

22 December 2021

Ms. Tricia Bernhardt
%Tetra Tech, Inc.
350 Indiana Street
Suite 500
Golden, CO 80401

Ref: D5.0302
Republic, Washington,
Marshall Counties
Track: 20180247-3

Dear Ms. Bernhardt,

Our office received your request for information concerning biological resources occurring in/near the proposed High Banks Wind Project to be constructed by NextEra Energy. The submitted boundary of the proposed wind project encompasses an estimated 134,337 acres in Republic and Washington Counties, Kansas, and an associated generation tie corridor would lead generally eastward from the development approximately 48 miles to an interconnection point in Marshall County, Kansas. We appreciate the NextEra's request for information related to this project. Kansas Department of Wildlife and Parks (KDWP) requests that the answers to your questions below be used to refine project plans and site infrastructure to avoid and/or minimize impacts to native wildlife species and habitats to the greatest extent feasible. Please note that this document does not constitute an official ecological review of the proposed project, and to complete such a review additional details regarding the project and proposed infrastructure locations is requested.

1. Known occurrences of state-listed species and federally listed species under the Endangered Species Act, including proposed listed and candidate species, as well as other species that are targeted for special conservation efforts, within the Project area and vicinity.

The U.S. Fish and Wildlife Service is the best source of information regarding species listed, petitioned, or being considered for listing under the authority of the federal Endangered Species Act. As such, their Ecological Services office will be the best contact to answer that specific portion of the question. KDWP records have not documented occurrences of any species listed under the authority of the Kansas Nongame and Endangered Species Conservation Act within the submitted project boundary. Similarly, the submitted High Banks project area and transmission line corridor do not overlap any designated critical habitat for state-listed wildlife species.

Potential impacts to Whooping Cranes (*Grus americana*) resulting from this project are a primary concern to the Department. The majority of the proposed wind project site is within the 95% band of the Aransas-Wood Buffalo Whooping Crane population migratory corridor. Multiple occurrences of the state-/federally-listed species have been reported and verified within 10 miles of the project boundary, including one record (2017) of Whooping Cranes at Talmo Wildlife Area (less than 3 miles from the boundary). We expect the species will reoccur within the area during the operational life of the development. Recent research¹ indicates Whooping Cranes may exhibit a behavioral aversion to utility-scale wind energy conversion systems and may be functionally displaced from suitable habitat within approximately 5 kilometers (3.1 miles) of wind turbines. As such, KDWP first recommends turbines not be sited within three miles of Talmo Wildlife Area, and second, we recommend the project sponsors complete an analysis of potential migratory stopover habitat near and within the wind project's proposed boundaries. We encourage using The Watershed Institute's Whooping Crane Stopover Habitat modeling methodology to determine

¹ Pearse, A.T., Metzger, K.L., Brandt, D.A., Shaffer, J.A., Bidwell, M.T., and W. Harrell. 2021. Migrating whooping cranes avoid wind-energy infrastructure when selecting stopover habitat. *Ecological Applications* 31(5):e02324. 10.1002/eap.2324. Accessed online 17 December 2021.

areas near/within the proposed project boundaries with a higher potential to attract cranes and design infrastructure siting alternatives to avoid those features to the extent feasible.

Greater Prairie-Chickens (*Tympanuchus cupido*) are also known to occur near and within the proposed High Banks wind project boundary as well as near/within the proposed transmission line corridor. Relative to the High Banks wind project area, KDWP records document 11 Greater Prairie-Chicken (GRPC) leks as well as 5 non-lek occurrences recorded within the project area since 2008. An additional 26 occurrences have been documented within a mile of the boundary (13 lek observations and 13 non-lek observations), and at a distance of 1-3 miles from the boundary 32 more leks and 14 additional occurrences have been documented. Similarly, 15 GRPC leks and 3 non-lek occurrences have been documented within the proposed transmission line corridor and an additional 22 leks and 10 non-lek observations have been recorded up to 1 mile from the corridor's boundary.

The majority of the occurrences noted above have been documented in/near the southeastern portion of the wind project area—near the eastern parcel of the KDWP-managed Griswold Wildlife Area. Generalized locations of the occurrences are included in the Terrestrial Species of Concern spatial data layer which can be publically viewed and accessed from the Kansas Natural Resource Planner web mapping application. KDWP recommends NextEra also complete at least one year of site-specific ground-based lek surveys using the protocol described in the WAFWA Range Wide Plan for Lesser Prairie-Chicken Conservation to supplement the data included in the Terrestrial Species of Concern layer.

Research suggests most GRPC nest in grasslands within two miles of a lek. To minimize potential impacts to the species, KDWP recommends combining existing occurrence information with data obtained from the recommended NextEra lek surveys, and using those data to refine potential turbine siting alternatives in such a way that avoids impacts to potential nesting and brood rearing habitat for the species. If avoidance of all grassland impacts is not feasible, we advise the project sponsors complete a grassland quality assessment to determine which native species-dominated grasslands may provide the best habitat for GRPC, and thereby, target lower quality areas for development and infrastructure placement. To be clear, KDWP does not consider livestock grazing or native grass restoration after cultivation to exclude potential for GRPC occurrence. Instead, KDWP focuses on habitat composition and structure to determine suitability for the species. Within areas of potential prairie grouse occupancy, KDWP recommends a hierarchical approach to infrastructure siting. We first advocate for the avoidance of all native species-dominated grasslands—most especially those within 1.25 miles of locations with repeated lek activity. The Department encourages prioritization of development in active cropland or monotypic non-native species-dominated pasture. Short of this, we next recommend that development occur in lower quality grasslands with low potential for grouse nesting/brood-rearing. If potential habitat for grouse species will be impacted, KDWP encourages voluntary conservation activity implementation to help offset these impacts in the local landscape.

2. Any known eagle nests or nests of other protected raptor species within 10 miles of the Project area.

KDWPT does not maintain a comprehensive list of eagle or other raptor nest locations. We encourage NextEra to consult with the U.S. Fish and Wildlife Service to investigate known eagle/raptor nest locations. Though we cannot confirm or refute the presence of raptor nests in the area around the project site, we know of one verified Bald Eagle (*Haliaeetus leucocephalus*) occurrence within the project area in 2017. The lack of multiple records does not necessarily indicate low use of the site by the species. The occurrence information reference comes from an opportunistic sighting of the species. Since exhaustive surveys have not been conducted by KDWP near or within the project area, a lack of observations should not be misconstrued as evidence of the species' absence from the area.

3. Known occurrences of special natural communities or habitats targeted for conservation efforts.

KDWPT places highest priority for conservation on native species-dominated rangeland communities, native forests, streams, riparian areas, and wetlands/playas. These habitats support and provide the life cycle requirements of numerous imperiled wildlife species and game species known to inhabit the area. We strongly encourage that all efforts be made to avoid any permanent impacts to those habitats.

It should also be noted that KDWP manages two public wildlife areas located near or within the proposed High Banks wind project area. The Department's Wind Power Position Statement notes "the Department manages public

wildlife areas to optimize habitat for native wildlife species, especially game species and migratory birds. This work tends to concentrate wildlife in those areas. [In an effort] to avoid adverse impacts to those species and the users of the wildlife areas, the Department recommends that turbines not be sited within three miles of a KDWP-managed property.” Talmo Wildlife Area is located approximately 1.5 miles south of the project area. Recent use by migrating Whooping Cranes has been documented at this location. Griswold Wildlife area (western parcel) is approximate 2 miles from the project boundary, and the eastern parcel of Griswold Wildlife Area is almost wholly within the defined project boundary. The eastern (Washington County) Griswold parcel has documented occurrences of GRPC onsite and nearby. We encourage NextEra to design turbine arrays to conform to our existing three mile setback recommendation in an effort to avoid or minimize impacts to the aforementioned species. Based on the mapped locations of verified occurrences of these two species, adherence to the setback recommendation is likely to substantially decrease risks related to the potential displacement of Whooping Cranes and Greater Prairie-Chicken within/near the project area.

Finally, portions of the High Banks wind project area and proposed transmission line corridor occur within the KDWP-defined Lower Republican (aquatic) Ecological Focus Area (EFA). While this designation has no regulatory tie, the Department has noted specific conservation issues and priorities which are targeted within the various Focus Areas. While the wind project is not expected to cause significant impacts to species and habitat conservation efforts within the Lower Republican EFA, KDWP still encourages NextEra to include aquatic impact avoidance and minimization efforts in the planning, construction, and operational phases of the project.

4. Any bat hibernacula, bat roosts, or other biological resources that may be of concern in the Project vicinity.

KDWP does not maintain an exhaustive list of bat hibernacula or roost locations. KDWP is not currently aware of any in Republic or Washington counties. However, our data is limited and lack of known hibernacula should not be considered as evidence of absence. We encourage NextEra to look up species occurrence records for Washington and Republic Counties available on the Kansas Mammal Atlas website to determine species historically observed in those counties. KDWP has also been collecting bat occurrence information around the state for the last three years as part of the ongoing USGS NABat project. Acoustic and field (mist netting) surveys completed in Washington County has resulted in verified occurrences of the following bat species: Big Brown (*Eptesicus fuscus*), Silver-haired (*Lasionycteris noctivagans*), Eastern Red (*Lasiurus borealis*), Hoary (*Lasiurus cinereus*), Northern Long-eared (*Myotis septentrionalis*), and Evening Bat (*Nycticeius humeralis*).

Based on our initial review of the project location and relevant biological information, we encourage design alternatives which minimize or avoid impacts to native wildlife habitats, recommend adherence to the KDWP Wind Power Position document, and request additional information from NextEra regarding grassland habitat quality within the proposed development area. We also suggest completing at least one year of Greater Prairie-Chicken surveys and incorporating new data with existing data to refine infrastructure siting alternatives. Finally, KDWP offers the following general recommendations and requests they be considered during the design/planning phases of the project.

- **Avoid or minimize the disturbance and removal of native upland prairie or riparian hardwood timber and herbaceous vegetation during construction and operation of the wind energy facility and associated infrastructure.**
- **Avoid/Minimize impacts to existing wetlands, springs or areas that pond water (e.g. filling).**
- **Avoid instream and stream bank disturbances including stabilizing the banks with foreign materials (e.g. riprap).**
- **Avoid encroachment or development in floodplains.**
- **If access roads require construction of culverts, we advocate for span or bottomless type designs. If bottomless designs are infeasible, culvert bottoms should be buried at least 12 inches below the streambed. Avoid working in streams during the general fish spawning season (March 1 – Aug. 31).**

- We recommend using Horizontal Directional Drilling techniques to bore under streambeds when laying collection lines. If a dry stream is open trenched, restore any stream crossings to the original substrate configuration and composition.
- Replant temporary grassland disturbances with native grasses and forbs, we recommend using a diverse seed mix and are willing to provide technical advice for seed mix development, or simply recommend using the local seed mix for USDA-NRCS conservation practice 643 - Rare and Declining Habitat.
- Implement and maintain standard erosion control Best Management Practices during all aspects of construction by installing sediment barriers (wattles, filter logs, rock check ditches, mulching, or any combination of these) across the entire construction area to prevent sediment and spoil from entering aquatic systems. Barriers should be maintained at high functioning capacity until construction is completed and vegetation is established. For more information on erosion BMPs go to: <http://www.kdheks.gov/stormwater/#construct>.
- Consult the Avian Power Line Interaction Committee Marking Guidelines for mitigating avian collisions by marking the incoming/outgoing transmission line(s) appropriately.
- Consult KDWP and the U.S. Fish and Wildlife Service to develop and implement a Bird and Bat Conservation Strategy (BBCS)—including post construction monitoring protocols as well as operational curtailment plans to minimize risks to migrating avian and bat species. Track and report avian and bat mortality, and use collected data to modify BBCS plans in consultation with the appropriate regulatory authorities.
- To the extent possible, eliminate non-natural light sources, dead animal carcasses, and other features that might serve to attract wildlife to the project area. Avoid placement of turbines near prairie dog colonies which may be likely to attract raptor species.

Without more information regarding proposed turbine locations and the placement of associated infrastructure, we are unable to provide a detailed review of potential impacts to wildlife or habitats. We request that NextEra Energy provide shapefiles of proposed turbine locations, collector lines, access roads, laydown areas, transmission lines and substations, construction crane “walk” routes, and other infrastructure details as those data become available. The Department values an iterative process of consultation on projects of this type. As such, we also request the opportunity to meet and discuss planned preconstruction surveys, a meeting to discuss survey results, and any necessary follow up conversations to provide recommendations for avoidance and minimization measures which can be implemented to lower the risk to wildlife from the development. As previously stated, we appreciate the early consultation on this project and encourage the project sponsors to continue coordination with KDWP and other applicable agencies as plans begin to come together for the development. We look forward to further discussions with NextEra and Tetra Tech through the development process.

Sincerely,



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