Appendix D
Agency Correspondence

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Representative Letters Sent

May 11, 2020

[Address Block]

RE: Requesting Comments on an up to 200-megawatt Wind Farm in Bowman County, North Dakota

Dear [Name],

Bowman Wind, LLC (Bowman Wind), an indirect wholly-owned subsidiary of Apex Clean Energy Holdings, LLC (Apex), is proposing to construct up to 200 megawatts (MW) of new wind energy generation in Bowman County, North Dakota (Project). Bowman Wind will be submitting an Application for a Certificate of Site Compatibility for the proposed Project to the North Dakota Public Service Commission (NDPSC). The Project will interconnect to the Basin Electric Power Cooperative Rhame 230 kilovolt (kV) substation within the Project boundary. As such, the Project's generation interconnection line will be less than one mile long and will be locally permitted.

The planned nameplate capacity for the Project is up to 200 MW. The Project's permanent facilities will include:

- Up to 70 wind turbines and associated equipment;
- New gravel access roads and improvements to existing roads;
- Underground electrical collection lines;
- An operations and maintenance facility;
- A Project substation; and
- Up to two permanent meteorological towers up to 92 meters tall.

The Project's temporary facilities will include:

- Staging/laydown areas for construction activities;
- Temporary improvements to existing roads, including driveways, for transport and access during construction; and
- Crane paths to be used during construction.

The turbine locations, access roads, and collection line routes have not been finalized at this time. Table 1 provides the sections of land that Bowman Wind is evaluating for siting the Project.

c/o Apex Clean Energy, Inc.
8665 Hudson Blvd North, Suite 110 | Lake Elmo, MN 55042
T 612.260.6614 | F 434.220.3712
apexcleanenergy.com

Table 1 Bowman Wind Farm Preliminary Project Location				
County Name	**Township Name**	**Township**	**Range**	**Sections**
Bowman	Marion	132N	103W	21, 29-36
	Adelaide	131N	104W	13-15, 20-29, 31-36
	Hart Unorganized Territory	131N	103W	1-5, 7-36
	Nebo	130N	104W	1-18, 20-24, 26-27
	Amor	130N	103W	1-12, 16-19

In conjunction with preparing the NDPSC application, we are seeking input from your agency or entity regarding any sensitive resources, current or planned development, or property interests your agency or entity may have in or around the Preliminary Project Area that Bowman Wind should consider as it moves forward with development. In addition, we ask that you provide information regarding any applicable permits that may be required from your office. To facilitate your review, we have enclosed a map that depicts the area within which turbines and associated facilities may be proposed. We welcome any comments your agency may have at this time and throughout the permit application process. Any written agency comments provided in response to this letter will be incorporated into the NDPSC's review process.

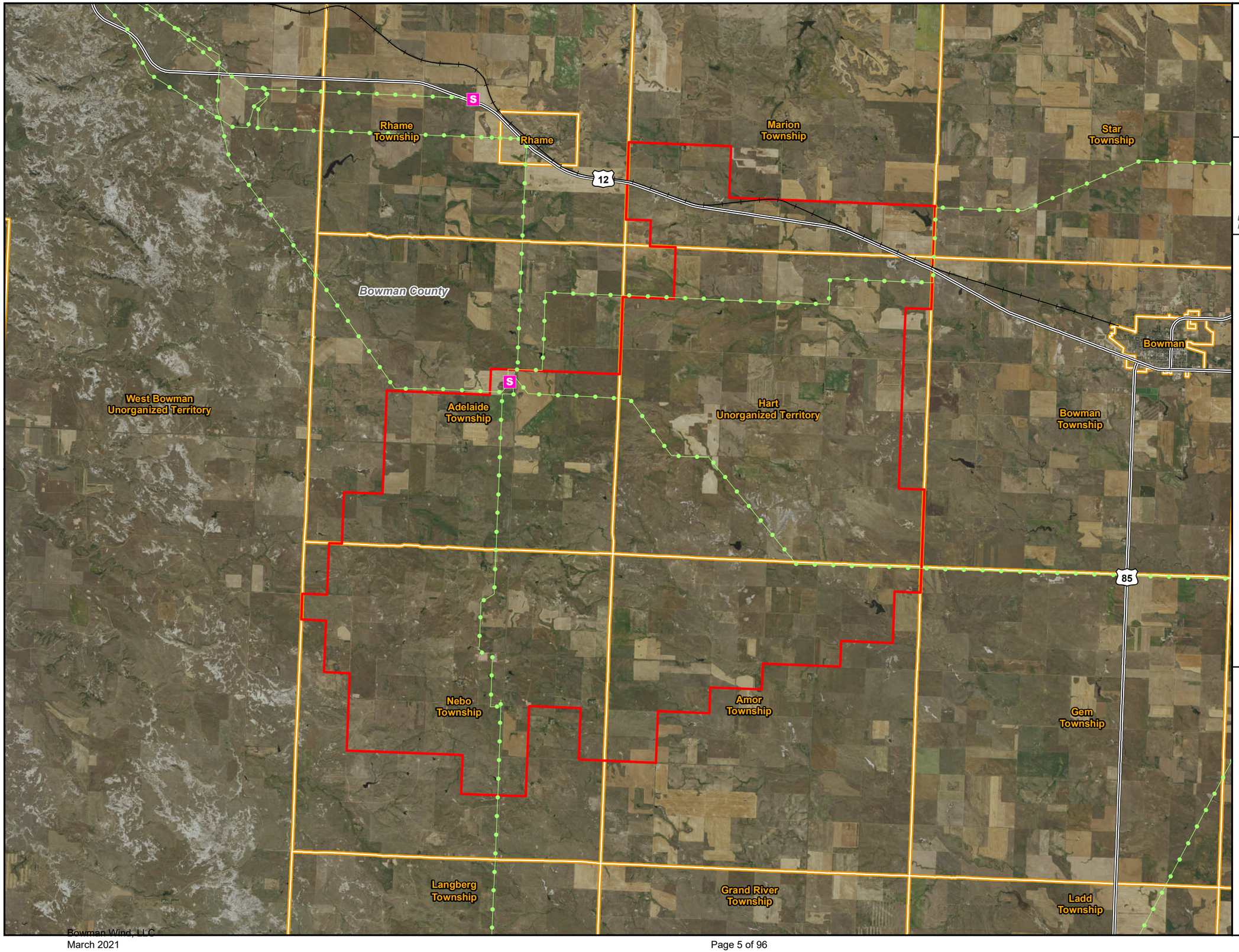
If you require further information or have questions regarding this matter, please contact me at (715) 432-3927 or scott.jansen@apexcleanenergy.com.

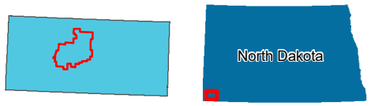
Sincerely,

Scott Jansen
Senior Development Manager
Apex Clean Energy

Enc. Preliminary Project Location Map

c/o Apex Clean Energy, Inc.
8665 Hudson Blvd North, Suite 110 | Lake Elmo, MN 55042
T 612.260.6614 | F 434.220.3712
apexcleanenergy.com





0 1 2 Miles

1:110,000

N

Data Source: Apex, US Census, ND GIS Hub, ESRI
Imagery: ND GIS 2018

- S Existing Substation
- Existing Transmission Line
- City/Township
- Preliminary Project Boundary

Figure 1
Preliminary Project Area

Bowman Wind Project

Bowman County, North Dakota

BOWMAN WIND

For Environmental Review Purposes Only

Source: Z:\Clients\A_D\Apex\BowmanPermitting\Site_Permit\Mapping\Fig01_Bowman_Project_Location.mxd
Date: (5/6/2020)

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Agencies Contacted

Title	First	Last	Title	Agency	Address	PO Box	City	State	Zip
Mr.	David	Norquist	Deputy Secretary of Defense	U.S. Department of Defense	1010 Defense Pentagon		Washington	DC	20301-1010
Ms.	Patricia	McQueary	Program Manager	U.S. Army Corps of Engineers, North Dakota Regulatory Office	3319 University Drive		Bismarck	ND	58504
Mr.	Dave	Anderson	Assistant Manager	Federal Aviation Administration, Dakota-Minnesota Airports District	2301 University Drive, Bldg. 23B		Bismarck	ND	58504
Mr.	Drew	Becker	Ecological Services Supervisor	U.S. Fish and Wildlife Service, North Dakota Field Office	3425 Miriam Avenue		Bismarck	ND	58501-7926
Mr.	Kyle	Wanner	Director	North Dakota Aeronautics Commission	2301 University Drive, Bldg. 22	PO Box 5020	Bismarck	ND	58502-5020
Mr.	Wayne	Stenehjem	Attorney General	North Dakota Attorney General's Office	600 East Boulevard Avenue, Dept. 125		Bismarck	ND	58505-0040
Mr.	Doug	Goehring	Agriculture Commissioner	North Dakota Department of Agriculture	600 East Boulevard Avenue, Dept. 602		Bismarck	ND	58505-0020
Mr.	David	Glatt	Director	North Dakota Department of Environmental Quality	918 E. Divide Avenue, 4th Floor		Bismarck	ND	58501
Mr.	Christopher	Jones	Executive Director	North Dakota Department of Human Services	600 East Boulevard Avenue, Dept. 325		Bismarck	ND	58505-0250
Ms.	Erica	Thunder	Commissioner of Labor	North Dakota Department of Labor and Human Rights	600 East Boulevard Avenue, Dept. 406		Bismarck	ND	58505-0340
Mr.	Wayde	Sick	Director and Executive Officer	North Dakota Department of Career and Technical Education	600 East Boulevard Avenue, Dept. 270		Bismarck	ND	58505-0610
Ms.	Michelle	Kommer	Commissioner	North Dakota Department of Commerce	1600 E. Century Avenue, Suite 2		Bismarck	ND	58503
Mr.	Greg	Link	Chief	North Dakota Game and Fish Department, Conservation and Communications	100 N. Bismarck Expressway		Bismarck	ND	58501-5095
				North Dakota Industrial Commission	600 East Boulevard Avenue, Dept. 405		Bismarck	ND	58505-0840
Governor	Doug	Burgum		North Dakota Office of the Governor	600 East Boulevard Avenue		Bismarck	ND	58505-0100
Mr.	William	Panos	Director	North Dakota Department of Transportation	608 East Boulevard Avenue		Bismarck	ND	58505-0700
Ms.	Claudia	Berg	Director	North Dakota State Historical Society	612 East Boulevard Avenue		Bismarck	ND	58505
Mr.	Scott	Davis	Executive Director	North Dakota Indian Affairs Commission	600 East Boulevard Avenue, Room 117		Bismarck	ND	58505
Mr.	Bryan	Klipfel	Executive Director	Job Service North Dakota	1600 E. Century Avenue		Bismarck	ND	58503
Ms.	Jodi	Smith	Commissioner	North Dakota Department of Trust Lands	1707 North 9th Street	PO Box 5523	Bismarck	ND	58506-5523
				North Dakota Trust Lands, Energy Infrastructure & Impact Office	1707 North 9th Street	PO Box 5523	Bismarck	ND	58506-5523
Mr.	Ryan	Gardner	Interim Director	North Dakota Parks & Recreation	1600 E. Century Avenue, Suite 3	PO Box 5594	Bismarck	ND	58506-5594
Mr.	Barton	Schott	Chair	North Dakota State Soil Conservation	2718 Gateway Avenue, Suite 304		Bismarck	ND	58503
				North Dakota State Water Commission	900 East Boulevard Avenue		Bismarck	ND	58505-0850
			Director	North Dakota Transmission Authority	600 East Boulevard Avenue, Dept. 405		Bismarck	ND	58505-0840
			Director	North Dakota Pipeline Authority	600 East Boulevard Avenue, Dept. 405		Bismarck	ND	58505-0840
Ms.	Lynn	Helms	Director	North Dakota Geological Survey	600 East Boulevard Avenue		Bismarck	ND	58505-0840
Ms.	Mylynn	Tufte	State Health Officer	North Dakota Department of Health	600 E Boulevard Ave, Dept 301		Bismarck	ND	58505
Mr.	Jerry	Jeffers	President and Bowman County Commissioner	Bowman County Planning & Zoning Board	104 1st St. NW, Suite 4		Bowman	ND	58623
Mr.	Rick	Braaten	Bowman County Commissioner	Bowman County Commission	104 1st St. NW, Suite 1		Bowman	ND	58623
Mr.	Josh	Buckman	Bowman County Commissioner	Bowman County Commission	104 1st St. NW, Suite 1		Bowman	ND	58623
Mr.	Pine	Abrahamson	Bowman County Commissioner	Bowman County Commission	104 1st St. NW, Suite 1		Bowman	ND	58623
Mr.	Lynn	Brackel	Bowman County Commissioner	Bowman County Commission	104 1st St. NW, Suite 1		Bowman	ND	58623

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Agency Correspondence

U.S. Department of Defense and Ellsworth Air Force Base

From: Allen, Douglas [USA] [mailto:Allen_Douglas@bah.com]
Sent: Thursday, February 22, 2018 12:23 PM
To: Mark Mauersberger <mark.mauersberger@apexcleanenergy.com>
Subject: Bowman Wind Project (2017-WTE-6065) Potential AF impacts

Mr Mauersberger,

You are listed as the POC for the Bowman Wind Project (2017-WTE-6065) in OE/AAA

I m writing to notify you that the Air Force has identified potential mission impacts associated with this project, specifically those missions that take place within the Powder River Training Complex We are working with the necessary Air Force stakeholders to gather all of the potential impacts and assess their severity, and will be ready for a joint meeting in the near future

Please let me know if you and your company are willing to work with the Air Force to help mitigate the potential impacts associated with Bowman, and we ll be looking forward to working with you in the near future

Thank you and please feel free to give me a call if need be (757 951 5121),

Doug Allen, AICP
SAF/IEI Encroachment Analyst
Allen_Douglas@bah.com
Cell: 757-951-5121

From:	Allen, Douglas [USA]
To:	Ozzie Nelson (eric.nelson.42@us.af.mil); Stone, George W CIV USAF 28 OG (US) (george.stone@us.af.mil); Dave Belote
Cc:	Scott Koziar; Mark Mauersberger; Tracy Butler; Karlis Povisils; Dylan Fraser
Subject:	Bowman Wind (2017-WTE-6065) MRT Meeting
Start:	Friday, March 09, 2018 11:00:00 AM
End:	Friday, March 09, 2018 12:00:00 PM
Location:	Dial In: (877) 885-1087; Conference Code: 343-450-4607
Attachments:	Ellsworth -- Bowman Wind -- V6.pptx

Dial In: (877) 885-1087; Conference Code: 343-450-4607

Does this time/date work for you guys to talk with Apex re: Bowman?

- **Roll Call:**
  - Doug Allen, SAF/IEI
  - Ozzie Nelson, ACC/A3
  - Steve White, IMSC Det 8
  - Dave Belote, Dare Strategies
  - Mark Mauersberger, Apex
  - Scott Koziar, Apex
  - Dylan Fraser, Apex
  - Tracy Butler, Apex
  - Karlis Povisils, Apex
  - Chia Stone, Ellsworth AFB
- **Purpose:** Discuss impact mitigation options for the Bowman Wind Turbine Project.
- **Action Items/Next Steps:**
  - AF: Provide Apex with historical LFE data
  - Apex: Use LFE data plus curtailment offer and determine economic impact/feasibility
  - **Next Step**: Reconvene to discuss agreement (Date TBD)
- **Notes:**
  - Apex will run numbers re: curtailment to 85 fps to see if there is any benefit to slowing down to this speed vs stopping the turbine
  - Dave Belote suggested the agreement could include 1-2 less curtailment days during LFEs replaced with money for studies to determine wind turbine impacts to operations, which could be used for real-life scenarios
  - Apex agrees to install NVG lighting on all turbines
  - Re: non-compliance – has been included in a past curtailment agreement
  - Ellsworth/PRTC directives require a 30-day notice ahead of all LFEs – can add Apex to the list of notified stakeholders
  - Mandated limits to PRTC LFEs as follows:
    - Maximum of 10 LFE days per year
    - Maximum of 1 LFE per quarter
    - Maximum of 3 days per LFE
    - 30 day notification prior to LFEs
  - It may be possible for AF to alert Apex when "high war" LFEs will be conducted and the turbines do not need to be curtailed
  - Noted that past LFE activities do not necessarily reflect future LFE activities
  - Apex Q: Would all turbines need to be curtailed?
    - A: Yes, since all turbines in this project are located within the PRTC airspace.
  - General Q: How many turbines will ultimately be built?
    - A: The project is limited to 200 MW total, so total number of turbines depends on the size and output of the turbines. The max would be roughly 100 and the minimum roughly 50, however the max/min represents the extreme and the final total is likely to be somewhere in the middle.

From: Dave Belote
To: Holland, Paul A CTR (USA)
Cc: Butt, Myra T.; Allen, Douglas K Jr CTR (USA)
Subject: Re: Bowman Update
Date: Friday, April 17, 2020 3:12:34 PM

Sounds good! Thanks — Dave

Dave Belote
DARE Strategies LLC
Sent from my iPhone

> On Apr 17, 2020, at 3:10 PM, Holland, Paul A CTR (USA) <paul.a.holland12.ctr@mail.mil> wrote:
>
> Dave,
>
> I checked in with Chia earlier this week about Bowman.
>
> Since this is the first agreement they've worked at Ellsworth, he wanted to run it up to the OG/CD for awareness before it goes to Jim and Jerry for their review.
>
> He said that the TMT would be completed on that by next Friday.
>
> Have a good weekend and we'll talk on Monday.
>
> Best,
>
> Paul
>
> Paul A. Holland
> Air Force Mission Sustainment Analyst, Ctr
> Office of the Deputy Assistant Secretary
> (Installations)
> Phone: 703-862-9866

From:	Holland, Paul A.
To:	Dave Belote
Cc:	Butt, Myra T.; ALLEN, DOUGLAS K JR CTR USAF HAF SAF/SAF/IEI; Edward Chupein; KUO, HSUAN-WEN CTR USAF AFDW SAF/SAF/IEI
Subject:	Executed Bowman Mitigation Agreement
Date:	Thursday, November 05, 2020 2:55:32 PM
Attachments:	Bowman Wind Mitigation Agreement Executed.pdf

Good Afternoon Dave,

Please see attached the signed and executed Bowman Mitigation Agreement.

Thanks for your assistance in getting this one across the finish line.

Best,

Paul

Paul Holland
SAF/IEI Mission Sustainment Analyst, Ctr
C: 703-862-9866

AGREEMENT AMONG THE DEPARTMENT OF DEFENSE, THE DEPARTMENT OF THE AIR FORCE, AND BOWMAN WIND, LLC, ADDRESSING THE BOWMAN WIND PROJECT NEAR BOWMAN, NORTH DAKOTA

This is an agreement among the Department of Defense (DoD), acting through the Military Aviation and Installation Assurance Siting Clearinghouse, the Department of the Air Force (MILDEP), acting through the Deputy Assistant Secretary of the Air Force for Installations (collectively, the "DoD parties"), and Bowman Wind, LLC (Project Owner). Together, these three entities are referred to as "parties" and individually as a "party." Any reference to "DoD parties" means both parties and does not indicate that one party acts for or on behalf of the other. In this agreement, DoD does not include the United States Army Corps of Engineers when engaged in its civil works program, including any permitting actions.

This agreement is entered into pursuant to section 183a of title 10, United States Code, and part 211 of title 32, Code of Federal Regulations.

Attachments A, *Federal Aviation Administration Filings for Bowman Wind Project*; B, *Bowman Wind Project Map and Project Area*; and C, *Curtailment Communications Protocol*, are attached to this agreement and made a part hereof.

For good and valuable consideration, the receipt of which is hereby acknowledged, the parties agree as follows:

SECTION 1. PURPOSE.

A. Objective. The objective of this agreement is to mitigate any potential adverse impact and to minimize risks to national security while allowing the Bowman Wind Project (Project) to proceed with construction and development.

B. De-confliction. As the Project was originally filed, the spinning wind turbines would conflict with MILDEP's operation of the Powder River Training Complex (PRTC). As originally filed, the Project's proposed turbine locations may have adversely affected the MILDEP's Large Force Exercises (LFEs) conducted by the 28th Bomb Wing, Ellsworth Air Force Base (AFB), in South Dakota. This includes the effects of the spinning wind turbines on airborne Doppler radar. The parties have focused on de-conflicting these activities and agree that the terms below allow the mutual goals of the parties to be met.

SECTION 2. DEFINITIONS.

A. Access. "Access" means either to enter a physical space or to remotely read, copy, edit, divert, release, alter the state of, or otherwise affect information technology systems (e.g., network, data, security, software, hardware).

B. Actual Curtailment Hours. Hours of curtailment, beginning when the rotor blade rotation stops and the blades are locked in accordance with this agreement.

C. ADLS. Aircraft Detection Lighting Systems.

D. ASN. Federal Aviation Administration Aeronautical Study Number.

E. Banked Hours. [RESERVED]

F. CFIUS. Committee on Foreign Investment in the United States.

G. CFR. Code of Federal Regulations.

H. Curtailment. The cessation of wind turbine operations when the wind turbine blades are not spinning and are locked. Curtailment requires that all of a turbine's rotor blades be completely precluded from rotation about the rotor hub.

1. Curtailment begins when rotor blade rotation stops and the blades are locked.

2. Curtailment ends after the MILDEP provides notification to Project Owner that cessation of operations is no longer required.

3. Curtailment is measured by hours (or any fraction thereof).

I. Day. A calendar day unless indicated otherwise.

J. DoD. Department of Defense, an executive department of the United States.

K. FAA. Federal Aviation Administration, an agency of the United States Department of Transportation.

L. Fiscal Year. The period that begins on October 1st and ends at the end of September 30th of the following year.

M. Hour. A temporal hour of 60 minutes, not a mega-watt hour. In order to account for fractions of an hour, hours will be calculated by rounding up the time measured to the next full minute, then dividing that number by 60, and expressing the quotient as a positive number out to three decimal places. By way of illustration only, if the measured amount of time were 46 minutes and 20 seconds, the time would be rounded up to 47 minutes, and because 47 divided by 60 equals 0.7833333333, the number of hours would be expressed as 0.783.

N. MILDEP. Department of the Air Force, a military department of the United States.

O. National Security or Defense Purpose. An emergency circumstance where the President of the United States, the Secretary of Defense, or a combatant commander under 10 U.S.C. section 164 directs a change to the mission of Ellsworth AFB in support of emergency circumstances. An emergency circumstance does not include routine changes to the mission of Ellsworth AFB.

P. Project. The Bowman Wind Project, which will consist of no more than 100 wind turbines within the project area depicted in Attachment B. The proposed wind turbines are identified in Attachment A by ASN.

Q. Project Owner. Bowman Wind, LLC, and its successors and assigns.

R. Siting Clearinghouse. Military Aviation and Installation Assurance Siting Clearinghouse established pursuant to 10 U.S.C. section 183a.

S. U.S.C. United States Code.

SECTION 3. MITIGATION.

A. In General. This agreement is structured to ensure Project Owner may construct and operate the Project without adversely impacting military operations and readiness. Project Owner agrees to limit the total number of Project wind turbines to not more than 100, and the Project wind turbine blade tips to a maximum height of 700 feet above ground level. Project Owner agrees to restrict the construction of the Project to the specific geographic coordinates, listed in Attachment A, and Project Area as shown in Attachment B. The location, height, and number of the structures within the boundary may be altered, but not to exceed the maximum height (700 feet at the blade tip) or the maximum number of the turbines (100). The MILDEP may provide written concurrence to a Project Owner request for changes in turbine geographic coordinates to the extent they are contained within the Project Area shown in Attachment B. Project Owner agrees to install Night Vision Goggle compatible lighting on all turbines associated with the Project that are required to have lighting pursuant to FAA requirements. Project Owner also agrees to ensure compliance with North Dakota law requiring aircraft detection lighting systems.

B. Impact Analysis during Test Energy Phase. [RESERVED]

C. Amendment of Applications. Project Owner agrees to amend its applications before the FAA, listed on Attachment A, by incorporating this agreement into each of those applications within 5 days of the execution of this agreement.

D. Withdrawal of Objections.

1. Within 10 calendar days of the execution of this agreement, the DoD parties shall deliver to the FAA "No Objections with Provisions" for the ASNs corresponding to the wind turbine

locations listed on Attachment A. The "Provisions" will incorporate by reference this agreement, referring to it by its title, the date executed, and its signatories.

2. If Project Owner submits any substitute ASNs to FAA within 12 months of the execution of this agreement, the DoD parties agree not to object to those substitute ASNs, provided that the substitute ASNs do not exceed the maximum height specified in section 3.A, that the substitute ASNs are located within the siting parameters of the Project Area specified in this agreement or any amendments to this agreement, that the total number of structure ASNs after substitution does not exceed 100, and that this agreement is incorporated into the substitute ASN filings.

3. All parties agree that, if Project Owner requests to extend the effective period of FAA's Determination of No Hazard to Air Navigation in accordance with 14 CFR section 77.35, then the DoD Parties will not object to such an extension as requested, provided that the affected ASNs are listed on Attachment A or are substitute ASNs that were submitted within 12 months of the execution of this agreement, that the wind turbine ASNs do not exceed the maximum height specified in section 3.A and are located within the siting parameters of the Project area specified in this agreement or any amendments to this agreement, that the total number of wind turbine ASNs for the Project still does not exceed 100, and that this agreement is incorporated into the ASN filings affected by the extension.

4. The DoD parties agree not to object to the construction and operation of the Project before any federal, state, or local regulatory entity with jurisdiction over the Project (except as provided in sections 6.B and 10.H of this agreement), provided that Project Owner is in material compliance with the terms of this agreement and that Project Owner has disclosed to the DoD parties in writing all material facts necessary to fully assess potential adverse impacts and all material facts relevant to other federal, state, or local regulatory entity jurisdictional matters.

E. Other Regulatory Actions. This agreement shall not prevent or limit the DoD parties from communicating in any form with any other regulatory body or agency with jurisdiction or possible jurisdiction over matters affecting Ellsworth AFB beyond the Project.

SECTION 4. CURTAILMENT.

A. Curtailment for Test Purposes. [RESERVED]

B. Curtailment for Training Purposes. The maximum curtailment requirement for training is 60 hours annually during the first 5-year period of this agreement. For each subsequent 5-year period after the first 5-year period, the MILDEP will re-examine the mission requirements and, in its sole discretion, adjust the total curtailment hours required for the next 5-year period. The maximum curtailment shall not exceed 80 hours for any annual period during the term of this agreement. The DoD parties agree that curtailment under this subsection (4.B) will only be requested in order to mitigate the impacts of the Project wind turbines on LFE training missions. The MILDEP and Project Owner agree to manage curtailment hours in accordance with the terms

and conditions set forth in this agreement and Attachment C. The MILDEP's LFE training missions are generally conducted during the workweek on a quarterly basis, never to exceed three days in a row.

Upon the request of the MILDEP and in accordance with the attached Curtailment Communications Protocol (Attachment C), Project Owner agrees to curtail the operations of the wind turbine generators up to 60 hours in any fiscal year or as adjusted pursuant to this subsection (4.B). The MILDEP has sole discretion to schedule these hours, up to six hours per week, in three-hour blocks on any day from Monday through Friday. There shall be no curtailment on any United States federal holiday.

C. Curtailment for a National Security or Defense Purpose. In addition to curtailment provided elsewhere in this agreement, upon request by either DoD party, Project Owner agrees to curtail wind turbine operations immediately for a national security or defense purpose. Such curtailment may not be requested except for a national security or defense purpose utilizing the communication protocol set out in Attachment C. Curtailment for a national security or defense purpose will be temporary in nature and extend only so long as is absolutely necessary to meet the discrete, temporary, and stated national security or defense purpose. This agreement in no way precludes Project Owner from seeking any available legal remedies for any curtailment associated with a national security emergency other than challenging the curtailment itself. Any request for curtailment under this subsection will include the releasable portions of the President's, the Secretary's, or the combatant commander's mission order.

D. Curtailment for Establishing Baselines. [RESERVED]

E. Wear and Tear. It is a fundamental premise of this agreement that the limited curtailment expected to be required from this agreement will not cause excess wear and tear on the Project. Project Owner agrees that it is responsible for any damage or wear and tear to the turbines as a result of curtailment (as defined in section 2.H) pursuant to this agreement.

F. Disclosure of Curtailment Request. Project Owner acknowledges that there may be national security considerations associated with any request by the MILDEP for curtailment in accordance with the terms of this agreement and any curtailment resulting therefrom. Project Owner therefore agrees not to disclose any such request or any curtailment resulting therefrom without the prior consent of the MILDEP, and the MILDEP agrees that consent to disclose to a business entity with which a non-disclosure agreement is in place will not be unreasonably withheld.

SECTION 5. REVIEW OF BUSINESS ENTITIES.

A. Protection of Defense Capabilities. It is a priority for the MILDEP to protect national defense capabilities and military operations, including military installations, research, development, test and evaluation activities, and military readiness activities, from compromise and exploitation that may occur due to an activity under foreign control operating in the vicinity of those national defense capabilities and military operations.

B. Advance Notice.

1. Project Owner has provided advance written notice to the MILDEP of the following:

a. The names of business entities or persons having a direct ownership interest in the Project.

b. The names of the material vendors and business entities with which Project Owner will potentially execute contracts to perform construction, supply turbines, or conduct operations activities at the location of the Project.

c. The names of any foreign entities or persons being allowed to access the wind turbine structures and associated data systems.

2. For those entities or persons identified under paragraphs 5.B.1.a and 5.B.1.b, the MILDEP agrees to identify to Project Owner, no later than 30 days after the effective date of this agreement, any entity or person posing a security concern. For those entities or persons identified under paragraph 5.B.1.c, the MILDEP agrees to identify to Project Owner, no later than 30 days after the receipt of the name of any foreign entity or person being allowed to access the wind turbines and associated data systems, any entity or person posing a security concern. Project Owner agrees to enter into negotiations with the DoD parties in order to mitigate any such concern. Any such security concern must be resolved prior to allowing access to the site by such persons or representatives of such entities or the use of wind turbines or other permanent on-site equipment manufactured by such a business entity.

3. Project Owner agrees to provide advance written notice to the MILDEP of Project Owner's use of any material vendor not previously screened pursuant to this section. The term "material" used in this subsection means "significant, influential, or relevant." Project Owner shall allow the MILDEP 30 days following such a notice to conduct a security review and assess any security concern. Project Owner will provide advance written notice of a potential new material vendor but need not wait 30 days if an unexpected situation arises for which employing services or vendors immediately is prudent for the operation of the Project.

SECTION 6. ASSIGNMENT.

A. Right to Assign. This agreement shall be binding upon Project Owner and its successors and assigns. If Project Owner and its successors or assigns (assignors) elect to sell, convey, mortgage, assign, or otherwise transfer all or any part of its interests and obligations in the assets comprising the Project (assignment) to any third party (assignee), assignor shall cause such assignee to expressly acknowledge the existence of this agreement. The assignor shall provide a copy of this agreement to the assignee. The assignee shall provide new point of contact information (as in Section 8) to the DoD parties.

B. Notice of Assignment to CFIUS. If the prospective assignee is a foreign national or foreign-owned or -controlled business entity, assignor and the proposed assignee shall jointly provide notice of the proposed transaction to CFIUS in accordance with applicable regulations (subpart D of 31 CFR part 800) and provide a copy of the notice to the MILDEP. Nothing in this agreement shall prohibit or limit DoD from objecting to the transaction before CFIUS, nor limit communications with CFIUS during national security reviews and investigations, and, should mitigation result, during mitigation, tracking, and post-consummation monitoring and enforcement, pursuant to applicable statutes and regulations.

C. Effect of Assignment. Upon an assignment, assignor shall be relieved of any obligations or liabilities under this agreement to the extent that the assignee has assumed in writing such obligations or liabilities and provided that Project Owner has provided a copy of the assignment, including the assumption of obligations and liabilities, to the DoD parties.

SECTION 7. EFFECTIVE DATE AND EXPIRATION.

A. Effective Date. This agreement becomes effective on the date when all parties have signed it.

B. Expiration. This agreement shall expire and have no further force and effect upon the occurrence of the earlier of the following:

1. Construction of the Project has not commenced within the time prescribed under 14 CFR sections 77.33 and 77.35.

2. The Project is decommissioned.

3. Ellsworth AFB ceases operations.

4. DoD ceases to use the FAA-approved Special Use Airspace currently managed by Ellsworth AFB and takes appropriate action accordingly.

5. Termination of the agreement by written mutual agreement of the parties.

C. Actions Prior to Expiration. Any activities engaged in by the parties (including the expenditure of part or all of any voluntary contribution) that occurred prior to expiration of this agreement shall remain valid and continue in effect, notwithstanding the expiration of the agreement.

SECTION 8. POINTS OF CONTACT AND NOTIFICATION.

A. Points of Contact (POCs). The following persons shall be the primary POCs for the parties for purposes of this agreement. Any notice, request, or other communication to be provided pursuant to this agreement shall be delivered to the POCs. Any party may change its POC by

providing written notification of the change to the other parties at least 30 days in advance of the change taking effect.

1. DoD. Executive Director, Military Aviation and Installation Assurance Siting Clearinghouse, 3400 Defense Pentagon, Room 5C646, Washington, DC 20301-3400

2. MILDEP. Director, Air Force Encroachment Management, Office of the Deputy Assistant Secretary of the Air Force for Installations, 1665 Air Force Pentagon, Room 4B94, Washington, DC 20330-1665, usaf.pentagon.saf-ie.mbx.saf-ieim-workflow@mail.mil

3. Project Owner. General Counsel, Apex Clean Energy, LLC, 310 4th Street NE, Suite 300, Charlottesville, VA 22902 USA.

B. Notification. Any written notice shall be sent by registered or certified mail, postage prepaid; sent by a nationally recognized overnight delivery service that provides a receipt for delivery; or hand delivered. A notice shall be deemed received when delivered to the recipient's address.

SECTION 9. BREACH AND COMPENSATORY MITIGATION.

A. Dispute Resolution. If a party believes that another party has breached this agreement, it shall provide written notice of the breach within 30 days of discovery of the breach to all other parties and provide the breaching party a reasonable opportunity (but in all cases at least 30 days from delivery of such notice) to cure the breach. Failure to provide notice within such 30-day period only waives the rights with respect to the periods from after the expiration of such 30-day period and until the date when the notice was given. If there is a dispute between the involved parties as to whether a breach occurred, the involved parties agree to attempt to resolve the dispute beginning with Project Owner and representatives of the MILDEP at Ellsworth AFB. Disputes may be elevated, on the part of the DoD parties, to the MILDEP headquarters and then to the Executive Director of the Siting Clearinghouse. If the breach is not cured or resolved after this initial dispute resolution process, any party may seek to enforce this agreement. Each party specifically reserves any and all rights or causes of action it may have either at law or in equity to require compliance with any provision of this agreement. Each party reserves the right to enforce or refrain from enforcing against another party the terms of this agreement as it sees fit and failure to enforce does not act to excuse future breaches.

B. Voluntary Contributions in the Nature of Liquidated Damages as Compensatory Mitigation. If Project Owner fails to curtail the operation of its wind turbines as required by this agreement, Project Owner shall, in lieu of actual damages, make a voluntary contribution under this agreement to DoD in the nature of liquidated damages of one hundred ninety-one thousand, five hundred, and sixteen dollars ($191,516) for each time Project Owner fails to curtail wind turbine operations as required by this agreement. The Commander, 28th Bomb Wing, will determine whether non-curtailed wind turbine impacts to the LFE training operation can be mitigated without requiring payment of the voluntary contribution. The parties agree that the voluntary contribution amount provided for in this clause, which is based on the calculated total

flight training costs of a B-1B aircrew with a flight time of one hundred twenty (120) minutes, is a fair and reasonable estimate of damages that the MILDEP will incur as a result of Project Owner's failure to curtail its wind turbine operations as required by this agreement. Project Owner shall make payment of the voluntary contribution under this provision within 30 days of receiving the MILDEP's payment request. The parties agree that the maximum cumulative amount of payment for failure to comply with wind turbine curtailment over the course of this agreement pursuant to this clause is one million, five hundred thousand dollars ($1,500,000). DoD will use these funds to offset the cost of measures undertaken by DoD to mitigate adverse impacts of this Project or other energy projects within the meaning of 10 U.S.C. section 183a on military operations and readiness or to conduct studies of potential measures to mitigate such impacts. DoD shall accept such payment as a voluntary contribution of funds pursuant to 10 U.S.C. section 183a. Such voluntary contribution may be in addition to voluntary contributions made by other project owners, and such other contributions may be in amounts different from that made by Project Owner. DoD will accept the voluntary contribution on behalf of the DoD parties and will transfer the funds to appropriate accounts. All voluntary contributions shall be paid electronically through Pay.gov.

1. Project Owner shall use one of the following two methods of making payment:

a. ACH Debit (preferred). ACH debit authorizes Pay.gov to request a payment immediately upon processing. Many institutions use ACH debit blocks as a precaution to prevent accidental withdrawals from unauthorized sources. In order to ensure the transaction is not blocked, Project Owner will use DoD's specified ID number as an exception for the debits authorized on the Pay.gov site. The ID for this specific collection is 00008522Z4.

b. ACH Credit. ACH Credit is a promise to arrange a payment from the promisor's bank account to the agency being paid.

2. To complete a voluntary contribution transaction:

a. Visit the Pay.gov website: https://www.pay.gov/public/form/start/579188704.

b. Fill out the form provided on the site.

c. Once submitted, print a copy of the confirmation for your records.

3. Important things to remember when filling out the form:

a. Collection Number: The collection number for this transaction will be: 2020BowmanWindLLCBowman.

b. Description: $191,516.

c. For further assistance, visit Pay.gov Web Help section: https://www.pay.gov/WebHelp/HTML/about.html

DoD Primary POC for voluntary contribution settlement:
Krishna Nekkalapudi
WHS Financial Management Directorate
4800 Mark Center Drive
Alexandria, VA 22350
Office: 703-545-0048
Email: krishnachaitanya.nekkalapudi.civ@mail.mil

DoD Alternate POC for voluntary contribution settlement:
Antonio King
WHS Financial Management Directorate
4800 Mark Center Drive
Alexandria, VA 22350
Office: 703-545-0028
Email: antonio.d.king10.civ@mail.mil

SECTION 10. GENERAL PROVISIONS.

A. Amendments. Any party to this agreement may request that it be amended, whereupon the parties agree to consult to consider such amendments. Any amendment to this agreement shall become effective when signed by all of the parties unless its terms provide for a different effective date. Amendments only providing substitute ASNs within the Project boundary, with no change to height or total number of Project ASNs, need only be signed by the MILDEP's and Project Owner's designated Project officers if filed with FAA within 12 months of the effective date of this agreement.

B. Integration. This agreement contains the entire agreement and understanding between the parties with respect to all of the subject matter contained herein, thereby merging and superseding all prior agreements and representations by the parties with respect to such subject matter.

C. Governing Law. This agreement shall be governed by and construed in accordance with the laws of the United States and the State of North Dakota, as may be applicable.

D. Interpretation. In the event an ambiguity or question of intent or interpretation arises, this agreement shall be construed as if drafted jointly by the parties and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of authorship of any of the provisions of this agreement. Any reference to any Federal, state, interstate, local, or foreign statute or law shall be deemed also to refer to all rules and regulations promulgated thereunder, as they may have been amended from time to time, unless the context requires otherwise.

E. Headings and Titles. The headings or section titles contained in this agreement are inserted solely for convenience and do not constitute a part of this agreement between the parties, nor should they be used to aid in any manner in the construction of this agreement.

F. Severability. If any term, provision, or condition of this agreement is held to be invalid, void, or unenforceable by a U.S. governmental authority and such holding is not or cannot be appealed further, then such invalid, void, or unenforceable term, provision, or condition shall be deemed severed from this agreement and all remaining terms, provisions, and conditions of this agreement shall continue in full force and effect. The parties shall endeavor in good faith to replace such invalid, void, or unenforceable term, provision, or condition with valid and enforceable terms, provisions, or conditions that achieve the purpose intended by the parties to the greatest extent permitted by law.

G. Waivers; Remedies Cumulative. There is no implied waiver of rights under this agreement. No failure or delay on the part of a party in exercising any of its rights under this agreement or in insisting upon strict performance of provisions of this agreement, no partial exercise by either party of any of its rights under this agreement, and no course of dealing between the parties shall constitute a waiver of the rights of any party under this agreement, other than the requirement to raise a matter of breach within 30 days of discovery. Any waiver shall be effective only by a written instrument signed by the party granting such waiver, and such waiver shall not operate as a waiver of, or estoppel with respect to, any subsequent failure to comply with this agreement. The remedies provided in this agreement are cumulative and not exclusive of any remedies provided by law.

H. CFIUS. Nothing in this agreement shall relieve Project Owner or its successors or assigns from complying with 31 CFR part 800 (Mergers, Acquisitions, and Takeovers by Foreign Persons) nor prevent or limit the parties from communicating in any form with CFIUS.

I. Anti-Deficiency. For the DoD parties, this agreement is subject to the availability of appropriated funds and sufficient resources. No provision in this agreement shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. section 1341.

J. Disclosure. The parties may freely disclose this agreement with any person or entity. DoD will post the agreement on the Siting Clearinghouse website. Project Owner may mark any part of any document it believes to be proprietary or competition sensitive and that it wants DoD or the MILDEP to exempt from disclosure. The DoD parties will only disclose any such marked information in accordance with the provisions of 5 U.S.C. section 552 (the Freedom of Information Act).

K. No Third Party Beneficiaries. Nothing in this agreement, express or implied, is intended to give to, or shall be construed to confer upon, any person not a party any remedy or claim under or by reason of this agreement and this agreement shall be for the sole and exclusive benefit of the parties and their respective successors and assigns.

L. Full and Complete Satisfaction. The completion of the obligations of each of the parties under this agreement constitute the full and complete satisfaction of those obligations.

M. Other Federal Agencies. This agreement does not bind any Federal agency, other than the DoD parties, nor waive required compliance with any law or regulation.

N. Completion of Construction. Within 60 days of the completion of construction of the Project, Project Owner shall deliver to DoD copies of the FAA form 7460-2 for each ASN, including the final coordinates for each turbine erected.

O. Grid Operator Protocols. Project Owner shall disclose this curtailment requirement to the grid operator and shall comply with the mitigation agreement's curtailment provisions, including requesting waivers from the grid operator if grid protocols would interfere with this mitigation agreement.

[*Continued on following page*]

P. Signature/Counterparts. The parties represent and warrant that the signatories below have authority to sign on behalf of and bind each respective party, and that no other signature is required to bind that party. This agreement may be executed in several counterparts, each of which shall be deemed an original, all of which shall constitute but one and the same instrument.

IN WITNESS WHEREOF, the parties have executed and delivered this agreement.

FOR THE DEPARTMENT OF DEFENSE:

Jordan Gillis
Assistant Secretary of Defense
(Sustainment)

11/4/2020
Date

FOR THE DEPARTMENT OF THE AIR FORCE:

MORIARTY.ROBERT.E.1013267584 Digitally signed by MORIARTY.ROBERT.E.1013267584 Date: 2020.09.24 09:35:10 -04'00'

ROBERT E. MORIARTY, P.E.
Deputy Assistant Secretary of the Air Force
(Installations)

Date

FOR BOWMAN WIND, LLC:

BY: APEX CLEAN ENERGY FINANCE, LLC
ITS: SOLE MEMBER

BY: APEX GBR, LLC
ITS: SOLE MEMBER

BY: APEX CLEAN ENERGY HOLDINGS, LLC
ITS: MANAGER

Ken Young
COO

09/14/2020
Date

Attachment A

Federal Aviation Administration Filings for Bowman Wind Project

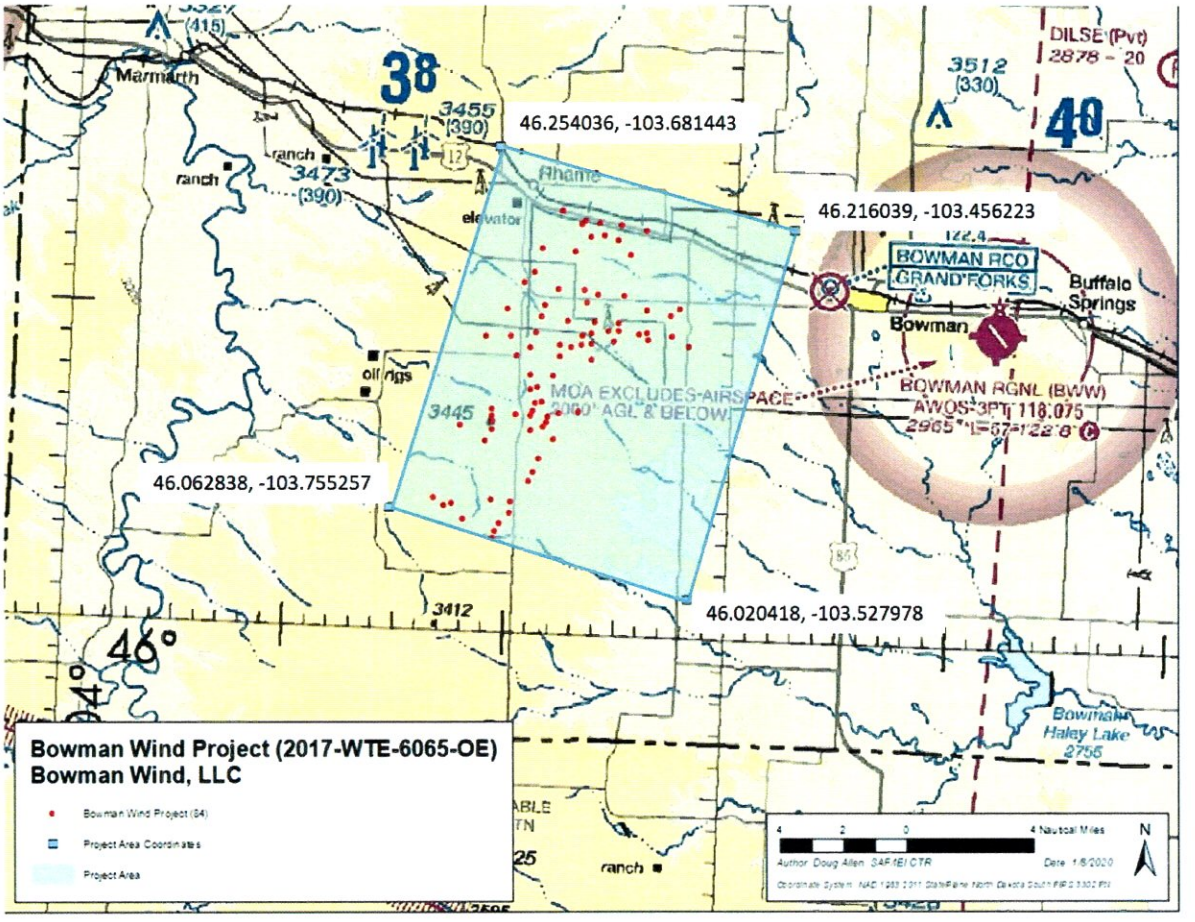
Case Number	City	State	Latitude (N)	Longitude (W)	Structure Height (Feet)
2020-WTE-416-OE	Bowman	ND	46-13-04.84	103-36-43.39	499
2020-WTE-417-OE	Bowman	ND	46-12-58.39	103-36-12.00	499
2020-WTE-418-OE	Bowman	ND	46-12-55.91	103-35-18.68	499
2020-WTE-419-OE	Bowman	ND	46-12-52.58	103-34-47.60	499
2020-WTE-420-OE	Bowman	ND	46-12-44.33	103-33-47.44	499
2020-WTE-421-OE	Bowman	ND	46-12-44.35	103-34-07.88	499
2020-WTE-422-OE	Bowman	ND	46-12-39.60	103-35-44.48	499
2020-WTE-423-OE	Bowman	ND	46-12-37.39	103-35-20.12	499
2020-WTE-424-OE	Bowman	ND	46-12-34.93	103-36-01.30	499
2020-WTE-425-OE	Bowman	ND	46-12-33.66	103-36-35.79	499
2020-WTE-426-OE	Bowman	ND	46-9-29.12	103-30-44.55	499
2020-WTE-427-OE	Bowman	ND	46-9-28.26	103-35-06.38	499
2020-WTE-428-OE	Bowman	ND	46-9-28.85	103-36-42.89	499
2020-WTE-429-OE	Bowman	ND	46-9-15.68	103-31-11.81	499
2020-WTE-430-OE	Bowman	ND	46-9-14.80	103-36-43.88	499
2020-WTE-431-OE	Bowman	ND	46-9-10.38	103-31-34.07	499
2020-WTE-432-OE	Bowman	ND	46-9-11.82	103-35-11.55	499
2020-WTE-433-OE	Bowman	ND	46-9-01.93	103-31-44.98	499
2020-WTE-434-OE	Bowman	ND	46-8-59.22	103-36-41.12	499
2020-WTE-435-OE	Bowman	ND	46-8-58.51	103-36-15.79	499
2020-WTE-436-OE	Bowman	ND	46-9-00.81	103-40-05.08	499
2020-WTE-437-OE	Bowman	ND	46-8-43.59	103-36-38.18	499
2020-WTE-438-OE	Bowman	ND	46-8-39.61	103-33-46.02	499
2020-WTE-439-OE	Bowman	ND	46-8-43.08	103-39-46.12	499
2020-WTE-440-OE	Bowman	ND	46-8-34.54	103-34-14.91	499
2020-WTE-441-OE	Bowman	ND	46-8-31.44	103-36-43.09	499
2020-WTE-442-OE	Bowman	ND	46-8-28.23	103-34-48.54	499
2020-WTE-443-OE	Bowman	ND	46-8-21.00	103-39-46.58	499
2020-WTE-444-OE	Bowman	ND	46-8-17.78	103-36-18.20	499
2020-WTE-445-OE	Bowman	ND	46-8-16.93	103-36-43.72	499
2020-WTE-446-OE	Bowman	ND	46-8-17.03	103-39-21.53	499
2020-WTE-447-OE	Bowman	ND	46-8-09.62	103-40-05.05	499
2020-WTE-448-OE	Bowman	ND	46-7-54.38	103-36-39.72	499
2020-WTE-449-OE	Bowman	ND	46-7-52.89	103-36-14.44	499
2020-WTE-450-OE	Bowman	ND	46-7-49.77	103-35-43.91	499
2020-WTE-451-OE	Bowman	ND	46-7-52.04	103-40-05.06	499
2020-WTE-452-OE	Bowman	ND	46-7-41.43	103-36-43.05	499
2020-WTE-453-OE	Bowman	ND	46-7-31.94	103-40-11.00	499
2020-WTE-454-OE	Bowman	ND	46-7-31.92	103-40-38.11	499
2020-WTE-455-OE	Bowman	ND	46-7-25.18	103-36-19.82	499

Case Number	City	State	Latitude (N)	Longitude (W)	Structure Height (Feet)
2020-WTE-456-OE	Bowman	ND	46-7-24.06	103-41-24.48	499
2020-WTE-457-OE	Bowman	ND	46-7-16.28	103-36-32.62	499
2020-WTE-458-OE	Bowman	ND	46-7-17.73	103-43-12.77	499
2020-WTE-459-OE	Bowman	ND	46-7-13.97	103-40-43.28	499
2020-WTE-460-OE	Bowman	ND	46-7-01.67	103-42-14.74	499
2020-WTE-461-OE	Bowman	ND	46-7-01.84	103-43-09.84	499
2020-WTE-462-OE	Bowman	ND	46-6-54.74	103-36-54.48	499
2020-WTE-463-OE	Bowman	ND	46-6-54.17	103-36-32.97	499
2020-WTE-464-OE	Bowman	ND	46-6-50.78	103-37-20.05	499
2020-WTE-465-OE	Bowman	ND	46-6-46.25	103-37-36.86	499
2020-WTE-466-OE	Bowman	ND	46-6-46.67	103-43-08.12	499
2020-WTE-467-OE	Bowman	ND	46-6-38.30	103-36-31.88	499
2020-WTE-468-OE	Bowman	ND	46-6-36.65	103-37-47.58	499
2020-WTE-469-OE	Bowman	ND	46-6-31.87	103-42-16.15	499
2020-WTE-470-OE	Bowman	ND	46-6-28.44	103-37-58.80	499
2020-WTE-471-OE	Bowman	ND	46-6-25.91	103-40-43.21	499
2020-WTE-472-OE	Bowman	ND	46-6-21.75	103-36-32.46	499
2020-WTE-473-OE	Bowman	ND	46-6-22.32	103-41-00.20	499
2020-WTE-474-OE	Bowman	ND	46-6-08.47	103-37-22.46	499
2020-WTE-475-OE	Bowman	ND	46-6-06.04	103-36-32.77	499
2020-WTE-476-OE	Bowman	ND	46-6-05.38	103-37-40.34	499
2020-WTE-477-OE	Bowman	ND	46-6-01.92	103-41-01.24	499
2020-WTE-478-OE	Bowman	ND	46-5-56.27	103-36-43.63	499
2020-WTE-479-OE	Bowman	ND	46-5-47.75	103-37-39.04	499
2020-WTE-480-OE	Bowman	ND	46-5-32.61	103-36-39.77	499
2020-WTE-481-OE	Bowman	ND	46-5-33.08	103-37-38.55	499
2020-WTE-482-OE	Bowman	ND	46-5-15.49	103-37-36.66	499
2020-WTE-483-OE	Bowman	ND	46-5-01.00	103-37-40.25	499
2020-WTE-484-OE	Bowman	ND	46-4-00.46	103-42-29.59	499
2020-WTE-485-OE	Bowman	ND	46-3-55.56	103-42-49.05	499
2020-WTE-486-OE	Bowman	ND	46-4-00.40	103-36-48.54	499
2020-WTE-487-OE	Bowman	ND	46-5-56.45	103-32-12.41	499
2020-WTE-488-OE	Bowman	ND	46-5-19.49	103-35-05.01	499
2020-WTE-489-OE	Bowman	ND	46-6-48.90	103-34-07.65	499
2020-WTE-490-OE	Bowman	ND	46-10-56.14	103-28-54.48	499
2020-WTE-491-OE	Bowman	ND	46-10-53.83	103-31-13.67	499
2020-WTE-492-OE	Bowman	ND	46-10-16.39	103-35-48.06	499
2020-WTE-493-OE	Bowman	ND	46-11-35.22	103-34-24.19	499
2020-WTE-494-OE	Bowman	ND	46-12-35.46	103-30-25.82	499
2020-WTE-495-OE	Bowman	ND	46-12-25.85	103-32-44.90	499
2020-WTE-496-OE	Bowman	ND	46-11-53.48	103-38-13.99	499
2020-WTE-497-OE	Bowman	ND	46-9-30.83	103-38-22.83	499
2020-WTE-498-OE	Bowman	ND	46-9-13.49	103-42-00.03	499

Case Number	City	State	Latitude (N)	Longitude (W)	Structure Height (Feet)
2020-WTE-499-OE	Bowman	ND	46-3-51.51	103-39-54.27	499
2020-WTE-500-OE	Bowman	ND	46-5-36.65	103-43-29.65	499
2020-WTE-501-OE	Bowman	ND	46-6-53.81	103-30-14.60	499
2020-WTE-502-OE	Bowman	ND	46-7-31.40	103-30-34.31	499

Attachment B

Bowman Wind Project Map and Project Area



Attachment C
Curtailment Communications Protocol

1. Purpose and Scope. This attachment establishes the protocol for communication between Project Owner and Ellsworth AFB, acting on behalf of the MILDEP, when curtailment of wind turbine operations is required.

2. Parties Authorized to Request Curtailment and Receive Curtailment Requests (Curtailment Contact).

A. Ellsworth AFB. The 28th Bomb Wing Airspace Manager and Wing Scheduling will be the primary MILDEP points of contact. These are the only persons authorized to request curtailment for Ellsworth AFB.

B. Project Owner. The Project Owner Remote Operations Center is the only Party authorized to receive a request by Ellsworth AFB for curtailment.

3. Curtailment Procedures.

A. 30 Day Schedule. No later than thirty (30) days in advance of a scheduled LFE, Ellsworth AFB will notify the Project Owner Remote Operations Center of the planned LFE days and times for which curtailment will be required.

B. Weekly Schedule. No later than seven (7) days prior to the LFE, Ellsworth AFB will notify the Project Owner Remote Operations Center via email of the planned start time and end time of the curtailment periods that would be required to avoid any adverse impact by the spinning of wind turbine blades. The block of time corresponding to start time and end time shall be referred to herein as the "requested period." The weekly schedule shall set forth separate requested periods for each LFE block that will require curtailment. The Project Owner Remote Operations Center will confirm receipt of the email. If confirmation is not received within 24 hours, the requesting official will contact the Project Owner Remote Operations Center by phone to request email confirmation of the weekly schedule.

C. Day of Curtailment Procedures. On the day scheduled for curtailment, Ellsworth AFB will notify the Project Owner Remote Operations Center to begin curtailment procedures, confirming there has been no change from the weekly schedule for that day. The Remote Operations Center will curtail wind turbine operations within 5 minutes. The Project Owner Remote Operations Center will remove curtailment restrictions from the turbines 180 minutes later. Upon receipt of the notice, the Project Owner Remote Operations Center shall promptly send an email to Ellsworth AFB confirming receipt of the notice and memorializing the curtailment in writing.

D. Procedures if Additional Training Time is Required. If additional training time is required after curtailment has been initiated, Ellsworth AFB will call the Project Owner Remote Operations Center to continue curtailment procedures beyond the

normal 180 minutes. The Remote Operations Center will continue to curtail turbines for the requested period. Upon receipt of such notice, the Project Owner Remote Operations Center shall promptly send an email to Ellsworth AFB confirming receipt of such notice and memorializing the curtailment in writing.

E. Procedures if the Training Schedule Is Changed. If the MILDEP changes the schedule for a LFE such that the MILDEP would require curtailment outside of the applicable requested period, Ellsworth AFB will promptly notify the Project Owner Remote Operations Center either via phone or via email of such change and will indicate the revised start time (hereinafter "revised start time") of the updated curtailment request. Upon receipt of such notice, the Project Owner Remote Operations Center shall promptly send an email to Ellsworth AFB confirming receipt of such notice and memorializing the curtailment in writing. In such instance, Project Owner is authorized to continue operating the Project without interruption until Ellsworth AFB calls to begin the revised LFE. If, prior to the revised start time, the MILDEP again changes the schedule for the LFE such that the revised start time must be further revised, then Ellsworth AFB will again notify the Project Owner Remote Operations Center according to the procedures outlined in this section. Project Owner will not shut down the turbines until Ellsworth AFB calls per the normal curtailment procedures outlined in section 3 of this attachment (above).

F. Procedures if Training Is Completed Early. If a LFE is completed before the end of the requested period then the MILDEP will make every effort to notify the Project Owner Remote Operations Center promptly via phone. In such instance, curtailment will end 20 minutes after such notice is received by the Project Owner Remote Operations Center. If the MILDEP successfully contacts the Project Owner Remote Operations Center via phone call, then the aforementioned 20 minute time period shall begin upon the completion of such phone call, and the Project Owner Remote Operations Center shall promptly send an email to Ellsworth AFB to confirm receipt of such telephonic notice and to memorialize in writing the exact time of the completion of such phone call. If the MILDEP cannot reach the Project Owner Remote Operations Center via phone, then the MILDEP shall promptly send such notification via email, and the aforementioned 20-minute time period shall begin running upon the timestamp of such email.

4. Verification of Curtailment. The Project Owner Remote Operations Center shall notify Ellsworth AFB promptly to confirm that the wind turbine blades are curtailed. Such notice shall be delivered either via phone or via email. If such notice is delivered via phone, the Project Owner Remote Operations Center shall promptly thereafter send an email to Ellsworth AFB to memorialize the notice in writing. Before any wind turbine operations begin, Project Owner agrees to provide a web-based portal for the relevant scheduling offices to confirm that all Project turbines are curtailed.

5. Remote Curtailment Scheduling. Project Owner may, with agreement of the 28th Bomb Wing, Ellsworth AFB, create a secure remote interface to be used by Ellsworth AFB to provide all or some of the information described in sections 3 and 4 of this attachment (Remote Scheduling). If Project Owner fully or partially implements Remote Scheduling, the Parties will not be required to follow the processes described above during the periods for which the Remote Scheduling is

accessible to Ellsworth AFB. Project Owner may discontinue Remote Scheduling at any time and return to the processes described herein.

6. Contact Listing.

A. Air Force.

1. Mr. George Stone, Airspace Manager, (605) 385-1230

2. 28th OSS Wing Scheduling, (605) 385-4110

3. PINE TREE, (605) 385-1570

B. Project Owner.

1. Manager, Remote Operations Control Center (Primary), (434) 328-2305

2. Senior Vice President of Technology and Energy Assessment (Secondary), (434) 220-3790

7. Reporting. The operations of the Project will be controlled and monitored using a system known as the Supervisory Control and Data Acquisition (SCADA) system.

A. Quarterly Report. Project Owner shall create a quarterly report using the SCADA system that will show the precise number of hours the Project was curtailed during each quarter (hereinafter the "quarterly report"). The Project Owner Curtailment Contact shall deliver each quarterly report to Ellsworth AFB within 7 days after the end of each quarter. Project Owner and Ellsworth AFB may discuss such quarterly reports during periodic review sessions, or at any such time as Project Owner and Ellsworth AFB mutually agree. Project Owner may, with agreement of the 28th Bomb Wing, Ellsworth AFB, establish a secure remote interface to be used by Ellsworth AFB to access the information contained in the quarterly report (Remote Report Access). If Project Owner establishes the Remote Report Access then it shall not be required to create the quarterly report during the periods for which the Remote Report Access is accessible to Ellsworth AFB. Project Owner may discontinue the Remote Report Access at any time and return to the process for providing monthly reports described herein.

B. Annual Report. At the end of each fiscal year, Project Owner shall create an annual report using the SCADA system (hereinafter the "annual report") to show the sum of hours the Project was curtailed during that fiscal year, as recorded by Project Owner, and a historical schedule showing Actual Curtailment Hours for all preceding years of the Project's operation. Project Owner shall deliver the annual report to Ellsworth AFB within 15 days after the end of each year. Within 7 days after receiving the annual report, Ellsworth AFB shall provide to Project Owner written notice via email that the 28th OSS Scheduling Office either accepts the annual report as accurate or disagrees with the annual report. In the event of disagreement, Ellsworth AFB and Project Owner shall enter dispute resolution as described in section 9 of the main agreement. The outcome of such dispute resolution shall be a revised annual report

agreed upon by Ellsworth AFB and Project Owner and memorialized in writing. The number of hours of curtailment for a given year as agreed upon by Ellsworth AFB and Project Owner and memorialized in writing in accordance with this subsection shall be the Actual Curtailment Hours.

8. Process Reviews. Ellsworth AFB and Project Owner shall conduct a semi-annual review to ensure that proper procedures were followed and to identify any lessons learned. Project Owner and Ellsworth AFB may conduct more frequent process reviews as required.

9. Process Testing. Ellsworth AFB and Project Owner shall conduct at least two tests of these procedures prior to the Project beginning commercial operations. These tests shall be scheduled at a mutually agreeable time and location. The first test shall be conducted during the development of the Project's control system and shall include a technical discussion of the process and how the curtailment will be implemented. The second test shall occur during the Wind Project's final commissioning and testing and shall represent a simulation of the process described herein. Upon completion of each test, Ellsworth AFB and Project Owner shall review the test results to identify any potential improvements to the process.

10. Communications Protocol for a National Security or Defense Purpose. Under circumstances described in section 4.C of the main agreement, either DoD party will call the Project Remote Operations Center to request immediate curtailment. Advance notification is unlikely due to the unpredictable and dynamic nature of national security or defense events. The applicable DoD party will call the Project Remote Operations Center as soon as possible after the national security or defense event is terminated and curtailment is no longer required.

Appendix D

Agency Correspondence

U.S. Department of Commerce, National Telecommunications and Information Administration

UNITED STATES DEPARTMENT OF COMMERCE
National Telecommunications and Information Administration
Washington, D.C. 20230

March 31, 2020

Mr. B. Benjamin Evans
EVANS ENGINEERING SOLUTIONS, LLC
524 Alta Loma Drive
Thiensville, WI 53092

Re: Bowman Project, Revision 1: Bowman County, ND

Dear Mr. Evans:

In response to your request on February 5, 2020, the National Telecommunications and Information Administration provided to the federal agencies represented in the Interdepartment Radio Advisory Committee (IRAC) the plans for the Bowman Wind Project, Revision 1, located in Bowman County, North Dakota.

After a 45+ day period of review, of the reviewing federal agencies, none had concerns with turbine construction in the designated areas.

While the other IRAC agencies did not identify any concerns regarding radio frequency blockage, this does not eliminate the need for the wind energy facilities to meet any other requirements specified by law related to these agencies. For example, this review by the IRAC does not eliminate any need that may exist to coordinate with the Federal Aviation Administration concerning flight obstruction.

Thank you for the opportunity to review these proposals.

Sincerely,

John R. McFall Digitally signed by John R. McFall Date: 2020.03.31 14:55:04 -04'00'

John R. McFall
Deputy Chief, Spectrum Services Division
Office of Spectrum Management

Appendix D

Agency Correspondence

U.S. Army Corps of Engineers, North Dakota Regulatory Office

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
3319 UNIVERSITY DRIVE
BISMARCK, NORTH DAKOTA 58504-7565

May 28, 2020

NWO-2020-01018-BIS

Apex Clean Energy
Attn: Mr. Scott Jansen
8665 Hudson Blvd North, Suite 110
Lake Elmo, Minnesota 55042

Dear Mr. Jansen:

This is in response to your letter dated May 11, 2020, requesting comments on the proposed Bowman Wind LLC, 200-megawatt Wind Farm project. The proposed project location in Bowman County, North Dakota is as follows:

Sections	Township	Range
21, 29-36	132N	103W
13-15, 20-29, 31-36	131N	104W
1-5, 7-36	131N	103W
1-18, 20-24, 26-27	130N	104W
1-12, 16-19	130N	103W

U. S. Army Corps of Engineers Regulatory Offices administer Section 404 of the Clean Water Act (Section 404). A Section 404 permit would be required for the discharge of dredge or fill material (temporarily or permanently) in waters of the United States. Waters of the United States may include, but are not limited to, rivers, streams, ditches, coulees, lakes, ponds, and their adjacent wetlands. Fill material includes, but is not limited to, rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mines or other excavation activities and materials used to create any structure or infrastructure in waters of the United States.

Based on the information contained in your letter, the Corps has determined that your proposed project may need a Clean Water Act Section 404 permit. The permit application and instructions for completing the application are enclosed and may also be found at: http://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Obtain-a-Permit. Be sure to accurately describe all proposed work and construction methodology. If you decide to submit a permit application, an aquatic resource delineation prepared according to the North Dakota Minimum Standards for Delineations (enclosed) is also required as supporting documentation. Once the application is complete, mail it to the letterhead address or to the email address (preferred) below.

Due to precautions taken in response to the COVID-19 pandemic, The North Dakota Regulatory office prefers that all submissions are sent electronically to the following email address: CENWO-OD-RND@usace.army.mil instead of a hard copy by mail. Please split large attachments (>25 MB) into multiple emails if needed.

Please refer to identification number NWO-2020-01018-BIS in any correspondence concerning this project. If you have any questions, please contact Jeremy Nygard by email at *Jeremy.S.Nygard@usace.army.mil*, or telephone at (701) 255-0015, extension 2006. For more information regarding our program, please visit our website at *http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/NorthDakota.aspx*.

Sincerely,

ERHARDT.TONI.R.1231324557
Digitally signed by ERHARDT.TONI.R.1231324557
Date: 2020.05.28 13:15:28 -05'00'

Toni R. Erhardt
Senior Project Manager
North Dakota

Enclosures

MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS

30 October 2019

The U.S Army Corps of Engineers, through its Regulatory Program, regulates certain activities in waters of the United States. Waters of the United States are defined under 33 CFR Part 328. In order for the Corps to determine the amount and extent of waters of the United States at a site, aquatic resources must first be delineated in accordance with established regulatory standards, guidance and protocol, such as the 1987 Corps of Engineers Wetlands Delineation Manual and appropriate regional supplements. Before making any permit decision, the Corps is responsible for conducting or verifying the delineation and determining which of the aquatic resources have the potential to fall under federal jurisdiction.

Due to limited staffing and resources, the North Dakota State Regulatory Office recommends permit applicants employ the services of individuals experienced in delineating aquatic resources. Permit applicants are encouraged early in the project planning stages to contact the Corps to determine what level of documentation is required for their project. A permit applicant should submit their aquatic resources delineation, along with a request for a preliminary or approved jurisdictional determination. Early consultation may help identify potential concerns and could result in a quicker permit decision.

The North Dakota Regulatory Office has established minimum standards for delineation reports to insure consistency and accuracy in aquatic resources delineations, which will minimize potential delays. The standards are based on years of experience conducting and verifying delineations, as well as the best practices of environmental consultants. **Delineations submitted for verification must follow the standards, unless determined to not be practical on a case-by-case basis. The Corps may determine that a desktop delineation may be appropriate instead of a full field aquatic resource delineation**. Please contact the State Program Manager for approval for desktop evaluations. A desktop delineation includes analysis of an area using current and historical aerial photographs, NRCS Soils Mapping, and NWI maps. We will not accept desktop evaluations where the only reference is NWI maps. These are only to be used as a tool to determine the potential for wetlands on-site and should not replace the use of good aerial photography. Situations where adherence to the standards may not be practical include activities with small permanent or temporary impacts to aquatic resources (under 0.10 acre), applicants with limited financial resources, and emergencies. The ND State Office will notify the requestor for delineation submittals

that do not contain enough information to accurately identify the limits of waters of the United States.

It should be noted that the Corps does not accept any variations of these standards as provided by other agencies. It is the Corps that determines whether a water is jurisdictional. **THERE SHOULD BE NO REFERENCE IN THE REPORT REGARDING THE JURISDICTION OF ANY WATER. THIS INCLUDES NO REFERENCES TO ARTIFICIAL WETLANDS**. **THIS IS A CORPS DECISION.**

U.S. Army Corps of Engineers
North Dakota Regulatory Office
Minimum Standards for Aquatic Resource Delineation Reports

ORM #/Project Title_____

Reviewer_____ Date _____

An aquatic resources delineation report submitted to the North Dakota Regulatory Office must include the following:

☐ (Mandatory) A cover letter requesting a jurisdictional determination. The letter must specify whether a preliminary and/or approved jurisdiction determination is requested. The RGL 16-01 Appendix 1 form can be used.

☐ (Mandatory) A signed statement from the property owner(s) allowing Corps personnel to enter the property and to collect samples during normal business hours. If the property is land-locked, the owner or proponent must obtain permission from the adjacent property owner(s) to provide access for Corps personnel. The RGL 16-01 Appendix 1 form can be used.

☐ (Mandatory) A statement that the delineation has been conducted in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual and appropriate regional supplement(s). The regional supplement(s) used must be identified. **For ordinary high water mark (OHWM) delineations, a statement identifying the use of the OHWM field guide must be included**. "**Arid West Ephemeral and Intermittent Streams OHWM Datasheet"**

☐ (Mandatory) Directions to the survey area, and the location of the Access Point of Entry. **The directions should be detailed enough that a regulator can drive to the site**. Google Maps can be used to provide directions and included in the Appendices.

☐ (Mandatory) Contact information for the applicant(s), property owner(s), and agent(s). Must include the applicant/property owner as the JD is issued to the property owner.

☐ (Mandatory) The total acreage of the survey area.

☐ (Mandatory) Date(s) field work was completed.

☐ (Mandatory) A site location map on a 7.5-minute USGS quadrangle. The map must provide the name of the USGS quadrangle, Section, Township, Range, and the latitude and longitude **(in decimal degrees).**

☐ (Mandatory) A map of all delineated aquatic resources ("Aquatic Resources Delineation Map") showing the following:

- ☐ (Mandatory) All aquatic resources delineated must be clearly shown on the map. Because only the Corps determines the regulatory status of each aquatic resource, the map must not include any labeling about jurisdiction.
- ☐ (Mandatory) At least one set of paired data points, documented in data forms, for each aquatic resource or complex. The paired data points must be located close to the delineated boundary. Additional data points may be necessary, depending on various factors including the size and shape of the aquatic resource, changes in vegetation communities, and slope. **The location of all data points should be shown on the wetland delineation map.**
- ☐ (Mandatory) A reference block that identifies the survey or project name, individual(s) who conducted the delineation, date of the map, and date(s) of any revisions or the company or agency that created the maps.
- ☐ (Mandatory) The orientation of the map on the page (as it is read) must be the same for all maps submitted.
- ☐ By convention, North will normally be toward the top of the page.

☐ Digital data for the site, aquatic resource boundaries, and data point locations must be provided in a geographic information system (GIS) format, with ESRI Shape-files being the preferred format. Each GIS data file must be accompanied by a metadata file containing the appropriate geographic coordinate system, projection, and datum. If GIS data is unavailable or otherwise cannot be produced and the Corps determines a site visit is necessary, the aquatic resource boundaries must be physically marked with numbered flags or stakes before the North Dakota Regulatory Office can complete a delineation verification. **This is optional depending on the size of the proposed project.**

☐ (Mandatory) A table listing all aquatic resources. The table shall include the name of each aquatic resource, its Cowardin type, acreage, and location (**latitude/longitude, in decimal degrees**). For linear features, the table must show both acreage and linear feet. **THE TABLE SHOULD NOT INCLUDE REFERENCES TO ARTIFICIAL WETLANDS!**

☐ If remote sensing was used in the delineation, provide an explanation of how it was used and include the name, date and source of the tools used and copies of applicable maps/photographs. Typically for desktop evaluations.

☐ (Mandatory) A narrative describing all aquatic resources at the site and an explanation for the mapped boundaries, especially for resources containing complex transition zones. On large projects, the narrative can combine similar resources into one descriptive paragraph. THIS SHOULD NOT INCLUDE REFERENCE TO ARTIFICIAL WETLANDS OR ARTIFICIAL DITCHES. THIS HAS NO BEARING ON WHETHER A

WATER IS JURISDICTIONAL. A description of a “ditch” wetland does not need a qualifier that it is artificial. The narrative must include the following:

☐ **(Mandatory) A description of existing field conditions. The field condition description must include current land use, flood/drought conditions, irrigation practices, and any characteristics considered atypical. The Existing Conditions describes the region in which the project will occur. A clear description of the setting helps to explain the context and intensity of impacts. The setting discussion gives the reader a concise description of the area’s topography, soils, habitat, watercourses and level of human or natural disturbance.**

- ☐ Current Land use addressed
- ☐ What are the functions of the wetlands or other waters
- ☐ Flood/drought conditions
- ☐ Irrigation practices
- ☐ Geographic Position
- ☐ Geology
- ☐ Climate, in particular, mean annual rainfall and snowfall
- ☐ Level of human or natural disturbance discussed?

☐ (Mandatory) **A discussion of the hydrology at the site, including all known surface or subsurface sources, drainage gradients, surface water connections to the nearest traditional navigable waterway or interstate water, and any potential influence for manmade water sources, such as irrigation. The discussion should also identify the nearest “blue-line” waterway or other feature found on the most recent USGS map.**

- ☐ **Surface or subsurface sources**
- ☐ **Drainage gradients**
- ☐ **Surface water connections to the nearest traditional navigable waterway or interstate water**
- ☐ **Potential influence for manmade water sources**
- ☐ **Nearest “blue-line” waterway or other feature found on the most recent USGS map**
- ☐ What watershed is the project located in?
- ☐ What is the size of the drainage basin?
- ☐ Direction of flow should be clearly shown on the delineation map.

☐ (Mandatory) **A discussion of plant communities and habitat types present at the site and a list of the scientific name, common name, and wetland indicator status of all plants.**

- ☐ **Plant communities**
- ☐ **Habitat types**
- ☐ **List of the scientific names, common name, and wetland indicator status of all plants.**

☐ (Mandatory) Soil descriptions, soil map(s), and a discussion of hydric soils or soils with hydric inclusions at the site. **The NRCS soils map should only be included with the delineation if the soils are being discussed within the delineation report. If the report does not identify the actual soils observed on the site, then soils reports should not be included.**

- ☐ Soil descriptions
- ☐ Discussion of hydric soils
- ☐ Discussion on Field Indicators

☐ (Mandatory) Any observed or documented interstate or foreign commerce associated with aquatic resources found on the site, specifically recreation or other use by interstate or foreign travelers, sale of fish or shellfish in interstate or foreign commerce, and use by industries operating in interstate or foreign commerce.

- ☐ Identify any recreational use of the site by interstate or foreign visitors
- ☐ Identify any commercial uses that may be used in interstate commerce
- ☐ Identify any potential industries that may be using the water on site

☐ A completed copy of the *Aquatic Resources Excel* spreadsheet must be submitted. For delineations that include greater than 25 separate waters, the spreadsheet will be required by the ND Regulatory Office.

☐ (Mandatory) Completed data forms for each sample point including all essential information to make a decision.

☐ For long linear projects, such as pipelines and road projects, similarly situated waters can be assessed as a group and not as individual waters. This applies especially to road projects that may include linear roadside ditches that may be assessed as a man-made tributary. For these situations, a pre-application meeting should be scheduled with the Corps for further clarification.

Often, additional information can expedite the verification of a delineation. Particularly helpful data includes site specific topographic maps, Light Detection and Ranging (LIDAR), satellite, aerial and ground photographs, floodplain maps, and related reports.

More information regarding aquatic resource delineation, including reference materials, can be found on our website at:
http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/NorthDakota.aspx

U.S. Army Corps of Engineers (USACE)

NATIONWIDE PERMIT PRE-CONSTRUCTION NOTIFICATION (PCN)

33 CFR 330. The proponent agency is CECW-CO-R.

Form Approved - OMB No. 0710-0003 Expires: 02-28-2022

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority	Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.
Principal Purpose	Information provided on this form will be used in evaluating the nationwide permit pre-construction notification.
Routine Uses	This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of the agency coordination process.
Disclosure	Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued.

The public reporting burden for this collection of information, 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR RESPONSE TO THE ABOVE EMAIL.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (*see sample drawings and/or instructions*) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (*agent is not required*)
First - Middle - Last -	First - Middle - Last -
Company -	Company -
Company Title -	E-mail Address -
E-mail Address -	
6. APPLICANT'S ADDRESS:	**9. AGENT'S ADDRESS:**
Address-	Address-
City - State - Zip - Country -	City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. with AREA CODE	**10. AGENT'S PHONE NOs. with AREA CODE**
a. Residence b. Business c. Fax d. Mobile	a. Residence b. Business c. Fax d. Mobile

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this this nationwide permit pre-construction notification and to furnish, upon request, supplemental information in support of this nationwide permit pre-construction notification.

_____ _____

SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME or TITLE (*see instructions*)

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY	
13. NAME OF WATERBODY, IF KNOWN (*if applicable*)	14. PROPOSED ACTIVITY STREET ADDRESS (*if applicable*)
15. LOCATION OF PROPOSED ACTIVITY (*see instructions*) Latitude °N Longitude °W	City: State: Zip:

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (*see instructions*)

State Tax Parcel ID | Municipality

Section | Township | Range

17. DIRECTIONS TO THE SITE.

18. IDENTIFY THE SPECIFIC NATIONWIDE PERMIT(S) YOU PROPOSE TO USE:

19. DESCRIPTION OF PROPOSED NATIONWIDE PERMIT ACTIVITY (*see instructions*)

20. DESCRIPTION OF PROPOSED MITIGATION MEASURES (*see instructions*)

21. PURPOSE OF NATIONWIDE PERMIT ACTIVITY (*Describe the reason or purpose of the project, see instructions*)

22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by Proposed Nationwide Permit Activity (*see instructions*)

Acres | Linear Feet | Cubic Yards Dredged or Discharged

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site.

23. List any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project on any related activity (*see instructions*)

24. If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and requires pre-construction notification, explain how the compensatory mitigation requirement in paragraph (c) of general condition 23 will be satisfied, or explain why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required for the proposed activity.

25. Is Any Portion of the Nationwide Permit Activity Already Complete? ☐ Yes ☐ No If Yes, describe the completed work:

26. List the name(s) of any species listed as endangered or threatened under the Endangered Species Act that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity. (*see instructions*)

27. List any historic properties that have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic property or properties. (*see instructions*)

28. For a proposed NWP activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, identify the Wild and Scenic River or the "study river":

29. If the proposed NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, have you submitted a written request for section 408 permission from the Corps district having jurisdiction over that project? ☐ Yes ☐ No

If "yes", please provide the date your request was submitted to the Corps District:

30. If the terms of the NWP(s) you want to use require additional information to be included in the PCN, please include that information in this space or provide it on an additional sheet of paper marked Block 30. (*see instructions*)

31. Pre-construction notification is hereby made for one or more nationwide permit(s) to authorize the work described in this notification. I certify that this information in this pre-construction notification is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

The Pre-Construction Notification must be signed by the person who desires to undertake the proposed activity (applicant) and, if the statement in block 11 has been filled out and signed, the authorized agent.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Instructions for Preparing a

Department of the Army

Nationwide Permit (NWP) Pre-Construction Notification (PCN)

Blocks 1 through 4. To be completed by the Corps of Engineers.

Block 5. Applicant' Name. Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the preconstruction notification, please attach a sheet of paper with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the PCN. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by the applicant, if an agent is to be employed.

Block 12. Proposed Nationwide Permit Activity Name or Title. Please provide a name identifying the proposed NWP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

Block 13. Name of Waterbody. Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the NWP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Activity Street Address. If the proposed NWP activity is located at a site having a street address (not a box number), please enter it in Block 14.

Block 15. Location of Proposed Activity. Enter the latitude and longitude of where the proposed NWP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area requiring evaluation. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality where the site is located.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide a description of the location of the proposed NWP activity, such as lot numbers, tract numbers, or you may choose to locate the proposed NWP activity site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed NWP activity site if known. If there are multiple locations, please indicate directions to each location on a separate sheet of paper and mark as Block 17.

Block 18. Identify the Specific Nationwide Permit(s) You Propose to Use. List the number(s) of the Nationwide Permit(s) you want to use to authorize the proposed activity (e.g., NWP 29).

Block 19. Description of the Proposed Nationwide Permit Activity. Describe the proposed NWP activity,including the direct and indirect adverse environmental effects the activity would cause. The description of the proposed activity should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal. Identify the materials to be used in construction, as well as the methods by which the work is to be done.

Provide sketches when necessary to show that the proposed NWP activity complies with the terms of the applicable NWP(s). Sketches usually clarify the activity and result in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed NWP activity (e.g.,a conceptual plan), but do not need to be detailed engineering plans.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 19.

Block 20. Description of Proposed Mitigation Measures. Describe any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed NWP activity. The description of any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or additional mitigation measures.

Block 21. Purpose of Nationwide Permit Activity. Describe the purpose and need for the proposed NWP activity. What will it be used for and why? Also include a brief description of any related activities associated with the proposed project. Provide the approximate dates you plan to begin and complete all work.

Block 22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by the Proposed Nationwide Permit Activity. For discharges of dredged or fill material into waters of the United States, provide the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained by the proposed NWP activity. For structures or work in navigable waters of the United States subject to Section 10 of the Rivers and Harbors Act of 1899, provide the amount of navigable waters filled, dredged, occupied by one or more structures (e.g., aids to navigation, mooring buoys) by the proposed NWP activity.

For multiple NWPs, or for separate and distant crossings of waters of the United States authorized by NWPs 12 or 14, attach an extra sheet of paper marked Block 21 to provide the quantities of wetlands, streams, or other types of waters filled, flooded, excavated, or drained (or dredged or occupied by structures, if in waters subject to Section 10 of the Rivers and Harbors Act of 1899) for each NWP. For NWPs 12 and 14, include the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained for each separate and distance crossing of waters or wetlands. If more space is needed, attach an extra sheet of paper marked Block 21.

Block 23. Identify Any Other Nationwide Permit(s), Regional General Permit(s), or Individual Permit(s) Used to Authorize Any Part of Proposed Activity or Any Related Activity. List any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. For linear projects, list other separate and distant crossings of waters and wetlands authorized by NWPs 12 or 14 that do not require PCNs. If more space is needed, attach an extra sheet of paper marked Block 22.

Block 24. Compensatory Mitigation Statement for Losses of Greater Than 1/10-Acre of Wetlands When Pre-Construction Notification is Required. Paragraph (c) of NWP general condition 23 requires compensatory mitigation at a minimum one-for-one replacement ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation is more environmentally appropriate or the adverse environmental effects of the proposed NWP activity are no more than minimal without compensatory mitigation, and provides an activity-specific waiver of this requirement. Describe the proposed compensatory mitigation for wetland losses greater than 1/10 acre, or provide an explanation of why the district engineer should not require wetland compensatory mitigation for the proposed NWP activity. If more space is needed, attach an extra sheet of paper marked Block 23.

Block 25. Is Any Portion of the Nationwide Permit Activity Already Complete? Describe any work that has already been completed for the NWP activity.

Block 26. List the Name(s) of Any Species Listed As Endangered or Threatened under the Endangered Species Act that Might be Affected by the Nationwide Permit Activity. If you are not a federal agency, and if any listed species or designated critical habitat might be affected or is in the vicinity of the proposed NWP activity, or if the proposed NWP activity is located in designated critical habitat, list the name(s) of those endangered or threatened species that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity. If you are a Federal agency, and the proposed NWP activity requires a PCN, you must provide documentation demonstrating compliance with Section 7 of the Endangered Species Act.

Block 27. List Any Historic Properties that Have the Potential to be Affected by the Nationwide Permit Activity. If you are not a federal agency, and if any historic properties have the potential to be affected by the proposed NWP activity, list the name(s) of those historic properties that have the potential to be affected by the proposed NWP activity. If you are a Federal agency, and the proposed NWP activity requires a PCN, you must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

Block 28. List the Wild and Scenic River or Congressionally Designated Study River if the Nationwide Permit Activity Would Occur in such a River. If the proposed NWP activity will occur in a river in the National Wild and Scenic River System or in a river officially designated by Congress as a "study river" under the Wild and Scenic Rivers Act, provide the name of the river. For a list of Wild and Scenic Rivers and study rivers, please visit http://www.rivers.gov/

Block 29. Nationwide Permit Activities that also Require Permission from the Corps Under 33 U.S.C. 408. If the proposed NWP activity also requires permission from the Corps under 33 U.S.C. 408 because it will temporarily or permanently alter, occupy, or use a Corps federal authorized civil works project, indicate whether you have submitted a written request for section 408 permission from the Corps district having jurisdiction over that project.

Block 30. Other Information Required For Nationwide Permit Pre-Construction Notifications. The terms of some of the Nationwide Permits include additional information requirements for preconstruction notifications:

* NWP 3, Maintenance –information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals.
* NWP 31, Maintenance of Existing Flood Control Facilities –a description of the maintenance baseline and the dredged material disposal site.
* NWP 33, Temporary Construction, Access, and Dewatering –a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.
* NWP 44, Mining Activities –if reclamation is required by other statutes, then a copy of the final reclamation plan must be submitted with the pre-construction notification.
* NWP 45, Repair of Uplands Damaged by Discrete Events –documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration.
* NWP 48, Commercial Shellfish Aquaculture Activities –(1) a map showing the boundaries of the project area, with latitude and longitude coordinates for each corner of the project area; (2) the name(s) of the species that will be cultivated during the period this NWP is in effect; (3) whether canopy predator nets will be used; (4) whether suspended cultivation techniques will be used; and (5) general water depths in the project area (a detailed survey is not required).
* NWP 49, Coal Remining Activities –a document describing how the overall mining plan will result in a net increase in aquatic resource functions to the district engineer and receive written authorization prior to commencing the activity.
* NWP 50, Underground Coal Mining Activities –if reclamation is required by other statutes, then a copy of the reclamation plan must be submitted with the pre-construction notification.

If more space is needed, attach an extra sheet of paper marked Block 29.

Blocks 31 and 32. For bank stabilization activities, we are collecting information on the use of living shorelines in coastal waters and lakes to inform future NWP rulemaking efforts. If the PCN is for a proposed NWP 13 activity, and it is located in coastal waters or a lake, please check the appropriate box in block 31 to indicate whether you considered the use of a living shoreline to protect your property from erosion. If the PCN is for a proposed NWP 13 activity, and it is located in coastal waters or a lake, please check the appropriate box in block 32 to indicate whether there are contractors in your area that construct living shorelines.

Block 33. Signature of Applicant or Agent. The PCN must be signed by the person proposing to undertake the NWP activity, and if applicable, the authorized party (agent) that prepared the PCN. The signature of the person proposing to undertake the NWP activity shall be an affirmation that the party submitting the PCN possesses the requisite property rights to undertake the NWP activity (including compliance with special conditions, mitigation, etc.).

DELINEATION OF WETLANDS, OTHER SPECIAL AQUATIC SITES, AND OTHER WATERS

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. The 45 day PCN review period will not start until the delineation is submitted or has been completed by the Corps.

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross-Section Map. Identify each illustration with a figure or attachment number. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient drawings should also be included. Please submit one original, or good quality copy, of all drawings on 8½x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section). While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.

ADDITIONAL INFORMATION AND REQUIREMENTS

For proposed NWP activities that involve discharges into waters of the United States, water quality certification from the State, Tribe, or EPA must be obtained or waived (see NWP general condition 25). Some States, Tribes, or EPA have issued water quality certification for one or more NWPs. Please check the appropriate Corps district web site to see if water quality certification has already been issued for the NWP(s) you wish to use. For proposed NWP activities in coastal states, state Coastal Zone Management Act consistency concurrence must be obtained, or a presumption of concurrence must occur (see NWP general condition 26). Some States have issued Coastal Zone Management Act consistency concurrences for one or more NWPs. Please check the appropriate Corps district web site to see if Coastal Zone Management Act consistency concurrence has already been issued for the NWP(s) you wish to use.

Appendix D

Agency Correspondence

Wildlife Agencies (U.S. Fish and Wildlife Service, North Dakota Field Office and North Dakota Game & Fish Department)

May 26, 2020 NDGFD and USFWS Email Communication

From: Ryan Henning
To: Josh Martin; Nathan Lehman; Clayton Derby - Western EcoSystems Technology, Inc. (cderby@west-inc.com); Brenna Gunderson; Dyke, Steve R.; Mueller, Elisha K.; Riddle, Heidi L; Becker, Drew N
Subject: RE: Bowman Wind Project Review
Attachments: image001.png

Hi Steve, Elisha, Drew and Heidi,
I wanted to send this email as an introduction to the voluntary mitigation offset option that the Bowman Wind Project is currently evaluating and will be a focus of topic for our upcoming meeting. The Bowman Wind Project plans to evaluate voluntary offsets through application of the Shaffer et al. (2019) model [Estimating offsets for avian displacement effects of anthropogenic impacts]. As part of evaluating the voluntary offsets for grassland nesting birds, the Bowman Wind Project will plan to use a combination of locally collected untilled grassland data and two years of avian use surveys to better inform two of the key criteria inputs within the Shaffer et al. (2019) model: Impact Distance and Percent Displacement. The local data will better inform these two input model parameters of Shaffer et al. (2019) since the Bowman Wind Project is in a different grassland community and also has a different mixture of grassland birds when compared to the three data collection sites associated with the Shaffer and Buhl (2016) study [Effects of wind-energy facilities on grassland bird distributions].
Please let us know if you have any questions in advance of the meeting on the use of locally collected data associated with these two parameters and ability to input into the Shaffer et al. (2019) model.
Regards,
-Ryan

RYAN HENNING
Senior Director - Environmental

Apex Clean Energy, Inc.
310 4th St. NE, Suite **300**, Charlottesville, VA 22902
cell: 303-807-2429 | fax: 434-220-3712
ryan.henning@apexcleanenergy.com | www.apexcleanenergy.com

-----Original Appointment-----
From: Ryan Henning
Sent: Friday, May 8, 2020 1:54 PM
To: Ryan Henning; Josh Martin; Nathan Lehman; Clayton Derby; Brenna Gunderson; Dyke, Steve R.; Mueller, Elisha K.; Riddle, Heidi L; Becker, Drew N
Subject: Bowman Wind Project Review
When: Thursday, May 28, 2020 9:00 AM-11:00 AM (UTC-07:00) Mountain Time (US & Canada).
Where: Via Zoom

Hello everyone and thanks in advance for agreeing to meet virtually to discuss the proposed Bowman Wind Project. I'll plan to the email the turbine shape files once those are final along with a draft agenda.

Join Zoom Meeting
https://apexcleanenergy.zoom.us/j/96650300724

Meeting ID: 966 5030 0724
One tap mobile
+12532158782,,96650300724# US (Tacoma)
+13462487799,,96650300724# US (Houston)

Dial by your location
+1 253 215 8782 US (Tacoma)
+1 346 248 7799 US (Houston)
+1 669 900 6833 US (San Jose)
+1 301 715 8592 US (Germantown)
+1 312 626 6799 US (Chicago)
+1 646 558 8656 US (New York)
Meeting ID: 966 5030 0724

Appendix D

Agency Correspondence

Wildlife Agencies (U.S. Fish and Wildlife Service, North Dakota Field Office and North Dakota Game & Fish Department)

July 31, 2020 NDGFD and USFWS Agency Meeting

From:	Ryan Henning
To:	Mueller, Elisha K.; Dyke, Steve R.; Riddle, Heidi L
Cc:	msmith@fredlaw.com; Brenna Gunderson; Scott Jansen; Nathan Lehman; Josh Martin; Owen Brenner; Chad LeBeau; Clayton Derby - Western EcoSystems Technology, Inc. (cderby@west-inc.com)
Subject:	FW: Business Confidential: Follow Up on Apex Bowman Wind Project- NDGFD USFWS Agency Meeting
Attachments:	image001.png BOW_NDGF USFWS Agency Meeting Summary_2018-02-09.pdf

Hi all,

Thanks for your time today, it was very much appreciated. I'm resending the original February 13, 2018 email distribution that includes the meeting minutes where the lek survey protocol was discussed and agreed upon.

Separately, Clayton and I are working on updating the Shaffer Loesch offset model calculation narrative document. Our goal is to have that document completed and emailed by mid-next week. Lastly and in the interim, Josh has uploaded the grassland data shapefiles and the current Layout 050 turbine locations to the box folder.

https://apexcleanenergy.app.box.com/folder/114343621018

Please let us know if you have any problems accessing that data.

Regards,

-Ryan

RYAN HENNING
Senior Director - Environmental

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310 4th St. NE, Suite **300**, Charlottesville, VA 22902
cell: 303-807-2429 | fax: 434-220-3712
ryan.henning@apexcleanenergy.com | www.apexcleanenergy.com

From: Ryan Henning <ryan.henning@apexcleanenergy.com>
Sent: Tuesday, February 13, 2018 1:17 PM
To: sdyke@nd.gov
Subject: FW: Business Confidential: Follow Up on Apex Bowman Wind Project- NDGFD USFWS Agency Meeting

Hi Steve,

Resending this email as I had your incorrect email address.

Regards,

-Ryan

RYAN HENNING
Sr. Permitting Manager

Apex Clean Energy, Inc.
310 4th St. NE, Suite 200, Charlottesville, VA 22902
cell: 303-807-2429 | fax: 434-220-3712
ryan.henning@apexcleanenergy.com | www.apexcleanenergy.com

From: Ryan Henning
Sent: Friday, February 9, 2018 1:09 PM
To: 'sdyke@state.nd.us' <sdyke@state.nd.us>; 'Kevin_Shelley@fws.gov' <Kevin_Shelley@fws.gov>
Cc: Dave Phillips <dave.phillips@apexcleanenergy.com>; Jennie Geiger <jennie.geiger@apexcleanenergy.com>; Mark Mauersberger <mark.mauersberger@apexcleanenergy.com>
Subject: Business Confidential: Follow Up on Apex Bowman Wind Project- NDGFD USFWS Agency Meeting

Good afternoon Steve and Kevin,
Thank you for meeting on January 30, 2018 to discuss the Bowman Wind Project. I have attached meeting notes outlining the topics discussed for your review and consideration.
We really appreciate your time and helpful input.
Regards,
-Ryan

RYAN HENNING
Sr. Permitting Manager

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BOWMAN WIND PROJECT - MEETING SUMMARY

Meeting Attendees:	Kevin Shelley, USFWS John Schumacher, NDGFD Elisha Mueller, NDGFD Josh Montgomery, NDGFD Steve Dyke, NDGFD RJ Gross, NDGFD Ryan Henning, Apex Clean Energy Jennie Geiger, Apex Clean Energy (by phone)
Notes Prepared by:	Apex Clean Energy
Date:	February 9, 2018

On June 20, 2017, Apex Clean Energy (Apex) met with the U.S. Fish and Wildlife Service (USFWS), and North Dakota Game and Fish Department (NDGFD) to discuss the Bowman Wind Project (Project) in Bowman County, North Dakota. The purpose of the meeting was to update the agencies on the status of the Project and to agree on specifics for the Tier 3 studies recommended by each agency. The following presents a summary of topics discussed and agreed upon next steps.

Eagles: USFWS confirmed that ECPG-level surveys to evaluate potential eagle use of the Project area and to identify nests within 10 miles were appropriate for the Project. USFWS requested that Apex set up a meeting after nest surveys are complete to discuss findings

Prairie Grouse: NDGFD indicated that they complete lek surveys for greater sage-grouse and sharp-tailed grouse in and around the Project area and are monitoring translocated greater sage-grouse in Bowman County. NDGFD offered to provide the most current historical and active lek location data to inform facility siting. It was agreed that Apex should supplement the annual NDFG lek surveys by surveying known leks (including historic lek sites) in or within 1 mile of the Project area. The lek surveys will occur from 0.5 hours before sunrise to 1 hour after sunrise, with 2 visits to each lek location between April 1 to May 15, where site access is available.

Other: It was agreed that prairie dog colonies should be mapped to inform siting of project features in response to potential prey concentrations. Apex will obtain data on existing prairie dog colonies from NDGFD, confirm boundaries and status of these colonies, and map additional colonies observed within the Project area.

NDFGD recommended that Apex delineate all areas of previously untilled (i.e., native prairie) grassland that are larger than 160 acres, using a combination of available data and field verification. The goal of this work is to inform siting of project facilities to avoid and minimize impacts to these tracts, and to enable quantification of impacts where necessary to inform potential mitigation strategies.

Final Tier 3 Survey Plan: The following surveys were recommended and agreed upon for the project:

- Aerial raptor nest surveys out to 1 mile and eagle nest surveys in suitable habitat out to 10 miles, completed no later than leaf-on in spring 2018
- 1 - 2 years of ECPG-level surveys (approximately 30% of the area evaluated with 800-m plots, 1x/month)
- Check historic and active leks within the Project area and 1-mile buffer. Surveys will occur from 0.5 hours before sunrise to 1 hour after sunrise and from April 1 – May 15.
- Mapping of intact grassland habitats > 160 acres in size

Action Items:

- NDGFD to provide existing lek and prairie dog data for the assessment areas.
- Apex to implement above survey plan and review results with the agencies once complete

From:	Ryan Henning
To:	Mueller, Elisha K.; Dyke, Steve R.; Riddle, Heidi L
Cc:	msmith@fredlaw.com; Brenna Gunderson; Scott Jansen; Nathan Lehman; Josh Martin; Owen Brenner; Chad LeBeau; Clayton Derby - Western EcoSystems Technology, Inc. (cderby@west-inc.com)
Subject:	RE: Business Confidential: Follow Up on Apex Bowman Wind Project- NDGFD USFWS Agency Meeting
Attachments:	image001.png Bowman Grassland Offset Measure_08-06-2020.pdf

Good afternoon,

As we discussed during the July 31, 2020 meeting, attached is the narrative document that discusses the Bowman Wind Project's incorporation of the Shaffer et al (2019) offset model and the corresponding offset area calculation for Layout 050. If you have any questions, please don't hesitate to reach out to Clayton or me. We will plan to follow up shortly to finalize the application of the model for the use in the BBCS and the additional reference in the NDPSC permit application.

Regards,

-Ryan

RYAN HENNING
Senior Director - Environmental

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cell: 303-807-2429 | fax: 434-220-3712
ryan.henning@apexcleanenergy.com | www.apexcleanenergy.com

From: Ryan Henning
Sent: Friday, July 31, 2020 2:57 PM
To: Mueller, Elisha K. <ekmueller@nd.gov>; Dyke, Steve R. <sdyke@nd.gov>; 'Riddle, Heidi L' <heidi_riddle@fws.gov>
Cc: Smith, Mollie <msmith@fredlaw.com>; Brenna Gunderson <brenna.gunderson@apexcleanenergy.com>; Scott Jansen <scott.jansen@apexcleanenergy.com>; Nathan Lehman <nathan.lehman@apexcleanenergy.com>; Josh Martin <josh.martin@apexcleanenergy.com>; Owen Brenner <owen.brenner@apexcleanenergy.com>; Chad LeBeau <cwlebeau@west-inc.com>; Clayton Derby - Western EcoSystems Technology, Inc. (cderby@west-inc.com) <cderby@west-inc.com>
Subject: FW: Business Confidential: Follow Up on Apex Bowman Wind Project- NDGFD USFWS Agency Meeting

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Subject: FW: Business Confidential: Follow Up on Apex Bowman Wind Project- NDGFD USFWS Agency Meeting

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From: Ryan Henning
Sent: Friday, February 9, 2018 1:09 PM
To: 'sdyke@state.nd.us' <sdyke@state.nd.us>; 'Kevin_Shelley@fws.gov' <Kevin_Shelley@fws.gov>
Cc: Dave Phillips <dave.phillips@apexcleanenergy.com>; Jennie Geiger <jennie.geiger@apexcleanenergy.com>; Mark Mauersberger <mark.mauersberger@apexcleanenergy.com>
Subject: Business Confidential: Follow Up on Apex Bowman Wind Project- NDGFD USFWS Agency Meeting

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We really appreciate your time and helpful input.
Regards,
-Ryan

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This transmittal may be privileged or confidential. If you are not the intended recipient, please immediately notify us by e-mail and do not copy or re-transmit.

Not printing this email saves energy and conserves resources.

Bowman Wind, LLC - Use of the Shaffer et al. (2019) Model to Estimate Offsets for Potential Breeding Grassland Bird Displacement Effects from the Proposed Bowman Wind Project

Bowman Wind, LLC (Bowman Wind) understands that applying the overarching policy of avoidance, minimization, and mitigation as part of developing the Bowman Wind Project (Project) is important. In past discussions regarding the Project, the United States Fish and Wildlife Service (USFWS) and North Dakota Game and Fish Department (NDGF) have outlined their preferences for avoidance and minimization (e.g., moving turbines off of unbroken grasslands where possible, relocating large portions of the wind farm to the north away from more sensitive landscapes, placing roads along edges of grasslands to minimize further fragmentation, etc.), with voluntary offsets using best available science to mitigate any remaining potential displacement to grassland birds. Bowman Wind also agrees that appropriate restoration efforts using approved native seed mixes (as appropriate and approved by the landowner) are vital in restoring temporary impact areas associated with construction activities.

A. Layout Modifications to Reduce Potential Unbroken Grassland Impacts

With respect to the Project site, a key concern identified was potential impact to unbroken grasslands and the potential displacement of grassland birds, as documented in Shaffer and Buhl (2016) at other wind project sites. Bowman Wind met with the USFWS and NDGF on July 31, 2020 to discuss a number of design measures incorporated into the turbine layout that avoid and minimize potential impacts to unbroken grasslands compared to the layout presented during the May 20, 2020 meeting with the agencies. For example, both the NDGF and USFWS raised concerns at the May 20, 2020 meeting about the direct placement of primary turbine locations on unbroken grasslands. Based on that input, Layout 050 was developed, which significantly reduces impacts to unbroken grasslands, with only two of the proposed 70 turbine locations placed within unbroken grasslands. Bowman Wind is continuing to explore layout options that would further reduce potential grassland impacts. In parallel, Bowman Wind is conducting a turbine technology review to see if larger commercially-available or potential future turbine options may be viable for the Project site. Further, Bowman Wind has committed to voluntary offsets for any potential remaining impacts.

B. Discussion of Offset Model

To evaluate voluntary offsets for potential avian displacement impacts, Bowman Wind has been investigating application of the model [Identification of Potential Offset Locations for 6 Species of Grassland Birds] outlined in Shaffer et al. (2019). Based on this evaluation, Bowman Wind will use the application of the Shaffer Loesch model, with updated unbroken grasslands data to account for field-verified conditions.

In Shaffer et al. (2019), the authors discuss incorporating updated land use/land cover data – in this case untilled grasslands – into the model, instead of using the default data layers provided by C. Loesch and used as the preset layers in the Shaffer Loesch GIS-based model. Through discussions with C. Loesch, Bowman Wind confirmed that C. Loesch supports using the best-available data, as more accurate grassland data provides more accurate modeling. Therefore, Bowman Wind plans to incorporate updated site-specific grassland mapping to better inform the model. Currently, Bowman Wind has updated grassland mapping for the Project site completed by SWCA in 2018 and landowner-informed intact grassland data (as of July 27, 2020). This information will be further refined based on grassland field surveys of the buildable areas within the Project site, which are currently being conducted by WEST.

Table 1 shows the modeling results for Layout 050 (which was presented July 31, 2020) with the current grassland data (SWCA mapping and landowner informed data), as well as the Shaffer et al (2019) baseline / preset model assumptions of 300 m impact distance displacement, 53 percent displacement, and 1.9 pairs/ha pre-impact and offset densities.

Table 1
July 2020 Meeting Layout 050 Grassland Mapping Update Used for the Avian-impact Offset Method to Estimate Offsets for Displaced Breeding Grassland Birds *{UPDATED LAYOUT TO BE USED IN THE FINAL CALCULATION}

Parameter	***Metric***	***Units***	***Source***	***Formula***	*Row 2*
Impact Distance	300	m	Shaffer and Buhl (2016)	--	*Row 3*
Impact Area	397	ha	Derived from GIS Model & SWCA and Landowner Informed Grassland Dataset	--	*Row 4*
Pre-Impact Density	1.9	pairs/ha	Shaffer and Buhl (2016)	--	*Row 5*
Percent Displacement	53	percent	Shaffer et al. (2019)	--	*Row 6*
Offset Density	1.9	pairs/ha	Equal Value Habitat	--	*Row 7*
Number Pairs in Impact Site	754	pairs	--	B8 = B4*B5	*Row 8*
Number Pairs Displaced	399	pairs	--	B9 =B8*(B6/100)	*Row 9*
Offset Area	210	ha	--	B10=B9/B7	*Row 10*
Column A	*Column B*	*Column C*	*Column D*		

Note: This table was replicated from Shaffer et al (2019) Appendix S1, Table S3, Example 2 calculation sheet.

As noted above, Bowman Wind continues to evaluate further refinements and wind energy optimizations to the layout. However, all future modeling calculations will include the base case model parameter assumptions for impact distance, percent displacement, pre-impact and offset densities, with incorporation of the updated unbroken grassland data. In addition, Bowman Wind will continue to explore pre-impact and offset densities data, since the Project-specific data showed that approximately 20 percent of observations were horned larks and the Project site includes highly divergent habitat and observed grasslands species compared to the data collected and evaluated for sites discussed in Shaffer and Buhl (2016) and as modeled in Shaffer et al. (2019).

Upon completion of the final layout, Bowman Wind will update the modeling, share the results with both the NDGF and USFWS and incorporate the voluntary calculated offset area into the Project-specific Bird and Bat Conservation Strategy.

References

Shaffer, J. A., and D. A. Buhl. 2016. Effects of wind-energy facilities on grassland bird distributions. Conservation Biology 30:59–71.

Shaffer, J. A., C. R. Loesch, and D. A. Buhl. 2019. Estimating offsets for avian displacement effects of anthropogenic impacts. Ecological Applications.

Appendix D

Agency Correspondence

Wildlife Agencies (U.S. Fish and Wildlife Service, North Dakota Field Office and North Dakota Game & Fish Department)

December 21, 2020 Bowman Wind Email Communication

From:	Ryan Henning
To:	Mueller, Elisha K.; Dyke, Steve R.; Riddle, Heidi L
Cc:	msmith@fredlaw.com; Brenna Gunderson; Scott Jansen; Nathan Lehman; Josh Martin; Owen Brenner; Chad LeBeau; Clayton Derby - Western EcoSystems Technology, Inc. (cderby@west-inc.com)
Subject:	RE: Business Confidential: Follow Up on Apex Bowman Wind Project- NDGFD USFWS Agency Meeting
Attachments:	image001.png Bowman Unbroken Grasslands Agency Meeting Summary_12-16-2020.pdf

Good evening,

Thanks for meeting with the Bowman Wind project on December 16, 2020. As was discussed during the meeting, please find the final 85 primary and spare turbine locations (74 of the 85 locations will be used for the final layout). Box link: https://apexcleanenergy.box.com/s/b3m2tr0ox05y0rhdq9wf7milutncddzx. A couple things to note about the data files:

1. The folder contains a shapefile of the LAY 054 turbine array which includes the 85 primary and spare turbine locations. As was noted during the meeting, this is worse case and only 74 of the 85 total locations will have a turbine when the final layout is completed.
2. The "AvianOffsetmethodDST.gdb" contains a raster named "GrasslandHabitat". This raster is the updated habitat data based on the field grassland assessment.

In addition, attached is the narrative describing the use of the Shaffer et al 2019 model that incorporated the updated unbroken grassland field data to calculate grassland bird displacement impacts and the corresponding voluntary offset mitigation acreage. If you have trouble accessing the Box folder, please let us know and Josh will find a way to get the data distributed to you directly.

Regards and Happy Holidays,

-Ryan

RYAN HENNING
Apex Clean Energy, Inc.

From: Ryan Henning
Sent: Thursday, August 6, 2020 5:16 PM
To: Mueller, Elisha K. <ekmueller@nd.gov>; Dyke, Steve R. <sdyke@nd.gov>; Riddle, Heidi L <heidi_riddle@fws.gov>
Cc: Smith, Mollie <msmith@fredlaw.com>; Brenna Gunderson <brenna.gunderson@apexcleanenergy.com>; Scott Jansen <scott.jansen@apexcleanenergy.com>; Nathan Lehman <nathan.lehman@apexcleanenergy.com>; Josh Martin <josh.martin@apexcleanenergy.com>; Owen Brenner <owen.brenner@apexcleanenergy.com>; Chad LeBeau <cwlebeau@west-inc.com>; Clayton Derby - Western EcoSystems Technology, Inc. (cderby@west-inc.com) <cderby@west-inc.com>
Subject: RE: Business Confidential: Follow Up on Apex Bowman Wind Project- NDGFD USFWS Agency Meeting

Good afternoon,

As we discussed during the July 31, 2020 meeting, attached is the narrative document that discusses the Bowman Wind Project's incorporation of the Shaffer et al (2019) offset model and the corresponding offset area calculation for Layout 050. If you have any questions, please don't hesitate to reach out to Clayton or me. We will plan to follow up shortly to finalize the application of the model for the use in the BBCS and the additional reference in the NDPSC permit application.

Regards,

-Ryan

RYAN HENNING
Senior Director - Environmental

Apex Clean Energy, Inc.
310 4th St. NE, Suite **300**, Charlottesville, VA 22902
cell: 303-807-2429 | fax: 434-220-3712
ryan.henning@apexcleanenergy.com | www.apexcleanenergy.com

From: Ryan Henning
Sent: Friday, July 31, 2020 2:57 PM
To: Mueller, Elisha K. <ekmueller@nd.gov>; Dyke, Steve R. <sdyke@nd.gov>; 'Riddle, Heidi L' <heidi_riddle@fws.gov>
Cc: Smith, Mollie <msmith@fredlaw.com>; Brenna Gunderson <brenna.gunderson@apexcleanenergy.com>; Scott Jansen <scott.jansen@apexcleanenergy.com>; Nathan Lehman <nathan.lehman@apexcleanenergy.com>; Josh Martin <josh.martin@apexcleanenergy.com>; Owen Brenner <owen.brenner@apexcleanenergy.com>; Chad LeBeau <cwlebeau@west-inc.com>; Clayton Derby - Western EcoSystems Technology, Inc. (cderby@west-inc.com) <cderby@west-inc.com>
Subject: FW: Business Confidential: Follow Up on Apex Bowman Wind Project- NDGFD USFWS Agency Meeting

Hi all,

Thanks for your time today, it was very much appreciated. I'm resending the original February 13, 2018 email distribution that includes the meeting minutes where the lek survey protocol was discussed and agreed upon.

Separately, Clayton and I are working on updating the Shaffer Loesch offset model calculation narrative document. Our goal is to have that document completed and emailed by mid-next week.

Lastly and in the interim, Josh has uploaded the grassland data shapefiles and the current Layout 050 turbine locations to the box folder.

https://apexcleanenergy.app.box.com/folder/114343621018

Please let us know if you have any problems accessing that data.

Regards,

-Ryan

RYAN HENNING
Senior Director - Environmental

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From: Ryan Henning <ryan.henning@apexcleanenergy.com>
Sent: Tuesday, February 13, 2018 1:17 PM
To: sdyke@nd.gov
Subject: FW: Business Confidential: Follow Up on Apex Bowman Wind Project- NDGFD USFWS Agency Meeting

Hi Steve,

Resending this email as I had your incorrect email address.

Regards,

-Ryan

RYAN HENNING
Sr. Permitting Manager

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From: Ryan Henning
Sent: Friday, February 9, 2018 1:09 PM
To: 'sdyke@state.nd.us' <sdyke@state.nd.us>; 'Kevin_Shelley@fws.gov' <Kevin_Shelley@fws.gov>
Cc: Dave Phillips <dave.phillips@apexcleanenergy.com>; Jennie Geiger <jennie.geiger@apexcleanenergy.com>; Mark Mauersberger <mark.mauersberger@apexcleanenergy.com>
Subject: Business Confidential: Follow Up on Apex Bowman Wind Project- NDGFD USFWS Agency Meeting

Good afternoon Steve and Kevin,
Thank you for meeting on January 30, 2018 to discuss the Bowman Wind Project. I have attached meeting notes outlining the topics discussed for your review and consideration.
We really appreciate your time and helpful input.
Regards,
-Ryan

RYAN HENNING
Sr. Permitting Manager

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Bowman Wind, LLC – Use of the Shaffer et al. (2019) Model to Estimate Offsets for Potential Breeding Grassland Bird Displacement Effects from the Proposed Bowman Wind Project

As part of the avoidance, minimization, and mitigation strategy for the Bowman Wind Project (Project), Bowman Wind, LLC (Bowman Wind) has been consulting with the United States Fish and Wildlife Service (USFWS) and North Dakota Game and Fish Department (NDGF). In early discussions, the USFWS and NDGF outlined their preferences for avoidance and minimization of impacts to unbroken grasslands, with voluntary offsets using best available science to mitigate any remaining potential displacement to grassland birds.

Prior to calculating any voluntary habitat offsets, Bowman Wind first utilized the data layers provided by C. Loesch related to the model [Identification of Potential Offset Locations for 6 Species of Grassland Birds] outlined in Shaffer et al. (2019). Bowman Wind placed turbines and infrastructure, to the extent practicable, in what the data layers from the model termed "unsuitable" habitat.

Bowman Wind met with the USFWS and NDGF on May 18, 2020 and July 30, 2020 to discuss modifications made to the Project layout to avoid and minimize impacts to unbroken grasslands and offset calculation methodology. A summary of those avoidance/minimization efforts and offset methodology discussions is provided in the attached August 6, 2020 summary, which was previously provided to the USFWS and NDGF ("August 2020 Summary").

As discussed in the August 2020 Summary, when Bowman Wind met with USFWS and NDGF on July 30, 2020, Bowman Wind was still exploring layout options to further reduce potential direct and indirect impacts to unbroken grassland. In parallel, Bowman Wind was conducting a turbine technology review to see if larger commercially-available or potential future turbine options may be viable for the Project site. Additionally, Bowman Wind was continuing to gather and refine the unbroken grassland data to be used in calculating offset acreage for potential impacts.

On December 16, 2020, Bowman Wind met with USFWS and NDGF to provide an update on the ND Public Service Commission permit application timeline, the turbine technology review, layout modifications, and unbroken grassland offset acreage calculations. This summary discusses in further detail the information presented during the December 16, 2020 meeting.

Turbine Technology Review/Layout Update

Bowman Wind evaluated whether a larger nameplate capacity turbine model (i.e., 5.2 megawatt) may be suitable for the Project. Based on the evaluation, using a larger megawatt turbine model is not an option for the Project because the technology for the site's higher wind speeds, topography, wind shear, and turbine spacing needs is not available.

Based on the turbine technology currently under consideration, and incorporation of applicable siting criteria and site-specific data, Bowman Wind has developed a layout consisting of 85 proposed turbine locations. Bowman Wind would construct turbines at up to 74 (i.e., 2.82 megawatt turbines) of the 85 locations, with the remainder of the locations to be used as alternates.

Discussion of Offset Model

As discussed in the August 2020 Summary, to evaluate voluntary offsets for potential grassland nesting bird displacement impacts, Bowman Wind analyzed the model [Identification of Potential Offset Locations for 6 Species of Grassland Birds] outlined in Shaffer et al. (2019). In Shaffer et al. (2019), the authors discuss incorporating updated land use/land cover data – in this case unbroken grasslands – into the model, instead of using the default data layers provided by C. Loesch and used as the preset layers in the Shaffer-Loesch GIS-based model. Through discussions with C. Loesch, Bowman Wind confirmed that C. Loesch supports using the best-available data, as more accurate unbroken grassland data provides more accurate voluntary offset calculations. As a result, Bowman Wind retained WEST to conduct an unbroken grassland desktop and field assessment for the Project. The unbroken grassland assessment included historical aerial photography review, input from landowners, and field surveys to identify unbroken grasslands within a 400-meter radius of 90 proposed primary and alternate turbine locations.

Bowman Wind used the results of the WEST unbroken grassland assessment to map unbroken grasslands within the suitable breeding habitats designated in the C. Loesch dataset (same data set used to inform earlier turbine placement to avoid and minimize impacts). Based on the updated unbroken grassland data, 5 of the 90 turbine locations analyzed were located on unbroken grasslands within defined suitable habitat in the C. Loesch model data. As a result, Bowman Wind eliminated those 5 turbine locations from further consideration. For the remaining 85 turbine locations, Bowman Wind calculated offset mitigation for displacement impacts to grassland nesting birds applying the four Shaffer et al. 2019 core model assumptions (300 m impact distance displacement, 53 percent displacement, and 1.9 pairs/ha pre-impact and offset densities) and incorporation of the updated unbroken grassland within the model defined suitable breeding habitat data. The inputs and calculations are provided in the table below.

Dec 16, 2020 Meeting Layout 054 Grassland Mapping Updated Based on Field Assessment Used for the Avian-impact Offset Method to Estimate Offsets for Displaced Breeding Grassland Birds *{RESULTS IN THIS TABLE INCLUDE 85 TOTAL PRIMARY AND SPARE TURBINE LOCATIONS – >THE FINAL LAYOUT WILL TOTAL 74 TURBINE LOCATIONS}

Parameter	***Metric***	***Units***	***Source***
Impact Distance	300	m	Shaffer and Buhl (2016)
Impact Area	361	ha	Derived from WEST Grassland Assessment and Loesch Suitable Habitat Data
Pre-Impact Density	1.9	pairs/ha	Shaffer and Buhl (2016)
Percent Displacement	53	percent	Shaffer et al. (2019)
Offset Density	1.9	pairs/ha	Equal Value Habitat
Number Pairs in Impact Site	685	pairs	--
Number Pairs Displaced	363	pairs	--
Offset Area	191	ha	--

Note: This table was replicated from Shaffer et al (2019) Appendix S1, Table S3, Example 2 calculation sheet

Although the number of turbine sites modeled increased from 70 to 85 between the August 2020 Summary and current tabulation, the overall offset mitigation acreage for the 85 turbine layout decreased compared to the prior layout modeled (offset acreage was reduced from 210 ha to 191 ha). Since the Project anticipates only installing up to 74 turbines, Bowman Wind anticipated that the actual offset mitigation acreage will be even further reduced. Additionally, despite the increase in potential turbine locations, none of the turbine bases are located in unbroken grasslands within model defined suitable breeding habitat.

Bowman Wind is incorporating the voluntary offset calculation methodology discussed above into the Project-specific Bird and Bat Conservation Strategy. Using that methodology, Bowman Wind will calculate the Project's voluntary offset acreage using up to 74 of the 85 proposed turbine locations.

References

Shaffer, J. A., and D. A. Buhl. 2016. Effects of wind-energy facilities on grassland bird distributions. Conservation Biology 30:59–71.

Shaffer, J. A., C. R. Loesch, and D. A. Buhl. 2019. Estimating offsets for avian displacement effects of anthropogenic impacts. Ecological Applications.

Appendix D

Agency Correspondence

Wildlife Agencies (U.S. Fish and Wildlife Service, North Dakota Field Office and North Dakota Game & Fish Department)

February 16, 2021 NDGFD and USFWS Agency Meeting

From: Ryan Henning
To: Mueller, Elisha K.
Cc: Dyke, Steve R.; Josh Martin
Subject: RE: Bowman Wind Project
Attachments: image002.png

Thanks for the follow up email, it is very much appreciated. Based on our February 16, 2021 meeting, we now better understand what NDGF has in mind for evaluating and offsetting impacts. We had previously presented and believed what we collectively agreed was to site turbines using the Loesch data and incorporate updated grassland data into the Shaffer et al 2019 model. As was discussed in the July 31, 2020 and December 16, 2020 meetings, the Project used the Loesch grassland unsuitable data layer to initially site turbines. To then evaluate potential indirect impacts to the defined "suitable" layer, we utilized desktop digitized information, information collected from landowners on previously broken areas, and field verification. This data was used to calculate grassland bird displacement impacts and was related to corresponding mitigation offsets. Whereas the NDGF impact methodology relies on desktop digitized grassland data to identify unbroken grasslands within 300 meters of turbines without further analyzing the relationship to potential grassland bird displacement.

Since the project initiated development in 2017, there have been a number of grassland mapping efforts completed through the fall of 2020. When the Project initiated agency coordination in 2017, the NDGF was focused on native prairie tracts greater than 160 acres and requested that mapping be conducted for that acreage threshold. Therefore, the Project hired SWCA to conduct a desktop grassland review and mapping exercise to identify those tracts of unbroken native grasslands greater than 160 acres. I believe that is the 2018 grassland analysis you are referring to in your sidenote in the email below. After our meeting July 30, 2020, the NDGF recommended that all unbroken native grassland tracts regardless of size be mapped in areas proposed for turbine locations. Prior to conducting field surveys, the Project interviewed all landowners that had signed leases to document the status of any broken or unbroken native grasslands and map any of those areas under their ownership. Once the landowner informed unbroken grassland data was compiled, the Project hired WEST to conduct a further desktop review incorporating the landowner data and review of historical aerial and satellite information, followed by a field verification and mapping effort of any unbroken grasslands within 400 meters of proposed turbine locations (the recommended 300 meters, plus 100 meters as buffer in case of shifts). The Project has used the WEST unbroken grassland data for our continued micro-siting and incorporation into the suitable data layer provided in the original model from Loesch.

Now that we understand that the NDGF doesn't distinguish the Loesch unsuitable grassland data from suitable grassland data in their internal analyses, the Project has completed another micro-siting exercise to further revise our methodology and to demonstrate additional avoidance. However, the Project has and will continue to use the WEST grassland data that incorporated landowner historical knowledge, aerial and satellite review, and field verification since we believe it is scientifically more accurate than manually digitizing potential grassland tracts using aerial photographs and other publicly available data. Layout 059 contains the updates of the micro-siting of turbines that further demonstrates the Project's avoidance of impacts to unbroken grasslands. Using the WEST data, layout 059 has been updated and now only has three primary and one spare turbine location on unbroken grasslands (regardless of suitable or unsuitable designation in the Loesch model). Further, as has been previously discussed, the Project will continue to use the best

scientific available information to evaluate potential indirect displacement to grassland bird nesting pairs (i.e. use of the Shaffer et al. 2019 model). That methodology and the resulting grassland bird displacement calculations will be updated and incorporated into the Breeding Bird and Bat Conservation Strategy document.
Lastly, the Project plans to incorporate averted loss which is one of the key principles of the Shaffer et al 2019 peer-reviewed paper by acquiring unbroken grassland conservation easements as a voluntary offset mitigation measure.

Layout 059 has been added to Box at the link below.

https://apexcleanenergy.box.com/s/r6bawmtdu4gpgfbq3sw460uusm7s6lmh
Please let us know if you have any trouble accessing the Box folder with the final layout 059.
Regards,
-Ryan
RYAN HENNING
Apex Clean Energy, Inc.

From: Mueller, Elisha K. <ekmueller@nd.gov>
Sent: Tuesday, February 16, 2021 2:23 PM
To: Ryan Henning <ryan.henning@apexcleanenergy.com>
Cc: Dyke, Steve R. <sdyke@nd.gov>; Josh Martin <josh.martin@apexcleanenergy.com>
Subject: Bowman Wind Project

Hi Ryan,

I just wanted to touch base real quick after that meeting. I was thinking that it might be worth while for your GIS team to take the layer Sandy provided and compare it to your layer & look closely at some of the areas of discrepancy. Attached is a photo of one example where your layer has a road but it's only a 2 track (which we would not count as broken prairie). I think there was some confusion when you suggested we were changing our methods so I want to share this example in hopes it helps you better understand. It is not that we do not agree with the tools you used to help guide turbine placement, the Department has and still recommends using any tool available (our grassland layer, Chuck's model, etc.). However, as none of these methods will provide perfect results (this specific turbine is a great example), we have always recommended doing a grassland analysis to determine the actual grassland footprint within the turbine buffers. This is how the Department estimates project impacts.

A side note, your newest grassland layer seems to be quite different from the grassland analysis you ran in 2018. Is there a document that explains the differences/ how you got to the updated layer that I missed in the dropbox? That might help clear up some of the discrepancies.

While your team does that, I will work on drafting our letter to PSC so that I can share it with you and we can have another conversation prior to us sending the letter.

Let me know if you have any thoughts/questions/concerns.

Elisha Mueller
Conservation Biologist

701.328.6348 • ekmueller@nd.gov • gf.nd.gov

Appendix D

Agency Correspondence

Wildlife Agencies (U.S. Fish and Wildlife Service, North Dakota Field Office and North Dakota Game & Fish Department)

March 22, 2021 NDGF Email Communication

Brie Anderson

From: Ryan Henning <ryan.henning@apexcleanenergy.com>
Sent: Monday, March 22, 2021 7:05 PM
To: Mueller, Elisha K.
Cc: Dyke, Steve R.; Johnson, Sandra K.
Subject: RE: Bowman Wind

Hi Elisha,

Thanks for your email. We thought it would be beneficial to provide detailed written responses to your three comments:

1. Turbines 3, 11, 16, 77, and 37 from layout 59 (no turbine number was attached to that data set, so these are the field IDs… hopefully that makes sense). We have identified these turbines as being on native prairie.

A grassland assessment was conducted to identify unbroken native prairie or previously broken grasslands to help inform siting within the proposed development areas of the Bowman Wind Project (Project). Unbroken native prairie was defined as grassland in its original or natural state showing no evidence of soil disturbance, with a dominance of native plant species present (i.e., western wheatgrass, big bluestem, sideoats grama, purple coneflower, blanket flower, etc.). Previously broken grasslands were identified based on features such as rock piles; presence, amount, and apparent height of trees and shrubs; field edge changes; straight line features indicating plowing, disking, harvesting, or planting; non-native plant species present (i.e., smooth brome, alfalfa, etc.), and any other features indicating human disturbance.

The 2020 native prairie/grassland assessment was a three-step process that included interviewing landowners, a desktop review, and a field assessment of grassland parcels within a 400-meter buffer of proposed turbines (Assessment Area). The desktop review included a review of current publicly available datasets (i.e., aerial photography, landowner input, Crop Data Layer 2019, SWCA data from the 2018 assessment, existing land cover data, etc.) and NDGFD Native Habitat Layer. All grassland parcels were digitized using ESRI software (ArcGIS 10.7). During the field assessment, grasslands within the Assessment Areas were visually evaluated on foot where access was permitted or from public roads to confirm the native prairie state (e.g., broken or previously broken).

Based on the native prairie/grassland assessment, turbines with FIDs 3, 11, 16, 37, and 77 (Figure 1) were located in areas identified as previously broken grasslands for the following reasons:

- Grasslands within the Assessment Area of turbines FID 3, 11, and 37 were identified as broken based on the NDGF Native layer, historic aerial imagery (1957-1962) that showed evidence of tillage, and results of the field assessment which indicated the presence of rock piles, vegetation in straight lines, and dominance of non-native planted species (i.e., smooth brome grass and alfalfa), which all indicate previous tillage.
- Grassland within the Assessment Area of turbine FID 16 were identified as broken based on not occurring within the NDGF Native layer, recent aerial imagery that indicated disturbance and degradation in 2019 and 2020, landowner confirmation, and results of the field assessment which indicated the presence of rock piles, vegetation in straight lines, and dominance of non-native planted species (i.e., smooth brome and Poa spp. grasses), which all indicate past tillage.
- Grassland within the Assessment Area of the turbine FID 77 was identified as broken based on not occurring within the NDGF Native layer and historic aerial imagery that showed evidence of tillage (1957 -1962).

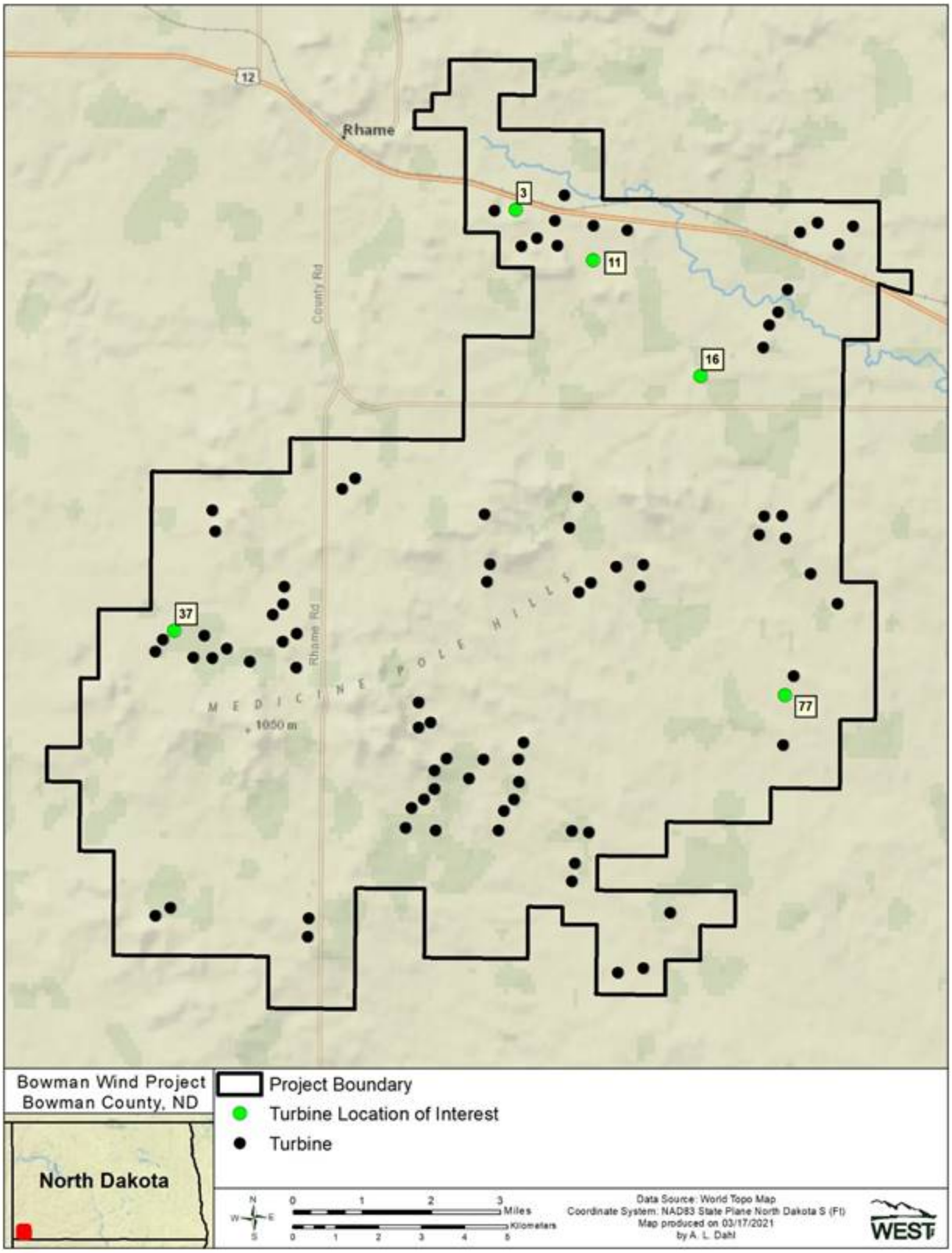

Figure 1 - Turbine locations associated with FIDs 3, 11, 16, 37, and 77

2. Turbines 67, 68, 69, 70, 37, 38, 39, 41, 42, 43, and 44. All of these turbines are within our Greater Sage-grouse Priority Conservation Area and the 6 bolded turbines fall within 4 miles of an active lek. In our early guidance

letter (attached for reference), the Department stated that its first recommendation is to discontinue permitting energy development within this area.

Throughout its development of the Bowman Wind Project (Project), Bowman Wind has been cognizant of the NDGF's concerns regarding potential impacts to greater sage-grouse populations in North Dakota, and has taken those concerns into account in Project siting. Bowman Wind reviewed the North Dakota Sage-Grouse Management Plan (Robinson 2014), which identifies three objectives: 1) conserving sagebrush habitats and habitats important for nesting and brood-rearing within Priority Conservation Areas (PCA), 2) increasing connectivity between available habitats in PCA, and 3) protecting intact PCA from fragmentation (Robinson 2014). The North Dakota Sage-Grouse Management Plan identifies various strategies and conservation actions to minimize impacts of specific anthropogenic structures to sage-grouse and their habitats. However, due to the lack of information available at the time of the publication in 2014, no strategies or conservation actions were presented for wind energy development (Robinson 2014).

As a result, Bowman Wind analyzed other State-specific documentation to identify appropriate measures to avoid and/or minimize potential impacts to sage grouse. The State Wildlife Action Plan states that conservation efforts should focus on leks and areas within 2 mile (mi; 3.2 kilometer [km]) of leks (Dyke et al. 2015). Data on sage-grouse monitoring in North Dakota indicates that areas within 2 miles of a lek are important for breeding and nesting, as 68% of all nests were located within 2 miles of a lek (average 1.7 mi [2. 7 km]; Herman-Brunson 2007, Herman-Brunson et al. 2009).

Bowman Wind also reviewed the limited research available specific to the effects of wind energy on sage-grouse populations. To date, one published study has analyzed the potential effects of wind energy infrastructure on sage-grouse at a single facility/study area. That study indicated that wind energy infrastructure sited within 0.75 mi (1.2 km) of important brood-rearing and late summer habitats could displace sage-grouse that are using those habitats; however, this displacement was found to not negatively affect survival (LeBeau et al. 2017a). In that same study area, trends in males attending leks pre-development compared to post-development of a wind energy facility did not differ, suggesting the presence of the facility did not result in population level declines (LeBeau et al. 2017a, LeBeau et al. 2017b). Leks in that study area where the facility was located ranged from 0.31 mi (0.5 km) to 2.7 mi (4.3 km) to the nearest turbines; however, given the results were associated with one facility/study area, the authors cautioned any avoidance buffers < 0.93 mi (1.5 km; LeBeau et al. 2017b).

Given the limited amount of research of the effects of wind energy on sage-grouse populations, Bowman Wind also considered research on the effects of wind energy development on other grouse populations, given their similar life histories. Based on the 15 published studies that have evaluated the impacts of wind energy on grouse, we understand that wind energy infrastructure has the ability to adversely affect grouse behavior similar to other forms of development, but the magnitude of effects associated with wind energy appears to be less than other forms of energy development (Winder et al. 2014, LeBeau et al. 2017a, 2020a,b). For example, in Idaho, Columbian sharp-tailed grouse (CSTG; Tympanuchus phasianellus columbianus) nest survival and nest site selection were not influenced by proximity to turbines (Proett et al. 2019). Likewise, greater prairie chicken (GRPC; T. cupido) nest and female survival was also reportedly not influenced by proximity to wind turbines in Nebraska or Kansas (Winder et al. 2014, McNew et al. 2014, Harrison et al. 2017, Smith et al. 2017). This is in contrast to the effects of oil and gas development on sage-grouse breeding populations (e.g., Holloran and Anderson 2005, Aldridge and Boyce 2007, Kirol et al. 2020).

A review of North Dakota oil and gas well data shows that ten active wells appear to occur within 2 miles of the previous active sage-grouse lek. Therefore, one of the most disruptive energy developments has already occurred in close proximity to this lek. Comparatively, of the limited Project infrastructure proposed to be located within the PCA, all of the infrastructure is located on the very eastern edge of the PCA boundary, and greater than 2 miles from the active sage-grouse lek. More importantly, the infrastructure was sited in areas with existing disturbances including cultivated croplands and roads, so impacts have previously occurred within these disturbed areas. Further, Project infrastructure located in the PCA is not likely to impact the sage-grouse population given the previous disturbances to this area, active oil and gas wells within 2 miles of the active lek, placement of the proposed infrastructure in previously disturbed areas, and our current understanding of effects of wind energy development on grouse populations. As noted above, grouse monitoring studies in North Dakota suggest placing infrastructure 2 miles away from an active lek will minimize impacts to breeding and nesting sage-grouse (Herman-Brunson 2007, Herman-Brunson et al. 2009). In addition, based on the

best available science for grouse, impacts from wind energy development are not expected to extend beyond one mile from infrastructure. Therefore, Bowman Wind's placement of infrastructure in areas with existing fragmentation and at least 2 miles from leks is not expected to impact the local sage-grouse population (LeBeau et al. 2017a,b; see LeBeau et al. 2020a). Connectivity between habitats is also not expected to be impacted given that the infrastructure located within the PCA is in the eastern-most extent and in areas with existing fragmentation, so affects to the local sage-grouse population and their habitats (if any) have already occurred. Considering all of the information outlined above, Bowman Wind believes it has sited Project infrastructure to avoid and minimize potential impacts to any local, remnant sage-grouse populations.

Aldridge, C. L. and M. S. Boyce. 2007. Linking Occurrence and Fitness to Persistence: A Habitat-Based Approach for Endangered Greater Sage-Grouse. Ecological Applications 17: 508-526.

Dyke, S. R., S. K. Johnson, P. T. Isakson. 2015. North Dakota State Wildlife Action Plan. North Dakota Game and Fish Department, Bismarck, ND.

Harrison J. O., M. B. Brown. L. A. Powell, W. H. Schacht, and J. A. Smith. 2017. Nest site selection and nest survival of greater prairie-chickens near a wind energy facility. The Condor 119:659-672.

Herman-Brunson, M. 2007. Nesting and brood-rearing habitat selection of greater sage-grouse and associated survival of hens and broods at the edge of their historic distribution. Thesis South Dakota State University.

Herman-Brunson K. M, K. C. Jenson, N. W. Kaczor, C. C. Swanson, M. A. Rumble, and R. W. Klaver. 2009. Nesting ecology of greater sage-grouse Centrocercus urophasianus at the eastern edge of their historic distribution. Journal of Wildlife Biology 15: 395-404.

Holloran, M. J. and S. H. Anderson. 2005. Spatial Distribution of Greater Sage-Grouse Nests in Relatively Contiguous Sagebrush Habitats. Condor 107: 742-752.

Kirol, C.P., K.T. Smith, N.E. Graff, J.B. Dinkins, C.W. LeBeau, T.L. Maechtle, A.L. Sutphin, and J.L. Beck. 2020. Greater sage-grouse response to the physical footprint of energy development. Journal of Wildlife Management 84:989–1001.

LeBeau, C. W., G. D. Johnson, M. J. Holloran, J. L. Beck, R. M. Nielson, M. E. Kauffman, E. J. Rodemaker, and T. L. McDonald. 2017a. Greater Sage-Grouse Habitat Selection, Survival, and Wind Energy Infrastructure. Journal of Wildlife Management 81(4): 690-711. doi: 10.1002/jwmg.21231

LeBeau, C. W., J. L. Beck, G. D. Johnson, R. M. Nielson, M. J. Holloran, K. G. Gerow, and T. L. McDonald. 2017b. Greater Sage-Grouse Male Lek Counts Relative to a Wind Energy Development. Wildlife Society Bulletin 41(1): 17-26. doi: 10.1002/wsb.725.

LeBeau, C., S. Howlin, A. Tredennick, and K. Kosciuch. 2020b. Grouse Behavioral Response to Wind Energy Turbines: A Quantitative Review of Survival, Habitat Selection, and Lek Attendance. Prepared for the National Wind Coordinating Collaborative, Washington, D.C. Prepared by Western EcoSystems Technology, Inc. (WEST).

LeBeau, C., K. Smith, S. Howlin, M. Kauffman, A. Tredennick, and K. Kosciuch. 2020b. A quantitative review of grouse responses to conventional and renewable energy infrastructure. Ecosphere. In review.

McNew, J. B., J. M. Hunt, A. J. Gregory, S .M. Wisely, and B .K. Sandercock. 2014. Effects of wind energy development on nesting ecology of greater prairie-chickens in fragmented grasslands. Conservation Biology 28:1089–1099.

Proett, M., S. B. Roberts, J. S. Horne, D. N. Koons, and T. A. Messmer. 2019. Columbian Sharp-Tailed Grouse Nesting Ecology: Wind Energy and Habitat. Journal of Wildlife Management: doi: 10.1002/jwmg.21673.

Robinson A. C. 2014. Management Plan and Conservation Strategies for Greater Sage-Grouse in North Dakota. North Dakota Game and Fish Department. Bismarck, ND, USA.

Smith J. A., M. B. Brown, J. O. Harrison, L. A. Powell. 2017. Predation risk: a potential mechanism for effects of a wind energy facility on greater prairie-chicken survival. Ecosphere 8(6):e01835.

Winder, V., L. B. McNew, L. M. Hunt, A. J. Gregory, S. M. Wisely, and B. K. Sandercock. 2014. Effects of Wind Energy Development on Seasonal Survival of Greater Prairie-Chickens. Journal of Applied Ecology 51: 395-405.

3.The most recent impact analysis and voluntary offset package. We have not seen an updated one and are assuming it is the same as the original, but if this isn't the case, could you provide that prior to our meeting?

Bowman Wind committed to apply the NDGFD's recommended overarching policy of avoidance, minimization, restoration, and mitigation to unbroken grasslands as part of the siting of wind turbines associated with the Project. NDGFD recommended the potential application of the Shaffer et al. 2019 (Estimating offsets for avian displacement effects of anthropogenic impacts) model as a tool to calculate voluntary offsets associated with turbines and potential grassland nesting bird displacement. As previously discussed, Bowman Wind planned to calculate voluntary offsets based on Shaffer et al. 2019 with the WEST grassland data layer (that includes landowner historical knowledge, historical and recent aerial and satellite photography review, and field verification) incorporated as the best-available grassland data. Below are the calculations of voluntary offsets that have been incorporated into the Bird Bat Conservation Strategy (BBCS) for Layout 059, which is the final layout being submitted to the ND PSC for approval.

Final Layout 059 Grassland Mapping Updated Based on WEST Field Assessment Used for the Avian-impact Offset Method to Estimate Offsets for Displaced Breeding Grassland Birds *{RESULTS IN THIS TABLE INCLUDE 85 TOTAL PRIMARY AND SPARE TURBINE LOCATIONS – >THE FINAL PROJECT LAYOUT WILL TOTAL 74, 2.82 MW TURBINE LOCATIONS}

Parameter	Metric	Units	Source
Impact Distance	300	m	Shaffer and Buhl (2016)
Impact Area	537	ha	Derived from WEST Grassland Assessment
Pre-Impact Density	1.9	pairs/ha	Shaffer and Buhl (2016)
Percent Displacement	53	percent	Shaffer et al. (2019)
Offset Density	1.9	pairs/ha	Equal Value Habitat
Number Pairs in Impact Site	1020	pairs	--
Number Pairs Displaced	540	pairs	--
Offset Area	284	ha	--

Note: This table was replicated from Shaffer et al (2019) Appendix S1, Table S3, Example 2 calculation sheet

Bowman Wind committed to following one of the key "averted-loss" tenets of Shaffer et al. 2019 peer-reviewed paper, which is to offset indirect displacement of grassland birds by protecting existing native landscapes or other valuable habitat through voluntary easements. Consistent with this commitment, Bowman Wind plans to acquire unbroken grassland conservation easements for the life of the Project as a voluntary offset for displaced grassland breeding birds by incorporation of the outputs from the framework model calculations in the table above and as detailed in Shaffer et al. 2019.

Shaffer, J. A., and D. A. Buhl. 2016. Effects of wind-energy facilities on grassland bird distributions. Conservation Biology 30:59–71.

Shaffer, J. A., C. R. Loesch, and D. A. Buhl. 2019. Estimating offsets for avian displacement effects of anthropogenic impacts. Ecological Applications.

Thanks for all of your coordination and discussions. As an update, the Project plans to submit its application to the North Dakota Public Service Commission this week.

Regards,

-Ryan

RYAN HENNING
Apex Clean Energy, Inc.

From: Mueller, Elisha K. <ekmueller@nd.gov>
Sent: Wednesday, March 10, 2021 2:40 PM
To: Ryan Henning <ryan.henning@apexcleanenergy.com>
Cc: Dyke, Steve R. <sdyke@nd.gov>; Johnson, Sandra K. <sajohnson@nd.gov>
Subject: Bowman Wind

Hi Ryan,

We have discussed internally and think it would be beneficial to set up another meeting/work session with you and your GIS team. Specifically, we would like to discuss the following topics:

1.) Turbines 3, 11, 16, 77, and 37 from layout 59 (no turbine number was attached to that data set, so these are the field IDs… hopefully that makes sense). We have identified these turbines as being on native prairie.
2.) Turbines **67**, 68, **69**, 70, **37**, 38, 39, **41**, **42**, 43, and **44**. All of these turbines are within our Greater Sage-grouse Priority Conservation Area and the 6 bolded turbines fall within 4 miles of an active lek. In our early guidance letter (attached for reference), the Department stated that it's first recommendation is to discontinue permitting energy development within this area.
3.) The most recent impact analysis and voluntary offset package. We have not seen an updated one and are assuming it is the same as the original, but if this isn't the case, could you provide that prior to our meeting?

Let's try to shoot for the weeks of the 22nd or 29th if possible.

Elisha Mueller
Conservation Biologist

701.328.6348 • ekmueller@nd.gov • gf.nd.gov

NORTH Dakota | Game and Fish
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Appendix D

Agency Correspondence

North Dakota Parks & Recreation

NORTH Dakota | Parks & Recreation
Be Legendary.

June 10, 2020

Scott Jansen
Bowman Wind
8665 Hudson Blvd. Suite 110
Lake Elmo, MN 55042

Re: Bowman Wind Farm

Dear Mr. Jansen,

The North Dakota Parks and Recreation Department has reviewed the above referenced proposed Bowman Windfarm located in Bowman County, North Dakota.

Our agency scope of authority and expertise covers recreation and biological resources (in particular rare plants and ecological communities). The project as defined does not affect state park lands that we manage or affect Land and Water Conservation Fund recreation projects that we coordinate.

The North Dakota Natural Heritage biological conservation database has reviewed the project to determine if any current or historical plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, we have several species of concern documented within or adjacent to project site. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. A map and spreadsheet with natural heritage data has been attached.

Given the potential for not only habitat disturbance and disruption but the threat to nesting, feeding and migratory bird and bats in the area we suggest that all efforts be made to avoid impacts to wildlife species and their habitats. In an effort to avoid or minimize impacts to wildlife and their habitats we encourage proper evaluation of all potential wind energy sites. To identify and assess adverse impacts to wildlife we suggest pre and post construction avian and bat monitoring studies be conducted. We defer further comments regarding animal species to the North Dakota Game and Fish Department and the United States Fish and Wildlife Service.

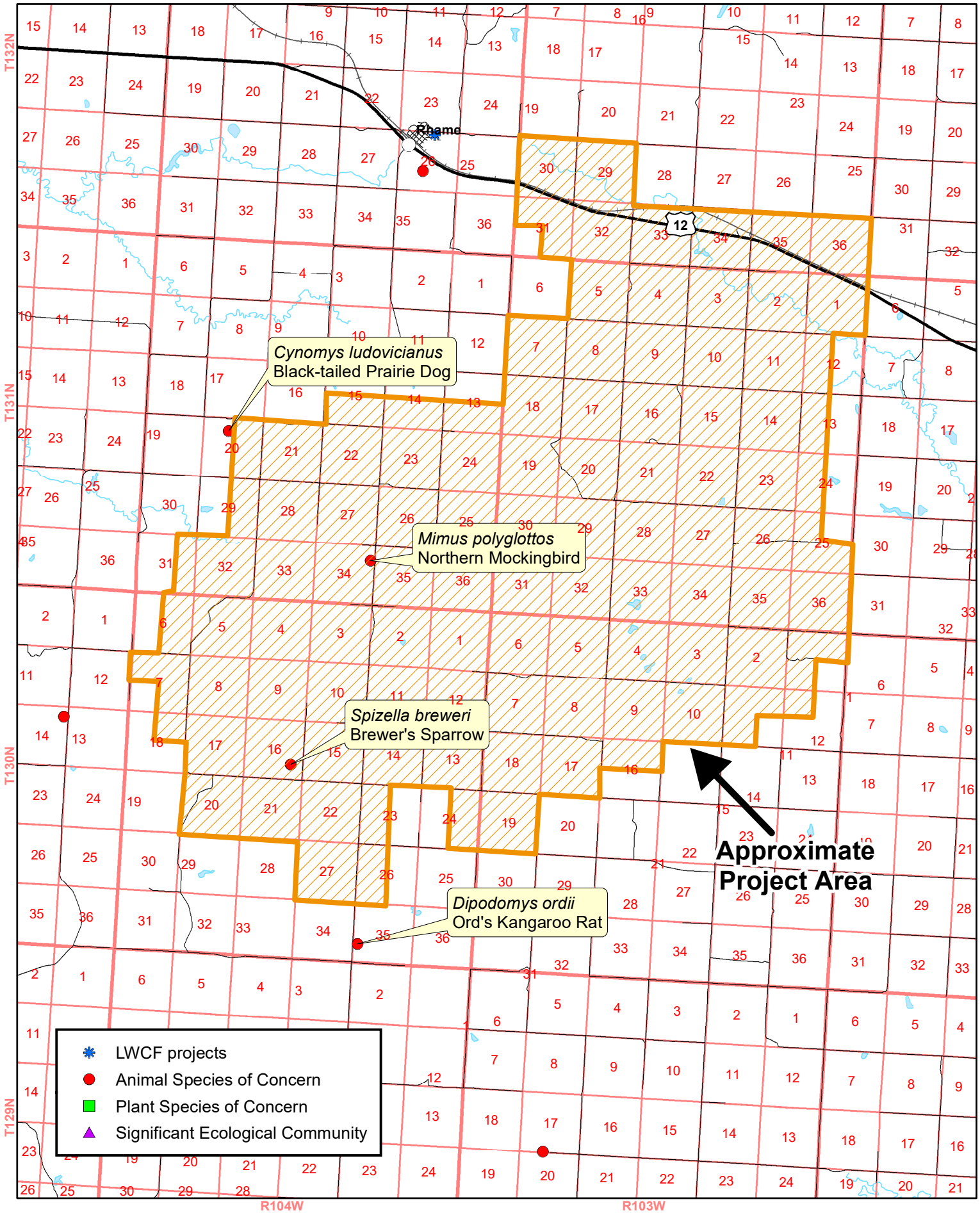
We appreciate your commitment to rare plant, animal and ecological community conservation, management and inter-agency cooperation to date. For additional information, please contact me at (701-220-3377 or kgduttenhefner@nd.gov Thank you for the opportunity to comment on this proposed project.

Sincerely,

Kathy Duttenhefner
Coordinator/Biologist II, Natural Resources Division

1600 East Century Ave. Ste. 3 | Bismarck, ND 58503
PHONE: 701-328-5357 | FAX: 701-328-5363 | EMAIL: parkrec@nd.gov | WEBSITE: www.parkrec.nd.gov

North Dakota Parks and Recreation Department
North Dakota Natural Heritage Inventory



State Scientific Name	State Common Name	State Rank	Global Rank	Federal Status	Township Range Section	County	Last Observation	Estimated Representation Accuracy	Precision
Cynomys ludovicianus	Black-tailed Prairie Dog	SU	G4		131N104W - 20; 131N105W - 01; 132N105W - 26; 131N104W - 01; 130N104W - 17; 132N105W - 34; 130N104W - 07; 131N104W - 34; 132N105W - 35; 132N105W - 25; 130N104W - 09; 132N104W - 34; 131N104W - 27; 131N105W - 28; 131N104W - 36; 131N104W - 26; 131N105W - 36	Bowman	1964-08-14		G
Dipodomys ordii	Ord's Kangaroo Rat	S4	G5		130N104W - 35	Bowman	1976-08		S
Mimus polyglottos	Northern Mockingbird	SU	G5		131N104W - 17; 131N104W - 26; 131N105W - 36; 130N104W - 15; 130N104W - 24; 131N104W - 07; 131N103W - 17; 131N103W - 28; 130N104W - 05; 130N104W - 10; 130N105W - 13; 131N103W - 18; 131N104W - 28; 130N104W - 04; 131N104W - 33; 131N103W - 32; 131N103W - 08	Bowman	1967-06-20		G
Spizella breweri	Brewer's Sparrow	S3	G5		130N104W - 16	Bowman	1976-05		S

Appendix D

Agency Correspondence

North Dakota State Water Commission

NORTH Dakota | Water Commission
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June 8, 2020

Scott Jansen
Bowman Wind
c/o Apex Clean Energy, Inc.
8665 Hudson Blvd North, STE 110
Lake Elmo, MN 55042

Dear Mr. Jansen:

This is in response to your request for a review of the environmental impacts associated with the 200-megawatt Wind Farm project located in Bowman County, ND.

The proposed project has been reviewed by State Water Commission staff, and the following comments are provided:

- There are no FEMA regulatory floodplains identified and/or mapped where this proposed project is to take place. No permits relative to the NFIP are required based on the current effective FIRM and State minimum standards.

- The Office of the State Engineer (OSE) Engineering and Permitting Section reviewed the project location and determined that the project will be constructed near surface water resources. The OSE requests to be notified regarding the proposed project's impacts, if any, to water resources such as watercourses (i.e. streams or rivers), agricultural drains, and wetlands (i.e. ponds, sloughs, lakes, or any series thereof) as any alterations, modifications, improvements, or impacts to those water resources may require a drainage permit(s) or a construction permit(s) from the OSE. Please contact the OSE Engineering and Permitting Section at 701-328-4288 if you have any questions.

- Initial review indicates the project does not require a conditional or temporary permit for water appropriation. However, if surface water or groundwater will be diverted for construction of the project, a water permit will be required per North Dakota Century Code § 61-04-02. Please consult with the Water Appropriations Division of the Office of the State Engineer if you have any questions at (701) 328-2754 or waterpermits@nd.gov.

- The State Water Commission maintains a network of observation wells across the state for monitoring the water levels and quality in glacial and bedrock aquifers. These wells are often installed in road and highway rights-of-way to limit inconvenience to the adjacent landowners. State Water Commission observation wells have a yellow protective casing extending between 1 and 3 feet above ground surface, and their locations are marked with a stake. If an observation well is encountered during project activities and must be removed, please contact the Water Appropriations Division. The State Water Commission hopes to keep all observation wells, but otherwise will ensure the well is properly abandoned.

Thank you for the opportunity to provide review comments. Should you have further questions, please contact me at 701-328-4970 or stevebest@nd.gov.

Sincerely,

Steven Best
Planner III

SB:dm/1570

Appendix D

Agency Correspondence

State Historical Society of North Dakota

May 13, 2020

Mr. Scott Jansen
Senior Development Manager
Apex Clean Energy
8665 Hudson Blvd North, Suite 110
Lake Elmo, MN 55042

ND SHPO Ref: 20-0335 PSC Bowman Wind in Bowman County, North Dakota

Dear Mr. Jansen,

We reviewed your preliminary information on ND SHPO Ref: 20-0335 PSC Bowman Wind in Bowman County, North Dakota. We recommend survey for cultural resources as follows:

- A current Class I (file search) to determine any previously recorded cultural resources in the project area.

- A Class II (reconnaissance) and Class III (pedestrian) survey by a permitted architectural historian for standing buildings and structures (including cemeteries) over 45 years old in the visual Area of Potential Effect (APE). This is within a two-mile radius of individual turbine locations. The purpose is to evaluate any architectural or structural features that may be eligible for nomination to the National Register of Historic Places. At least three out of the seven aspects of integrity used to evaluate historic properties could be impacted by the proposed project: the setting, feeling, and association of historic sites.

- A Class III archaeological survey of all areas of direct impact including crane paths, met towers, access roads, turbine locations and staging areas, unless the footprint has been recently surveyed for cultural resources.

Thank you for the opportunity to review this project to date. We look forward to review of the Class II/Class III surveys. Please include the ND SHPO reference number listed above in any further correspondence for this specific project. If you have any questions, please contact Lorna Meidinger at (701) 328-2089 or lbmeidinger@nd.gov.

Sincerely,

for Claudia J. Berg
State Historic Preservation Officer (North Dakota)

20-0335

Appendix D

Agency Correspondence

Bowman County Airport Authority

Bowman County Airport Authority

TO: Scott Jansen Apex Clean Energy
FROM: Bowman County Airport Authority/ Board
SUBJECT: Bowman Wind Turbine Project 56 Approval Letter

Bowman County Airport Authority met February 5, 2021 and determined there is no impact, from Project 56 Wind Turbine Layout, to the Bowman Regional Airport and it's 5 mile (radius) associated airspace. Motion to approve presented, seconded and motion passed to forward this Letter of Approval to Apex Clean Energy.

Signed this date- February 8, 2021

Bowman County Airport Authority- Rodney Sichart - chairman

Address- P.O. Box 331, Bowman, North Dakota 58623