DEPARTMENT OF NATURAL RESOURCES

Minnesota Department of Natural Resources
Division of Ecological & Water Resources
500 Lafayette Road
St. Paul, MN 55155-4040

January 31, 2018 [Electronic Submittal]

Mr. Daniel Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul MN 55101

RE: In the Matter of the Application of Palmer's Creek Wind Farm LLC for a Large Wind Energy Conversion System Site Permit for the 44.6 MW Palmer's Creek Wind Project in Chippewa County, Minnesota

PUC Docket Number: IP-6979/WS-17-265

Dear Mr. Wolf,

The Minnesota Department of Natural Resources (DNR) respectfully submits the following comments in response to the *Avian and Bat Protection Plan* (ABPP) filed by Palmer's Creek Wind Farm on January 11, 2018. The purpose of this letter is to provide direction so that the ABPP can be revised before the site permit is issued. The DNR's earlier letter of August 8, 2017 (attached) provided similar comments. Our agency also reiterates the high risk level of the project site.

Page 20 indicates: "The MNDNR has determined the project is "high risk" for bats. Because of the high-risk status, additional years (3) and intensity (4 times per week) of fatality monitoring will occur." Standard practice is for the ABPP to include the protocol framework (start and end date, cleared plots, road and pad, trials for searcher efficiency and carcass persistence, etc.) that will be used for the monitoring. Issues have occurred on past wind projects permitted by the Public Utilities Commission (Commission) when the protocol was not outlined in the ABPP.

Page 31 indicates: "Feathering the blades when the wind is below the manufacturer's cut-in speed would reduce bat fatalities on the order of 70 percent." The ABPP did not provide any references or information to support this claim. The American Wind Energy Association has indicated that bat fatalities could be reduced by as much as 30 percent (press release attached). The DNR's position is that feathering up to the manufacturer's recommended cut-in speed has potential to reduce bat fatalities by 25-35 percent because the effectiveness will vary from project to project. The claim of a 70

percent reduction is an exaggeration when only feathering up to the manufacturer's recommended cut-in speed. This is especially true because this project will only be feathering to 3.0 m/s.

If bat fatality monitoring results in high bat fatality estimates, then our agency will recommend adaptive management. Adaptive management can include curtailment above the manufacturer's recommended cut-in speed. The ABPP did not include an Adaptive Management Section. It is a standard practice for an ABPP to include this information.

Page 31 indicates: "In total, if the net effect of accounting for the known high bias in habitat quality and the potential high bias due to improved data capture of new technology is taken into account the Palmer's Creek site could have an adjusted BPDN < 10. Consequently, bat mortality from the construction and operation of the proposed facility is likely within the normal range of such facilities in Minnesota (NCE 2017)." This statement is based on speculation. The reality is that the BPDN at 143.93 is extremely high for southern Minnesota when compared to other projects and indicates a potential for high bat fatalities.

Page 31 also indicates: "A corrected bat passes per detector night (BPDN) of between 50.7 and 34.8 is high for pre-construction surveys of potential wind energy sites in Minnesota, and is in the ballpark for what might be expected of the best bat habitat (Johnson et. Al. 2003)." Clearly, the BPDN at 143.93 is very high when you use the developer's cited reference. Locating a commercial wind project directly upslope from habitat associated with the Minnesota River Valley presents a high risk of significant bat fatalities.

The Pleasant Valley wind project included a table that compares bat activity estimates for the Midwest to bat fatality estimates (attached). The high end of bat activity estimates listed in the table are close to 10 BPDN, while the Palmer's Creek Wind project is 143.93. Some of the increase can be attributed to differences in bat detectors used in data collection, but what the difference is among different detectors is largely unknown. Also note that fatality estimates generally increase as bat activity estimates increase. In many instances, the statistical analysis does not indicate a correlation, but based on this table, increased bat activity generally indicates higher bat fatalities.

Based on the DNR's review of the Palmers Creek Wind ABPP, our agency finds the ABPP to be incomplete as it is inconsistent with projects that have been recently permitted by the Commission. The ABPP needs to be revised as follows: 1) include an adaptive management section, 2) include a fatality monitoring protocol framework, and 3) remove the speculative language. The ABPP should be revised and resubmitted. Due to the ongoing issues associated with this project, the ABPP should be approved prior to the decision on the site permit.

The DNR continues to be concerned and disappointed that Palmer's Creek Wind did not pursue additional wind leases farther from the Minnesota River Valley to locate turbines. The first step to developing an environmentally sensitive wind project is proper siting of the project area and turbine

layout. Siting turbines 5, 9, 10, and 12 farther from the Minnesota River Valley could reduce the risk of higher avian and bat fatalities. Our agency clearly identified the option of signing up additional leased areas and including alternate turbine locations during preliminary meetings and in our comment letters (August 8, 2017 letter attached). To our knowledge, Palmer's Creek Wind has not pursued these siting options.

The U.S. Environmental Protection Agency and the U.S. Fish and Wildlife Service also expressed similar concerns about locating turbines near the Minnesota River in their comments on the Environmental Assessment for the transmission line associated with the project (letters attached). The issues associated with these specific turbine locations remains unaddressed. The DNR recommends that the Commission carefully consider the multi-agency concerns that have been raised in these state and federal agency letters in their decision of whether or not to grant the site permit.

The DNR looks forward to further coordination with Palmer's Creek Wind Farm to address project concerns. If you have any questions, please contact me at cynthia.warzecha@state.mn.us or 651-259-5078.

Sincerely,

Cynthia Warzecha

Cynthia Warzecha
Principal Planner

Enclosures: Minnesota Department of Natural Resources comment letter (Aug. 8, 2017)
American Wind Energy press release (Sept. 3, 2015)
Pleasant Valley Wind Bat Acoustic Survey Results (Nov. 26, 2012)
U.S. Fish and Wildlife Service - Draft EA comment letter (Nov. 15, 2017)
U.S. Environmental Protection Agency - Draft EA comment letter (Nov. 15, 2017)

EC: Cezar Panait, Minnesota Public Utilities Commission
Richard Davis, Minnesota Department of Commerce
Mike Rutledge, Fagen Engineering
ERDB 20160322

DEPARTMENT OF NATURAL RESOURCES

Minnesota Department of Natural Resources
Division of Ecological & Water Resources
500 Lafayette Road
St. Paul, MN 55155-4040

August 8, 2017 [Electronic Submittal]

Mr. Daniel Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul MN 55101

RE: In the Matter of the Application of Palmer's Creek Wind Farm LLC for a Large Wind Energy Conversion System Site Permit for the 44.6 MW Palmer's Creek Wind Project in Chippewa County, Minnesota

PUC Docket Number: IP-6979/WS-17-265

Dear Mr. Wolf,

The Minnesota Department of Natural Resources (DNR) respectfully submits the following comments in response to the *2017 Field Season - Interim Acoustic Bat Report* and the *Wildlife Monitoring Report* filed by Palmer's Creek Wind on July 31, 2017. Our agency appreciates the preparation of these reports. However, both reports contain several inaccuracies and lack key information. The purpose of this letter is to provide information that can be used to revise the reports so the preparation of the Avian and Bat Protection Plan (ABPP) and the issuance of a site permit are not delayed. The DNR's comments also reiterate the high risk level of the project site and suggest measures to reduce the risk level.

<u>2017 Field Season - Interim Acoustic Bat Report</u>

1. Tables 2 through 5 need correction. Tables 2 through 5 are incorrect as the big brown, little brown, tri-colored (formerly eastern pipistrelle), and northern long-eared bat are species of "special concern" in Minnesota. The tables list these species as "least concern." In addition, Table 4 occurs twice in the document.

2. The report needs to include bat passes per detector night (BPDN). The standard in Minnesota is to include the BPDN in all bat acoustic reports because this is a standard measure used to assess bat activity for all projects. Our agency has commented on this same issue during prior

meetings. The bat activity in the project area is high based on the 15,511 sound files classified as bat detection passes as indicated in the report.

3. BPDN needs to be determined based on how many days the detectors are fully functional. The report does not include any information on how many detector days the units were working correctly. The prior year of bat data collection included a significant number of days that had detector failure. The raw data needs to be provided as an appendix for each detector for each day of operation/failure. BPDN is based on the number of days the detectors are fully functioning.

4. BPDN is based on first and last call heard across all of the detectors. This ensures that the bat active season has started and provides a more consistent basis for determining BPDN. When BPDN is determined using data collected before or after bats are active, the zero call days bias the BPDN downward and does not provide for comparison across projects.

5. The report concludes that the towers near the river present the greatest level of risk because the habitat is more diverse and will have an increased potential for foraging behavior, roosting, etc. Our agency agrees. However, bat monitor 3, which is located farther from the river, had the highest number of bat passes (3,231). The high number of bat passes could be due to bats using the ditch that has a Reinvest in Minnesota (RIM) easement associated with it as a travel corridor from the Minnesota River habitat to the habitat associated with, and adjacent to, Sween Wildlife Management Area. WTG 1 and WTG 2 are near this area and, due to the higher bat passes, are indicative of a higher risk to bats.

6. The text on page 13 needs to be modified to correctly characterize the status of the bat species that have been documented. Page 13 states: "The project seems to impact primarily common and representative species of bats, but not a large number of rare and/or sensitive species. This fact alludes to a moderate risk in a general worst case." The "common and representative species of bats" include four state-listed species of special concern. The four state-listed species of special concern are cave dwelling bats that are not only experiencing high cumulative fatalities from commercial wind projects, but are also experiencing impacts from white-nosed syndrome. In addition, the migratory tree bats are experiencing a high number of cumulative fatalities from commercial wind projects in southern Minnesota.

7. The project site is high risk based on the location to the expansive habitat associated with the Minnesota River that has high bird and bat use. In addition, bat acoustic data indicates high bat activity in the project area. Our agency will consider reducing the risk level only if WTG 5, 9, 10, and 12 are located farther from the Minnesota River, are located to another location, or are removed from the project. One option is to alter the project boundary and sign new landowners into wind easements to locate the turbines at suitable locations. In our March 10, 2016 letter, the DNR did recommend that 2-3 alternate turbine locations be included in the layout to provide an opportunity to avoid or minimize potential impacts to natural resources. It

is standard practice for project developers to include numerous alternate sites to work around issues that arise during project development and permitting.

8. The ABPP needs to include detailed bat monitoring protocols for high risk sites. Based on the current layout, the ABPP would also need to specify that WTG-1, 2, 5, 9, 10, 12 are included for monitoring. Please be advised that if the bat fatality estimates are high, our agency will recommend curtailment above the manufacturer's recommended cut-in speed.

Wildlife Monitoring Report - Section 3.1.5 Sensitive Species Observation

The state status of the bald eagle is incorrect; the species is no longer state-listed. While the bald eagle is not protected under the federal Endangered Species Act, it is federally protected under the Migratory Bird Treaty Act and under the Bald and Golden Eagle Protection Act. It should also be noted that several of the bird species documented are Species in Greatest Conservation Need as identified in Minnesota's State Wildlife Action Plan (http://www.dnr.state.mn.us/mnwap/index.html).

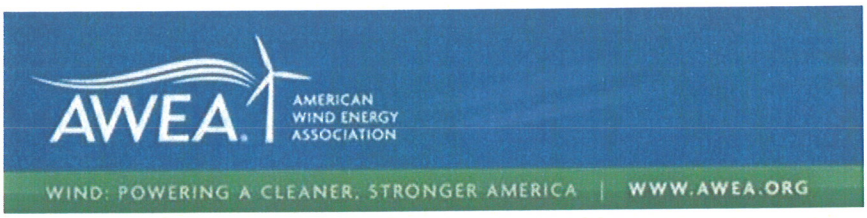
The DNR looks forward to further coordination with Palmer's Creek Wind Farm to address project concerns. If you have any questions, please contact me at cynthia.warzecha@state.mn.us or 651-259-5078.

Sincerely,

Cynthia Warzecha

Cynthia Warzecha
Principal Planner

EC: Michael Kaluzniak, Minnesota Public Utilities Commission
Richard Davis, Minnesota Department of Commerce
Mike Rutledge, Fagen Engineering
ERDB 20160322



For immediate release
Thursday, September 3, 2015

Contact: David Ward
dward@awea.org, 202-425-2065

Wind energy industry announces new voluntary practices to reduce overall impacts on bats by 30 percent

Washington, D.C., September 3, 2015 — The U.S. wind energy industry announced, on the eve of National Wildlife Day, a best management practice establishing a new voluntary operating protocol, which is expected to reduce impacts to bats from operating wind turbines by as much as 30 percent.

The agreement, developed by the American Wind Energy Association (AWEA) with the initial support of 17 of its member companies, involves wind operators' voluntarily limiting the operations of turbines in low-wind speed conditions during the fall bat migration season, when research has shown bats are most at risk of collision. The new protocols are based on over 10 years of research by the Bats and Wind Energy Cooperative (BWEC) and others.

"The adoption of this protocol to reduce impacts to bats is a continuation of our legacy of care for wildlife and the environment," said Tom Kiernan, CEO of AWEA. "American wind power is strongly committed to producing one of the safest and cleanest forms of energy, for people and wildlife."

"As we continue to strive to make the wind industry's impacts as low as possible, we hope this step can serve to encourage other energy industries, and all businesses for that matter, to proactively take steps to reduce their impacts on the environment in their respective communities," continued Kiernan.

Despite the potential collective loss of millions of dollars in electric generation, the U.S. wind energy industry has voluntarily committed to changing how turbines are operated during the bats' fall migration season, slowing blade rotations to fewer than 1-3 revolutions a minute, depending on blade length, thereby reducing the risk of collision. On-the-ground research over the past decade at a number of operating wind farms has shown that will significantly reduce the collision risk for bats in low wind speed conditions when they are most at risk. The expected reduction of overall bat impacts was calculated with data from the research by BWEC and the conservation and academic communities who worked with the industry to identify solutions.

"That this industry-wide best practice has been voluntarily adopted demonstrates how the U.S. wind energy industry holds itself to a higher standard," said John Anderson, Senior Director, Permitting Policy and Environmental Affairs, for AWEA. "Our industry values all wildlife and habitat. By proactively employing this measure to reduce our already low environmental impacts further, consumers can have even more confidence in buying clean, affordable, and carbon-free wind energy."

Representatives from the conservation community applauded the action taken by the industry:

- "The implementation of this industry-wide practice is an important step and demonstrates how far the wind energy industry has come on the issue of bats. We believe this will, on average, reduce bat fatalities significantly among participating facilities across the country. We appreciate the industry's efforts to protect species of bats that otherwise would have no protection under current federal law." – Andrew Walker, Executive Director, Bat Conservation International

- "Through common sense practices and a proactive spirit by the wind industry, it's clear we can both move the nation toward a clean energy future, and protect wildlife." – Collin O'Mara, President and CEO, National Wildlife Federation

- "We applaud the U.S. wind energy industry's decision to voluntarily and significantly reduce its bat impacts. Growing clean energy here at home is one of the best ways we can balance growing a competitive economy with protecting the environment. Building a more diverse energy mix that includes wind energy is one of the best ways the U.S. can cost-effectively cut carbon pollution, keep the lights on for American families and businesses, and protect our treasured landscapes and wildlife." – Rob Sisson, Executive Director, ConservAmerica

- "This action by the wind industry to protect bats is a truly commendable example of corporate responsibility and proactive stewardship. The ecological and economic importance of bats, which can eat their body weight in insects each night, cannot be overstated. They save farmers more than $3.7 billion per year in reduced crop damage. We applaud the wind industry's continued commitment to minimizing impacts and safeguarding wildlife." – David Jenkins, President, Conservatives for Responsible Stewardship

- "Congratulations to wind industry leaders for taking proactive steps to address impacts of wind energy on bats. AWWI looks forward to continuing to collaborate with its partners in the science, industry, and conservation communities to find effective ways to minimize and mitigate these impacts." Abby S. Arnold, AWWI Executive Director

U.S. wind farms benefit wildlife by helping to keep our environment clean, as wind energy emits no air or water pollution, requires no fuel, uses no water in the production of power, and creates no hazardous or radioactive waste. Wind energy also acts as a leading solution to climate change, the greatest threat to all wildlife, by greatly reducing carbon dioxide emissions and other pollutants in nearly every state. It avoids 126 million metric tons of carbon dioxide a year in the U.S. – or 26 million cars' worth of carbon emissions.

Today's announcement comes on the eve of the annual National Wildlife Day, this year on Friday, Sept. 4. National Wildlife Day was created as one way to "help preserve the planet's animals and educate the public about conservation." It is sponsored by Animal Planet, Roots & Shots, Australia Zoo Worldwide, and the International Fund for Animal Welfare.

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AWEA is the national trade association of the U.S. wind energy industry, with 1,000 member companies, including global leaders in wind power and energy development, wind turbine manufacturing, component and service suppliers, and the western hemisphere's largest wind power trade show, the AWEA WINDPOWER Conference & Exhibition, which takes place next in New Orleans, LA, May 23-26, 2016. AWEA is the voice of wind energy in the U.S., promoting renewable energy to power a cleaner, stronger America. Look up information on wind energy at the AWEA website. Find insight on industry issues at AWEA's blog Into the Wind. Join AWEA on Facebook. Follow AWEA on Twitter.

Pleasant Valley Wind
Bat Acoustic Survey Results
November 26, 2012

Appendix A. Wind energy facilities in North America with comparable activity and fatality data for bats, grouped by geographic region.

Wind Energy Facility	Bat Activity Estimate[A]	Bat Activity Dates	Fatality Estimate[B]	No. of Turbines	Total MW
Pleasant Valley, MN (this study)	**21.81**				
	Midwest				
Cedar Ridge, WI (2009)	9.97 [C,D,E]	7/16/07-9/30/07	30.61	41	67.6
Blue Sky Green Field, WI	7.7 [F]	7/24/07-10/29/07	24.57	88	145
Cedar Ridge, WI (2010)	9.97 [C,D,E]	7/16/07-09/30/07	24.12	41	68
Forward Energy Center, WI	6.97	8/5/08-11/08/08	18.17	86	129
Top of Iowa, IA (2004)	35.7	5/26/04-9/24/04	10.27	89	80
Crystal Lake II, IA			7.42	80	200
Top of Iowa, IA (2003)			7.16	89	80
Kewaunee County, WI			6.45	31	20.46
Ripley, Ont. (2008)			4.67	38	76
Winnebago, IA			4.54	10	20
Buffalo Ridge, MN (Phase II; 2001/Lake Benton I)	2.2 [D]	6/15/01-9/15/01	4.35	143	107.25
Buffalo Ridge, MN (Phase III; 2001/Lake Benton II)	2.2 [D]	6/15/01-9/15/01	3.71	138	103.5
Crescent Ridge, IL			3.27	33	54.45
Buffalo Ridge, MN (Phase III; 1999)			2.72	138	103.5
Buffalo Ridge, MN (Phase II; 1999)			2.59	143	107.25
Morraine II, MN			2.42	33	49.5
Buffalo Ridge, MN (Phase II; 1998)			2.16	143	107.25
Prairie Winds (Minot), ND			2.13	80	115.5
Grand Ridge, IL			2.10	66	99
Buffalo Ridge, MN (Phase III; 2002/Lake Benton II)	1.9 [D]	6/15/02-9/15/02	1.81	138	103.5
Buffalo Ridge, MN (Phase II; 2002/Lake Benton I)	1.9 [D]	6/15/02-9/15/02	1.64	143	107.25
Elm Creek, MN			1.49	67	100
Wessington Springs, SD			1.48	34	51
NPPD Ainsworth, NE			1.16	36	20.5
Buffalo Ridge, MN (Phase I; 1999)			0.74	73	25
Buffalo Ridge I, SD (2010)			0.16	24	50.4
	Rocky Mountains				
Summerview, Alb. (2008)	7.7 [D]	07/15/06-07-09/30/06-07	11.42	39	70.2
Judith Gap, MT			8.93	90	135
Foote Creek Rim, WY (Phase I; 1999)			3.97	69	41.4
Foote Creek Rim, WY (Phase I; 2001-2002)	2.2 [D,E]	6/15/01-9/1/01	1.57	69	41.4
Foote Creek Rim, WY (Phase I; 2000)	2.2 [D,E]	6/15/00-9/1/00	1.05	69	41.4
	Southeast				
Buffalo Mountain, TN (2005)			39.70	18	28.98
Buffalo Mountain, TN (2000-2003)	23.7 [E]		31.54	3	1.98
	Southern Plains				
Barton Chapel, TX			3.06	60	120
Buffalo Gap II, TX			0.14	155	233
Buffalo Gap I, TX			0.10	67	134

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Ecological Services
Minnesota-Wisconsin Field Office
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November 15, 2017

Western Area Power Administration
6th Floor, Attn: Christina M. Gomer
2900 4th Ave North
Billings, MT 59101
FWS TAILS # 03E19000-2018-CPA-0001

Dear Ms. Gomer,

Thank you for the opportunity to comment on the draft Environmental Assessment (DEA) for the proposed Palmer's Creek Wind (LLC) project in Chippewa County, MN. The US Fish and Wildlife Service (the Service) provides comments on activities described in the DEA that it may affect Service interest lands, threatened, endangered, or species of concern, migratory birds, and bald eagles. The following comments are being provided pursuant to the Endangered Species Act (ESA), Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, and Fish and Wildlife Act of 1956. We highlight we did not reach the same conclusions for eagle and migratory bird risk as the DEA, and recommend further coordination with the Service to resolve this issue.

The Service recommends Palmer Creek Wind follow both the Final Land-Based Wind Energy Guidelines (https://www.fws.gov/ecological-services/es-library/pdfs/WEG_final.pdf) as well as the Eagle Conservation Plan Guidance (ECP) (https://www.fws.gov/migratorybirds/pdf/management/eagleconservationplanguidance.pdf) to minimize impacts to migratory birds, eagles, threatened and endangered species, and Fish and Wildlife Service Interest Lands. The project proponent is in the process of following these guidelines for preconstruction analysis. The Service recommends these guidelines area also followed for post-construction mortality monitoring and any necessary adaptive management. The Service makes the following recommendations for this proposed project:

Impacts to Service Interest Lands

There are three Service Interests Lands within two miles of the project boundary: Hawk Creek and Wang WPA, and Hinz FSA. These are managed by Morris and Litchfield Wetland Management District. We recommend considering the waterfowl and migratory bird corridors that may exist between the proposed project and these units, and avoid placing turbines directly in these corridors. Should turbines potentially impact migratory birds from these areas, we

recommend operational minimization measures to reduce mortalities. The refuge managers for these properties are copied on this letter; we would like to include these managers in future discussions of minimization of migratory bird impacts.

Impacts to Migratory Birds

The Migratory Bird Treaty Act (16 U.S.C. 703-712; MBTA) implements four treaties that provide for international protection of migratory birds. The MBTA prohibits taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. Bald and golden eagles are afforded additional legal protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d). Unlike the Endangered Species Act, neither the MBTA nor its implementing regulations at 50 CFR Part 21, provide for permitting of "incidental take" of migratory birds.

Proximity to Minnesota River

The proposed project overlaps with the Upper Minnesota River Valley Important Bird Area (IBA), and there are multiple turbines within 0.5 miles from the Minnesota River. The Bird and Bat Conservation Strategy (BBCS) attached to the DEA states that important wildlife areas will be avoided to minimize direct impact to birds and bats. Because this river serves as an important migratory bird corridor, the Service recommends increasing turbine setback from the river as much as possible (<0.5 miles). We also recommend robust post-construction mortality monitoring, and using this data to inform operational minimization measures to reduce the direct impact to migratory birds (collision), especially during spring and fall migration periods.

Birds of Conservation Concern

The Service's Information for Planning and Consultation (IPaC, https://ecos.fws.gov/ipac/) has identified the following migratory birds of conservation concern within the proposed project boundary:

American Bittern (*Botaurus lentiginosus*)
American Golden-plover (*Pluvialis dominica*)
Black Tern (*Chlidonias niger*)
Black-billed Cuckoo (*Coccyzus erythropthalmus*)
Bobolink (*Dolichonyx oryzivorus*)
Buff-breasted Sandpiper (*Tryngites subruficollis*)
Dunlin (*Calidris alpina hudsonia*)
Franklin's Gull (*Leucophaeus pipixcan*)
Hudsonian Godwit (*Limosa haemastica*)
Lesser Yellowlegs(*Tringa flavipes*)
Marbled Godwit (*Limosa fedoa*)
Nelson's Sparrow (*Ammodramus nelson*)
Red-headed Woodpecker (*Melanerpes erythrocephalus*)
Ruddy Turnstone (*Arenaria interpres morinella*)
Semipalmated Sandpiper (*Calidris pusilla*)
Short-billed Dowitcher (*Limnodromus griseus*)
Willet (*Tringa semipalmata*)

The Service recommends the DEA address measures to avoid and minimize impacts to these species. Information on the Service's identified list of Birds of Conservation Concern (and ways to minimize impacts) can be found: https://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php.

Lighting and Tower Design

The Service recommends any necessary lights on buildings, turbines or meteorological (met) towers be compliant with the 2016 Federal Aviation Administration (FAA) guidance on tower lighting, including the use of flashing and white lights, and to restrict the use of guy wires on met towers. These measures have been shown to reduce migratory bird collision by as much as 70%. More information about this guidance can be found:

https://www.faa.gov/news/updates/?newsId=85204
https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/communication-towers.php
https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_70_7460-1L_.pdf
https://www.fws.gov/migratorybirds/pdf/management/fccopportunitiestoreducebirdcollisions.pdf (enclosed)

Impacts to Eagles

Although bald and golden eagles were delisted from the Endangered Species Act on August 8, 2007, they are protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act (Eagle Act). The Service has been coordinating with the project proponent on assessing the proposed project's potential risks to bald and golden eagles. This assessment includes implementation of pre-construction eagle use monitoring and nest surveys. This coordination is on-going; the Service has recommended developing an Eagle Conservation Plan (ECP) to assess the proposed project's impact to eagles, and to determine if an eagle take permit is recommended. However, the Service offers these conservation recommendations to minimize eagle impacts from the proposed project:

- The project proponent has identified several eagle nests near the project boundary; the Service recommends placing turbines outside of projected eagle territories (estimated by the ½ Mean Internest Distance (MID) of known nests within a 10-mile radius). The Service has not generated estimated territories and cannot state if any proposed turbines locations are within the ½ MID.
- Figure 4 of Appendix B of the DEA lists a raptor nest on the western boundary of the project as a red-tailed hawk nest; however this nest was identified by the MN DNR Heritage Database and the Project's BBCS as an active bald eagle nest (located T116N R40W Section 11). We recommend the DEA be updated.
- The Service recommends two years of pre-construction eagle use data to adequately determine eagle risk; this project has collected one year of eagle use data.
- If the project wishes to apply for an eagle take permit, pre-construction surveys will need to comply with the data collection requirements under the 2016 Eagle Incidental Take Permit Regulations (found https://www.gpo.gov/fdsys/pkg/FR-2016-12-16/pdf/2016-29908.pdf)
- The DEA states the project proponent has estimated the projected eagle fatalities for this project; the project proponent has not discussed this risk assessment with the Service, and we have not had an opportunity to analyze the raw data.

- Section 4.6.3.1. estimates bald eagle fatalities to be 0.0002/year, or 0.006 eagle fatalities over the life of the 30-year project. The Service ran our Collision Risk Model (CRM) with the following inputs (taken from the DEA):

Number of Turbines	18
Survey Hours	160
Hazardous Area	58 m radius
Eagle Minutes	87

The preliminary outputs from this modeling run was a projected take of 1.954 eagles/year (80^{th} quantile, 1.327 mean). (Mean exposure = 0.271, SD = 0.0289) This is 10 eagles every 5 years, or 60 eagles over the life of the project. Due to the discrepancies between the DEA projected take and the Service's initial model runs, we recommend further coordination and data analysis.

Impacts to Listed Species

Northern Long Eared Bat
The Northern Long-Eared bat (NLEB) (*Myotis septentrionalis*) has potential to occur in Chippewa County, and may occur within the project boundary. The Service currently does not have records of Northern Long-eared bats within the vicinity of the project, and the closest hibernaculum over <50 miles away. Suitable habitat exists for NELB within the project area (specifically along riparian areas); the Service recommends a 1,000 foot setback from wooded areas where NLEB may be foraging. This minimization measure will also benefit other bat species. Currently the NLEB is covered under the Final 4(d) rule, which states that take of NLEB by wind facilities is not prohibited. If the status of the NLEB is upgraded to endangered, or the 4(d) rule is removed, any take of NLEB by the operational project would be prohibited. Should prohibitions around NLEB take change, the Project Proponent should coordinate with the Service to determine project risk and if any additional measures are recommended.

Other Bat Species
Should any other bat species become federally protected during the life of this project (and occurs within the project area), we recommend Palmer Creek Wind coordinate with the Service to determine relative risk and potential minimization measures.

Prairie Butterfly Species
Both Dakota Skipper (*Hesperia dacotae*, Threatened) and Poweshiek skipperling (*Oarisma poweshiek*, Endangered) have the potential to occur within Chippewa County. However, there are no known records of either species and no designated Critical Habitat within the proposed project boundary. The Service recommends any revegation work post-construction include the use of native and pollinator-friendly plants.

Thank you for the opportunity to comment on the Draft Environmental Assessment. Please contact us with any questions or concerns; and we look forward to working with you on further assessment of eagle and migratory bird risk. Please contact Mags Rheude (Margaret_rheude@fws.gov, 952-252-0092 x202) at our office with project inquiries.

Sincerely,

Peter Fasbender
Project Leader, Minnesota-Wisconsin Field Office

Enclosure

Cc (email only): Louis Hanebury, WAPA
Richard Davis, Department of Commerce
Kevin Mixon, MN DNR
Cynthia Warzecha, MN DNR
Bruce Freske, Morris Wetland Management District
Scott Glup, Litchfield Wetland Management District

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON DC 20554

January 6, 2017

Opportunities to Reduce Bird Collisions with Communications Towers While Reducing Tower Lighting Costs

On December 4, 2015, the Federal Aviation Administration (FAA) revised its advisory circular that prescribes tower lighting to eliminate the use of L-810 steady-burning side lights on towers taller than 350 ft. Above Ground Level (AGL). *See* http://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_70_7460-1L.pdf. On September 28, 2016, the FAA released specifications for and made mandatory flashing L-810 lights on new towers 150-350 ft. AGL. *See* http://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5345-43GH.pdf. While the FAA made these changes to reduce the number of migratory bird collisions (by as much as 70%), extinguishing steady-burning side lights also reduces maintenance costs to tower owners. Implementing flashing lighting on towers that received an FAA Study prior to the release of the new advisory circular can be achieved through a simple application process with the FAA and the Federal Communications Commission (FCC).

The FAA and FCC recognize that:

- Birds are attracted to non-flashing red lights, such as L-810 steady-burning side lights; and
- Birds are much less attracted to flashing lights on towers, such as L-864 and L-865 lights.

A "lighting deviation" can be used to extinguish or eliminate L-810 steady-burning side lights from an existing registered tower taller than 350 ft. AGL and to reprogram L-810 steady-burning side lights to flash on registered towers 150-350 ft. AGL.[1] The following steps are necessary:[2]

1. File a Marking and Lighting study electronically with the FAA (https://oeaaa.faa.gov/oeaaa/external/portal.jsp) requesting the elimination or omission of steady-burning lights (L-810) or requesting that steady-burning lights flash with Form 7460-1, Notice of Proposed Construction or Alteration. Designate structure type: "Deviation from Red Obstruction Light Standards."

2. Once the FAA has approved the request and assigned a FAA Study Number, file Form 854 with the FCC via the Antenna Registration System (ASR). Please select "MD – Modification" and choose the appropriate FAA Lighting Style.[3] The FCC typically will approve the application and modify the registration within 24 hours.

3. Once the lighting change for a tower has been granted by the FCC via ASR, the L-810 steady-burning side lights can be extinguished on towers taller than 350 ft. AGL and reprogramed to flash in concert with L-864 lights on towers 150-350 ft. AGL. Extinguishing L-810 lights and reprogramming lights are typically accomplished in the tower transmission building and do not ordinarily require climbing the tower. Per the FAA requirements, flashing red lights should flash at 30 FPM (+/- 3 FPM).

The elimination of continuously burning security lights under towers also minimizes bird attraction to the site and reduces energy costs. Many tower operators use down-shielded, motion sensor-triggered security lighting, which promotes tower safety and reduces the possibility of attracting migratory birds.

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[1] Although incandescent lights may not support reprogramming and require replacement with LED lights, the process described below would be the same otherwise.

[2] For towers 150-350 ft. AGL, if the existing No Hazard Determination was issued under advisory circular 70/7460-1L prior to September 28, 2016, no filings are needed with either the FAA or FCC to change from steady-burning to flashing L-810 lights.

[3] If the FAA grants a lighting deviation referencing an advisory circular other than 70/7460-1L, select "3. Other" and describe the lighting in the field provided. If the FAA issues a new Study referencing 70/7460-1L, select the lighting style that corresponds to the lighting in the FAA Study.

For more information about this and other migratory bird or endangered species issues, please contact: Joelle Gehring, Biologist, Federal Communications Commission, (202)270-4435, Joelle.Gehring@FCC.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

NOV 15 2017

REPLY TO THE ATTENTION OF:

Christina Gomer
U.S. Department of Energy
Western Area Power Administration
Upper Great Plains NEPA Coordinator
2900 4th Avenue North
Billings, Montana 59101-1266

RE: Draft Environmental Assessment -- Palmer's Creek Wind Farm, Chippewa County, Minnesota

Dear Ms. Gomer:

The U.S. Environmental Protection Agency reviewed the aforementioned project document dated October 2017. Our comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR 1500-1508), and Section 309 of the Clean Air Act.

Palmer's Creek Wind Farm, LLC proposes to construct the Palmer's Creek Wind Farm (Proposed Wind Farm) in Chippewa County, Minnesota. The Proposed Wind Farm would consist of 18 wind turbines, spread across approximately 6,150 acres of privately-owned land, and include associated access roads, a new collector substation, an operations and maintenance facility, and associated transmission interconnection facilities. The Proposed Wind Farm would interconnect to Western Area Power Administration's (WAPA) existing Granite Falls Substation for an expected lifespan of approximately 20 to 40 years. Palmer's Creek goals and objectives for the Project are to provide an economically-viable, reliable, and cost-effective source of renewable energy to users in Minnesota, the Dakotas, and throughout WAPA's service area. The Department of Energy is evaluating Palmer's Creek interconnection request in accordance with the Southwest Power Pool Tariff and the Federal Power Act.

The Draft EA, which analyzes the proposed interconnection to WAPA's transmission system, tiers from the analysis conducted in the Upper Great Plains Wind Energy Final Programmatic Environmental Impact Statement (PEIS) (dated April 2015) and the Record of Decision (dated July 2015).

EPA's comments on the Draft EA cover the following issues: turbine siting and species impacts, water withdrawals, air quality and construction emissions reduction measures, materials management, impacts to plant communities, and coordination with Tribes.

MINNESOTA RIVER VALLEY

The Minnesota River Valley is a habitat corridor for several bird species. Part of the western side of the project area, near the Minnesota River, overlaps with the Upper Minnesota River Valley Important Bird Area (IBA)[1]. The IBA, which incorporates river valley, riparian corridor,

[1] IBAs are identified by Audubon Minnesota in partnership with the MnDNR.

and upland communities along the Minnesota River, provides habitat for a wide variety of bird species and serves as a natural corridor for migrating birds. As noted in the Draft EA, over 200 species, including state-listed species and Species in Greatest Conservation Need are known to use the IBA. Although project construction would occur outside the IBA, avian species following the river valley to migrate would migrate through the project area and have the potential to collide with proposed wind turbines 1, 5, 9, and 12.

The Draft EA indicates that post-construction monitoring is required to determine bird mortality. In light of the fact that monitoring for bird mortality is not easily accomplished, an accurate assessment of post-construction impact may be difficult, if not impossible, to achieve. In light of the facts that a) the Draft EA states "...the Minnesota River Valley being a significant migration corridor, ..." and b) post-construction avian fatality monitoring would be required, including bat mortality monitoring, we question whether wind turbines 1, 5, 9, and 12 should be relocated.
Recommendations: EPA recommends coordination with the U.S. Fish and Wildlife Service (FWS) and the Minnesota Department of Natural Resources (MnDNR) to determine if concern regarding bird/bat strikes and turbines 1, 5, 9, and 12 could be reduced if these four turbines were to be relocated. If this is the case, what buffer distance should be employed to inform the possible relocation of these four wind turbines?

ECOLOGICALLY SIGNIFICANT AREAS

As stated in the Draft EA, a query of the MnDNR Natural Heritage Information System (NHIS) indicated the presence of Ecologically Significant Areas: Prairie Core Area (Upper Minnesota River Valley); Minnesota Biological Survey (MBS) sites of moderate biodiversity including Dry Hill Prairie remnants (native prairie), and Silver Maple – (Virginia Creeper) Floodplain Forest (rare wetland), which may contain state-listed plants. The Draft EA indicates MBS sites, native prairie, and wetland areas would be avoided if possible.
Recommendations: The Draft EA is not clear as to whether avoidance of MBS, native prairie, and wetland areas was attempted. Because these habitat types are difficult, if not impossible, to successfully recreate, and such attempted mitigation would increase the overall project cost, EPA recommends the analysis include information concerning attempts to avoid and/or minimize direct impacts (e.g., from construction, temporary lay-down areas, or access routes) to MBS, native prairie, and wetland areas. EPA recommends a commitment to avoid impacting these areas be included in the Finding of No Significant Impact (FONSI).

WATER WITHDRAWALS

During construction of wind-energy sites and infrastructure, water withdrawals may be needed for construction activities, including dust suppression, concrete mixing, and vehicle and machinery washing. If water is not brought in from other sources outside the project area, available water from nearby surface waters may be used. Such withdrawals could reduce stream discharge and alter the natural hydrologic regime of the stream system.
Recommendations: Acknowledging that all surface water withdrawals for construction activities would be required to meet all state and/or local regulations for water withdrawals, EPA recommends the analysis address the issue of water withdrawals in connection with the proposed project as well as efforts to avoid or minimize any adverse effects.

AIR QUALITY

Construction activities will result in temporary impacts to air quality.

Recommendation: In addition to those measures found in Appendix G of the Draft EA, *Best Management Practices (BMPs) and Conservation Measures,* EPA recommends the FONSI include a commitment to implement relevant construction-related emission reduction measures listed on the enclosed document, *EPA's Construction Emission Control Checklist.*

MATERIALS MANAGEMENT

The Draft EA indicates wind turbine foundations would consist of pedestal diameters of approximately 18 feet. In some cases, an area around a turbine may be covered in four inches of gravel, river rock, or crushed stone. The excavated area for the turbine foundations would typically be approximately 75 feet by 75 feet.

Recommendations: EPA recommends the analysis address the impact of obtaining the requisite gravel, river rock, or crushed stone and transporting these materials to the project site (e.g., anticipated number of transport vehicles traveling to the construction site each day, etc.). EPA also recommends the analysis address the proposed disposal of excavated materials. We suggest excavated material be made available to the community. For example, advertising within the community that clean backfill is available prior to disposing of any unused materials will reduce quantities that would otherwise be disposed of in landfills and reduce overall project cost.[2]

IMPACTS TO PLANT COMMUNITIES

Section 4.6.1, *Plant Communities*, indicates that approximately 10 acres of non-agricultural land would be temporarily disturbed for laydown areas and other construction activities, including one acre of forest. Following construction, disturbed areas would be restored to their condition prior to construction, including reseeding and planting trees, as determined during permitting.

Recommendations: Acknowledging the BMPs listed in Appendix G, which indicates that restoration of disturbed soils and vegetation should be initiated as soon as possible after construction activities are completed using weed-free native grasses, forbs, and shrubs, EPA recommends a commitment be included in the Finding of No Significant Impact to also replant trees impacted by the proposed project using native tree species appropriate to this ecoregion (e.g., along the southern edge of the Swenson Farmstead site). MnDNR could recommend a list of native tree species and, if replanting cannot take place at the impact location(s), recommend a suitable location(s) for tree planting.

One of the BMPs listed in Appendix G concerning invasive species indicates that access roads, utility and transmission line corridors, and tower site areas shall be monitored *regularly* for the establishment of invasive species, and weed control measures should be initiated immediately upon evidence of the introduction of invasive species.

Recommendations: EPA commends the willingness to control invasive species in the project footprint. Nonetheless, EPA requests clarification concerning "regular monitoring" in the BMP list. For example,

- does "regularly" mean that monitoring will take place once per month, per growing season, or after several growing seasons following initial restoration activities?
- How long will "regular monitoring" take place (e.g., during first three-five years or during entire life of the project)?

[2] https://www.epa.gov/smm/sustainable-management-construction-and-demolition-materials

- Will "regular monitoring" also apply to restoration activities for grasses, forbs, shrubs, and trees that are slated to be replanted?

MnDNR could recommend monitoring protocols for invasive species and newly-restored areas.

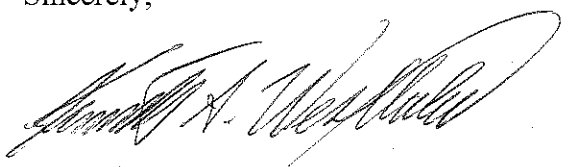
COORDINATION

The Draft EA indicates that Palmer's Creek has been in regular contact with the Upper Sioux Indian Community.

Recommendations: EPA recommends the analysis indicate the results of coordination with the Upper Sioux Indian Community. Since up to 15 wind turbines may be visible from the east observation point on the Upper Sioux Reservation, coordination is pertinent before a decision regarding the project's implementation can be reached.

Thank you for the opportunity to review and comment on the proposed project. Please send one copy of future correspondence relating to the NEPA process, including the signed project decision document, for this project to me at the above address. We are available to discuss our comments with you; please contact Kathy Kowal of my staff at 312-353-5206 or via email at kowal.kathleen@epa.gov.

Sincerely,



Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Enforcement and Compliance Assurance

Enclosure: EPA's Construction Emission Control Checklist

cc: Matt Marsh, WAPA
Megs Rudy, FWS
Kelly Hogan, FWS
Cynthia Warzecha, MnDNR