APPLICATION FOR A CERTIFICATE OF SITE COMPATIBILITY

Submitted to:

NORTH DAKOTA PUBLIC SERVICE COMMISSION

Submitted by:

HOMESTEAD WIND, LLC

120 Garrett Street, Suite 700
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WILLIAMS COUNTY, NORTH DAKOTA

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TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

ACRONYM LIST

ABNP	Aransas-Wood Buffalo National Park
ACP	American Clean Power
ADLS	Aircraft Detection Lighting System
Aeronautics Commission	North Dakota Aeronautics Commissiong
AM	amplitude modulation
ANSI	American National Standards Institute
APE	area of potential effects
Apex	Apex Clean Energy Holdings, LLC
Application	Application for a Certificate of Site Compatibility
BBCS	Bird and Bat Conservation Strategy
BCC	Birds of Conservation Concern
BCR	Bird Conservation Region
BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMP	best management practices
BOP	Balance of Plant
Certificate	Certificate of Site Compatibility
Commission or PSC	North Dakota Public Service Commission
CRP	Conservation Reserve Program
CUP	Conditional Use Permit
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
DNH	Determination of No Hazard
DoD	Department of Defense
ECPG	Eagle Conservation Plan Guidance
EMF	electromagnetic field
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FM	frequency modulation
FRS	Facility Registry Service
GE	General Electric
GW	gigawatts
Homestead Wind	Homestead Wind, LLC
ICBM	intercontinental ballistic missile
IPaC	Information for Planning and Consultation
ISO	International Organization for Standardization
kV	kilovolt
LiDAR	Light Detection and Ranging
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MET towers	meteorological evaluation towers
m/s	meters per second
MW	megawatts
NA	not applicable

NDAC	North Dakota Administrative Code
NDCC	North Dakota Century Code
NDDA	North Dakota Department of Agriculture
NDDEQ	North Dakota Department of Environmental Quality
NDDOT	North Dakota Department of Transportation
NDDTL	North Dakota Department of Trust Lands
NDDWR	North Dakota Department of Water Resource
NDGFD	North Dakota Game and Fish Department
NDGS	North Dakota Geological Survey
NDPDES	North Dakota Pollutant Discharge Elimination System
NDPRD	North Dakota Parks and Recreation Department
NIEHS	National Institute of Environmental Health Sciences
NLCD	National Land Cover Database
NLEB	northern long-eared bat
NORAD	North American Aerospace Defense Command
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWR	National Wildlife Refuge
O&M	operations and maintenance
OEAAA	Obstruction Evaluation Airport Airspace Analysis
OSE	Office of the State Engineer
Phase I ESA	Phase I Environmental Site Assessment
PLOTS	Private Land Open to Sportsmen
PPA	power purchase agreement
Project	Homestead Wind Project
Project Area	the approximately 25,000-acre identified in Figure 1 of this Application
PSC or Commission	North Dakota Public Service Commission
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
ROCC	Remote Operations Control Center
ROW	right-of-way
RUMA	Road Use and Maintenance Agreement
SCADA	Supervisory Control and Data Acquisition
SHPO	State Historic Preservation Office
SHSND	State Historical Society of North Dakota
Siting Act	North Dakota Century Code Chapter 49-22
Siting Rules	North Dakota Administrative Code Article 69-06-08
SPCC	Spill Prevention, Control, and Countermeasure
SPP	Southwest Power Pool
SSURGO	Soil Survey Geographic Database
Study Area	the 63,642-acre area that includes the Project Area, as shown in Figure 1 of this Application
SWPPP	Stormwater Pollution Prevention Plan
THPO	Tribal Historic Preservation Office
UDP	Unanticipated Discoveries Plan
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDOE	U.S. Department of Energy
USEPA	U.S. Environmental Protection Agency

USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	Underground Storage Tank
WEG	Wind Energy Guidelines
WEST	Western EcoSystems Technology, Inc.
WMA	Wildlife Management Area
WOTUS	Waters of the United States
WPA	Waterfowl Production Area

1.0 INTRODUCTION

Homestead Wind, LLC, (Homestead Wind) is submitting this Application (Application) for a Certificate of Site Compatibility (Certificate) to the North Dakota Public Service Commission (PSC or Commission) for the proposed Homestead Wind Project (Project) in Williams County, North Dakota. This Application is submitted pursuant to the North Dakota Energy Conversion and Transmission Facility Siting Act, North Dakota Century Code (NDCC) Chapter 49-22 (Siting Act).

The Project is in Williams County, North Dakota (refer to **Figure 1: Project Location**). A Study Area of approximately 63,642 acres was analyzed, and based on the analysis, an approximately 25,000-acre Project Area was selected that avoids or minimizes human and environmental impacts. The Project Area provides sufficient area for construction of all Project infrastructure and integrates all required setbacks. The Project would have a nameplate capacity of up to 256.5 megawatts (MW), with up to 255 MW delivered to the grid.

Homestead Wind is a wholly-owned subsidiary of Apex Clean Energy Holdings, LLC (Apex). Founded in 2009, Apex is a full-service renewable energy company headquartered in Charlottesville, Virginia that is focused on bringing utility-scale generation facilities to market, from site origination and financing to turnkey construction and long-term asset management. Apex's mission-driven team of more than 400 professionals uses a data-focused approach and an unrivaled portfolio of projects to create solutions for the world's most innovative and forward-thinking customers.

Apex's track record of successful transactions and strong relationships in the global financial community underpin its capabilities: since the company's founding, Apex has commercialized more than 50 projects totaling nearly 12 gigawatts (GW) of capacity. Operating assets under management have grown to two GW with nearly another GW currently under construction. In North Dakota, Apex recently completed construction of the Bowman Wind Project in Bowman County, which began commercial operations on December 19, 2025.

1.1 Compliance with the Energy Conversion and Transmission Facility Siting Act, North Dakota Century Code Chapter 49-22

The Siting Act requires the proponent of a wind energy conversion facility exceeding 0.5 MW to obtain a Certificate from the Commission in order to locate, construct, and operate the facility in the state of North Dakota. An application for a Certificate must meet certain criteria set forth in the Siting Act, as well as in North Dakota Administrative Code (NDAC) Article 69-06-08 (Siting Rules).

In this Application, Homestead Wind presents the information required by the Siting Act and the Commission's Siting Rules. Homestead Wind has considered the exclusion and avoidance areas, the selection criteria, and the policy criteria in the design of the Project, in accordance with NDCC Chapter 49-22 and NDAC Section 69-06-08-01. Information regarding Project design, wind resources, and technical information has been included in this Application to allow a thorough understanding of the Project and to aid in review by the Commission, regulatory agencies, and the public. Table 1.1-1 provides a summary of information included in this Application and the section of the document in which each siting requirement is addressed.

Table 1.1-1 Certificate Completion Checklist		
State Authority	**Description**	**Section**
Chapter 69-06-04-01 Certificate of Site Compatibility		
Section 2: Contents		
a. (1)	A description of the type of energy conversion facility proposed.	1.0, 4.0
a. (2)	A description of the gross design capacity.	1.2
a. (3)	A description of the net design capacity.	1.2.7
a. (4)	A description of the estimated thermal efficiency of the energy conversion process and the assumptions upon which the estimate is based.	N/A
a. (5)	A description of the number of acres that the proposed facility will occupy.	1.0, 1.2.2
a. (6) a	A description of the anticipated time schedule for obtaining the certificate of site compatibility.	1.2.8
a. (6) b	A description of the anticipated time schedule for completing land acquisition.	1.2.8
a. (6) c	A description of the anticipated time schedule for starting construction.	1.2.8
a. (6) d	A description of the anticipated time schedule for completing construction.	1.2.8
a. (6) e	A description of the anticipated time schedule for testing operations.	1.2.8
a. (6) f	A description of the anticipated time schedule for commencing commercial production.	1.2.8
a. (6) g	A description of the anticipated time schedule for beginning any expansions or additions.	1.2.9
b.	Copies of any evaluative studies or assessments of the environmental impact of the proposed facility submitted to any federal, regional, state, or local agency.	Summarized in Appendix L – Bird and Bat Conservation Strategy and specific reports in Appendix M – Wildlife Survey Reports
c.	An analysis of the need for the proposed facility based on present and projected demand for the product or products to be produced by the proposed facility, including the most recent system studies supporting the analysis of the need.	2.1
d.	A description of any feasible alternative methods of serving the need.	2.2
e.	A study area that includes the proposed facility site, of sufficient size to enable the Commission to evaluate the factors addressed in North Dakota Century Code section 49-22-09.	1.0, 6.0-6.17, 8.0-8.10

Table 1.1-1 Certificate Completion Checklist		
State Authority	**Description**	**Section**
f.	A discussion of the utility's policies and commitments to limit the environmental impact of its facilities, including copies of board resolutions and management directives.	Appendix A – Homestead Wind, LLC / Apex Clean Energy Policy Statement
g.	A map identifying the criteria that provides the basis for the specific location of the proposed facility within the study area.	Figure 2: Project Facilities
h.	A discussion of the criteria evaluated within the study area, including exclusion areas, avoidance areas, selection criteria, policy criteria, design and construction limitations, and economic considerations.	3.0-3.6
i.	A discussion of the mitigative measures that the applicant will take to minimize adverse impacts which results from the location, construction, and operation of the proposed facility.	6.1.2, 6.2.2, 6.3.2, 6.4.2, 6.5.2, 6.6.2, 6.7.2, 6.8.2, 6.9.2, 6.10.2, 6.11.2, 6.12.2, 6.13.2, 6.14.2, 6.15.2, 6.16.2, 6.17
j.	The qualifications of each person involved in the facility site location study.	10.0
k.	A map of the study area showing the location of the proposed facility and the criteria evaluated.	Figure 5: Constraints Map
l.	An 8 ½-inch by 11-inch black and white map suitable for newspaper publication depicting the site area.	Figure 11: Homestead Wind Project (Newspaper Map)
m.	A discussion of present and future natural resource development in the area.	6.2, 6.8, 6.10-6.16
n.	Map and GIS requirements. The applicant shall provide information that is complete, current, presented clearly and concisely, and supported by appropriate references to technical and other written material available to the Commission.	Figures 1-11, USB drive
NDCC Section 49-22-08 Description of Application Requirements		
Section 1: An application for a certificate shall be in such form as the commission may prescribe, containing the following information:		
a.	A description of the size and type of facility.	1.0, 4.0
b.	A summary of any studies which have been made of the environmental impact of the facility.	1.2.1, 1.2.4, 6.0-6.17
c.	A statement explaining the need for the facility.	2.1
d.	An identification of the location of the preferred site for any energy conversion facility.	1.2, Figure 1: Project Location
e.	An identification of the location of the preferred corridor for any transmission facility.	N/A

Table 1.1-1 Certificate Completion Checklist		
State Authority	**Description**	**Section**
f.	A description of the merits and detriments of any location identified and a comprehensive analysis with supporting data showing the reasons why the preferred location is best suited for the facility.	1.1, 1.2, 2.0-3.6, 6.0-6.17, 8.0-8.10
g.	A description of mitigative measures that will be taken to minimize all foreseen adverse impacts resulting from the location, construction, and operation of the proposed facility.	6.1.2, 6.2.2, 6.3.2, 6.4.2, 6.5.2, 6.6.2, 6.7.2, 6.8.2, 6.9.2, 6.10.2, 6.11.2, 6.12.2, 6.13.2, 6.14.2, 6.15.2, 6.16.2, 6.17
h.	An evaluation of the proposed site or corridor with regard to the applicable considerations set out in section 49-22-09 and the criteria established pursuant to section 49-22-05.1.	1.1, 3.0-3.6, 6.0-6.17, 8.0-8.10
i.	Such other information as the applicant may consider relevant or the commission may require.	Complete Application including Appendices and Figures
NDCC 49-22-09(1) **Factors to be considered in evaluating applications and the designation of sites, corridors, and routes.**		
a.	Available research and investigations relating to the effects of the location, construction, and operation of the proposed facility on public health and welfare, natural resources, and the environment.	6.0-6.17, 8.1
b.	The effects of new energy conversion and transmission technologies and systems designed to minimize adverse environmental effects.	8.2
c.	The potential for beneficial uses of waste energy from a proposed energy conversion facility.	8.3
d.	Adverse direct and indirect environmental effects which cannot be avoided should the proposed site or route be designated.	8.4
e.	Alternatives to the proposed site, corridor, or route which are developed during the hearing process and which minimize adverse effects.	8.5
f.	Irreversible and irretrievable commitments of natural resources should the proposed site, corridor, or route be designated.	8.6
g.	The direct and indirect economic impacts of the proposed facility.	8.7
h.	Existing plans of the state, local government, and private entities for other developments at or in the vicinity of the proposed site, corridor, or route.	6.2, 6.9, 8.8
i.	The effect of the proposed site or route on existing scenic areas, historic sites and structures, and paleontological or archaeological sites.	3.1, 3.2, 6.6, 6.7, 8.9

Table 1.1-1 Certificate Completion Checklist		
State Authority	**Description**	**Section**
j.	The effect of the proposed site or route on areas which are unique because of biological wealth or because they are habitats for rare and endangered species.	6.16, 8.10
k.	Problems raised by federal agencies, other state agencies, and local entities.	9.0

1.2 Project Summary

The Project will be located in Williams County, North Dakota (see **Figure 1: Project Location)**. The Project's nameplate capacity is up to 256.5 MW of wind energy capacity with up to 255 MW delivered to the grid. Homestead Wind continues to assess its turbine options but anticipates that it will use a turbine model with an output of between 3.8 MW – 4.5 MW. The Project facilities are shown in **Figure 2: Project Facilities,** and will include:

- 81 wind turbine locations, of which up to 67 wind turbines and related equipment will be constructed (depending on the turbine model ultimately selected);
- new gravel access roads and improvements to existing roads (as needed);
- underground 34.5 kilovolt (kV) electrical collection lines connecting the turbines to the Project substation and associated facilities;
- underground fiber-optic cable for turbine communications co-located with the collection lines;
- one meteorological tower (MET) and temporary Light Detection and Ranging (LiDAR) technology;
- Project substation;
- operations and maintenance (O&M) facility;
- light-mitigating technology and related equipment; and
- temporary facilities, including: a concrete batch plant, laydown areas for equipment and construction management facility, intersection improvements to facilitate over-length turning, crane paths and working pads, and staging areas for turbine structure delivery.

The Project will interconnect via an approximately 0.2-mile (approximately 850-foot) 115 kV transmission line extending from the Project substation to the point of interconnection to the grid at the existing Mountrail-Williams Electric Cooperative Strandahl 115 kV substation, located within the Project Area along 151st Avenue NW. Per NDCC Section 49-22-03-7(b), the proposed transmission line is not considered an "electric transmission facility" because it is less than one mile in length. Therefore, the transmission line does not fall within the Commission's siting jurisdiction and is not described in detail or analyzed in this Application. The transmission line has been permitted through Williams County.

1.2.1 Study Area

Homestead Wind reviewed an approximately 63,642-acre Study Area that includes the Project Area (see **Figure 1: Project Location**). Table 1.2-1 lists the townships, sections, and ranges included in the Study Area.

Table 1.2-1
Study Area Location

	Township Name	Township	Range	Section(s)
Williams	Climax	158N	103W	23-26, 35-36
	Good Luck	158N	102W	9-16, 19-36
	Orthell	158N	101W	7, 18-19, 30-31
	Standahl	157N	103W	1-2, 11-14, 23-25, 36
	Bonetrail	157N	102W	1-36
	Blacktail	157N	101W	6-7, 18-19, 30-31
	Bull Butte	156N	103W	1-4, 10-12
	Cow Creek	156N	102W	3-7

1.2.2 Project Area

The Project Area is comprised of approximately 25,000 acres of primarily agricultural land in Williams County (see **Figure 1: Project Location**). Table 1.2-2 summarizes the townships, sections, and ranges included in the Project Area.

Table 1.2-2
Homestead Wind Project Area Location

County Name	Township Name	Township	Range	Section(s)
Williams	Climax	158N	103W	25, 36
	Good Luck	158N	102W	10, 13-15, 22-25, 29-31-34, 36
	Orthell	158N	101W	19, 30-31
	Strandahl	157N	103W	1, 12-13*, 24
	Bonetraill	157N	102W	1-7, 9-23, 25-36
	Blacktail	157N	101W	6
	Bull Butte	156N	103W	1-2

1.2.3 Project Layout

In this Application, Homestead Wind provides the preliminary Project layout, which includes all components described above as illustrated in **Figure 2: Project Facilities**. The Project layout includes all 81 proposed turbine locations, of which up to 67 turbine locations would be built. The preliminary layout is designed to accommodate either of the turbine models currently under consideration. A more detailed description of the turbine models being considered for the Project is included in Section 4.1.1 of this Application.

The Project layout satisfies all North Dakota siting requirements, per the Siting Act and Siting Rules, while optimizing efficiency of space and electrical generation as well as avoiding or minimizing impacts to the environment, cultural resources, and existing land use. Homestead Wind has also sited turbines and associated facilities in compliance with applicable Williams County setback requirements, except where a variance was granted by Williams County.

1.2.4 Selection of Project Area

Recognizing the unique and favorable combination of traits that make Williams County ideally suited for wind development, Apex looked for opportunities in Williams County and selected the Project Area because of its extraordinary wind resource, nearby electrical infrastructure for interconnection to the grid, and landowner support. Further, the Project is compatible with the existing land use and environmental features within the Project Area. These attributes make this Project Area well-suited for wind energy development.

1.2.5 Project Development History

Homestead Wind began evaluating the area as a potentially suitable site for a wind project in 2015. Over the course of the following ten years, based on site-specific studies and in consultation with agencies, landowners, and other stakeholders, Homestead Wind refined the Project location, as described below.

2015-2022

In 2015, Homestead Wind initiated development activities on an approximately 58 square mile (approximately 37,000-acre) area in the northwest corner of Williams County. Homestead Wind began its community outreach land control efforts in 2015 by introducing the Project to the local community and providing interested landowners with the opportunity to participate. With a positive landowner response to the Project, Homestead Wind signed the initial landowners and installed the first meteorological (MET) tower to assess wind conditions in 2015 and added a second MET tower in 2016. This allowed Homestead Wind to collect site-specific wind data over the course of ten years.

Homestead Wind filed its interconnection queue position with Southwest Power Pool in 2018 and initiated coordination with Mountrail Williams Electric Cooperative, the utility owner of the Strandahl Substation, in 2022.

2023 -2024

In 2023, based on positive landowner support and other considerations, Homestead Wind expanded its analysis and land leasing efforts to assess a larger area (approximately 98 square miles or 63,000 acres). Beginning in 2023 and into 2024, Homestead Wind conducted additional environmental studies and surveys of the expanded area. Homestead Wind continued to progress through the interconnection queue process.

2025-2026

In 2025, Homestead Wind continued working closely with participating landowners, the surrounding community, wildlife agencies, Mountrail Williams Electric Cooperative, and other stakeholders to refine the proposed layout and further refine the Project Area. Homestead Wind also added two more MET towers and LiDAR units to collect site-specific data.

Homestead Wind continued with its environmental studies in 2025, including an additional eagle and raptor nest survey, a grassland assessment, bat acoustic monitoring, and a whooping crane habitat assessment. All these surveys helped Homestead Wind refine the Project Area to avoid and minimize impacts to wildlife, wetlands, and sensitive habitats. For example, Homestead Wind refined the Project Area to exclude airspace associated with the Williston Basin International Airport approximately 7 miles southeast of the Project Area, condense the footprint of the Project closest to the point of interconnection at the Strandahl Substation, and avoid environmental features such as larger grassland complexes and sharp-tailed grouse leks.

In June 2025, Homestead Wind executed Generator Interconnection Agreement with Mountrail-Williams Electric Cooperative and Southwest Power Pool, the Regional Transmission Operator.

In late 2025 and early 2026, Homestead Wind initiated and completed its conditional use permit process with Williams County, which approved a conditional use permit and two associated variances for the Project in January 2026.

The Project Area Homestead Wind is submitting in this Application includes participating parcels (comprised mostly of wind energy leases, two parcels for underground collection lines, and one easement for the transmission line) and four North Dakota Department of Trust Lands (NDDTL) parcels. The Project Area excludes from its boundary all non-participating parcels.

1.2.6 Project Area Wind Characteristics

The US Department of Energy (USDOE) and the North Dakota Division of Community Services have conducted wind resource assessment studies in North Dakota. According to the USDOE, annual average wind speeds of 6.5 meters per second (m/s) and above are suitable for wind power projects. The USDOE land-based wind map for the state of North Dakota indicates that the wind resources within the Project Area average 7.75 m/s to 8.5 m/s at a height of 100 meters above the ground.[1]

Homestead Wind has had four temporary METs located in the Project vicinity since 2015 to assess site-specific wind resource data. The METs have collected data showing that long-term annual wind speeds are at the upper end of the average range for North Dakota, indicating that the Project Area is an excellent resource for electrical generation. All of the temporary METs either have been or will be removed during construction of the Project, or within a year following commercial operation of the Project.

As discussed further in Section 4.1.5 of this Application, Homestead Wind will utilize both a permanent MET and LiDAR technology for meteorological monitoring during operations. Homestead Wind includes preliminary locations for one permanent MET location and two LiDAR in **Figure 2: Project Facilities**.

1.2.7 Projected Output

The Project will have a nameplate capacity of up to 256.5 MW (with up to 255 MW delivered to the grid), with projected average output ranging from 1,110.5 to 1,120.3 gigawatt hours per year, depending on the wind turbine model selected. Variations in the actual Project output will depend upon final wind turbine selection and any additional changes to the final design and layout of the facility. As a point of reference, this amount of electrical output is enough to power approximately 104,000 average American homes per year.

1.2.8 Project Schedule

The following list provides details of the proposed schedule for the design, permitting, and construction of the Project:

- **Land Acquisition**. Homestead Wind has completed land acquisition with all private landowners within the Project Area. Homestead Wind has submitted an application to the NDDTL for a Wind Farm Right-of-Way on four parcels. Based on coordination with the NDDTL, Homestead Wind understands the agreement cannot be finalized until

[1] North Dakota 100-Meter Wind Resource Map, available at https://windexchange.energy.gov/maps-data/383.

after the Project concludes the PSC Certificate process. Homestead Wind will secure agreements on these parcels prior to applying for building permits from Williams County.

- **Conditional Use Permit**. Williams County issued a conditional use permit and two associated variances for the Project in January 2026 (**Appendix B – Williams County Conditional Use Permit Approval Letter**).

- **PSC Certificate of Site Compatibility.** Homestead Wind anticipates that the Certificate, if approved, will be issued by the Commission in 4th Quarter of 2026.

- **Other Permits**. Homestead Wind will acquire all other permits necessary for construction of the Project prior to conducting the work for which the permit is required.

- **Construction**. Project construction is anticipated to begin as early as the 3rd Quarter of 2027 and be completed in the 4th Quarter of 2028.

- **Commercial Operations**. Homestead Wind anticipates full commercial operation to occur no later than the end of 2028.

1.2.9 Expansion or Addition

Homestead Wind does not propose any additions or expansions to the Project at this time. Should Homestead Wind develop adjacent areas in the future, all necessary permits and approvals would be obtained.

1.2.10 Project Ownership

The Project will be developed, constructed, owned, and operated by Homestead Wind.

1.2.11 Project Cost

The estimated total cost to construct Homestead Wind is approximately $750 million.

2.0 NEED FOR FACILITY

2.1 Need Analysis

Homestead Wind is actively marketing the Project to a number of potential off takers and may sell the power in the form of a power purchase agreement (PPA), directly on the merchant market, or the Project could be owned directly by a utility.

Utilities and other customers seeking to diversify and build their energy generation portfolios are attracted to wind energy projects because of long-term, fixed, competitive pricing and environmental benefits. Generally, renewable energy sources provide lower costs per megawatt-hour than conventional sources (Lazard 2025; IREA 2025). Thus, the Project could help satisfy local, regional or even national renewable energy demand.

In addition to traditional utility demand for renewable energy, a growing number of corporations are turning to renewable energy to save money on energy and meet their sustainability goals. Corporate customers either purchase renewable energy directly or obtain renewable benefits and cost savings through financially settled contracts, sometimes called virtual PPAs. In addition, many utilities are creating “green tariffs,” which allow customers to purchase up to 100 percent renewable energy from the utility (USEPA, 2018).

2.2 Alternatives

Potential alternatives to wind energy include other forms of renewable energy, such as solar energy, hydropower, or biomass. Which renewable resource is preferred depends on many factors, including the nature of the demand and the characteristics of the proposed location. Due to its characteristics, hydropower and biomass are not viable alternatives for this site. Specifically, the site does not have a large water or biomass source. Other renewable energy resources such as solar would not likely be a practical alternative for the Project. As discussed in Section 1.2.6, the wind resource in the Project Area is ideal for wind energy generation. A ground-mounted solar facility capable of generating 256.5 MW would require large, contiguous tracts of land that would be taken out of agricultural production for the lifetime of the Project, as well as landowners willing to lease such acreage.

2.3 Ten Year Plan

Pursuant to NDCC Section 49-22-04 and NDAC Chapter 69-06-02, Homestead Wind submitted a Ten Year Plan for years 2026 – 2036 in February 2026. Homestead Wind’s Ten Year Plan, included as **Appendix C – Homestead Wind, LLC’s Ten Year Plan**, is consistent with the contents of this Application.

3.0 SITE SELECTION CRITERIA

Homestead Wind selected the Project Area based on a number of factors, including the excellent wind resource, support from landowners, regional demand for energy, and compatibility with existing land uses and resources. In addition, site selection for the Project was based on the criteria outlined in NDAC Chapter 69-06-08. These criteria are discussed further below.

3.1 Exclusion Areas[2]

The geographical areas identified in NDAC Section 69-06-08-01(1) "must be excluded in the consideration of a site for an energy conversion facility." NDAC Section 69-06-08-01(2) also lists geographical areas that "must be excluded in the consideration of a site for a wind energy conversion facility."

Table 3.1-1 summarizes these Exclusion Areas and their presence or absence in the Project Area. Exclusion Areas within the Project Area are depicted on **Figure 3: Exclusion Areas**.

Table 3.1-1
Summary of Exclusion Areas

General Exclusion Area	Present Within Project Area?	Description	Section Addressed
Designated or registered national: parks; memorial parks; historic sites and landmarks; natural landmarks; historic districts; monuments; wilderness areas; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands.	None	NA	6.2, 6.6, 6.7, 6.8, 6.12
Designated or registered state: parks; forests; forest management lands; historic sites; monuments; historical markers; archaeological sites; grasslands; wild, scenic, or recreational rivers; game refuges; game management areas; management areas; and nature preserves.	None	NA	6.2, 6.6, 6.7, 6.8, 6.12
County parks and recreational areas; municipal parks; parks owned or administered by other governmental subdivisions; hardwood draws; and enrolled woodlands.	None	NA	6.8, 6.9
Areas critical to the life stages of threatened or endangered animal or plant species.	None	NA	6.16
Areas where animal or plant species that are unique or rare to this state would be irreversibly damaged.	None	NA	6.16
Areas within 1,200 feet of the geographic center of an intercontinental ballistic missile (ICBM) launch or launch control facility.	None	NA	6.2

[2] As defined in NDAC Section 69-06-01-01(8), exclusion criteria are "criteria that remove areas from consideration for energy conversion facility sites and transmission facility routes."

Table 3.1-1
Summary of Exclusion Areas

General Exclusion Area	Present Within Project Area?	Description	Section Addressed
Areas within thirty feet [9.14 meters] on either side of a direct line between an intercontinental ballistic missile (ICBM) launch facility and a missile alert or launch control facilities to avoid microwave interference. This restriction only applies to aboveground structures, not to surface features, such as roads, or belowground infrastructure.	None	There are no ICBMs in Williams County.	6.2
Additional Exclusion Areas for Wind Energy Conversion Facilities – Areas within:[1]			
1.1x the turbine height from the nearest edge of an interstate or state roadway right-of-way (ROW).	None	There are no interstates or state roadways in the Project Area.	6.3
1.1x the turbine height plus 75 feet from the centerline of any county or maintained township roadway.	Present	No turbines will be located within these exclusion areas	4.2
1.1x the turbine height from the nearest edge of railroad ROW.	None	There are no railroads in the Project Area.	6.3
1.1x the turbine height from the neared edge of a 115 kilovolt or higher transmission line ROW.	Present	No turbines will be located within these exclusion areas	4.2
1.1x the turbine height from the property line of a non-participating landowner and 3x the height of the turbine from an inhabited rural residence of a non-participating landowner, unless a variance is granted. A variance may be granted if an authorized representative or agent of the permittee, the nonparticipating landowner, and affected parties with associated wind rights file a written agreement expressing all parties' support for a variance to reduce the setback requirement in this subsection. A nonparticipating landowner is a landowner that has not signed a wind option or an easement agreement with the permittee of the wind energy conversion facility as defined in NDCC Chapter 17-04.	Present	No turbines will be located within these exclusion areas	4.2

[1] For the purposes of setbacks, Homestead Wind assumed a turbine up to 113 meters in hub height, with an up to 163-meter rotor diameter, and/or total tip height of 194.5 meters.

3.2 Avoidance Areas[3]

Pursuant to NDAC Section 69-06-08-01(3), certain geographical areas "may not be approved as a site for an energy conversion facility unless the applicant shows that under the circumstances there is no reasonable alternative. In determining whether an avoidance area should be designated for a facility the [C]ommission may consider, among other things, the proposed management of adverse impacts; the orderly siting of facilities; system reliability and integrity; the efficient use of resources; and alternative sites. Economic considerations alone will not justify approval of these areas. A buffer zone of a reasonable width to protect the integrity of the area must be included. Natural screening may be considered in determining the width of the buffer zone." An additional avoidance area for wind energy conversion facilities is set forth in NDAC Section 69-06-08-01(4).

Table 3.2-1 summarizes avoidance areas and their presence or absence in the Project. Avoidance areas within the Project Area are shown on **Figure 4: Avoidance Areas**.

Table 3.2-1
Summary of Avoidance Areas

Avoidance Area	Present Within Project Area?	Description	Section Addressed
Historical resources which are not designated as exclusion areas.	Present	Homestead Wind has completed a Class I cultural resources inventory for the Project Area, as well as a Class III cultural resource inventory of areas that may be impacted by Project construction. Homestead Wind has also completed a Class II Architectural History reconnaissance survey. Identified unevaluated, potentially eligible, and eligible archaeological and architectural resource sites will be avoided.	6.7
Areas within the city limits of a city or the boundaries of a military installation.	None	NA	6.1
Areas within known floodplains as defined by the geographical boundaries of the hundred-year flood.	None	NA	6.12
Areas that are geologically unstable.	None	NA	6.11

[3] As defined in NDAC Section 69-06-01-01(2), avoidance criteria are "criteria that remove areas from consideration for energy conversion facility sites and transmission facility routes unless it is shown that under the circumstances there are no reasonable alternatives."

Table 3.2-1 Summary of Avoidance Areas			
Avoidance Area	**Present Within Project Area?**	**Description**	**Section Addressed**
Woodlands and wetlands.	Present	Wetlands and small woodlands and shelterbelts are present within the Project Area. All permanent wetland impacts will be avoided. As currently designed, up to approximately 4.9 acres of temporary impacts to wetlands may occur as a result of Project construction. Trees are sparsely located throughout the Project and the Project has been designed to minimize tree removal to the extent possible. If impacts to trees occur, Homestead Wind will follow the Commission's tree and shrub mitigation specifications. Homestead Wind requests the Commission authorize Homestead Wind to clear trees and shrubs in the Project Area up to 100 feet in up to eight (8) areas where it is necessary to collocate multiple facilities (e.g., access roads, crane paths, collection lines) and the workspace associated with each and/or in order to safely stage and list turbine components and blades.	6.9, 6.13, 6.14
Areas of recreational significance which are not designated as exclusion areas.	None	NA	-
Additional Avoidance Areas for Wind Energy Conversion Facilities – Areas within:			
A geographic area where, due to the operation of the facility, the sound levels within one hundred feet on an inhabited residence or community building will exceed forty-five dBA. The sound level avoidance area criteria may be waived in writing by the owner of the occupied residence or the community building.	Present	Homestead Wind has completed a sound assessment for both turbine models under consideration and all 81 proposed turbine locations (**Appendix F – Sound Level Modeling Report**). Modeled sound levels do not exceed 45 dBA within 100 feet of inhabited residences or community buildings.	6.5

3.3 Selection Criteria[4]

NDAC Section 69-06-08-01(5) states that a "site may be approved in an area only when it is demonstrated to the [C]ommission by the applicant that any significant adverse effects resulting from the location, construction, and operation of the facility in that area, as they relate to the following, will be at an acceptable minimum, or that those effects will be managed and maintained at an acceptable minimum." A summary of the selection criteria set forth in NDAC Section 69-06-08-01(5) is included in Table 3.3-1.

Table 3.3-1
Summary of Selection Criteria

Selection Criteria	Potential Adverse Effects from Project	Section Addressed
The Impact Upon Agriculture:		
(1) Agricultural production.	Out of 24,994 acres in the Project Area, up to 107.9 acres could be utilized for agricultural production (cultivated crops and conservatively including grassland/herbaceous areas that may be used for grazing – see Table 6.2-3). The Project is proposed to permanently impact less than one percent of the total land within the Project Area.	6.2, 6.10
(2) Family farms and ranches.	While some areas of agricultural production will be converted to an energy generation resource during the life of the Project, the Project will provide additional income to these landowners in the form of lease income. Any economic losses are anticipated to be minor in comparison. Additionally, the Project has been designed to minimize impacts to family farms and ranches to the extent possible, and turbines have been set back from occupied dwellings in accordance with Commission requirements. Additionally, Homestead Wind coordinated with landowners on site plan reviews for their parcel(s).	6.5, 6.9
(3) Land which the owner demonstrates has soil, topography, drainage, and an available water supply that cause the land to be economically suitable for irrigation.	Landowners have not expressed concerns related to irrigation on their property, and no known irrigation system is present in the Project Area.	NA
(4) Surface drainage patterns and ground water flow patterns.	No adverse impacts are anticipated to surface drainage or groundwater flow patterns.	6.11, 6.12
(5) The agricultural quality of the cropland.	No adverse impacts to agricultural quality of cropland are anticipated. Landowners will be compensated for the placement of Project facilities on their property and will be reimbursed for revenues lost due to temporary crop damage from construction activities.	6.2, 6.10
The impact upon the availability and adequacy of:		
(1) Law enforcement.	No adverse impacts to law enforcement are anticipated.	6.3

[4] As defined in NDAC Section 69-06-01-01(14), selection criteria is defined as "criteria that guide and govern the selection of energy conversion facility sites and transmission facility corridors and routes in order to minimize adverse human and environmental impact after the exclusion and avoidance criteria have been applied."

Table 3.3-1
Summary of Selection Criteria

Selection Criteria	Potential Adverse Effects from Project	Section Addressed
(2) School systems and education programs.	No adverse impacts to school systems and education programs are anticipated.	6.3
(3) Governmental services and facilities.	No adverse impacts to government services and facilities are anticipated.	6.3
(4) General and mental health care facilities.	No adverse impacts to general and mental health care facilities are anticipated.	6.3
(5) Recreational programs and facilities.	No adverse impacts to recreational programs and facilities are anticipated.	6.8
(6) Transportation facilities and networks.	There will be a temporary increase in truck traffic during construction activities. Homestead Wind will coordinate with local road authorities regarding haul roads. During facility operations, road use will generally be similar to other area traffic.	6.3
(7) Retail service facilities.	No adverse impacts are anticipated to retail service facilities.	6.3
(8) Utility services.	No adverse impacts are anticipated to utility services. Homestead Wind will coordinate with Mountrail-Williams Electric Cooperative or other local utility for electricity for the O&M facility and Upper Missouri District Health Unit on a septic system.	6.3
The impact upon:		
(1) Local institutions.	No adverse impacts to local institutions are anticipated.	6.3
(2) Noise-sensitive land uses.	Noise-sensitive land uses within the Project Area include residences near turbine sites. However, Homestead Wind has sited turbines to comply with applicable setbacks, and the Project will comply with the Commission's sound level requirement.	6.5
(3) Light-sensitive land uses	Turbines and MET lighting will be in accordance with Federal Aviation Administration (FAA) requirements; and, subject to FAA approval, Homestead Wind will use commercially reasonable efforts to install a light-mitigating technology that is consistent with applicable requirements.	5.2, 6.6
(3) Rural residences and businesses.	No adverse impacts are anticipated. Homestead Wind has sited turbines to comply with applicable setbacks, and the Project will comply with the Commission's sound level requirement.	6.5, 6.6
(4) Aquifers.	There are no aquifers in Williams County or the Project Area; therefore, no impacts to aquifers are anticipated.	6.11
(5) Human health and safety.	No impacts to human health and safety are anticipated.	6.4
(6) Animal health and safety.	No adverse impacts to domestic animal health or safety are anticipated. Measures to keep livestock away from construction activities will be used as necessary. Coordination is ongoing with U.S. Fish and Wildlife Service (USFWS) and North Dakota Game and Fish (NDGFD) regarding minimization of potential impacts to wildlife.	6.15, 6.16

Table 3.3-1
Summary of Selection Criteria

Selection Criteria	Potential Adverse Effects from Project	Section Addressed
(7) Plant life.	Temporary and permanent vegetation impacts will occur during construction. Following construction, temporarily disturbed non-cultivated areas will be re-vegetated with a seed mixture free of noxious weeds according to NRCS recommendations, unless otherwise specified by the landowner and approved by the Commission. Homestead Wind will comply with the Commission's tree and shrub mitigation specifications. Homestead Wind includes a Noxious Weed Management Plan that has been approved by the Williams County Weed Board as **Appendix K – Noxious Weed Management and Control Plan**.	6.14
(8) Temporary and permanent housing.	During construction, construction personnel may utilize existing temporary housing in the form of motels or rental housing. Local housing facilities could experience short-term economic benefits. Homestead Wind anticipates sufficient temporary housing will be available within Williams County and the surrounding area to accommodate construction personnel. Up to four full-time personnel will be required during the operation of the Project, and sufficient long-term housing exists in Williams County and the surrounding area. No long-term adverse impacts are anticipated.	6.1
(9) Temporary and permanent skilled and unskilled labor.	Homestead Wind will encourage its Balance of Plant (BOP) contractor to source materials and the construction workforce from within the State of North Dakota and/or areas surrounding the Project. Homestead Wind expects that the selected BOP contractor will develop a sourcing and workforce plan that seeks to achieve this goal within the parameters of the Project's requirements for quality, safety, budget, and schedule.	3.6
Cumulative impact:		
The cumulative effects of the location of the facility in relation to existing and planned facilities and other industrial development.	Development of the Project would not conflict with existing development plans of state, local, or private businesses. Oil and gas development occurs in the Project Area. Cumulative impacts from the Project will be minimized by utilizing existing public and private oil and gas roadways to the extent possible. Prior to and during construction, Homestead Wind will continue to coordinate with oil and gas parties in or near the Project Area for the continued development of both the mineral and surface estates.	6.11

3.4 Policy Criteria[5]

In accordance with NDAC Section 69-06-08-01(6), "[t]he [C]ommission may give preference to an applicant that will maximize benefits that result from the adoption of the following policies and practices, and in a proper case may require the adoption of such policies and practices. The [C]ommission may also give preference to an applicant that will maximize interstate benefits." Policy Criteria considered by the Commission are summarized in Table 3.4-1, below.

Table 3.4-1
Summary of Policy Criteria

Policy Criteria	Applicant's Policies and Practices	Section Addressed
Recycling of the conversion byproducts and effluents	NA	NA
Energy conservation through location, process, and design	The Project has been designed to maximize energy conversion where available.	1.2, 3.5
Training and utilization of available labor in this state for the general and specialized skills required	Homestead Wind will use skilled and trained labor from North Dakota, to the extent feasible, within the parameters of the Project's requirements for quality, safety, budget, and schedule.	6.1
Use of a primary energy source or raw material located within the state	The energy generated will come from the available wind resources of the state. In addition, to the extent commercially reasonable, gravel will likely be obtained from a local source for road and pad construction, as well as for aggregate for concrete.	1.2.4
Not relocating residents	No relocation of residences will occur.	6.1
The dedication of an area adjacent to the facility to land uses such as recreation, agriculture, or wildlife management	The Project will not interfere with adjacent land uses. As such, Homestead Wind does not currently anticipate dedicating any adjacent areas for land uses such as recreation, agriculture, or wildlife management.	6.15
Economies of construction and operation	With a nameplate capacity of up to 256.5 MW, Homestead Wind will benefit from economies of scale related to the Project's construction and operation. Wind energy projects have one-time costs that remain relatively stable despite the scale of the project. Therefore, a larger project will have cost advantages in comparison to a smaller project because the fixed costs are spread out over more units of output. Some examples of wind energy project costs that remain similar despite the size of the project include: an on-site office space, crane mobilization, and substation procurement and construction.	3.6, 6.1
Secondary uses of appropriate associated facilities for recreation and the enhancement of wildlife	None. The Project is compatible with existing recreation and wildlife uses.	NA

[5] As defined in NDAC Section 69-06-01-01(12), policy criteria are "criteria that guide and govern the selection of energy conversion facility sites and transmission facility corridors and routes in order to maximize benefits during the construction and operation of a facility."

Table 3.4-1
Summary of Policy Criteria

Policy Criteria	Applicant's Policies and Practices	Section Addressed
Use of citizen coordinating committees	Homestead Wind has coordinated and will continue to coordinate with landowners and local businesses and groups located within and near the Project Area.	9.0
A commitment of a portion of the energy produced for use in this State	Energy produced by the Project will interconnect to the transmission grid at the Strandahl substation. The power produced by the Project will be positioned to help meet the local, regional, or national demand for renewable energy, and/or corporate or government renewable energy initiatives/goals.	2.1
Labor relations	No adverse impacts to labor relations are anticipated.	NA
The coordination of facilities	Existing facilities and facility corridors were considered in the siting of the Project.	3.5, 6.3, 6.4
Monitoring of impacts	Homestead Wind will monitor construction activities and use Best Management Practices (BMPs) throughout Project construction. During operation and restoration, Homestead Wind will monitor the Project and assess impacts as well as comply with all requirements set forth in the Certificate. Homestead Wind also includes a Bird and Bat Conservation Strategy as **Appendix L – Bird and Bat Conservation Strategy**, which outlines wildlife-specific monitoring.	5.1, 5.2, 6.17
A commitment to install lighting mitigation technology for wind energy conversion facilities subject to commercial availability and Federal Aviation Administration (FAA) approval.	Homestead Wind will utilize a light-mitigating technology system that is consistent with applicable requirements, subject to FAA approval and commercial availability.	5.2, 6.6

3.5 Design and Construction Limitations

In siting the Project, Homestead Wind considered design and construction limitations related to the Project Area's wind resource, environmental constraints, setback requirements, interconnection to the transmission grid, and landowner input. Homestead Wind evaluated meteorological conditions within and around the Project Area to confirm that a 256.5-MW wind energy project would be economically viable at this location (refer to Section 1.2.6).

Interconnection capacity to the existing electrical grid was also considered in the design of the Project. In June 2025, Homestead Wind executed a Generator Interconnection Agreement with Mountrail-Williams Electric Cooperative and Southwest Power Pool, the Regional Transmission Operator.

Site control has also been critical to the design of the Project. Homestead Wind has 37 agreements signed with private landowners covering 207 parcels and approximately 25,000 acres. These include wind energy leases across the Project, easements for underground facilities (i.e., collection lines) on two parcels, and one easement for aboveground facilities (i.e., transmission line). Homestead Wind has completed its site control efforts with private landowners; there are four North Dakota Department of Trust Lands (NDDTL)-owned surface trust land parcels

that Homestead Wind expects to secure an agreement for upon receipt of the Certificate. Participating properties and their agreement type are displayed on **Figure 2: Project Facilities.**

Furthermore, site-specific constraints were considered in the design and siting of the Project. Homestead Wind sited the Project to avoid or minimize impacts to sensitive environmental resources to the extent possible. Setbacks from occupied residences, non-participating landowner properties, and existing infrastructure, as required by the Commission and Williams County, were also considered in the design and siting of the Project. Section 6.0 includes a more detailed discussion of site-specific resources and the best management practices (BMPs) and mitigation measures that will be implemented to avoid or minimize impacts to these resources.

3.6 Economic Considerations

The wind resource in a given area is the primary driver of the economic viability of wind energy projects. As discussed in Section 1.2.6, the meteorologic conditions within the Project Area are ideal for the development and operation of a wind energy project.

Additionally, the Project will provide meaningful economic benefits to landowners, local governments, and communities, including the following:

- Provides reliable income in the form of lease payments to landowners.
- Allows landowners to diversify their operations with minimal disruption to existing agricultural use. Agricultural uses, including grazing and cultivation, will be able to continue in the Project Area around above-ground Project facilities during the life of the Project.
- Diversifies economic development in Williams County.
- Creates up to approximately 250 construction jobs during Project construction.
- Creates up to 4 full-time jobs during operations.
- Provides significant and measurable indirect economic benefits to the general area, including increased retail and service activity at restaurants, gas stations, and local purchases of construction materials and supplies, such as concrete, fuel, and aggregate.
- Generates personal income by circulation and recirculation of dollars paid out by the Project as business expenditures, state and local taxes, as well as associated increases to the local tax base.

In addition to direct payments to participating landowners, creation of jobs, and other economic activity, the Project will also generate significant direct economic benefits in the form of generation taxes paid to state and local taxing authorities (see Table 3.6-1). Specifically, the Project would pay an Electric Generation Tax of USD 2.50 per kilowatt times the rated capacity of the turbine, as well as one-half of one mill per kilowatt-hour of generated electricity. *See* NDCC Section 57-33.2-04. This means Homestead Wind would pay over $1.1 million in generation taxes annually and over $35 million over the life of the Project. The estimated generation tax breakdown is as follows, based on current State tax law and rates:

Table 3.6-1
Homestead Wind Generation Taxes over Project Life[1]

Taxing Authority	Approximate Annual Revenue	Approximate Revenue over 30-year life of Project
State General Fund	**$391,400**	**$11,742,011**
Williams County	**$124,003**	**$3,720,088**
Townships	**$20,990**	**$629,688**
Climax	$2,094	$62,813
Bonetrail	$15,239	$457,169
Good Luck	$ -	$ -
Bull Butte	$2,403	$72,100
Strandahl	$1,254	$37,605
Schools	**$514,925**	**$15,447,756**
Grenora SD#99[2]	$514,925	$15,447,756
Other	**$121,568**	**$3,647,043**
Williston Basin International Airport	$17,174	$515,230
County Library Service - Williston	$4,609	$138,264
Williston Vector District #1	$4,348	$130,438
Grenora Ambulance District	$61,349	$1,840,478
Grenora Rural Fire District #6	$21,740	$652,189
Garrison Conservancy District	$4,348	$130,438
Soil Conservation District	$8,000	$240,006
Total:	**$1,172,886**	**$35,186,586**

1 Tax revenues are based on a 67-turbine layout and are subject to change based on the final turbine model.

2 School districts in North Dakota are primarily funded through local property tax revenue and North Dakota's state aid formula, the purpose of which is to ensure that every student in North Dakota receives the same level of funding. A portion of all property taxes and payments in lieu of property taxes collected by a school district are either contributed to the state aid formula or used to offset the amount of state aid the school district receives. As applied to the Project, the state aid payment the school district receives will be reduced by an amount equal to 75% of the payments in lieu of property taxes distributed to the school district (excluding sinking & interest levies). The amounts in this table reflect the total amounts the school district is anticipated to receive from the Project's payment in lieu of taxes without any adjustment for amounts that will be offset by a reduction in each school district's payments under the state aid funding formula.

In summary, Homestead Wind will pay over $35 million dollars to taxing districts in the Project Area over the life of the Project, which includes townships, Grenora School District, and several community services. Grenora Public School and the Grenora School District have submitted a letter of support noting the Project "...has the potential to provide significant financial benefits to our school district through increased local tax revenues. These funds are critical in supporting classroom instruction, staffing, facilities, and long-term financial stability (**Appendix D.1 – Local Community Support**)."

3.6.1 Community Benefits

Homestead Wind has been active in the local community throughout the development process. Homestead Wind staff and representatives have built considerable relationships with local leaders and organizations, emphasizing the value the Project can bring to the area. This outreach includes contributions to community grants supporting many organizations in the Williams County community. Since 2022, Homestead Wind has awarded more than $110,000 to local programs, organizations, schools, and community events that generally fall into four categories: building healthy communities, economic development, environmental sustainability, and promoting education.

In addition, Homestead Wind has received letters of support from the Williston Area Chamber of Commerce and Western Star Foundation and the James Memorial Art Center. In its letter dated September 29, 2025, the Willison Area Chamber of Commerce and Western Star Foundation highlights the immediate and long-term benefits of the Project for Williams County, its taxing districts, and local residents. The James Memorial Art Center provided a letter on September 19, 2025, that highlighted the economic impact of the Project and Homestead Wind's commitment to being a good neighbor through its proved investments in the community through the grant program (**Appendix D.1 – Local Community Support**).

Homestead Wind is committed to being a good neighbor for years to come and keeping an open line of communication with local officials and stakeholders.

4.0 DESCRIPTION OF THE PROPOSED FACILITY

4.1 Project Components

Project components, including turbines, associated facilities, and temporary facilities, are described in the following subsections. The Project layout and estimated Project facility impacts are also described. **Figure 2: Project Facilities** shows the locations of the proposed Project infrastructure described below.

4.1.1 Wind Turbines

Wind turbines convert the kinetic energy of the wind into rotational energy of a rotor and drivetrain. This energy is in turn converted into electrical power by industrial generators integrated within the wind turbine housing.

Each wind turbine consists of three major components: the tower, the nacelle, and the rotor. These components are mounted on a concrete foundation to provide structural support to the assembled turbine. The height of the tower, or "hub height" (height from the base of the tower to the center of the rotor hub on top of the tower), will be dependent on the final turbine selection and design. The nacelle sits atop the tower, and the rotor hub is mounted on a drive shaft that is connected to the gearbox and generator contained within the nacelle.

The tower and blades for each wind turbine will be painted a white non-reflective, unobtrusive color. The surface of each turbine will consist of non-reflective material. All wind turbine surfaces will be designed to resist corrosion. No advertising or signage, outside of safety warnings or standard manufacturer markings, will be affixed to any of the turbines.

Tower: The tubular towers for the Project will be conical steel structures or a combination of steel and concrete, depending on final turbine selection. Each tower has a lockable access door, internal lighting and an internal ladder to access the nacelle.

Nacelle: The main mechanical and electrical components of the wind turbine are housed in the nacelle. The nacelle is mounted on a sliding ring that allows it to rotate, or "yaw," into the wind to maximize energy capture. The nacelle components include the drive train, gearbox, generator, and generator step-up transformer. The nacelle is housed in a steel-reinforced fiberglass shell that protects internal machinery from the environment. The housing is designed to allow for adequate ventilation to cool internal machinery. It is externally equipped with an anemometer and a wind vane to measure wind speed and direction. The generated electricity is conducted through cables within the tower to a switch enclosure mounted at the base of the turbine tower.

Rotor: A rotor assembly is mounted on the drive shaft and operates upwind of the tower. Electric motors within the rotor hub vary the pitch of each blade according to wind conditions to maximize turbine efficiency at varying wind speeds. The rotor consists of three blades mounted to a hub, which is connected to the nacelle.

Foundation: Each turbine will sit atop a concrete foundation. Foundation size and design will be finalized once geotechnical analyses have been completed and the turbine model selected, though it is estimated that the foundation could be approximately 60-80 feet in diameter and up to 15 feet in depth.

Turbine operation controls: Having turbines and/or anemometers that are working properly is an important aspect of a well-operating wind project. Each turbine will have multiple redundant sensors on the rotor and drive train to sense when blades become imbalanced or create vibration and can automatically shut down the turbine and anemometer. The anemometers monitor the wind speed and direction to ensure its current position is most efficient to produce electricity. This data is also used for feathering the blades, applying the brakes in high wind speeds, determining if the blades are off-balance, and to communicate to the turbine when the wind is strong enough to begin turning the generator and producing electricity at the "cut-in" wind speed.

Lightning and Ground Protection: Lightning and ground protection for all wind farm facilities is designed and constructed to be compliant with all applicable National Electrical Code and National Electric Safety Code requirements. Grounding and shielding components are integrated into the foundation and structural elements of all equipment and conductor lines. In particular, each wind turbine will include conductive elements in the blades and a complete grounding and shielding network within the turbine, tower, and foundation.

A final turbine model has not been selected at this time, but Homestead Wind plans to select the most appropriate technology for the Project to ensure cost efficiency and optimization of wind and land resources and in consideration of landowner input, setback requirements and other constraints. Homestead Wind will select one of two turbine models with a hub height ranging from 113 to 116 meters (371 to 381 feet), a rotor diameter of up to 163 meters (535 feet), and a tip height of up to 194.5 meters (638 feet). Both turbine models under consideration meet Williams County's ground clearance requirement of 75 feet. The turbine models under consideration are provided in Table 4.1-1.

Table 4.1-1
Wind Turbine Models and Characteristics under Consideration by Homestead Wind

Turbine Model	Nameplate Capacity	Hub Height	Rotor Diameter	Tip Height	Ground Clearance	# Turbines[1]
Vestas V163	4.5 MW	113 m / 371 ft	163 m / 535 ft	194.5 m / 638 ft	31.5 m / 104 ft	57
General Electric (GE) 154	3.8 MW	116 m / 381 ft	154 m / 505 ft	193 m / 634 ft	39 m / 128 ft	67

[1] # Turbines represents the total number of turbines required to achieve up to 256.5 MW nameplate capacity for the Project and that would be constructed. Homestead Wind is seeking approval for all 81 turbine locations, of which, up to 67 will be constructed.
[2] Conversions between metric and imperial/standard are rounded up to the nearest foot.

The preliminary layout shows the 81 proposed wind turbine locations; however, no more than 67 turbine locations will be constructed for the Project. The final number of turbines constructed for the Project will depend upon the turbine model selected. Turbine models with a greater generating capacity (the V163-4.5MW turbine) will require installation of fewer turbines to reach the up to 256.5 MW nameplate capacity. All setback distances are calculated using the tip height of the tallest turbine under consideration, the Vestas V163-4.5 at 113 m (371 ft) hub height and 194.5 m (638 ft) tip height. Additionally, all sound requirements and shadow flicker commitments are met for either turbine model at all proposed turbine locations. Therefore, regardless of the turbine model or turbine locations ultimately constructed, the Project will comply with all applicable requirements and commitments.

4.1.2 Access Roads

Construction and service access to each turbine location will be facilitated by a compacted gravel road within the Project Area. The permanent access roads will be approximately 20 feet wide and constructed with locally-sourced gravel, if available. The Project roads will support the size and weight of maintenance vehicles. During construction, some of the access roads will be widened to accommodate movement of the turbine erection crane, with temporary widths generally not exceeding 150 feet (45.7 meters). Following construction, the access roads will be reduced back to 20 feet (6.1 meters) wide and the area temporarily used will be restored to pre-construction conditions, to the extent practicable. Separate access may be required for the cranes used to erect the wind turbines. In such cases, temporary crane paths will be constructed between turbine locations. Following construction, the temporarily affected crane path areas will be restored to pre-construction conditions, to the extent practicable.

Access roads will be located in consultation with the landowner and, as needed, the township, to avoid or minimize impacts to land use and the environment. For three turbine locations in Good Luck and Bull Butte Townships, Homestead Wind includes two options for the access road in the layout presented with this Application: one overlapping the section line right-of-way and one wholly outside of the section line right-of-way. Homestead Wind includes both options as it continues to coordinate with landowners and the townships; only one option per access road will be constructed, with use of the section line right-of-way option subject to authorization from the applicable township.

4.1.3 Underground Electrical Collection System

The Project will utilize underground electrical collection lines to connect turbines to one another and to deliver electricity to the Project Substation. The electrical collection lines will consist of an underground cable system between the Project Substation and the individual turbine locations. The collection system has been designed for operation at 34.5 kV and has been sited to minimize cost and land impacts and in consideration of landowner input and constraints. The collection lines will be installed in a trench at least 48 inches below the ground in a location that was reviewed by the landowner to minimize potential impact from the existing land uses. Above-ground junction boxes will be installed, as required, for connections or splices. A small number of cabling junction boxes may be located above ground and marked with bollards. Once construction is complete, the land will be returned to preconstruction conditions, to the extent practicable, following installation of the collection system. No permanent impacts are anticipated aside from minor impacts associated with aboveground junction boxes.

4.1.4 SCADA System

Each wind turbine will communicate directly with the Supervisory Control and Data Acquisition (SCADA) system for remote performance monitoring, energy reporting and troubleshooting. The SCADA system provides data on turbine generation and production, availability, meteorology, and communications. The SCADA system allows for 24/7 monitoring of the Project, and relays alarms and communication errors to the Remote Operations Control Center (ROCC; off-site operations center).

Homestead Wind will utilize a ROCC that is actively staffed 24 hours a day, seven days a week, 365 days a year at Apex's headquarters in Charlottesville, Virginia. The ROCC operators are connected to the facilities with real-time monitoring, alarm, and control capabilities. These capabilities include individual inverters and substation breakers that can isolate (i.e., turn off)

affected component(s) in an emergency. Additionally, O&M staff on-site also have the capability to monitor and control turbine operations.

4.1.5 METs and LiDAR Technology

Homestead Wind will utilize both a permanent MET tower and Light Detection and Ranging (LiDAR) technology for meteorological monitoring during operations. Homestead Wind includes preliminary locations for both one permanent MET location and two LiDAR[6] on **Figure 2: Project Facilities**. Each technology is described in more detail below.

Permanent MET: The Project will include one permanent MET that will remain in place for the life of the Project. This permanent MET will be as tall as the hub height of the selected wind turbine and will provide data critical to assessing the performance of the Project and aid in short-term forecasting for the Project. The permanent MET will be marked and lighted as specified by the FAA. Additionally, the Project's permanent MET will comply with applicable State marking requirements (NDCC Chapter 2-05).

LiDAR Technology: Homestead Wind may install up to two LiDAR sensors on portable trailers within the Project Area, each co-located with a 60-meter temporary portable met tower called a LiDAR monitoring mast. The monitoring masts are tilt-up towers that are supported by guy wires. The LiDAR technology (trailer and associated monitoring mast) would work together over a period of six to nine months starting within one year after the commercial operation date to collect accurate measurements of wind speed, direction and other characteristics such as turbulence intensity. Once sufficient data has been collected, the LiDAR technology will be removed.

4.1.6 Light-Mitigating Technology System

Turbines will be lit so as to satisfy minimum Federal Aviation Administration (FAA) requirements. The Project will also comply with the PSC's light-mitigating technology requirements, as specified in NDCC Section 49-22-16.4. Subject to FAA approval, Homestead Wind plans to use an Aircraft Detection Lighting Systems (ADLS). ADLS is a sensor-based system that functions by monitoring the area near the Project (typically approximately 3.5 nautical miles) for aircraft. With this radar system, turbine lighting is off until the radar detects an aircraft in proximity to the Project, at which time the lights turn on until they are no longer needed by the aircraft (e.g., the aircraft clears the area) and the lights turn off. The components and specific locations of the ADLS system will be dependent on FAA's review of turbine technology, terrain, and other factors. Based on preliminary design, the ADLS will include one ADLS tower (and associated cables and access road). The ADLS tower will be an approximately 110-foot lattice tower with a rotating radar on the top and will sit inside a graveled and fenced enclosure of approximately 50 feet by 25 feet. The radar tower is connected to the turbines with underground (at least 48 inches below ground) fiber optic cabling that allows the ADLS system to communicate with the turbines to turn the lights on and off. The preliminary location of the ADLS radar tower is shown in **Figure 2: Project Facilities**.

[6] The locations of the temporary, paired LiDAR technology are included in the preliminary Project layout depicted on **Figure 2: Project Facilities**. These locations are preliminary and may change as they are dependent on the final turbine model selected and locations of the up to 67 turbines to be constructed. The placement of this LiDAR technology is highly precise and must meet the following criteria: located in a wake free and undisturbed sector, located 2-3 rotor diameters away from the turbine, accessible for installation, maintenance, and decommissioning, located with landowner approval so as to minimize disruption to agricultural activities, and located on flat terrain dictated by IEC 61400 12-1.

Once the wind turbines are operational, the ADLS will undergo calibration, testing, and commissioning.

4.1.7 O&M Facility

An O&M Facility will be constructed in the Project Area and will provide access and storage for Project operations and maintenance. The O&M Facility is proposed to be located in the west central portion of the Project along the north side of 69th Street NW between 150th Avenue NW and 151st Avenue NW (in Section 13 of Strandahl Township). The buildings typically used for this purpose are approximately 3,000 to 5,000 square feet and house the equipment to operate and maintain the Project. The parking area adjacent to the building is typically approximately 3,000 square feet. Homestead Wind includes a 10-acre area for the O&M Facility including the associated parking area.

4.1.8 Project Substation

The Project's underground collection system will extend from the turbines to a Project substation. The substation will be located on approximately 9.25 acres and is intentionally sited adjacent to the existing Mountrail-Williams Electric Cooperative Strandahl 115 kV substation. **Figure 2: Project Facilities** shows the location of the Project substation. The principal function of the Project substation is to increase the voltage from the collection system (34.5 kV) to the voltage of the transmission line (115 kV), which will transport the electricity of the entire Project to the existing transmission system. This facility will house the production metering, various collection systems, facility isolation and protective functions. The facility will be fenced and have security lighting that will be down-lit.

4.1.9 Temporary Facilities

Other temporary facilities will be required for the construction phase of the Project, including a concrete batch plant, laydown areas for equipment and construction management facility, intersection improvements to facilitate over-length turning, crane paths and working pads, and staging areas for turbine and transmission structure delivery. The temporarily affected areas will be restored to pre-construction conditions, to the extent practicable, after construction has been completed.

4.2 Project Layout

As described in Section 1.2.3, the Project layout consists of 81 potential wind turbine locations, of which up to 67 turbines will be constructed. The final number of turbines constructed will be dependent on final engineering analysis and Project design. All 81 potential turbine locations are shown on **Figure 2: Project Facilities**. In addition to turbines, the layout includes proposed locations for associated facilities.

Homestead Wind has designed the Project to optimize electrical generation and efficiency while minimizing potential impacts to existing resources, infrastructure, and land use. Homestead Wind has coordinated with landowners regarding infrastructure placement and has utilized existing roads, driveways, field edges, and other previously disturbed areas for access roads to the extent practicable. Homestead Wind has worked and will continue to work diligently with its landowner partners throughout Project development.

The Project has been sited to comply with the setback requirements of the Commission, as well as Williams County, unless a variance has been granted by Williams County. Where setback requirements differ, the Project will adhere to the more stringent requirement. Applicable setback requirements are identified in Table 4.2-1. These are also displayed on **Figure 5: Constraints Map**.[7] Regardless of the turbine model selected, the Project layout will comply with all of the setback requirements outlined below. Setbacks are measured from the closest edge of the turbine tower base to the closest edge of the referenced feature. Homestead Wind is considering two turbine models and has designed the turbine layout based on the taller turbine (a turbine with a tip height of 194.5 meters (638 feet) and a rotor diameter of 163 meters (535 feet). This ensures all turbine locations meet the setback requirements for either turbine model.

Table 4.2-1
Project Setbacks

Wind Turbine Setbacks	
ND PSC (NDAC Section 69-06-08-01 and NDCC Section 49-22-05.1)	
Turbine Setback Requirement	**Distance**
The geographic center of an intercontinental ballistic missile (ICBM) launch facility or launch control facility	Areas within 1,200 feet of the geographic center
Direct line between an ICBM launch facility and a missile alert or launch control facilities to avoid microwave interference	Areas within 30 feet (9.14 meters) on either side of a direct line between an ICBM launch facility and a missile alert or launch control facility
Nearest edge of an interstate or state roadway right of way	1.1 times the height of the turbine
County or maintained township roadway	1.1 times the height of the turbine plus seventy-five (75) feet from the centerline of the roadway
Nearest edge of a railroad right-of-way	1.1 times the height of the turbine
Nearest edge of a 115 kV or higher voltage transmission line right-of-way	1.1 times the height of the turbine
Property line of a non-participating landowner	1.1 times the height of the turbine[1]
Inhabited rural residence of a non-participating landowner	3 times the height of the turbine[1]
Inhabited residence or a community building	A wind energy conversion site must not include a geographic area where, due to the operation of the facility, the sound levels within 100 feet of an inhabited residence or a community building will exceed 45 dBA[2]
Williams County (Zoning Ordinance 6-10-10)	
Turbine Setback Requirement	**Distance**
Turbines from the perimeter of the facility	2.5 times the rotor diameter

[7] Where the Commission's and Williams County's setback requirements differ, the more stringent requirement (i.e., the larger setback) is applied to the Project and depicted on **Figure 5: Constraints Map**.

Table 4.2-1 Project Setbacks	
Turbines from existing structures[3]	1,400 feet[4]
Turbines from the nearest public road (including section lines) or above ground communication and electrical lines (center of right-of-way)	200 feet or greater
Other Structure Setbacks – Agricultural District	
Williams County (Zoning Ordinance 2-2-4)	
Project Structure Setback	**Distance**
From a section line or the center line of the road easement of a designated County, State, or Township road, or section line road	133 feet
From any non-public road easement	75 feet
From sensitive areas	100 feet

1 As set forth in NDCC Section 49-22-05.1(4) and NDAC Section 69-06-08-01(2)(a)(5), a variance from this setback requirement may be granted if an authorized representative or agent of the permittee, the nonparticipating landowner, and affected parties with associated wind rights file a written agreement expressing the support of all parties for a variance to reduce the setback requirement. A nonparticipating landowner is a landowner that has not signed a wind option or an easement agreement with the permittee of the wind energy conversion facility as defined in chapter 17-04. The Project complies with these setback requirements and is not seeking variances therefrom.

2 The sound level avoidance area criteria may be waived in writing by the owner of the occupied residence or community building, as provided in NDAC Section 69-06-08-01(4). The Project complies with the sound level requirement.

3 Based on prior discussions with Williams County Planning and Zoning officials, “structures” do not include fences, above ground communication and electrical lines, or road-related items (such as road signs), as those features are addressed specifically by the 200-foot setback in Section 6-10-10(3) of the Zoning Ordinance.

4 As set forth in Section 6-10-10(2) of the Zoning Ordinance, a variance for this setback may be granted by the Board of County Commissioners, provided the permittee and affected landowner sign a waiver agreement. On January 6, 2026, the Williams County Board of County Commissioners approved a variance for setbacks from existing structures on parcels owned by participating landowners (LU-0102-25). The variance included two exceptions: (1) a 1,400-foot setback would be maintained from existing occupied residences; and (2) a 500-foot setback would be maintained from all existing and active above ground oil and gas wellhead and tank battery locations.

4.3 Estimated Project Facility Impacts

As stated above, the Project layout includes 81 potential turbine locations. Of these locations, up to 67 turbines would be constructed. Table 4.3-1 presents the maximum approximate area of temporary and permanent impacts associated with all Project infrastructure. Although only up to 67 turbines will be constructed, all 81 potential turbine locations and associated infrastructure (e.g., collection lines, access roads, etc.) have been included for calculations of potential impacts. Furthermore, conservative temporary construction disturbance areas are assumed for these analyses. Thus, the actual area that will be disturbed is expected to be much smaller than those reported herein.

Table 4.3-1
Summary of Permanent and Temporary Footprint from Project Facilities (acres)[1]

Project Facility	Description of Footprint	Temporary[2]	Permanent[2]
Turbines	50-foot radius for turbine pad	-	14.6
	250-foot radius for construction workspace	339.1	-
Access Roads[3]	20-foot-wide road		86.4
	150-foot-wide construction workspace	488.7	
Electrical Collection and Communication Lines	75-foot-wide corridor per line, 50-foot off outside line when multiple lines	398.0	-
Crane Paths	120-foot-wide corridor	355.7	-
MET and LiDAR	15-foot by 15-foot area	-	<0.1
	100-foot by 100-foot workspace	0.2	-
ADLS	50-foot by 25-foot area	-	<0.1
	200-foot by 200-foot workspace	0.9	-
O&M Facility	Footprint of facility	-	10.0
Project Substation	Footprint of facility	-	0.4
Laydown/Staging Areas	Footprint of two laydown/staging areas within the Project Area	30.0	-
	Total	**1,612.6**	**111.4**

1 Because the Project has collocated facilities, double counting of potential impacts has been accounted for by first calculating permanent impacts, then calculating temporary impacts from electrical collection and communication lines (ground disturbance), then turbine workspace, crane paths, access roads, and facility footprints.
2 Rounding has been applied to all values.
3 Access Roads include access roads to turbines, met and LiDAR, ADLS, and the Project substation.

5.0 PROJECT CONSTRUCTION, OPERATION, AND DECOMMISSIONING

5.1 Project Construction

A variety of activities must be completed to carry the Project through construction. Preconstruction, construction, and post-construction activities for the Project include:

- Pre-construction:
  - Geotechnical analysis;
  - Design high voltage electrical system, electrical collection system, and Project substation;
  - Design turbine foundations and access roads;
  - Design ADLS, MET/LiDAR, and O&M Facility;
  - Underground utility and oil and gas facility discovery; and
  - Procure all necessary turbine and associated facility components (towers, nacelles, blades, foundations, and transformers).

- Construction:
  - Construct temporary laydown yards and construction management facility;
  - Construct temporary intersection modifications to facilitate turbine component delivery;
  - Construct access roads and install collection lines;
  - Construct the Project substation;
  - Construct the ADLS, MET/LiDAR, and O&M Facility;
  - Install tower foundations and underground cables; and
  - Place towers and set turbines.

- Post-Construction:
  - Restore all disturbed areas not intended for permanent above ground facilities;
  - Test facility; and
  - Begin commercial production.

Haul road permits will be acquired from townships, Williams County, and/or the North Dakota Department of Transportation (NDDOT), as necessary. Furthermore, Homestead Wind will acquire all necessary permits to cross/bore state, county, and township roads required for the installation of its collection lines. Homestead Wind will negotiate a Road Use and Maintenance Agreement (RUMA) with Williams County and the townships, as needed. During construction, equipment and worker vehicles will travel to and from the site. Peak construction is anticipated to begin in early fall when the majority of the foundation construction, access road, electrical, and Project substation work is taking place. Delivery of turbine components will coincide with peak construction. Upon completion of construction, heavy equipment will be removed from the site.

In addition, culverts or other drainage methods will be installed or upgraded as needed in accordance with County and State requirements.

5.2 Commissioning

Upon completion of the construction phase, the Project will undergo detailed inspection and testing procedures before being commissioned. Inspection and testing will occur for each

individual component of the wind turbines, as well as the associated communication, meteorological, collection, and SCADA systems.

5.3 Operation and Maintenance

Each wind turbine will communicate directly with the SCADA system for remote performance monitoring, energy reporting, and troubleshooting. The SCADA system provides data on turbine generation and production, availability, meteorology, and communications. The SCADA system allows for 24/7 monitoring of the Project, and relays alarms and communication errors to an off-site operations center. Homestead Wind will provide service and maintenance for the Project. Permanent, full-time staff will perform these duties. The following schedule is anticipated to be used for scheduled service activities:

- First Service Inspection – The first service inspection will take place one to three months after the turbines have been commissioned. Focus will be placed on bolt tightening, greasing and oil filtering.

- Semi-Annual Service Inspection – Semi-annual service inspections will commence six months after the first inspection. The semi-annual inspections will consist of lubrication and safety testing.

- Annual Service Inspection – The annual service inspection will include the same items as the semi-annual service inspection plus bolt tightening and a full component check.

- Two-Year Service Inspection – The two-year service inspection will include items checked during the annual inspection, as well as terminal connector tightening.

- Five-Year Service Inspection – The five-year service inspection will include items checked during the annual inspection, as well as braking system inspection, oil and grease testing, balance check and terminal connector tightening.

5.4 Decommissioning and Restoration

Once the Project has reached the end of its operational life, Homestead Wind will decommission the Project per North Dakota Wind Turbine Decommissioning Guidelines (NDAC Article 69-09-09) and the Williams County Zoning Ordinance and Subdivision Regulations Section 6-10-12. Unless waived by the Commission in accordance with NDAC Section 69-09-09-05(2), these actions will include the following:

- Dismantling and removal of all towers, turbine generators, transformers, fencing, overhead cables, inverters, substations, and other equipment.

- Removal of underground cables to a depth of 24 inches, cables buried deeper than 24 inches will remain in place.

- Removal of foundations, structures, and ancillary equipment to a depth of four feet.

- Site restoration and reclamation to the approximate original topography that existed prior to construction of the facility with topsoil respread over the disturbed areas at a depth similar to that in existence prior to the disturbance.

- Grading and restoring topsoil of areas disturbed by the facility and reseeding according to Natural Resources Conservation Services (NRCS) recommendations, unless the Commission approves an owner request signed by the applicable landowner identifying the surface features the landowner would like to keep in place and the reason the landowner prefers to keep those features.

Pursuant to NDAC Section 69-09-09-06, Homestead Wind will submit a decommissioning plan to the Commission prior to operation. Homestead Wind will comply with all applicable financial assurance requirements.

6.0 ENVIRONMENTAL ANALYSIS

6.1 Demographics

The following sections describe existing demographics, potential impacts, and proposed avoidance/minimization measures.

6.1.1 Existing Conditions

The Project is located in Williams County, North Dakota, in a predominantly rural agricultural region. The Project Area overlaps portions of Climax, Good Luck, Orthell, Strandahl, Bonetrail, Blacktail, and Bull Butte Townships. The closest incorporated community is the City of Grenora (approximately 7 miles northwest of the Project Area). Demographic data for the Project Area is presented at the state and county levels in Table 6.1-1.

The per capita income in Williams County between 2019 and 2023 was $45,793, which is similar to the state level (U.S. Census Bureau, 2024a). The unemployment rate in Williams County is similar to the state level, at 1.9 percent and 1.3 percent, respectively. Approximately 7.7 percent of the people in Williams County are reported living at or below the poverty level, which is lower than the state level of 11.1 percent. The top three industries of employment in Williams County and the State of North Dakota are educational services, and health care and social assistance; agricultural, forestry, fishing, and hunting; and retail trade (U.S. Census Bureau, 2024c). The percentage of people in Williams County employed by the educational services, and health care and social assistance, and retail trade industries is similar to the state level, while those employed in the agriculture, forestry, fishing and hunting, and mining industry is higher in Williams County than at the state level.

Table 6.1-1
Demographics in the Project Area

Counties and Townships	North Dakota	Williams County
ACS Population Estimates July 1, 2024[1]	796,568	40,763
Estimated Total Vacant Housing Units[2]	31,289	4,983
Per Capita Income (U.S. 2024 Dollars; 2020-2024)[1]	$43,389	$44,320
Unemployment Rate (%)[3]	1.3	1.9
Persons Living Below the Poverty Level (%)[1]	11.1	7.9
Top 3 Industries[3, 4]	E (25.4%), R (11.5%), Ag (8.5%)	E (25.0%), Ag (20.6%), R (9.2%)

1 U.S. Census Bureau, 2024a
2 U.S. Census Bureau, 2024b
3 U.S. Census Bureau, 2024c
4 Industries are defined under the 2012 North American Industry Classification System and abbreviated as follows: Ag = Agriculture, Forestry, Fishing, and Hunting, and Mining; E = Educational, Health and Social Services; R = Retail Trade

6.1.2 Demographic Impacts and Avoidance/Minimization Measures

The Project is expected to result in socioeconomic benefits for the local population and will not impact long-term population trends. The Project will be socioeconomically beneficial to landowners, local governments, and communities because it will provide additional income in the

form of lease payments to landowners, which could raise the per capita income in Williams County. Homestead Wind has designed the Project to minimize impacts to family farms and ranches to the extent practicable, and any economic losses are anticipated to be minor in comparison to additional income provided by the Project. Furthermore, the Project will increase the local tax base, thereby benefitting local governments and communities. Additionally, multiple studies have shown that property values are not impacted by the presence of a wind energy conversion facility.[8]

Construction of the Project will create approximately 250 temporary jobs, both skilled and unskilled, during the construction phase. Homestead Wind will employ up to 4 full-time workers during operations. Homestead Wind will encourage its Balance of Plant (BOP) contractor to source materials and the construction labor force from within North Dakota and/or areas near the Project, to the extent commercially reasonable. Limited general skilled labor is expected to be available in Williams County or the state to serve the basic infrastructure and site development needs. Specialized labor will be required for certain components of Project construction. It may be necessary to import specialized labor from other areas of North Dakota or neighboring states, as the relatively short duration of construction often precludes special training of local or regional labor.

Non-local temporary workers would need temporary housing during the period of construction, which is expected to occur from 3rd Quarter of 2027 through 4th Quarter of 2028. Although the Project may increase demand for housing during the construction phase, according to the U.S. Census Bureau's 2024 estimates, 4,983 vacant housing units may be present within Williams County. This number of potentially vacant housing units would be enough to house non-local workers throughout Project construction. Demand for lodging could provide a temporary increase in revenue in the area.

Construction of the Project could also provide temporary revenue increases in the area through increased demand for food services, fuel, goods, and services. Personal income could also be generated by circulation and recirculation of dollars paid out by the Project as business expenditures and state and local taxes.

Long-term beneficial impacts to the tax bases of Williams County, as a result of the construction and operation of the Project, will have an additional positive impact on the local economy in this area of North Dakota. In addition to the creation of jobs and personal income, the Project would pay approximately $23.4 million in taxes to Williams County and local taxing authorities over 30 years and would pay approximately $11.7 million to the State General Fund over the operational life of the Project (Section 3.6).

The proposed Project could increase demand on the labor force in Williams County and for local housing during construction; however, the construction period is only temporary. Overall, Homestead Wind anticipates that the Project will be socioeconomically beneficial to the local population. Further, the Project would not result in relocation of residences, and turbine placement complies with applicable setbacks from occupied residences. The Project will also comply with the Commission's sound avoidance requirement outlined in NDAC Section 69-06-08-01. Thus, no additional mitigation measures are anticipated to be required.

[8] See Hoen, Brown, and colleagues (2013); Hoen, Wiser, and colleagues (2009); and Atkinson-Palombo and Hoen (2014). Furthermore, in two 2018 rulings relevant to this Application, the Commission concluded that there is "no record evidence that property values will be adversely affected," (2018a: paragraph 55) and "There was no credible showing that there will be quantifiable or qualitative effect on property value" (2018b: paragraph 60).

6.2 Land Cover, Land Use, and Zoning

The following sections describe the existing land cover, land uses, and zoning within the Study Area and Project Area, potential impacts from construction and operation of the Project, and proposed avoidance/minimization measures.

6.2.1 Existing Conditions

6.2.1.1 Land Cover

Homestead Wind reviewed the U.S. Geological Survey (USGS) National Land Cover Database (NLCD) to determine land cover classification types present within the Study Area and the Project Area. The results of this review are presented in Table 6.2-1. The predominate NLCD land cover classification in the Study and Project Areas is cultivated crops, followed by grassland/herbaceous, and developed land; collectively, these land cover classifications comprise about 99 percent of the Study and Project Areas (**Figure 6: Land Cover**).

Table 6.2-1
Land Cover Types and their Relative Abundance in the Project Area

Land Cover	Study Area		Project Area	
	Acres	Percent	Acres	Percent
Cultivated Crops	49,497.2	77.8	20,257.1	81.0
Grassland/Herbaceous	11,042.5	17.4	3,550.1	14.2
Developed	2,440.1	3.8	921.8	3.7
Hay/Pasture	307.9	0.5	141.2	0.6
Emergent Herbaceous Wetlands	206.6	0.3	74.5	0.3
Shrub/Scrub	37.2	<0.1	20.0	<0.1
Open Water	46.7	<0.1	15.0	<0.1
Woody Wetlands	37.8	<0.1	9.1	<0.1
Deciduous Forest	25.6	<0.1	5.3	<0.1
Total	**63,641.5**	**100.0**	**24,994.0**	**100.0**

Source: 2024 NLCD (USGS, 2024)

6.2.1.2 Land Use and Ownership/Management

Land in the Study and Project Areas is predominantly used for agricultural production and livestock grazing with some areas of oil and gas production, primarily in the southwestern portion of the Project Area. Federal and state ownership interests are present in the Study Area and the Project Area, as shown in Table 6.2-2. **Figure 7: Public Lands and Easements** shows the locations of public lands and easements in relation to the Study Area and Project Area.

Table 6.2-2
Land Ownership and Management in the Study and Project Areas

Agency	Acres in Study Area	Acres in Project Area
U.S. Fish and Wildlife Service (USFWS)		
Wetland Easements[1]	430	430
Waterfowl Production Areas	90	-
State of North Dakota		
Private Lands Open to Sportsmen	320	-
Department of Trust Lands – Surface Trust	1,423	634
Department of Trust Lands – Mineral Trust Lands	6,416	3,109

[1] Acreage represented here is the entire parcel for which a USFWS wetland easement is on; only wetland basins are protected, not the uplands. However, Homestead Wind has not obtained the basin-specific acreage from the USFWS Wetland Management District nor field verified basins with USFWS staff.

Source: USFWS, 2026; NDGIS, 2025.

U.S. Fish and Wildlife Service (USFWS) wetland easements are present in the Study Area and Project Area. A USFWS wetland easement protects only the wetland basin(s) present on the subject parcel; the upland area outside the wetland is not covered by the easement. There are no USFWS grassland easements in the Study Area or Project Area. There are three parcels within the Project Area that have USFWS wetland easements (**Figure 7: Public Lands and Easements**); no Project facilities are located on these parcels.

The USFWS also administers the National Wildlife Refuge System which includes National Wildlife Refuges (NWR) and Waterfowl Production Areas (WPA). NWRs serve the purpose of preserving and protecting lands for fish and wildlife and their habitat. WPAs are lands protected and/or restored for the purpose of waterfowl production. No NWRs are located within the Study Area or Project Area. The nearest NWR, called Lake Zahl NWR, is approximately 4 miles northeast of the Study Area. There is one WPA within the southwestern corner of the Study Area, the Hapip WPA, located approximately 0.7 miles southwest of the Project Area (**Figure 7: Public Lands and Easements**). The closest turbine to this WPA is located over one mile away. There are no WPAs within the Project Area.

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) administers the Conservation Reserve Program (CRP). Agricultural landowners may enroll their land into the CRP, essentially taking the land out of production for a given timeframe to protect wildlife and water resources in exchange for receiving annual payments. Most often, lands enrolled in the CRP are not identifiable using publicly available data. Homestead Wind has coordinated with the Bismarck State office of the NRCS regarding the Project, which has not noted the presence of any CRP-enrolled lands within the Project Area. Through its land leasing and title efforts to date, and coordination with landowners, Homestead Wind has not identified any CRP-enrolled parcels in the Project Area.

In North Dakota and other western states, the Bureau of Land Management (BLM) issues grazing allotments to ranchers to allow livestock grazing on public lands (BLM, Undated). In addition to public lands under the jurisdiction of the BLM, allotments may include private lands, state lands, and lands under the jurisdiction of other federal agencies. There are no BLM-managed lands or grazing allotments within the Study Area or Project Area.

In North Dakota, Private Land Open to Sportsmen (PLOTS) lands are private lands open to public use for hunting and bird watching. The PLOTS program offers rental payments to landowners in exchange for walk-in access for hunters during the state's hunting seasons (NDGFD, 2025a). PLOTS lands are administered through agreements between the North Dakota Game and Fish Department (NDGFD) and individual landowners. There are two PLOTS tracts located outside of but adjacent to the Project Area, and within the Study Area: the southeast quarter of Section 24 and the southwest quarter of Section 25, Township 158 North, Range 103 West (**Figure 7: Public Lands and Easements**).

NDGFD also manages Wildlife Management Areas (WMA) which are located throughout the state. Unless specified otherwise, WMAs are open to hunting, fishing, trapping, and other forms of recreation. There are no NDGFD WMAs within the Study Area or Project Area; the closest WMA is the Blacktail Dam WMA located approximately two miles east of the Study Area on the east side of Blacktail Lake.

Homestead Wind reviewed information received from the North Dakota Department of Trust Lands (NDDTL) to identify NDDTL lands within the Study Area and Project Area. NDDTL manages trust lands on behalf of the Board of University and School Lands (Board). Surface trust lands generate income through leases for grazing or agricultural use. Mineral rights trust lands generate income through leases for oil and gas, coal, potash, and other mineral extraction. NDDTL parcels are present within the Study Area and Project Area. There are 9 NDDTL surface trust parcels within the Study Area (totaling 1,423 acres), 4 of which are also within the Project Area (totaling 634 acres); and 44 mineral trust parcels within the Study Area (totaling 6,416 acres), 21 of which are within the Project Area (totaling 3,109 acres).

No concentrated residential developments are present within the Study or Project Areas though scattered farmsteads are present in both areas. There are 29 occupied residences within the Study Area, of which 10 are located within the Project Area.

There are no intercontinental ballistic missile (ICBM) launch facilities in Williams County.

6.2.1.3 Zoning

According to Section 6-10-1 of the Williams County Zoning Ordinance and Subdivision Regulations, construction and operation of a wind energy facility in Williams County requires a Conditional Use Permit from Williams County. Homestead Wind has been coordinating with Williams County and on January 6, 2026, received a Conditional Use Permit for the wind energy facility (LU-0099-25), a Conditional Use Permit for the transmission line (LU-0100-25), a variance from the fencing landscaping requirements (LU-0202-25), and a variance from the required 1,400-foot setback from existing structures on parcels owned by participating landowners (**Appendix B – Conditional Use Permit Approval Letter**).

6.2.2 Land Cover, Land Use, and Zoning Impacts and Avoidance/Minimization

6.2.2.1 Land Cover

Construction of the Project will result in the conversion of a portion of the land within the Project Area from existing land uses to a renewable energy resource for the life of the Project. In addition, construction of the Project may result in temporary land use impacts. Table 6.2-3 presents the anticipated impacts on land cover categories as a result of construction and operation of the Project.

Table 6.2-3
Summary of Land Cover Impacts (acres)

Land Cover Type	Impacts (acres)	
	Temporary	Permanent
Cultivated Crops	1,415.2	103.3
Grassland/Herbaceous	116.5	4.6
Shrub/Scrub	-	-
Developed (all categories)	79.5	3.5
Hay/Pasture	-	-
Emergent Herbaceous Wetlands	1.4	-
Deciduous/Evergreen Forest	-	-
Woody Wetlands	-	-
Total	**1,612.6**	**111.4**

Source: 2024 NLCD (USGS, 2024)

Construction of the Project will temporarily impact approximately 1,612.6 acres of land. Approximately 88 percent of the temporary impacts will occur on land categorized as cultivated cropland, and seven percent of the impacts will occur on land categorized as grassland/herbaceous, with the remaining temporary impacts occurring on other land cover types. Impacts related to construction workspaces at turbine sites and access roads, the temporary batch plant, installation of underground collection and communication lines, and use of crane paths and laydown yards will be temporary and will be restored following completion of construction. Temporarily disturbed areas will be reclaimed, fertilized, and reseeded according to NRCS recommendations, unless otherwise specified by the landowner and approved by the Commission.

Impacts from turbines, access roads, the O&M Facility, Project substation, MET and LiDAR, and ADLS tower will convert existing land uses to a renewable energy source for the life of the Project. In total, the Project will impact approximately 111.4 acres of land during the life of the Project. Approximately 93 percent of this permanent impact will occur on land categorized as cultivated cropland, four percent will occur on land categorized as grassland/herbaceous, and the remaining permanent impacts will occur on other land cover types. Homestead Wind has collocated linear facilities (access roads, crane paths, and collection lines) to the extent practicable. Homestead Wind has also prioritized siting linear facilities along field edges and parcel lines and with landowner input. In some cases, the linear facilities have a longer distance to maximize collocation and traverse previously disturbed areas.

Homestead Wind does not expect that conversion of 111.4 acres of land to a renewable energy source will impact broader existing land use patterns. Operation of the Project would not preclude use of the land in the Project Area for crops, grazing, and other agricultural uses. The Project would not conflict with the existing development plans of state, local, or private entities within the Project Area as the Project generally avoids developed areas. Lease payments will be paid to landowners for placement of Project facilities to offset loss of income from impacts to land used for agriculture during the life of the Project.

6.2.2.2 Land Use

There are no BLM-managed lands or grazing allotments, USFWS WPAs, USFWS NWRs, or USFWS grassland easements within the Project Area; accordingly, no impacts are anticipated.

Additionally, no Project facilities are located on parcels with USFWS wetland easements, and therefore no impacts are anticipated. To-date, no CRP-enrolled parcels have been identified in the Project Area and no impacts are anticipated; however, if identified in further coordination with landowners, Homestead Wind will coordinate with the landowners and the NRCS to determine appropriate reclamation programs for temporarily disturbed land or offset payment requirements for any land that is permanently impacted by the Project.

There are no NDGFD WMAs or PLOTS parcels located within the Project Area; therefore, no impacts are anticipated.

Two NDDTL surface trust parcels will host Project facilities. Homestead Wind is currently working through the NDDTL right-of-way process to obtain an agreement to site facilities on these parcels in addition to two additional parcels within the Project Area that will not have facilities. NDDTL staff have completed onsite reviews for tract project participation and for proposed infrastructure locations. NDDTL provided a letter on December 10, 2025, that outlines the parcels included for participation and/or infrastructure, confirmation of Homestead Wind's coordination, and maps of proposed infrastructure locations reviewed onsite (**Appendix D.2 – Agency Correspondence**). Based on coordination with NDDTL, Homestead Wind understands the agreements cannot be finalized until after the Project concludes the Commission's Certificate process.

6.2.2.3 Zoning

As noted above, Homestead Wind received its Conditional Use Permit for a wind energy conversion system and associated variances in January 2026 (**Appendix B – Conditional Use Permit Approval Letter**). Homestead Wind has designed the Project to comply with the applicable Williams County permitting requirements, unless a variance was granted by Williams County.

6.3 Public Services

The following sections describe existing public services in the Study Area and Project Area, potential impacts, and proposed avoidance/minimization measures.

6.3.1 Existing Conditions

Data identifying public services and infrastructure in the Project Area, including transportation ROWs, known transmission lines, and telecommunication facilities, were analyzed to assess potential impacts. No missile silos were identified within the Project Area or Study Area. Specific categories of public infrastructure are discussed below. **Figure 8: Infrastructure** depicts existing public infrastructure in the Study and Project Areas.

6.3.1.1 Local Services

The Project is located in rural northwestern North Dakota. A network of roads and utility infrastructure provides access, electricity, water supply, and telephone service to rural residences, farmsteads, small industry, and unincorporated areas. The Project Area is served by the Grenora Ambulance District and Grenora Rural Fire District #6.

6.3.1.2 Electrical Services

Electrical service in the Study Area is provided by Mountrail-Williams Electric Cooperative, Basin Electric Power Cooperative, and the MDU Resources Group, Inc. Transmission infrastructure

includes overhead electrical distribution and transmission lines. Additionally, small underground and overhead distribution lines are present going to farmsteads and oil production facilities. The Mountrail-Williams Electric Cooperative Strandahl substation is located within the Project Area.

6.3.1.3 Roads

The Study Area does not intersect any major roadways; the nearest state highway is Highway 50 located approximately four miles north of the Study Area. In addition, U.S. Highway 85 is located approximately eight miles east of the Study Area. Roadways within the Study Area include gravel township roads, paved or well-maintained gravel county roads, and two-track trails used for agricultural and oil field purposes.

NDDOT traffic counts have not been conducted for roads within the Study Area but have been completed for State Highway 50 and U.S. Highway 85. In 2024, the average annual daily traffic volume was 748 for daily traffic and 226 for truck traffic on State Highway 50 and 2,559 for daily traffic and 1,159 for truck traffic on U.S Highway 85 (the portions of these roads closest to the Study Area; NDDOT, 2024). On the roadways in the Study Area, traffic results from oil and gas exploration and production, agricultural purposes, and rural residence access.

6.3.1.4 Railroads

There are no railroads in the Study or Project Areas.

6.3.1.5 Water Supply

Rural water is supplied to the Study Area by the Northwest Rural Water District. It is common for rural residences in the area to utilize private wells for alternative uses, such as agriculture. According to North Dakota Department of Water Resources (NDDWR) data, there are 33 water wells (domestic/stock/irrigation/monitoring/observational) in the Study Area; of these, 11 (domestic/stock) are within the Project Area (NDDWR, 2025). In addition, and as further discussed in Section 6.11, there are no sole source aquifers or shallow glacial drift aquifers within the Study Area.

6.3.1.6 Telephone, Microwave, Radio, and Television Communications

Homestead Wind contracted with Comsearch to conduct telecommunications studies on microwave beam paths, television reception, land mobile and emergency services, amplitude modulation/frequency modulation (AM/FM) radio towers, and Federal Communications Commission (FCC)-licensed communication towers (**Appendix E – Telecommunication Reports**).

Based on the Microwave Study, there are no microwave beam paths within the Project Area and vicinity.

An assessment of television channels that serve the Project Area was conducted, as summarized in the Off-air Television Report. As identified in the report, there are 25 off-air television stations currently licensed and operating within 150 kilometers (approximately 93 miles) of proposed turbine locations; television stations at a distance of 150 kilometers or less are the most likely to provide off-air coverage to the Project Area and neighboring communities. Of these 25 stations, 22 are low-power stations or translators, which receive signals from distant broadcasters and retransmit the signal to a local audience.

As noted in the Land Mobile and Emergency Services Report, no FCC-licensed land mobile or public safety transmitting stations/towers in the Project Area.

As noted in the AM and FM Radio Report, there are no AM or FM towers within the Project Area. The closest AM radio tower is located approximately 20 kilometers (12.4 miles) southeast of the Project Area, and the closest FM tower is located approximately 25 kilometers (15.5 miles) south of the Project Area.

6.3.2 Public Services Impacts and Avoidance/Minimization Measures

The following subsections discuss potential impacts and proposed avoidance/minimization measures.

6.3.2.1 Local Services

Impacts to local services in and around the Project Area are not anticipated.

Construction and operation of the Project is not expected to impact the availability of emergency services. If emergency services are required during construction or operation of the Project, the nearby emergency services infrastructure (e.g., law enforcement, fire departments, etc.) is suitable to address Project-related emergencies without negatively impacting the availability of these services for the local populace.

Homestead Wind will coordinate with emergency services providers to determine appropriate safety precautions and standards, and develop an Emergency Response Plan to implement these precautions and standards. If emergency services are required during construction or operation of the Project, the law enforcement, fire departments, ambulance services, and hospitals near the Project Area would be adequate to address Project-related emergency service needs without negatively impacting the availability of these services for the local populace.

Turbines will be clearly numbered for identification and emergency response, and Homestead Wind will provide a map identifying turbine locations and numbers to local emergency response coordinators and Williams County.

6.3.2.2 Electrical Services

The Project will help meet regional demand for electricity, and as a result the Project is anticipated to have a positive effect on the electrical services in the region. Homestead Wind will utilize North Dakota One Call prior to construction to identify existing utilities and will coordinate with facility owners to minimize potential impacts to existing infrastructure. Homestead Wind anticipates that electrical services for routine operations will be provided by a local utility such as Mountrail Williams Electric Cooperative.

6.3.2.3 Roads

Existing roadways within the Project Area will be utilized to the extent feasible; however, construction of new access roads will be required to provide access to the proposed turbine locations. Newly constructed permanent access roads will be approximately 20 feet wide. Access roads will be constructed in locations that minimize impacts to the environment and existing land uses and will support the size and weight of maintenance vehicles. Following construction, the temporarily affected areas will be restored to pre-constructions conditions, to the extent practicable.

During the construction phase, temporary impacts are anticipated on some public roads. Roads will be used to transport equipment to and from the Project Area and between Project facilities. Construction traffic will use the existing county, state, and federal roadway system to access the Project Area and deliver construction materials and personnel. Truck access near the Project Area is generally served by U.S. Highway 85 approximately eight miles east of the Project Area. Specific additional truck routes will be dictated by the location required for delivery. Exact haul routes will be determined closer to construction and in coordination with local roadway authorities, as appropriate. Construction activities will temporarily increase the amount of traffic using local roadways, but are not anticipated to result in adverse traffic impacts.

Homestead Wind's road use is expected to have a minimal effect on existing road infrastructure and will comply with all applicable federal, state, and local requirements. Haul road permits will be acquired from townships, Williams County and NDDOT, as necessary. Homestead Wind is in the process of finalizing a Road Use and Maintenance Agreement (RUMA) with Williams County and will enter into a RUMA with the townships, as needed. Homestead Wind will work with the road authorities to develop construction traffic plans and follow recommended avoidance/minimization measures.

Following completion of construction, affected roadways will be repaired or restored to at least equal to the condition prior to construction of the Project.

After construction is complete, traffic impacts during the operations phase of the Project will be minimal. A small maintenance crew driving through the area in pickup trucks on a regular basis will monitor and maintain the wind turbines as needed. There would be a slight increase in traffic for occasional turbine and substation repair, but traffic function will not be impacted as a result.

6.3.2.4 Railroads

There are no railroads within the Project Area; as such, no impacts are anticipated and no mitigation is proposed.

6.3.2.5 Water Supply

Water use during construction will provide dust control and water for concrete mixes. One temporary batch plant may be needed to supply concrete for construction of the Project. The batch plant and water use for dust control may be able to use rural water service but is more likely to require well water.

The O&M Facility will likely require a new private well water supply. Water usage during the operating period will be similar to household volume; less than five gallons per minute. Homestead Wind will coordinate with the Northwest Rural Water District with respect to use of a potable water supply, as necessary. All applicable permits will be obtained for installation of a water well for the O&M Facility. Operation of the Project will not require water appropriations beyond those provided at the O&M Facility. The Project will not require the appropriation of surface water or permanent dewatering and dewatering is not anticipated during construction.

Project facilities have been sited to avoid water wells. The water supply for local residents and nearby communities is not anticipated to be affected by the Project. Therefore, mitigation measures for impacts to the water supply are not required.

6.3.2.6 Telephone, Microwave, Radio, and Television Communications

Homestead Wind will coordinate with utility companies to determine utility locations and will comply with North Dakota One-Call requirements.

There are no microwave beam paths or towers in the Project Area and vicinity and, as such, no impacts are anticipated.

Construction of wind turbines has the potential to impact television reception to residences as a result of an obstruction in the line of sight between the television station antennas and the antennas at residences (**Appendix E – Telecommunications Reports**). However, modern digital television receivers have undergone significant improvements to mitigate the effects of signal scattering. As such, television reception at residences relying on cable or satellite television service will not be impacted by construction or operation of the Project. If residences that rely on antennas experience signal disruption, Homestead Wind will coordinate with the residence to mitigate the disruption.

Impacts to land mobile and emergency services are not anticipated (**Appendix E – Telecommunications Reports**). Turbines are not sited within 77.5 meters (254 feet) of a land mobile tower (the closest proposed turbine is approximately 2.71 kilometers (1.68 miles)); accordingly, impacts are not anticipated. Additionally, the nearby land mobile services used for public safety and emergency response (the E-911 communication system) are typically unaffected by the presence of wind turbines; these systems operate on a reliable network with multiple transmitter stations and a not line-of-sight environment, and the frequencies of operation for E-911 services have characteristics that allow the signal to propagate through wind turbines. As such, the Project is not anticipated to interfere with land mobile and emergency services.

The AM and FM Radio Report identified two AM stations within 30 kilometers (18.6 miles) of the Project – nearly 20 kilometers (12.4 miles) to the south. Project turbines are sited outside the 3-kilometer (1.9 mile) exclusion distance for which interference can occur (the closest turbine to an AM tower is 20-kilometers (12.4 miles), and, therefore, will not impact coverage of local AM radio stations (**Appendix E – Telecommunications Reports**). Coverage of FM stations is generally not sensitive to interference due to wind turbines, especially when turbines are located in the far field region of radiating antenna. At nearly 25 kilometers (15.5 miles) from the nearest FM station, turbines are sited adequately to avoid interference (**Appendix E – Telecommunications Reports**). Accordingly, no impacts to AM or FM radio are anticipated.

Construction and operation of the Project are also not expected to impact landline phone service.

In summary, Homestead Wind has sited the Project and its turbines to avoid interference with telecommunications systems.

6.4 Human Health and Safety

The following sections describe existing conditions, potential impacts, and proposed avoidance/minimization measures related to human health and safety.

6.4.1 Existing Conditions

6.4.1.1 Air Traffic

The Federal Aviation Administration (FAA) regulates federal airspace. The FAA conducts aeronautical studies to determine whether a structure over 200 feet tall (including turbines) may

be a hazard to air navigation and, if no issues are identified, issues a Determination of No Hazard (DNH). Part of the FAA's study process includes coordination with other potentially interested federal agencies, including the Department of Defense (DoD) who evaluates whether a structure may pose a risk to military airspace or military radar.

There are no public airports in the Project Area. The closest public airport to the Project Area is the Williston Basin International Airport, located approximately six miles southeast of the Study Area or approximately 7.2 miles southeast of the Project Area. The Williston Basin International Airport serves a variety of general aviation users and has two runways and a 110,000-square-foot terminal building. There is one private landing strip within the Project Area (Hought Airstrip). This is no military airspace within the Project Area. The closest military radar is the Watford City Air Route Surveillance Rader, which is located approximately 40 miles southeast of the Project Area.

6.4.1.2 Electromagnetic Fields

Electromagnetic fields (EMF) are electric and magnetic fields that are present around any electrical device. Electric fields result from the voltage or electrical charges, and magnetic fields result from the flow of electricity or current that passes through substation transformers, transmission lines, power collection (feeder) lines, house wiring, and electrical appliances. Electric field intensity is associated with the voltage of the line, and magnetic field intensity is related to the current flow through the conductors (wire). EMF can occur indoors and outdoors. No discernible health impacts result from EMF associated with power lines (NIEHS, 2002). The general consensus is that electric fields pose no health risk to humans (New Zealand Ministry of Health, 2013).

The sources of EMF for the Project will be electrical collection lines, the Project substation, and wind turbines. EMF from electrical collection lines, transmission lines, and transformers dissipates rapidly with distance from the source. Generally speaking, higher-voltage electrical lines produce higher levels of EMF at the source before dissipating with distance. There is no federal standard for transmission line electric fields. No current North Dakota regulations pertain to magnetic field exposure.

6.4.1.3 Hazardous Materials/Hazardous Waste

The land within the Project Area is rural and used for agriculture. Potential hazardous materials associated with agricultural activities include petroleum products (fuel and lubricants), pesticides, and herbicides. Older farmsteads may also have lead-based paints, asbestos shingles, and polychlorinated biphenyls in transformers. Trash and farm equipment dumps are common in rural settings. Potential hazardous materials associated with oil and gas wells can include, but are not limited to, releases of petroleum products and chemicals, which may potentially have adverse effects to human health or the environment.

Homestead Wind reviewed the following: U.S. Environmental Protection Agency's (USEPA) Facility Registry Service (FRS) to identify sites that are listed on the Comprehensive Environmental Response, Compensation, and Liability Information System (also known as Superfund sites); Resource Conservation and Recovery Act (RCRA) Treatment, Storage, and Disposal; RCRA hazardous waste generators; the Assessment, Cleanup, and Redevelopment Exchange System; and the Leaking Underground Storage Tank—American Recovery and Reinvestment Act database (USEPA, 2026). Homestead Wind also reviewed the North Dakota Department of Environmental Quality (NDDEQ) Underground Storage Tank (UST) Program database to identify UST or leaking USTs (LUSTs) in the Project Area (USEPA, 2025).

Table 6.4-1 presents the FRS Interests that were identified within the Study and Project Areas as a result of this review. No Superfund sites were identified within the Study or Project Areas.

Table 6.4-1
U.S. Environmental Protection Agency (USEPA) Facility Registry Service (FRS) Interests in the Study and Project Areas

USEPA FRS Interest Category	Study Area	Project Area
Department of Homeland Security – Chemical Security Assessment Tool Reporter	-	-
Enforcement/Compliance Activity	1	-
Air Minor	6	2
Air Major	-	-
Risk Management Plan Reporter	-	-
Small-quantity Hazardous Materials Generator	-	-
State Master	-	-
Tier 2 Hazardous Materials Reporter	-	-
Toxic Substances Control Act Reporting	-	-
Not Currently Classified in any Hazardous Waste Universe	-	-
Total	**7**	**2**

Source: USEPA, 2026

Most of the FRS interests that were identified are related to oil and gas production facilities in the Study and Projects Areas (e.g., gas plants, compressor stations). Other facilities were identified in the FRS records that are not related to oil and gas production such as the Hought Airstrip and Nick's Landing[9].

Homestead Wind reviewed the USEPA's UST finder to identify USTs in the Project Area (USEPA, 2025). Review of the USEPA UST finder revealed no USTs in the Project Area.

In addition to the research described above, an ASTM-conforming Phase I Environmental Site Assessment (Phase I ESA) will be conducted for the Project Area. Homestead Wind will avoid siting facilities within recognized environmental conditions (RECs) identified in the Phase I ESA.

6.4.1.4 Security

The Study Area and Project Area are in generally rural areas. The Project Area is located approximately seven miles southeast of Grenora and 13 miles northwest of Williston; no cities or towns are located with the boundaries of the Study Area or Project Area.

6.4.2 Human Health and Safety Impacts and Avoidance/Minimization Measures

6.4.2.1 Air Traffic

Homestead Wind has coordinated with the FAA, DoD, North Dakota Aeronautics Commission (Aeronautics Commission), and Williston Basin International Airport regarding the Project.

[9] Hought Airstrip is the private landing strip referenced in Section 6.4.1.1; Nick's Landing is an inactive former airstrip on a participating property for which Homestead Wind has confirmed has not been used since the early 90s. The landowner confirmed the former hanger is used to stage farm equipment during spring planting and fall harvest.

Specifically, Homestead Wind provided electronic notice for all turbine locations to the FAA through the FAA's online Obstruction Evaluation Airport Airspace Analysis (OEAAA) portal on September 16, 2025. Homestead Wind provided similar notice to the FAA for the permanent MET and ADLS on December 1, 2025. On January 21, 2026, DoD staff responsible for North American Aerospace Defense Command (NORAD) radar installations (including the Watford City radar) requested additional Project information. DoD staff subsequently requested Homestead Wind make a voluntary mitigation payment to offset the cost of any potential measures undertaken by DoD in the unlikely event of adverse potential impacts from the Project. Homestead Wind, through its consultant, agreed to such a payment and the parties are working on a formal mitigation agreement that will memorialize this payment. Historically, once a project and the DoD sign a mitigation agreement, the DoD indicates to the FAA, through the OEAAA portal, that DoD has no objection to the structures and FAA completes its evaluation of the proposed structures.

The FAA publishes Advisory Circulars that define the standards for marking and lighting structures to promote aviation safety. The FAA provides guidelines to mark and light wind farms. The wind turbines will be marked and lighted in accordance with FAA requirements. The permanent MET will also be marked and lighted as specified by the FAA. Additionally, the Project's permanent MET will comply with applicable State marking requirements (NDCC Chapter 2-05). The Project will comply with the light-mitigating technology system requirements set forth in NDCC Section 49-22-16.4. Subject to FAA approval, Homestead Wind plans to use an ADLS for the Project. ADLS is a sensor-based system designed to detect aircraft as they approach an obstruction or group of obstructions. The system will automatically activate the appropriate obstruction lights until they are no longer needed by the aircraft (e.g., the aircraft clears the area). Homestead Wind submitted its request to utilize an ADLS on the Project to the FAA for review on December 1, 2025.

Homestead Wind has also coordinated with the Aeronautics Commission and Williston Basin International Airport regarding the Project. In correspondence dated August 19, 2025, the Aeronautics Commission concluded that the Project would not have any significant impacts on the airspace surrounding the airport and recommended that Homestead Wind contact the airport authority directly to share information about the Project. In a letter dated September 15, 2025, Homestead Wind provided information about the Project to the Williston Basin International Airport. The Williston Basin Airport Director provided a response on September 16, 2025, seeking confirmation that Homestead Wind will complete an FAA airspace study and obtain DNHs for each turbine. Homestead Wind responded on September 17, 2025, confirming that Homestead Wind filed the FAA Form 7460s with the FAA seeking DNHs for all turbine locations. Homestead Wind will continue coordinating with the Williston Basin International Airport, as needed.

Homestead Wind has coordinated with the landowner/pilot associated with the one private airstrip location within the Project Area and sited turbines to avoid obstruction to approach zones on either side of the airstrip; the owner of this airstrip has confirmed they have no concerns with the turbine layout.

6.4.2.2 Electromagnetic Fields

The Project facilities are not significant sources of EMF exposure. The electrical collection lines will be buried to a depth of at least 48 inches and generate levels of EMF comparable to those generated by household appliances. No impacts due to EMF are anticipated, and no mitigation specific to EMF is proposed.

6.4.2.3 Hazardous Materials / Hazardous Waste

Homestead Wind has sited turbines at least 500 feet from all existing and active above ground oil and gas wellhead and tank battery locations. Additionally, Homestead Wind is coordinating with oil and gas facility owners and/or operators in or near the Project Area. Homestead Wind used ground-penetrating radar to evaluate the presence of linear oil distribution lines in the vicinity of turbine locations. As a result of this work early in the design process, Homestead Wind shifted turbine locations to avoid these underground distribution lines. Homestead Wind will continue to coordinate with oil and gas companies in or near the Project Area to allow for the continued development of both the mineral and surface estates.

Homestead Wind does not anticipate that contaminated sites will be encountered within the Project Area during construction. All Project facilities will be sited to avoid RECs identified in the Phase I ESA. If contaminated sites are encountered during construction, Homestead Wind will contact the NDDEQ to determine appropriate next steps.

Homestead Wind will obtain coverage under a North Dakota Pollutant Discharge Elimination System (NDPDES) General Construction Permit for the Project, which will require Homestead Wind to develop a Storm Water Pollution Prevention Plan (SWPPP). Additionally, hazardous materials used for construction or operation of the Project will be stored according to applicable regulations. Homestead Wind will not install USTs for the Project. On-site storage of turbine petroleum products in the O&M Facility will be minimal, and these materials will be stored aboveground. If oil storage will exceed 1,320 gallons, Homestead Wind will prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan for the Project.

6.4.2.4 Security

Homestead Wind does not anticipate that construction and operation of the Project will impact the security of surrounding residents or communities. During operation of the Project, all facilities, including turbine access doors and the Project substation, will be locked and have appropriate warning signage. Additionally, a chain-link fence will be installed around the Project substation.

As discussed in Section 6.3, Homestead Wind will coordinate with emergency services providers to determine appropriate safety precautions and standards, and develop an Emergency Response Plan to implement these precautions and standards. Turbines will be clearly numbered for identification and emergency response, and Homestead Wind will provide a map identifying turbine locations and numbers to local emergency response coordinators and Williams County.

6.5 Sound Resources

The following sections describe the existing soundscape, potential impacts, and proposed avoidance/minimization measures.

6.5.1 Existing Conditions

The Project is located in a rural area in north-west North Dakota. Existing sounds within the Project Area are likely to include wind in foliage and ground cover, road traffic, birds, insects, farming machinery, and general farming or recreational activities. Sound levels in rural areas typically range from 30 to 40 decibels (dB) using the A-weighting scale (dBA) at night but can exceed these levels based on temporary activity occurring in localized areas.

6.5.2 Sound Impacts and Avoidance/Minimization

Sound is produced by wind turbines due to turbulence at the blade tips and trailing edge, from mechanical systems in the hub or nacelle (which radiates throughout the structure), and from transformers either within the nacelle or pad-mounted at the base of the turbine. However, the primary source of sound is the aerodynamic sound from the blades. Sound increases with wind speed until maximum blade rotational speed is reached, which usually occurs when wind speeds reach 8-10 m/s at the turbine hub. Even at the base of a wind turbine, two people can carry on a conversation in a normal speaking voice.

Commission rules require that wind turbines be sited such that sound levels within 100 feet of an inhabited residence or community building do not exceed 45 dBA unless a waiver is obtained from the owner of the inhabited residence or community building (see NDAC Section 69-06-08-01(4)). Williams County does not have sound level requirements for wind energy conversion facilities.

Homestead Wind conducted a sound level modeling analysis for the Project, including both turbine models under consideration as well as the transformers at the Project substation (**Appendix F – Sound Level Modeling Report**). The analysis was performed in accordance with the International Organization for Standardization (ISO) standard 9613-2, taking into account typical industry standards for modeling inputs and assumptions such as American National Standards Institute/American Clean Power (ANSI/ACP) 111-1. The turbine models have sound mitigation built into the turbine blades in the form of serrated trailing edges (Vestas turbines) and low-noise trailing edges (General Electric (GE) turbines). The analysis incorporated conservative assumptions, including:

- all 81 potential wind turbine locations would be operating, even though only up to 67 will be constructed for the Project;
- a +2 dB adjustment factor was applied to the sound power level, which means the turbines are modeled with sound power levels 2 dB higher than the manufacturer specification;
- the model assumes that all turbines are always operating at the maximum sound emission simultaneously; and
- the model assumes that all receptors are downwind from every turbine, which is not possible.

Based on this analysis, no occupied residences or community buildings will have sound levels above 45 dBA within 100 feet of the building, and therefore, the Project is designed to meet the Commission's sound level requirement.

6.6 Visual Resources

The following sections describe existing conditions, potential impacts, and proposed avoidance/minimization measures for the visual environment of the Study Area and Project Area, including the potential effects of shadow flicker.

6.6.1 Existing Conditions

6.6.1.1 Aesthetics

The topography of the Project Area is generally flat with elevations ranging from approximately 2,300 to 2,515 feet (701 to 766 m) above sea level. Elevations are highest in the west central portion of the Project Area. The landscape can be classified as rural open space.

Residences and farm buildings are scattered along rural county and township roads. Infrastructure such as highways, county/township roads, transmission lines, distribution lines, and oil and gas development are present on the landscape.

6.6.1.2 Shadow Flicker

Shadow flicker occurs when the rotating blades of a wind turbine are directly between an observer and the sun, causing alternating light and dark. This effect decreases and ultimately disappears with distance from the turbine, and is also eliminated by obstacles between the observer and the turbine, such as trees, buildings, or terrain. Shadow flicker is harmless to humans, though it may be considered by some to be an annoyance. No local, state, or federal guidelines exist that determine an acceptable threshold for shadow flicker. However, 30 hours of shadow flicker per year is a commonly cited target for wind projects.

6.6.2 Visual and Aesthetic Impacts and Avoidance/Minimization Measures

Visual and aesthetic impacts that would result from construction of the proposed Project, as well as proposed avoidance/minimization measures, are discussed below.

6.6.2.1 Aesthetics

Measuring the aesthetic value of a specific landscape is difficult and may vary based on an individual's personal values, experiences, or preferences. The degree of visual contrast will vary based on the viewpoint distance and location in relation to the Project.

During construction, visual impacts associated with the Project facilities would include the removal of existing vegetation, if any, and the exposure of bare soils, as well as earthwork and grading scars associated with heavy equipment tracks, trenching, and machinery and tool storage. These impacts are generally noticeable in close proximity to the work areas and are temporary in nature, as the areas would be restored following construction.

During operation, visual impacts associated with the Project include the presence of aboveground infrastructure such as wind turbines and associated facilities. Generally, turbines will be noticeable due to the flat topography and absence of tall vegetation, structures, or other landscape features. Visual impacts will vary depending on the viewer's proximity and orientation to the turbines (i.e., within the Project Area vs. outside the Project Area and the direction the viewer faces relative to wind turbines), obstructions such as tree lines, the viewer's duration in the Project Area (i.e., a resident vs. a car passing through the Project Area), and the viewer's personal preferences.

The FAA requires obstruction lighting or marking of structures more than 200 feet above ground level to provide safe air navigation; for wind turbines, this lighting is synchronized flashing of red lights. As described in Section 6.4.2.1, Homestead Wind will coordinate with the FAA on implementation of ADLS, subject to FAA approval, which is consistent with the Commission's light-mitigating technology requirements. Furthermore, Homestead Wind's layout complies with

the Commission's minimum setback of three times tip height between turbines and non-participating inhabited residences, thereby distancing turbines from non-participating residences.

Additionally, wind turbines will exhibit visual cohesion in the shape, color, and size of rotor blades, nacelles, and towers. Collection lines on the site will be buried. For ancillary buildings and other structures, low-profile structures will be chosen whenever possible to reduce their visibility. Turbine foundations and roads have been designed to minimize and balance cuts and fills.

6.6.2.2 Shadow Flicker

Receptors that experience shadow flicker will typically only experience it when the sun is low in the sky, and when certain meteorological and operational factors are present. If a receptor does experience shadow flicker, it most likely will be only during a few days per year from a given turbine, and for a total of only a fraction (typically less than one percent) of annual daylight hours.

No local, state, or federal requirements exist with respect to shadow flicker. However, Homestead Wind has designed the Project to comply with the industry standard of 30 hours per year or less of shadow flicker at non-participating and participating occupied residences. Homestead Wind conducted a shadow flicker analysis for the Project, including both turbine models under consideration (**Appendix G – Shadow Flicker Report**). Shadow flicker dissipates within ten rotor diameters of turbine locations, which is 1,630 meters for the larger turbine model. The analysis was completed for all occupied residences within one mile of the Project Area (which includes all occupied residences within the ten-rotor diameter distance from turbine locations). The analysis included conservative assumptions, including:

- all 81 potential wind turbine locations would be operating, even though only up to 67 will be constructed for the Project;
- the model reports total shadow flicker results at a receptor (occupied residence) regardless of the presence or orientation of windows at that particular residence (a receptor is modeled as a "greenhouse");
- the model does not account for existing obstacles or screening around a particular residence (i.e., existing buildings and trees); and
- the model assumes turbine rotors are continuously in motion.

Based on the analysis, no residences, participating or non-participating, are modeled to receive more than 30 hours of shadow flicker per year.

The model calculates the maximum number of hours per year during which a given receptor could realistically expect to be exposed to shadow flicker from nearby wind turbines. The maximum shadow flicker (hours per year) is less than 30 hours for participating residences and less than 21 hours for non-participating residences (both for the Vestas V163 turbine model). Additionally, 11 and 13 of the 18 non-participating residences modeled have zero hours of modeled shadow flicker, for the Vestas V163 and GE 154, respectively. Accordingly, the Project will comply with Homestead Wind's voluntary commitment of 30 hours per year or less of shadow flicker at all occupied residences.

6.7 Archaeological and Architectural Resources

The Project has followed North Dakota guidelines for cultural (archaeological and architectural) assessment per the North Dakota State Historic Preservation Office (SHPO) and the State Historical Society of North Dakota (SHSND). Homestead Wind met with the SHSND in July 2025 to introduce the Project and to discuss surveys for the Project. In addition, Homestead Wind received a response from SHSND to its Project introduction letter on August 13, 2025. In its letter, and consistent with the July 2025 meeting, SHSND recommended a Class I (literature search) for the Project, a Class II (reconnaissance) survey by a permitted architectural historian for standing buildings and structures over 45 years old within two-miles of individual turbine locations, and a Class III intensive archaeological survey of direct impact areas (i.e., proposed facilities).

Homestead Wind retained Tetra Tech to conduct the background literature review (Class I) and field surveys (Class II and III) recommended by the SHSND. Homestead Wind submitted batches of archaeology and architectural site forms to the SHSND in November and December for their review and comment, and submitted the survey reports to SHSND in February 2026. Homestead Wind will continue to coordinate with the SHSND regarding the survey results, as needed.

The following sections describe existing known archaeological and architectural resources, potential impacts, and proposed avoidance/minimization measures.

6.7.1 Existing Conditions

6.7.1.1 Archaeological Resources

Tetra Tech conducted a Class I literature search of a larger project area and one-mile buffer in April of 2024. The review included geospatial site data from the SHSND supplemented by an in-person records review. Tetra Tech also reviewed the National Register of Historic Places (NRHP) and North Dakota State Register of Historic Places lists. To assess potential effects to archaeological resources, the direct area of potential effect (direct APE) is defined as the approximately 4,379 acres where ground disturbing activity may occur for the construction of the Project. The Class I literature search area was later refined (reduced) to include the direct APE plus a one-mile buffer (Research Area). Twenty-four previously recorded archaeological resources (11 sites, four site leads, nine isolated finds), one architectural resource, and one unrecorded cemetery are located within the Research Area. Of the previously recorded resources identified, one is protected by burial laws (cemetery), six are unevaluated for NRHP listing, and 17 are not eligible for NRHP listing. The protected cemetery and five of the six unevaluated sites are located outside of the direct APE; one unevaluated site is located within the direct APE and was revisited during Class III surveys and is discussed below.

Tetra Tech conducted a Class III intensive Cultural Resources Pedestrian Inventory (Class III survey) to provide the necessary information for the SHSND review by confirming the presence or absence of archaeological sites within the direct APE. The Class III survey area was conducted between May and October 2025 and covered approximately 26,950 acres including the approximately 4,379-acre direct APE (Class III Survey Area). The Class III survey resulted in the identification of 42 new archaeological resources (17 sites and 25 isolated finds) and revisited seven previously recorded resources (six sites and one site lead) within the Class III Survey Area; of these, fourteen (six sites, seven isolated finds, and one site lead) are located within the direct APE. Of the 14 resources located within the direct APE, all are recommended as not eligible for the NRHP, and no further management is recommended for these resources.

Outside of the direct APE, one newly recorded site is recommended as eligible for the NRHP, and one site is unevaluated for NRHP listing. These sites are outside of the direct APE and therefore are avoided by the Project layout.

Homestead Wind submitted batches of archaeology site forms to the SHSND in November and December 2025 for their review and comment, and submitted the survey report to SHSND in February 2026. Homestead Wind will continue to coordinate with the SHSND regarding the survey results, as needed.

Tetra Tech's archaeological survey report, which includes detailed information on the methodologies and results of the Class I and Class III archaeological surveys, is provided in **Appendix H – Cultural Resources Survey Reports**.

6.7.1.2 Architectural Resources

The Class I literature review outlined above in Section 6.7.1.1 identified one previously recorded architectural resource. In September 2025, Tetra Tech conducted an additional desktop review of the Project's visual APE (a two-mile buffer surrounding the proposed turbine locations) by reviewing historic maps, aerial imagery, and the SHSND website to identify potential historic architectural resources; four additional previously recorded architectural resource sites were identified. In total, five previously recorded architectural resources were identified within the Project's visual APE; four were unevaluated for NRHP listing, and one was not eligible for NRHP listed. Additionally, three cemeteries are located within the visual APE, but none are located within the direct APE (defined in Section 6.7.1.1 above).

Tetra Tech conducted a Class II reconnaissance survey for architectural resources within the visual APE in September 2025. The survey methodology conformed to the SHSND guidelines and included a review of the Project's visual APE, which consists of a two-mile buffer surrounding the proposed turbine locations, as required by SHSND guidelines (SHSND, 2020). During the Class II survey conducted for the Project, 58 newly identified properties and five previously recorded properties with buildings or structures over 45 years of age were visited. Of the 63 properties, 13 (which includes the five previously recorded properties and eight newly documented properties) were determined in the field to have structures that may be eligible for listing on the NRHP or necessitated a re-recording; site forms were completed for these properties. Following post-field research, nine of these properties were recommended to have at least one building or structure eligible or potentially eligible for listing on the NRHP. Three properties that are recommended eligible or potentially eligible for listing on the NRHP have resources within the visual APE that could be adversely impacted by the Project. Homestead Wind submitted batches of architectural site forms to the SHSND in November and December 2025 for their review and comment, and submitted the survey report to SHSND in February 2026 and will continue to coordinate with the SHSND regarding the survey results, as needed.

Tetra Tech's architectural survey report, which includes detailed information on the methodologies and results of the Class II survey, is provided in **Appendix H.1 – Class II Architectural Report**.

6.7.2 Archaeological and Architectural Resources Impacts and Avoidance/Minimization Measures

Ground-disturbing activities during construction of the Project have the potential to impact known or unknown cultural resources. Because the Project involves the construction and operation of wind turbines, if historic architectural resources are present in or adjacent to the Project Area, the presence of wind turbines could affect the visual setting of these resources.

Homestead Wind has sited the Project facilities to avoid NRHP listed, eligible, potentially eligible, and unevaluated archaeological sites identified in the Class I literature review and the Class III survey. Therefore, no impacts to archaeological resources are anticipated. Class I and III archaeological survey work for the Project is complete. Homestead Wind submitted the Class I and Class III archaeological report to SHSND in February 2026 and will continue to coordinate with the SHSND regarding the survey results, as needed. Homestead Wind will provide the Commission with the SHSND's acceptance letter once it is received.

As noted above in Section 6.7.1.2, three architectural properties that are recommended potentially eligible for listing on the NRHP have resources that could be adversely impacted by Project construction. Homestead Wind will coordinate with the SHSND on proposed mitigation for visual impacts to architectural properties, as needed. Class II architectural survey work for the Project is complete. Homestead Wind submitted the Class I and Class II architectural reports to SHSND in February 2026 and will continue to coordinate with the SHSND regarding the survey results, as needed. Homestead Wind will provide the Commission with the SHSND's acceptance letter once it is received.

Homestead Wind has prepared an Unanticipated Discoveries Plan (UDP) for the Project. The UDP details a process for prompt communication and action regarding the discovery of previously unknown archaeological resources or human remains, should they be encountered during construction. The UDP is an appendix in the Class III report (**Appendix H.2**) that was submitted to the SHSND for review in February 2026.

6.8 Recreational Resources

The following sections describe existing recreational resources in the Study Area and Project Area, potential impacts, and proposed avoidance/minimization measures.

6.8.1 Existing Conditions

No designated recreation areas, public or private parks or designated trails are located in the Study Area. The nearest recreational opportunity is Blacktail Dam Campground, located approximately two miles east of the Study Area or three miles east of the Project Area at the nearest point.

6.8.2 Recreational Resources Impacts and Avoidance/Minimization Measures

Because there are no designated recreation areas, public or private parks, or designated trails within the Project Area, no impacts are anticipated and no mitigation is proposed.

6.9 Effects on Land-Based Economies

The following sections describe existing conditions, potential impacts, and proposed avoidance/minimization measures.

6.9.1 Existing Conditions

The following sections describe existing agriculture and woodlands in the Study Area and Project Area.

6.9.1.1 Agriculture

According to the USDA's 2022 Census of Agriculture, there are 539 farms operating in Williams County with an average farm size of 2,067 acres (USDA, 2022). Crop sales account for a larger percentage of total market value of agricultural products sold annually compared to livestock, at $248.7 million vs. $18.3 million, respectively. Wheat and forage are the dominant agricultural crops by acreage in Williams County and cattle is the dominant livestock raised in Williams County. A discussion of prime farmland in the Study and Project Areas is presented in Section 6.10.

6.9.1.2 Woodlands

As noted in Table 6.2-1, areas classified as Woody Wetlands and Deciduous Forest in the NLCD data are present within the Study and Project Areas. Less than 0.1 percent of the total Study and Project Areas fall into this category. Trees and wooded areas within the Study and Project Areas consist of wooded draws and planted hardwood shelterbelts that provide wind protection around farmsteads or between cropland fields. Trees are sparse within the Project Area and are therefore not utilized for economic activities such as logging or timber trading. Because shelterbelts are narrow, they often are not identified in NLCD data. Therefore, Homestead Wind conducted a detailed desktop analysis using high resolution aerial imagery to identify these features. Based on this detailed assessment, there are approximately 93 acres of woodlands in the Project Area (**Figure 4: Avoidance Areas**).

6.9.2 Land Based Economies Impacts and Avoidance/Minimization Measures

6.9.2.1 Agriculture

Homestead Wind designed the Project and will continue to work with landowners to avoid and/or minimize impacts to agricultural land. Construction of the Project could cause minimal, temporary impacts to agricultural land from soil compaction and rutting, accelerated soil erosion, crop damage, temporary disruption to normal farming activities, and introduction of noxious weeds to the soil surface. However, Homestead Wind will repair and restore temporary impacts and will not significantly impact use of land for agricultural production. As demonstrated by other wind energy projects in North Dakota, agricultural practices continue during construction and operations.

Although up to approximately 1,415.2 acres of cultivated cropland and 116.5 acres of grassland/herbaceous would be temporarily impacted during construction, these areas will be available for agricultural use following construction. Non-tilled land temporarily impacted by construction will be restored to pre-construction conditions to the extent practicable and reseeded in accordance with NRCS recommendations, unless otherwise specified by the landowner and approved by the Commission. Depending on the timing of construction completion, tilled areas may be reseeded with a cover crop until the next growing season.

The Project will remove from production 107.9 acres of agricultural land (cultivated cropland and grassland/herbaceous that may be used for grazing) for the life of the Project. However, during operations, landowners may continue to plant crops and graze livestock near and up to the turbine pads and access roads after these facilities are installed. Access roads are designed to minimize impacts to agricultural use beyond the footprint of the access road. For example, an access road is low-profile and typically located either at the field edge or sufficient distance from the field edge to allow agricultural equipment adequate room for operation (i.e., planting, maintaining, harvesting). This allows for continued farming in the area around the access road. Additionally, Homestead Wind reviewed the layout with each landowner to discuss siting concerns, particularly

related to agricultural activities. The Project substation, O&M facility, and ADLS tower would be fenced, but agricultural production would be allowed to continue beyond the fenced area.

The loss of agricultural land for operation of the Project will reduce the amount of land that can be cultivated in the Project Area; however, less than one percent of the Project Area will be converted to non-agricultural land use (i.e., wind turbines, access roads, Project substation, ADLS tower, MET and LiDAR, and O&M Facility). This represents minimal impact to agricultural land in the Project Area and will not significantly alter agricultural production in the Project Area or Williams County. Furthermore, the Project will allow landowners to diversify their operations with an additional, steady income source in the form of lease payments. This additional income would also be reflected as an increase to the county tax base.

6.9.2.2 Woodlands

Trees are sparsely located throughout the Project Area and Homestead Wind has designed the Project to minimize tree removal to the extent possible. Any impacts on trees and woodlands from the placement of wind turbines and associated facilities for the Project would be minor in nature considering only 93 acres of woodlands were identified within the Project Area, which represents less than 1 percent of the total Project Area. Homestead Wind will continue to evaluate options to avoid impacts to trees. Additionally, Homestead Wind will minimize temporary impacts to trees by utilizing irregular shaped workspaces around turbines (i.e., rectangular instead of circular) and bore collection lines under tree lines and woodlots to avoid impacts. If impacts to trees occur, Homestead Wind will follow the Commission's tree and shrub mitigation specifications. Homestead Wind requests the Commission authorize Homestead Wind to clear trees and shrubs in the Project Area up to 100 feet in up to eight (8) areas where it is necessary to collocate multiple facilities (e.g., access roads, crane paths, collection lines) and the workspace associated with each and/or in order to safely stage and list turbine components and blades.

6.10 Soil Resources

The following sections describe the existing soil conditions within the Study Area and Project Area, potential impacts, and proposed avoidance/minimization measures.

6.10.1 Existing Conditions

Soil characteristics within the Study Area and Project Area were assessed using the Soil Survey Geographic Database (SSURGO) database (Soil Survey Staff, 2024). The SSURGO database is a digital version of the original county soil surveys developed by NRCS for use with GIS. It provides the most detailed level of soils information for natural resource planning and management. Soil maps are linked in the SSURGO database to information about the component soils and their properties (NRCS, 2024).

There are 46 soil types found within the Study Area, 32 of which are within the Project Area. Due to the quantity of soil types, they are provided separately in **Appendix I – Soil Types**. The predominant soil types in the Project Area are Williams-Bowbells loams (59.3 percent) and Vida-Zahill loams (22.2 percent).

Prime farmland is defined as land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, and oilseed crops, and is also available for these uses (the land could be cropland, pasture, woodland, or other lands). Urbanized land and open water cannot be designated as prime farmland. Prime farmland typically contains few or no rocks, is permeable to water and air, is not excessively erodible or saturated with water for long periods

and is not subject to frequent or prolonged flooding during the growing season. Soils that do not meet the above criteria may be considered prime farmland if the limiting factor is mitigated (e.g., by draining or irrigating) (NRCS, 2024).

The NRCS also recognizes farmlands of statewide importance, which are defined as lands other than prime farmland that are used for production of specific high-value food and fiber crops (e.g., citrus, tree nuts, olives, fruits, and vegetables). Farmlands of statewide importance have the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Farmland of statewide importance is similar to prime farmland but with minor shortcomings such as greater slopes or less ability to store soil moisture. The methods for defining and listing farmland of statewide importance are determined by the appropriate State agencies, typically in association with local soil conservation districts or other local agencies. Approximately 879.2 acres of soils within the Project Area (3.5 percent) are classified as prime farmland (including areas that are classified as prime farmland if drained and prime farmland if irrigated); 15,412.9 acres (61.7 percent) are classified as farmland of state importance; and 8,701.9 acres (34.8 percent) are classified as not prime farmland.

6.10.2 Soil Resources Impacts and Avoidance/Minimization Measures

Soils will be impacted during the Project's construction stages. Surface disturbance caused by construction of the wind turbines and infrastructure improvements could result in soil surfaces becoming more prone to erosion and the use of heavy equipment could result in soil compaction. However, any such impacts to site soils will be localized and BMPs will be implemented to minimize these impacts. These BMPs may include the use of erosion and sediment control during and after construction, noxious weed control, segregating topsoil from subsurface materials, reseeding of disturbed areas, the use of construction equipment appropriately sized to the scope and scale of the Project, ensuring access road grades fit closely with the natural terrain, proper on-site disposal of soil cuttings from turbine foundation construction and maintaining proper drainage. Existing access roads will be used to the extent practicable to prevent further soil disturbance and fragmentation on the landscape. Additionally, all areas of temporary disturbance will be reclaimed with vegetation consistent with the surrounding vegetation types including a native seed mixture. Following construction, the temporarily disturbed areas outside of cropland will be reclaimed and reseeded with a seed mixture consistent with the surrounding vegetation and free of noxious weeds according to NRCS recommendations, unless otherwise specified by the landowner and approved by the Commission. To minimize the impacts of surface water runoff which could impact sediment reaching aquatic habitat, BMPs in accordance with a SWPPP will be implemented including use of silt fencing in areas under construction as needed to control erosion and storm water runoff. Surface flows would be directed away from cut-and-fill slopes and into ditches that discharge to natural drainages. All roads, turbine pads and trenched areas would be regularly inspected and maintained to minimize erosion. Additionally, Homestead Wind will obtain coverage under the NDPDES General Stormwater Construction Permit, which requires preparation of a SWPPP. In addition, if more than 1,320 gallons of oil storage occurs on-site during construction, the Project will complete and implement a SPCC Plan.

Less than one percent of the total land in the Project Area that could be considered prime farmland or farmland of statewide importance will be impacted for the life of the Project. As such, the acreage of prime farmland and farmland of statewide importance removed from use for the life of the Project will have a negligible impact on agricultural production.

6.11 Geologic and Groundwater Resources

The following sections describe existing geologic and groundwater resources, potential impacts, and proposed avoidance/minimization measures. **Figure 9: Geologic and Groundwater Resources** depicts the existing geologic and groundwater resources in the Study and Project Areas.

6.11.1 Existing Conditions

The Study Area is located in a region of North Dakota known as the Missouri Couteau, which marks the western edge of the glaciated land in North Dakota (NDGFD, 2025b). Wetlands are numerous on the eastern edge of the Coteau, decreasing toward the Missouri River and the Study Area. Surface geology within the Study Area is considered part of the Coleharber Formation which consists of glacial till approximately 100 feet thick with large pockets of cross bedded sands and gravels. As noted in Section 6.3.1.5, according to the publicly available Sole Source Aquifer GIS database and the North Dakota GIS Hydrography layer, there are no shallow glacial drift aquifers within the Study Area (NDDWR, 2025). In addition, no sole source aquifers occur within the Study Area. There are 33 water wells (domestic/stock/irrigation/monitoring/observational) in the Study Area; of these, 11 (domestic/stock) are within the Project Area (**Figure 9: Geologic and Groundwater Resources**) (NDDWR, 2025).

Existing oil and gas development infrastructure within the Project Area includes 26 oil and gas wells and 141 associated storage tanks.

In a letter dated July 14, 2025, Homestead Wind introduced the Project to the North Dakota Geological Survey (NDGS) and requested input regarding sensitive resources within the Project Area. In a response dated July 29, 2025, NDGS noted that it had completed a review of the Project against recently completed landslide mapping work and did not note any landslide areas or any other geologic concerns for the Project.

6.11.2 Geologic and Groundwater Impacts and Avoidance/Minimization Measures

Homestead Wind does not anticipate any impacts to bedrock during construction or operation of the Project as bedrock within the Project Area is at depths much greater than proposed foundation depths of up to 15 feet deep. Similarly, Homestead Wind does not expect any impacts to groundwater resources as there are no aquifers in the Project Area and the Project facilities have been designed to avoid water wells. Additionally, Homestead Wind has designed the Project to avoid impacts to domestic, stock, industrial, and observational water wells.

Water use during construction will provide dust control and water for concrete mixes. One temporary batch plant may be needed to supply concrete for construction of the Project. The batch plant may be able to use rural water service but is more likely to require well water. The water source will be determined prior to construction.

The O&M Facility will likely require a new private well water supply. Water usage during the operating period will be similar to household volume; less than five gallons per minute. Operation of the Project will not require the appropriation of surface water or permanent dewatering.

Homestead Wind has designed the Project to avoid impacts to the identified locations of the facilities into account so that no problems arise during construction or operations of the Project.

Homestead Wind used ground-penetrating radar to evaluate the presence of linear oil distribution lines in the vicinity of turbine locations. As a result of this work early in the design process, Homestead Wind sited turbine locations to avoid these underground distribution lines. Additionally, Homestead Wind has sited turbines at least 500 feet from all existing and active above ground oil and gas wellhead and tank battery locations on participating parcels. Homestead Wind will continue to coordinate with oil and gas facility owners and/or operators, as needed.

6.12 Surface Water and Floodplain Resources

The following sections describe existing surface water and floodplain resources in the Study Area and Project Area, potential impacts, and proposed avoidance/minimization measures. **Figure 10: Surface Waters and Wetlands**, depicts the existing water resources in the Study and Project Areas.

6.12.1 Existing Conditions

The Study Area occurs in the Missouri-Poplar and Lake Sakakawea Watershed Basins, which are located in the large prairie pothole region of North Dakota. The Study Area is located in three watersheds: the Medicine Lake-Lake Creek watershed in the northwest portion of the Study Area, the Lower Little Muddy River in the southern portion of the Study Area, and the Middle Little Muddy River in the eastern portion of the Study Area. These watersheds are within the Mixed-grass Prairie (Missouri Coteau) geological region. North Dakota's publicly available surface water data is presented in **Figure 10: Surface Waters and Wetlands**.

There are no Federal Emergency Management Agency (FEMA) flood hazard areas or floodplains within the Study Area. Correspondence received from the NDDWR on August 19, 2025, confirmed that the Project Area is not in an area identified or mapped as a FEMA National Flood Insurance Program floodplain.

6.12.2 Surface Water and Floodplain Resources Impacts and Avoidance / Minimization Measures

Project facilities have been designed to avoid or minimize impacts on surface water resources to the extent practicable. Wind turbines will be built on uplands to avoid surface water resources in the lower elevations to the extent practicable. Access roads have been designed to avoid crossing streams and other surface waters. Collection lines that cross streams will be bored to avoid temporary impacts, to the extent practicable. Crane paths will be matted and temporary in nature.

Construction of Project facilities (such as underground electrical collector lines, access roads, crane paths, turbine pads, Project substation, ADLS, and O&M Facility) will impact land and therefore could potentially impact surface water runoff within the Project Area. Ground-disturbing construction activities also have the potential to cause sedimentation. These impacts are expected to be minimal and would only occur during construction. These impacts will be avoided and/or minimized through use of BMPs. The Project will comply with USEPA regulations regarding storm water runoff, including the creation of a SWPPP. The SWPPP will address the construction-related, temporary measures and permanent restoration methods to slow storm water runoff and avoid sediment reaching streams and rivers. Homestead Wind will implement appropriate erosion and sediment control measures. Silt fencing will be utilized in areas under construction, as needed, to control erosion and storm water runoff. Surface flows will be directed away from cut-and-fill slopes and into ditches that discharge to natural drainages. All roads, pads, and trenched areas will be regularly inspected and maintained to minimize erosion.

Coverage under a Section 404 Clean Water Act (CWA) permit will be needed if discharge of dredge or fill material (temporarily or permanently) into waters of the United States (WOTUS) will occur. Homestead Wind anticipates that if there would be unavoidable impacts to U.S. Army Corps of Engineers (USACE) jurisdictional waters, these activities would be permitted under the Nationwide Permit program. Additionally, Homestead Wind will obtain coverage under the NDPDES General Stormwater Permit, which requires preparation of a SWPPP. In addition, if, during construction, more than 1,320 gallons of oil storage occurs on-site, the Project will complete and implement a SPCC Plan.

No impacts to FEMA-mapped floodplain areas are anticipated and therefore, no mitigation is proposed.

6.13 Wetlands

The following sections describe the existing wetlands within the Study Area and the Project Area, potential impacts, and proposed avoidance/minimization measures.

6.13.1 Existing Conditions

Wetlands are areas with hydric (wetland) soils, hydrophilic (water-loving) vegetation, and wetland hydrology (inundated or saturated much of the year). Wetland types include marshes, swamps, bogs, and fens. Wetlands vary widely due to differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors.

The Clean Water Act of 1972 (CWA; 33 U.S. Code § 1251 et seq.) establishes federal jurisdiction over “navigable waters,” defined in the CWA as “waters of the United States” or WOTUS. Generally, wetlands that have a significant nexus to a navigable water fall within the jurisdiction of the USACE, which administers Section 404 of the CWA. WOTUS may also include non-wetland features such as streams that have a significant nexus to a navigable water (refer to Section 6.12). However, both USACE-jurisdictional and non-jurisdictional wetlands have been considered in this analysis.

Wetlands were initially identified using the publicly available USFWS National Wetlands Inventory (NWI; **Figure 10: Surface Waters and Wetlands**). NWI data indicated the potential presence of up to 948 acres of wetlands within the Study Area and 324 acres of wetlands within the Project Area.

Field wetland delineations were then completed within the Project Area between April 29 – May 2, 2025, and September 17-19, 2025. Wetlands were delineated within a survey corridor that included any ground surface area that has the potential to be disturbed by any construction or installed activities associated with the Project. The field delineation identified 28.2 acres of wetlands within the survey corridors. Only four of the wetland features delineated appear to be potentially jurisdictional WOTUS, with an additional 11 features with an underdetermined jurisdictional status. The remaining wetland features appear to be isolated and lacking surface water connection to navigable waterways (**Appendix J – Wetland Delineation Report).**

6.13.2 Wetland Impacts and Avoidance/Minimization Measures

The Project has been designed to avoid permanent impacts to delineated wetlands and minimize temporary wetland impacts.

Temporary impacts to wetlands may occur from the use of temporarily widened access roads and crane paths and the installation of collection lines. Temporary impacts associated with the use of temporary access roads and crane paths will be minimized by the use of matting during construction or avoided to the extent practicable by revising temporary workspaces to go around wetlands. Where wetlands are present, Homestead Wind plans to install underground collection lines by boring beneath the wetland, thereby avoiding impacts, to the extent practicable. As noted above, if discharge of dredge or fill material into WOTUS will occur, Homestead Wind anticipates that these activities would be permitted under the Section 404 CWA Nationwide Permit program.

6.14 Vegetation Resources

The following sections describe existing vegetation, potential impacts to vegetation, and proposed avoidance/minimization measures.

6.14.1 Existing Conditions

As shown in Table 6.2-1, based on NLCD data, approximately 77.8 percent of the Study Area and 81 percent of the Project Area are cultivated crops, and grassland/herbaceous covers approximately 17.4 percent of the Study Area and 14.2 percent of the Project Area. The remaining vegetation types found in the Project Area (hay/pasture, wetlands, scrub/shrub, forest) cumulatively comprise approximately one percent of the Project Area.

NDCC Chapter 4.1-47 identifies 13 state noxious weeds that are enforced by all cities and counties in North Dakota (NDDA, 2025a). Cities and counties are also able to list additional noxious weeds for control within their jurisdiction. Williams County includes one additional noxious weed - hoary cress (*Lepidium draba*) (NDDA, 2025b). Table 6.14-1 includes a list of the state and county noxious weed species.

Table 6.14-1
State and County Noxious Weeds

Common Name	Scientific Name	Jurisdiction
Absinth wormwood	*Artemisia absinthium*	State
Canada thistle	*Cirsium arvense*	State
Dalmatian toadflax	*Linaria genistifolia*	State
Diffuse knapweed	*Centaurea diffusa*	State
Houndstongue	*Cynoglossum officinale*	State
Leafy spurge	*Euphorbia esula*	State
Musk thistle	*Carduus nutans*	State
Palmer amaranth	*Amaranthus palmeri*	State
Purple loosestrife	*Lythrum salicaria, Lythrum virgatum*	State
Russian knapweed	*Rhaponticum repens*	State
Saltcedar	*Tamarix* spp.	State
Spotted knapweed	*Centaurea maculosa*	State
Yellow toadflax	*Linaria vulgaris*	State
Hoary Cress	*Lepidium draba*	Williams

Source: (NDDA, 2025a) and (NDDA, 2025b)

6.14.2 Vegetation Resources Impacts and Avoidance/Minimization Measures

Homestead Wind has minimized impacts to vegetation to the extent practicable by utilizing existing roads, driveways, edge of field lines, or other previously disturbed areas for proposed facility access road locations to the extent possible. Homestead Wind has also collocated linear facilities (crane paths, collection lines, and access roads) as much as possible.

Vegetation will be removed from areas of permanent aboveground infrastructure footprints for the life of the Project (e.g., turbine pads, access roads, Project substation, O&M facility, ADLS tower, and permanent MET). With less than one percent of the current Project Area permanently converted for aboveground Project infrastructure, the Project will remove approximately 111.4 acres of vegetation for the life of the Project, the majority of which is cultivated cropland (approximately 103.3 acres). Construction of the Project will temporarily impact 1,532.7 acres of vegetation (See Table 6.2-3; all categories except developed). Following construction, the temporarily disturbed areas outside of cropland will be re-vegetated with a seed mixture consistent with the surrounding vegetation and free of noxious weeds, in coordination with the NRCS and landowners. Once re-vegetated, these areas will be available for their present use.

Homestead Wind has sited 79 of the 81 turbine locations on cultivated cropland, thereby minimizing impacts to grasslands. The two turbine locations that are not in cultivated cropland are on NDDTL surface tract parcels, for which the agency has expressed a desire to participate in the Project. Although grassland, the NDDTL tracts are located among cultivated cropland parcels, so are in a fragmented landscape. NDDTL notes “the proposed infrastructure as presently planned will allow for adequate preservation of grassland assets while allowing NDDTL to fulfil their constitutional fiduciary mandate.” (**Appendix D.2 – Agency Correspondence**).

Homestead Wind has developed and will implement a Noxious Weed Management Plan (**Appendix K – Noxious Weed Management and Control Plan**) that identifies and establishes the procedures to prevent the introduction and spread of noxious weeds during construction and ongoing operations. On October 14, 2025, Homestead Wind provided a draft Noxious Weed Management and Control Plan for the Project to the Williams County Weed Board Officer. The Weed Board Officer approved the plan on October 15, 2025 (see **Appendix D.2 – Agency Correspondence**).

6.15 Wildlife

Homestead Wind has conducted numerous wildlife and habitat studies to evaluate potential impacts. The wildlife surveys summarized in Table 6.15-1 below were conducted in coordination with NDGFD and USFWS and are consistent with the voluntary USFWS Land-Based Wind Energy Guidelines (WEGs; USFWS, 2012a) and Eagle Conservation Plan Guidance (ECPG; USFWS, 2013). The results of each study listed in Table 6.15-1 are summarized in the sections below.

Table 6.15-1
Summary of Wildlife Studies at Homestead Wind Project

Survey Type	Study Period	Company; Report Reference; Appendix
Eagle and Raptor Nest Survey	March 13, 2023 – April 24, 2023	Western EcoSystems Technology, Inc. (WEST); Shelly, K. and C. LeBeau 2024a; Appendix M.1
Sharp-tailed Grouse Lek Survey	March 27, 2023 – April 25, 2023	WEST; Shelly, K. and C. LeBeau 2024b; Appendix M.2
Avian Use Surveys	Year 1: February 2023 – January 2024	WEST; 2026a; Appendix M.3
	Year 2: October 2024 – September 2025	
Grassland Assessment	May 2024; May 2025	Midwest Natural Resources; 2026; Appendix M.4
Eagle and Raptor Nest Survey	February 21, 2025 – April 21, 2025	EEI; 2025; Appendix M.1
Sharp-tailed Grouse Lek Survey	March 16, 2025 – April 29, 2025	WEST; 2025a; Appendix M.2
Whooping Crane Desktop Habitat Assessment	September – October 2025	WEST; 2025b; Appendix M.5
Bat Acoustic Activity Survey	April 2025 − November 2025	WEST; 2026b; Appendix M.6
Northern Long-Eared Desktop Habitat Assessment	February 2026	Copperhead Environmental Consulting; 2026; Appendix M.7

As is further discussed in Section 9.0, Homestead Wind initiated coordination with the USFWS and NDGFD in April 2024 and has continued to coordinate with these agencies regarding wildlife and species habitat throughout Project development. Homestead Wind consulted with USFWS and NDGFD regarding survey selection, protocols, and associated results. In June 2025, Homestead Wind met with USFWS, NDGFD, and North Dakota Department of Agriculture (NDDA) to discuss additional survey results, how those results were incorporated into the layout, and proposed avoidance and minimization measures. On July 28, 2025, NDGFD provided a letter summarizing the Project's proposed avoidance and minimization measures and acknowledging Homestead Wind's commitment to avoiding sensitive habitats, such as unbroken grasslands, wetlands, and areas important to declining species, such as the sharp-tailed grouse leks. NDGFD noted Homestead Wind's proposed measures are important in siting development in a manner least impactful to wildlife (**Appendix D.2 – Agency Correspondence**). Homestead Wind will continue to coordinate with USFWS and NDGFD regarding the Project as needed.

Homestead Wind has prepared a Bird and Bat Conservation Strategy (BBCS) that summarizes the wildlife and habitat studies completed in coordination with the wildlife agencies and outlines specific measures Homestead Wind will implement during construction and operation to avoid and/or minimize potential impacts to avian and bat species (see **Appendix L – Bird and Bat Conservation Strategy**).

6.15.1 Existing Conditions

The following sections describe wildlife species identified during desktop and field studies as having the potential to occur in the Study Area.

6.15.1.1 Avian Species

The Study Area lies within a bird migration route following the Great Plains of the United States and Canada, known as the Central Flyway of North America. Within the Central Flyway lies the prairie pothole region, which provides migration and breeding habitat in the form of agricultural lands, grasslands, and wetland basins.

Migratory Birds

Protection is provided for bald and golden eagles, as well as certain species of migratory birds (some of which are legally hunted (e.g., waterfowl, doves)), through the Migratory Bird Treaty Act (MBTA) of 1918 as well as the Bald and Golden Eagle Protection Act (BGEPA) of 1940. Both laws are intended to prohibit the "take" of and regulate impacts to eagles and other migratory birds from direct mortality, habitat degradation and/or displacement of individual birds without appropriate permits.[10] USFWS also maintains a list of Birds of Conservation Concern (BCC) list (USFWS, 2021a), which is intended to prevent or remove Endangered Species Act (ESA) bird listings. The Project is located within Bird Conservation Region (BCR) 11 (Prairie Potholes), which includes 34 BCC species.

As discussed in sections 6.2 and 6.14, the predominant vegetation cover types in the Project Area are cultivated crops (81.0 percent) and grassland/herbaceous (14.2 percent), which can be used by migratory and resident bird species for resting, foraging, and breeding activities.

Homestead Wind completed two years of general avian use surveys from February 2023 to January 2024 and from October 2024 to September 2025 (**Appendix M.3 – Avian Use Surveys)**. The objective of these surveys was to evaluate species composition and seasonal and spatial use of the Project Area by birds, with a particular focus on eagles and species of concern. Survey methods were developed in accordance with the WEGs, ECPG, and the 2016 USFWS Revisions to Regulations for Eagle Incidental Take and Take of Eagle Nests (2016 Final Eagle Rule; 81 Federal Register 91494 [December 16, 2016]).

For the first year of study, the most common large bird species observed during avian use surveys were sandhill crane, Canada goose, and snow goose. These species are typical of this region and are also widespread and abundant. Large bird use was highest in the spring, driven by migratory waterfowl, and in the fall, driven by migratory waterbirds. The most common small bird species observed during avian use surveys were horned lark, European starling, and Lapland longspur. Small bird use was highest in the fall, followed by spring, winter, and summer.

During the second year of study, the most common large bird species observed during avian use surveys were sandhill crane, Canada goose, snow goose, and ring-necked pheasant. These species are typical of this region in the agricultural landscape as habitat generalists and are also widespread and abundant. Large bird use was highest in the fall, driven by migratory waterbirds, and in the spring, driven by migratory waterfowl. Winter large bird use was primarily comprised of ring-necked pheasant observations. The most common small bird species observed during avian use surveys were horned lark, European starling, and Lapland longspur.

[10] https://www.doi.gov/sites/default/files/documents/2025-04/m-37085.pdf

No federally listed threatened or endangered species were observed during avian use surveys. During the first year of studies, there were two golden eagles and zero bald eagles observed during surveys. During the second year of studies, there were zero golden eagles and one bald eagle observed during surveys. Incidental observations, which were observations of eagles made outside of the standardized surveys (i.e. driving to/from the site, birds observed outside of the standard survey radius), included two golden and five bald eagles during the first year and four golden and seven bald eagles during the second year. Of the 34 BCC species included in BCR 11 (Prairie Potholes), the following eight were observed in the Project Area during avian use surveys: bobolink, chestnut-collared longspur, Franklin's gull, California gull, grasshopper sparrow, marbled godwit, northern harrier, and willet.

Eagle and Raptor Nests

Homestead Wind conducted a series of ground-based and aerial eagle and raptor nest surveys in accordance with the USFWS Region 6 Recommended Protocol for Conducting Pre-Construction Eagle Nest Surveys at Wind Energy Projects (Region 6 Guidelines; USFWS, 2021b) in March/April 2023 and February/April 2025 (**Appendix M.1 – Eagle and Raptor Nest Survey Reports**). As noted earlier in this Application, the Project boundary has been refined over time. Eagle and raptor nest surveys were completed for the project boundary existing at the time of the survey and associated one-mile buffer for raptors and two-mile buffer for bald and golden eagles. The eagle and raptor nest surveys conducted to-date cover the current Project Area and associated one-mile buffer for raptors and two-mile buffer for bald and golden eagles, which aligns with current USFWS guidance (USFWS, 2020).

Raptors

In 2023, aerial raptor nest surveys identified three active non-eagle raptor nests within the larger project area. In 2025, ground-based and aerial raptor nest surveys identified three active non-eagle raptor nests within the current Project Area. The non-eagle raptor nests from 2023 and 2025 do not overlap (i.e., are not the same nests).

Eagles

No bald or golden eagle nests were identified within the Project Area or the two-mile buffer during surveys in 2023 or 2025.

Sharp-tailed Grouse

Ground-based lek surveys were completed to document the location and status of sharp-tailed grouse leks in 2023 and 2025. Historic lek locations were requested from NDGFD prior to the 2023 survey; however, no historic leks were known to occur within the larger project area plus a two-mile buffer (**Appendix M.2 – Sharp-tailed Grouse Lek Survey Reports**). The survey methodology followed NDGFD recommendations; three rounds of ground-based surveys were completed within the larger project area in 2023 and a two-mile buffer. In 2023, six active leks were observed within the larger project area (of these, two are within the current Project Area), and three active leks were observed within the two-mile buffer. In 2025, no active leks were observed within the current Project Area and four active leks were observed within the two-mile buffer (the closest being approximately 0.5 miles from the current Project Area).

6.15.1.2 Bat Species

Eleven species of bats are known to occur in North Dakota. To characterize bat activity in the Project vicinity, Homestead Wind installed acoustic stations on three temporary met towers, two

of which are within the current Project Area. The acoustic survey took place between April 3, 2025, and November 2, 2025 (**Appendix M.6 – Bat Acoustic Activity Survey)**. A total of 1,853 bat passes were recorded during 1,114 detector-nights. The majority (approximately 79 percent) of the bat passes were classified as low frequency bat passes, which is representative of species such as the big brown bat, hoary bat, and silver-haired bat. The remaining bat passes were high-frequency passes, which is representative of species such as eastern red bat, little brown bat, and western small-footed bat. No northern long-eared bat (NLEB) calls were detected during the acoustic monitoring survey; indicating NLEB are likely not present within the Project Area, or vicinity, as the area surveyed extended beyond the current Project Area.

Overall weekly bat activity was relatively low during spring migration and summer (April 3 – July 22), with some weeks having no activity. Overall weekly bat activity began increasing the week of July 23, the beginning of the fall migration period, reaching a peak in activity during the week of August 13. By the week of September 24, overall bat activity returned to the relatively low activity levels observed at the beginning of the study, with no bat passes recorded after October 1.

6.15.2 Wildlife Impacts and Avoidance/Minimization Measures

Field and desktop studies indicate that impacts to wildlife and wildlife habitat are expected to be minimal because grasslands, wooded areas, shrublands, and other areas identified as important to wildlife are relatively limited within the Project Area and will largely be avoided through Project design. The following sections describe potential impacts and proposed avoidance and minimization measures for wildlife.

6.15.2.1 Avian Species

Migratory Birds

Birds may be impacted directly or indirectly as a result of the construction and operation of wind facilities. Direct impacts may result from collision with operating turbines and from the clearing and construction of the Project. Indirect impacts may occur through habitat avoidance (i.e., displacement) as a result of construction activity or placement of a new feature on the landscape (e.g., wind turbine).

During both years of pre-construction avian surveys, migratory waterfowl and migratory waterbirds typically accounted for the greatest proportions of detections. Overall, the species composition, seasonal abundance, and spatial use patterns documented during avian use surveys are considered typical for birds in this region. The majority of species observed are common and abundant within the region. The Project is not anticipated to result in population-level impacts to avian species.

Eagles and Raptors

Based on the eagle nest surveys, there are no bald or golden eagle nests in the Project Area. Bald eagles were only recorded within the Project Area during spring and fall, which indicates bald eagles are using the area for foraging and not for breeding. Spatial use was similar over two years of surveys (with most observations in the southern half of the Project Area), which indicates the potential presence of a prey base, but the lack of major water features and preferred nesting habitat suggests that the Project is not likely to attract bald eagles in large numbers. Therefore, impacts to bald eagles are not expected to occur as a result of the Project.

Golden eagles exhibited similar spatial use patterns to bald eagles, but golden eagle observations were proportionally more prevalent in the southern half of the Project Area than bald eagles. Golden eagles were observed during surveys (Year 1) and incidentally (both years). Across both survey years, golden eagle use spanned three seasons with observations occurring during the winter survey season in addition to the fall and spring survey seasons. The Project is located in an arid region dominated by shrub/scrub and herbaceous/cultivated grassland as the primary land cover, offering some foraging opportunities, but very limited nesting habitat for golden eagles. Therefore, impacts to golden eagles are not expected to occur as a result of the Project.

Homestead Wind will continue to coordinate with the USFWS regarding recommendations and measures to avoid and/or minimize potential impacts to eagles, as needed.

Sharp-tailed Grouse

No active sharp-tailed grouse leks were documented within the Project Area in 2025. Additionally, Homestead Wind has minimized siting turbines in unbroken grassland (79 of 81 turbines are in cultivated cropland), thereby minimizing the potential for impacts on grassland-dependent species such as sharp-tailed grouse. Two turbine locations are in unbroken grassland on NDDTL surface tract parcels, which are largely surrounded by cropland and are part of a fragmented and developed/oil/gas landscape.

Sharp-tailed grouse are known to nest within two miles of a lek site; however, they nest in grassland and are not known to nest in cropland. As a result, placement of turbines in cropland is not anticipated to impact sharp-tailed grouse nests. Additionally, for the two turbines located in grasslands, both are sited more than two miles of an active lek site, and therefore, not expected to impact grouse nests. Homestead Wind is also coordinating with NDDA regarding voluntary offsets for potential impacts to unbroken grasslands.

Avoidance and Minimization Measures

Homestead Wind has prepared a BBCS based on the results of surveys and agency recommendations, which outlines specific avoidance/minimization measures that Homestead Wind has implemented during Project layout and design, or plans to implement during construction and operation to avoid and minimize potential impacts on birds (**Appendix L – Bird and Bat Conservation Strategy**), including but not limited to the following:

Project Layout and Design

- The electrical collection system will be placed underground to the extent practicable. This measure would eliminate collision risk and electrocution hazards for birds and allow habitat to regenerate.
- Tree clearing, in general, will be minimized by utilizing existing roads and minimizing the size of clearings needed around turbines, to the maximum extent practicable. This measure will minimize potential disturbance to bats and nesting birds, as well as minimize conversion of natural areas to Project facilities (habitat loss).

Construction

- To avoid and minimize impacts to nesting birds and roosting bats, tree removal will be minimized to the greatest extent possible, and Homestead Wind will conduct any

necessary tree removal in winter (November 1 – April 14) or inactive season for the majority of birds and bats.

- Wildlife-friendly erosion measures will be used during construction to minimize entrapment and potential fatalities of wildlife. If erosion control blanket is to be used, wildlife-friendly plastic-free blanket will be used to prevent the entanglement of native wildlife.

Operation

- Lighting will be minimized, to the extent practicable, and downward projecting lights or motion sensor activated lights will be installed, as practicable, and "warm-white" or filtered LEDs (correlated color temperature < 3,000K) will be used to minimize blue light emission, avoid over-lighting, and to minimize attractants to birds and bats.
- The number of storm water control features (sediment retention ponds) will be minimized to reduce potential on-site attractants to bats and birds.
- Demand-controlled night marking, which switch off the permanent night-time lighting and only activate turbine warning lighting when an approaching flying object is near (ADLS), will be implemented to minimize impacts on bats and birds.
- Wildlife carrion and livestock carcasses near the turbines will be reported for removal as expediently as practicable. This measure reduces the attractiveness of the Project to avian scavengers and their prey.

Homestead Wind continues to coordinate with the USFWS and NDGFD regarding appropriate avoidance and minimization measures for potential avian impacts. Should additional avoidance and minimization measures be warranted based on operational impacts or a change in listing status for a species that may occur within the Project site, Homestead Wind will coordinate with NDGFD and/or the USFWS, as described in the Adaptive Management section in the Homestead Wind BBCS (**Appendix L – Bird and Bat Conservation Strategy**).

6.15.2.2 Bat Species

Potential impacts to bat species from the construction and operation of the Project include direct impacts due to collision and indirect impacts due to roosting/foraging habitat loss (tree removal). Homestead Wind has coordinated with the USFWS and NDGFD and has designed the Project to avoid and/or minimize potential impacts to bat species. Homestead Wind has designed the Project to minimize tree removal to the extent possible. Turbines and access roads have been sited to avoid wooded draws and shelterbelts to the extent practicable and minimal tree removal is expected. Additionally, if tree removal is necessary, Homestead Wind will follow the Commission's tree and shrub mitigation specifications.

There is the potential for bats to collide with turbines. However, based on the bat acoustic survey results, bat activity was relatively low throughout the study period, peaking during the late summer period. However, in an abundance of caution, turbines will be curtailed from one-half hour before sunset to one-half hour after sunrise from August 16 to October 31 to minimize risk to migrating bats.

As noted above in Section 6.15.2.1, Homestead Wind has prepared a BBCS that will be implemented during construction and operation of the Project (**Appendix L – Bird and Bat Conservation Strategy**). The BBCS includes a number of measures, including those noted

above, that Homestead Wind will implement to avoid and minimize potential impacts to bats. Homestead Wind will continue to coordinate with the USFWS and NDGFD regarding appropriate avoidance and minimization measures for potential bat impacts, as needed.

6.16 Rare and Unique Natural Resources

The following sections describe existing conditions, potential impacts, and proposed avoidance/minimization measures for rare and unique natural resources.

6.16.1 Existing Conditions

The Endangered Species Act (ESA) of 1973, 50 Code of Federal Regulations Part 402, provides a framework for the conservation of threatened and endangered plants and animals and the habitats in which they are found.

According to the USFWS Information for Planning and Consultation (IPaC) website, federally listed species that may occur in the vicinity of the Project Area include the piping plover (threatened) (*Charadrius melodus*), rufa red knot (threatened) (C*alidris canutus rufa*), and whooping crane (endangered) (*Grus americana*). The northern long-eared bat (NLEB; endangered) was not identified in the IPaC as potentially occurring; however, the IPaC currently only considers the existence of roosting habitat/records in whether or not the species is included. The Project is within the range of the NLEB; therefore, the species does have the potential to occur during migration. These species are discussed further below.

In addition, the monarch butterfly (*Danaus plexippus*)*,* Suckley's cuckoo bumble bee *(Bombus suckleyi*)*,* and Western regal fritillary (*Speyeria idalia*) are species that are proposed for listing and have the potential to occur within the Project Area; federal protections would not apply until the effective date of a final rule for these species. Homestead Wind will continue to monitor the listing proposals for these species and will incorporate applicable measures to avoid impacts based on formal guidance from the USFWS at the time of the final listing rule, as applicable.

There are no designated critical habitats for federally listed species within the Study Area. As noted above in Section 6.15.1.1, there were no federally listed bird species observed during both years of avian use studies.

Whooping Crane (*Grus americana*)

Whooping cranes that are part of the Aransas-Wood Buffalo National Park (ABNP) population are federally endangered in North Dakota (USFWS, 2012b). The central flyway of the ABNP population's migratory route passes over a large portion of western and central North Dakota.

In North Dakota, the whooping crane is not present year-round; they are only present during the twice-yearly migration between winter grounds and summer nesting sites (i.e., late April to June 15 and September 15 to November 15).

In meetings dated April 9, 2024, and July 17, 2025, the USFWS noted that the Project falls within the 75 percent migration corridor (i.e., the 80-mile-wide band where 75 percent of all whooping crane sightings have occurred) and recommended that an assessment of potentially suitable whooping crane stopover habitat be conducted for the Project.

In response to the recommendation from the USFWS, Homestead Wind completed a whooping crane migration habitat assessment to quantify the land cover types, topography, and overall suitability of habitat for whooping crane use as resting and foraging habitat during migration within

the Project Area, a 5 kilometer (approximately 3 mile) buffer, and a 20 kilometer (approximately 12 mile) buffer (**Appendix M.5 – Whooping Crane Desktop Habitat Assessment)**. Based on publicly available data reviewed for the assessment, the nearest confirmed observation of a whooping crane to the Project Area is approximately 1.8 miles to the north. Results of the analysis suggest no historical, traditional stopover habitat areas exist within the Project Area, 5-kilometer buffer, or 20-kilometer buffer and that overall likelihood of species occurrence within the Project Area and 5-kilometer buffer during spring and fall migration is low. Therefore, the potential for whooping crane to use the Project Area is unlikely and the potential for impacts is also therefore low.

Piping Plover (*Charadrius melodus*)

In western North Dakota, potentially suitable breeding habitat for the piping plover occurs along the Missouri and Yellowstone rivers in the form of riverine sandbars, gravel beaches and flat, sandy beaches with little vegetation. Suitable habitat also consists of alkali areas of wetlands, which are scattered in North Dakota. There is potential for piping plovers to utilize wetlands and waterbodies near the Project Area and/or to migrate through the Project; however, potentially suitable habitat for the piping plover (i.e., sandy or gravelly beaches and sandbars) is very limited within the Project Area. Further, no piping plovers were detected during avian use surveys (**Appendix M.3 – Avian Use Survey**). Accordingly, based on this as well as coordination with USFWS and NDGFD, the piping plover is unlikely to occur within the Project Area given the lack of potentially suitable breeding habitat (**Appendix D.2 – Agency Correspondence**).

Rufa Red Knot (*Calidris canutus rufa*)

The rufa red knot migrates during the spring and fall between breeding grounds in northern Canada and wintering grounds in the Southeast US, the Northeast Gulf of Mexico, northern Brazil and Tierra del Fuego in South America. While a majority of red knots follow migration routes along the east and west coast of the US, small numbers of this species follow an inland migration route across the Midwest along the Great Lakes. Preferred stopover habitat in North America includes sandy or gravely beaches, tidal mudflats, salt marshes, shallow coastal impoundments and peat banks. There is limited potential for the rufa red knot to migrate through the Project because potentially suitable habitat is very limited within the Project Area (i.e., sandy or gravelly beaches and sandbars). Additionally, no rufa red knots were detected during avian surveys (**Appendix M.3 – Avian Use Survey**). Accordingly, based on this as well as coordination with USFWS and NDGFD, the rufa red knot is unlikely to occur within the Project Area given the lack of potentially suitable habitat (**Appendix D.2 – Agency Correspondence**).

Northern Long-Eared Bat (*Myotis septentrionalis*)

The NLEB is forest dependent and requires trees for roosting and foraging in summer. In accordance with USFWS recommendations, Homestead Wind conducted a NLEB Desktop Habitat Assessment to identify potentially suitable NLEB summer habitat (roosting and foraging) within the Project Area (**Appendix M.7 – Northern Long-eared Bat Desktop Assessment)**. The assessment found that no potentially suitable summer NLEB habitat exists within the Project Area due to the insufficient size of forested areas present. Available wooded areas within the Project Area are highly fragmented, and there is very limited connectivity of wooded shelter belts throughout the landscape. In addition, no NLEB calls were detected during the acoustic monitoring survey. As such, the potential for NLEB to occur in the Project Area is considered very low.

6.16.2 Rare and Unique Natural Resource Impacts and Mitigation Measures

The following sections describe potential impacts and proposed mitigation for impacts to rare and unique natural resources.

Potential impacts and avoidance and minimization measures for federally listed species are discussed below. Avoidance and minimization measures and general conservation strategies for federally listed species follow those described in Section 6.15 for all avian and bat species. The BBCS (**Appendix L – Bird and Bat Conservation Strategy**) outlines specific measures that will be used to avoid and/or minimize impacts to bird and bat species, including federally listed species.

Whooping Crane

As noted above, results of the whooping crane migration habitat assessment suggest no historical, traditional stopover habitat areas exist within the Project Area, 5-kilometer buffer, or 20-kilometer buffer and that overall likelihood of species occurrence within the Project Area and 5-kilometer buffer during spring and fall migration is low. Therefore, due to the lack of suitable stopover habitat, the potential for impacts is also low. Additionally, no whooping cranes have been documented as fatalities at wind facilities (USFWS, 2009; NGPC, 2018). Homestead Wind will avoid impacts to whooping cranes by implementing the general conservation measures for birds presented in the Project's BBCS.

Piping Plover

Although there is some potential for piping plovers to utilize wetlands and waterbodies near the Project Area for breeding, potentially suitable habitat for the piping plover (i.e., sandy or gravelly beaches and sandbars) is very limited within the Project Area. Additionally, no individuals were observed during avian surveys. Therefore, impacts to piping plover as a result of Project construction and operation are not anticipated, and no species-specific mitigation measures are proposed.

Rufa Red Knot

Although there is some potential for the rufa red knot to migrate through the Project or to utilize wetlands and waterbodies for stopover habitat, potentially suitable habitat for the rufa red knot is very limited within the Project Area. Additionally, no rufa red knots were detected during avian surveys. Therefore, impacts to rufa red knot from Project construction and operation are not anticipated, and no species-specific mitigation measures are proposed.

Northern Long-Eared Bat

The NLEB Desktop Habitat Assessment found that no potentially suitable summer NLEB habitat exists within the Project Area due to the insufficient size of forested areas present. Additionally, NLEB were not documented during the acoustic monitoring survey, indicating NLEB are likely not present within the Project Area. Although likelihood of occurrence of NLEB in the Project Area is low, Homestead Wind has prepared a BBCS that will be implemented during construction and operation of the Project (**Appendix L – Bird and Bat Conservation Strategy**), which includes a number of measures that Homestead Wind will implement to avoid and minimize potential impacts to bats, including the NLEB. Turbines will be curtailed from one-half hour before sunset to one-half hour after sunrise from August 16 to October 31 to minimize risk to migrating bats. Homestead Wind will continue to coordinate with the USFWS regarding recommendations and measures to avoid and minimize potential impacts to the NLEB, as needed.

6.17 Summary of Impacts and Avoidance/Minimization Measures

Table 6.17-1 provides a summary of potential Project impacts and avoidance and minimization measures.

Table 6.17-1
Summary of Impacts

Resource	Potential Impact	Proposed Avoidance, Minimization, and Mitigation
Demographics (Section 6.1)	The Project will result in an increase in socioeconomic benefits for landowners, local governments, and communities by providing increased income to landowners receiving lease payments, which could increase per capita income in Williams County. No long-term changes to demographics are anticipated.	No mitigation is proposed.
Land Cover, Land Use, and Zoning (Section 6.2)	The Project will convert approximately 111.4 acres of land in the Project Area into a wind energy facility for the life of the Project. The Project would temporarily impact approximately 1,612.6 acres of land.	Lease payments will be made to landowners for placement of Project facilities to offset loss of income from permanent impacts to agricultural land. After construction, Homestead Wind will restore and revegetate temporary disturbance areas according to NRCS recommendations, unless otherwise specified by the landowner and approved by the Commission. Linear facilities (i.e., access roads, crane paths, and collection lines) will be collocated and sited in previously disturbed areas to the extent practicable. The Project is compatible with existing land uses and has been designed to comply with local zoning requirements. Homestead Wind is actively working through the NDDTL right-of-way process.
Public Services (Section 6.3)	Construction of the Project will temporarily increase traffic on haul roads. Traffic impacts associated with the operations phase after construction will be minimal. The Project has the potential to impact television reception for residents relying on antennas. Impacts to local emergency services, railroads, water supplies, telephone, microwave, or radio communications are not anticipated.	Local utility companies will be contacted prior to construction. Homestead Wind will utilize North Dakota One Call prior to construction to identify existing utilities. Homestead Wind will enter into RUMA(s) with Williams County and, if needed, applicable townships. Following completion of construction, per the terms of the RUMA(s), affected roadways will be repaired and restored to a condition at least equal to the condition prior to construction of the Project. Homestead Wind will coordinate with applicable local and state road authorities to ensure that all applicable road-related permits are obtained. If residents that rely on antennas experience signal disruption, Homestead Wind will coordinate with the residence owners to mitigate the disruption.

Table 6.17-1
Summary of Impacts

Resource	Potential Impact	Proposed Avoidance, Minimization, and Mitigation
Human Health and Safety (Section 6.4)	No adverse impacts are anticipated.	Homestead Wind has sited wind turbines and associated facilities in compliance with applicable Commission and Williams County requirements. Homestead Wind will coordinate with emergency service providers to determine appropriate safety precautions/standards and develop an Emergency Response Plan. Homestead Wind will comply with light-mitigating technology system requirements set forth in NDCC Section 49-22-16.4.
Sound (Section 6.5)	A sound assessment was completed, and sound levels are modeled at or below 45 dBA within 100 feet of inhabited residences and community buildings.	The Project will comply with the Commission's sound level requirement; accordingly, no mitigation is proposed.
Visual (Section 6.6)	The Project will have visual and potential aesthetic impacts. A shadow flicker analysis was performed and indicated that the highest modeled shadow flicker is less than 21 hours per year for non-participating residences and less than 30 hours per year for participating residences. All receptors, including all participating and non-participating receptors, have expected shadow flicker of less than 30 hours per year.	Compliance with applicable setbacks and minimum FAA lighting and marking requirements are anticipated to minimize visual impacts. Homestead Wind has designed the Project to comply with the industry standard of 30 hours per year or less of shadow flicker at all occupied residences.
Archaeological and Architectural Resources (Section 6.7)	Ground-disturbing activities during construction have the potential to impact known or unknown archaeological and historic architectural resources in or adjacent to the Project Area.	Homestead Wind has completed a Class I literature review, a Class III archaeological resource inventory of areas that may be impacted by Project construction, and a Class II reconnaissance survey for architectural resources. Project facilities have been sited to avoid identified unevaluated, potentially eligible, and eligible archaeological and architectural resource sites. Homestead Wind will coordinate with the SHSND on potential mitigation for architectural resources, as needed. In addition, Homestead Wind has prepared an Unanticipated Discoveries Plan (UDP). The UDP is an appendix in the Class III report (**Appendix H.2**).

Table 6.17-1
Summary of Impacts

Resource	Potential Impact	Proposed Avoidance, Minimization, and Mitigation
Recreational Resources (Section 6.8)	There are no designated recreation areas, public or private parks, or designated trails located in the Project Area. Impacts to recreational resources are not anticipated.	No mitigation is proposed.
Land-Based Economies (Section 6.9)	The Project will temporarily impact up to approximately 1,531.7 acres of agricultural land (cultivated cropland and grassland/herbaceous used as pasture), and will impact up to approximately 107.9 acres of agricultural land (cultivated cropland and grassland/herbaceous that may be used for grazing) for the life of the Project. The Project may impact up to 2.5 acres of woodlands.	Agricultural land temporarily impacted by construction will be restored and revegetated in accordance with NRCS recommendations, unless otherwise specified by the landowner and approved by the Commission. Agricultural practices will be able to continue during Project construction and operations. Economic loss to producers due to land conversion will be minor in comparison to additional income from the Project. The Project has been designed to minimize tree removal to the extent possible. Where trees/shrubs are removed, Homestead Wind will follow the Commission's tree and shrub mitigation specifications. Homestead Wind requests the Commission authorize Homestead Wind to clear trees and shrubs in the Project Area up to 100 feet in up to eight (8) areas where it is necessary to collocate multiple facilities (e.g., access roads, crane paths, collection lines) and the workspace associated with each and/or in order to safely stage and list turbine components and blades.
Soil Resources (Section 6.10)	Construction of the Project may cause soil surfaces to become more prone to wind and water erosion and may result in soil compaction and the spread of noxious weeds.	Impacts to soils within the Project Area will be localized to the areas where Project activities occur and minimized through the use of BMPs. BMPs may include erosion and sediment control measures including segregation of topsoil, noxious weed control and the use of construction equipment appropriately sized for the scope of work. Additionally, Homestead Wind will verify that access road grades fit closely with the natural terrain, soil cuttings are properly disposed of, and proper drainage is maintained.

Table 6.17-1
Summary of Impacts

Resource	Potential Impact	Proposed Avoidance, Minimization, and Mitigation
Geologic and Groundwater Resources (Section 6.11)	No adverse impacts anticipated.	No mitigation is proposed.
Surface Water and Floodplain Resources (Section 6.12)	Construction of Project facilities could potentially impact surface water runoff within the Project Area. Ground-disturbing construction activities have the potential to cause sedimentation, but these impacts are expected to be minimal and would only occur during construction. The Project is not anticipated to permanently impact surface waters.	The Project and associated facilities have been sited to avoid floodplains, and to avoid or minimize impacts to surface waters. If unavoidable impacts to USACE jurisdictional waters were to occur, these activities would be covered by the Nationwide Permit Program. Homestead Wind will also utilize appropriate erosion and sediment control BMPs and obtain coverage under the NDPDES General Stormwater Permit.
Wetlands (Section 6.13)	The Project has been designed to avoid permanent impacts to wetlands. Temporary impacts to wetlands may occur from the use of widened access roads and crane paths, installation of collection lines, and workspaces temporarily used during construction.	Homestead Wind plans to use boring to install underground collection when wetlands are present, thereby avoiding wetland impacts. Matting will also be used in wetlands during construction to minimize temporary disturbances. Any impacts to USACE jurisdictional waters will be covered by the Nationwide Permit Program.
Vegetation (Section 6.14)	The Project will result in temporary and permanent vegetation impacts.	Following construction, temporarily disturbed areas outside cultivated cropland will be re-vegetated with a seed mixture consistent with the surrounding vegetation and free of noxious weeds in accordance with NRCS recommendations, unless otherwise requested by the landowner and approved by the Commission. Homestead Wind includes a Noxious Weed Management Plan that has been approved by the Williams County Weed Board as **Appendix K – Noxious Weed Management and Control Plan**. Appropriate BMPs will be employed during project construction to avoid or limit temporary impacts to vegetation.

Table 6.17-1
Summary of Impacts

Resource	Potential Impact	Proposed Avoidance, Minimization, and Mitigation
Wildlife: Avian Species (Section 6.15)	The Project may result in direct or indirect impacts to avian species through increasing the potential for bird strikes with the turbines and habitat removal.	The Project has been sited to avoid and/or minimize impacts to avian species by siting Project facilities in previously disturbed areas to the extent practicable (79 of 81 turbine locations are in cultivated cropland). All collection lines will be buried, thereby avoiding the potential for collisions. Temporarily disturbed areas will be re-vegetated with a seed mixture consistent with the surrounding vegetation and free of noxious weeds, in accordance with NRCS recommendations, unless otherwise requested by the landowner and approved by the Commission. If impacts to trees/shrubs occur, they will be mitigated consistent with the Commission's tree and shrub mitigation specifications. Homestead Wind is coordinating with NDDA regarding voluntary offsets for potential direct impacts to unbroken grasslands **(Appendix D.2 – Agency Correspondence)**. Homestead Wind includes a BBCS as **Appendix L – Bird and Bat Conservation Strategy** that outlines proposed avoidance, minimization, and mitigation measures that will be implemented.
Wildlife: Bat Species (Section 6.15)	The Project has a low likelihood to impact bat species due to lack of suitable habitat and low bat activity.	The Project has been designed to avoid wooded areas and shelterbelts to the extent practicable and minimal tree clearing is expected. Tree impacts will be mitigated consistent with the Commission's tree and shrub mitigation specifications. Homestead Wind includes a BBCS as **Appendix L – Bird and Bat Conservation Strategy** that outlines proposed avoidance and minimization measures that will be implemented.
Rare and Unique Natural Resources (Section 6.16)	The potential for federally listed species to occur in the Project Area is low due to limited potential habitat; therefore, impacts to federally listed species are not anticipated.	Homestead Wind has implemented or will implement measures to minimize potential impacts to rare and unique natural resources. Homestead Wind includes a BBCS as **Appendix L – Bird and Bat Conservation Strategy** that outlines proposed avoidance, minimization, and mitigation measures that will be implemented.

7.0 IDENTIFICATION OF POTENTIAL PERMITS/APPROVALS

Potential permits, clearances, and approvals that may be needed for the development and operation of the Project are listed in Table 7.0-1. Documentation of related agency correspondence is included in **Appendix D.2 – Agency Correspondence**.

Table 7.0-1
Potential Permits and Approvals

Administering Agency	Permit, Approval, or Consultation	Applicability to the Project	Status
Federal			
U.S. Army Corps of Engineers	Federal Clean Water Act Section 404	Required if dredging or filling jurisdictional waters of the United States.	To be obtained prior to activity subject to permit, if needed.
U.S. Fish and Wildlife Service (USFWS)	Review for Threatened and Endangered Species	Consultation on potential impacts to species protected under the Endangered Species Act.	Homestead Wind has been coordinating with USFWS since 2023.
Federal Aviation Administration (FAA)	Form 7460-1 Notices of Proposed Construction or Alteration (Determinations of No Hazard)	• Construction or alteration of structures standing higher than 200 feet above ground level. • Construction or alteration of structures near airports. • Siting within radar line of-sight of an air defense facility.	Filed in September 2025.
	Notices of Actual Construction or Alteration (Form 7460-2)	Supplemental notice provided to FAA in advance of or after beginning construction.	To be provided in advance of or after commencing construction, as required.
	Marking & Lighting Recommendations	Required for approval of light-mitigating technology.	Filed in December 2025.
Federal Communications Commission (FCC)	Radio Station Authorization/License	Typically required for operation of communications tower associated with ADLS.	If needed, prior to operation of ADLS communications tower.
	Registration	Typically required for communications tower associated with ADLS.	Prior to construction/installation of ADLS communications tower.
State of North Dakota Approvals			
North Dakota Public Service Commission	Certificate of Site Compatibility	Required for construction of wind energy conversion facility with greater than 0.5 MW nameplate capacity.	In progress; to be obtained prior to construction.

Table 7.0-1
Potential Permits and Approvals

Administering Agency	Permit, Approval, or Consultation	Applicability to the Project	Status
North Dakota Department of Environmental Quality	North Dakota Pollutant Discharge Elimination System (NDPDES) General Permit for Stormwater Discharge Related to Construction (includes preparation of the Stormwater Pollution Prevention Plan)	Required for stormwater discharges from construction activities with disturbances greater than one acre.	To be obtained prior to activity subject to permit, if needed.
	401 Water Quality Certification	Required in connection with Section 404 permit for filling in jurisdictional waters of United States.	Incorporated into Section 404 Nationwide Permits; to be obtained prior to activities subject to permit, if required.
North Dakota Department of Water Resources, Office of the State Engineer (NDDWR/OSE)	Temporary Water Permit	Required for all temporary uses of water, except in cases when both the amount of water to be impounded, diverted, or withdrawn is less than 12.5 acre-feet (4,073,137 gallons) and the use is domestic, livestock, fish, wildlife, or other recreational uses.	To be obtained prior to activity subject to permit, if needed.
	Conditional Water Permit	Required for all uses of water (where the use period will exceed 12 months), except in cases when both the amount of water to be impounded, diverted, or withdrawn is less than 12.5 acre-feet (4,073,137 gallons) and the use is domestic, livestock, fish, wildlife, or other recreational uses.	To be obtained prior to activity subject to permit, if needed.
NDDWR/OSE; Water Resource District	Drainage Permit	Required before draining a pond, slough, lake or sheetwater, or any series thereof, that has a watershed area (i.e., drainage area) of 80 acres or more.	To be obtained prior to activity subject to permit, if needed.

Table 7.0-1
Potential Permits and Approvals

Administering Agency	Permit, Approval, or Consultation	Applicability to the Project	Status
North Dakota Highway Patrol	Oversize/Overweight Permit(s)	Required to transport oversize/overweight loads on state-maintained roads.	To be obtained prior to activity subject to permit, if needed.
North Dakota Department of Transportation	Utility Occupancy Permit(s)	Required to install electrical lines within state owned right-of-way (ROW).	To be obtained prior to activity subject to permit, if needed.
	Highway Access Permit(s)	Required to construct driveway access to state owned ROW.	To be obtained prior to activity subject to permit, if needed.
	Temporary Modification Permit(s)	Required for temporary modifications to state-owned ROW.	To be obtained prior to activity subject to permit, if needed.
North Dakota State Electrical Board	Wiring Certificate and Inspection Approval	Required for installation of electrical facilities.	To be obtained prior to activity subject to permit, if needed.
North Dakota Department of Trust Lands (NDDTL)	Wind Farm Right-of-Way Agreement	Required for construction of Project facilities on NDDTL-owned surface trust lands.	To be obtained after the PSC permitting process is complete and prior to building permit approval.
State Historical Society of North Dakota (SHSND)	Cultural and Historic Resources Review and Review of State and National Register of Historic Sites and Archeological Survey	Consultation required in connection with other agency permitting requirements, such as the PSC.	Class I, II, and III survey work for the Project is complete; survey reports were submitted to SHSND in February 2026. Homestead Wind will continue to coordinate with the SHSND, as needed.
Local Approvals			
Williams County	Conditional Use Permit (CUP) (Project)	Required for construction and operation of a new Wind Energy Facility.	Approved January 6, 2026 (**Appendix B – Conditional Use Permit Approval Letter**).
	CUP (transmission line)	Required for construction and operation of transmission line associated with a Wind Energy Facility.	Approved January 6, 2026 (**Appendix B – Conditional Use Permit Approval Letter**).

Table 7.0-1
Potential Permits and Approvals

Administering Agency	Permit, Approval, or Consultation	Applicability to the Project	Status
	Variances	Required for the Project.	Approved January 6, 2026 (**Appendix B – Conditional Use Permit Approval Letter**).
	Building Permit(s)	Required prior to construction of a building or structure.	To be obtained prior to activity subject to permit, if needed.
	Approach Permits	Required to construct driveway access to county road ROW.	To be obtained prior to activity subject to permit, if needed.
	County Road Crossing Permits (Utility Permits)	Required for the installation of electrical lines on/across county road ROW.	To be obtained prior to activity subject to permit, if needed.
	Storm Water Management Plan Approval	Required for commercial projects.	To be obtained prior to activity subject to permit, if needed.
	Load Permit(s)	Required to transport oversize/overweight loads on county roads.	To be obtained prior to activity subject to permit, if needed.
	Williams County Water Resource District Crossing Permit(s)	May be required to install Project facilities across Water Resource District Board ROW or infrastructure.	To be obtained prior to activity subject to permit, if needed.
Organized Township(s)	Approach Permit(s)	May be required to construct driveway access to county road ROW.	To be obtained prior to activity subject to permit, if needed.
	Haul Road Permit(s)	May be required to transport oversize/overweight loads on township roads.	To be obtained prior to activity subject to permit, if needed.
	Utility Crossing Permit(s)	May be required for the installation of electrical lines on/across township road ROW.	To be obtained prior to activity subject to permit, if needed.

Table 7.0-1
Potential Permits and Approvals

Administering Agency	Permit, Approval, or Consultation	Applicability to the Project	Status
Upper Missouri District Health Unit	Septic system permit/approval	May be required for installation of septic system.	To be obtained prior to activity subject to permit, if needed.

8.0 FACTORS CONSIDERED

NDCC Section 49-22-09 identifies factors that guide the Commission in assessing and designating a site for a proposed facility. These factors are discussed below.

8.1 Public Health, Welfare, Natural Resources, and the Environment

The preceding sections of this Application provide a review of the investigations related to the potential impacts to public health, welfare, natural resources, and the environment that could occur as a result of Project development and operation. Section 6.17 provides a summary of these potential impacts and the proposed mitigation measures that would be implemented to avoid or minimize these impacts.

8.2 Minimizing Adverse Environmental Effects

Homestead Wind has, or will, utilize the most current available technologies to site, construct, and operate the Project in order to optimize utilization of wind resources while also minimizing or avoiding potential adverse environmental impacts. Mitigation, minimization, and/or avoidance measures to be implemented for each resource are described in each corresponding subsection within Section 6.0.

8.3 Potential for Beneficial Uses of Waste Energy

Wind energy generation does not produce waste energy. Therefore, the Project does not have the potential for beneficial use of waste energy.

8.4 Unavoidable Adverse Environmental Effects

Unavoidable adverse environmental impacts are described for each resource category in Section 6.0. Unavoidable long-term ground disturbance associated with the Project will include the conversion of land to a renewable energy generation resource and alteration of the visual landscape through the construction and lighting of turbines, as well as ancillary facilities, for the life of the Project. Areas temporarily impacted by Project construction activities will be restored to their original conditions following construction, to the extent practicable and in coordination with landowners. Homestead Wind selected the Project site to minimize unavoidable environmental impacts and will implement appropriate mitigation measures throughout Project development.

8.5 Alternatives to the Proposed Site

As discussed in Section 1.2, Homestead Wind analyzed various siting options for the Project Area. Homestead Wind selected the proposed Project Area based on a variety of factors including the strong wind resource, community support, minimal impact to the environment, and grid interconnection. The Project has been sited to avoid and minimize impacts to the environment and existing land uses. Homestead Wind believes the proposed site represents the best location for the Project.

8.6 Irreversible and Irretrievable Commitments of Natural Resources

Renewable energy projects, including the Project, require relatively few irreversible and irretrievable commitments of natural resources. The primary irreversible and irretrievable

commitments of natural resources for the Project are associated with construction activities. Natural resources will be used in the manufacturing and preparation of construction materials including steel, concrete, and aggregate. In addition, transportation of vehicles and equipment to and from the site during construction will require the use of hydrocarbon fuel. Although they would not be retrievable after use, supply of these materials is not sparse, and their use would not be expected to have a significant impact on resource availability. Further, the limited commitment of natural resources for the Project would be balanced against the anticipated benefits resulting from Project development.

8.7 Direct and Indirect Economic Impacts

Direct economic impacts resulting from development of the Project will be primarily positive. The Project will result in land use conversion; however, the majority of the Project Area (i.e., 99 percent) will still be available for agricultural practices and landowners will be compensated for the land occupied by wind turbines and associated facilities.

The Project may also indirectly benefit economies in the surrounding area due to wages and salaries paid to local hires and increased spending at local businesses. Further, long-term benefits to the Williams County tax base resulting from the Project will improve the local economy.

8.8 Existing Development Plans of the State, Local Government, and Private Entities at or in the Vicinity of the Site

The Project is not anticipated to conflict with the existing development plans of state, local, or private entities within the Project Area. The Project has obtained a conditional use permit and associated variances from the Williams County Board of County Commissioners for the Project. Additionally, Homestead Wind has coordinated with the Williston Basin International Airport and designed the Project to avoid impacts to airport operations.

8.9 Effect of Site on Cultural Resources

Project infrastructure has been sited to avoid archaeological and historic architectural resources that have been identified and recommended for avoidance in the Project's Class I, II, and III cultural resources inventories. Homestead Wind submitted the survey reports to SHSND for review in February 2026. Homestead Wind has also prepared a UDP; the UDP is an appendix in the Class III report (**Appendix H.2**). This plan details the process for prompt communication and action in the event that previously unidentified cultural resources or human remains are encountered during construction. Refer to Section 6.7 for additional details regarding the cultural resources survey efforts conducted for the Project and SHSND consultation.

8.10 Effect of Site on Biological Resources

The Project is designed to avoid and/or minimize impacts to biological resources, including wildlife. Homestead Wind has developed a BBCS that outlines specific measures that Homestead Wind has implemented during Project layout and design, or plans to implement during construction and operation, to avoid and/or minimize potential impacts to wildlife.

9.0 AGENCY COMMENTS

Homestead Wind has coordinated with various agencies and used this input, as well as study findings, to inform siting of Project infrastructure.

In July 2025, Homestead Wind sent Project notification letters to agencies listed in NDAC Section 69-06-01-05. The Project notification letters included a description of the Project and a map of the Project Area. The following sections summarize agency coordination efforts to date, organized by agency. A list of agencies consulted and copies of agency correspondence are provided in **Appendix D.2 – Agency Correspondence**.

9.1 Native American Tribes

On July 11, 2025, Homestead Wind, through its consultant Tetra Tech, provided Project introduction letters to three (3) Native American tribes: Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana; Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota; and Turtle Mountain Band of the Chippewa Indians of North Dakota. On July 24, 2025, the Turtle Mountain Band of Chippewa Indians Tribal Historic Preservation Office (THPO) provided a response noting the land is likely now privately owned, but in the past was native hunting grounds for their native nation. The THPO requested copies of survey work that has been completed. As noted above in the SHSND coordination Section 6.7, Homestead Wind has completed the literature search (Class I), architectural survey (Class II), and the archaeological survey (Class III) for the Project. Homestead Wind submitted the survey reports to SHSND in February 2026. Homestead Wind will provide the THPO with links to the reports on the PSC docket, once available.

9.2 Federal Aviation Administration

In addition to sending the Project introduction letter, Homestead Wind also submitted the turbine layout in this Application to the FAA for Determinations of No Hazard (DNH; Form 7460) on September 16, 2025. Additionally, on December 1, 2025, Homestead Wind filed a request to utilize ADLS on the Project for FAA review. The FAA is conducting their review of the turbine layout and ADLS request, and Homestead Wind anticipates a final determination in the second half of 2026.

9.3 Wildlife Agencies (U.S. Department of Interior – Fish & Wildlife Service and North Dakota Game and Fish Department)

Homestead Wind initiated coordination with the USFWS and NDGFD in April 2024. The meeting introduced the Project and reviewed initial avian survey results and discussed additional survey needs. These surveys included avian use, raptor nests, sharp-tailed grouse leks, bats, grassland, and wetlands.

In June 2025, Homestead Wind met with USFWS, NDGFD, and North Dakota Department of Agriculture to discuss additional survey results, how those results were incorporated into the design, and proposed avoidance and minimization measures.

On July 10, 2025, Homestead Wind sent a letter to NDGFD outlining proposed minimization and avoidance measures discussed in the June 9, 2025, meeting. On July 28, 2025, NDGFD provided a letter summarizing the Project's proposed avoidance and minimization measures and acknowledging Homestead Wind's commitment to avoiding sensitive habitats, such as unbroken

grasslands, wetlands, and areas important to declining species, such as the sharp-tailed grouse leks. NDGFD noted Homestead Wind's proposed measures are important in siting development in a manner least impactful to wildlife. Homestead Wind provided the BBCS to NDGFD on February 27, 2026, as requested in their July 28, 2025, letter.

Homestead Wind will continue to coordinate with USFWS and NDGFD regarding the Project, as needed, throughout development.

9.4 U.S. Department of Agriculture – Natural Resources Conservation Service

On August 19, 2025, the NRCS responded to Homestead Wind's introduction letter. The letter provided general guidelines for minimizing impacts to wetlands. As described in Section 6.13, the Project has been designed to avoid permanent impacts to wetlands; temporary impacts are minimized and will be mitigated through construction BMPs such as matting.

9.5 Federal Bureau of Land Management

On July 24, 2025, the Bureau of Land Management (BLM), North Dakota Field Office provided an email response to Homestead Wind's introduction letter indicating that no BLM managed lands will be affected by the Project. The agency went on to note that if any federal minerals such as sand or gravel are removed or utilized for the Project, there may need to be a federal authorization in place. Homestead Wind will utilize sand and/or gravel from private suppliers; no federal minerals will be impacted.

9.6 North Dakota Aeronautics Commission

The North Dakota Aeronautics Commission (Aeronautics Commission) provided a response to Homestead Wind's introduction letter on August 19, 2025. The agency noted that the closest public airport to the Project Area is Williston Basin International Airport, located approximately 6.85 nautical miles to the NNW of the Project Area, and that the Project "would not have any significant impacts on the airspace surrounding the airport."

Aeronautics Commission staff recommended contacting the airport authority directly to share Project information as well as the FAA and provided contacts for both. Homestead Wind has submitted DNHs for the turbine layout in this Application to the FAA and has coordinated directly with Williston Bason International Airport.

9.7 North Dakota Department of Agriculture

In June 2025, Homestead Wind met with NDDA, USFWS, and NDGFD, to discuss the Project and potential voluntary mitigation, among other topics addressed above.

Homestead Wind further coordinated with NDDA in meetings on October 21, 2025, and January 7, 2026, regarding its voluntary mitigation program. On February 11, 2026, Homestead Wind and NDDA entered into a Memorandum of Understanding pursuant to which Homestead Wind agreed to make a voluntary contribution to the Environmental Impact Mitigation Fund administered by the NDDA Commissioner under NDCC Section 4.1-01-21.

9.8 North Dakota Department of Transportation

On August 21, 2025, NDDOT, Office of Project Development responded to Homestead Wind's introduction letter, indicating "this Project should have no adverse effect on NDDOT highways." The letter went on to recommend further coordination and permitting if any Project work is to be completed in highway rights-of-way. There are no state highways in the Project Area, and therefore, Project work will not occur within NDDOT rights-of-way.

9.9 State Historical Society of North Dakota

Homestead Wind met with the SHSND on July 2, 2025, to introduce the Project, review survey protocols and survey results to date, and coordinate on next steps. On August 13, 2025, the SHSND provided a letter that reiterated the three survey types recommended for the Project at the July 2, 2025, meeting. SHSND recommended a Class I (literature search) and Class II (reconnaissance) survey by a permitted architectural historian for standing buildings and structures over 45 years old within two miles of individual turbine locations, and a Class III intensive archaeological survey of direct impact areas (i.e., proposed facilities), unless the footprint has been recently surveyed for cultural resources. Homestead Wind submitted site forms to SHSND in the fall of 2025, and SHSND provided comments on the site forms in late 2025 and early 2026, which Homestead Wind addressed.

As described in Section 6.7, Homestead Wind has completed the literature search (Class I), architectural survey (Class II), and the archaeological survey (Class III) for all areas that may be impacted by construction of the Project. The Project has been sited to avoid archaeological and architectural resources identified as listed on the NRHP, eligible for NRHP listing, potentially eligible for NRHP listing, or unevaluated. Homestead Wind submitted the survey reports to SHSND in February 2026 and will continue to coordinate with the agency, as needed

9.10 North Dakota Department of Trust Lands

Homestead Wind initiated coordination with NDDTL in May 2023 as part of the land leasing effort for the Project. In January 2025, Homestead Wind submitted an application to NDDTL for a Wind Farm Right-of-Way on eight (8) parcels; only four (4) of these parcels are within the current Project Area. On May 14, 2025, NDDTL sent a letter acknowledging Homestead Wind's application and that Homestead Wind is working through the process to obtain an agreement. NDDTL noted that its staff has completed onsite reviews for the subject parcels and proposed Project facility locations thereon, and stated that temporary disturbance or wind turbines on the parcels are not likely to significantly affect the landscape. NDDTL indicated that the agreement cannot be finalized until after the Project concludes the Commission's Certificate of Site Compatibility process. On December 10, 2025, NDDTL sent a letter again acknowledging that Homestead Wind is working through the process to obtain an agreement and confirming that NDDTL staff have completed onsite reviews for tract participation and proposed infrastructure locations.

9.11 North Dakota Parks and Recreation Department

North Dakota Parks and Recreation Department (NDPRD) provided a response letter on August 13, 2025. NDPRD noted that the Project does not affect properties owned, leased, or managed by NDPRD or any properties protected under Section 6(f) of the Land and Water Conservation Fund. Additionally, NDPRD stated a query of the North Dakota Natural Heritage biological conservation database indicates no documented occurrences of plant or animal species of

concern, or significant ecological communities, within or immediately adjacent to the Project Area (approximately one mile radius).

9.12 North Dakota Department of Water Resources

The NDDWR responded to the Project introduction letter on August 19, 2025, providing information on NDDWR permitting requirements. As described in Sections 6.12 and 6.13, the Project has been designed to avoid impacts to water features, and therefore drainage and/or construction permits from NDDWR are not anticipated to be required. Related to floodplains, the agency confirmed there are no FEMA national Flood Insurance Program floodplains identified or mapped in the Project Area and therefore no permits are required. And lastly, the agency noted that initial review of the Project indicates that a conditional or temporary permit for water appropriation is not required.

9.13 North Dakota Department of Environmental Quality

On August 11, 2025, NDDEQ responded to the Project introduction letter, providing information on mitigating fugitive dust, sourcing aggregate free of erionite, construction activities near waters of the state, stormwater permitting, avoiding spills that may affect groundwater, and solid waste management. NDDEQ also noted that the Project does not overlie an aquifer. As discussed throughout this Application, Homestead Wind has designed the Project to avoid and minimize impacts to water resources and will obtain appropriate construction related permits, including obtaining coverage under the NDPDES General Stormwater Construction Permit and preparation of a SWPPP.

9.14 North Dakota Geological Survey

On July 29, 2025, the Surface Geology Section Manager responded to the Project introduction letter confirming that no landslide areas or any other geologic concerns are present within the Project Area.

9.15 Williams County

Homestead Wind initiated coordination with Williams County in 2015 when it obtained CUPs for the temporary met towers in the vicinity of the Project.

On June 3, 2025, Homestead Wind held an in-person pre-application meeting with Michelle Haugen (Staff Planner) and Kameron Hymer (Development Services Director) to discuss the Project and Williams County's permitting processes.

On August 19, 2025, Homestead Wind met with the Williams County engineer to introduce the Project, discuss the Project layout and components, and reviewed a preliminary transportation plan for turbine and other equipment deliveries during construction. The group also discussed a culvert inventory that was completed and additional upcoming studies to be completed in advance of executing a RUMA. Following the meeting, the Wiliams County State's Attorney provided a draft RUMA to Homestead Wind. Homestead Wind will continue to coordinate with the Williams County engineer and Couty State's Attorney on road studies and the RUMA.

On October 14, 2025, Homestead Wind provided a draft Noxious Weed Management and Control Plan for the Project to the Williams County Weed Board. The plan was approved on October 15, 2025.

Homestead Wind filed its applications for Conditional Use Permits and variances with Williams County in November 2025. The Williams County Planning and Zoning Commission held a public hearing in December 2025 on the applications and voted to recommend approval. On January 6, 2026, the Williams County Board of County Commissioners approved the Conditional Use Permit for the Project and associated variances and the Conditional Use Permit for the transmission line.

9.16 Townships

Homestead Wind has coordinated with the local townships to provide information regarding the Project and answer questions. Homestead Wind will enter into RUMA(s) with the townships, if needed.

9.17 Williston Basin International Airport

Based on the North Dakota Aeronautics Commission's recommendation on September 16, 2025, Homestead Wind sent a Project introduction letter to the Williston Basin International Airport. The same day, Airport Director Anthony Dudas responded, noting that while the Project Area is under the approach and departure path for the airport's primary runway, he agrees with the NDAC "that once constructed, this is unlikely to have any impact on the airports operation." The Airport Director requested clarification of construction methods to ensure that they would have limited or negligible impact on the approach procedures and that the turbines will undergo FAA study (i.e., obtain DNHs), noting that the FAA's DNH process "will confirm if there is any impact to [the airport's] approach areas." On September 17, 2025, Homestead Wind provided the requested information, confirming that the construction crane height will be below the turbine tip height evaluated by the FAA and that Homestead Wind submitted the turbine layout for FAA study (DNHs) on September 16, 2025. Homestead Wind offered to meet with the Airport Director on instrument flight procedures as part of the FAA review. Homestead Wind will continue to coordinate with the airport, as needed.

10.0 QUALIFICATIONS OF CONTRIBUTORS TO SITING STUDY

Table 10.0-1 presents the qualifications of contributors to the siting study.

Table 10.0-1
Qualifications of Contributors to Siting Study

Name and Project Role	Education and Professional Experience
Brie Anderson Homestead Wind, LLC	Brie Anderson is a Senior Director of Project Permitting for Apex Clean Energy, where she has been employed for five years. In her role, she leads discretionary permit applications for local and state permits for wind, solar, and transmission projects across the portfolio. Prior to joining Apex, Brie worked as an environmental consultant for over 15 years working on energy projects across the country. Brie holds a Bachelor of Science degree in wildlife ecology from St. Cloud State University and a Master of Science degree in Geographic Information Systems from St. Mary's University of Minnesota.
Angie Durand Homestead Wind, LLC	Angela Durand is a Permitting Manager for Apex Clean Energy. In her role at Apex, where she has worked for 1.5 years, Angela supports all aspects of discretionary permitting at the local and state levels. Prior to joining Apex, Angela was an environmental consultant for over 20 years supporting regulatory compliance including environmental permitting and due diligence review for energy infrastructure development projects throughout the contiguous U.S., with an emphasis on wind and solar development projects. Angela holds a Bachelor of Science degree in Natural Resources and Environmental Studies from the University of Minnesota, Twin Cities.
Matt Eberl Homestead Wind, LLC	Matt Eberl is a Senior Development Manager for Apex Clean Energy where he has been employed for 4 years. In his role at Apex, Matt has worked on several wind projects in North Dakota and is responsible for managing Project development activities including leasing efforts, public relations, & community outreach. Prior to joining Apex, Matt was a Branch Manager for an environmental engineering & consulting company in the mid-Atlantic that focused on soil and groundwater remediation at brownfield sites. Matt has over 20 years experience in engineering and development and received a Bachelor of Science degree in environmental engineering from the State University of New York School of Environmental Science & Forestry (SUNY-ESF).
Jennie Geiger Homestead Wind, LLC	Jennie Geiger is a Senior Director of Environmental for Apex Clean Energy, where she has been employed for 11 years. In her role at Apex, Jennie has worked on over 40 wind and solar projects across the U.S. and is responsible for derisking projects from an environmental perspective to ensure regulatory compliance and minimize impacts to natural resources. Prior to joining Apex, Jennie worked as a Senior Manager for a consulting firm that supported federal agencies with environmental compliance and greenhouse gas emission reductions across the U.S. Jennie has more than 25 years of professional experience in environmental and wildlife management and received a Bachelor of Science in Forestry Resources and Wildlife Biology from the University of Georgia and a Master of Arts in Environmental Policy and Administration with an emphasis on collaborative approaches to natural resource management from Colorado State University.

Table 10.0-1
Qualifications of Contributors to Siting Study

Name and Project Role	Education and Professional Experience
Sarah Sinsabaugh Homestead Wind, LLC	Sarah Sinsabaugh is a Senior Environmental Permitting Manager for Apex Clean Energy. She has over 25 years of professional experience in the environmental industry, including the last 4 years with Apex. In her current role, she ensures her projects within Apex's commercial-scale wind and solar portfolio are permitted and commercialized in compliance with local, state, and federal environmental laws and regulations. She supports both greenfield reviews and the entire development-stage project life cycle. Prior to her role at Apex, she provided regulatory permitting strategy, solutions, mitigation, implementation, construction management, and compliance on both national and international projects during her tenure as a State regulator and environmental consultant. Sarah holds a Bachelor of Arts degree in Biological Sciences with a minor in environmental Studies from PACE University, Pleasantville, NY.
Brian Schreurs Homestead Wind, LLC	Brian Schreurs is a Senior GIS Analyst for Apex Clean Energy, where he has been employed for 3.5 years. Prior to working at Apex Brian has over 20 years of GIS experience working in environmental permitting, cultural resources and natural resource management. Brian collaborates with team members to assure data quality, supports fieldwork activities, provides analysis, and produces cartographic output in support of renewable energy projects. Brian received both a Bachelor of Science and Master of Science from St. Could State University, St. Cloud, MN.
Mollie Smith Attorney at Law Fredrikson & Byron, P.A.	Mollie Smith assists clients with wind farm, solar, pipeline, and transmission line permitting matters in North Dakota, South Dakota, and Colorado. At the state level, Mollie represents clients in certificate of corridor compatibility, route permit, certificate of site compatibility, and rulemaking proceedings before the PSC; and energy facility permit proceedings before the South Dakota Public Utilities Commission. At the local level, Mollie advises and assists clients with a variety of permitting-related matters, including obtaining conditional use/special exception permits, variances and subdivision approvals, and participating in zoning ordinance amendment processes. Mollie has a Bachelor of Arts in English from Northern State University, Aberdeen, SD; a Master of Arts in Literature from Colorado State University, Fort Collins, CO; and a Juris Doctor from the University of Minnesota Law School, Minneapolis, MN.
Bridget Duffus Attorney at Law Fredrikson & Byron, P.A.	Bridget Duffus assists clients with wind farm, solar farm, transmission line, and pipeline permitting matters in North Dakota, South Dakota, and Minnesota. At the state level, Bridget represents clients in certificate of corridor compatibility, route permit, and certificate of site compatibility proceedings before the North Dakota Public Service Commission, facility permit proceedings before the South Dakota Public Utilities Commission, and certificate of need, route permit, and site permit proceedings before the Minnesota Public Utilities Commission. At the local level, Bridget advises and assists clients with a variety of permitting-related matters, including obtaining conditional/special use permits and variances, and participating in zoning ordinance amendment processes. Bridget has a BA in Psychology from the University of St. Thomas, St. Paul, MN, and a JD from the University of St. Thomas School of Law, Minneapolis, MN.

Table 10.0-1
Qualifications of Contributors to Siting Study

Name and Project Role	Education and Professional Experience
Eddie Duncan, Paxwood Acoustics – Sound Modeling Analysis	Eddie Duncan, Principal Consultant at Paxwood Acoustics, is a Board-Certified Noise Control Engineer (#09002) through the Institute of Noise Control Engineering and is a member of the Acoustical Society of America. Mr. Duncan has been practicing acoustic consulting for over 20 years. In that time, he has managed over 450 acoustics projects and has worked on 120+ wind power projects, 80+ solar projects, 70+ transmission projects, and a growing portfolio of energy storage projects. He regularly provides expert testimony before state and local boards across the country. Eddie has a BS in Engineering Science from Rensselaer Polytechnic Institute (RPI) where he focused in acoustics and a MS in Environmental Studies from Green Mountain College where he focused in environmental law and policy.
Jake Runner, EDR – Shadow Flicker Analysis	Jacob Runner is a Practice Leader of Geospatial Services at Environmental Design and Research D.P.C. (EDR), with more than 10 years of professional experience. He coordinates, supervises, and manages the implementation and completion of geospatial-based projects and/or geospatial deliverables in support of all internal EDR divisions. Jacob standardizes workflows and adapts them to unique projects and/or datasets and is responsible for research and development of new or expanded geospatial services. He has robust experience in spatial analyses, shadow flicker assessments, glare analyses, and preparation of multiple state siting board applications and environmental impact statements. Jacob has served as an expert witness for several energy projects in varying jurisdictions including Ohio, New York, and Illinois. Jacob has a Bachelor of Science degree in Environmental Science with a concentration in Environmental Information and Mapping from the SUNY College of Environmental Science & Forestry, Syracuse, NY.
Chad LeBeau, WEST – Wildlife	Chad LeBeau is a Senior Biologist and Certified Senior Ecologist (Ecological Society of America) with Western EcoSystems Technology, Inc. (WEST), based in Laramie, Wyoming. He manages wildlife research studies across the United States and specializes in grouse ecology, including large-scale studies evaluating the effects of wind energy development on greater sage-grouse, lesser prairie-chickens, and plains sharp-tailed grouse. Chad's technical expertise includes wind–wildlife interaction studies, pre-construction risk assessments, and post-construction fatality monitoring for wind and solar energy projects.

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Qualifications of Contributors to Siting Study

Name and Project Role	Education and Professional Experience
Stephen Anderson, Tetra Tech – Archaeological and Architectural Resources	Stephen Anderson is the division cultural resource group manager at Tetra tech for projects in the Intermountain West, Southwest, Southeast, Great Plains, Midwestern Plains, and the Pacific Northwest. Stephen has experience working on archaeological projects in North Dakota, Colorado, Wyoming, Montana, Nebraska, New Mexico, Arkansas, Oregon, Idaho, Washington, Alaska, Utah, Iowa, South Dakota, Arizona, California, Nevada, Texas, Illinois, Indiana, Oklahoma, Kansas, Virginia, and West Virginia. He is a Registered Professional Archaeologist (RPA) and is permitted as a Principal Investigator in North Dakota and thirteen other western and Midwestern states and/or federal agencies and meets the Secretary of Interior standards. He is responsible for the supervision and coordination of the Tetra Tech, Inc. CES cultural resource group, managing GIS data and plan map graphics for site forms and reports, and writing technical reports. His areas of specialty and academic research include anthropological archaeology; peopling of the Americans; paleo- and archaic archaeology; cattle grazing impacts; river corridor archaeology; Great Plains archaeology; Great Basin archaeology, Wyoming historic coal mining; Grand Canyon and southern Arizona mining; Southwestern Idaho gold and silver mining; Montana copper mining; abandoned mine reclamation assessments; Fremont and Ancestral Puebloan cultures of New Mexico, Utah, Arizona, and Colorado; World War II Formerly Used Defense Sites (FUDS), Pacific Northwest archaeology of the Columbia Plateau and Western Aleutian Islands, and GIS analysis (ARCGIS 10.8).

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FIGURES