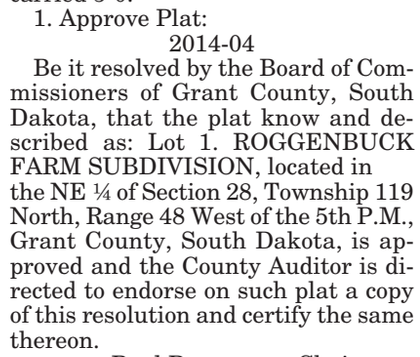
/s/ Karen M. Layher,
Grant County Auditor

Published once at an approximate cost of $96.59.

Field Specialist Report

Agronomy/Crops

By Paul Johnson
Watertown Regional
Extension Center



GLYPHOSATE RESISTANT HORSEWEED OR MARESTAIL

In the early nineties there was the development of Su or Imi resistant then Marestail. This weed, being a fall annual found normally in no-till systems, was very hard to handle if soybeans were planted. This was overcome in 1996 with the planting of Roundup resistant soybeans. This was a great fit until 2010 when the first Glyphosate resistant, now called Horseweed, was identified in South Dakota.

This was not a big surprise because Horseweed was the first broadleaf found to be resistant to Glyphosate in 2000 in Delaware, which was also in a no-till situation. It also has been found that Horseweed can germinate early in the spring, form a rosette vernalize and produce seed that same year.

When we look at dealing with resistance, chemical control is the first thing looked at because it is easy. But this weed can also be controlled with tillage. Tillage in the fall or early spring will provide excellent control. Crop rotation can also help to control this weed.

Spring wheat or winter wheat both provide ways to control this weed with chemicals. Corn or sorghum both have options that can control Glyphosate resistant horseweed. Rotating to a perennial crop like alfalfa is also a good option to control Horseweed by providing permanent cover to keep the horseweed from germinating.

One of the main characteristics to look at with all resistance is to take an integrated management approach for control. By looking at more than one control strategy it should be easier to eliminate the problem and avoid more resistance problems in the future.

FAMILY MATTERS

By Holli Seehafer

Have you ever headed for home after work only to stop, turn the car around and drive to the school to pick up your child from practice or OST? I have, and I would bet that I'm not alone.

When our normal patterns are disrupted and we have a lot of things going on in our minds, it's easy to forget things. That's normal.

But do you find yourself forgetting other things? Standing there staring into the refrigerator, wondering if you were putting something in or taking something out? Ever find the salt shaker in the refrigerator, or the milk in the cupboard? Can't find your car keys when you are holding them in your hand?

It could just be lack of focus, but if you are concerned that your brain is suffering the effects of aging, there are some simple and inexpensive steps you can take to help keep your thought processes sharp.

1. Lift weights – Any exercise is good for the mind and body, but weight lifting and resistance training may offer special benefits, according to at least a couple of studies on women.

In one study of women with normal cognitive function, those who exercised for an hour once or twice a week, using dumbbells, weight machines and other calisthenic exercises, significantly improved their long-term mental focus and decision-making.

2. Laugh – Humor is healthy. A hearty laugh provides short but similar benefits of aerobic exercise for improved heart (and brain) health and immunity. Other benefits: Laughter elevates the production of neurotransmitters linked to improved memory and alertness while decreasing stress hormones that can cloud thinking.

3. Take a nap – In addition to improved daytime alertness, good sleep helps keep memory and learning well-tuned. If you can work in a regular afternoon nap for about 90 minutes, you could see measurable improvements in decision-making, problem-solving, creativity and even tasks like recalling directions.

4. Meditate – Studies find that daily meditation can strengthen connections between brain cells, increase growth in the part of the brain that controls memory and language and may even bolster the ability to process information and make decisions more quickly.

5. Rate your plate – Brain-boosting foods don't have to be expensive. Grains like oatmeal, brown rice, barley and quinoa supply energy to the brain, which may boost learning. Nuts and seeds — including peanuts, sunflower seeds and flax — are loaded with vitamin E, which helps combat cognitive decline as you age.

Blueberries, cherries, raspberries and red grapes contain antioxidants to feed brain areas responsible for memory and learning (apples, bananas and oranges are also good). Spinach, tomatoes, onions and asparagus are vegetable standouts. And while salmon remains supreme, less expensive fish — also rich in omega-3 fatty acids — include tuna, sardines, anchovies and mullet.

6. Step lively – Simply walking briskly cuts your lifetime risk of Alzheimer's disease by half. So do other activities such as gardening and housecleaning – anything that gets your heart pumping. Boosting heart rate improves blood flow to areas of the brain involved with memory, learning and decision-making.

7. Socialize – Take a class, volunteer or just hang out with friends. Any of these no-cost activities reduces the risk of dementia and slows or prevents cognitive decline. Social engagement means mental engagement — talking or just being around others requires focus and attention to details and combats loneliness.

(condensed from www.aarp.org)

Life is like the stock market. Some days you're up. Some days you're down. And some days you feel like something the bull left behind.
Paula Wall

Social Security Answers Your Questions Concerning Benefits

Q: Can a person receive Social Security disability and workers' compensation benefits at the same time?

A: Yes, but workers' compensation and other public disability benefits may reduce Social Security benefits. If you receive workers' compensation or other public disability benefits and SSA disability benefits for the same period, the total amount of these cannot exceed 80 percent of your average current earnings before you became disabled. When someone is eligible for both workers' compensation and Social Security disability, sometimes the State offsets the workers' compensation benefits while sometimes Social Security offsets the disability benefits. Variations exist in types of state workers' compensation benefits so this general answer will not apply in the same manner for all states. Reporting receipt of workers' compensation is one of your responsibilities when receiving disability.

Q: Our newly adopted baby son already has a Social Security number (SSN). Can we change his SSN to correct his name and show us as his parents?

A: Yes, at no charge. Learn the documents needed and print the downloadable application at http://socialsecurity.gov/ssnumber/. As a general guideline for any SSN name change, child or adult, documents seen must clearly show the person going from the previous to new name. For example, adoption decrees and marriage certificates often show both the previous and new name. You must also show the change in parent names. Documents Social Security may accept to prove your child's legal name and parent changes include the final adoption decree, court order for a name change or amended birth certificate. Separate ID for your son might be needed. Proof of your relationship to your son and ID for you is needed. This might be your driver's license or U.S. passport. Sometimes one document serves for multiple purposes. All documents used must be either originals or copies certified by the issuing agency, not photocopies you made or notarized copies of documents. All documents are returned to you. Once corrected, your child will have the same SSN as before. All SSN actions are provided free by Social Security. Protect yourself. Be sure to access information through the official Social Security website at www.socialsecurity.gov. From the homepage, SSN information is in the Numbers & Cards tab.

Social Security Benefits Questions Answered

Q: What is the maximum Social Security retirement amount for 2014?

A: The maximum monthly Social Security retirement amount changes each year. The 2014 maximum is more than the 2013 maximum but will be less than the 2015 amount. Several reasons are responsible for this with a major one being that different years of earnings become available to include in the retirement calculation.

With each new calendar year, a year of potentially higher earnings becomes available for use in computing retirement benefit amounts. Not only might actual earnings be higher but, depending on the maximum taxable earnings base (www.socialsecurity.gov/planners/maxtax.htm) for that year, more of the earnings can be credited for use in the Social Security computation.

An early step in determining a retirement amount is to compute the person's amount at full retirement age (FRA), without reductions or additions. To do this, Social Security uses the person's best 35 years of earnings, weighted for inflation.

To compute the benefit for the person's actual retirement date, Social Security adjusts the full retirement age amount by the number of months that the person is away from FRA. The amount is reduced if younger than full retirement age or increased if older than their full retirement age.

If starting Social Security retirement in 2014 exactly at full retirement age, and if the person earned at least the maximum SSA taxable earnings in each of the 35 years used in the calculation, then the highest 2014 Social Security retirement amount is $2,642 per month. For comparison, the highest 2013 SSA retirement amount was $2,533 per month.

Knowing the highest 2014 Social Security retirement amount is interesting. Estimating your own retirement amount is more useful. Do so with the calculators included in the in the SSA Retirement Planner at www.socialsecurity.gov/retire2/. The Retirement Estimator will be especially useful. Ready to file for retirement? Go online.

We need your input!

We need your comments to help us define the scope and alternatives for an Environmental Assessment on a proposal by SummitWind, LLC for the development of the SummitWind Farm located in Grant and Roberts Counties, near Summit, South Dakota. The proposed wind farm will include up to 40 turbine generators, a transmission line, and access roads. Construction is proposed to start in 2015.

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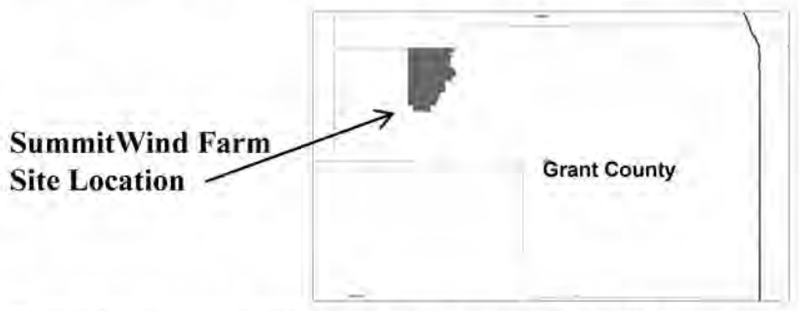

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5 to 8 PM, Wednesday, February 12th, 2014
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Summit, SD 57266-0924

For more information or to be added to the project mailing list contact:

Matt Marsh, Environmental Protection Specialist
Western Area Power Administration
PO Box 35800
Billings, MT 59107-5800
Phone: 1-800-358-3415 Email: mmarsh@wapa.gov

Invoice

Friends of South Dakota Public Broadcasting

Bill To:

Western Area Power Administration
Chelsea Horn
444 Broadway, Suite 203
Saratoga Springs, NY 12866

Remit To: **Friends of SD Public Broadcasting**
c/o BIT Finance Office
PO Box 5000
Vermillion, SD 57069-5000

Bill To E-mail	
Invoice #	**Invoice Date**
2352	**02/01/2014**
Total Contract Amount	Contract Balance
$80.00	**$80.00**
Contract Dates	
02/03/2014 to 02/12/2014	

Description of Underwriting Contract	Amount
Underwriting on South Dakota Public Radio	**80.00**
Paid by Credit Card - for information purposes only	
Amount Currently Due:	**$80.00**

Thank you for underwriting on South Dakota Public Broadcasting. Public Broadcasting is an important educational and cultural resource. Your support ensures quality programming will be available for the people of South Dakota.

Signed: Deborah Larson

Title: Finance Manager

Phone: 605-677-6411

deb.larson@state.sd.us

Please reference the invoice number with your remittance to insure proper credit.

The Friends of SDPB supports lifelong learning for all South Dakotans through advocacy, leadership and responsible fundraising on behalf of SDPB Television, Radio, Internet and Education & Outreach.

Remember the Friends of SDPB in your will

SummitWind Public Scoping Meeting Radio Ad on South Dakota Public Radio's Native News spot, weekdays at 4:30 pm CT.

National Native News is brought to you by Western Area Power Administration, hosting a public scoping meeting February 12th from 5 to 8 in Summit, South Dakota, seeking input for the proposed Grant County SummitWind Farm.

Attachment 2 – Project Maps and Handouts

SummitWind Farm, LLC
Environmental Assessment
Public Scoping Meeting
February 12, 2014 – Summit, South Dakota

Western AREA POWER ADMINISTRATION

- Please Print -

First	Last	Street/PO Address, City, State, Zip	Email	Organization

SummitWind Farm Open House
February 12th, 2014, 5-8 PM, Summit Volunteer Fire Hall
Public Scoping Meeting
Environmental Assessment (EA)

Thank you for your interest in the SummitWind Farm EA. After reviewing all of the exhibits and speaking with project representatives, please complete the appropriate sections of this form to be included on the EA mailing list and/or to provide comments. Written comments can be submitted at the Scoping Meeting, faxed to (406) 255-2900, mailed to Mr. Matt Marsh, Document Manager, Western Area Power Administration, P.O. Box 35800, 2900 4th Avenue, North, Billings, MT 59107-5800 or e-mailed to mmarsh@wapa.gov**.** Your comments are important to us and will be accepted through **2/19** for formal consideration in the scoping process**.**

Please Print Contact Information Below

Name:	Organization:
E-mail Address:	Daytime Phone No. (*optional*):
Street Address:	City / State / Zip Code:

- ☐ Please e-mail me the web link to the Draft EA when it becomes available. (Quickest and Preferred method)
- ☐ I would like a paper copy of the Draft EA when it becomes available.
- ☐ I would like a Compact Disk (CD) of the Draft EA when it becomes available.
- ☐ I do not need a copy of the Draft EA.

Please Share Comments, Questions, or Concerns Below (continue on separate sheet if necessary)

Thank you for your time and interest.

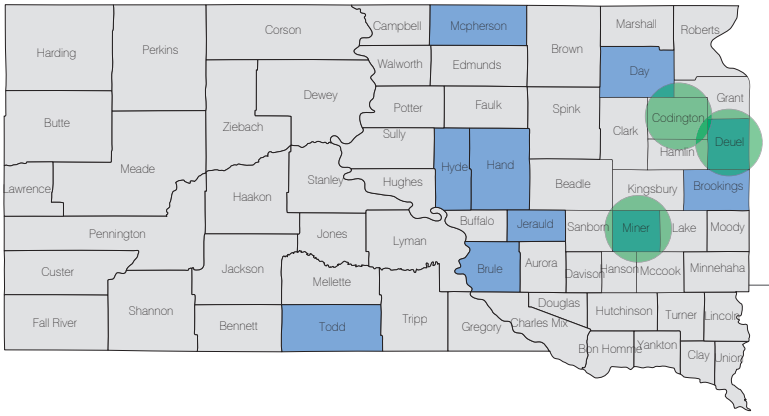
Please fold in thirds and tape

Place postage here

Mr. Matt Marsh
Document Manager
Western Area Power Administration
Upper Great Plains Region
P.O. Box 35800
2900 4th Avenue, North
Billings, MT 59107-5800

WIND ENERGY FACTS: SOUTH DAKOTA

Developing South Dakota's incredible wind resources creates economic development



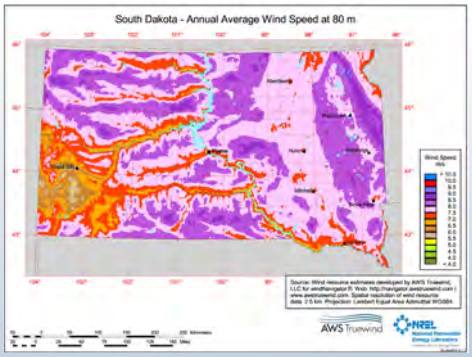
South Dakota has only developed a tiny fraction of its wind resource. Further development will provide considerable economic and environmental benefits.

Blue counties have wind projects. Green dots are online wind energy manufacturing facilities.

WIND PROJECTS

Currently online:	784 megawatts (MW)
Added in 2011:	75 MW
Added in 2010:	396 MW
Wind projects in queue:	7,399 MW

South Dakota added the 4th most new wind capacity in 2010.



GENERATION AND POTENTIAL

Percentage of South Dakota power provided by wind in 2011: 22.3%

South Dakota is the first state in the U.S. to generate more than 20% of its electricity from wind! It leads the nation in percentage of electricity from wind energy.

Equivalent number of homes South Dakota wind farms now power: 240,000

State wind resource: 882,412 MW at 80 meters hub heights

South Dakota's wind resource is ranked 5th in the US.

According to a resource assessment from the National Renewable Energy Lab, South Dakota's wind resource could provide 310 times the state's current electricity needs.

Photo: the Tatanka Wind Farm, on the border of South Dakota & North Dakota
photo provided by Knight & Carver Wind Group

FOR MORE INFORMATION, PLEASE CONTACT: windmail@awea.org

AMERICAN WIND ENERGY ASSOCIATION
WWW.AWEA.ORG | 202.383.2500 | 1501 M ST. NW, SUITE 1000, WASHINGTON, D.C.

AWEA AMERICAN WIND ENERGY ASSOCIATION

WIND ENERGY FACTS: SOUTH DAKOTA

Economic and Environmental Benefits

Investment in wind power is an investment in jobs, including jobs in operations and maintenance, construction, manufacturing and many support sectors. In addition, wind power projects produce lease payments for landowners and increase the tax base of communities.

- Total direct and indirect jobs supported in 2011: 1,001-2,000
- Annual property tax payments by wind project owners: around $3.9 million
- Annual land lease payments to local landowners: over $2.3 million

Generating wind power creates no emissions and uses virtually no water. The wind power installed in South Dakota will avoid 1.7 million metric tons of carbon dioxide annually.

Manufacturing Sector

While some of South Dakota's wind-related manufacturing may be from companies that have transitioned from other industries, South Dakota has already attracted significant investment in wind-specific facilities. Molded Fiber Glass, one of the leaders in blade manufacturing, opened a $40 million manufacturing facility in Aberdeen, South Dakota. At full capacity, as it would be under an aggressive RES, the facility would employ over 700 workers. With strong policy support, many other manufacturers would diversify into wind energy manufacturing and open new facilities in the state.

South Dakota Policy

South Dakota has a voluntary renewable objective to have 10 percent of its 2015 electricity sales derived from renewable and recycled energy.

Events

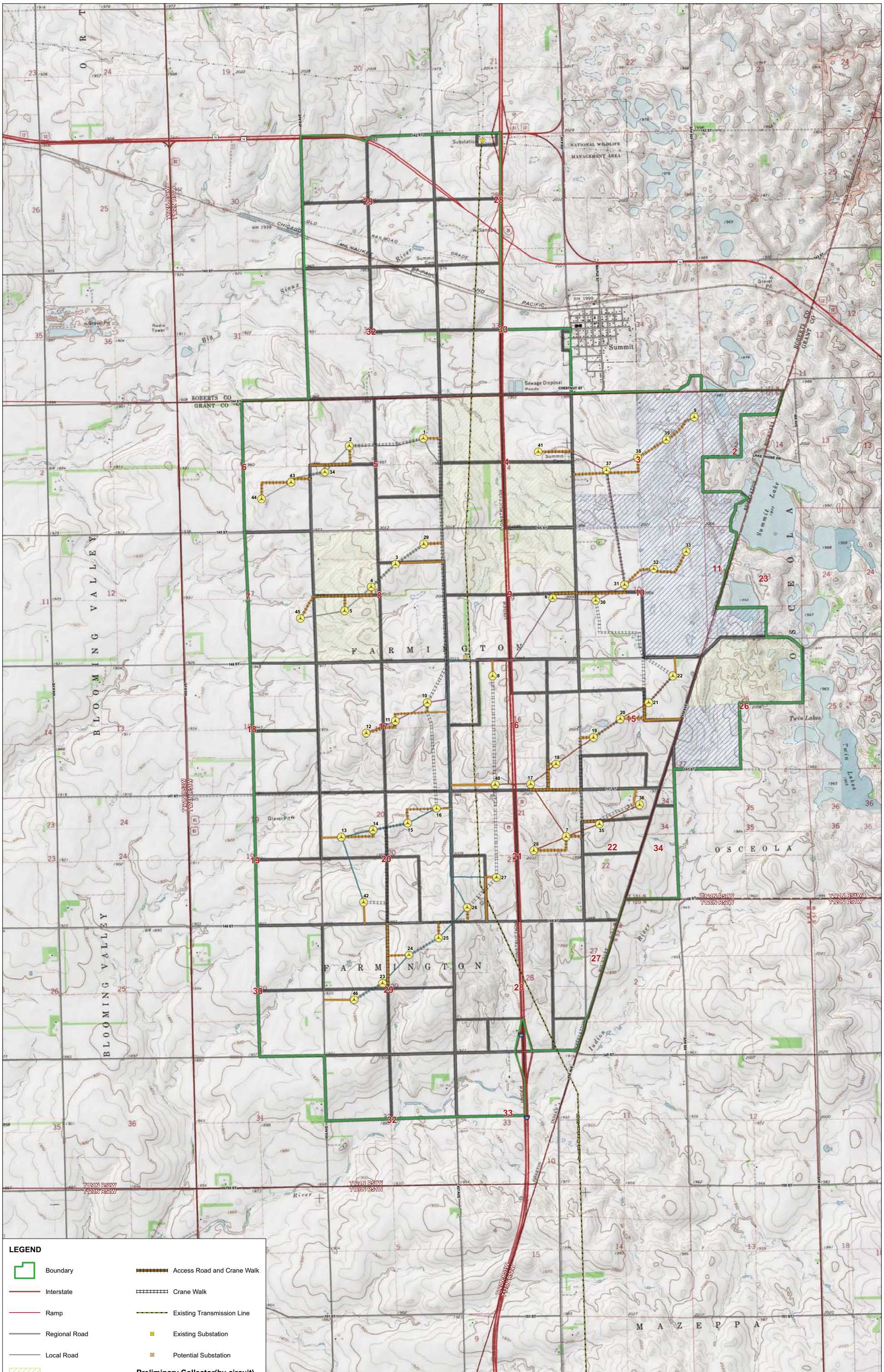
Companies from South Dakota exhibiting at the WINDPOWER 2012 Exhibition: 4

Published October 2012 | Calculations based on national and state averages

FOR MORE INFORMATION, PLEASE CONTACT: windmail@awea.org

AMERICAN WIND ENERGY ASSOCIATION
WWW.AWEA.ORG | 202.383.2500 | 1501 M St. NW, Suite 1000, WASHINGTON, D.C.

AWEA AMERICAN WIND ENERGY ASSOCIATION



LEGEND

- Boundary
- Interstate
- Ramp
- Regional Road
- Local Road
- USFWS Grassland Easement
- USFWS Wetland Easement
- Parcel
- Wind Turbine Location
- Access Road
- Access Road and Crane Walk
- Crane Walk
- Existing Transmission Line
- Existing Substation
- Potential Substation

Preliminary Collector(by circuit)

- 1
- 2
- 3
- 4

1:12,000
1 INCH = 1,000 FEET (AT 36"x60")
0 1,000 2,000 3,000
SCALE IN FEET

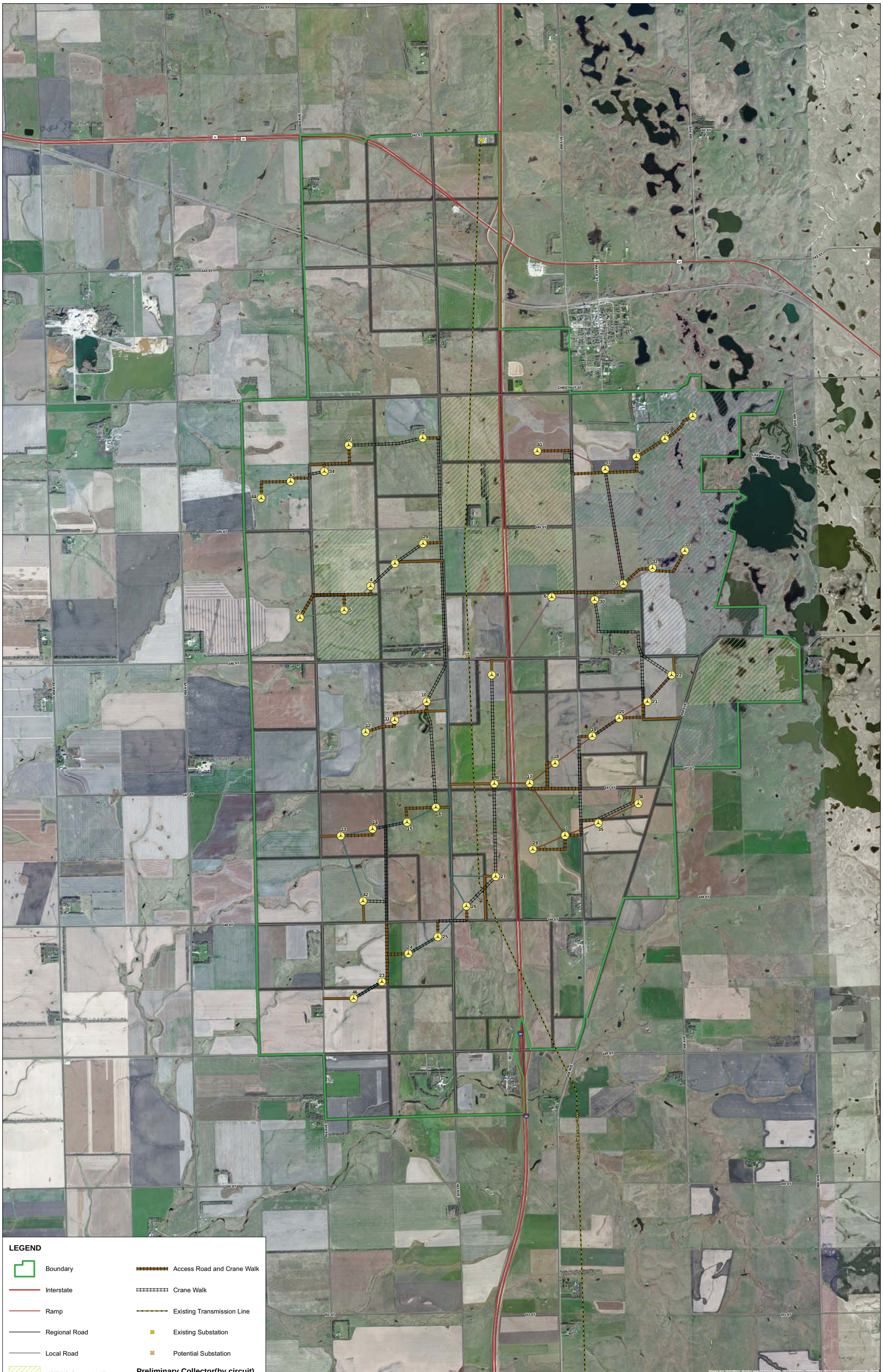
OwnEnergy™
THE POWER IS IN YOUR HANDS

SummitWind Farm, LLC

SUMMITWIND FARM — **GRANT AND ROBERTS COUNTIES, SOUTH DAKOTA**

FEBRUARY 2014 PRELIMINARY ELECTRICAL / CIVIL SITE PLAN

PROJ. NO.	DWG. NO.	SHT. NO.
40060	SummitWind Base Map Alt3 36x60.mxd	1



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Attachment 4 – Photos

Attachment 4
SummitWind Public Scoping Meeting Photos
Wednesday, February 12th, 2014

Photos 1: Attendees at public scoping meeting.

Photo 2: Attendees at public scoping meeting

Photo 3: Attendees asking questions to project developers Scott Kuhlke and Russell Laplante

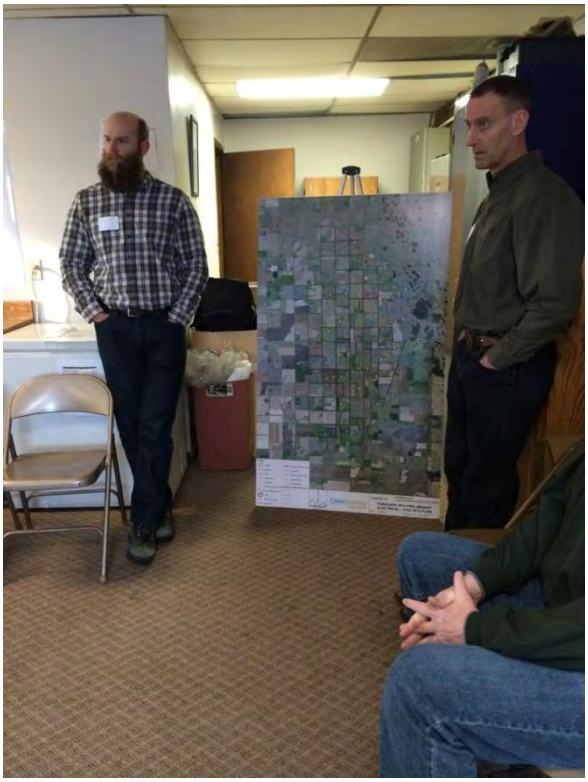

Photo 4: One of the two project maps available for review at the meeting.

Photo 5: Attendees asking Western representatives questions about the project.


Photo 6: Attendees reviewing project map.

APPENDIX B

Agency Correspondence and Public Comments

South Dakota
Wildlife Division
Department of Game, Fish and Parks

Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

24 December 2014

Western Area Power Administration
Upper Great Plains NEPA Coordinator
2900 4th Ave North
Billings, MT 59101

RE: Comments on the draft Environmental Assessment (EA) of Summit Wind Project in Grant and Roberts counties, South Dakota.

To Whom It May Concern:

The following is provided in response to your notice of a 30-day comment period on the Environmental Assessment (EA) written for the Northern Wind Project. This is a potential 41 turbine (2.3 MW turbine nameplate capacity) wind generation facility located in Grant and Roberts counties, South Dakota. This project would potentially be connected to the energy grid through one of Western Area Power Administration's transmission lines.

Page specific comments are provided below:

Page 3: The EA states that field wetland determinations have not yet been completed and the need for a Section 404 permit is still unknown. The information from this determination should be available within the draft EA as a necessary component to better assess the environmental impacts. The draft EA indicates that wetlands may be impacted.

Page 4: The document states that the final design of the electrical system and interconnection has not yet been finalized. If this is referring to the design and layout of the proposed 4.5 miles of transmission line, this information should also have been available in the EA as it would be necessary to assess the environmental impacts and impacts to wildlife.

Page 5: In regards to lighting on meteorological towers, please be apprised of the evaluation of new lighting techniques to reduce avian fatalities conducted by the Federal Avian Administration (FAA). These recent changes may be applicable to the lighting on the meteorological towers for this project. For more information on avian collisions,

Phone: (605) 773-4192 FAX: (605) 773-6245

tower lighting and the FAA analysis, please visit http://fewerlights.anr.msu.edu/. Every effort should be made to reduce potential avian collisions with these and other towers.

Page 16: It appears that alternative sites for the wind towers and associated infrastructure were analyzed. What other alternatives (other than the no action alternative) were analyzed for the entire project location given the project location is in a unique geographic area of South Dakota, has tracts of both native (representing a imperiled tallgrass ecosystem) and restored prairie, high concentrations of wetlands and is adjacent to or in proximity of other lands managed specifically for wildlife.

Page 16: It is stated that all mapped wetlands...will be avoided. How will unmapped wetlands be addressed? If the location of all wetlands within the project boundary is currently unknown, the statement that all mapped wetlands will be avoided may be misinterpreted and is misleading. This also applies to page 37.

Page 16: The renewable portfolio standard in South Dakota is voluntary (SDCL 49-34A-101).

Page 19: Please be apprised of SDCL 49-41B-25.1 regarding the notice to the (Public Utilities) Commission of planned construction of certain wind energy projects.

Page 37: What are the specific measures that would be taken to minimize temporary wetland/stream impacts?

Page 38: We recommend that a land cover/land use delineation study should be completed before the draft EA is released. The results of this study also should have been provided in map, table, and/or text format within the document. This information would be important in the environmental analysis and writing of the document as well as important information for the public reviewing the document.

Page 39: "Tallgrass Prairie Wildlife Management Area" If this is in reference to the grassland easement program administered by the U.S. Fish and Wildlife Service, please clarify. Many readers may be unaware of this program, what it is or at least what the program is officially named.

Page 39: Survey for noxious and invasive plant species will be conducted, but what will be done about these plant species if they are found?

Page 39: If the draft Upper Great Plains Programmatic Environmental Impact Statement (UGP PEIS) is available to the public, please provide a reference or a link to that document. Although later in the EA, specific conservation measures from this EIS are provided. Given that the project proponents are proposing to follow a draft document (UGP PEIS) provides uncertainty as to what conservation measures will actually be implemented. If the conservation measures in the draft UGP PIES are

changed or removed, how will this affect the measures used by the Summit Wind project?

Page 41: Provide details on what "appropriate" erosion and sediment control measures will be used. At a minimum, provide a finalized document to as a reference outlining what will be done.

Page 42: What mitigation measures will be used to minimize noxious/invasive plant species spread?

Page 42: What will determine if native plant species will be used to restore disturbed areas? What methods and species will be used?

Page 43: If mowing is part of the operations and management plan, more specifics need to be provided on where this mowing will occur. Will mowing occur adjacent to buildings, along access roads, or a much larger portion of the project area, etc.? Is mowing along access roads necessary? We would suggest mowing only those areas where it is necessary for the safe operation of the wind farm.

Page 45: Who will be responsible for implementing the noxious/invasive plant species control plan?

Page 46: The EA states the UGP PEIS provides a variety of conservation measures. Why are only two selected?

Page 46: An attempt should be made at developing a species list of birds and bats species that are known or suspected to occur at the site. This is a basic step in evaluating the potential environmental impacts of a project.

Page 46: The presence of several large wetland areas in close proximity to the project area and grassland and wetlands easements are good indicators that wildlife *will be* and are attracted to the area. The use of the phrase "may potentially attract bird…" would underestimate the actual use.

Page 47: Was any effort considered to survey bats?

Page 47: Scientific name for the northern long-eared bat is *Myotis septentrionalis*.

Page 47: What surveys were conducted for spring migrating birds, grassland breeding birds and grouse? Were only fall/winter bird surveys conducted?

One page 46 it states that extensive wildlife surveys were conducted. It is our recommendation that one full calendar year (this would be considered a minimum) of spring *and* fall surveys for migrating birds and bats, breeding grassland birds surveys, summer bat use surveys, and grouse surveys be conducted . Two full years of pre-

construction surveys would have provided the minimum information to help assess the environmental impacts especially in areas were limited wildlife surveys have been conducted. In addition, this pre-construction information is crucial to help assess what actual impacts a wind farm may have after construction.

Page 47: It is highly unlikely that any leks would be discovered if bird surveys were only conducted from September through December in one year. This is an inappropriate time to survey for leks, whereas late March through May would be optimum.

Page 51: Habitat fragmentation is stated to be an issue on page 39 ("The project proponent understands that special care should be given to avoid damage to unfragmented landscapes and high quality prairie."), but limited information or evidence is provided that these types of areas were avoided, information that supports limited road length or width will be followed, or that alternative project sites were evaluated. Further details on actions to be taken to minimize fragmentation would be helpful.

Page 51: Before finalization, the Avian and Bat Protection Plan should be developed in conjunction with both the state and federal wildlife agencies.

Page 51: The analysis of the potential wildlife impacts does not adequately address the risk of both birds *and bats* striking turbine blades, nor does it address the issue of avoidance of potential habitat due to the presence of turbines.

Page 51: We suggest more information be provided such as the land use at each turbine site and specific results of any wildlife surveys.

Page 51: Powerline electrocutions and strikes are mentioned, but no mention is made of guidelines provided by the Avian Powerline Interaction Committee. This committee has developed industry accepted guidelines to reduce impacts to birds from collisions and electrocutions with powerlines (http://www.aplic.org/).

Page 51: Please define or identify off-limit sensitive areas.

Page 51: A variety of BMPs and conservation measures *may* be implemented? Because this leaves a lot of uncertainty as to what will actually be done, we recommend more detail as to what measures will be implemented.

Page 51: *May* monitor for impacts? We suggest at least two years of post-construction wildlife mortality studies be conducted.

Page 52: How was bat collision mortality reduced?

Page 52: Bat collisions with powerlines is not a known concern.

Page 56: Reyelts/O'Farrell is a *Waterfowl* Production area. The designation of this and other areas along a suggested birding tour route is a strong indicator that the area has high wildlife use.

Page 56: What information was used and meant for the statement that hunting will occur on the proposed project area regardless of permission? Also, if this is a high use area for hunting, it is a good indicator that it is a high use area for wildlife.

Page 56: Transmission line impacts will be reduced by co-locating with another line. What work has been done to show that the existing line hasn't had any negative impacts on existing wildlife such as avian collisions and electrocutions?

Page 57: We suggest providing citations for the statements made regarding increased tourism as a result of wind project development in other areas.

Please refer to our comment letter dated 9 August 2013 for information about important wildlife habitats in the area and recommended wildlife surveys. Information obtained from both pre-and post-construction wildlife surveys is important to assess any impacts of wind energy development.

Regards,

Tom Kirschenmann
Chief of Terrestrial Resources

SummitWind Farm
Summary of Comments and Responses on NEPA EA

Comment #	Page #	Comment	Resolution
1	3	The EA states that field wetland determinations have not yet been completed and the need for a Section 404 permit is still unknown. The information from this determination should be available within the draft EA as a necessary component to better assess the environmental impact. The draft EA indicates that wetlands may be impacted.	Wetland Delineations have been completed. Section 1.2 has been updated to include the results of field surveys.
2	4	The document states that the final design of the electrical system and interconnection has not yet been finalized. If this is referring to the design and layout of the proposed 4.5 miles of transmission line, this information should also have been available in the EA as it would be necessary to assess the environmental impacts and impacts to wildlife.	The on-site location for interconnection location has been selected as a part of the interconnection study review. The EA has been updated throughout to reflect the selection of this interconnection alternative.
3	5	In regards to lighting on meteorological towers, please be apprised of the evaluation of new lighting techniques to reduce avain fatalities conducted by the Federal Avian Administration (FAA). These recent changes may be applicable to the lighting on the meteorological towers for this project. For more information on avian collisions, tower lighting and the FAA analysis, please visit http://fewerlights.anr.msu.edu/. Every effort should be made to reduce potential avian collisions with these and other towers.	Thank you for your comment.
4	16	It appears that alternative sites for the wind towers and associated infrastructure were analyzed. What other alternatives (other than the no action alternative) were analyzed for the entire project location given the project location is in a unique geographic area of South Dakota, has tracts of both	As stated in the EA, Western's purpose and need is: Please note that Western's Purpose and Need under this EA is limited to the consideration of approving or not approving a transmission interconnection request. Western's Purpose and Need does not include generation of electrical power by any means. Since the

Comment #	Page #	Comment	Resolution
		native (representing a imperiled tallgrass ecosystem) and restored prairie, high concentrations of wetlands and is adjacent to or in proximity of other lands managed specifically for wildlife.	interconnection request can only be approved or not approved, the logical range of alternatives is limited to 2: approved, or not approved. In this case, if approved, the operational interconnection agreement to be executed would include Western owning and operating a small switchyard at the interconnection location to accommodate the physical interconnection. Although the No Action Alternative as stated, "this is assumed only for the purpose of the analysis," the No Action Alternative does not actually prevent the generation project from being constructed. It is a private project on private land. The No Action Alternative simply means that Summit Wind Farm would not be allowed to interconnect with Western's transmission infrastructure, but could be interconnected with a different transmission service provider in the area, like any private project might be able to do. Western's NEPA documents typically include a fairly detailed description of the requestor's proposed generation project, primarily in the interest of public disclosure. This description usually includes an applicant's Purpose and Need and its Proposed Action separate from Western's Purpose and Need and Western's Proposed Action. However, this public disclosure does not include or imply Western's oversight or control of any aspect of the requestor's privately-held project. All regulatory responsibility for turbine siting, project location, and other technical aspects of any private electric generation utility lies with the State and County authorities; in this case, South Dakota and

Comment #	Page #	Comment	Resolution
			Roberts County.
5	16	It is stated that all mapped wetlands…will be avoided. How will unmapped wetlands be addressed? If the location of all wetlands within the project boundary is currently unknown, the statement that all mapped wetlands will be avoided may be misinterpreted and is misleading. This also applies to page 37.	See response to comment 1.
6	16	The renewable energy portfolio standard in South Dakota is voluntary (SDCL 49-34A-101).	So noted. The text of the EA has been changed to reflect the voluntary nature of South Dakota's RPS.
7	19	Please be apprised of SDCL 49-41B-25.1 regarding the notice to the (Public Utilities) Commission of planned construction of certain wind energy projects.	A reference to the required notice for planned construction to the PUC has been added to Table 1.6-1.
8	37	What are the specific measures that would be taken to minimize temporary wetland/stream impacts?	See Section 2.3.3 of the EA for measures to minimize surface water impacts, including wetlands. These are BMPs identified in the Final UGP Wind Energy PEIS, as applicable to the SummitWind project.
9	38	We recommend that a land cover/land use delineation study should be completed before the draft EA is released. The results of this study also should have been provided in map, table, and/or text format within the document. This information would be important in the environmental analysis and writing of the document as well as important for the public reviewing the document.	A delineation of impacts to land cover throughout the study area is quantified in Tables 2.4.2-1 and 2.4.2-2.

Comment #	Page #	Comment	Resolution
10	39	"Tallgrass Prairie Wildlife Management Area" If this is in reference to the grassland easement program administered by the U.S. Fish and Wildlife Service, please clarify. Many readers may be unaware of this program, what it is or at least what the program is officially named.	Section 2.4.1.2 describes the purpose for the establishment of the wildlife management area by USFWS and its relative location.
11	39	Survey for noxious and invasive plant species will be conducted, but what will be done about these plant species if they are found?	In Section 2.4.3 of the EA provides an outline of the components of an invasive species control plan as taken from the BMPs in the Final UGP Wind Energy PEIS.
12	39	If the draft Upper Great Plains Programmatic Environmental Impact Statement (UGP PEIS) is available to the public, please provide a reference or a link to that document. Although later in the EA, specific conservation measures from the EIS are provided. Given that the project proponents are proposing to follow a draft document (UGP PEIS) provides uncertainty as to what conservation measures will actually be implemented. If the conservation measures in the draft UGP PEIS are changed or removed, how will this affect the measures used by the Summit Wind project?	The Final UGP Wind Energy PEIS (April 2015) has been prepared and published and can be found at the following link: http://plainswindeis.anl.gov/documents/fpeis/
13	41	Provide details on what "appropriate" erosion and sediment control measures will be used. At a minimum, provide a finalized document to as a reference outlining what will be done.	See Section 2.3.3. The applicant would prepare a Stormwater Pollution Prevention Plan (SWPPP) and seek coverage under the NPDES National Pollutant Discharge Elimination System (NPDES) for General Construction Stormwater Discharges.

Comment #	Page #	Comment	Resolution
14	42	What mitigation measures will be used to minimize noxious/invasive plant species spread?	See response to 11, above.
15	42	What will determine if native plant species will be used to restore disturbed areas? What methods and species will be used?	As indicated in 2.1.3 for conservation measures, native seed mix will be used to restore disturbed soils. Seed mixes are referenced in Section 5.2.3.1 of the UGP PEIS.
16	43	If mowing is part of the operations and management plan, more specifics need to be provided on where this mowing will occur. Will mowing occur adjacent to buildings, along access roads, or a much larger portion of the project area, etc? Is mowing along access roads necessary? We would suggest mowing only those areas where it is necessary for the safe operation of the wind farm.	Section 2.4.2 of the EA has been modified to include that mowing will occur at the Operations and Maintenance Facility as a part of routine maintenance of the facility.
17	45	Who will be responsible for implementing the noxious/invasive plant species control plan?	Text has been added to Section 2.4.3 of the EA to indicate that an invasive species control plan will be prepared by the project owner.
18	46	The EA states the UGP PEIS provides a variety of conservation measures. Why are only two selected?	This is in reference to the operations phase, where monitoring is the most common measure, as listed. The EA provides a more extensive list of measures for construction phase, where more BMPs are typically applied.
19	46	An attempt should be made at developing a species list of birds and bats species that are known or suspected to occur at the site. This is a basic step in evaluating	As referenced in Section 2.5, wildlife species lists were compiled and impacts were assessed based upon a Tier 2 Study, Avian Use Surveys, Breeding Bird Surveys, Northern Long-Eared Bat Acoustic Survey, Bat Acoustic

Comment #	Page #	Comment	Resolution
		the potential environmental impacts of a project.	Survey Report, Butterfly Survey and the Biological Assessment (BA).
20	46	The presence of several large wetland areas in close proximity to the project area and grassland and wetland easements are good indicators that wildlife *will* be and are attracted to the area. The use of the phrase "may potentially attract bird…" would underestimate the actual use.	Text was added to Section 2.5.1.1 to indicate "These areas are known habitats for local wildlife species."
21	47	Was any effort considered to survey bats?	Yes, acoustic studies for bats were completed. The findings from the surveys are provided in Section 2.5
22	47	Scientific name for the northern long-eared bat is *Myotis septentrionalis.*	The scientific name for the northern long-eared bat is provided in Section 2.5.
23	47	What surveys were conducted for spring migrating birds, grassland breeding birds and grouse? Were only fall/winter bird surveys conducted?	As described in Section 2.5, WEST conducted fixed-point bird use surveys approximately once per week in the spring (March 1 to May 15) and fall (September 1 to November 15) and twice monthly during winter (November 16 to February 29 and summer (May 16 to August 31). In addition, specific grassland breeding bird transect survey were completed away from roads at proposed turbine locations. Grouse were recorded incidentally to other surveys, with specific attempts in the spring to visit grassland areas early in the mornings in an attempt to locate leks, but no specific lek surveys were completed.
24	46	On page 46 it states that extensive wildlife surveys	

Comment #	Page #	Comment	Resolution
		were conducted. It is our recommendation that one full calendar year (this would be considered a minimum) of spring *and* fall surveys for migrating birds and bats, breeding grassland birds surveys, summer bat use surveys, and grouse surveys be conducted. Two full years of construction surveys would have provided the minimum information to help assess the environmental impacts especially in areas where limited wildlife surveys have been conducted. In addition, this pre-construction information is crucial to help assess what actual impacts a wind farm may have after construction.	Completed studies were conducted and are listed in Section 1.3.2. Wildlife studies were conducted in consultation with USFWS and are summarized in Section 2.5.
25	47	It is highly unlikely that any leks would be discovered if bird surveys were only conducted from September through December in one year. This is an inappropriate time survey for leks, whereas late March through May would be optimum.	Fixed-point bird use surveys were conducted approximately once per week in the spring (March 1 to May 15) and fall (September 1 to November 15) and twice monthly during winter (November 16 to February 29 and summer (May 16 to August 31). No leks were observed during these use surveys. Species specific lek surveys were not conducted due to a lack of suitable habitat in the project area. Grassland areas were visited during surveys early in the mornings in an attempt to locate leks, but no specific lek surveys were completed.
26	51	Habitat fragmentation is stated to be an issue on page 39 ("The project proponent understands that special care should be given to avoid damage to unfragmented landscapes and high quality prairie."), but limited information or evidence is provided that these types of areas were avoided, information that supports limited road length or width will be followed,	See response to comment 4. The Applicant avoided areas of contiguous grassland habitat during siting and routing for the project components. Specific effort was given to remove or relocate several turbines from the grassland on the east side of the project area, where the largest block of grassland habitat occurs.

Comment #	Page #	Comment	Resolution
		or that alternative project sites were evaluated. Further details on actions to be taken to minimize fragmentation would be helpful.	
27	51	Before finalization, the Avian and Bat Protection Plan should be developed in conjunction with both state and federal wildlife agencies.	Text has been added to Section 2.5.3 of the EA to state that completion of a Bird and Bat Conservation Strategy (BBCS) is a voluntary effort encouraged in the Wind Energy Guidelines. The BBCS is being prepared in consultation with USFWS.
28	51	The analysis of the potential wildlife impacts does not adequately address the risk of both birds and bats striking turbine blades, nor does it address the issue of avoidance of potential habitat due to the presence of turbines.	Section 2.5 of the EA has been updated to reflect the potential for adverse impacts to wildlife species, based upon the studies conducted.
29	51	We suggest more information be provided such as the land use at each turbine site and specific results of any wildlife survey.	Regarding land use, see response to comment 9. Regarding wildlife surveys, studies were completed and are listed in Section 1.3.2. Wildlife survey protocols were developed and studies were conducted in consultation with USFWS and are summarized in Section 2.5 of the EA.
30	51	Powerline electrocutions and strikes are mentioned, but no mention is made of guidelines provided by the Avian Powerline Interaction Committee. This committee has developed industry accepted guidelines to reduce impacts to birds from collisions and electrocutions with powerlines (http://www.aplic.org/).	Text has been added to Section 2.5.2 of the EA to reference adherence to applicable guidelines in the Avian Powerline Interaction Committee.

Comment #	Page #	Comment	Resolution
31	51	Please define or identify off-limit sensitive areas.	Text has been added to the EA to indicate that sensitive areas, such as wetlands, streams and native grasslands, were avoided wherever possible.
32	51	A variety of BMPs and conservation measures *may* be implemented? Because this leaves a lot of uncertainty as to what will actually be done, we recommend more detail as to what measures will be implemented.	Additional information regarding BMPs and conservation measures as outlined in the UGP PEIS have been added to Section 2.5.3.
33	51	*May* monitor for impacts? We suggest at least two years of post-construction wildlife mortality studies be conducted.	Section 2.5.3 has been updated to indicate that the BBCS will also address monitoring following the USFWS WEG that recommends a minimum of one year of post construction monitoring.
34	52	How was bat collision mortality reduced?	Bat collision with electrical collection lines would be reduced as the electrical collection lines would be primarily buried.
35	52	Bat collisions with powerlines is not a known concern.	So noted.
36	56	Reyelts/O'Farrell is a *Waterfowl* Production area. The designation of this and other areas along a suggested birding tour is a strong indicator that the area has high wildlife use.	Site specific avian surveys were conducted to observe avian use in the project area; however, high use is not a predictor of high impact. Wildlife studies are summarized in Section 2.5. The habitat in the Revelts/O'Farrell water fowl production area is not similar to the habitat provided in the Project Area.
37	56	What information was used and meant for the statement that hunting will occur on the proposed project area regardless of permission? Also, if this is a high use area for hunting, it is good indicator that it is a high use area for wildlife.	The statement has been changed for clarity. It had originally included the statement "regardless of permission" to reflect scoping statements from landowners that trespass for the purpose of hunting occurs from time to time on their property. While the

Comment #	Page #	Comment	Resolution
			area may be a good resource for hunting recreational uses, it is not necessarily a high wildlife use area for either for game species or for non-game species.
38	56	Transmission line impacts will be reduced by co-locating with another line. What work has been done to show that the existing line hasn't had any negative impacts on existing wildlife such as avian collisions and electrocutions?	The transmission interconnect is located within the project area, and the offsite location requiring a transmission line was not selected.
39	57	We suggest providing citations for the statements made regarding increased tourism as a result of wind project development in other areas.	Section 2.6.2 has been modified to clarify that some towns report that there is an increase in tourism and provides further citation to a study prepared for the Welsh government regarding potential effects of wind farms on tourism.
40	General Comment	Please refer to our comment letter dated 9 August 2013 for information about important wildlife habitats in the area and recommended wildlife surveys. Information obtained from both pre and post-construction wildlife surveys is important to assess any impacts of wind energy development.	The EA has been updated to reflect the results of preconstruction surveys that have been conducted at the project site. See response to comment 24 and Section 2.5 of the EA.