

Coteau Preservation Alliance

We, Coteau Preservation Alliance, are presenting information about why we believe the Burke Wind Project Area should be abandoned. This wind project, in fact, after reviewing how this Coteau area has been recognized as a very valuable resource for its native grasslands, wetlands, and wildlife, should have been abandoned before any planning began.

An outline of the topics in the attached package¹ is:

I. Grasslands, Wetlands, and Wildlife (pages 2 - 19)

II. Health (pages 3 - 23)

III. Land Values (pages 24 - 25)

IV. Liabilities (pages 26 - 27)

V. Reclamation (page 28)

VI. Local Comments and Thoughts (page 28 - 31)

VII. Issues to Contemplate (pages 31 - 33)

The Missouri Coteau is one area remaining that still has significant amounts of grasslands, wetlands, and wildlife compared to intensively farmed areas in other parts of North Dakota. A quote by Tom Dickson in July-August 2018 North Dakota Outdoors magazine fits very well with what may happen to our very valuable North Dakota natural resources on the Coteau.

“To enrich our lives, we humans have tinkered a lot with the natural world. The food we eat, the electricity we use, the wood and metal that build our homes and vehicles--all that and more comes from altering the environment to meet our needs. We can't turn back time and not plow the prairies, log forests, build dams, or mine copper.... But we can value and conserve the shiners, sparrow, and other seemingly insignificant species still out there. Not out of moral duty or guilt, but because it's the wise thing to do.

We still don't fully understand how the natural world works, and may never get there. But we should still retain all the parts.... Once they're gone, they're gone for good.”

The Burke Wind LLC Project Area will adversely affect our health and property values, and increase problems with liability, reclamation and so much more, all at the landowner's expense. Important to us as well is the loss of our way of life.

This project will adversely affect our lives in so many ways for those who live in and around the Burke Wind LLC Project Area.

Please reject the application that would allow NextEra to complete the Burke Wind LLC Project Area!

¹ Copies of references provided upon request.

I. Grasslands, Wetlands, and Wildlife

We, Coteau Preservation Alliance, are providing information about the valuable natural resources in the Coteau where the Burke Wind Project Area is proposed. Our information includes:

- description of the Missouri du Coteau,
- valuable landscapes within,
- wildlife diversity in the grassland/wetland landscape,
- adverse effects of Burke Wind Project Area to these natural resources,
- many organizations and government agencies that recognize the value and importance of this unique resource.

Description of the Missouri du Coteau and its Valuable Resources

The Burke Wind proposal is located on the Missouri Coteau Breaks (Coteau). The Coteau, a glacially formed terminal moraine of the Wisconsin glacier that traverses from the southeast Alberta through southwest Saskatchewan entering in the northwest corner of North Dakota to the south-southeast boundary (light green area in Figure 1) and continues southeast across South Dakota and into northwest Iowa. This very unique feature has many important natural resources for North Dakota.

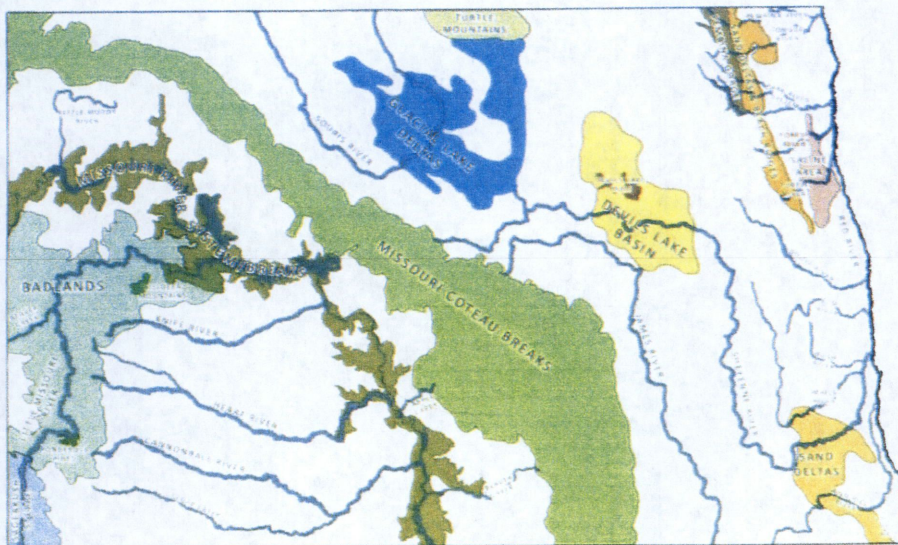


Figure 1. This is a copy of Figure B1 from draft guidelines developed by North Dakota Game and Fish Department (hereafter referred to as “ND Draft Guidelines”). This map is used to identify North Dakota’s current draft recognition of Focus Areas most important to the vast majority of Species of Conservation Priority. Due to the high value of these areas, all Focus Areas are categorized as High Impact to Native Wildlife and Habitat.

The native grasslands found in the Burke Wind project area (located on the Coteau straight above the olive green extension northward from the Missouri River) are composed of northern

mixed-grass prairie plant species, different from the tallgrass and shortgrass prairie grassland ecosystems elsewhere in North Dakota. Prairie plant communities thrive in North Dakota because of their deep rooted systems allowing them to survive in extreme climatic variability's common here. It is estimated 75% of these native grasslands have been converted (NDGF, unpublished data).

The areas in Figure 1 with color are the Focus Areas. These are of most importance to the vast majority of Species of Conservation Priority by NDGFD. In subsequent figures these areas are grayed in the background of the overlay colors for different land features presented.

North Dakota's remaining native grassland areas have been categorized using a 4 square mile area equal to or greater than 40% remaining in native grasslands (Figure 2). The Burke Wind Project Area is within one of the prized native grassland areas composed of the northern mixed-grass prairie plant species. This project is squarely in a High importance Focus Area in the Coteau.

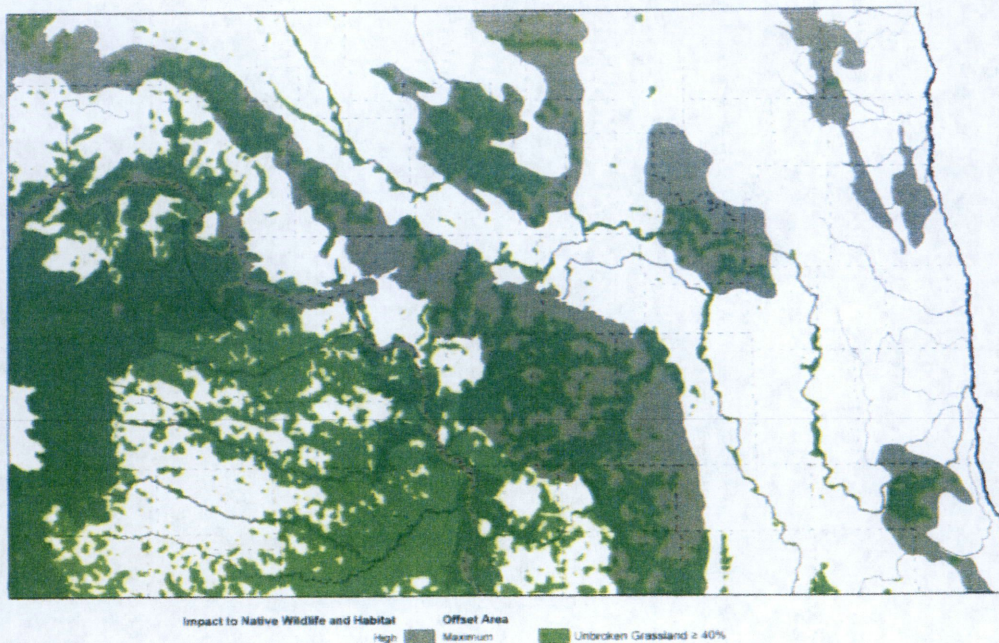


Figure 2. The light green overlay on the Focus Areas are areas of higher portions of native grasslands remaining. This is a copy of Figure B4 from the ND Draft Guidelines. The criteria used to identify these areas was any 4 square mile area that contained equal to or greater than 40% native grasslands.

Intermingled in the grasslands is a vast array of wetlands large and small, fresh and saltier than the oceans. It is estimated 50% of wetlands have been lost from an estimated 4.9 million acres that once existed to 2.5 million (Dahl 2014). In Figure B9, copied from ND Draft Guidelines, is data from U.S. Fish and Wildlife Service's wetland inventories. Burke County's Coteau is composed of abundant wetlands. Data pulled together by USFWS in Bismarck, North Dakota

found that the Burke Wind Project Area has proportions of sections with wetland basins greater than 100 is 3.6 times higher in the project area than elsewhere in the state. Again, as you can see, Burke Wind project is right in one of the highest densities of wetlands in North Dakota.

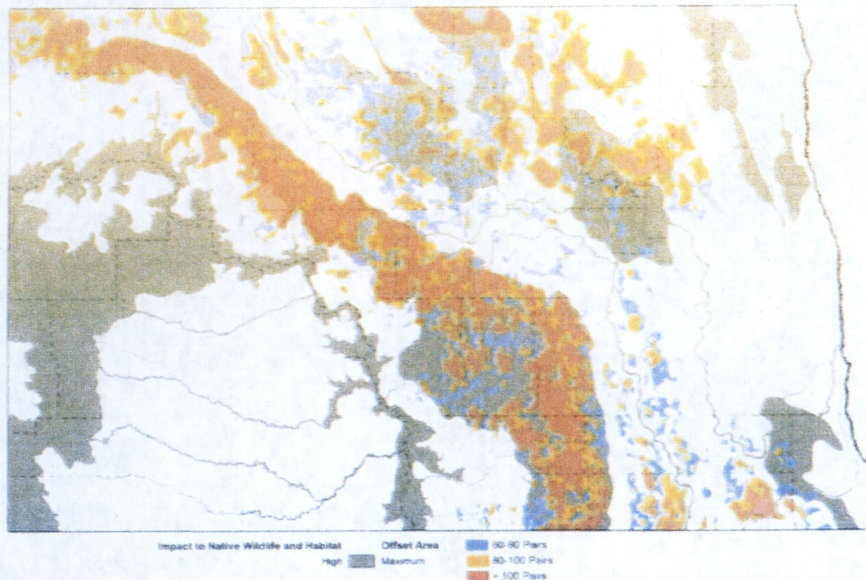


Figure B9. Intersection of the wetland dense areas and the SWAP Focus Areas/High Impact to Native Wildlife and Habitat.

Wetland areas that fall within the Focus Areas is classified as **High Impact to Native Wildlife and Habitat**. Wetland areas that fall outside the Focus Areas is classified as **Medium Impact to Native Wildlife and Habitat**.

The Nature Conservancy has recognized important ecoregions in United States. These areas represent the top U.S. places where native species and plant communities should be conserved. Figure 4 shows where The Nature Conservancy has identified in North Dakota where these important ecoregions are. Note that the Burke Wind project is squarely in one of the priority conservation areas in the northern portion of the Coteau.

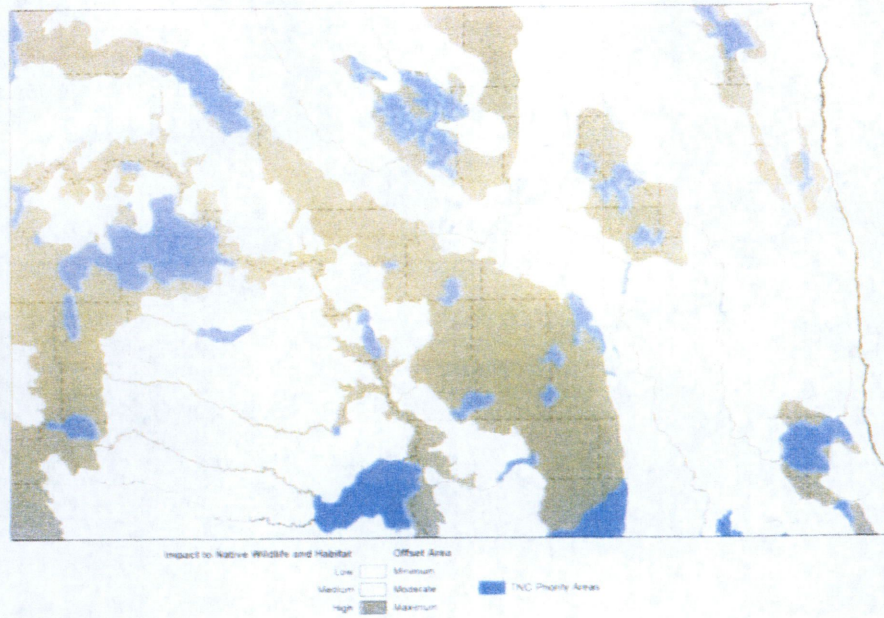


Figure 4. The Nature Conservancy identified areas in ecoregions throughout the United States that represent the top places where native species and plant communities should be conserved. This figure shows the top places in North Dakota. Spatial layers available: <http://www.uspriorityareas.tnc.org>

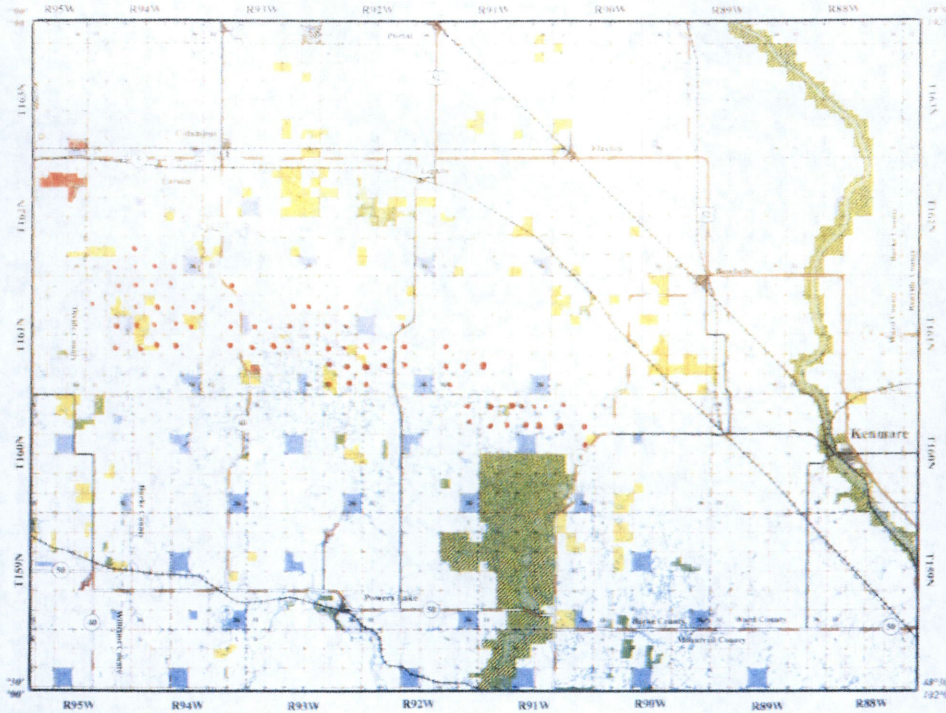


Figure 4. The Burke Wind project boundary goes from one township west of State Highway 8 west to Divide County. The red dots are section within the project’s boundary identified by Burke Wind LLC, Subsidiary of NextEra Energy Resources LLC (Juno Beach, Florida). The large green area in the lower center of this figure is Lostwood National Wildlife Refuge.

The Burke Wind project is also immediately adjacent to one of BirdLife International sites (Figure 5). They have identified over 12,000 “Important Bird Areas.” Lostwood National Wildlife Refuge (Lostwood) is one of those areas. These sites represent some of the most important places for birds at the global or regional level. Burke Wind project is only one mile north of this Important Bird Area where spinning turbines in the Burke Wind Project Area will affect bird movement during the breeding season and in migration.

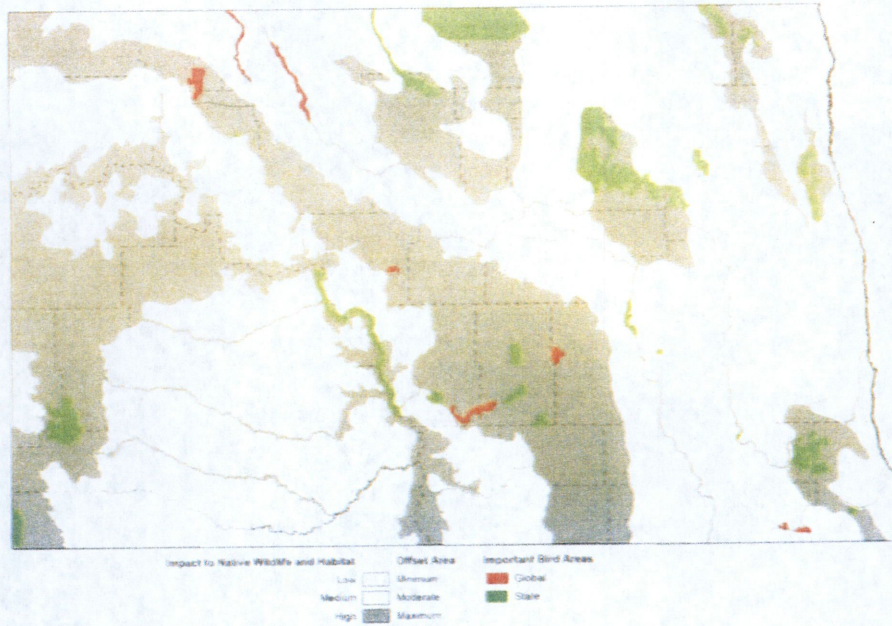


Figure 5. BirdLife International has identified over 12,000 Important Bird Areas. These sites represent some of the most important places for birds at the global or regional level. Lostwood is one of Global importance.

(<http://www.arcgis.com/home/item.html?id=af5fe0b13bae4f8297700345d27201fa>).

The Burke Planning and Zoning Commission’s 2016 Plan stresses on page 17 page, Goal G: “Public lands are generally existing lands established and sited for a variety of environmental, historical or cultural reasons. They may include parks, wildlife refuges, state-owned land, recreational areas such as golf courses, and the like. **When considering development near public lands, it is important to protect from loss of the characteristics which made the site originally desirable as a public land.**”

Not only will Lostwood character be compromised, there is the Lostwood Wilderness Area on the north side of Lostwood. Even though Lostwood and its 5,000-acre wilderness area has been excluded in the project area with NextEra 1-mile buffer around its north boundary, this closeness still will lose the CHARACTER of the desirable public land when viewing north into a spinning industry of turbines. Our own Burke County Planning and Zoning Commission recognized the importance of these public lands and their character. The character of a wide open prairie landscape will be lost.

Natural resource government agencies that have high regard for the Coteau’s natural resource are North Dakota Game and Fish, and U.S. Fish and Wildlife Service.

- The **North Dakota Game and Fish Department (NDGFD)** is required by stature authority to protect, conserve, and enhance fish and wildlife populations and their habitat for sustained public consumptive and non-consumptive use.

- The **U.S. Fish and Wildlife Service** is required to follow their mission of "...working with others to conserve, protect and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people."

Each agency developed voluntary guidelines for wind projects to reduce impacts to wildlife and their habitats. Neither agency is politically allowed to oppose wind projects. NDGFD has identified in their ND Draft Guidelines for wind projects, species of conservation priority. A three tier Level of concern was developed: Level I-High, Level II-Moderate, and Level III-Low. Many species found in the Coteau are in Levels I and II (details of specific species are in the ND Draft Guideline).

USFWS guidelines express: "As the United States moves to expand wind energy production, it also must maintain and protect the Nation's wildlife and their habitats, which wind energy production can negatively affect" (USFWS Guidelines, p 1). USFWS guideline uses "tiered approach" for assessing potential adverse effects to species of concern and their habitats.... During the pre-construction tiers (Tiers 1, 2, and 3), developers are working to identify, avoid and minimize risks to species of concern....The tiered approach provides the opportunity for evaluation and decision-making at each stage, enabling a developer to abandon or proceed with project development...."

Coteau Landscape Importance:

- North Dakota's crucial habitat core areas are essential to sustain wildlife and species of conservation priority for the future (ND Draft Guidelines p.45). The Missouri Coteau is one of the more intact remaining endangered grassland ecosystems.
- These are valuable resources not only for wildlife but for the ranching community in Burke County.
- The Project Area in central Burke County has been highly prized as extremely important to native grassland wildlife by many natural resource interested people and organizations.
- North Dakotans and non-resident people come to hunt, bird watch, and enjoy the open, rolling grasslands dotted with wetlands in North Dakota. These resources are a very important economical asset to North Dakota's ecotourism.

The Burke Wind Project Area is squarely in the middle of some of the larger remaining native grassland tracts found on the Coteau! This project needs to be abandoned.

Wildlife Species of Concern in Burke Wind Project Area

The Coteau's grassland wildlife diversity is stunning. NDGFD conservation priority listing contains species that are unique to this region's northern mixed-grass prairie. Many are the little brown birds that are seen flitting about in the grasses, their songs often the best way to identify them.

These seemingly insignificant species sought by people all over the world to see include Baird's sparrow, grasshopper sparrow, LeConte's sparrow, Nelson's sparrow, bobolink, chestnut-collared longspur, Sprague's pipit, western meadowlark, and others. Birds of prey include Ferruginous hawk, Swanson's hawk, and northern harrier. Sharp-tailed grouse population in the Coteau is some of the highest in North Dakota. Grouse are sought after during the hunting season by North Dakota hunters, and hunters from other states. There are more species of concern, just not all listed right here but can be found in the ND Draft Guidelines.

All of these species are species of conservation concern due to depleting habitat either by direct loss of habitat or by fragmenting what is left.

The abundance of these species on the Burke Wind Project Area will be similar to what has been documented on Lostwood because Lostwood is adjacent to the project area's southeastern end by one mile. Various studies on Lostwood had all the species of conservation concern present.

Six of the species of conservation concern shown above—Baird's sparrow, grasshopper sparrow, bobolink, Sprague's pipit, western meadowlark, and Le Conte's sparrow—are well represented on Lostwood (Green 1992, Madden 1999, Madden 2000, Winter 1999, Murphy and Smith 2007). Each species selected their preferred grassland habitat, habitats like that found on the Burke Wind Project Area.

Livestock operators in the project area maintain these grasslands for their livestock. Ranchers keep these grasslands healthy for their livestock through their management which also promotes quality grasslands for wildlife (Messmer 1990, Buskness et al. 2001, Danley et al. 2004). Defoliating the grasslands creates habitat diversity, critical for these grassland passerines and maintenance of grasslands (Kerns et al. 2010). For example, Sprague's pipits decline quickly as visual obstruction increase while Baird's and grasshopper sparrows prefer a little more visual obstruction. On the other end of the visual obstruction spectrum is the Le Conte's sparrow who selects the tallest and densest grassy habitat (Madden et al. 2000). All of these habitat conditions are present and maintained with defoliations conducted by private livestock operators on their rangelands found in the Burke Wind Project Area.

One species, the Baird's sparrow, has a very restricted range that includes most of North Dakota, northeastern Montana and portions of southern Alberta, Saskatchewan, and Manitoba. That is it, nowhere else does it breed. The Burke Wind Project Area is within this species breeding range. This species does move about within its range based on vegetative conditions and amounts of precipitation to find it's preferred and yet varied breeding habitat structure (Dechant et al. 2003). Baird's sparrow where defoliation was frequent on Lostwood had a density from 6.9 males/100 ha to 20 males/100 ha (Winter 1994, Winter 1999), some of the higher densities recorded.

Other species of concern with similar restricted breeding ranges is Nelson's sparrow and Le Conte's sparrow, both species found on Lostwood and currently on private lands within the project area.

The Burke Wind Project Area also harbors one of the best duck breeding habitats in North Dakota. From the U.S. Fish and Wildlife duck pair data calculated each year, this project area has one of the highest breeding pair numbers.

The proportions of sections with pair values greater than 100 pairs in the Burke Wind Project Area compared to other areas of North Dakota was 8 times higher (sections were identified as being equal or greater than 575 acres).

Within the Burke Wind Project Area, using the same duck data, pintails—a species of concern—the proportion of sections with a pair range of 100-200 was 83% higher than other areas of the state with only 11% occurrence.

The late summer and fall use by ducks is important in the Coteau, including the Burke Wind area. As the young of the year mature and begin flying about, they move from wetland to wetland and to stubble grain fields. Wind turbines will be in their flight paths as they fly about up over hills into the next wetland.

The Burke Wind Project Area also harbors a diversity of nesting shorebirds and other wetland birds, as documented in the same habitat type on Lostwood (Lostwood's 1981 Annual Refuge Narrative and refuge files, Smith *in draft*). Wetlands are predominately the reason most of these birds are here. Many of these species use the uplands for nesting and wetland edges to raise their young. These include American avocet, Wilson's phalarope, yellow rail, marbled godwit, willet, and upland sandpiper. Birds more directly dependent on wetlands are American white pelican, Franklin's gull, black tern, horned grebe, northern pintail, and American bittern. All of these species are of concern and all present in the Burke Wind Project Area.

There are piping plovers, a threatened species, that move through the Burke Wind Project Area in the spring and fall migration to arrive and depart their breeding habitat of alkaline wetlands. These birds nest both in North Dakota—including Lostwood—and into Canada. The Coteau is a very important migration corridor for these birds.

There are whooping cranes that use the wind's project area as their main migration route (Figure 6). This general map shown in Figure 6 has been further detailed for the most probable migration route these birds are taking. In a figure in Niemuth et al (2018)(Figure 3), the Burke Wind Project Area is centered in the landscape-level habitat used by migrant whooping cranes. *In fact, the centerline of the migration corridor from sightings is centered through the Burke Wind Project Area!*

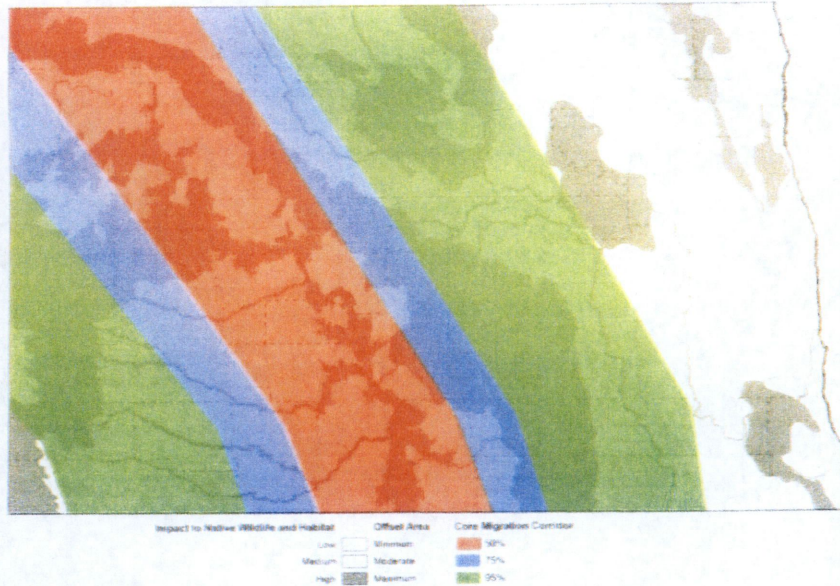


Figure 6. Whooping crane migration corridors were delineated using opportunistic sightings and location data from telemetered birds. The migration corridors are well defined and include 50%, 75%, and 95% core corridors (Pearse et al. 2018). Spatial layer available: <https://www.sciencebase.gov/catalog/item/5a314a72e4b08e6a89d707e0>

There are also golden and bald eagles that migrate along the Coteau, following the waterfowl migration path. Even reptiles, such as the smooth green snake, are a concerned species that lives in the Coteau's grasslands. It is on Lostwood so it is assumed also in the wind project area.

There are also moose, mule deer, and white-tailed deer that are throughout the Burke Wind Project Area. Moose are a species of concern in United States.

Of specific concern is that this stretch of the Coteau has some of the highest elevations along this glacial feature. Towers will be placed on some of these highest elevations square in the middle of the migration path that will adversely affect migrating birds and bats.

One of the remaining states to retain sharp-tailed grouse in good numbers is North Dakota, a core area with 30.9% of the global population (ND Draft Guidelines).

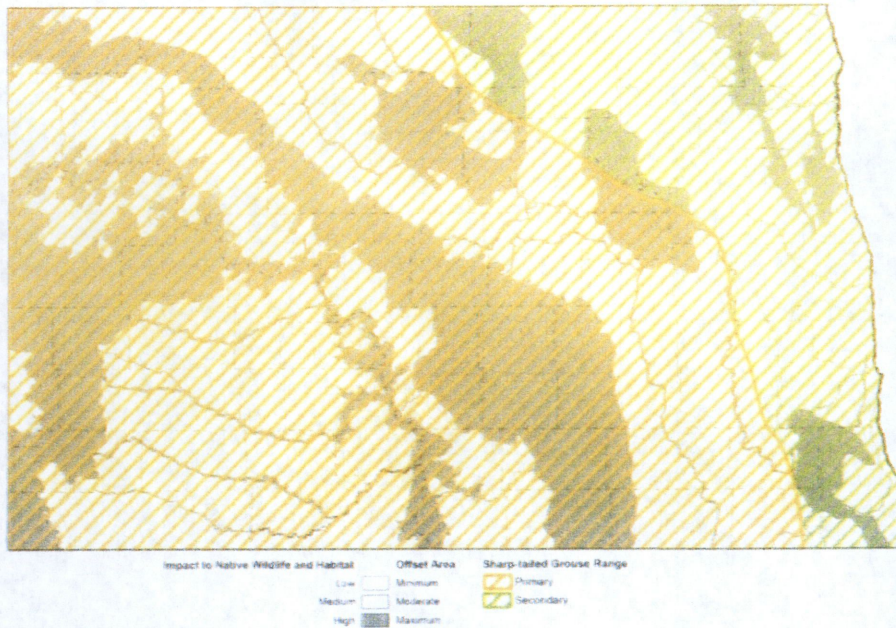


Figure 7 (copied from Figure C8 of ND Draft Guidelines). The sharp-tailed grouse is found across North Dakota, but abundance increases from east to west. The majority of leks will be found on grasslands within Medium and High Impact to Native Wildlife areas that includes the Coteau. Spatial layers available: <https://gf.nd.gov/maps/data>

The Burke Wind Project Area has not identified all dancing grounds within the project area. On Lostwood's 26,900 acres during years 1978 to 1992 when annual precipitation average about 16.5 inches, the range of dancing grounds was from 32 to 44 that averaged 36/year. In years 1993 through 2001, the average annual precipitation increased significantly to 21.93 inches. This increase adversely affected the number of leks each year by 4 to 6, averaging about 4 fewer leks compared to the previous normal annual precipitation. The number of males on leks also decreased but minimally, averaging about 3 fewer males.

Table 1. The number of sharp-tailed grouse dancing grounds (leks) and males/lek on Lostwood National Wildlife Refuge from 1978 through 2001 (Lostwood files). The 1978 through 1992 represents years with the average precipitation records that began in the mid-1930s of 16.5 inches, while the 1993 through 2001 represents significant annual increases in average annual precipitation to 21.93 inches (Smith *in draft*).

1978 though 1992				1993 through 2001			
# of leks		# of males/lek		# of leks		# of males/lek	
range	ave.	range	ave.	range	ave.	range	ave.
32 - 44	36	10 - 27	18	26 - 40	32	12 - 19	15

What significance does this information have regarding the Burke Wind Project Area. The Project Area, based on information given at the Public Hearing Zoning Change on July 10, 2018,

this Project Area encompasses approximately 50,560 acres. The project map given at a July 17 Burke Planning and Zoning Commission meeting shows only 24 leks.

The Burke Wind Project Area is more than double the size of Lostwood, yet Lostwood has 25 to 33 percent more leks. We know all the leks have not been found on the Project Area.

We know it is hard to find all dancing grounds, taking 2 or more springs to find them. Most leks remain in at one site for several years but they do move about based on land use. On sections with annual crops present, there will be fewer leks, and leks with smaller number of males, often only 2 to 6 (based on experience from a member of the Coteau Preservation Alliance when searching for and counting males on leks in croplands for NDGFD).

A couple of accusations:

- has there not been enough time spent to find all the grouse leks?
- NextEra may not want to find all leks because of the ½ mile radius around each lek without turbines--a protection for grouse NextEra chose to follow although ND Guidelines suggests a 2 mile buffer.

The northern mixed-grass prairie and its wetlands provide valuable grassland resources. This prairie—a large part of the state’s valuable natural heritage and culture—contributes significantly to ecotourism that includes hunting by locals and non-residents bringing in revenue for local town communities.

The Burke Wind LLC Project Area harbors all these habitats and wildlife species in abundance. The Coteau provides all who live here or visit with abundant grassland, wetlands, and its wildlife. We live in some of the best of the best that has survived. This future loss is very concerning to us and others.

Potential Adverse Effects to Coteau’s Grassland, Wetlands and its Wildlife with Burke Wind LLC Project Area.

When the diversity of grassland habitats and wildlife on the Coteau is fully realized, the grassland and wetlands that remain are some of the best of the best! The Coteau has some of the most grassland blocks across North Dakota’s landscapes. The Coteau has the largest intact wetland densities across such a large landscape of anywhere else in North Dakota, thus the reason why NDGFD recognized this landscape as a Focus Area of High value!

Habitat fragmentation is described as the process of dividing large tracts of contiguous native habitat into smaller, disconnected pieces. Habitat fragmentation results in an increased number of small habitat patches, isolated by a matrix of human altered land cover (Haddad, 2015). Breaking habitat into smaller pieces also increases the amount of edge, and animal behavior can be influenced by these “edge effects” (Lidicker 1999; Ries et al., 2004; Batary and Baldi, 2004).

This reduction of habitat and connectivity and increase in edge effect has been shown to lead to a loss in biodiversity (Wilcox and Murphy, 1985; Fletcher et al., 2007). This is especially concerning when coupled with the fact that there is still substantial wind potential desired developed by the wind industry in North Dakota.

The Missouri Coteau has been identified as a Focus Area of High value. In the Burke Wind Project Area there are large tracts of land without significant roads (2011 Burke County Plat Book & Directory www.greatplainsdirectory.com). Townships that have four or more sections without marked roads are Harmonious, Clayton, Dimond, and Foothills. There are fewer and fewer large tracts of native mixed-grass rangelands left on the Coteau. These large, rural tracts need to be protected from further **fragmentation and destruction**.

There is direct loss to this valuable habitat due to new and widening roads to 38 feet (stated at the August 1, 2018 application request to the Burke Planning and Zoning Commission), but likely wider in some locations. Destruction will occur with concrete pads for wind towers, other infrastructure needs, and so called temporary loss when roads are widened to accommodate the tower parts to arrive at their locations. (Once the native grassland is torn in this way, this is a permanent loss, not temporary.) *This valuable grassland resource with such large tracts and other native grassland areas just cannot be lost!*

It is commendable that NextEra is proposing collection lines underground. This greatly reduces overhead line wildlife collisions on these open grasslands, although there are above ground transmission lines transporting power from the Project Area. Unfortunately, native sod will be torn apart from heavy equipment pulling the trencher across the landscape.

The Project Area is within prime ranching country. When trenching activities split open and tear the sod apart for line placement, there will also be rocks pulled up, leaving sod upturned and holes in their place. Holes left where rocks once were is of grave concern for livestock operators because livestock can step into these small, hard to see areas, injuring their legs, hips and shoulders.

The trenching across the landscape increases weed infestation which the land owner will end up having to control over several years, if it is ever totally resolved. Additional land disturbance that will increase weed problems include gravel—brought in from gravel sites that likely will have such weeds as leafy spurge— for roads and for tower sites. Equipment brought to construction sites can have weeds on the equipment itself, bringing in other weeds to pristine areas. Additional pesticide use will likely be used to reduce invasive weeds brought in by these invasive activities. All of these activities add additional disturbance to wildlife and cost to the landowner that would not happen if the wind project was abandoned.

There will be dust from construction and maintenance of turbines and other facilities, and chemical spills during construction. NextEra estimated on August 1st Burke Planning and Zoning Commission meeting that there will be 50 vehicle travel/days of increase traffic on the roads due

to the Burke Wind maintenance. All of these activities will increase dust accumulation that will reduce grassland and habitat quality for wildlife and for livestock.

NextEra has located some of the grouse dancing grounds. All leks need to be found in the Project Area. They have put a ½ mile buffer from turbines around leks, although ND Guidelines suggest a 2 mile buffer. The buffer is helpful but their upland habitat will still be fragmented by roads and the turbines themselves, vertical structures that grouse are not very tolerant of.

There is direct loss of grouse habitat from road building, turbine construction sites, and collection line trenching, and the disturbance during construction and maintenance activities. There also is indirect loss that happens over time by a trend of increasing avoidance.

For eight grassland birds in a North and South Dakota study of mixed-grass prairies, of significant turbine effects indicated displacement at 100m, 100-200 m, and 200-300 m. Shaffer and Buhl (2016) found that *the first year post-construction displacement was relatively low, but reached up to an average of 55% at 5 years for certain bird species* (Shaffer, J.A., Loesch, C.R., and Buhl, D.A., *in prep.*).

Grassland birds and waterfowl exhibit avoidance of wind turbines in studies in the Dakotas within the Prairie Pothole Region (Loesch et al. 2013, Shaffer and Buhl 2016). Loesch et al. (2013) demonstrated that five species of dabbling ducks exhibited an average decline of 20% after the erection of turbines on one wind farm.

A species very sensitive to having large tracts of native grassland, the Sprague's pipit (Davis et al. 2006), likely will decline with fragmentation of the native grassland tracts.

Roads exacerbate habitat loss, affecting grassland birds (Wellicome et al. 2014).

Bairds sparrow are even more sensitive and a Species of Conservation Concern. This is a species with an extremely restricted breeding range in North America that occurs in the Project Area. This species avoids roads (Koper and Schmiegelow 2006, Sliwinski and Koper 2012, Wellicome et al. 2014, Ludlow et al. 2015, and Nenninger and Koper 2018). Baird's sparrow abundance was over 16 times lower on roadside point counts than on off-road point counts (800 meters from the nearest roadside count) (Wellicome et al. 2014).

Bobolinks avoided roads within 150 meters (Thompson et al. 2015). Grasshopper sparrows displayed a strong avoidance of building nests in roadside edges cut through native prairies (Patten et al. 2006, 2011). Western Meadowlarks were also negatively related to distance to roads (Koper and Schmiegelow 2006).

Noise is another concern. There is a buffer of 1.2 km as setback to the rural residencies for protection from noise and health affects to people for a maximum sound of 50 decibels. There is no protection for wildlife at and around where the turbine for noise disturbance, which does not include the inaudible low-frequency and infra sounds the turbines produce—this is also not taken into consideration for people!

The turbines themselves are of grave concern for flying wildlife. For example, one turbine site we are aware of is immediately above a wetland used each late summer and fall by hundreds of ducks. Where the turbine is being proposed is directly in the flight path for these ducks as they fly about from wetland to wetland and to harvested grain fields adjacent to this wetland.

There are other areas that will be similar or even worse. Turbines intermingled with the abundant wetlands in the Coteau is a disaster waiting to happen—whooping cranes, waterfowl, shorebirds, and other water depend birds such as white pelican, bald eagles following the waterfowl migration—all species and more that follow the Coteau during spring and fall migration. This does not include the breeding bird life in the Project Area that will have to maneuver around, through, over turbines, or eventually abandon the Coteau as a breeding site due to these obstacles (scientific citing in section above).

NextEra has completed some wildlife inventories and surveys, although we have only seen their dancing ground locations and raptor nesting sites shown on their issued map dated July 11, 2018 but nothing else. Each year's wildlife surveys will vary from year to year due to precipitation, defoliation events, temperatures, cold springs and much more. Completing only one or two years of breeding bird transects may not reveal all species presence. Not all these species may be seen every year because changes in temperature and precipitation from abundant to scarce that alters the vegetation habitat structure from year to year. Grassland bird species are nomadic and go where the condition are right but they will occur somewhere in the ecoregion where their preferred grassland habitat needs are met.

We, the Coteau Preservation Alliance, are proud of what we have and do not want this destroyed!

The Coteau: off limits to Wind Projects

What is being proposed by NextEra Energy will have negative impacts on the Coteau in Burke County. Negative impacts, both direct and indirect, that comes from fragmenting these large grassland tracts with turbines, roads, transmission lines, and increased human activities. The entire stretch of the Missouri Coteau is likely targeted for additional wind projects by perhaps NextEra and other wind companies. Thus, these projects should not be evaluated individually but instead evaluated for those existing, proposed and those in the future. If this project is completed as planned, this could set a precedent for the remaining portions of the Coteau where large tracts of native grasslands still remain, **a valuable endangered ecosystems.**

The Coteau's native grasslands, wetlands and associated wildlife found here are way too valuable to destroy by allowing the Burke Wind Project Area to continue. Please stop this wind project to prevent destruction of our beloved Coteau and its native grasslands and wetlands!

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II. Adverse Health Effects to People Living Near Industrial Wind Turbines

In the Burke County Roadmap to the Future Comprehensive Plan, Goal B (page16) states “Protect Existing Development from Nuisances/Conflicts.”

The World Health Organization (WHO) defines health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”²

Some proponents to industrial wind turbines (IWTs) say that there just are not that many health complaints from people living near IWTs. Although opponents argue to the contrary, if true, one reason for that may be because people who have entered into a lease agreement with a wind company have to abide by a confidentiality agreement, also known as a “gag order” which does not allow them to talk about certain things³ which may include health problems. The other reason may be that proponents just don’t want to listen.

So who better to know about the health effects of the IWTs than the people who actually live or have lived by them?

The sounds produced by IWTs are: (a) the audible components; and (b) the inaudible components, known as infrasound, low-frequency sound and vibrations. Of the sounds that can be heard, people who have lived near IWTs complain about the actual noises made by the turbines, but especially the whooshing. “The pulsating noise, characteristic of wind turbines, can be more intrusive than other types of noise...”⁴ People who live by IWTs talk about how the whooshing never seems to stop and when it does they are always anticipating when it will start up again.

There are many health issues which include, but are not limited to dizziness, nausea, tinnitus, bad headaches/migraines, depression, anxiety, racing pulse, heart palpitations, difficulty with memory and concentration. “Sleep disturbance is by far the most common complaint of families living near wind turbines. Prolonged lack of sleep affects our capacity to learn and negatively affects our memory, temperament, heart health, stress levels, and hormones that regulate growth, puberty and fertility. It can also lead to high blood pressure, changes in heart rate, and an increase in heart disease, as well as weight gain and lowered immunity to disease. These symptoms have regularly been reported by individuals who live near IWTs.”⁵

This family’s experience was similar to others living by IWTs:

² Constitution of World Health Organization, *Basic Documents*, Forty-fifth edition, Supplement, October 2006 [http://www.who.int/governance/eb/who_constitution_en.pdf]

³ Better Plan, Wisconsin, Badgers for a Better Renewable Energy Plan [<http://betterplan.squarespace.com/todays-special/2011/5/28/52911-oh-thats-what-a-wind-lease-gag-order-looks-like-and-co.html>]

⁴ Frey, B.J., and Hadden, P.J., January 2012. Wind Turbines and Proximity to Homes; The Impact of Wind Turbine Noise on Health, a review of literature and discussion of the issues

⁵ Punch, J. and James, R., November 11, 2014, The Negative Health Impact of Noise from Industrial Wind Turbines: The Evidence [<https://hearinghealthmatters.org/hearingviews/2014/wind-turbine-noise-evidence-health-problems>]

“They were noisy immediately, blades ‘whooshing’ around ... if the wind is from the East, or the South, the noise is horrendous. You can’t get away from the noise, where can you go? It’s all around outside and you get it inside the house as well. It’s worst during the night, I have to “bed hop” to get any sleep ... but it doesn’t work ... This noise is like a washing machine that’s gone wrong. It’s whooshing, drumming, constant drumming, noise. It is agitating. It is frustrating. It is annoying. It wears you down. You can’t sleep at night and you can’t concentrate during the day ... It just goes on and on ... It’s torture ... [4 years later] You just don’t get a full night’s sleep and when you drop off it is always disturbed and only like ‘cat napping.’ You then get up, tired, agitated and depressed and it makes you short-tempered ... Our lives are hell.”⁶

One of NextEra’s representatives at a zoning meeting indicated that 47 to 50 decibels was not a cause for concern; however, the World Health Organization in its 2009 Night Noise Guidelines for Europe study⁷ stated:

- | | |
|--------------|--|
| “30 to 40 dB | A number of effects on sleep are observed from this range: body movements, awakening, self-reported sleep disturbance, arousals.... Vulnerable groups (for example children, the chronically ill and the elderly) are more susceptible.... |
| 40 to 55 dB | Adverse health effects are observed among the exposed population. Many people have to adapt their lives to cope with the noise at night. Vulnerable groups are more severely affected... |

For the primary prevention of subclinical adverse health effects related to night noise in the population, it is recommended that the population should not be exposed to night noise levels greater than 40 dB of $L_{\text{night, outside}}$ during the part of the night when most people are in bed. The LOAEL [lowest observed adverse effect level] of night noise, 40 dB $L_{\text{night, outside}}$, can be considered a health-based limit value of the night noise guidelines (NNG) necessary to protect the public, including most of the vulnerable groups such as children, the chronically ill and the elderly, from the adverse health effects of night noise.”

To be able to better understand infrasound and how it affects us, the following is quoted from Nina Pierpont, M.D. and Ph.D.:

“The explanation may be tucked away in the inner ear in a cluster of tiny, interconnected organs with a remarkable evolutionary pedigree. The vestibular organs--the semicircular

⁶Frey, B.J. and Hadden, P.J., February 2007. Noise Radiation from Wind Turbines Installed Near Homes: Effects on Health, With an annotated review of research and related issues

⁷World Health Organization Night Noise Guidelines for Europe
www.euro.who.int/__data/assets/pdf_file/0017/43316/E92845.pdf

canals, saccule, and utricle—function as Mother Nature’s gyroscope, controlling our sense of motion, position, and balance, including our spatial thinking. (Remember when you got carsick as a kid? Or seasick?)

Humans share these enigmatic organs with a host of other backboned species, including fish and amphibians. Some scientists indeed see them as a kind of pan-species master key for an extraordinarily broad range of brain function—amounting to a sixth sense.

One of those functions, it now appears, is to register and respond to the sounds and vibrations (infrasound) we don’t consciously hear, but feel—as from wind turbines. For many people, the response is swift and disastrous.

Sometimes it’s advantageous being a country doctor. Six years ago I began hearing health complaints from people living in the shadow of these gigantic turbines. At first it was merely local and regional, then global. Tellingly, virtually everyone described the same constellation of symptoms. Symptoms that were being triggered, I began to suspect, by vestibular dysregulation.

- (1) Sleep disturbance. Not simply awakened, but awakening in a panic (“flight or fight” response).
- (2) Headache
- (3) Tinnitus
- (4) Ear pressure
- (5) Dizziness
- (6) Vertigo
- (7) Nausea
- (8) Visual blurring
- (9) Tachycardia
- (10) Irritability
- (11) Problems with concentration and memory
- (12) Panic episodes associated with sensations of internal pulsation or quivering, which arise while awake or asleep. (This latter involving other, non-vestibular organs of balance, motion, and position sense.)

None of these people had experienced these symptoms to any appreciable degree before the turbines became operational. All said their symptoms disappeared rapidly whenever they spent several days away from home. All said the symptoms reappeared when they returned home.

Many had supported the wind farm project before all this happened. Now, some became so ill, they literally abandoned their homes—locked the door and left [emphasis added].

Taking my cue from a British country doctor who was reporting identical ‘wind turbine’ symptoms among her patients, I did what clinicians call a case series. I interviewed 10 families (38 people) both here and abroad, who had either left their homes or were about to leave. I found a statistically significant correlation between the telltale symptoms and pre-existing motion sensitivity, inner ear damage, and migraine disorder. Each is a risk factor for what I now christened Wind Turbine Syndrome. My data suggest, further, that young children and adults beyond age 50 are also at substantial risk.

The response from ear, nose, throat clinicians (otolaryngologists and neuro-otologists) was immediate and encouraging. One was Dr. F. Owen Black, a highly regarded neuro-otologist who consults for the US Navy and NASA on vestibular dysregulation.

Another was Dr. Alec Salt at the Washington University School of Medicine, who recently published an NIH-funded, peer-reviewed study demonstrating that the cochlea (which links to the vestibular organs) responds to infrasound without registering it as sound. Infrasound, in fact, increases pressure inside both the cochlea and vestibular organs, distorting both balance and hearing.

Salt thus effectively shatters the dogma that *'what you can't hear, can't hurt you.'* It can indeed hurt you. The growing uproar among wind turbine neighbors testifies to this inconvenient truth."⁸

“The adverse health effects of audible and inaudible noise are substantial. Their effects are underestimated and underappreciated....”⁹ [emphasis added]

The industrial development proposal of wind turbines in the Coteau from the Burke Wind Project does not fulfill Goal B in the Burke County Comprehensive Plan: “Protect Existing Development from Nuisances/Conflicts.”

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⁸Pierpont, N., MD, PhD, [CounterPunch Magazine](#) (10/31/10) “Inconvenient Truths: Wind Turbine Syndrome”

⁹Jeffrey, R.D., Krough C. and Horner, B., Adverse health effects of industrial wind turbines [<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3771715>]

III. Industrial Wind Turbines Adversely Affect Property Values

In the Burke County Roadmap to the Future Comprehensive Plan, Goal A (page 16) states "Protect Property Values."

Reporting on the decrease in property values due to industrial wind turbines is varied, but most do agree that there is definitely a decrease to some degree, depending on the proximity, as follows:

"Real estate and appraisal businesses maintain that wind power does affect property values. Michael McCann of McCann Appraisal, LLC out of Chicago said that 'residential property values are adversely and measurably impacted by close-proximity of industrial-scale wind energy turbine projects to the residential properties,' if they are up to 3.2 km [almost 2 miles] away. They decrease a property's value by 35 to 40 per cent."

"According to the London School of Economics, wind farms decrease property value by up to 12 per cent if the home is within a two km radius and can even affect a property's value up to 14 km [over 8.5 miles] away from the home."

"In fact, the Ontario Superior Court ruled in 2013 that landowners living near large wind farms suffer from lower property values. That court said it decreased property values by 22 to 55 per cent."¹⁰

"Once a lender gets wind of [the fact that there are windmills visible or adjacent to the project] (forgive the pun), they will not fund a mortgage," said Angela Jenkins, a mortgage agent at Dominion Lending Centres...."

"John Leonard Goodwin, who has been a real estate broker for more than 10 years in the Grand Bend, Ont. market, asserted that wind turbines absolutely do affect property values. 'Turbines complicate your property enjoyment, period,' he said. 'That alone spells depreciated value(s).'"

"Turbines should be in remote, unpopulated locations. To all the folks who have turbines on their property: Enjoy your \$18,000 per turbine per year, because you will be giving most of the lease payments back (in much lower property value) when you sell."¹¹

According to Forensic Appraisal Group, Ltd., "Through our research we've interviewed dozens of realtors because they have nothing to gain by taking sides on this debate, making them perfect barometers of the public's perception of wind turbines and their effect on property values. After all, a realtor's job is to sell. If the market says a house with polka dots sells less than a house with a single color scheme, a good realtor adapts to the public's perception of value and discounts the polka dot house accordingly to make the sale."

¹⁰ Joy, Lisa, Stettler Independent, Apr. 3, 2018, Wind turbines affect property values

¹¹ Paterson, Jennifer, 18 Dec 2014, Industry criticizes wind turbine report

So what do most realtors think of a property that once had an attractive viewshed but now looks at the wind turbines? According to our research, an overwhelming majority of realtors says that wind turbines negatively impact property value. They estimate the range of impact to be from a 10% price reduction to being completely unsellable."¹²

Even property which has high-voltage transmission lines could be affected by a decrease of 2.1% to 3.4% in property values.¹³

"Put simply, if you were to buy your future home, given the choice, would you buy where you would have noise, shadow flicker, an industrial view, potential health issues caused by the turbines, and the possibility of a very difficult resale, or would you spend your money elsewhere?"¹⁴

The industrial development proposal of wind turbines in the Coteau from the Burke Wind Project does not fulfill Goal A in the Burke County Comprehensive Plan: "Protect Property Values."

¹² Do Wind Turbines Affect Property Values [forensic-appraisal.com/wind-turbines]

¹³ Chalmers, J.A., The Appraisal Journal, Winter 2012, High-Voltage Transmission Lines and Rural, Western and Real Estate Values

¹⁴ Paterson, Jennifer, 18 Dec 2014, Industry criticizes wind turbine report

IV. Liability Concerns for Landowners

Farmers' Guide to Wind Energy¹

Page 5-8: "...any person who suffers harm caused by a wind facility will likely sue both the landowner and the turbine owner....the farmer should require that...the developer include a provision requiring the developer to carry sufficient liability insurance, to defend the farmer....¹⁸"

Page 5-13: "Tall objects on the landscape can cause interference with television, telecommunications, and radio reception by blocking or reflecting the signals. Commercial-scale wind turbines have been known to interfere with television reception...." [Nexrad radar used by the National Weather Service may lose accuracy for forecasting dangerous weather events.]

Page 5-23: "...if wetlands are damaged during the construction or operation of a wind project, even accidentally, it can have serious consequences for the farmer's future eligibility for federal farm programs...."

Page 5-24 through 26: Under various federal farm programs—Conservation Security Program (CSP), Environmental Quality Incentive Programs (EQIP), Wildlife Habitat Incentives Program (WHIP), Farmland Protection Program (EPP), Grassland Reserve Program (GRP), and Wetlands Reserve Program (WRP)—risks that a farmer might face as a result of using enrolled land for a wind project could include:

- "...loss of eligibility for future payments...
- ... demand for return of all payments...
- ...fines...
- ...and ineligibility for other farm programs."

NDSU Extension Service, 2009 "Wind Turbine Lease Considerations for Landowners"²

"U.S. Department of Agriculture's Farm Service Agency mortgage restrictions: Any land with a FSA mortgage needs an extensive approval process." Page 7

"U.S. Department of Agriculture programs: Approval may be needed from the U.S. Department of Agriculture if the land or landowner is involved in ...: Wetlands, CRP, Commodity program payments, Swampbuster provisions, CSP, EQUIP, WHIP, FPP, GRP, and WRP." Page 7

Morrison, L. 2012. National Wind Watch: Five Questions to ask before signing a wind...

Affect to farm operations: "The lease clearly state your rights to use the land for farming, grazing, development of subsurface minerals, hunting or other uses...."

Affect to farm operations, efficiency and production: turbines and access roads soil compaction and changes field configurations, field-drainage patterns may be altered, grazing land fences, gates may have to change, aerial crop spraying will be an issue, and winter snow removal on access roads may pile snow delaying or preventing planting, or access to pasture with fences destroyed by the snow piles.

Types of wind-power property agreements that can harm a farming/ranching operation when easements in the contract are not carefully reviewed, understood, and stated: access, construction, transmission, wind non-obstruction, overhang or encroachment, noise, covenant, and leases. Some of these provisions can end up giving exclusive property rights to the tenant—the wind developer.

Landowner fears about developer will default or dissolve leaving reclamation to landowner. North Dakota has a relatively weak reclamation law ...”permits turbines to stand idle so long that the company could be long gone.”

Problems with wind lease renewal because landowners may not have a say.

¹Shoemaker, J.A. 2007. Farmers’ Guide to Wind Energy, Legal Issues in Farming the Wind. Farmers’ Legal Action Group, Inc.
Farmers’ Legal Action Group, Inc. (FLAG)
360 North Robert Street, Suite 500
Saint Paul, Minnesota 55101-1589
Phone: 651.223.5400 Email: lawyers@flaginc.org Web site: www.flaginc.org

²Aakre, D, and R. Haugen. 2009. Wind Turbine Lease Considerations for Landowners. NDSU Extension Service, North Dakota State University: 8 pages.

V. Reclamation

We in Burke County have had experience living with the aftermath of a coal mine located 4 miles south of Columbus without reclamation. In 1930 the Baukol-Noonan coal mine opened as one of the first to develop strip mining. The mining operation covered 1040 acres and the vein which was 7-9 feet thick was beneath 30 feet of soil.

Huge hills of earth was tossed up by the giant steam shovels, spreading man made hills and valleys in a fan like design. The dragline created depths often exceeding 40-50 feet which radically changed the topography.

This land was not reclaimed until 1978 following the Improvement in reclamation practices as a result of the 1977 Federal legislation.

The original contract stated reclamation can be accomplished. However it is recognized a good reclamation plan must be developed and implemented for complete success.

This wording could be accurate today related to the Wind Farm planned for Burke County. Where are we going to be in 20 years when it comes time for decommissioning the wind turbines. One big question is how much money is being set aside for the inevitable decommissioning with removing aging, unprofitable and just plain worn out turbines. Are we going to see our country side full of rusty, teetering and fallen wind turbines?

VI. Local Comments and Thoughts

Comment from a resident living in the Project Area: Burke County Planning and Zoning Commission and/or Burke County Commissioners and/or officials did not follow their own December 2016 approved plan. What happened? Highly likely money and gifts were presented to the town and county people who buckled under, betraying their rural residents.

The “Burke County Roadmap to the Future Comprehensive Plan of December 2016” expresses concerns for retaining the rural stature: page 14

“Rural Lands are lands located throughout the County which have very low density development and are used primarily as open space or for agricultural purposes. They are typically located outside of existing residential developments or subdivisions. **These lands should be encouraged to remain rural in character. Uses which promote increased levels of traffic or need increased levels of government support should be encouraged not to develop in rural areas.**”

WHAT HAPPENED AFTER THE COMPLETION OF THIS PLAN? Our county leadership decided to change what they wrote in 2016 and decided for development of rural areas without

rural resident input. This is betrayed of—keep the rural character with limited traffic and to not encourage develop in rural areas--by our Burke County leadership to their rural neighbors!

There are fewer than a dozen county leaders making decisions for rural people who live in the project area. This is poor representation for the affected people. How many people who were supportive of the wind project actually reside in the Project Area?

One county in North Dakota recognizes and values their rural residents. Divide County has established a 3-mile setback of turbines for residencies (Ordinance 7.13.5a).

The unfortunate thing that has happened to rural western North Dakotans who live on the land is it has become common for commercial industries to push their way through because rural is not populated as cities and towns. We are being taken advantage of because we do not have the numbers of people. The agriculture community is what created and keeps North Dakota going economically. To abandon this community and give in to political moves and pushes from industries is abusive to many farmers and ranchers whom may, and have been, adversely affected by such development.

Comment from another resident living in the Project Area: I went online and read the Burke County Roadmap to the Future Comprehensive Plan of December 2016 that expresses concern for retaining rural stature. This is the plan you use as a guideline before you make your decisions. It states:

"Rural Lands are lands located throughout the County which have a very low density development and are used primarily as open space or for agricultural purposes. They are typically located outside of existing residential developments or subdivisions. These lands should be encouraged to remain rural in character. Uses which promote increased levels of traffic or need increased levels of government support should be encouraged NOT to develop in rural areas."

By allowing a wind farm to be built in Burke County it will definitely increase traffic especially during the construction phase of the project. It will also add to the need increased levels of government support. Examples are increased law enforcement, adding to the work load of our volunteer fire departments and ambulance squads. It may also have a huge affect on our county road crews. If NextEra are to be tax payers in Burke County I assume they would have the right to ask for snow removal to get access to their turbines. Some of the roads they will be using are minimum maintenance roads that are never opened from the first snowfall to the thaw in the spring. Will the county and townships be forced to keep these roads open? I have lived near the hills for 52 years and I can tell you that it is a whole new ball game when dealing with snow removal during years when we have had excessive amounts of snow and wind. And I might add, very costly!

Because we are a sparsely populated community we are being taken advantage of by a commercial industry that in my opinion does not care how it will affect our way of life. Several

of the people that signed leases with this company don't actually live in the project area. Many of them live out of the county and even out of the state. Agriculture is the backbone of the economy in this state. It has been in the past and it will be in the future. We need to protect the land and our rural community.

On page 16 of your comprehensive plan under Goals, Objectives and Policies: Goal A is to protect property values. Real estate and appraisal businesses maintain that landowners living near wind farms suffer from lower property values. They may see a decrease of 35 to 40 % in property value.

Also in the Burke County Comprehensive Plan on page 17 it states:

"Public lands are generally existing lands established and sited for a variety of environmental, historical or cultural reasons. They may include parks, wildlife refuges, state-owned land, recreational areas such as golf courses and the like. When considering development near public land, it is important to protect from loss of the CHARACTERISTICS which made the site originally desirable as a public land."

We have waterfowl production areas, a National wildlife refuge, state school lands and state game management areas within the project boundary. If a wind farm is built near these public lands it will change the characteristics of the landscape. People will not be able to enjoy the beauty of a prairie vista without viewing an industrial field of wind turbines.

What this all boils down to is QUALITY OF LIFE VS MONEY. There are 9 or 10 people making this life changing decision for everyone in the county— as well as for future generations. This is a tremendous responsibility. I ask that before you make this decision that you take your time and think it through and not let NextEra push you into making a snap decision. If you were to take a poll or have a vote of the people I believe the citizens of Burke County would choose quality of life over any monetary benefit they may or may not receive.

A yes vote is contrary to everything in your comprehensive plan. Therefore I urge you to vote no on the construction of a wind farm in our county.

Comment from yet another resident living in the Project AreaAs far as I know, wind does not take precedence over the surface owner's rights. People seem to think the wind energy has the same rights as the oil and cannot be told "no," but the surface owner can say "no" to a turbine on the land they own....The other thing I thought of is that the natural resources and wildlife protection are the ideas that have to be emphasized heavily. If we can get across that it is important to protect this area as if it is as valuable as a national park or a state park....The county and the state have to think about being good stewards to preserve our native grasslands, our wildlife, our teepee rings and the history of this area.

Other thoughts

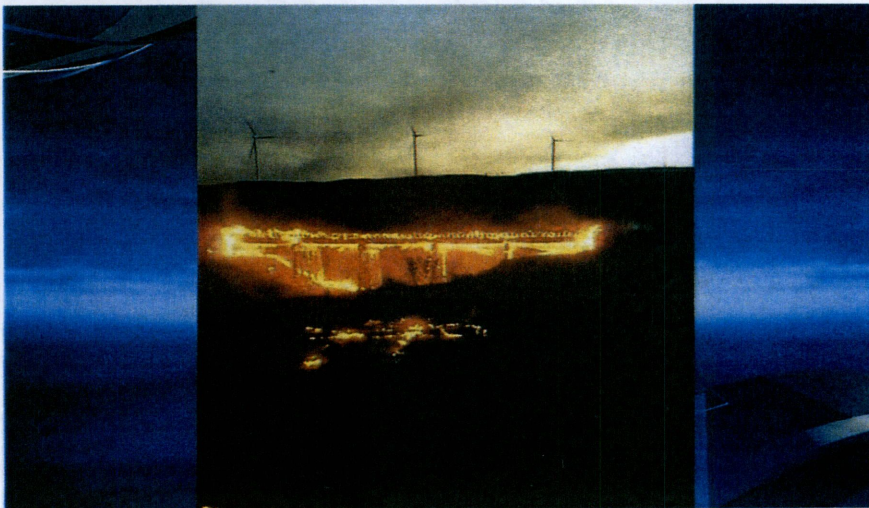
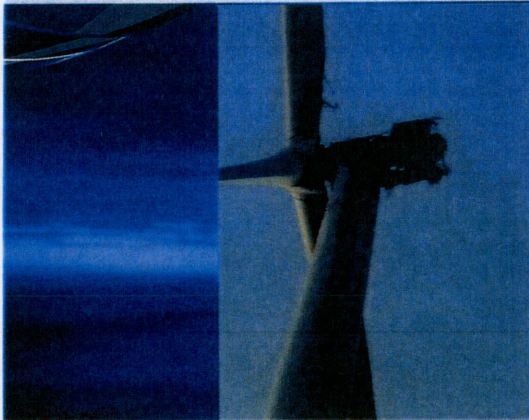
Damage to lands when trenching for the collection lines occurs. When these trenching machines split open the soils for line placement, there will be rocks hit. This leaves upturned topsoil and even holes where the rocks once were. This increases the weed infestation problems and increases the chances of cattle and horses getting injured by stepping into one of these holes. It will also cost the ranching community time and money to overcome damages.

VII. Issues to Contemplate

Fire Danger

This happened in Arlington, Oregon on August 2, 2018. A wind turbine caught fire, sparking a 2,000-acre wildfire. Two railroad bridges burned before it could be put out. Article by KATU.com Staff, Friday 3rd 2018.

ARLINGTON, Ore. — A wind turbine caught fire Thursday, August 2, 2018 sparking a 2,000-acre wildfire, according to the North Gilliam Rural Fire Protection District. The turbine was on Rattlesnake Road and, according to firefighters, the fire jumped Highway 19, closing the road. Firefighters got the fire out but not before two railroad bridges were burned. No evacuations were needed.



A railroad bridge burns Thursday night, Aug. 2, 2018 in Arlington, Oregon. Firefighters said a wind turbine caught fire, sparking a

Jobs

How many construction and/or permanent jobs will actually be awarded to "locals", or will NextEra bring in all their "own" people or people from a different state or local?

Please consider reading this website: <http://gatehousenews.com/windfarm/home>

It contains information on all aspects of wind farm industries tactics and health effects. Basic headings are:

WIND INDUSTRY DENIES CLAIMS

A BOOMING INDUSTRY

INCENTIVES AND MANDATES

Two factors fueled the boom.

FORCED TO MOVE

Hundreds of residents nationwide have claimed industrial wind turbines make them sick. Several families say the structures have forced them from their homes....As the wind industry continues to expand, so do its critics.

SHADOW FLICKER

She developed nausea, headaches and vertigo from the persistent shadow flicker infiltrating nearly every room in the house.

VIBRATIONS

At first it was the noise – loud whistling and whooshing sounds. But soon they could feel thumping vibrations that resonated through the walls of their home like bass-heavy music from a distant, passing car....

HEALTH IMPACT DEBATE

That annoyance is “statistically related” to reports of migraines, tinnitus, dizziness and high blood pressure.

LIKE MOTION SICKNESS

these acoustic impulses – or low-frequency sound waves – stimulate parts of the inner ear responsible for balance, motion and spatial orientation and that they provoke symptoms similar to motion sickness

DRAGGED THROUGH THE MUD

But some wind farm residents who spoke out about their problems said the industry belittles them. It dismisses their complaints as unfounded or labels them troublemakers, multiple people said. ...It has silenced many of their neighbors whom they said suffer the same symptoms but fear the consequences of speaking out.

MISLEADING TACTICS

Some landowners solicited by wind farm developers claim the companies used misleading statements in their bids to secure land rights for the projects. ...Among the statements these landowners cited: That they should sign agreements because their neighbors already did; that the wind turbines would be quiet and unobtrusive; that they could exit the agreement at any time. Several of those who signed said they now regret doing so.

WHO THE CONTRACTS FAVOR

The agreements work in the favor of companies in almost every sense, according to several attorneys who have reviewed these types of documents.

WIND INDUSTRY DENIES CLAIMS

- Wind industry officials have denounced people who complain about these symptoms, calling them misinformed or “anti-wind.” Some wind companies offer money or other concessions to frequent complainers, often in exchange for silence and a waiver for turbine-related claims. “I call it a shut-up clause,” said Jim Miller of South Dakota, who refused to sign such an agreement with Florida-based NextEra....Forced to moveAs the wind industry continues to expand, so do its critics. ... Hundreds of residents nationwide have claimed industrial wind turbines make them sick. Several families say the structures have forced them from their homes.