

# Environmental Assessment

**Nodak Electric Cooperative, Inc. to Construct Facility  
at Grand Forks AFB, North Dakota**



**Prepared by  
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## COVER SHEET

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Action: Nodak Electric Cooperative to Construct Operations Facility  
at Grand Forks Air Force Base, North Dakota.

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Designation: Environmental Assessment (EA)

Abstract: This EA has been prepared in accordance with the National Environmental Policy Act of 1969, Council on Environmental Quality and Air Force Environmental Impact Analysis Process, to assess the potential environmental impacts to construct a facility for use by Nodak Electric Cooperative at Grand Forks County, North Dakota. The facility is necessary as the result of the award of a fifty-year contract for Nodak to provide electrical utilities and infrastructure at Grand Forks Air Force Base, North Dakota.

Relevant resource areas analyzed in the EA include Airspace/Airfield Operations, Noise and Acoustic Environment, Air Quality and Climate Change, Water Resources, Natural and Biological Resources, Earth Resources, Hazardous Materials and Waste, Cultural Resources, Land Use, Infrastructure Utilities and Transportation, Safety and Occupational Health, Socioeconomic Resources and Environmental Justice.

In addition to the Proposed Action, the Alternative locations and the No Action Alternative are analyzed in the EA. The EA also addresses the potential cumulative effects of the associated activities along with other concurrent actions at Grand Forks AFB and the surrounding area. All references to Nodak, or Nodak Electric, refer to Nodak Electric Cooperative, Inc.

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## ACRONYMS, ABBREVIATIONS and TERMS

<u>AAM</u>	<u>Annual Arithmetic Mean</u>
<u>AC</u>	<u>Alternating Current</u>
<u>ACC</u>	<u>Air Combat Command</u>
<u>ACG</u>	<u>Architectural Compatibility Guidelines</u>
<u>ACM</u>	<u>Asbestos Containing Material</u>
<u>AF</u>	<u>Air Force</u>
<u>AFB</u>	<u>Air Force Base</u>
<u>AFI</u>	<u>Air Force Instruction</u>
<u>AFOSH</u>	<u>Air Force Occupational Safety and Health</u>
<u>AICUZ</u>	<u>Air Installation Compatible Use Zone</u>
aka	also known as
<u>AMC</u>	<u>Air Mobility Command</u>
<u>AOC</u>	<u>Area of Concern</u>
<u>APZ</u>	<u>Accident Potential Zone</u>
<u>ARPA</u>	<u>Archeological Resource Protection Act</u>
<u>ARW</u>	<u>Air Refueling Wing</u>
<u>AST</u>	<u>Above Ground Storage Tank</u>
<u>ATC</u>	<u>Air Traffic Control</u>
<u>AT/FP</u>	<u>Antiterrorism Force Protection</u>
<u>ATR</u>	<u>Air Traffic Radio</u>
<u>Ave</u>	<u>Avenue</u>
<u>AWWA</u>	<u>American Water Works Association</u>
<u>BASH</u>	<u>Bird Aircraft Strike Hazard</u>
<u>Bldg</u>	<u>Building</u>
<u>Blvd</u>	<u>Boulevard</u>
<u>BMP</u>	<u>Best Management Practice</u>
<u>BMX</u>	<u>Bike Motocross</u>
<u>BOD</u>	<u>Biochemical Oxygen Demand</u>
<u>BRAC</u>	<u>Base Realignment And Closure</u>
<u>BTU</u>	<u>British Thermal Unit</u>
<u>C&amp;D</u>	<u>Construction and Demolition</u>
<u>CAA</u>	<u>Clean Air Act</u>
<u>CATM</u>	<u>Combat Arms Training and Maintenance</u>
<u>CDC</u>	<u>Child Development Center</u>
<u>CEQ</u>	<u>Council on Environmental Quality</u>
<u>CERCLA</u>	<u>Comprehensive Environmental Response, Compensation and Liability Act</u>
<u>CES</u>	<u>Civil Engineer Squadron</u>
<u>CEV</u>	<u>Environmental Management Flight</u>
<u>CFR</u>	<u>Code of Federal Regulations</u>
<u>CO</u>	<u>Carbon Monoxide</u>
<u>CWA</u>	<u>Clean Water Act</u>
<u>dB</u>	<u>decibel</u>

1	<u>dB</u>	<u>Decibels Adjusted</u>
2	<u>DNL</u>	<u>Day-Night Average A-Weighted Sound Level</u>
3	<u>DOD</u>	<u>Department of Defense</u>
4		
5	<u>EA</u>	<u>Environmental Assessment</u>
6	<u>EIAP</u>	<u>Environmental Impact Analysis Process</u>
7	<u>EIS</u>	<u>Environmental Impact Statement</u>
8	<u>EO</u>	<u>Executive Order</u>
9	<u>EPA</u>	<u>Environmental Protection Agency</u>
10	<u>EPCRA</u>	<u>Emergency Planning and Community Right-to-Know Act</u>
11	<u>EQSD</u>	<u>Explosive Quantity Siting Distance</u>
12	<u>ERP</u>	<u>Environmental Restoration Program</u>
13	<u>ESA</u>	<u>Endangered Species Act</u>
14		
15	<u>F</u>	<u>Fahrenheit</u>
16	<u>FAA</u>	<u>Federal Aviation Administration</u>
17	<u>FEMA</u>	<u>Federal Emergency Management Agency</u>
18	<u>FONPA</u>	<u>Finding of No Practicable Alternative</u>
19	<u>FONSI</u>	<u>Finding of No Significant Impact</u>
20	<u>ft</u>	<u>Feet</u>
21	<u>ft<sup>3</sup>/s</u>	<u>feet cubed per second</u>
22	<u>FW</u>	<u>Fighter Wing</u>
23		
24	<u>GATR</u>	<u>Ground-to-Air Transmitter and Receiver</u>
25	<u>GFAFB</u>	<u>Grand Forks Air Force Base</u>
26	<u>GPP</u>	<u>Green Procurement Program</u>
27		
28	<u>HAP</u>	<u>Hazardous Air Pollutants</u>
29	<u>hr</u>	<u>Hour</u>
30	<u>HCA</u>	<u>Hazardous Cargo Area</u>
31	<u>HM</u>	<u>Hazardous Material</u>
32	<u>H<sub>2</sub>S</u>	<u>Hydrogen Sulfide</u>
33	<u>HVAC</u>	<u>Heating, Ventilation and Air Conditioning</u>
34	<u>HW</u>	<u>Hazardous Waste</u>
35		
36	<u>IAW</u>	<u>in accordance with</u>
37	<u>IDP</u>	<u>Installation Development Plan</u>
38	<u>IRP</u>	<u>Installation Restoration Program</u>
39	<u>INRMP</u>	<u>Integrated Natural Resources Management Plan</u>
40		
41	<u>KV</u>	<u>Kilovolt</u>
42	<u>KVA</u>	<u>Kilovolt-Ampere</u>
43		
44	<u>LT</u>	<u>Long-Term</u>
45	<u>LEED</u>	<u>Leadership in Environmental and Energy Design (US Green Building Council)</u>
46		



1	<u>MBTA</u>	<u>Migratory Bird Treaty Act</u>
2	<u>MFH</u>	<u>Military Family Housing</u>
3	<u>MILSTD</u>	<u>Military Standard</u>
4	<u>mph</u>	<u>Miles Per Hour</u>
5	<u>MSDS</u>	<u>Material Safety Data Sheet</u>
6	<u>MSA</u>	<u>Munitions Storage Area</u>
7	<u>MSL</u>	<u>Mean Sea Level</u>
8	<u>µg/m<sup>3</sup></u>	<u>Micrograms Per Meter Cubed</u>
9	<u>MUX</u>	<u>Multiplex(er)</u>
10		
11	<u>NAAQS</u>	<u>National Ambient Air Quality Standards</u>
12	<u>NAGPRA</u>	<u>Native American Graves Protection and Repatriation Act</u>
13	<u>ND</u>	<u>North Dakota</u>
14	<u>NDAAQS</u>	<u>North Dakota National Ambient Air Quality Standards</u>
15	<u>NDAC</u>	<u>North Dakota Administrative Code</u>
16	<u>NDDH</u>	<u>North Dakota Department of Health</u>
17	<u>NDGFD</u>	<u>North Dakota Game and Fish Department</u>
18	<u>NDNHP</u>	<u>North Dakota Natural Heritage Program</u>
19	<u>NDPDES</u>	<u>North Dakota Pollutant Discharge Elimination System</u>
20	<u>NEPA</u>	<u>National Environmental Policy Act</u>
21	<u>NESHAP</u>	<u>National Emission Standards for Hazardous Air Pollutants</u>
22	<u>NFPA</u>	<u>National Fire Protection Act</u>
23	<u>NHPA</u>	<u>National Historic Preservation Act</u>
24	<u>NO<sub>x</sub></u>	<u>Nitrogen Oxides</u>
25	<u>NO<sub>2</sub></u>	<u>Nitrogen Dioxide</u>
26	<u>Nodak Electric</u>	<u>Nodak Electric Cooperative</u>
27	<u>NPDES</u>	<u>National Pollutant Discharge Elimination System</u>
28	<u>NPL</u>	<u>National Priorities List</u>
29	<u>NRHP</u>	<u>National Register of Historic Places</u>
30	<u>NWR</u>	<u>National Wildlife Refuge</u>
31		
32	<u>O<sub>3</sub></u>	<u>Ozone</u>
33	<u>QD</u>	<u>Quantity Distance</u>
34	<u>OSHA</u>	<u>Occupational Safety and Health Act</u>
35	<u>OWS</u>	<u>Oil Water Separator</u>
36		
37	<u>Pb</u>	<u>Lead</u>
38	<u>PCS</u>	<u>Petroleum-Contaminated Soil</u>
39	<u>PEM</u>	<u>Palustrine Emergent Wetland</u>
40	<u>PM<sub>10</sub></u>	<u>Particulate Matter 10 Microns in Diameter</u>
41	<u>PM<sub>2.5</sub></u>	<u>Particulate Matter 25 Microns in Diameter</u>
42	<u>POL</u>	<u>Petroleum Oil Lubricant</u>
43	<u>PPE</u>	<u>Personal Protective Equipment</u>
44	<u>ppm</u>	<u>Parts Per Million</u>
45	<u>PSD</u>	<u>Prevention of Significant Deterioration</u>
46		

1	<u>QA/QC</u>	<u>Quality Assessment and Quality Control</u>
2		
3	<u>RACM</u>	<u>Regulated Asbestos Containing Materials</u>
4	<u>RCRA</u>	<u>Resource Conservation and Recovery Act</u>
5	<u>RCS</u>	<u>Report Control Symbol</u>
6	<u>RG</u>	<u>Reconnaissance Group</u>
7	<u>RH</u>	<u>Relative Humidity</u>
8	<u>RI/FS</u>	<u>Remedial Investigation/Feasibility Study</u>
9	<u>ROI</u>	<u>Region of Interest</u>
10	<u>RV</u>	<u>Recreational Vehicle</u>
11		
12	<u>SAGE</u>	<u>Strategic Air Ground Equipment</u>
13	<u>SAIC</u>	<u>Science Applications International Corporation</u>
14	<u>SARA</u>	<u>Superfund Amendments and Reauthorization Act</u>
15	<u>SATAF</u>	<u>Site Activation Task Force</u>
16	<u>SDS</u>	<u>Safety Data Sheet</u>
17	<u>SF</u>	<u>Square Feet</u>
18	<u>SO</u>	<u>System Owner</u>
19	<u>SNG</u>	<u>Synthetic Natural Gas</u>
20	<u>SO<sub>2</sub></u>	<u>Sulfur Dioxide</u>
21	<u>SO<sub>x</sub></u>	<u>Sulfur Dioxide</u>
22	<u>St</u>	<u>Street</u>
23	<u>ST</u>	<u>Short-Term</u>
24	<u>SWMU</u>	<u>Solid Waste Management Unit</u>
25		
26	<u>TO</u>	<u>Technical Order</u>
27	<u>tpy</u>	<u>Tons Per Year</u>
28	<u>TSCA</u>	<u>Toxic Substance Control Act</u>
29	<u>TSI</u>	<u>Thermal System Insulation</u>
30		
31	<u>UAS</u>	<u>Unmanned Aircraft System</u>
32	<u>UHF</u>	<u>Ultra High Frequency</u>
33	<u>UPS</u>	<u>Uninterruptible Power Supply</u>
34	<u>US</u>	<u>United States</u>
35	<u>USACE</u>	<u>United States Army Corps of Engineers</u>
36	<u>USAF</u>	<u>United States Air Force</u>
37	<u>USFWS</u>	<u>United States Fish and Wildlife Service</u>
38	<u>U.S.C.</u>	<u>United States Code</u>
39	<u>USEPA</u>	<u>United States Environmental Protection Agency</u>
40	<u>UST</u>	<u>Underground Storage Tank</u>
41		
42	<u>VOC</u>	<u>Volatile Organic Compound</u>
43	<u>VHF</u>	<u>Very High Frequency</u>
44		

## EXECUTIVE SUMMARY

### **Nodak Electric Cooperative, Inc. to construct an operations facility at Grand Forks Air Force Base, North Dakota**

Grand Forks Air Force Base has prepared this Environmental Assessment to comply with the National Environmental Policy Act of 1969, as amended. This document evaluates the potential environmental impacts of activities associated with the proposed construction by Nodak Electric Cooperative to construct a facility at Grand Forks AFB. All references to Nodak, or Nodak Electric, refer to Nodak Electric Cooperative, Inc.

The Proposed Action is a construction project for an operation facility to enable Nodak Electric Cooperative to provide electric utilities at Grand Forks AFB. Nodak was awarded a fifty-year contract, called Utility Privatization, effective for years 2018-2068. It involves Federal funding and Federal land. The proposed location for construction is along Contractor Row on Grand Forks AFB.

The Alternative Action includes a No Action alternative. Three alternative locations were considered, but eliminated from detailed study.

Based upon the nature of the activities that would occur under the Proposed Action and Alternative Action, Grand Forks AFB environmental program managers determined that the following resources would be insignificantly affected: Airspace/Airfield Operations, Noise and Acoustic Environment, Air Quality and Climate Change, Water Resources, Natural and Biological Resources, Earth Resources, Hazardous Materials and Waste, Cultural Resources, Land Use, Infrastructure Utilities and Transportation, Safety and Occupational Health, Socioeconomic Resources and Environmental Justice. The existing conditions were evaluated and documented as the basis for determining the environmental consequences.

These conclusions were the basis for the decision to issue a Finding of No Significant Impact (FONSI) in accordance with the Council on Environmental Quality Regulations, 40 CFR, Parts 1500-1508, which implements the procedural provisions of the National Environmental Policy Act of 1969, PL 91-190, 42 USC 4321-4347, as amended and 32 CFR 989, which implements the Environmental Impact Analysis Process (EIAP) for Air Force actions.

## **1.0 PURPOSE OF AND NEED FOR PROPOSED ACTION**

As required by the National Environmental Policy Act (NEPA) of 1969, federal agencies must consider environmental consequences in their decision-making process. The Air Force complies with NEPA through adherence to 40 Code of Federal Regulations (CFR) 1500-1508, Council on Environmental Quality's (CEQ's) Regulations for Implementing the Procedural Provisions of NEPA and 32 CFR 989, Air Force Environmental Impact Analysis Process (also known as AFI 32-7061). These federal regulations establish both the administrative process and substantive scope of the environmental impact evaluation designed to ensure that deciding authorities have a proper understanding of the potential environmental consequences of a contemplated course of action.

The EA provides analysis of the potential environmental impacts from both the Proposed Action and the Alternative Actions to determine whether the Proposed Action would have a significant adverse effect on the quality of the environment. This environmental assessment evaluates the proposed Construction of a Facility by Nodak Electric on Grand Forks AFB.

### **1.1 INTRODUCTION**

The 319th Air Base Wing, Grand Forks Air Force Base, North Dakota, provides Base operating and direct operations support to wing personnel, two tenant units and eleven geographically separated units (GSU) including Cavalier AFS ND. The wing trains, deploys and redeploys over 1,400 Airmen in support of the Air Expeditionary Force and combatant commander requirements. It also provides facilities and equipment support for the Department of Homeland Security Customs and Border Protection and the 69th Reconnaissance Group. The wing is also only one of two locations worldwide operating the High Frequency Global Communications System, providing operational support of senior leader communications for all Department of Defense agencies, including the President of the United States. In addition, the wing provides logistics, medical, civil engineering, contracting, communications, security and force support functions as well as facilities and equipment.

Grand Forks AFB supports a broad mission set. The 69th Reconnaissance Group conducts daily missions for Combatant Commanders throughout the world with Global Hawk high-altitude intelligence, surveillance and reconnaissance (HAISR) remotely piloted aircraft. The 319th Communications Squadron operates one of only two control nodes for the High Frequency Global Communications System, which exists to provide reliable command and control to a host of DOD entities and missions, including worldwide global airlift. The 319th Air Base Wing enables these missions, as well as Reaper (MQ-9) operations for the Department of Homeland Security's Customs and Border Protection. In addition, the 319 ABW supports the Space Surveillance mission of the 10th Space Warning Squadron at Cavalier Air Force Station.

The Mission Statement states that Grand Forks AFB would:

- Provide decisional advantage to our warfighters and national leaders through support of our Nation's Global Hawk High Altitude ISR mission.
- Ensure strategic command and control through operation of the Nation's High Frequency Global Communication System (HFGCS).

- Afford Combatant Commanders mission-ready Airmen anytime, anywhere.
- Provide Airmen and families of the Grand Forks AFB team, to include geographically separated units, with responsive, tailored and mission-focused support.
- The 69<sup>th</sup> RG would train, deploy and employ airmen and assets to deliver globally integrated ISR in support of national objectives.

Grand Forks AFB covers 5,150 acres of government-owned land, with another 595 acres in easements, permits and licenses, for a total of 5,745 acres occupied. GFAFB is located in northeastern ND, about 13 miles west of Grand Forks, along United States (US) Highway 2. See Figure 1.1 for a location map. Grand Forks (population 66,861) is the third largest city in ND. The city and surrounding area, is a regional center for agriculture, education and government. It is located approximately 160 miles south of Winnipeg, Manitoba and 315 miles northwest of Minneapolis, Minnesota. The total Base population, as of September 2017, is approximately 4,213. Of that, 1,643 are military, 1,566 are military dependents, 320 appropriated fund (APF) civilians and 684 other civilians working on-base (NAF, Commissary, BX, DHS, Grand Forks Public School, contractors).

In 2005, the Base Realignment and Closure (BRAC) Commission's final recommendation included realignment of the 319<sup>th</sup> Air Refueling Wing's KC-135-R/T aircraft to five other Bases by 2010. It recommended modification of infrastructure at Grand Forks AFB to accommodate the emerging Unmanned Aircraft System (UAS) mission using Remotely Piloted Aircraft (RPA). The Air Force constructed appropriate facilities on GFAFB to launch, recover, maintain and support the UAS.

The mission of Grand Forks AFB changed from tankers to Remotely Piloted Aircraft in January of 2011. The initial cadre of personnel arrived to beddown the incoming Global Hawk aircraft with the first two aircraft in summer of 2011. The wing has nine Block 40 and three Block 20 Global Hawk aircraft.

The Global Hawk is a high-altitude, long-endurance (HALE) unmanned aircraft system (UAS) designed to provide military field commanders with comprehensive, near-real-time intelligence, surveillance and reconnaissance (ISR), plus detection of moving targets over a large geographical area for battle management, targeting and situation awareness of enemy actions.



1 The Air Force announced the re-designation of the 319th Air Base Wing at Grand Forks Air Force  
2 Base, North Dakota, as the 319th Reconnaissance Wing, on May 11, 2019. The official re-  
3 designation ceremony is scheduled for June 28, 2019, in conjunction with the Grand Forks AFB  
4 change of command.

5  
6 The re-designation, initiated by Air Combat Command, aligns Grand Forks AFB's host wing and  
7 the 69th Reconnaissance Group. The 69th RG, which flies the high-altitude, remotely-piloted RQ-  
8 4 Global Hawk aircraft, has been aligned under the 9th Reconnaissance Wing at Beale  
9 AFB, California, since it initiated operations as a tenant at Grand Forks AFB in 2011.

10  
11 Although there won't be any changes to aircraft or operations at Beale AFB, changes at Grand  
12 Forks AFB are expected to begin this year. When the 69th RG mission and personnel align under  
13 the 319th RW, the unit will be activated as the 319th Operations Group and the 69th  
14 Reconnaissance Group will inactivate. The 319th OG will continue to execute the Global Hawk's  
15 intelligence, surveillance and reconnaissance mission in support of worldwide, full-spectrum  
16 operations.

## 17 18 **1.2 PURPOSE AND NEED FOR THE ACTION**

19  
20 This Description of Proposed Action and Alternative (DOPAA) examines the potential for impacts  
21 to the environment resulting from construction of a facility by Nodak Electric to be used during  
22 their 50-year lease to provide electrical utilities at Grand Forks Air Force Base, North Dakota.

23 Defense Logistics Agency (DLA) has awarded the fifty-year contract, SP0600-18-C-8321, to  
24 Nodak Electric Cooperative to provide all electric utilities at Grand Forks AFB. The contract,  
25 called Utility Privatization, has a period of performance from December 1, 2018 to November 30,  
26 2068.

27  
28 Nodak Electric Cooperative proposes to construct a facility on Grand Forks Air Force Base (AFB),  
29 North Dakota. The facility would provide heated space for maintenance, office, electrical  
30 materials storage and staging and vehicle and equipment storage. Nodak Electric would have title  
31 to the facility it builds and the federal land provided free of rental, as part of the Utility  
32 Privatization contract.

33  
34 The purpose of the Proposed Action for Grand Forks AFB is to to provide real estate on which  
35 Nodak can construct a long term facility from which to operate.

## 36 37 **Background**

38  
39 Historically, Air Force civil engineers were meeting mission requirements operating and  
40 maintaining utility systems at significantly less cost than industry standard for many years.  
41 However, by the end of the 20th century, energy consumption had increased and the amount of  
42 technicians available on a daily basis began decreasing; as a result of the system degradation, the  
43 Air Force began looking for a solution. In December 1998, Defense Reform Initiative Directive  
44 #49 mandated all military departments to develop plans to privatize utilities on military bases.

1 The Air Force recognized maintenance, operations and upgrades of the four main utility systems,  
2 electric, natural gas, sewer and water, are not a core competency and, where appropriate and cost  
3 effective, should be privatized.

4  
5 The Air Force has “privatized” or owned-by-others utility systems before the Congressional  
6 utilities privatization authorization, Title 10 U.S.C. § 2688, in 1998. Congress enacted Title 10  
7 U.S. Code §2688 to provide statutory authority for the service secretaries to solicit and transfer  
8 ownership of Defense Department utility system infrastructure. It allows the Air Force to transfer  
9 ownership of existing utility distribution systems to private, municipal, regional, district, or  
10 cooperative utility companies or other entities where such conveyance demonstrates long-term  
11 economic benefits. Procurement of the underlying commodity is not part of utilities privatization.

12  
13 Subsequently, DoD issued direction to the service secretaries to privatize utility systems. These  
14 directives were based on two premises: Utility system ownership and its associated operation and  
15 maintenance are not a DoD core competency and utility systems on DoD installations must be  
16 restored to and reliably maintained at, industry standards. The benefits of Utility Privatization  
17 includes precise understanding of regulatory requirements, specialized current expertise and  
18 training, faster access to system specific parts reduces down time and a one-stop-shop with all  
19 skills for system operation and maintenance. The base mission is not impacted during utility  
20 system transfer and it provides long-term operational stability.

21  
22 When the on-base utility system has been privatized, it is wholly owned, operated and maintained  
23 by a System Owner (SO). In this instance, the SO is Nodak Electric. The privatized utility system  
24 may include production, distribution, collection, generation and treatment facilities. Utility  
25 Privatization (UP) is defined in AFI 32-1061.

26  
27 The construction of an operational building is anticipated to adequately house required support  
28 equipment and support areas for Nodak Electric. The project must meet current health and safety  
29 standards. Grand Forks AFB does not have a facility available to provide Nodak Electric the  
30 permanent space and requirements needed by the company. Construction would provide right-  
31 sized facility space to provide operational efficiency.

32  
33 The System Owner shall acquire, furnish, install and operate and maintain all facilities required to  
34 provide the utility service. The System Owner shall have title to all facilities it builds and  
35 equipment it installs under the contract. If available and at the Government’s sole discretion, the  
36 System Owner may be permitted to either build or lease office space, maintenance shops, materials  
37 storage/staging areas, or other facilities on the Installation.

38 The System Owner shall be responsible for acquiring all utilities, janitorial services, building  
39 maintenance and ground maintenance for these facilities. The Government may, if its capabilities  
40 permit, consent to provide certain of these services to the System Owner on a reimbursable basis,  
41 as defined in the utility-specific attachments of the contract.

42 New construction or remodeling of existing facilities shall comply with the Installation’s  
43 architectural standards and be fully coordinated with the Installation prior to beginning  
44 construction.

1 The proposed EIAP action is assigned RCS number 2018-006. A copy of the AF Form 813  
2 describing the Proposed and Alternative Actions is found in Appendix A of the EA. There is no  
3 Automated Civil Engineering System-Project Management (ACES-PM) project number assigned  
4 because Nodak Electric is constructing their own building.

### 6 **1.3 OBJECTIVES FOR THE ACTION**

8 Grand Forks AFB proposes to provide a location for Nodak Electric to construct a 5,000 SF facility  
9 to use as part of Utility Privatization.

11 AFI 32-1061 describes the Environmental Studies to Support UP as follows:

- 12 • An Environmental Baseline Survey (EBS) is not required for those areas that are subject  
13 to non-exclusive use under a right of access. An EBS is mandatory for areas that the  
14 privatization entity would use exclusively, such as plants or substations.  
15 When a privatization action qualifies for application of a categorical exclusion (CATEX),  
16 the CATEX should be applied. An Environmental Assessment or Environmental Impact  
17 • Statement should only be prepared when the action does not qualify for application of a  
18 CATEX. The construction of a new facility in an undeveloped site does not qualify for a  
19 CATEX. Therefore, this EA is required.

### 21 **1.4 SCOPE OF EA**

23 This EA identifies, describes and evaluates the potential environmental impacts associated with  
24 the Proposed Action to construct a new facility by and for Nodak Electric.

26 The following resources must be considered under the NEPA, Section 102(E).

- 28 • Air Space/Airfield Operations
- 29 • Noise and Acoustic Environment
- 30 • Air Quality and Climate Change
- 31 • Water Resources
- 32 • Natural and Biological Resources
- 33 • Earth Resources
- 34 • Hazardous Materials and Waste
- 35 • Cultural Resources
- 36 • Land Use
- 37 • Infrastructure and Utilities
- 38 • Safety and Occupational Health
- 39 • Socioeconomic Resources
- 40 • Environmental Justice

### 42 **1.5 DECISION(S) THAT MUST BE MADE**

44 This EA evaluates the environmental consequences from the Proposed Action to construct a new  
45 facility in the proposed construction site location in order for Nodak Electric to perform Utility



1 Privatization of Electric Utilities. The other decision options are to a No Action Alternative and  
2 three other location Alternatives, as described in section 2.5 below.

3  
4 These actions are proposed to provide a functional work space for Nodak Electric. NEPA requires  
5 that environmental impacts be considered prior to final decision on a proposed project. The Base  
6 Commander would determine if a Finding of No Significant Impact can be signed or if an  
7 Environmental Impact Statement (EIS) must be prepared. Preparation of an environmental  
8 analysis must be accomplished prior to a final decision regarding the proposed project and must  
9 be available to inform decision makers of potential environmental impacts of selecting the  
10 Proposed Action or any of the Alternatives.

## 11 12 **1.6 APPLICABLE REGULATORY REQUIREMENTS AND REQUIRED** 13 **COORDINATION**

14  
15 These regulations require federal agencies to analyze potential environmental impacts of Proposed  
16 Action and Alternatives and to use these analyses in making decisions on a Proposed Action. All  
17 cumulative effects and irretrievable commitment of resources must also be assessed during this  
18 process. The Council on Environmental Quality (CEQ) regulations declares that an EA is required  
19 to accomplish the following objectives:

- 20  
21 • Briefly provide sufficient evidence and analysis for determining whether to prepare an  
22 EIS or a Finding of No Significant Impact (FONSI).
- 23 • Aid in an agency's compliance with NEPA when an EIS is not necessary and facilitate  
24 preparation of an EIS when necessary.

25  
26 Air Force Instruction (AFI) 32-7061 as promulgated in 32 Code of Federal Regulations (32 CFR)  
27 989, specifies the procedural requirements for the implementation of NEPA and the preparation of  
28 an EA. Other environmental regulatory requirements relevant to the Proposed Action and  
29 Alternatives are also in this EA. Regulatory requirements including, but not restricted to the  
30 following programs would be assessed:

- 31  
32 • AFI 32-7020, Environmental Restoration Program
- 33 • AFI 32-7040, Air Quality Compliance
- 34 • AFI 32-7041, Water Quality Compliance
- 35 • AFI 32-7042, Waste Management
- 36 • AFI 32-7063, Air Installation Compatible Use Zone (AICUZ) Program
- 37 • AFI 32-7064, Integrated Natural Resource Management
- 38 • Archaeological Resources Protection Act (ARPA) [16 U.S.C. Sec 470a-11, et seq., as  
39 amended]
- 40 • Clean Air Act (CAA) [42 U.S.C. Sec 7401, et seq., as amended]
- 41 • Clean Water Act (CWA) [33 U.S.C. Sec 400, et seq.]
- 42 • CWA [33 U.S.C. Sec 1251, et seq., as amended]
- 43 • Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)  
44 of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA)  
45 [42 U.S.C. Sec. 9601, et seq.]
- 46 • Defense Environmental Restoration Program [10 U.S.C. Sec. 2701, et seq.]

- 1 • Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 [42
- 2 U.S.C. Sec. 11001, et seq.]
- 3 • Endangered Species Act (ESA) [16 U.S.C. Sec 1531-1543, et seq.]
- 4 • Executive Order (EO) 11514, Protection and Enhancement of Environmental Quality
- 5 as Amended by EO 11991
- 6 • EO 11988, Floodplain Management
- 7 • EO 11990, Protection of Wetlands
- 8 • EO 12372, Intergovernmental Review of Federal Programs
- 9 • EO 12898, Environmental Justice
- 10 • EO 12989 Federal Actions to Address Environmental Justice in Minority Populations
- 11 and Low-income Populations
- 12 • EO 13045, Protection of Children from Environmental Health Risks and Safety Risks
- 13 • EO 13112, Invasive Species
- 14 • Hazardous Materials Transportation Act of 1975 [49 U.S.C. Sec 1761, et seq.]
- 15 • NEPA of 1969 [42 U.S.C. Sec 4321, et seq.]

16 Proposed Action for construction of a 5,000 SF facility for Nodak Electric would not disturb more  
17 than one acre and thus would not require the need for Grand Forks AFB or the construction  
18 contractor to obtain a separate NPDES construction permit from the North Dakota Department of  
19 Health (NDDH). The Base general small site permit would cover this activity to construct a 5,000  
20 SF facility and would need to be tracked by the construction agent IAW the appropriate rules. The  
21 permit would regulate discharge of storm water runoff until the site is stabilized by the  
22 reestablishment of vegetation or other permanent cover.

23  
24 Scoping for this EA included discussion of relevant issues with members of the environmental  
25 management, safety and bioenvironmental flights. Scoping letters requesting comments on  
26 possible issues of concern are sent to agencies with pertinent resource responsibilities. Interagency  
27 correspondence is found in Appendix A. In accordance with 32 CFR 989, a copy of the final EA  
28 is submitted to the ND Division of Community Services.

29  
30 Applicable regulatory requirements, environmental controls and required coordination before and  
31 during construction include Preconstruction Survey Report, Health and Safety Plan, a Work  
32 Clearance Request, Stormwater Protection Plan, Dust Control Plan, Spill Control Plan and Erosion  
33 and Sediment Control Plan to the CEIEC Water Program Manager; a Pollution Prevention Plan,  
34 Asbestos Removal Plan, Spill Control Plan and Waste Disposal Plan to the CEIEC Environmental  
35 Solid Waste/Toxic Program Manager; and copies of all plans to the Contracting Officer. The  
36 contractor performing the action would be required to submit these plans and specification to the  
37 319 CES for approval prior to initiating work. Section 106 consultation with SHPO would be  
38 accomplished in coordination with the EA.

39  
40 The Intergovernmental Coordination Act and EO 12372, Intergovernmental Review of Federal  
41 Programs, require federal agencies to cooperate with state and local agencies and to consider their  
42 views on implementing a federal proposal. Interagency and Intergovernmental Coordination for  
43 Environmental Planning (IICEP) is required under AFI 32-7060 for the purpose of agency  
44 coordination. The Description of Proposed Action and Alternatives (DOPAA) is provided to  
45 relevant federal, state, tribal and local agencies for their input during the scoping process. Section  
46 6.0 lists the agencies provided with a copy of the draft DOPAA and EA. USAF considered their

input in the planning process; comment letters and emails received are included in Appendix C. Additionally, the EA will be made available for a 30-day public comment period, to solicit the input of these and other agencies as well as other interested parties. A copy of the public notice is found in Appendix B. A Public Notice of Availability for the EA and Draft FONSI will be published in the Grand Forks Herald. The EA and Draft FONSI will be on the Grand Forks Air Force Base public web site <https://www.grandforks.af.mil/About-Us/Economic-and-Environmental-Information>. The IICEP and public comment effort is performed to solicit agency and public input in the decision-making process. Replies will be included in Appendix C.

The following include:

- the location map for Grand Forks AFB ND.
- the base map.

### Grand Forks AFB, ND

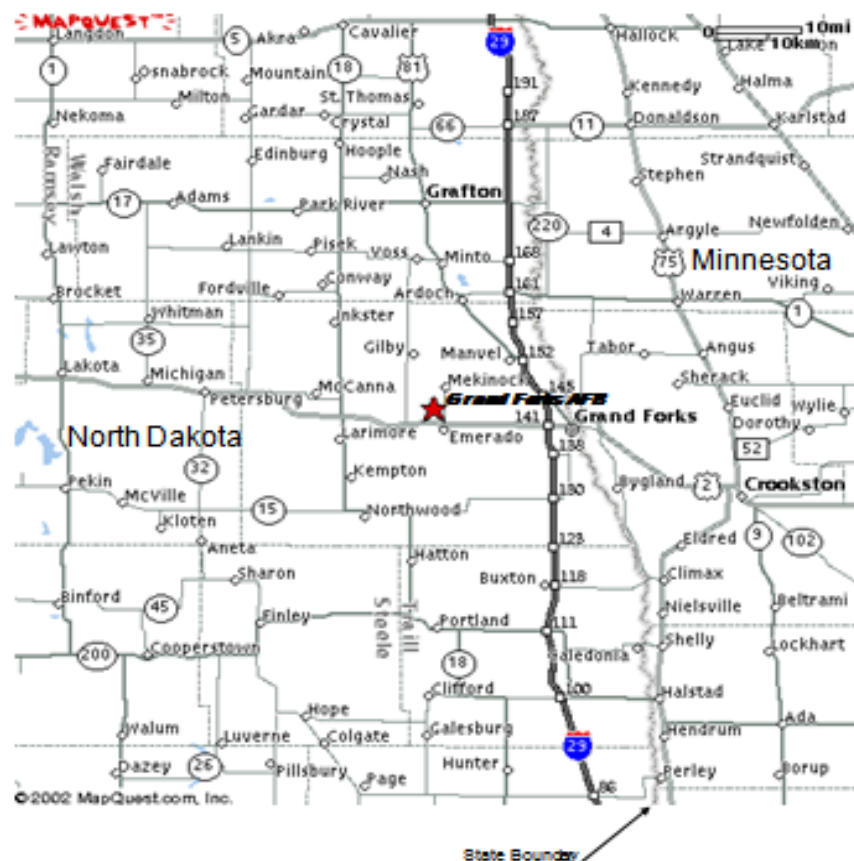


Figure 1.1 Location of Grand Forks Air Force Base in eastern North Dakota

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6  
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8  
9  
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11  
12  
13  
14  
15



## **2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**

### **2.1 INTRODUCTION**

This section presents a comparative summary matrix of the alternatives, providing the decision maker and the public with a clear basis for choice among the alternatives.

This section has five parts:

- Selection Criteria for Alternatives
- Alternatives Considered but Eliminated from Detailed Study
- Detailed Descriptions of the Three Alternatives Considered
- Comparison of Environmental Effects of the Proposed Action and Alternatives
- Identification of the Preferred Alternative

### **2.2 SELECTION CRITERIA FOR ALTERNATIVES**

The National Environmental Policy Act (NEPA) and the Council on Environmental Quality (CEQ) regulations mandate the consideration of reasonable alternatives for the proposed action. “Reasonable alternatives” are those that also could be utilized to meet the purpose of and need for the proposed action. Per the requirements of 32 Code of Federal Regulations (CFR) 989, the USAF Environmental Impact Analysis Process (EIAP) regulation, selection standards are used to identify alternatives for meeting the purpose and need for the USAF action.

Selection criteria used to evaluate the Proposed and Alternative Action to construct a facility for Nodak Electric to include the following:

- A location that allows enough space for a 5,000 SF facility with sufficient space for laydown of equipment and supplies, including large transformers and switches and employee parking.
- A location in the proper Land Use District: Industrial.
- A location with nearby utilities of electricity, water, wastewater and natural gas.
- A location with accessible roads for Nodak Electric trucks, equipment and employee access.

The Proposed Action must meet the criteria as follows:

- Avoid or minimize impacts to the natural and man-made environment.
- Comply with state and federally mandated requirements and protocols.
- Meet the current mission requirements of the installation.
- Improve the versatility of the Base for accepting new missions.
- Eliminate or minimize potential hazards to safety that could occur in the area.

### **2.3 SCREENING OF ALTERNATIVES**

The following potential alternatives that might meet the purpose and need for an operation building for Nodak Electric were considered.

- Proposed Action – a space along Contractor Row would provide sufficient space for Nodak plus space to grow, if needed.
- No Action – without a permanent operation facility, Nodak would need to continue to relocate each time that the Air Force has a higher need for the property.
- Alternative Actions – three locations were considered, but eliminated as the best choice for a permanent location for Nodak Electric.

## 2.4 DESCRIPTION OF PROPOSED ALTERNATIVES

This section describes the activities that would occur under alternatives: the No Action Alternative and the Proposed Action. The proposed action along Contractor Row was chosen for analysis in this EA. The three alternatives in section 2.5 below were eliminated for complete analysis. However, the environment and consequences are similar for all four locations. The EA would provide the decision maker with a reasonable range of alternative locations from which to choose. A copy of Air Force Form 813, Request for Environmental Impact Analysis, is included in Appendix A of the EA.

Nodak Electric proposes a 100' x 50' steel frame, steel-sided, clear span facility with a concrete floor and 16 feet overhead doors. The facility would include racks, bins, shelving and office furniture. Electric hydronic heat in the concrete floor is proposed. Nodak proposes to build a pad at GFAFB. The pad at GFAFB would include a driveway to the facility and the overhead doors, an open parking area for POVs and under cover area for Nodak vehicles and equipment, a transformer/switch/junction box, cable and pole storage area and a make-up area. The proposed facility would meet GFAFB architectural standards.

Site work includes:

- Stripping of building area
- Excavation of perimeter thickened edge slab
- 6 inch granular and vapor barrier under slab

Concrete work includes:

- 6 inch reinforced concrete slab with 2 inch deep thickened edge
- Floor heat
- Rigid insulation at exterior face of thickened edge slab

Building includes:

- Wall and roof insulation
- Liner panel on walls (None figured on roof)
- 50' x 100' pre-engineered metal building system
- 2 each 16' x 20' overhead doors
- 3 each exterior walk doors
- 1 each bathroom
- 1 each breakroom with 1 office within the breakroom
- Mechanical work with floor heat, electric boiler, HVAC, trench drain, sand/oil interceptor
- Electrical Work, with lighting, power, etc.

1 Nodak would maintain sufficient inventory of maintenance stocks on the Base to enable prompt  
2 efforts. These materials include Fuses, Guy guards, Primary wire sleeves (overhead and URD),  
3 Secondary wire sleeves (overhead and URD), Tape, Wire, Hot line clamps, Copper and guy wire,  
4 Insulators and bells, URD splice covers, Riser guard, Bolts and associated hardware, Arrestors and  
5 cutouts, Cross arms and braces, Spare transformers, Anchors, Ground rods, Poles, Stirrups, URD  
6 secondary connections (inside transformer) and URD elbows.

7  
8 Nodak owns heavy-duty bucket trucks, digger trucks and specialized equipment for maintenance  
9 and repair of distribution lines, including underground cable (e.g., line locators, fault locating  
10 equipment and line pullers). Nodak proposes to add a 50-foot bucket truck, a trencher and a pole  
11 trailer for shared dedicated use at the installation. Nodak proposes that a dedicated service team  
12 and their equipment/supplies be located on Grand Forks AFB.

13  
14 Nodak proposes a three-person crew team that would be responsible for restoration and operations  
15 at the installation. The team would consist of two dedicated, fully trained and capable linemen.  
16 One lineman, designated a foreman, would supervise Nodak's on-site efforts.

17  
18 Nodak utilizes a seamless computerized mapping system, based on ESRI's ArcGIS, to replace  
19 historic paper maps. The system integrates our customer information databases with the  
20 geodatabase information of inventory, maintenance and condition and enables visualization of the  
21 two. All line crews have iPads with electronic mapping.

22  
23 The list of MSDS sheets is included in Appendix D of the EA. Many of the items are cleaning  
24 supplies, office supplies, but many are for operation, splice and terminations. The MSDS's are  
25 available upon request.



### 2.4.1 Alternative 1 (Proposed Action)

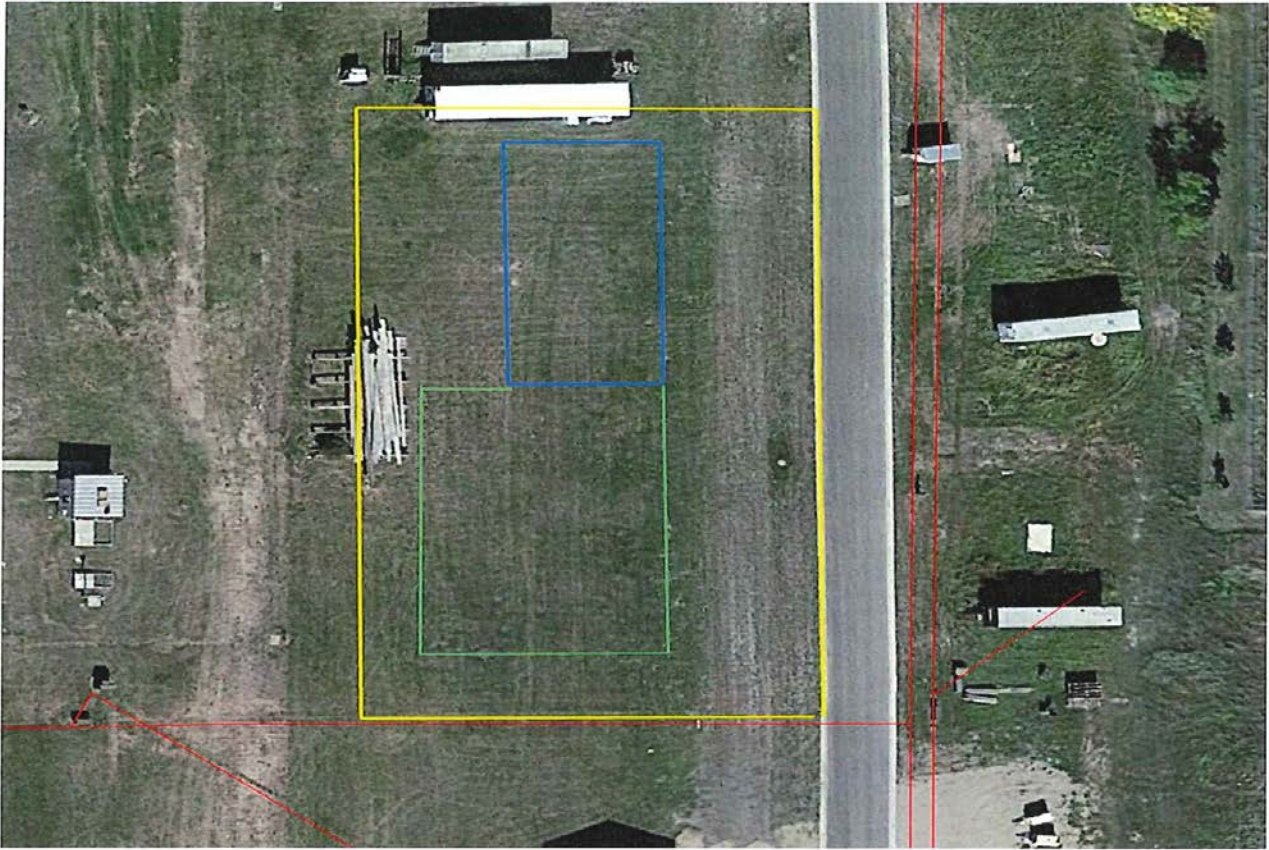
Grand Forks AFB proposes to site the new Nodak Electric facility along the street Contractor Row. The location A-1 is called the proposed construction site within this document. It is located approximately 200 feet north of the Paint Contractor in Building 491. It provides sufficient open space for a laydown area of equipment and materials.



Figure 2.4.1-1, Proposed Location A-1 on west side of Contractor Row.



1 Nodak proposes a 5,000 SF building, 8,800 SF staging area, in the 37,500 SF total site area.



- Building (100'x50') 
- Staging Area (110'x80') 
- Site area (150'x250') 

3  
4 Figure 2.4.1-2, Proposed Location A-1 with Site, Staging Pad and Building.  
5



1

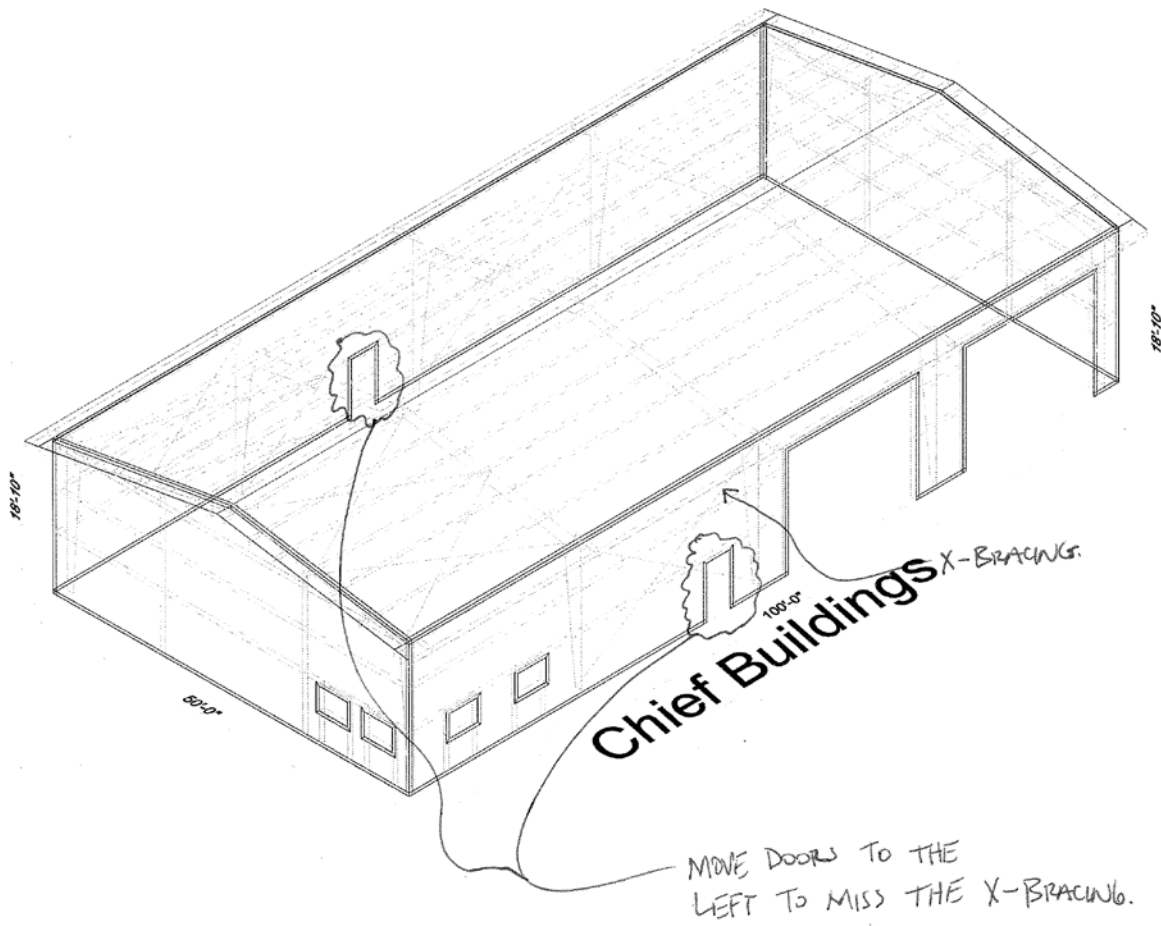
2 Figure 2.4.1-3 Photo of site A-1 for Nodak Electric facility on Grand Forks AFB, on Contractor  
3 Row.

4

5

6





- 1
- 2 Figure 2.4.1-4, Proposed Building on Contractor Row.
- 3

#### **2.4.2 Alternative 2 (No Action Alternative): Status Quo**

The No Action Alternative would continue the current mode of operation and there would be no construction of an on-base facility for Nodak Electric. The No Action would not improve the effectiveness of the Base's mission, nor replace inefficient and inadequate facilities and current deficiencies would not be corrected. This would be in conflict of the Electric Utilities Privatization Contract that requires the System Owner to provide an on-base facility.

Nodak Electric would have to continue operating from the north end of Building 631 and open storage area 444. The location would be subject to relocation, if the Air Force were to have a higher need for Building 631 or Area 444. The primary operation and cooperative headquarters of Nodak Electric Cooperative Inc. remains in the city of Grand Forks at 4000 32<sup>nd</sup> Avenue South.

Because CEQ regulations stipulate that the No Action Alternative be analyzed to assess any environmental consequences that may occur if the Proposed Action is not implemented, the alternative would be carried forward for analysis in the EA. The No Action Alternative also provides a baseline against which the Proposed Action can be compared.

#### **2.5 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY**

Three other alternative open locations were considered for Nodak's facility, but eliminated from detailed study and further consideration. These alternatives are not carried forward for analysis in this EA. The following three locations were considered.

### 2.5.1 Alternative A-2 (Alternative Location)

Below is Alternative site A-2. This location is south of the RV lot, on 1<sup>st</sup> Avenue and west of Building 753 the Dog Kennel and Building 326 Vet Clinic. It is approximately 400 feet west of the Dog Kennel. The Dog Kennel training area requires a calm, quiet atmosphere for training the police dogs. Site A-2 provides open grass space for a laydown area of equipment and materials.



Figure 2.5.1-1, Proposed Alternative A-2 Location on 1<sup>st</sup> Avenue and G Street.

### 2.5.2 Alternative A-3 (Alternative Location)

Below is Alternative site A-3. This location is on the corner of 1<sup>st</sup> Ave and H St, north of the Munitions Storage Area (MSA), east of Building 753 Dog Kennel and west of Building 328 Water Pump Station. It is approximately 300 feet east of the Dog Kennel. The Dog Kennel training area requires a calm, quiet atmosphere for training the police dogs. Site A-3 provides sufficient open grass space for a laydown area of equipment and materials. There is an existing parking lot.



Figure 2.5.2-1, Proposed Alternative A-3 Location on 1<sup>st</sup> Avenue and H Street.



### 2.5.3 Alternative A-4 (Alternative Location)

Below is Alternative site A-4. This location is on the north side of 1<sup>st</sup> Avenue, east side of the Airfield, southeast of Bravo Ramp, southwest of Building 513 Training Facility. It is the location of the demolished Security Forces headquarters. It is located within the Airfield Operations district. This location is high potential airfield real estate. The existing parking lot is surrounded by administrative and training buildings.



Figure 2.5.3-1, Proposed Alternative A-4 Location on 1<sup>st</sup> Avenue, near Bravo Ramp.

1 **2.5.4 DESCRIPTION OF PAST, PRESENT and REASONABLY FORESEEABLE**  
2 **FUTURE ACTIONS RELEVANT TO CUMULATIVE IMPACTS**  
3

4 Impacts from the Proposed Action would be concurrent with other actions occurring at Grand  
5 Forks AFB. There are several other repair and construction projects occurring on Grand Forks  
6 AFB in the same time frame. These projects are addressed under separate NEPA documents. The  
7 Construction of a new water and wastewater facility and fill-station for Base Utilities Inc. is  
8 another Utilities Privatization project being accomplished concurrently. The location proposed is  
9 also on Contractor Row, but across the road, directly east of the Nodak Electric facility.  
10

11 **2.6 SUMMARY COMPARISON OF THE POTENTIAL EFFECTS OF ALL**  
12 **ALTERNATIVES**  
13

14 Potential impacts from implementing the Proposed Action, the Alternatives and the No Action  
15 Alternative are discussed in detail in Chapter 4 of the EA. Table 2.6-1, Summary of Environmental  
16 Impacts below, offers a summary of the environmental consequences. Short-term (ST) impacts  
17 are those that occur during the timeframe of the construction project and long-term (LT) impacts  
18 occur subsequent to the completion of construction. The following table summarizes the three  
19 actions by each of the areas of consideration. The tables are No Action, Proposed Action A-1 and  
20 Alternative Actions A-2, A-3 and A-4.  
21  
22  
23



**Table 2.6-1 Summary of Environmental Impacts – No Action, Proposed Action, Alternative Actions**

Legend: ST = short-term; LT = long-term	No Action	Proposed Action A-1	Alternative Action A-2	Alternative Action A-3	Alternative Action A-4
Airspace	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.
Noise and Acoustic Environment	Current conditions would continue.	Temporary ST Impact during construction.	Temporary ST Impact during construction.	Temporary ST Impact during construction.	Temporary ST Impact during construction.
Air Quality and Climate Change	Current conditions would continue.	Temporary construction related emissions. LT air emissions would fall within limits prescribed by contractor Title V permit.	Temporary construction related emissions. LT air emissions would fall within limits prescribed by contractor Title V permit.	Temporary construction related emissions. LT air emissions would fall within limits prescribed by contractor Title V permit.	Temporary construction related emissions. LT air emissions would fall within limits prescribed by contractor Title V permit.
Water Resources					
Ground Water	Current conditions would continue.	Insignificant, with PPE, BMP's and AFI's in force.	Insignificant, with PPE, BMP's and AFI's in force.	Insignificant, with PPE, BMP's and AFI's in force.	Insignificant, with PPE, BMP's and AFI's in force.
Surface Water	Current conditions would continue.	Insignificant, with PPE, BMP's and AFI's in force.	Insignificant, with PPE, BMP's and AFI's in force.	Insignificant, with PPE, BMP's and AFI's in force.	Insignificant, with PPE, BMP's and AFI's in force.
Wastewater	Current conditions would continue.	Insignificant, with PPE, BMP's and AFI's in force.	Insignificant, with PPE, BMP's and AFI's in force.	Insignificant, with PPE, BMP's and AFI's in force.	Insignificant, with PPE, BMP's and AFI's in force.
Water Quality	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.
Wetlands	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.
Biological and Natural Resources					
Vegetation	Current conditions would continue.	When vegetation is established, current conditions would continue.	When vegetation is established, current conditions would continue.	When vegetation is established, current conditions would continue.	When vegetation is established, current conditions would continue.
Noxious Weeds	Current conditions would continue.	When weeds are destroyed and removed, current conditions would continue.	When weeds are destroyed and removed, current conditions would continue.	When weeds are destroyed and removed, current conditions would continue.	When weeds are destroyed and removed, current conditions would continue.
Wildlife	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.
Threatened and Endangered Species	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.
Earth Resources and Geological Resources	Current conditions would continue.	If contaminated soils are found, they would be properly handled during the construction process.	If contaminated soils are found, they would be properly handled during the construction process.	If contaminated soils are found, they would be properly handled during the construction process.	If contaminated soils are found, they would be properly handled during the construction process.
Hazardous Materials, Hazardous Waste and Stored Fuels	Current conditions would continue.	Insignificant, LT Impact of HW flammables, corrosives, toxic and other solid or liquid waste and materials.	Insignificant, LT Impact of HW flammables, corrosives, toxic and other solid or liquid waste and materials.	Insignificant, LT Impact of HW flammables, corrosives, toxic and other solid or liquid waste and materials.	Insignificant, LT Impact of HW flammables, corrosives, toxic and other solid or liquid waste and materials.
Environmental Restoration Program	Current conditions would continue.	Current conditions would continue. Must avoid nearby monitoring wells.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.
Pesticide Management	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.
Cultural Resources	Current conditions would continue.	SHPO ineligible NRHP.	SHPO ineligible NRHP.	SHPO ineligible NRHP.	SHPO ineligible NRHP.
Land Use	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.

Transportation Systems	Current conditions would continue.	Insignificant ST Impact.	Insignificant ST Impact.	Insignificant ST Impact.	Insignificant ST Impact.
Infrastructure and Utilities	Current conditions would continue.	Insignificant ST Impact, Positive LT Impact.	Insignificant ST Impact, Positive LT Impact.	Insignificant ST Impact, Positive LT Impact.	Insignificant ST Impact, Positive LT Impact.
Safety and Occupational Health	Current conditions would continue.	Insignificant, with PPE, BMP's and AFI's in force.	Insignificant, with PPE, BMPs and AFI's in force.	Insignificant, with PPE, BMPs and AFI's in force.	Insignificant, with PPE, BMPs and AFI's in force.
Aircraft Safety	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.
Socioeconomic Resources	Current conditions would continue.	Insignificant Beneficial ST Impact for local construction workers and LT for Nodak.	Insignificant Beneficial ST Impact for local construction workers and LT for Nodak.	Insignificant Beneficial ST Impact for local construction workers and LT for Nodak.	Insignificant Beneficial ST Impact for local construction workers and LT for Nodak.
Environmental Justice	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.	Current conditions would continue.

## 2.7 IDENTIFICATION OF PREFERRED ALTERNATIVE

This EA evaluates the Proposed Action to Construct a Facility for Electric utilities along Contractor Row.

The Proposed Action was selected as the Preferred Alternative after consideration of the potential impacts and the logistics of the project. The differences in impacts include the following:

- Sites A-2 and A-3 are near the Security Police Dog Kennel that requires little noise and distractions for training the dogs.
- Alternative A-4 is near the Airfield that is a desirable location for aircraft-related functions.
- Site A-1 on Contractor Row fits well with other contractor-performed functions.
- All four locations provided sufficient space for a building, as well as parking lot and lay-down area for equipment and parts.
- Another fitting location would have been adjacent to the Civil Engineer electric utility shop; however, there was no sufficient space available.

The preferred Alternative is the Proposed Action to Construct on Contractor Row, site A-1.

## **3.0 AFFECTED ENVIRONMENT**

### **3.1 SCOPE OF THE ANALYSIS**

This section describes the operational concerns and the environmental resources relevant to the decision that must be made concerning the Proposed and Alternative Action. Environmental concerns and issues relevant to the decision to be made and attributes of the potentially affected environment are studied in greater detail in this section. This descriptive section, combined with the definitions of the alternatives in Section 2 and their predicted effects in Section 4, establish the scientific baseline against which the decision-maker and the public can compare and evaluate the activities and effects of all the alternatives.

#### **3.1.1 Resources Analyzed**

- Air Space/Airfield Operations
- Noise and Acoustic Environment
- Air Quality and Climate Change
- Water Resources
- Natural and Biological Resources
- Earth Resources
- Hazardous Materials and Waste
- Cultural Resources
- Land Use
- Infrastructure, Utilities and Transportation
- Safety and Occupational Health
- Socioeconomic Resources
- Environmental Justice

#### **3.1.2 Resources Eliminated from Detailed Analysis**

None.

## **3.2 AIRSPACE/AIRFIELD OPERATIONS**

### **3.2.1 AIRCRAFT SAFETY**

Bird Aircraft Strike Hazard (BASH) is a significant safety concern for military aircraft. The focus of the BASH program is to prevent wildlife-related aircraft mishaps and reduce the potential for wildlife hazards to aircraft operations. Collision with birds may result in aircraft damage and aircrew injury, which may result in high repair costs or loss of the aircraft. A BASH hazard exists at Grand Forks AFB and its vicinity, due to resident and migratory birds and whitetail deer. Daily and seasonal bird movements create various hazardous conditions. Vegetation is mowed to detract birds or animals on the flight line. Kellys Slough NWR two miles east of the Base is a major stopover for migratory birds. Canada Geese and other large waterfowl have been seen in the area.

1 Wetland areas provide the basic needs for many wildlife species and thus create potential hazards  
2 to aircraft operations. Innovative techniques to manage wildlife in wetlands are explored and  
3 implemented, such as bird depredation, bow hunting and deer drives. Legally defensible actions  
4 to reduce the amount of wetlands on the airfield to the maximum extent possible should be  
5 explored and pursued when their presence conflicts with the flight mission. While “no net loss”  
6 of wetlands is an important AF goal, priority must be given to flight safety.

### 8 **3.2.2 AIRSPACE COMPATIBILITY**

10 The primary objective of airspace management is to ensure the best possible use of available  
11 airspace to meet user needs and to segregate requirements that are incompatible with existing  
12 airspace or land uses. The Federal Aviation Administration has overall responsibility for  
13 managing the nation’s airspace and constantly reviews civil and military airspace needs to ensure  
14 all interests are compatibly served to the greatest extent possible. Airspace is regulated and  
15 managed through use of flight rules, designated aeronautical maps and air traffic control  
16 procedures and separation criteria. A Memorandum of Agreement (MOA) between the Air Force  
17 and Grand Forks County exists for the use of Grand Sky business park operators to use the GFAFB  
18 airfield. Current operators include Northrop Grumman and General Atomics.

### 20 **3.3 NOISE AND ACOUSTIC ENVIRONMENT**

22 Noise generated on Grand Forks AFB consists mostly of aircraft, vehicular traffic and construction  
23 activity. Noise levels are dependent upon type of aircraft, type of operations and distance from  
24 the observer to the aircraft. Duration of the noise is dependent upon proximity of the aircraft,  
25 speed and orientation with respect to the observer. Since the Base converted from a refueling  
26 mission to an unmanned aircraft system mission, noise levels have declined. A new noise survey  
27 is planned to be funded by AFCEC and accomplished in the near future.

Table 3.3-1 Typical Decibel Levels Encountered in the Environment and Industry			
Sound Level (dBA) <sup>a</sup>	Maximum Exposure Limits	Source of Noise	Subjective Impression
10			Threshold of hearing
20		Still recording studio; Rustling leaves	
30		Quiet bedroom	
35		Soft whisper at 5 ft <sup>b</sup> ; Typical library	
40		Quiet urban setting (nighttime); Normal level in home	Threshold of quiet
45		Large transformer at 200 ft	
50		Private business office; Light traffic at 100 ft; Quiet urban setting (daytime)	
55		Window air conditioner; Men's clothing department in store	Desirable limit for outdoor residential area use (EPA)
60		Conversation speech; Data processing center	
65		Busy restaurant; Automobile at 100 ft	Acceptable level for residential land use
70		Vacuum cleaner in home; Freight train at 100 ft	Threshold of moderately loud
75		Freeway at 10 ft	
80		Ringling alarm clock at 2 ft; Kitchen garbage disposal; Loud orchestral music in large room	Most residents annoyed
85		Printing press; Boiler room; Heavy truck at 50 ft	Threshold of hearing damage for prolonged exposure
90	8 hr <sup>c</sup>	Heavy city traffic	
95	4 hr	Freight train at 50 ft; Home lawn mower	
100	2 hr	Pile driver at 50 ft; Heavy diesel equipment at 25 ft	Threshold of very loud
105	1 hr	Banging on steel plate; Air Hammer	
110	0.5 hr	Rock music concert; Turbine condenser	
115	0.25 hr	Jet plane overhead at 500 ft	
120	< 0.25 hr	Jet plane taking off at 200 ft	Threshold of pain
135	< 0.25 hr	Civil defense siren at 100 ft	Threshold of extremely loud
<sup>a</sup> dBA – decibals <sup>b</sup> ft – feet <sup>c</sup> hr - hours Source: US Army			

Table 3.3-2 Approximate Sound Levels (dBa) of Construction Equipment						
Equipment Type	Sound Levels (dBa) at Various Distances (ft)					
	50	100	200	400	800	1,600
Front-end Loader	84	78	72	66	60	54
Dump Truck	83	77	71	65	59	53
Truck	83	77	71	65	59	53
Tractor	84	78	72	66	58	52
Source: Thurman; US Army						

Because military installations attract development in proximity to their airfields, the potential exists for urban encroachment and incompatible development. The USAF utilizes a program known as AICUZ to help alleviate noise and accident potential problems due to unsuitable community development. AICUZ recommendations give surrounding communities alternatives to help prevent urban encroachment. Noise contours are developed from the Day-Night Average A-Weighted Sound Level (DNL) data which defines the noise created by flight operations and ground-based activities. The AICUZ also defines Accident Potential Zones (APZs), which are rectangular corridors extending from the ends of the runways. Recommended land use activities and densities in the APZs for residential, commercial and industrial uses are provided in the Base's AICUZ study. Grand Forks AFB takes measures to minimize noise levels by evaluating aircraft operations. Blast deflectors are utilized in designated areas to deflect blast and minimize exposure to noise. New DOD Policy on EIAP and Analysis for Potential Hearing Loss is included in "Methodology for Assessing Hearing Loss Risk and Impacts in DOD Environmental Impact Analysis" which applies whenever the 80 decibel Day/Night Average Noise Level (DNL) contour extends into populated areas off-base, or cantonment/residential areas on-Base. Any workers or visitors within fifty feet of the trucks, tractors and loaders involved in construction activities would wear hearing protection.

### 3.4 AIR QUALITY AND CLIMATE CHANGE

Grand Forks AFB has a humid continental climate that is characterized by frequent and drastic weather changes. The summers are short and humid with frequent thunderstorms. Winters are long and severe with almost continuous snow cover. The spring and fall seasons are generally short transition periods. The average annual temperature is 40°Fahrenheit (F) and the monthly mean temperature varies from 4°F in January to 69°F in July. Mean annual precipitation is 19.3 inches. Rainfall is generally well distributed throughout the year, with summer being the wettest season and winter the driest. An average of 34 thunderstorm days per year is recorded, with some of these storms being severe and accompanied by hail and tornadoes. Mean annual snowfall recorded is 40 inches with the mean monthly snowfall ranging from 1.6 inches in October to 8.0 inches in March. Relative humidity averages 58 percent annually, with highest humidity being recorded in the early morning. The average humidity at dawn is 76 percent. Mean cloud cover is 48 percent in the summer and 56 percent in the winter.

Table 3.2-1: Climate Data for Grand Forks AFB, ND						
Month	Mean Temperature (°F)			Precipitation (Inches)		
	Daily			Monthly		
Month	Maximum	Minimum	Monthly	Mean	Maximum	Minimum
January	14	-5	4	0.7	1.8	0.1
February	20	1	10	0.5	1.7	0.0
March	33	15	24	0.9	3.4	0.0
April	52	31	41	1.2	3.6	0.0
May	67	42	55	2.3	5.7	0.1
June	76	52	64	3.2	7.9	0.7
July	81	57	69	3.0	9.1	0.5
August	80	54	67	2.7	7.9	0.3
Sept	69	45	57	2.0	5.6	0.1
October	55	33	44	1.5	5.8	0.0
November	35	18	27	0.9	3.9	0.0
December	20	3	11	0.6	2.0	0.1
Source: High Plains Regional Climate Center (HPRCC) – Station 323616 Grand Forks FAA AP, December 2009,						

Wind speed averages 10 miles per hour (mph). A maximum wind speed of 74 mph has been recorded. Wind direction is generally from the northwest during the late fall, winter and spring and from the southeast during the summer.

The North Dakota Ambient Air Quality Monitoring Network is designed to monitor those air pollutants that demonstrate the greatest potential for deteriorating the air quality of North Dakota. Due to a greater number of pollution-producing sources in the western part of the state (primarily associated with the energy producing industries), the greatest percentage of the network is located in the western part of the State. LM Wind Power Blades of Grand Forks is the only major Air Toxics Source in Grand Forks County.

GFAFB maintains a Title V Air Emissions Permit IAW the requirements of North Dakota Administrative Code 33-15 and North Dakota Century Code 23-25. GFAFB is "In Attainment" and the current permit is valid through October 14, 2022. A list of permitted sources is identified within the permit. Additional mobile and non-mobile sources can be found on the GFAFB APIMS website. 319 CES/CEOI maintains a refrigeration database within the APMIS database. Specific air emissions training as required by AFI is available on the "Resource" tab on SharePoint and also through the EMS "Competence, Training and Awareness" page.

The System Owner, Nodak Electric, is responsible for obtaining their own Air Emissions permit, and maintaining their own inventory and recordkeeping. The addition of any significant air emission source, e.g., spray paint booth, generator, or boiler, et al, must be coordinated with NDDH while still in the planning phase. No expenditure of funds is allowed until the process has been reviewed and approved by the North Dakota Department of Health, as a Title V Permit modification and a Permit to Construct may be required before any action can be taken. Failure to do so will result in a Notice of Violation and possible associated fines.

Grand Forks County is included in the ND Air Quality Control Region. This region is in attainment status for all criteria pollutants. In 1997, the ND Department of Health (NDDH) conducted an Air Quality Monitoring Survey that indicated that the quality of ambient air in ND is generally good as it is located in an attainment area (NDDH, 1998). Grand Forks AFB has an air permit T5-F78004 (permit to operate) issued by NDDH and a CAA Title V air emissions permit. The permit requires that once per month, the permittee shall record the paint and solvent usage and determine the total paint and solvent usage for the previous 12-month period (12-month rolling total).

The United States Environmental Protection Agency (USEPA) established the National Ambient Air Quality Standards (NAAQS), which define the maximum allowable concentrations of pollutants that may be reached, but not exceeded within a given time period. The NAAQS regulates the following criteria pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), Ozone (O<sub>3</sub>), particulate matter (PM) and sulfur dioxide (SO<sub>2</sub>). The ND Ambient Air Quality Standards (NDAAQS) were set by the State of ND. These standards are more stringent and emissions for operations in ND must comply with the Federal or State standard that is the most restrictive. ND has a standard for hydrogen sulfide (H<sub>2</sub>S) and monitors ammonia (NH<sub>3</sub>).

Prevention of significant deterioration (PSD) regulations establishes SO<sub>2</sub>, particulate matter 10 microns in diameter (PM<sub>10</sub>) and NO<sub>2</sub> that can be emitted above a premeasured amount in each of three class areas. Grand Forks AFB is located in a PSD Class II area where moderate, well-controlled industrial growth could be permitted. Class I areas are pristine areas and include national parks and wilderness areas. Significant increases in emissions from stationary sources (100 tons per year (tpy) of CO, 40 tpy of nitrogen oxides (NO<sub>x</sub>), volatile organic compounds (VOCs), or sulfur oxides (SO<sub>x</sub>), or 15 tpy of PM<sub>10</sub>) and the addition of major sources requires compliance with PSD regulations. There is also a 25 ton/year level for total particulate.

Air pollutants include O<sub>3</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, Pb and particulate matter. Ground disturbing activities create PM<sub>10</sub> and particulate matter 2.5 microns in diameter (PM<sub>2.5</sub>). Combustion creates CO, SO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> particulate matter and the precursors (VOC and NO<sub>2</sub>) to O<sub>3</sub>. Only small amounts of Hazardous Air Pollutants (HAP) are generated from internal combustion processes or earth-moving activities. The Grand Forks AFB 2017 Air Emissions Inventory Report indicated that the installation generated total HAPs of below 10 tpy. Grand Forks AFB is not a significant source of HAPs. All emergency generator engines on the Base inventory ran less than 100 hours for CY 2017 and remain insignificant units. New air pollutant equipment added to the new Nodak Electric facility would be added to Nodak's Air Pollutant Emission Inventory and are their responsibility as the System Owner.

Addition of equipment to the new Nodak Electric facility and increased air pollutants would be an adverse impact. These actions are insignificant to this PSD Class II area of Grand Forks AFB.

As the region is in attainment status for all criteria pollutants and not under an air quality maintenance plan, no Conformity Determination is required before proceeding with any alternative.



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Table 3.2-2 National Ambient Air Quality Standards (NAAQS) and ND Ambient Air Quality Standards (NDAAQS)				
Pollutant	Averaging Time	NAAQS μg/m <sup>3</sup> (ppm) <sup>a</sup>		NDAAQS μg/m <sup>3</sup> (ppm) <sup>a</sup>
		Primary <sup>b</sup>	Secondary <sup>c</sup>	
O <sub>3</sub>	1 hr 8 hr <sup>e</sup>	235 (0.12) 157 (0.08)	Same Same	Same None
CO	1 hr 8 hr	40,000 (35) 10,000 (9)	None None	40,000 (35) 10,000 (9)
NO <sub>2</sub>	AAM <sup>d</sup>	100 (0.053)	Same	Same
SO <sub>2</sub>	1 hr 3 hr 24 hr AAM	None None 365 (0.14) 80 (0.03)	None 1,300 (0.5) None None	715 (0.273) None 260 (0.099) 60 (0.023)
PM <sub>10</sub>	AAM 24 hr	50 150	Same Same	Same Same
PM <sub>2.5</sub> <sup>e</sup>	AAM 24 hr	65 15	Same Same	None None
Pb	¼ year	1.5	Same	Same
H <sub>2</sub> S	1 hr 24 hr 3 mth AAM Instantaneous	None None None None	None None None None	280 (0.20) 140 (0.10) 28 (0.02) 14 (10) 14 (10)
<sup>a</sup> μg/m <sup>3</sup> – micrograms per cubic meter; ppm – parts per million <sup>b</sup> National Primary Standards establish the level of air quality necessary to protect the public health from any known or anticipated adverse effects of pollutant, allowing a margin of safety to protect sensitive members of the population. <sup>c</sup> National Secondary Standards establish the level of air quality necessary to protect the public welfare by preventing injury to agricultural crops and livestock, deterioration of materials and property and adverse impacts on the environment. <sup>d</sup> AAM – Annual Arithmetic Mean. <sup>e</sup> The Ozone 8-hour standard and the PM 2.5 standards are included for information only. A 1999 federal court ruling blocked implementation of these standards, which USEPA proposed in 1997. USEPA has asked the US Supreme Court to reconsider that decision (USEPA, 2000). PM <sub>10</sub> is particulate matter equal to or less than 10 microns in diameter. PM <sub>2.5</sub> is particulate matter equal to or less than 2.5 microns in diameter. Source: 40 CFR 50, ND Air Pollution Control Regulations – North Dakota Administrative Code (NDAC) 33-15				

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### 3.4.1 CLIMATE CHANGE

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North Dakota's climate is changing. In the past century, most of the state has warmed about two degrees (F). Rainstorms are becoming more intense and annual rainfall is increasing. In the coming decades, longer growing seasons are likely to create opportunities for farmers and increasing rainfall may benefit some farms but increase the risk of flooding. Our climate is changing because the earth is warming. People have increased the amount of carbon dioxide in the air by 40 percent since the late 1700s. Other heat-trapping greenhouse gases are also increasing. These gases have warmed the surface and lower atmosphere of our planet about one degree during the last 50 years. Evaporation increases as the atmosphere warms, which increases

1 humidity, average rainfall and the frequency of heavy rainstorms in many places—but contributes  
2 to drought in others. Greenhouse gases are also changing the world’s oceans and ice cover.  
3 Carbon dioxide reacts with water to form carbonic acid, so the oceans are becoming more acidic.  
4 The surface of the ocean has warmed about one degree during the last 80 years and sea level is  
5 rising at an increasing rate. Warming is causing snow to melt earlier in spring.

#### 6 7 **3.4.1.1 PRECIPITATION AND WATER RESOURCES** 8

9 Changing the climate is likely to increase the demand for water and make it more available. Rising  
10 temperatures increase evaporation and water use by plants. But rainfall is also likely to increase,  
11 so soil moisture is likely to increase slightly or remain about the same as today. More water is  
12 likely to run off into the upper Missouri River and its tributaries. The resulting increase in river  
13 flows could benefit recreational boating, public water supplies and electric power generation.  
14 During droughts, decreased river flows can lower the water level in lakes and reservoirs, which  
15 may limit water supplies and impair swimming, fishing and other recreational activities. But if  
16 more water flows through the rivers before or during a drought, these problems will become less  
17 likely. Higher water flows also increase hydropower production, which accounts for about 5  
18 percent of all energy produced in North Dakota. Nevertheless, droughts are likely to become more  
19 severe in downstream states. When droughts lower water levels enough to impair navigation, the  
20 U.S. Army Corps of Engineers releases water from the upstream dams, making less water available  
21 to North Dakota.

#### 22 23 **3.4.1.2 INCREASED FLOODING** 24

25 Greater river flows, increasing precipitation and more severe storms are each likely to increase the  
26 risk of flooding. Major floods include those of 1826, 1897, 1950, 1997, 2009, 2011 and there has  
27 been significant flooding many years in between. In the Red River watershed, river flows during  
28 the worst flood of the year have been increasing about 10 percent per decade since the 1920s. The  
29 flood of 1997 caused the dikes to fail and the entire town of Grand Forks was evacuated and  
30 flooded by the Red River of the North. GFAFB was not flooded and offered temporary housing  
31 and meals to evacuated residents.

#### 32 33 **3.4.1.3 HEAVY STORMS** 34

35 Warmer air tends to have more water vapor, so more water can be potentially released in a storm.  
36 During the last 50 years, the amount of rain falling during the wettest four days of the year has  
37 increased about 15 percent in the Great Plains. Over the next several decades, heavy downpours  
38 are likely to account for an increasing fraction of all precipitation.

#### 39 40 **3.4.1.4 AGRICULTURE** 41

42 Changing the climate is likely to have both positive and negative effects on agriculture in North  
43 Dakota. Warmer temperatures have extended the growing season by about 30 days since the  
44 beginning of the 20th century. Corn and soybeans are now grown in areas that were previously  
45 too cold for those crops and warmer temperatures are likely to increase corn yields in the future.  
46 The fertilizing effect of increased concentrations of carbon dioxide is likely to further increase

1 yields of corn and substantially increase yields of wheat and soybeans. Increased precipitation at  
2 the beginning of the growing season is likely to help ensure that soils are sufficiently moist for the  
3 growing season. Although the longer growing season benefits most crops, planting dates might  
4 be delayed if increased winter and spring precipitation leaves some fields too wet to plant. Rising  
5 temperatures may also reduce yields of wheat, partly offsetting the fertilizing effect of carbon  
6 dioxide. Warmer winters may promote the growth of weeds and pests. During drought years,  
7 hotter summers will dry the soil more than would otherwise occur. Over the next 70 years, the  
8 number of days above 100°F is likely to double, which could further stress crops during drought  
9 years.

#### 11 **3.4.1.5 ECOSYSTEMS**

13 Rising carbon dioxide concentrations are likely to increase the productivity of grasslands.  
14 Although ecosystems generally benefit from higher productivity, several impacts of a changing  
15 climate may harm ecosystems. Changes in temperature and the length of the growing season may  
16 disrupt natural ecological processes and shift species' ranges. Many species of birds are shifting  
17 northward as temperatures rise and warmer temperatures are causing flowers in North Dakota to  
18 bloom earlier in spring. Even small changes in the timing of plant development or animal  
19 migration can disrupt predator-prey relationships, mating behavior, or availability of food.

#### 21 **3.4.1.6 HUMAN HEALTH**

23 Extremely hot and cold days can be unhealthy—even dangerous. Certain people are especially  
24 vulnerable, including children, the elderly, the sick and the poor. The elderly may be particularly  
25 prone to heat stress and other heat-related health problems, including dehydration, cardiovascular  
26 strain and respiratory problems. Those with low incomes may be particularly vulnerable due to a  
27 lack of air conditioning. Power failures due to severe weather can also present risks, especially in  
28 lightly populated areas where access to the necessary support services may be limited. While these  
29 risks will increase as the climate becomes warmer, illnesses and deaths due to cold weather and  
30 snow are likely to decline. Climate change may also increase the length and severity of the pollen  
31 season for allergy sufferers. For example, the ragweed season in Fargo has grown 19 days longer  
32 since 1995, because the first frost in fall is later.

### 34 **3.5 WATER RESOURCES**

#### 36 **3.5.1 GROUND WATER**

38 Chemical quality of ground water is dependent upon the amount and type of dissolved gases,  
39 minerals and organic material leached by water from surrounding rocks as it flows from recharge  
40 to discharge areas. The water table depth varies throughout the Base, from a typical 1-3 feet to 10  
41 feet or more below the surface.

43 Even though the Dakota Aquifer has produced more water than any other aquifer in Grand Forks  
44 County, the water is very saline and generally unsatisfactory for domestic and most industrial uses.  
45 Its primary use is for livestock watering. It is sodium chloride type water with total dissolved  
46 solids concentrations of about 4,400 ppm. The water generally contains excessive chloride, iron,

sulfate, total dissolved solids and fluoride. The water from the Dakota Aquifer is highly toxic to most domestic plants and small grain crops and in places, the water is too highly mineralized for use as livestock water (Hansen and Kume, 1970).

Water from wells tapping the Emerado Aquifer near Grand Forks AFB is generally of poor quality due to upward leakage of poor quality water from underlying bedrock aquifers. It is sodium sulfate type water with excessive hardness, chloride, sulfate and total dissolved solids. Water from the Lake Agassiz beach aquifers is usually of good chemical quality in Grand Forks County. The water is a calcium bicarbonate type that is relatively soft. The total dissolved content ranges from 308 to 1,490 ppm. Most water from beach aquifers is satisfactory for industrial, livestock and agricultural uses (Hansen and Kume, 1970).

Grand Forks AFB draws 100 percent of its water for industrial, commercial and housing functions from the City of Grand Forks. The City of Grand Forks draws water from the Red River and Red Lake River and treats it for consumption. It is then pumped to GFAFB for household and industrial use.

### **3.5.2 SURFACE WATER**

Natural surface water features located on or near Grand Forks AFB are the Turtle River and Kellys Slough National Wildlife Refuge (NWR). Drainage from surface water channels ultimately flows into the Red River.

The Turtle River, crossing the Base boundary at the northwest corner, is very sinuous and flows 45 miles in a northeasterly direction. It receives surface water runoff from the western portion of Grand Forks AFB and eventually empties into the Red River of the North that flows north to Lake Winnipeg, Canada. The Red River drainage basin is part of the Hudson Bay drainage system. At Manvel, ND, approximately 10 miles northeast of Grand Forks AFB, the mean discharge of the Turtle River is 50.3 feet cubed per second (ft<sup>3</sup>/s). Peak flows result from spring runoff in April and minimum flows (or no flow in some years) occur in January and February.

NDDH has designated the Turtle River to be a Class II stream; it may be intermittent, but, when flowing, the quality of the water, after treatment, meets the chemical, physical and bacteriological requirements of the NDDH for municipal use. The designation also states that it is of sufficient quality to permit use for irrigation, for propagation of life for resident fish species and for swimming and other water recreation.

Kellys Slough NWR occupies a wide, marshy flood plain with a poorly defined stream channel, approximately two miles east and downstream of Grand Forks AFB. Kellys Slough NWR receives surface water runoff from the east half of the Base and effluent from the Base sewage lagoons located east of the Base. Surface water flow of the slough is northeasterly into the Turtle River. Drainage from surface water channels ultimately flow into the Red River. Floodplains are limited to an area 250 feet on either side of Turtle River (about 46 acres on-base). Any development in or modifications to floodplains must be coordinated with the United States Army Corps of Engineers and the Federal Emergency Management Agency (FEMA). The North Dakota State Water

Commission requires that any structure in the floodplain have its lowest floor above the identified 100-year flood level.

Surface water runoff leaves Grand Forks AFB at four primary locations related to identifiable drainage areas on-base. The four sites are identified as northeast, northwest, west and southeast related to the Base proper. These outfalls were approved by the NDDH as stated in the Grand Forks AFB ND Pollutant Discharge Elimination System (NDPDES) Permit NDR05-0000 Stormwater Discharges from Industrial Activity. Of the four outfall locations, the west and northwest sites flow into the Turtle River, the northeast site flows to the north ditch and the southeast outfall flows into the south ditch. The latter two flow to Kellys Slough and then the Turtle River. All drainage from these surface water channels ultimately flows into the Red River. The Bioenvironmental Engineer Office samples the four outfall locations during months when de-icing activities occur on-base.

### **3.5.3 WASTE WATER**

Grand Forks AFB discharges its domestic and industrial wastewater to four stabilization lagoons located east of the main Base. The four separate treatment cells consist of one primary treatment cell, two secondary treatment cells and one tertiary treatment cell. Wastewater effluent is discharged under ND Permit ND-0020621 into Kellys Slough. Wastewater discharge occurs for about one week, sometime between mid-April through October. Industrial wastewater at the Base comprises less than ten percent of the total flow to the treatment lagoons. The operation of Water and Wastewater became the responsibility of System Owner Base Utilities Inc. (BUI) in 2019, with a fifty-year Utilities Privatization contract.

### **3.5.4 POTABLE WATER**

According to the National Water Quality Inventory Report (USEPA, 1995), ND reports the majority of rivers and streams have good water quality. Natural conditions, such as low flows, can contribute to violations of water quality standards. During low flow periods, the rivers are generally too saline for domestic use. Grand Forks AFB receives water 100% from Grand Forks city. The city recovers its water from the Red River and the Red Lake River. BUI tests the water received on-base daily for chlorine. The 319th Bioenvironmental Flight collects monthly bacteriological samples to be analyzed at the City of Grand Forks Water Treatment Plant Lab, which is a state certified laboratory, or if necessary, another state certified laboratory. The Bioenvironmental Flight and BUI maintenance team needs to be advised of any water line interruptions, including turn-ons and turn-offs.

### **3.5.5 WETLANDS**

The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats and natural ponds.

Grand Forks County have wetland Type I (wet meadow) to Type V (open freshwater). Approximately 59,500 acres of wetland Type I to V are used for wetland habitat. Wetland Types IV and V include areas of inland saline marshes and open saline water. Kellys Slough NWR occupies a wide, marshy flood plain with a poorly defined stream channel, approximately two miles east and downstream of Grand Forks AFB. Kellys Slough NWR is the most important regional wetland area in the Grand Forks vicinity. Wetland delineations have indicated that the Base has 413 acres of wetlands contained within 192 separate wetland areas. These include one Riverine wetland totaling 3 acres in Turtle River, one Palustrine Emergent Wetland (PEM)/Lacustrine lagoon wetland totaling 47 acres and 190 Palustrine wetlands totaling 363 acres. Vegetation is robust at GFAFB wetlands and many are characterized as typical prairie potholes found within the northern plains ecoregion.

Wetlands on Grand Forks AFB occur frequently in drainage ways, low-lying depressions and prairie potholes. Wetlands are highly concentrated in drainage ways leading from the wastewater treatment lagoons to Kellys Slough NWR. The majority of wetland areas occur in the northern and southwest central portions of Base, near the runway, while the remaining areas are near the eastern boundary and southeastern corner of Base. Development in or near these areas must include coordination with the ND State Water Commission and the USACE. To help preserve wetlands, the North Dakota, Grand Forks County regional office of the Natural Resource Conservation Service recommends a 100-ft vegetated (grass) buffer with a perimeter filter strip.

Palustrine emergent marsh (PEM) wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants and at GFAFB are dominated by cattails (*Typha sp.*) and smartweed (*Polygonum coccineum*) as noted in the 2004 Wetland Assessment report (CH2M HILL 2004). These species, in addition to spike-rush (*Eleocharis sp.*) and sedge (*Carex sp.*), were also the most prevalent type of wetland plants observed during this survey.

The PEM wetlands observed at the study area were partially comprised of a unique wetland system known as prairie pothole wetlands. Prairie potholes are depressional wetlands often located in the northern plains region of the U.S. and also in Canada. The potholes are the result of historical glacial activity, which left the landscape pockmarked. These potholes accumulate snowmelt and precipitation during spring-thaw conditions. Prairie pothole marshes can be temporary or may be permanent. There has been an increase in the number, average size and permanence of prairie wetlands due to a wet spell that began in 1993 following a prolonged drying trend.

Section 404 of the Clean Water Act (Title 33, United States Code, Section 1344) establishes a program to regulate all dredging and filling activities related to jurisdictional waters and wetlands of the United States. Actions that may impact wetlands, to include dredging, filling and activities that may displace soil into a wetland, may require a 404 permit from the USACE. Applicants must submit USACE ENG Form 4345, *Application for Department of the Army Permit* to the appropriate USACE District Engineer prior to any land disturbance activity located in or near a wetland area. Along with the permit application, they must submit a vicinity map and site development plan that includes a cross-sectional view of the affected area showing limits of jurisdictional waters, the normal water level, volume of fill material to be discharged below ordinary high water and the area of waters affected.

1 Section 401 of the CWA directs that any proponent of an action that requires a federal license or  
2 permit (such as a Section 404 permit) must obtain a Water Quality Certificate from the state water  
3 pollution control agency. The Water Quality Certificate certifies that the action complies with  
4 state water quality criteria. State permits to undertake projects within a specified buffer zone  
5 surrounding wetlands may also be required. When applying for a permit under state wetland  
6 protection laws, certain information not required for an USACE permit, such as a delineation of a  
7 regulated buffer area, may also be required. In some cases, permit applications may be submitted  
8 concurrently for review by both the state and the USACE.

9  
10 A wetland mitigation bank is a wetland area that is currently being restored, enhanced, or created  
11 and set aside to compensate for future actions that may negatively impact other wetlands within  
12 the same watershed and provide like (in-kind) wetland functions. Development of wetlands  
13 mitigation banks is encouraged when practicable as a cost-effective method to reduce the  
14 uncertainty and delays that may be associated with mitigation requirements for future installation  
15 development. A wetland bank is established by means of a formal agreement with the Army Corps  
16 of Engineers or other appropriate regulatory agency enacted prior to nomination of a wetland to  
17 the program. The value of a bank is determined through cooperation with the regulating agency  
18 to quantify the wetland values restored, enhanced, or created in terms of credits.

19  
20 EO 11990 requires each agency shall provide leadership and shall take action to minimize the  
21 destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial  
22 values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing and  
23 disposing of Federal lands and facilities; and (2) providing Federally undertaken, financed, or  
24 assisted construction and improvements; and (3) conducting Federal activities and programs  
25 affecting land use, including but not limited to water and related land resources planning,  
26 regulating and licensing activities. Prior to any construction activity in a wetland area (as defined  
27 by E. O. 11990), proponents must first prepare a Finding of No Practicable Alternative (FONPA),  
28 which documents that there are no practicable alternatives to such construction and that the  
29 Proposed Action includes all practicable measures to minimize harm to wetlands. In preparing the  
30 FONPA, the AF must consider the full range of practicable alternatives that would meet the  
31 proposed mission requirements. If wetlands would be impacted, a FONPA must be prepared and  
32 submitted for review and approval by the Director, Installation and Mission Support prior to  
33 implementing the impacting activity.

34  
35 In compliance with Executive Order 11990, *Protection of Wetlands*, May 24, 1977, the Air Force  
36 would seek to preserve the natural values of wetlands while carrying out its mission on both AF  
37 lands and non-AF lands. To the maximum extent practicable, the AF would avoid actions which  
38 would either destroy or adversely modify wetlands. Executive Order 11990 requires federal  
39 agencies to avoid to the extent practicable, adverse impacts associated with the destruction or  
40 modification of wetlands. The Order directs federal agencies to avoid new construction in  
41 wetlands unless there is no reasonable alternative and states that where wetlands cannot be  
42 avoided, the Proposed Action must include all practicable measures to minimize harm to wetlands.  
43 No wetlands are present in the vicinity of the proposed Nodak Electric facility along Contractor  
44 Row.

### 3.5.6 FLOODPLAINS

The shape of the Red River Valley has resulted from past glacial activity. The floodplain is poorly defined, and floods are frequent. Flooding usually lasts only for a short period because of a vast network of drainage ditches and channelized streams. The Red River has several basin characteristics making it susceptible to flooding including an undersized main channel in relation to its floodplain, a small main channel gradient, and a northerly flow that synchronizes flooding with the progression of the spring thaw. Floods typically occur during late spring resulting from quick temperature rise, spring rains, snowmelt, and soil-moisture content held over from the fall.

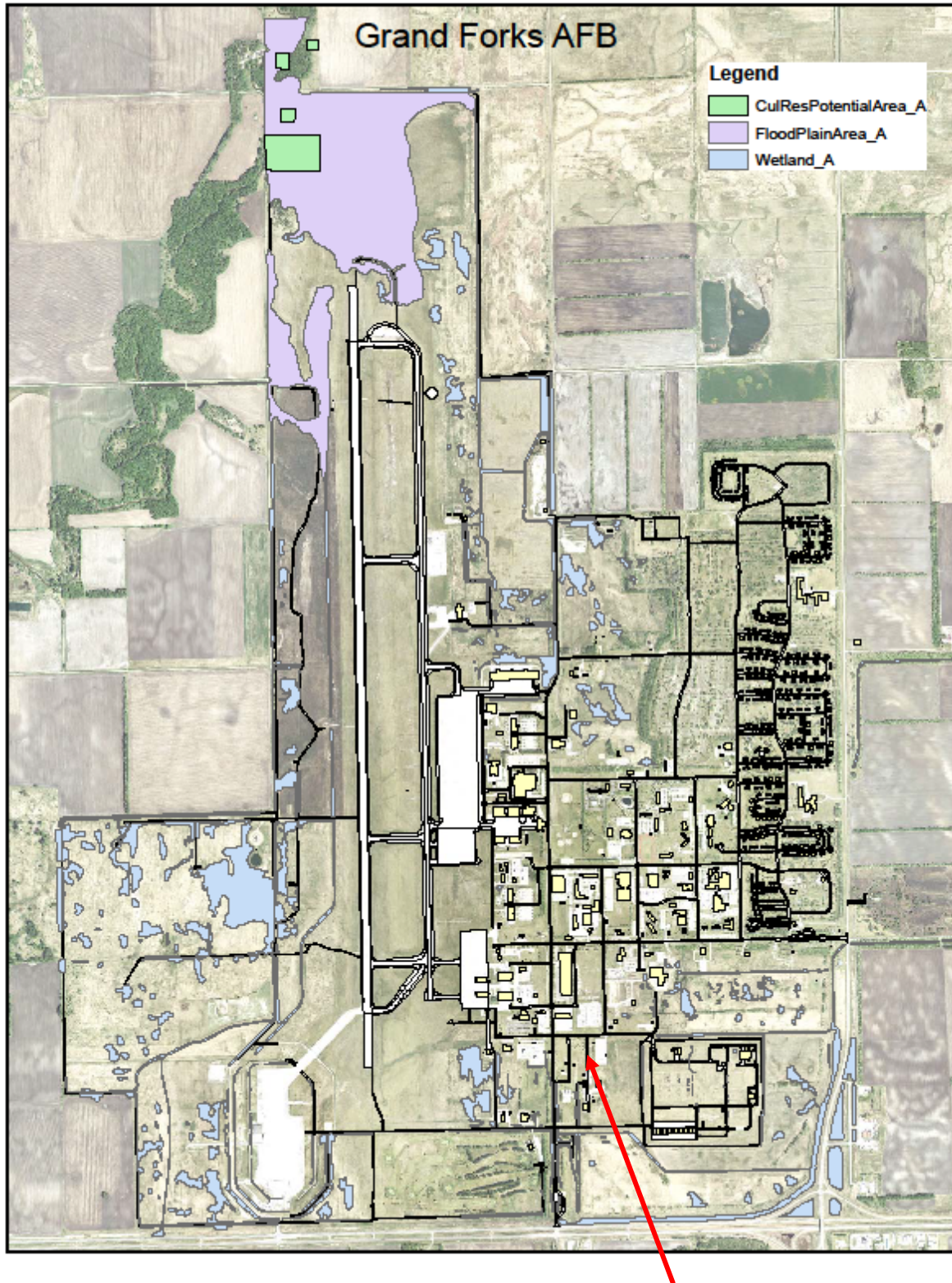
An exceptionally deep snow pack resulting from a series of blizzards during the 1996-97 winter rapidly melted in heavy spring rains and unusually warm early spring temperatures. The result was unprecedented flooding of the Red River Valley. The entire town of Grand Forks was evacuated as result of the floodwaters, which lingered in the area for several weeks before receding. GFAFB played a critical role in providing temporary shelter for the flood victims who were forced from their homes. Again in 2009, deep snow pack and heavy spring rains resulted in flooding of the Red River Valley. Although the town of Grand Forks was not evacuated, as flood waters did not overtop the levees, GFAFB continues to play a critical role in assisting with flood conditions.

GFAFB is located in the Turtle River watershed. The Turtle River flood zone occupies only a small section of the northwest corner of the Base. Vegetation along the river consists of narrow strips of woody shrubs, occasional forested areas, and aquatic plants occurring in shallow areas. Additionally, the floodplain surrounding Kelly's Slough runs near the southeast corner of the lagoons annex. The mapped 100-year floodplain of the Turtle River is located in the northwest corner of the installation and the mapped 100-year floodplain of Kelly's Slough is located in the southeast corner of the lagoons parcel.

There are no floodplains identified and/or mapped where this proposed project is to take place along Contractor Row. The project is located in the Industrial District. The project would not affect a floodplain as identified by the National Flood Insurance Program (NFIP).



1



2

3

Figure 3.5.1-1 , Wetlands, Floodplains and Cultural Resource Potential Area

## 3.6 NATURAL AND BIOLOGICAL RESOURCES

### 3.6.1 VEGETATION

Hay land, wildlife management areas, waterfowl production areas, neighboring wildlife refuges, state parks and conservation reserve program land have created excellent grassland and wetland habitats for wildlife in Grand Forks County. Pastures, meadows and other non-cultivated areas create a prairie-land mosaic of grasses, legumes and wild herbaceous plants. Included in the grasses and legumes vegetation species are tall wheat grass, brome grass, Kentucky bluegrass, sweet clover and alfalfa. Herbaceous plants include little bluestem, goldenrod, green needle grass, western wheat grass and bluegrass. Shrubs such as Juneberry, dogwood, hawthorn, buffalo berry and snowberry also are found in the area. In wetland areas, predominant species include Typha species, smartweed, wild millet, cord grass, bulrushes, sedges and reeds. These habitats for upland wildlife and wetland wildlife attract a variety of species to the area and support many aquatic species.

Various researchers, most associated with the University of ND, have studied current native floras in the vicinity of the Base. The Natural Heritage Inventory through field investigations has identified ten natural communities occurring in Grand Forks County. Of these, two communities are found within Base boundaries, River/Creek and Lowland Woodland. The River/Creek natural community refers to the Turtle River. This area is characterized by submergent and emergent aquatic plants, green algae, diatoms, diverse invertebrate animals such as sponges, flatworms, nematode worms, segmented worms, snails, clams and immature and adult insects, fish, amphibians, turtles and aquatic birds and mammals. Dominant trees in the Lowland Community include elm, cottonwood and green ash. Dutch elm disease has killed many of the elms. European buckthorn (a highly invasive exotic species), chokecherry and wood rose are common in the under story in this area. Wood nettle, stinging nettle, beggars' ticks and waterleaf are typical forbes.

Grass heights within semi-improved areas, including airfield areas within 300 feet of the runway centerline, are maintained at 7 to 14 inches. Beyond the 300-foot border on the airfield, hay cutting dictates the height of the vegetation. Significant portions of the unimproved areas on base support the active cultivation of wild hay.

Prairie View Nature Preserve is a restored native prairie with a nature trail, interpretive signs, blue bird nesting boxes, and a butterfly garden promoting environmental education and is located on the north end of base housing adjacent to North Dakota County Road B3. This area is minimal maintenance grassland using prescribed fire as a management tool. Prairie View Nature Preserve was planted with western wheatgrass, slender wheatgrass, big bluestem, little bluestem, Indian grass, switchgrass, and a variety of native wildflowers. This restoration area resembles a northern tallgrass prairie habitat and provides the community with an example of a true grassland ecosystem. Other native prairie restoration projects on base are occurring in semi-improved and unimproved areas, as well as hay lease areas. A hay lease totaling 664 acres has been let in recent years, and covers much unimproved grassland. The area has several different types of mixed grasses throughout the acreage. Most of the area is a smooth brome hay field, while some areas have been reseeded to native grasses appropriate for haying.

### 3.6.2 WILDLIFE

Grand Forks County is agrarian in nature, however it does have many wildlife management areas, waterfowl production areas, conservation reserve program land and recreational areas providing excellent habitat for local wildlife within the county. Kellys Slough NWR is located two miles northeast of Grand Forks AFB. In addition to being a wetland, it is a stopover point for thousands of migratory birds, especially shorebirds. The Prairie Chicken Wildlife Management Area is located north of Mekinock and contains 1,160 acres of habitat for deer, sharp-tailed grouse and game birds. Wildlife can also be found at the Turtle River State Park, the Bremer Nature Trail and the Myra Arboretum.

The Base supports a remarkable diversity of wildlife given its size and location within an agricultural matrix. The Turtle River riparian corridor, Prairie View Nature Preserve, grassland areas on the west side of the Base and the lagoons to the east of the Base all provide important habitat for native plant and wildlife species and should be conserved as such within mission constraints. Many mammalian species are found on base such as the white tail deer, eastern cottontail rabbit, coyotes, fox, beaver, raccoons, striped skunks, badgers, voles, gophers, shrews, mice, ermine, muskrat, squirrels, bats, fisher, otter and occasional moose and bear. Amphibian State Species of Concern include the Northern Leopard Frog. Mammal State Species of Concern include the bobcat, moose and black bear.

There are 238 bird species known to occur on GFAFB with 105 breeding species recorded, many of which include grassland bird species. Grassland bird populations are declining across North America due to huge losses of prime grassland habitat from conversion to agricultural, urban and industrial development. No other avian group has experienced such dramatic losses as grassland birds. GFAFB is fortunate to support a large variety of grassland birds, many of which are listed on the Partners-in-Flight species of concern list, such as the grasshopper sparrow. The most common species observed utilizing the base include red-winged blackbird, mourning dove, brown-headed cowbird, ringbilled gull and house sparrow. Best management practices (BMPs) to restrict construction actions during nesting season are implemented to reduce the amount of disruption to birds and wildlife.

### 3.6.3 THREATENED AND ENDANGERED SPECIES

Under the Endangered Species Act (ESA) (16 USC 1536), an “endangered species” is defined as any species in danger of extinction throughout all or a significant portion of its range. A “threatened species” is defined as any species likely to become an endangered species in the foreseeable future (USFWS 1973). The ESA does require that Federal Agencies not jeopardize the existence of a threatened or endangered species nor destroy or adversely modify designated critical habitat for threatened or endangered species.

Current federally endangered, threatened, candidate and critical habitat species listed for North Dakota (USFWS 2017) include the endangered whooping crane, endangered gray wolf, threatened Northern Long-eared Bat, threatened Red Knot, threatened Piping Plover, threatened Dakota Skipper, endangered Poweshiek skipperling, endangered Pallid Sturgeon and endangered Least Tern. None of these federally-listed species have ever been documented on GFAFB during official

1 biological survey events or identified from anecdotal accounts. No critical habitat for any of these  
2 species has been designated in Grand Forks County.

3  
4 The gray wolf is most frequently observed in the Turtle Mountains and generally presence of  
5 wolves throughout North Dakota is sporadic with occasional dispersing of animals from  
6 Minnesota, Montana and Manitoba. The whooping crane is most often associated with shallow  
7 wetlands and occasionally upland areas during migration. Most whooping cranes migrate through  
8 North Dakota each spring and fall, frequently with sandhill cranes. The northern long-eared bat  
9 has been sighted in North Dakota, but there is not yet any documentation of northern long-eared  
10 bats hibernating in the state. The bats have been found in areas like the Missouri and Little  
11 Missouri River forested corridors in small numbers. North Dakota is on the very western edge of  
12 their range. There are incidental records for the Red Knot occupying the City of Grand Forks  
13 sewage lagoon area through the Grand Cities Bird Club. Both the Dakota Skipper and Poweshiek  
14 Skipperling (*Oarisma poweshiek*) butterflies have been listed as threatened and endangered and  
15 are found in ND, however no critical habitat has been identified in Grand Forks County.

16  
17 On June 28, 2007, the bald eagle was formally removed from the list of federally threatened and  
18 endangered species (50 CFR 17). The bald eagle remains federally protected by both the Bald and  
19 Golden Eagle Protection Act (16 USC 668a-d) and the Migratory Bird Treaty Act (16 USC 703-  
20 712). While many bald eagles migrate through the state, several birds now stay and breed once  
21 again in North Dakota. Bald eagles observed at GFAFB property have been documented harassing  
22 waterfowl near the sewage lagoons, occasionally seen feeding on road kill in the area, and observed  
23 hunting in the Turtle River riparian area.

24  
25 North Dakota does not have a state endangered species act. Instead the state's Nature Preserves  
26 Act (NDCC 55-11) gives the North Dakota Parks and Recreation Department the responsibility to  
27 set aside a system of natural areas and nature preserves for the benefit of North Dakota citizens  
28 (NDPRD 2009). The North Dakota Natural Heritage Program is administered under this act. The  
29 NDNHP uses an international system for ranking rare, threatened and endangered species within  
30 the state of North Dakota as well as those ranked throughout the world. Species are ranked on a 1  
31 to 5 scale, primarily based on the number of known occurrences, but also including threats,  
32 sensitivity, area occupied and other biological factors throughout the species range. The NDNHP  
33 develops a list of species along with their state rank identified as critically imperiled (S1),  
34 imperiled (S2), or rare or uncommon (S3), apparently secure (S4) or secure (S5).

35  
36 In addition to state-ranked and federal lists, NDGFD has developed their "Species of Conservation  
37 Priority" in the state wildlife conservation plan, 2015. One hundred twelve species of birds,  
38 mammals, reptiles, amphibians, fish, and mussels were identified to one of three conservation  
39 levels. Level I species are those having a high level of conservation priority, Level II are those  
40 having a moderate level of conservation priority, and Level III are those having a moderate level  
41 of conservation priority but are believed to be peripheral or non-breeding in North Dakota  
42 (NDGFD 2015).

43  
44 The DOD Partners in Flight (PIF) Program consists of a cooperative network of natural resources  
45 personnel from military installations across the U.S. to work collaboratively with partners to  
46 conserve migratory and resident birds and their habitats on DOD lands. PIF bird conservation



plans identify species and habitats by both state and physiographic areas (ecoregions). The PIF program goals include the creation of a species of concern list for each installation which integrates national and international bird conservation initiatives into a consolidated species list based on several different priority lists (GFAFB INRMP).

Two hundred and fifty five taxa were identified in the ND Natural Heritage Inventory and the BS Bioserve biological inventory update for Grand Forks Air Force Base. Two rare orchid species, the Large and Small Yellow Lady's Slipper, are known to exist on Grand Forks AFB. These state-threatened plants were identified during the 2004 and 2009 inventories. The Eastern prickly gooseberry and Dutchman's breeches were discovered in the Turtle River Lowland Woodlands in the northwestern portion of the Base in 2009. Best management practices (BMPs) to restrict construction actions within the area are implemented to reduce the amount of disruption to natural resources. The Large and Small Yellow Lady's Slippers are found on the west side of the Base airfield in unimproved area and are not near the proposed construction site on Contractor Row.

The GFAFB Species of Concern Management Plan covers all species of concern found on GFAFB including species federally listed for protection as endangered or threatened under the Endangered Species Act, candidate species for federal protection, North Dakota threatened or endangered species ranked by North Dakota Natural Heritage Program, species of conservation priority listed in the North Dakota Comprehensive Wildlife Conservation Strategy, Partners in Flight Land Bird Conservation Plan Watch List, and U.S. Fish and Wildlife Service Birds of Conservation Concern for the Prairie Pothole Bird Conservation Region. The INRMP lists 64 birds, 4 plants, 5 amphibians, 6 mammals and 4 insects as "high priority" Species of Concern on Grand Forks AFB. Several rare and state-listed species have been observed on-base near Turtle River, the lagoons and the grassland to the west of the airfield. Management is required for these species, therefore, Base activities that affect them must be assessed following the Sikes Act.

The most recent Integrated Natural Resources Management Plan (INRMP) was signed by the Installation Commander on April 29, 2015. It is reviewed and signed each year by GFAFB, ND Game and Fish and US Fish and Wildlife Service. The INRMP defines natural resources management goals and objectives that are consistent with the military mission and ensure no net loss in the capability of installation lands to support the military mission. The main goal of ecosystem management on GFAFB is to maintain and improve the sustainability and biological diversity of unique native ecosystems while supporting the specific military mission of GFAFB.

INRMPs provide for the protection and conservation of state listed protected species when practicable. Although not required by the Endangered Species Act, similar conservation measures for species protected by state law are provided when such protection is not in direct conflict with the military mission. When conflicts occur, the appropriate state authority is consulted to determine if any conservation measures can be feasibly implemented to mitigate impacts.

The INRMP document can be found at:

<https://cs2.eis.af.mil/sites/10624/GrandForks/Shared%20Documents/Environmental%20Element/Natural%20Resources/INRMP/INRMP%20Grand%20Forks%20FY19.pdf>

## 3.7 EARTH RESOURCES

### 3.7.1 ENVIRONMENTAL RESTORATION PROGRAM

The Environmental Restoration Program (ERP) is the AF's environmental restoration program based on the CERCLA. CERCLA provides for Federal agencies with the authority to inventory, investigate and clean up uncontrolled or abandoned hazardous waste sites. There are seven ERP sites at Grand Forks AFB. These sites are identified as potentially impacted by past hazardous material or hazardous waste activities. They are the Fire Training Area/Old Sanitary Landfill Area, FT-02; New Sanitary Landfill Area, LF-03; Strategic Air Ground Equipment (SAGE) Building 306, ST-04; Explosive Ordnance Detonation Area, OT-05; Refueling Ramps and Pads, Base Tanks Area, ST-06; POL Off-Loading Area, ST-07; and Refueling Ramps and Pads, ST-08 (USAF, 1997b). Two sites, OT-05 and ST-06, are considered closed. ST-08 has had a remedial investigation/feasibility study (RI/FS) completed and the rest are in long-term monitoring. Grand Forks AFB is not on the National Priorities List (NPL).

The nearest site to the proposed construction site is ST007, Petroleum, Oils and Lubricant (POL) Unloading Area. It is located about 100 feet west of the proposed Nodak site. ST007 is part of the Base POL system, which has been in operation since 1958. The site is located in the south-central portion of the Base and consists of 17 fuel and deicer unloading/transfer manifolds used for receiving and dispensing jet fuel, deicer fluid and fuel oil from tanker trucks. Petroleum odor was detected from an excavation at the site in 1991. A Preliminary Assessment/Site Inspection (PA/SI) was performed to evaluate impacts to soil and groundwater in 1992. Supplemental work was conducted in 1993 and 1994 to further characterize groundwater impacts. Soil and groundwater at the site are contaminated with petroleum products due to periodic spillage that occurred during fuel unloading over the past 50 years.

Natural attenuation was the remedial alternative selected to address groundwater contamination at ST007 in the 1995 Decision Document. LTM has been completed to verify natural attenuation is occurring at the site. As part of the regular LTM program, samples are collected from five monitoring wells: POL-MW02, POL-MW03R, POL-MW04, POL-MW5R and POL-MW09. The samples were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX), TPH-DRO and TPH-GRO. Detected BTEX concentrations were compared to the current USEPA MCLs. TPH compounds were compared to NDDH cleanup action level guidelines. Groundwater sampling data from the LTM events from 2010 to 2012 were reviewed. A summary of the data reviewed follows:

- Chemicals of concern (COCs) were not identified in monitoring wells POL-MW02 or POL-MW04 in excess of screening levels.
- Benzene, TPH-GRO and TPH-DRO were identified in monitoring well POL-MW03R at concentrations exceeding the screening levels.
- Benzene, ethylbenzene, TPH-GRO and TPH-DRO were identified in monitoring wells POL-MW5R and POL-MW09 at concentrations exceeding the screening levels.

Groundwater contamination appears to be confined to the site. The slow seepage velocity within the native clay material is confining the contamination to the sandy fill at the source area.

With the exception of brief spikes in contaminant concentrations, groundwater contamination levels have remained relatively constant at the site. Natural attenuation continues to remediate the site and has enough assimilative capacity to remove all contamination.

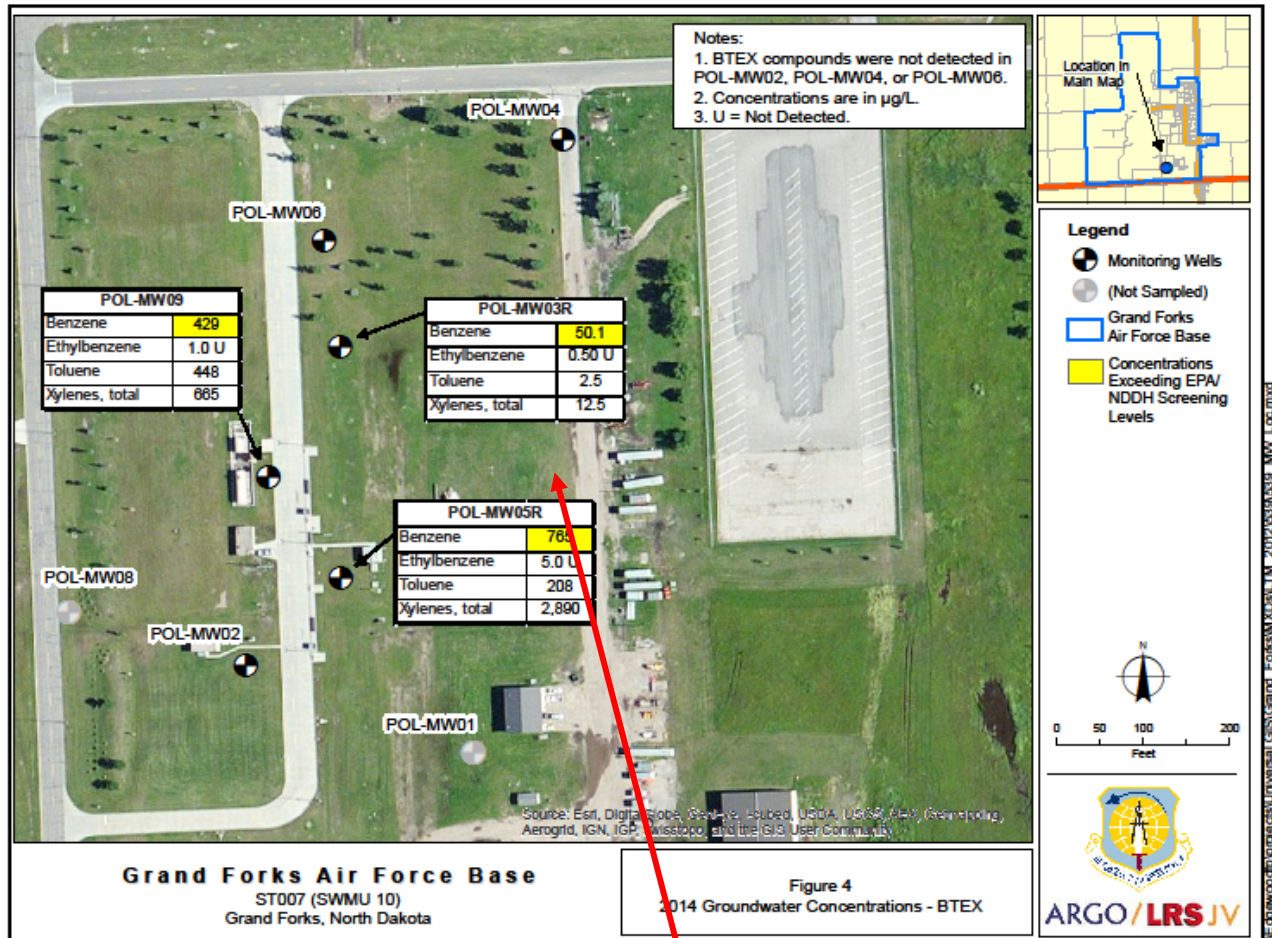


Figure 3.7.1-1 ERP Site ST007. The black and white circles are monitoring wells. Red arrow points to Nodak site.

## **3.7.2 GEOLOGICAL RESOURCES**

### **3.7.2.1 PHYSIOGRAPHY AND TOPOGRAPHY**

The topography of Grand Forks County ranges from broad, flat plains to gently rolling hills that were produced mainly by glacial activity. Local relief rarely exceeds 100 feet in one mile and, in parts of the lake basin, less than five feet in one mile.

Grand Forks AFB is located within the Central Lowlands physiographic province. The topography of Grand Forks County and the entire Red River Valley, is largely a result of the former existence of Glacial Lake Agassiz, which existed in this area during the melting of the last glacier, about 12,000 years ago (Stoner et al., 1993). The eastern four-fifths of Grand Forks County, including the Base, lies in the Agassiz Lake Plain District, which extends westward to the Pembina escarpment in the western portion of the county. The escarpment separates the Agassiz Lake Plain District from the Drift Plain District to the west. Glacial Lake Agassiz occupied the valley in a series of recessive lake stages, most of which were sufficient duration to produce shoreline features inland from the edge of the lake. Prominent physiographic features of the Agassiz Lake Plain District are remnant lake plains, beaches, inter-beach areas and delta plains. Strandline deposits, associated with fluctuating lake levels, are also present and are indicated by narrow ridges of sand and gravel that typically trend northwest-southwest in Grand Forks County.

Grand Forks AFB lies on a large lake plain in the eastern portion of Grand Forks County. The lake plain is characterized by somewhat poorly drained flats and swells, separated by poorly drained shallow swells and sloughs (Doolittle et al., 1981). The plain is generally level, with local relief being less than one foot. Land at the Base is relatively flat; with elevations ranging from 880 to 920 feet mean sea level (MSL) and averaging about 890 feet MSL. The land slopes to the north at less than 12 feet per mile.

### **3.7.2.2 SOIL TYPE CONDITION**

Soils consist of the Gilby loam series that are characterized by deep, somewhat poorly drained, moderately to slowly permeable soils in areas between beach ridges. The loam can be found from 0 to 12 inches. From 12 to 26 inches, the soil is a mixture of loam, silt loam and very fine sandy loam. From 26 to 60 inches, the soil is loam and clay loam.

## **3.7.3 PESTICIDE MANAGEMENT**

Pesticides are handled at various facilities including Environmental Control Pest Management, Golf Course Maintenance, Grounds Maintenance contractor and military family housing self help. Primary uses are for weeds, mosquito, ground squirrel, rodent control and BASH (Bird/Wildlife Aircraft Strike Hazard). Herbicides, such as picloram, nonselective glyphosate and 2, 4-D are used to maintain areas on-base. Pesticides Trumpet and Altosid are used for aerial spraying for mosquito control. The complete list of pesticides can be found in the GFAFB Integrated Pest Management Plan. The Wildland Fire Management Plan guides the Base in the use of controlled burns as a method for control of noxious weeds and invasive species. Other organizations assist in the management of pesticides and monitoring or personnel working with pesticides.



1 Military Public Health and Bioenvironmental Engineer offices provide information on the safe  
2 handling, storage and use of pesticides. Military Public Health maintains records on all pesticide  
3 applicators. The Fire Department on base provides emergency response in the event of a spill,  
4 fire, or similar type incident. Safety manages the BASH program.

### 6 **3.8 HAZARDOUS MATERIALS, HAZARDOUS WASTE and STORED FUELS**

#### 8 **3.8.1 HAZARDOUS WASTE, HAZARDOUS MATERIAL, RECYCLABLE MATERIAL**

10 Hazardous wastes, as listed under the RCRA, are defined as any solid, liquid, contained gaseous,  
11 or combination of wastes that pose a substantive or potential hazard to human health or the  
12 environment. On-base hazardous waste generation involves three types of on-base sites: an  
13 accumulation point (270-day), satellite accumulation points and spill cleanup equipment and  
14 materials storage. Discharge and emergency response equipment is maintained in accessible areas  
15 throughout Grand Forks AFB. The Fire Department maintains adequate fire response and  
16 discharge control and containment equipment. Pre-existing petroleum contaminated soils  
17 generated from excavations throughout the Base can be treated at the land treatment facility located  
18 on-base west of the south end of the runway. These solid wastes are tilled or turned a minimum  
19 of four times a year to remediate the soils to acceptable levels.

21 Recyclable materials from industrial facilities are collected in the recycling facility, in Building  
22 671. Cardboard and wood are collected in separate roll off storage bins. Paper, glass, plastics and  
23 metal cans are commingled in one roll off. Curbside containers are used in housing for recyclable  
24 materials. A contractor collects these materials and transports them off-base for processing.

26 The Environmental Management Element manages the hazardous material through a contract.  
27 Typical hazardous materials include materials such as reactives, ignitables, toxics and corrosives.  
28 Improper storage can impact human health and the safety of the environment.

#### 30 **3.8.2 UNDERGROUND AND ABOVE GROUND STORAGE TANKS**

32 Petroleum, oils and lubricants (POLs) are stored in twenty four (24) underground storage tanks  
33 (USTs) at GFAFB. Fifteen (15) USTs are regulated and store gasoline (4), diesel fuel (4), JP-8 (1)  
34 and waste oil (6) from oil water separators (OWS). Five (5) USTs are deferred from specific  
35 regulations and store JP-8 for the hydrant fuel system. Four (4) USTs are exempt from specific  
36 regulations and provide emergency spill containment for JP-8 or hydraulic oil. A UST and OWS  
37 are located about 200 feet west of the proposed construction site.

39 JP-8, gasoline, diesel fuel and used oil are stored in seventy-three (73) aboveground storage tanks  
40 (ASTs) at GFAFB. JP-8 is stored in six (6) ASTs with a combined capacity of 3,990,000 gallons.  
41 These six hydrant fuel system tanks each are contained by a concrete dike system. Diesel fuel for  
42 motor vehicle use is stored in four (4) ASTs with a combined capacity of 50,950 gallons. Thirty-  
43 nine (39) ASTs store diesel fuel for emergency generator use. The remaining twenty-four (24)  
44 ASTs store diesel fuel and used oil in smaller capacity tanks throughout the Base. All ASTs have  
45 secondary containment. There is a nearby AST about 200 feet south of the proposed Nodak site.

1 Potassium acetate used for runway deicing is stored in two 10,000-gallon ASTs. Both propylene  
2 glycol and Type IV aircraft deicing fluid is stored in 26,000-gallon and 8,600 gallon ASTs.  
3 Aircraft deicing fluid is recovered and stored in an AST north of Hangar 649.  
4

### 5 **3.8.3 SOLID WASTE MANAGEMENT**

6

7 Hard fill, construction debris and inert waste generated by Grand Forks AFB are disposed of at a  
8 permitted off-base landfill. All on-base household garbage and solid waste is collected by a  
9 contractor and transported to the Grand Forks City Landfill. The majority of construction debris  
10 is disposed of at an inert landfill (permit number IT-198) four miles northeast of the Base, while  
11 municipal waste and asbestos waste is disposed of at the Grand Forks City Landfill (SW-069)  
12 twelve miles east of the Base. GFAFB also operates a land treatment facility (IT-183) on-base for  
13 the remediation of petroleum-contaminated soils (PCSs). PCSs are generated on-base through  
14 spills, are encountered while excavating for various subsurface repairs, or encountered while  
15 replacing or removing underground storage tanks and piping.  
16

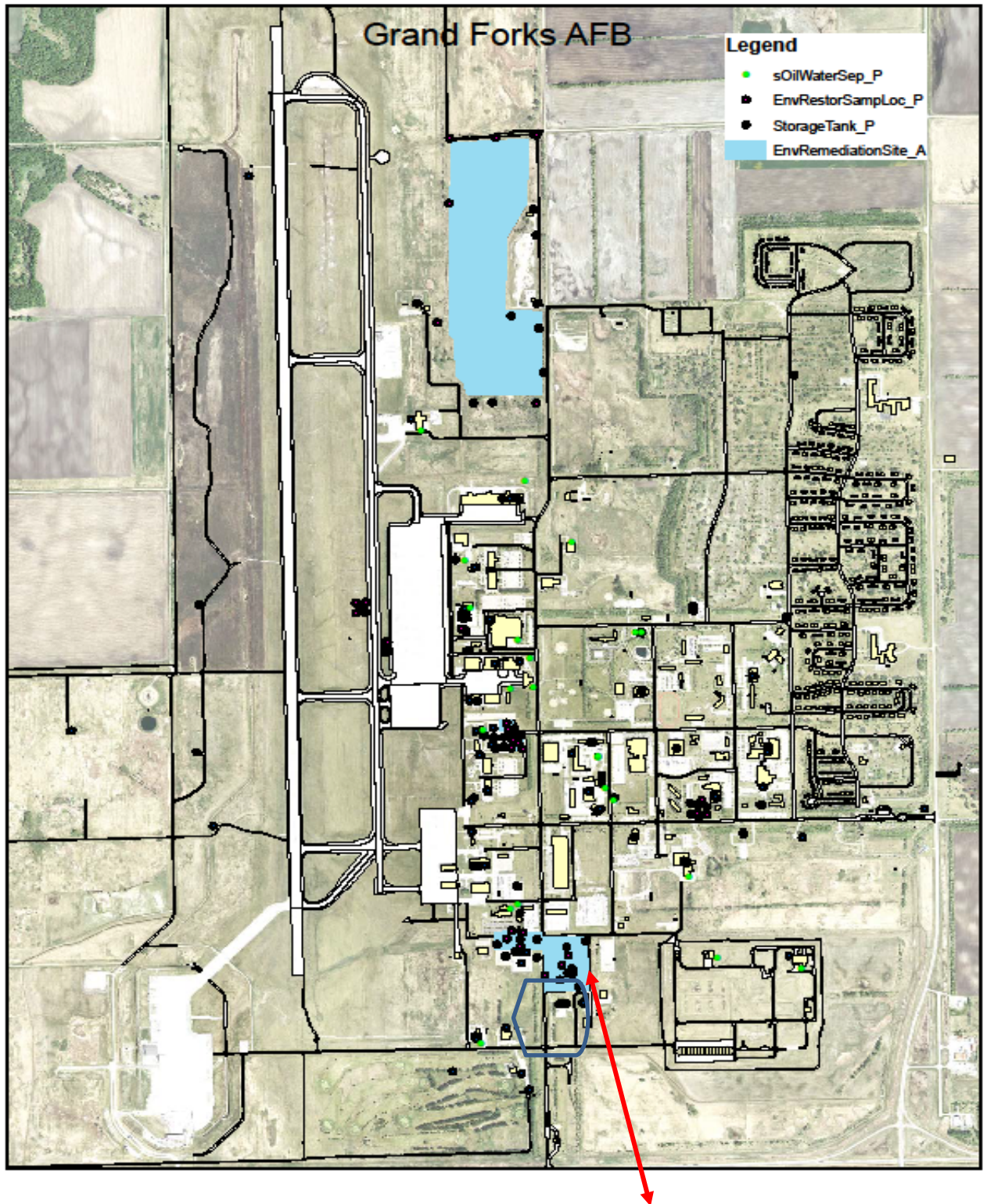


Figure 3.8.2-1 ERP, UST, AST, OWS Locations. Red arrow points to Nodak site.

### 3.9 CULTURAL RESOURCES

According to the Grand Forks AFB Cultural Resources Management Plan, there are no archeological sites that are potentially eligible for the National Register of Historic Places (NRHP). A total of six archeological sites and six archeological find spots have been identified on the Base. They are abandoned farmsteads and isolated artifacts. None meet the criteria of eligibility of the NRHP established in 36 CFR 60.4. There is no evidence for Native American burial grounds on the installation. There could be cultural sensitive areas found within areas identified on the cultural resource probability map. Due to the potential for the presence of buried prehistoric sites, paleosols (soil that developed on a past landscape) remain a management concern. Reconnaissance-level archival and archeological surveys of Grand Forks AFB conducted by the University of ND in 1989 indicated that there are no facilities (50 years or older) that possess historical significance. Several of the Base buildings are over the age of 50 years and were evaluated in 2011 under the NHPA, Section 110. The proposed construction site for the new Nodak Electric facility was not assessed. Murals and other artwork painted on walls throughout Base buildings are considered cultural resources and must be preserved and consultation completed with the State Historic Preservation Officer (SHPO) per the National Historic Preservation Act. Prior to painting/removing artwork in Base buildings, the actions must first be coordinated with the ND SHPO. The location of the proposed Nodak building is in a low probability area.

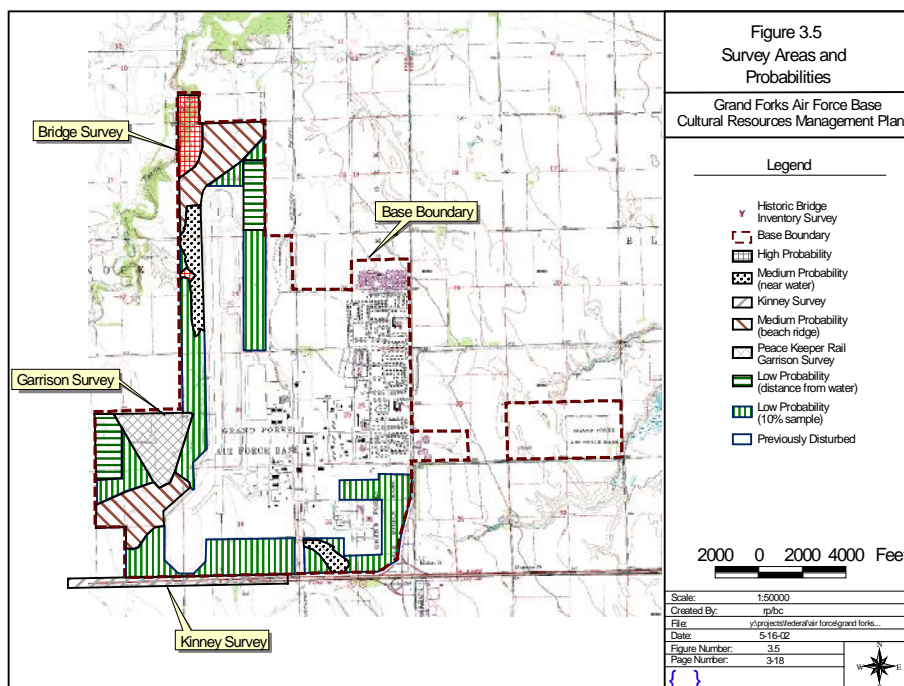


Figure 3.9.1-1 Cultural Resource Probability Areas

Grand Forks Air Force Base signed a Programmatic Agreement with Headquarters United States Air Force, State Historical Society of North Dakota, Headquarters Air Force Space Command,



Headquarters Air Mobility Command and the Advisory Council on Historic Preservation for the Deactivation of the 321<sup>st</sup> Missile Group in 1999. GFAFB mitigated under a memorandum of agreement for the demolition of building 306 and dismantlement of 150 Minuteman III Missile Launch Facilities and 15 Missile Alert Facilities and as such has preserved much of the cold war heritage of GFAFB through development of an outdoor interpretive plaza. The Cold War Plaza at Grand Forks Air Force Base incorporates a Viking, sunflakes and a history of the Cold War. With its Warrior of the North statue and interpretive storyboards, the Cold War Plaza was constructed in the heart of the community area for future generations to learn and appreciate the Cold War heritage of the Base. The rich history of the Base unfolds through dramatic story-boards and vivid photographs along the walkways. Starting with the original mission beddown in the 1950's, the storyboards depict the multiple missions, such as A Day in the Life of a Pilot and Missileer, Fighter Aircraft on the Ready and A Family of Warriors. The plaza was created as the result of a Memorandum of Agreement between the Base and the North Dakota State Historical Preservation Office when the Base's Semi-Automated Ground Environment (SAGE) facility (306), a large, windowless, concrete structure was demolished in 2003. The SAGE facility not only played a significant role as a state-of-the-art radar system in the late 1950's, but also as the Missile Wing Headquarters until 1997. A photo of the Cold War Plaza is shown in Figure 3.2.

Key elements of the plaza include a seven foot bronze statue of the Warrior of the North and 20 storyboards of the Grand Forks AFB Cold War heritage. The Warrior of the North statue represents the thousands of Airmen who have served bravely and diligently at the Base throughout the years. Locally referred to as Sven, he can also be seen on coins, wall art and street banners throughout the Base. The statue was sculpted by a noted artist, Thomas Bollinger, who has also sculpted such works as the Sacagawea statue located in the United States Capitol Building. The storyboards, created of porcelain enamel, are strategically placed in chronological order throughout the plaza. The storyboard text was researched by a local university student and the storyboard layout; design and editing were accomplished in-house by the 319th Civil Engineer Squadron. The sunflake symbol, embedded in the walkways, signifies the diverse seasons of the North Dakota landscape. Benches, ornamental lighting and brick paver walk-ways are integral design features connecting the plaza to the surrounding community area. Colorful, low-maintenance landscaping located throughout the plaza creates a park-like atmosphere which softens the formality of the symmetrical walkways. The plaza is handicap accessible and connected to the Base sidewalk and multi-use trail system. Gently sloped berms add interest, frame the plaza and screen nearby parking areas. The plaza honors the Cold War heritage for present and future generations. A portable walking-set of the storyboards was also created to be shared and enjoyed at nearby schools, museums and other community events held off-base. The Cold War Plaza turned a cultural resource mitigation project into a landscape architectural focal point in the heart of the community area for all to enjoy.

Nine tribes visited Grand Forks AFB for a Tribal Relations Site Visit on September 12, 2018. They visited the proposed site and were briefed by Nodak Electric engineers on the upcoming construction project. Discussions included previous disturbance in the area, tribal monitors during ground-disturbing activities, cultural resources survey and the protection of water resources.



Figure 3.9.1-2 Cold War Plaza at Grand Forks AFB

### 3.10 LAND USE

Land use in Grand Forks County consists primarily of cultivated crops with remaining land used for pasture and hay, urban development, recreation and wildlife habitat. Principal crops are soybeans, wheat, spring wheat, corn, dry edible beans, barley, sunflowers, potatoes and sugar beets. Turtle River State Park, developed as a recreation area in Grand Forks County, is located about five miles west of the Base. Several watershed protection dams are being developed for recreation activities including picnicking, swimming and ball fields. Kellys Slough NWR (located about two miles east of the Base) and the adjacent National Waterfowl Production Area are managed for wetland wildlife and migratory waterfowl, but they also include a significant acreage of open land wildlife habitat. There are several WPA, NWR, WMA's, UND land, CRP land all available for Wildlife Habitat. There are increasing fisher populations, deer, coyote, many active hunters and an active bird club in the county.

The main Base encompasses 5,745 acres, of which the USAF owns 5,150 acres and another 595 acres are lands containing easements, permits and licenses. Improved grounds, consisting of all covered area (under buildings and sidewalks), land surrounding Base buildings, the 9-hole golf course, recreational ball fields and the military family housing area, encompass 1,120 acres. Semi-improved grounds, including the airfield, fence lines and ditch banks, skeet range and riding stables account for 1,390 acres. The remaining 3,235 acres of the installation consist of unimproved grounds. These areas are comprised of woodlands, open space and wetlands, including four lagoons (180.4 acres) used for the treatment of Base wastewater. Agricultural out leased land (643 acres) is also classified as unimproved. Land use at the Base is twenty percent urban in nature, with residential development to the east and cropland, hayfields and pastures in the north, west and east of the Base footprint.

1 Land use along Contractor Row has always been for use of contractors, usually in the form of  
2 trailers and sheds, for the duration of the Base. The northwest end held the Central Heat Plant  
3 (423). It provided heating for all the industrial buildings on Base. Surrounding buildings 434,  
4 443, 451 and 464 supported the Heat Plant. The Heat Plant was demolished, and all the industrial  
5 buildings are now heated by natural gas. Along the northeast end of Contractor Row was the  
6 Security Forces Armory (700). The Armory has since been demolished, but the concrete slab and  
7 parking lot surrounded by chainlink fence remains. In recent years, permanent buildings have  
8 been built by painting, snow removal and groundskeeping contractors. The following map reflects  
9 the numerous trailers which once parked along Contractor Row in the 1980's.  
10



11  
12  
13  
14 Figure 3.10.1-1 reflects numerous trailers and sheds used by temporary contractors in 1980's.  
15 Red arrow reflects proposed siting for Nodak facility.  
16  
17  
18

### 3.11 INFRASTRUCTURE, UTILITIES AND TRANSPORTATION SYSTEMS

Two thousand vehicles per day travel ND County Road B3 to and from Grand Forks AFB's east gate to the US Highway 2 Interchange (SSgt Canada, 2015). US Highway 2, east of the Base interchange, handles 6,785 vehicles per day. (ND DOT, 2008). A four lane arterial road has a capacity of 6,000 vehicles per hour and a two lane road has capacity of 3,000 vehicles per hour, based on the average capacity of 1,500 vehicles per hour per lane. Roadways adjacent to Grand Forks AFB are quite capable of accommodating existing traffic flows.

Grand Forks AFB has good traffic flow even during peak hours (6-8 am and 4-6 pm). There are two gates: the main gate located off of County Road B3, about one mile north of U.S. Highway 2 and the Secondary/Commercial Gate located off of U.S. Highway 2, about 3/4 mile west of County Road B3. The main gate (gate 1) is connected to Steen Boulevard (Blvd), which is the main east-west road and serves the passenger traffic. The south gate (Commercial gate 2) is connected to Eielson Street (St), which is the main north-south road and serves the truck traffic. Both gates have visitor control personnel for research of visitor access to Base.

### 3.12 SAFETY AND OCCUPATIONAL HEALTH

Safety and occupational health issues include one-time and long-term exposure. Examples include asbestos/radiation/chemical exposure, explosives safety quantity-distance and bird/wildlife aircraft hazard. Safety issues include injuries or deaths resulting from a one-time accident. Aircraft Safety includes information on birds/wildlife aircraft hazards and the BASH program. Health issues include long-term exposure to chemicals such as asbestos and lead-based paint. Safety and occupational health concerns could impact personnel working on the project and in the surrounding area. The Globally Harmonized System of Classification and Labeling of Chemicals (GHS) includes criteria for the classification of health, physical and environmental hazards, as well as specifying what information should be included on labels of hazardous chemicals as well as safety data sheets. The GHS uses Safety Data Sheets (SDS). Nodak's are listed in Appendix D.

The National Emission Standards for Hazardous Air Pollutants (NESHAP) of the CAA designates asbestos as HAP. OSHA provides worker protection for employees who work around or asbestos containing material (ACM). Regulated ACM (RACM) includes thermal system insulation (TSI), any surfacing material and any friable asbestos material. Non-regulated Category I non-friable ACM includes floor tile and joint compound.

Lead exposure can result from paint chips or dust or inhalation of lead vapors from torch-cutting operations. This exposure can affect the human nervous system. Due to the size of children, exposure to lead-based paint is especially dangerous to small children. OSHA considers all painted surfaces in which lead is detectable to have a potential for occupational health exposure.

### 3.13 SOCIOECONOMIC RESOURCES

Grand Forks County is primarily an agricultural region and, as part of the Red River Valley, is very fertile. Cash crops include soybeans, sugar beets, corn, barley and oats. The valley ranks first in the nation in the production of potatoes, spring wheat, sunflowers and durum wheat. Grand



1 Forks County's population in 2014 was 70,138 (Census.gov). Grand Forks County's annual  
2 median household income in 2013 was \$46,745. Grand Forks AFB is one of the larger employers  
3 in Grand Forks County. The total Base population, working or living on base, is approximately  
4 4,213. Of that, 1,643 are military, 1,566 are military dependents, 320 appropriated fund (APF)  
5 civilians and 684 other civilians working on-base (Grand Forks AFB, 2016). The total annual  
6 economic impact for Grand Forks AFB is \$276,879,894.

### 7 8 **3.14 ENVIRONMENTAL JUSTICE**

9  
10 Environmental justice addresses the minority and low-income characteristics of the area, in this  
11 case Grand Forks County. The total population was 66,861 in the 2010 census. The county is  
12 88.2 percent Caucasian, 2.5 percent Native American, 2.0 percent African-American, 2.0 percent  
13 Asian/Pacific Islander, 2.9 percent Hispanic and 2.4 percent "Two or more races". In comparison,  
14 the US is 62.5 percent Caucasian, 0.9 percent Native American, 12.6 African-American, 4.8  
15 percent Asian, 16.3 percent Hispanic and 2.9 percent "Two or more races". Approximately 17  
16 percent of Grand Forks County's population is below the poverty level in comparison to 11.0  
17 percent of the state. The nearest town of Emerado has a 414 population with 22 percent in poverty  
18 status. The city of Grand Forks has 52,838 population with 14.6 percent in poverty status. GFAFB  
19 has 2,922 population with 4.2 percent in poverty status. (US Bureau of the Census, FactFinder  
20 site 2019). Over 90 percent of the military live on base, where the family housing is less than  
21 twenty years old. The residences surrounding GFAFB within twelve miles are small farmsteads  
22 and small towns with no concentrations of minority populations. The city of Grand Forks is  
23 thirteen miles from the base and has 79 percent of the county population.  
24  
25

1  
2

## **4.0 ENVIRONMENTAL CONSEQUENCES**

### **4.1 INTRODUCTION**

This chapter discusses the potential for significant impacts on the human and natural environment. The effects of the Proposed Action and the Alternatives on the affected environment are discussed in this section. The proposed project involves Construction of the new Nodak Electric facility to support electrical operations and storage. The Alternative Action is No Action. There were an additional three locations considered for the construction site, but were not selected and were eliminated from detailed study. If any of the three had been selected and proposed, the environmental consequences would have been similar to the Proposed Action. The three sites were each within 1,500 feet from the proposed construction site.

### **4.2 AIRSPACE AND AIRFIELD OPERATIONS**

#### **4.2.1 Alternative 1 - Proposed Action**

4.2.1.1– Construct a new Nodak Electric facility - The Proposed Action would have minimal impact on aircraft safety and airspace compatibility. Insignificant impacts associated with airspace and airfield operations during construction activities and operation of equipment would be insignificant, temporary and cease at the completion of these construction activities.

#### **4.2.2 Alternative 2 – No Action**

4.2.2.1 No new impacts to aircraft safety and airspace compatibility would occur from the No Action Alternative.

### **4.3 NOISE**

#### **4.3.1 Alternative 1 -Proposed Action**

4.3.1.1- Construct a new Nodak Electric facility -Significant impacts from noise would not be expected. There are no sensitive noise receptors (e.g., residential areas, hospitals, churches) within 4,000 feet of the project area. Impacts associated with the noise of construction activities and operation of equipment would be insignificant, temporary and cease at the completion of these activities. North Dakota Department of Health recommends that noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order and ensuring that construction activities are not conducted during early morning or late evening hours. Any workers or visitors within fifty feet of the trucks, tractors and loaders involved in construction activities would wear hearing protection to protect for hearing loss because the 80 decibel Day/Night Average Noise Level (DNL) contour extends into the cantonment areas on-base during equipment operation. No reasonable expectation of significant effects based on the science and facts.

#### 4.3.2 Alternative 2 – No Action

4.3.2.1- No new impacts to noise would occur from the No Action Alternative.

### 4.4 AIR QUALITY AND CLIMATE CHANGE

#### 4.4.1 Alternative 1 - Proposed Action

4.4.1.1- Construct a new Nodak Electric facility – Air Quality is considered good and Grand Forks AFB is in attainment for all criteria pollutants. Under the Proposed Action, fugitive dust would be generated during facility construction activities, including site preparation, clearing and grading. Fugitive dust could be reduced through standard dust minimization practices of regularly watering exposed soils and soil stockpiling. The site area is 150 feet by 150 feet for total 22,500 feet or approximately ½ acre. The standard dust emission factor for general non-residential construction activity is conservatively estimated at 0.095 ton of PM10 generated per half acre per month of activity. PM10 are inhalable particles of particulate matter with diameters that are generally 10 micrometers and smaller. Fugitive dust emissions would be short-term and temporary. Air quality impacts associated with fugitive dust would be considered minor and less than significant.

Under the Proposed Action, construction activities would result in short-term, temporary Greenhouse Gas (GHG), including carbon dioxide, emissions from operation of heavy equipment during construction and commutes. These construction activities associated with the Proposed Action are temporary mobile sources and would not result in any substantial increase in GHG emissions. When construction is complete, Nodak Electric will be able to stock and supply the necessary equipment and supplies on Base and therefore cut down on trips to their Grand Forks warehouse and have a slight mitigating effect on overall GHG emissions.

Best Management Practices (BMPs) would be implemented in order to reduce short-term construction-related air quality impacts. Fugitive emissions from construction activities would be managed in accordance with NDAC 33-15-17-03. Fugitive dust control measures to be implemented during earthmoving may include the following:

- All construction equipment would be maintained in good operating condition to minimize exhaust emissions.
- Vehicle speed would be limited on unpaved surfaces.
- All excavated, graded, or unpaved areas would be watered to prevent excess dust generation.
- The area of disturbance would be limited to the extent practicable.

Any changes to the proposed action, such as the addition of a generator, boiler, fuel storage tank, or welding operation, would require Nodak Electric to obtain their own Title V Permit from the North Dakota Health Department. It has been determined that the Utility Privatization system owners are responsible for their own Air Permits.

1 As the region is in attainment status for all criteria pollutants and not under an air quality  
2 maintenance plan, no Conformity Determination is required before proceeding with any  
3 alternative.

#### 4 5 4.4.2 Alternative 2 – No Action

6  
7 4.4.2.1- No new impacts to air quality would occur from the No Action Alternative. The  
8 operation of existing facilities and vehicles would continue to have the same ongoing contribution  
9 to the global climate change.

### 10 11 **4.5 WATER RESOURCES**

#### 12 13 4.5.1 Alternative 1 - Proposed Action

14  
15 4.5.1.1– Construct a new Nodak Electric facility – impacts to water resources as follows:

16  
17 4.5.1.1.1 Groundwater: Excavation during construction could potentially intercept the high  
18 water table. If the excavated area fills with groundwater, water could be directly exposed to  
19 contaminants released from construction equipment. This water would need to be pumped from  
20 the excavation, filtered and discharged as surface water. Erosion control plans would be required  
21 to minimize the amount of soil and sediment entering the water during construction and permits  
22 would be required for the discharge of the water. The acquisition of the discharge permit would  
23 be part of the design and construction process. Provided best management practices are followed,  
24 there would be insignificant impacts on ground water resources. No long-term significant impacts  
25 are anticipated.

26  
27 4.5.1.1.2 Surface Water: Surface water quality could be degraded during actual construction  
28 in the immediate area. The short-term effects come from possible erosion contributing to turbidity  
29 of runoff and possible contamination from spills or leaks from construction equipment. The  
30 contractor must utilize effective methods to control surface water runoff and minimize erosion.  
31 Proper stabilization and seeding the site immediately upon completion of the construction would  
32 provide beneficial vegetation for controlling erosion. Provided best management practices are  
33 utilized during construction and site reclamation, negative surface water impacts should be  
34 insignificant. Long-term significant impacts are not anticipated.

35  
36 4.5.1.1.3 Storm Water: In the short-term, construction activities could increase surface erosion  
37 and increase the dissolved solid and sediment content in storm water. Storm water runoff would  
38 be controlled through implementation of an erosion and sediment control plan. North Dakota  
39 Department of Health requires that projects disturbing one or more acres are required to have a  
40 permit to discharge storm water runoff until the site is stabilized by the reestablishment of  
41 vegetation or other permanent cover. This project will disturb one half acre. Specific sediment,  
42 erosion control and spill prevention measures would be developed during detailed design and  
43 would be included in the plans and specifications. Potential measures could include silt fences  
44 and traps, detention basins, buffer strips or other features used in various combinations. Long-  
45 term significant impacts are not anticipated.

1 4.5.1.1.4 Wastewater: Provided best management practices are used, the Proposed Action  
2 would have no impact on wastewater.

3  
4 4.5.1.1.5 Water Quality: Provided containment needs are met and best management practices  
5 are used, the Proposed Action would have insignificant impact to potable water quality. Prior to  
6 introducing a new line to the water main at the new Nodak Electric facility, it should be disinfected  
7 IAW AWWA standards to include bacteriological testing by the contractors. Notify Base Utilities  
8 Inc. (BUI) before connecting to the drinking water system. Results shall be sent to  
9 Bioenvironmental Engineering for review and approval for that line to be reinstated in the  
10 distribution system. If contamination of the water system occurs, notification to BUI and  
11 Bioenvironmental Engineering must be made immediately. Sampling and analysis would  
12 establish GFAFB's water distribution system is potable per the Safe Drinking Water Act.

13  
14 4.5.1.1.6 Wetlands: There are no wetlands in the vicinity of the new Nodak Electric facility.  
15 The nearest wetlands is a ditch 500 feet south of the proposed Nodak Electric facility. The  
16 proposed construction would have no effect on the wetland on-base. There would be no  
17 compensation necessary for wetland loss.

18  
19 4.5.1.1.7 Floodplains: There are no floodplains identified and/or mapped where this proposed  
20 project is to take place along Contractor Row. The project is located in the Industrial District. The  
21 project would not affect a floodplain as identified by the National Flood Insurance Program  
22 (NFIP). Provided best management practices are used, the Proposed Action would have no impact  
23 on floodplains.

#### 24 25 4.5.2 Alternative 2 – No Action

26  
27 4.5.2.1- No new impacts to water resources would occur from the No Action Alternative.

### 28 29 **4.6 NATURAL AND BIOLOGICAL RESOURCES**

#### 30 31 4.6.1 Alternative 1 - Proposed Action

32  
33 4.6.1.1– Construct a new Nodak Electric facility – impacts to wildlife, vegetation, or other  
34 biological resources as follows:

35  
36 4.6.1.1.1 Vegetation: BMPs and control measures, including silt fences, covering of  
37 stockpiles, keeping construction equipment in construction areas would be implemented to ensure  
38 that impacts to biological resources and the amount of vegetation disturbed would be kept to the  
39 minimum required to complete the action. Disturbed areas should be re-established as soon as  
40 possible. There would be a short-term insignificant loss of vegetation from construction activities.  
41 All trees and shrubs that need removal shall be either relocated on site, if appropriate, and/or  
42 replaced one for one. New plantings of trees shall be consistent w/guidance in AFI 32-7064 and  
43 the Base INRMP.

44  
45 4.6.1.1.2 Noxious Weeds: Public law 93-629 mandates control of noxious weeds. The Federal  
46 Noxious Weed Act (7 USC 2801 et seq.) and Executive Order 13112 requires federal agencies to

1 monitor and control noxious weeds on federal properties. Limit possible weed seed transport from  
2 infested areas to non-infested sites. Avoid activities in or adjacent to heavily infested areas or  
3 remove seed sources and propagules from site prior to conducting activities, or limit operations to  
4 non-seed producing seasons. Wash or otherwise remove all vegetation and soil from equipment  
5 before transporting to a new site. The Base does contain invasive/noxious weeds. Equipment  
6 should be kept within the construction area to reduce transport of noxious weeds. Provided best  
7 management practices are used, the Proposed Action would have no significant impact on noxious  
8 weeds.

9  
10 4.6.1.1.3 Wildlife: Construction would have insignificant impacts to wildlife, because the  
11 construction activity is short-term and construction equipment would remain in the construction  
12 area. The area is improved, providing habitat for mammals such as Richardson ground squirrels,  
13 rabbits, birds and invertebrates. Due to the abundance and mobility of these species and the  
14 profusion of similar landscaped areas in the general vicinity, any wildlife disturbed would be able  
15 to find similar habitat in the local area. Provided best management practices are used, the Proposed  
16 Action would have no significant impact on wildlife.

17  
18 4.6.1.1.4 Threatened or Endangered Species: The most recent compilation of all bird data  
19 collected on GFAFB identifies Birds of Conservation Concern (USFWS), the North Dakota  
20 Threatened or Endangered Species, North Dakota Natural Heritage Inventory (Ranks S1-S3),  
21 North Dakota Species of Concern, North Dakota Natural Heritage Inventory, the Partners in Flight  
22 Bird Conservation Plan for the Northern Tallgrass Prairie (Physiographic Area 40) and the North  
23 Dakota Special Programs, Comprehensive Wildlife Conservation Strategy, 100 Species of  
24 Conservation Priority, 2004. Proposed activities should have insignificant impact on these  
25 sensitive species. There is suitable habitat adjacent to the work area for many of the birds of  
26 conservation concern as listed above and other animals for the construction of the new Nodak  
27 Electric facility. The area is improved and construction management practices should be  
28 conducted to reduce any adverse impacts. The activity footprint should remain within the hangar  
29 footprint. All alternatives would be accomplished in compliance with the INRMP. The location  
30 of the proposed activity is an improved area of the Base and not near the Turtle River, lagoons and  
31 grassland west of the airfield where threatened and species of concern are most likely to appear.

#### 32 33 4.6.2 Alternative 2 – No Action

34  
35 4.6.2.1- No new impacts to biological and natural resources would occur from the No Action  
36 Alternative.

### 37 38 **4.7 EARTH RESOURCES**

#### 39 40 4.7.1 Alternative 1 - Proposed Action

41  
42 4.7.1.1– Construct a new Nodak Electric facility – impacts to earth resources as follows:

43  
44 ERP: Provided best management practices (BMP) are followed, the Proposed Action would not  
45 impact ERP Sites. The nearest ERP Site is 100 feet on POL Unloading Area to the west. Any

accidental contact with the nearby monitoring wells, or POL-contaminated soil, should be immediately referred to the Base Restoration Manager at 701-747-4183.

Geology: The Proposed Action would not impact geological resources. Soils present in the proposed construction area include the Gilby loam series. The elevation at this site is 893 feet.

Pesticides: No pesticides would be used during the construction of the new Nodak Electric facility.

#### 4.7.2 Alternative 2 – No Action

4.7.2.1- No new impacts to earth resources would occur from the No Action Alternative.

### **4.8 WASTES, HAZARDOUS MATERIALS and STORED FUELS**

#### 4.8.1 Alternative 1 - Proposed Action

4.8.1.1- Construct a new Nodak Electric facility – As a contractor, Nodak Electric will not be adding hazardous waste and materials to the Air Force generations, but shall remove their own waste from the Base. GFAFB is a Small Quantity Generator generating less than 1,000 kilograms ( 2204.62 pounds) of hazardous waste per month. The generator category is not expected to change. Solid waste, municipal waste and asbestos waste would be disposed in an approved location, such as the Grand Forks City Landfill (SW-069), which is located within 12 miles of the proposed construction area. Construction debris could be disposed at an inert landfill, such as one located four miles from the Base, with permit number IT-198. All solid waste materials would be managed, transported and disposed in accordance with the state’s solid and hazardous waste rules. Appropriate efforts to reduce, reuse and/or recycle waste materials are encouraged by the State of North Dakota. Inert waste should be segregated from non-inert waste, where possible, to reduce the cost of waste management.

Only RACM is required to be removed prior to a construction. The quantity of RACM for removal must be determined by the certified inspector and stated on the demo form. Non-friable ACM (e.g. floor tile and wall board systems) can remain in the building and be removed with the building debris as construction waste. The quantity of non-friable material remaining in the building must be assessed by the inspector and stated on the ASBESTOS NOTIFICATION OF DEMOLITION AND RENOVATION form. North Dakota Department of Health recommends that all necessary measures must be taken to minimize the disturbance of any asbestos-containing material and to prevent any asbestos fiber release episodes.

Polychlorinated Biphenyls (PCBs) and PCB Items would be removed prior to construction and disposed at an EPA approved chemical waste landfill approved for disposal of PCBs. Storage and disposal procedures in 40 CFR 761 would be performed.

Lead-based paints or coatings are not required to be removed prior to construction. All debris can be considered construction waste and disposed of properly. Workers must be protected from



1 exposure during construction and must be properly trained in the removal and disposal of lead-  
2 based paint surfaces.

3  
4 Batteries, pesticides, mercury devices and lamps such as fluorescent light bulbs can be stored and  
5 disposed as Universal Waste. Ignitable, corrosive, reactive and toxic wastes must be stored and  
6 disposed as Hazardous Waste. Accumulations of both Universal and Hazardous Waste generated  
7 by Nodak will be removed from Base and disposed off-site in an approved manner.

#### 8 9 4.8.2 Alternative 2 – No Action

10  
11 4.8.2.1- No new impacts to hazardous waste and hazardous materials would occur from the No  
12 Action Alternative.

### 13 14 **4.9 CULTURAL RESOURCES**

#### 15 16 4.9.1 Alternative 1 - Proposed Action

17  
18 4.9.1.1– Construct a new Nodak Electric facility – The Proposed Action to construct a new  
19 Nodak Electric facility has little potential to impact underground archaeological resources. The  
20 location of the new Nodak Electric facility is in a low probability area for archaeological resources.  
21 In the unlikely event any archaeological artifacts, arrowheads, skeletons, bones, pottery or tools  
22 are discovered during the construction activities, the contractor would be instructed to halt  
23 construction and immediately notify Grand Forks AFB Cultural Resource Manager who would  
24 notify the State Historic Preservation Officer (SHPO) and Tribal Historic Preservation Officer  
25 (THPO).

#### 26 27 4.9.2 Alternative 2 – No Action

28  
29 4.9.2.1- No new impacts to cultural resources would occur from the No Action Alternative.

### 30 31 **4.10 LAND USE**

#### 32 33 4.10.1 Alternative 1 - Proposed Action

34  
35 4.10.1.1– Construct a new Nodak Electric facility –The proposed construction would not change  
36 the land use, since the building is in the area designated for Industrial operations. The USAF land  
37 use planning process is designed to ensure efficient use of available resources and that the  
38 functional relationships of land use arrangements meet the goals and objectives of the Base. There  
39 are population growth fluctuations anticipated in the long-term future with the growth of the Grand  
40 Sky Park in the southwest corner of GFAFB. The Proposed Action has no adverse impact to land  
41 use, but does have positive impact to land use with the addition of a new Nodak facility on  
42 Contractor Row.

#### 43 44 4.10.2 Alternative 2 – No Action

45  
46 4.10.2.1- No new impacts to land use would occur from the No Action Alternative.

## **4.11 INFRASTRUCTURE, UTILITIES AND TRANSPORTATION SYSTEMS**

### **4.11.1 Alternative 1 - Proposed Action**

4.11.1.1– Construct a new Nodak Electric facility - Implementing the Proposed Action would not result in long-term impacts to the transportation networks at Grand Forks AFB. Short-term impacts from implementing the Proposed Action could include increased traffic movement through Gate 2 (secondary gate) for the duration of construction activities. The movement of equipment and vehicles for construction activities would result in short-term impacts to traffic and circulation during peak hours at Grand Forks AFB. The construction truck traffic would enter and exit Grand Forks AFB from Gate 2, which is used primarily for contractor truck access. Short-term congestion resulting from construction vehicle traffic would be insignificant.

The project area is nearest to 1<sup>st</sup> Avenue and Eielson Street, which provides direct access to Gate 2. This direct route for construction vehicles and distribution of traffic would minimize any potential impact on transportation at Grand Forks AFB. In addition, the route to the landfill is direct along U.S. Highway 2 and is outside the City of Grand Forks. Impacts to transportation in the local area would be short term and insignificant.

### **4.11.2 Alternative 2 – No Action**

4.11.2.1- No new impacts to infrastructure, utilities and transportation would occur from the No Action Alternative.

## **4.12 SAFETY AND OCCUPATIONAL HEALTH**

### **4.12.1 Alternative 1 - Proposed Action**

4.12.1.1– Construct a new Nodak Electric facility - Participants in the construction are required to wear appropriate personnel protective equipment (PPE) for protection from exposure. Any excavation in this area needs to be reviewed by the Bioenvironmental Engineer for worker protection. Provided best management practices are used, the Proposed Action would have positive impact on safety and occupational health. Any health issues related to mercury, PCBs, asbestos, lead-based paint and mold would be resolved during the design, surveys and construction of the new Nodak Electric facility.

### **4.12.2 Alternative 2 – No Action**

4.12.2.1- No new impacts to safety and occupational health would occur from the No Action Alternative.

## **4.13 SOCIOECONOMIC RESOURCES**

### **4.13.1 Alternative 1 - Proposed Action**

1 4.13.1.1– Construct a new Nodak Electric facility – Socioeconomic resources would be  
2 impacted if implementation of the Proposed Action resulted in a change to the population,  
3 employment, or income potential of Grand Forks AFB and the Region of Interest (ROI).  
4 Implementing the Proposed Action would not result in impacts to the socioeconomic conditions  
5 of the ROI. The Proposed Action would not involve relocation of personnel; therefore, no change  
6 to the population or permanent workforce would be expected. The economic benefits would be  
7 local and short-term, such as construction jobs, purchase of construction materials and services  
8 and secondary retail sales. Three personnel of Nodak will be assigned to work in the new facility.

9  
10 The unemployment rate in the ROI is low (2.7 percent) and would not be impacted by the small  
11 increase in short-term employment opportunities provided by the Proposed Action. There would  
12 be a small, positive impact to the total personal income in the ROI.

#### 13 14 4.13.2 Alternative 2 – No Action

15  
16 4.13.2.1- No new impacts to socioeconomic resources would occur from the No Action  
17 Alternative.

### 18 19 **4.14 ENVIRONMENTAL JUSTICE**

#### 20 21 4.14.1 Alternative 1 - Proposed Action

22  
23 4.14.1.1– Construct a new Nodak Electric facility - EO 12898 requires federal agencies to  
24 identify and address, as appropriate, disproportionately high and adverse human health or  
25 environmental effects of their programs, policies and activities on minority and low-income  
26 populations. Implementing the Proposed Action would not result in environmental justice impacts  
27 since there are few low-income or minority populations or children within or immediately adjacent  
28 to the project area.

#### 29 30 4.14.2 Alternative 2 – No Action

31  
32 4.14.2.1- No new impacts to environmental justice would occur from the No Action Alternative.

### 33 34 **4.15 OTHER NEPA CONSIDERATIONS**

#### 35 36 4.15.1 UNAVOIDABLE ADVERSE IMPACTS

37  
38 The Proposed Action would involve the use of construction-related vehicles and heavy equipment  
39 and extensive ground disturbance associated with the proposed construction of the Nodak Electric  
40 project at Grand Forks AFB. Consequently, implementation of the Proposed Action would result  
41 in unavoidable adverse construction-related impacts on air quality, water resources, noise and  
42 infrastructure. However, as described for the Proposed Action these impacts would be short term,  
43 temporary and less than significant.

#### 4.15.2 RELATIONSHIP BETWEEN USES AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

CEQ regulations (40 CFR § 1502.16) specify that environmental analyses must address "...the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity." Special attention should be given to impacts that narrow the range of beneficial uses of the environment in the long-term or pose a long-term risk to human health or safety. A short-term use of the environment is generally defined as a direct consequence of a project in its immediate vicinity. Changes to long-term productivity generally refer to negative impacts to the long-term quality of the land, air, or water.

The Proposed Action and its alternatives would involve the use of previously developed areas within the main cantonment area of the Base. Development has included installation of a road and underground utilities. No croplands, pastureland, wooded areas, or wetlands would be modified or affected as a result of implementing the Proposed Action and, consequently, productivity of the area would not be degraded.

Balancing the local short-term uses of the human environment with the maintenance and enhancement of long-term productivity is an important consideration in planning a project. For the purposes of this project, short-term uses of the environment include direct construction-related disturbances occurring over the projected timeframe for the project. Long-term uses of the human environment include those impacts occurring after construction activities are completed. If the project was not constructed, existing uses of Contractor Row would continue. The construction of a new facility for Nodak Electric would be a valuable enhancement to Grand Forks AFB.

#### 4.15.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA requires that environmental analysis include identification of any irreversible and irretrievable commitments of resources, which would be involved in the implementation of the projects included in the Proposed Action to construct a new facility for Nodak Electric. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the use of these resources has on future generations. Irreversible effects primarily result from the use or destruction of a specific resource that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action.

Resources used for the proposed construction activities include building materials, concrete and asphalt and various material supplies would be irreversibly lost. However, these resources are not in short supply, would not limit other unrelated construction activities and would not be considered significant. In addition, energy resources used as a result of the proposed action would be irretrievably lost. These include petroleum-based products (e.g., gasoline and diesel), natural gas and electricity. During construction, gasoline and diesel would be used for the operation of construction vehicles.

Under the Proposed Action, fuels, manpower, financial economic resources and other recovery materials related to the construction of the new Nodak Electric facility would be irreversibly lost. An irreversible effect would result from the use or destruction of resources (e.g., energy) that cannot be replaced within a reasonable time. Other resource commitments would be neither irreversible nor irretrievable.

#### 4.16 CUMULATIVE AND INDIRECT IMPACTS

Cumulative impacts on environmental resources result from incremental impacts of an individual action when combined with other past, present and reasonably foreseeable future projects in an affected area. Cumulative impacts generally result from minor, but collectively substantial, actions undertaken over a period of time by various agencies (e.g., Federal, state, or local) or persons. In accordance with the NEPA, a discussion of cumulative impacts resulting from projects proposed, under-construction, recently completed, or anticipated to be implemented in the near future is required.

Cumulative effects may occur when there is a relationship between a proposed action and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with or in close proximity to the Proposed Actions can be reasonably expected to have more potential for cumulative effects on “shared resources” than actions that may be geographically separated. Similarly, actions that coincide temporally would tend to offer a greater potential for cumulative effects. CEQ guidelines require that potential cumulative impacts be considered over a specified time period (i.e., from past through future). The appropriate time for considering past, present and reasonably foreseeable future projects can be the design life of a project, or future timeframes used in local master plans and other available predictive data. Determining the timeframe for the cumulative impacts analysis requires estimating the length of time the impacts of an action would last and considering specific resources in terms of their history of degradation (CEQ 1997).

Per CEQ guidelines for considering cumulative effects under NEPA (CEQ 1997), this cumulative impact analysis includes three primary considerations to:

- Determine the scope of the cumulative analysis, including relevant resources, geographic extent and timeframe;
- Conduct the cumulative effects analysis; and
- Determine the cumulative impacts to relevant resources.

The proposed construction project included in the Proposed Action is located within the main cantonment area of Grand Forks AFB. There is very little development in the immediate vicinity of Grand Forks AFB, as land use in this area is comprised primarily of agricultural operations. The City of Grand Forks has a number of recently approved and pending development projects (City of Grand Forks); however, these projects are relatively small scale developments, remodels, etc. Additionally, these projects are located within the City boundaries, approximately 13 miles east of Grand Forks AFB. Therefore, these City projects are not likely to result in impacts that would combine with Proposed Action impacts to produce cumulative effects. Further, Grand Forks County is currently in *attainment* for all criteria air pollutants; therefore, short-term

1 construction emissions associated with the projects included in the Proposed Action at Grand Forks  
2 AFB would be minor and would not contribute substantially to cumulative impacts.

3  
4 For the purposes of this EA, a review of recently completed, in-progress and planned construction  
5 and demolition projects was conducted. The following NEPA-compliant EAs have been prepared  
6 for a variety of construction activities at Grand Forks AFB over the last 10 years:

7  
8 EA for Beddown and Flight Operations of UAS at Grand Forks AFB, ND (2008).  
9 EA for Beddown of UAS by DHS-CBP at Grand Forks AFB ND (2008).  
10 EA for Demolition of 35 Buildings within the Munitions Storage Area (2008).  
11 EA for Demolition of Refueler Inn at Grand Forks AFB ND (2009).  
12 EA for Construction of Fire Station at Grand Forks AFB ND (2009).  
13 EA for Construction of a Fit-to-Fight Outdoor Running Track at GFAFB ND (2009).  
14 EA for Installation Development at Grand Forks AFB, North Dakota (2010).  
15 EA for Sanitary Sewer Line in Wetland at Grand Forks AFB ND (2010).  
16 EA for Privatization of MFH at Grand Forks AFB ND (2011).  
17 EA for Construction of DASR and Demo ASR at GFAFB ND (2011).  
18 EA for Riparian Restoration and Stabilization of Turtle River at GFAFB ND (2012).  
19 EA for Integrated Control of Nuisance Species and Mosquito Control Plan (2013).  
20 EA for Proposed Mixed-Use Business Park (Grand Sky) on an Enhanced Use Lease  
21 at Grand Forks AFB, North Dakota (2014).  
22 EIS for KC-46A Beddown MOB1 including Grand Forks AFB ND (2014).  
23 EA for DHS-CBP Relocation from Airport to Grand Forks AFB ND (2018).  
24 EA for Multiple Projects at Grand Forks AFB, North Dakota (2018).  
25 EIS for KC-46A Beddown MOB4 including Grand Forks AFB ND (2018).  
26 EA for Construction of Water/Wastewater Facility for BUI (in progress 2019).  
27

28 Additionally, Grand Forks AFB would prepare an Installation Development Plan) to guide future  
29 development at the Base over a 5-year planning horizon and beyond. All planned and programmed  
30 (i.e., reasonably foreseeable) development at Grand Forks AFB would be included in the  
31 Installation Development Environmental Assessment (IDEA) of 2020 and would likely include  
32 additional construction and demolition activities, including facilities not included in this Proposed  
33 Action.

#### 34 35 4.16.1 Air Quality

36  
37 Implementation of the project included in the Proposed Action would result in a short-term  
38 temporary increase in construction-related emissions. However, implementation of the Proposed  
39 Action would be required to implement BMPs to reduce fugitive dust and combustion emissions  
40 during construction activities to acceptable levels. Annual construction emissions associated with  
41 the Proposed Action are not expected to exceed *de Minimis* thresholds during any year of  
42 cumulative project implementation. The Proposed Action would not contribute significantly to  
43 any potential cumulative impacts to air quality.  
44  
45  
46

#### 4.16.2 Water Resources

Construction activities associated with the Proposed Action and cumulative projects at Grand Forks AFB could potentially cause short-term adverse cumulative impacts to water quality. Ground-disturbing activities would increase the potential for soil erosion and silt-laden runoff discharge into Turtle River or Kellys Slough. However, these impacts would be minimized through implementation of existing nonpoint pollution requirements and spill prevention and response procedures. A General Construction Stormwater Water Permit (Permit No. NDR10-0000), issued by NDDH Water Quality Division, would be required for the Proposed Action as well as all cumulative projects at Grand Forks AFB. In addition, implementation of BMPs—such as silt fencing and vegetation-based erosion control measures—would further reduce construction impacts. Therefore, cumulative impacts on water quality are expected to be less than significant.

#### 4.16.3 Biological Resources

As described in Section 4.6, *Biological Resources*, the Proposed Action is sited within an improved grounds within the main cantonment area of Grand Forks AFB. As such, the implementation of this project would have a less than significant impact on vegetation, wildlife and sensitive species at Grand Forks AFB. Further, with the implementation of BMPs, construction of the proposed new Nodak Electric facility would have no significant impacts on Grand Forks AFB. Other development projects on base are likely to have similar less than significant impacts. It is anticipated that implementation of the Proposed Action and the other projects identified above would not result in loss of valuable habitat or sensitive wildlife species. Therefore, cumulative impacts on biological resources are expected to be less than significant.

#### 4.16.4 Hazardous Materials and Wastes

The potential for overlapping cumulative construction projects could have a cumulative impact associated with the temporary increase in the storage, use, or generation of hazardous materials and wastes at the Base. For all cumulative construction activities at Grand Forks AFB, the use and disposal of hazardous materials and wastes, including Asbestos Containing Material (ACM), would be handled IAW appropriate Federal, state and local regulations as well as the Base's Hazardous Waste Management Plan (Grand Forks AFB). Further, cumulative projects are not expected to impact ERP sites or AOCs at Grand Forks AFB. Therefore, cumulative impacts to hazardous materials and wastes are expected to be less than significant and would not change the generator status of Small Quantity Generator.

#### 4.16.5 Cultural Resources

Implementation of the Proposed Action would include the construction of a new Nodak Electric building at Grand Forks AFB. As described in Section 4.9, *Cultural Resources*, the implementation of this project would result in a less than significant impact on cultural resources. Additionally, because the Proposed Action is limited to land within the boundary of Grand Forks AFB, it would not contribute to potential cumulative impacts off base.

#### 4.16.6 Infrastructure

Implementation of the Proposed Action at Grand Forks AFB would not result in or contribute to any operational changes to the airfield, transportation network, or any other related infrastructure on the Base. Consequently, construction-related impacts to infrastructure would be short-term and temporary and would not combine with any other potential impacts at Grand Forks AFB to create a cumulative impact.

#### 4.16.7 Safety

Implementation of the projects included in the Proposed Action would avoid CZs, APZs and ESQD Arcs. Additionally, all proposed construction activities would comply with AT/FP. Consequently, implementation of the projects included in the Proposed Action would not contribute to any cumulative safety impacts.

The potential impacts to issues and resource areas of interest in this EA are short-term and insignificant. No resources were found to have a long-term effect resulting from implementation of the Proposed Action, except benefits to Base operation. The incremental contribution of impacts of the Proposed Action, when considered in combination with other past, present and reasonably foreseeable future actions, would be negligible. The Proposed Action would be concurrent with capital improvement projects specified in the Installation Development Plan that would be assessed in separate NEPA documents as necessary. Overall, the analysis for this EA indicates that the Proposed Action for this new Nodak Electric facility construction project would not result in, or contribute to, significant negative cumulative impacts to the resources in the region.

Planned improvements to infrastructure and facilities are included in the 5-year, 10-year and 20-year plans in accordance with the Base comprehensive plan for Grand Forks AFB. Potential impacts to resources from implementation of projects in these plans, including construction activities, would be similar to the Proposed Action in this EA and would revert to baseline conditions after completion of the individual projects. The USAF land use planning process is designed to ensure efficient use of available resources and that the functional relationships of land use arrangements meet the goals and objectives of the Base. Limited growth is anticipated at Grand Forks AFB in the short-term. A significant mission change from KC135 refueling tankers to the Unmanned Aircraft System (UAS) with military population decline took place on Grand Forks AFB in 2010. However, other associations with Department of Homeland Security Customs and Border Protection, the Grand Forks County EUL Grand Sky Park and the upcoming redesignation of the 319 Air Base Wing to the 319 Reconnaissance Wing may prove to be healthy growth in the long-term future of Grand Forks AFB. The Air Force has constructed and renovated appropriate facilities on GFAFB to launch, recover, maintain and support the UAS. The UAS beddown was evaluated by an Environmental Impact Statement signed in 2010. The Air Force would focus limited time and funding on the infrastructure needed to perform the mission, diverting resources away from excess, obsolete and under-utilized infrastructure.



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APPENDIX A  
AF 813 - Request for Environmental Impact Analysis



<b>REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS</b>		Report Control Symbol RCS: 2018-006				
INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).						
<b>SECTION I - PROPONENT INFORMATION</b>						
1. TO (Environmental Planning Function) 319 CES/CENPL	2. FROM (Proponent organization and functional address symbol) 319 CES/CD	2a. TELEPHONE NO. 701-747-4761				
3. TITLE OF PROPOSED ACTION Construction of Electric Utility Facility						
4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date) DLA has awarded a fifty-year contract, SP0600-18-C-8321, to Nodak Electric Cooperative to provide all electric utilities at Grand Forks AFB. The contract is called Utility Privatization. The period of performance is from 1 Dec 2018 to 30 Nov 2068.						
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.) Nodak Electric proposes to construct a facility for their own use during the 50-year lease to provide electrical utilities at Grand Forks AFB ND.						
6. PROPONENT APPROVAL (Name and Grade) LESLIE W. CANARR, GS-13, DAFC DEPUTY BASE CIVIL ENGINEER	6a. SIGNATURE CANARR.LESLIE.W ARREN.1140214333 <small>Digitally signed by CANARR LESLIE WARREN 1140214333 Date: 2019.03.28 16:09:11 -05'00'</small>	6b. DATE 28 Mar 2019				
<b>SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY.</b> (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U= unknown effect)		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 25%;">+</td> <td style="width: 25%;">0</td> <td style="width: 25%;">-</td> <td style="width: 25%;">U</td> </tr> </table>	+	0	-	U
+	0	-	U			
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> </tr> </table>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> </tr> </table>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
9. WATER RESOURCES (Quality, quantity, source, etc.)		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> </tr> </table>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> </tr> </table>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> </tr> </table>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> </tr> </table>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> </tr> </table>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> </tr> </table>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> </tr> </table>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
16. OTHER (Potential impacts not addressed above.)		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input checked="" type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> <td style="width: 25%;"><input type="checkbox"/></td> </tr> </table>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<b>SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION</b>						
17. <input type="checkbox"/> PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # _____ ; OR <input checked="" type="checkbox"/> PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.						
18. REMARKS This action is not "regionally significant" and does not require a conformity determination in accordance with 40 CFR 93.153(1). The total emission of criteria pollutants from the proposed action are below the de minimus thresholds and less than 10 percent of the Air Quality Region's planning inventory.  See continuation page.						
19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) DIANE M. STROM, GS-11, DAFC ENVIRONMENTAL PROTECTION SPECIALIST	19a. SIGNATURE STROM.DIANE M.1231329176 <small>Digitally signed by STROM DIANE M 1231329176 Date: 2019.03.27 14:09:15 -05'00'</small>	19b. DATE 20190326				

4.0 Purpose and Need for Action RCS#2018-006

4.1 Purpose of the Action (mission objectives-who proposes to do what, where, when): Nodak Electric proposes to construct a facility for their own use during the 50-year lease to provide electrical utilities at Grand Forks AFB ND.

4.2 Need for the Action (why this action is desired or required-why here, why now): Defense Logistics Agency (DLA) has awarded a fifty-year contract, SP0600-18-C-8321, to Nodak Electric Cooperative to provide all electric utilities at Grand Forks AFB. The contract is called Utility Privatization. The period of performance is from 1 Dec 2018 to 30 Nov 2068.

4.3 Objectives for the Action (what goal do you wish to accomplish): Assess the environmental impacts associated with construction of a new facility for the electrical utility contractor Nodak Electric at the proposed location.

4.4 Related EISs/EAs and other documents (similar projects in the past): EIAP for construction along Contractors Row for paint contractor building 491, groundskeeping contractor building 493 and snow removal contractor building 490. EAs for Multiple Projects at GFAFB, Installation Development EA, Beddown of RPA/UAS, Construction of Fire Station.

4.5 Decision that must be made: The decision to be made by this 813 is whether or not further environmental analysis must be accomplished in the form of an EA or EIS. Implementation of the Proposed Action is the Preferred Alternative in this AF 813. An EA for the Construction of Electric Utility Facility on Contractors Row is appropriate.

4.6 Applicable Regulatory Requirements and Required Coordination-- required permits, licenses, entitlements: Applicable regulatory requirements and required coordination before and during construction include a Work Clearance Request, Stormwater Protection Plan, Dust Control Plan, Spill Control Plan, and Erosion and Sediment Control Plan to the CEI Water Program Manager; a Spill Control Plan and Waste Disposal Plan to the CEI Environmental Manager; and copies of all plans to the Contracting Officer.

5.0 Description of Proposed Action and Alternatives

5.1 Description of the proposed action (in brief, introduction): Construct an Electric Utility facility by and for Nodak Electric.

5.2 Selection criteria for Alternatives

5.2.1 Minimum mission requirements: effectiveness, timeliness, cost effective, legality, safety, efficiency.

5.2.2 Minimum environmental standards : noise, air, water, safety, HW, vegetation, cultural, geology, soils, socioeconomic standards at Grand Forks AFB.

5.3 Alternatives Considered but Eliminated from Detailed Study: Several locations were considered for siting. The four most practical locations are assessed in the document, with the Contractors Row location as the proposed action, and three other locations as alternative locations. None were eliminated.

5.4 Description of proposed alternatives

5.4.1 No-action alternative: Nodak will continue to provide electric utility service from existing locations provided on base. Corporate headquarters will continue from the Grand Forks location.

5.4.2 Proposed Action: see attachment. A-1 is the proposed location.

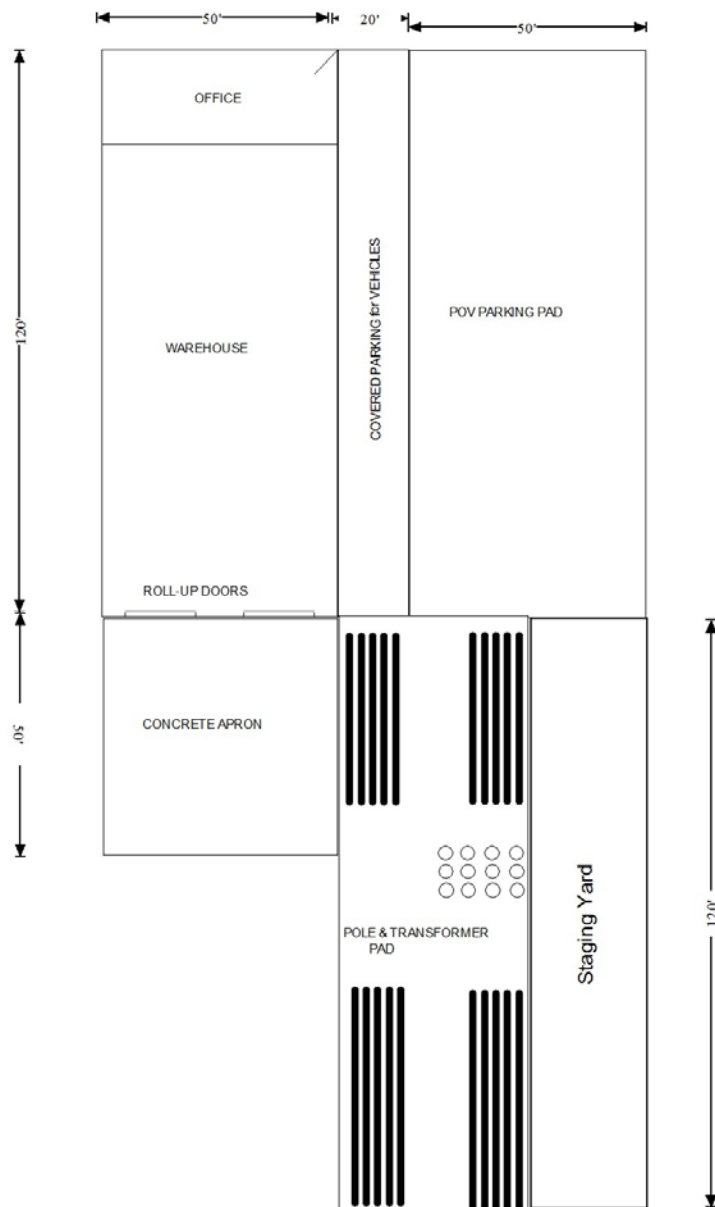
5.4.3 Another Reasonable Action Alternative: see attachment. A-2, A-3 and A-4 are alternative locations.

5.5 Description of Past and Reasonably Foreseeable Future Actions Relevant to Cumulative Impacts: There are several other training, construction and demolition projects occurring on Grand Forks AFB in the same time frame. These projects are addressed under separate NEPA documents.

5.6 Recommendation of preferred alternative: Nodak Electric will Construct a Electric Utility facility along Contractors Row.

## **DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**

Nodak Electric proposes a 120' x 50' steel frame, steel-sided, clear span facility with a concrete floor and 14 feet overhead doors. The facility will include racks, bins, shelving and office furniture. Planning includes electric hydronic heat in the concrete floor. Nodak proposes to build a pad at GFAFB. The pad at GFAFB will include a driveway to the facility and the overhead doors, an open parking area for POVs and under cover area for Nodak vehicles and equipment, a transformer/switch/junction box, cable and pole storage area and a make-up area. The proposed facility would meet GFAFB architectural standards.



Nodak will maintain sufficient inventory of maintenance stocks on the Base to enable prompt efforts. These materials include Fuses, Guy guards, Primary wire sleeves (overhead and URD), Secondary wire sleeves (overhead and URD), Tape, Wire, Hot line clamps, Copper and guy wire, Insulators and bells, URD splice covers, Riser guard, Bolts and associated hardware, Arrestors and cutouts, Crossarms and braces, Spare transformers, Anchors, Ground rods, Poles, Stirrups, URD secondary connections (inside transformer) and URD elbows.

Nodak owns heavy-duty bucket trucks, digger trucks and specialized equipment for maintenance and repair of distribution lines, including underground cable (e.g., line locators, fault locating equipment and line pullers). Nodak proposes to add a 50-foot bucket truck, a trencher and a pole trailer for shared dedicated use at the installation. Nodak proposes that a dedicated service team and their equipment/supplies be located on Grand Forks AFB.

Nodak proposes a three-person crew team that will be responsible for restoration and operations at the two installations. The team will consist of two dedicated, fully trained and capable linemen. One lineman, designated a foreman, will supervise Nodak's on-site efforts.

Nodak utilizes a seamless computerized mapping system, based on ESRI's ArcGIS, to replace historic paper maps. The system integrates our customer information databases with the geodatabase information of inventory, maintenance and condition and enables visualization of the two. All line crews have iPads with electronic mapping.

The list of MSDS sheets is provided by Nodak Electric. Many of the items are cleaning supplies, office supplies, but many are for operation, splice and terminations.

#### 2.4.1 Alternative 1 (Proposed Action)

Grand Forks AFB proposes to site the new Nodak Electric facility along the street Contractor's Row. The location is called the proposed site within this document. It is located approximately 200 feet north of the Paint Contractor in Building 491. It provides sufficient open space for a laydown area of equipment and materials.



### 2.4.2 Alternative 2 (Alternative Action)

Below is Alternative site A-2. This location is south of the RV lot, and west of Building 753 the Dog Kennel and Building 326 Vet Clinic. It is approximately 400 feet west of the Dog Kennel. The Dog Kennel training area requires a calm, quiet atmosphere for training the police dogs. It provides open space for a laydown area of equipment and materials.





### 2.4.3 Alternative 3 (Alternative Action)

Below is Alternative site A-3. This location is north of the Munitions Storage Area (MSA), east of Building 753 Dog Kennel, and west of Building 328 Water Pump Station. It is approximately 300 feet east of the Dog Kennel. The Dog Kennel training area requires a calm, quiet atmosphere for training the police dogs. It provides sufficient open space for a laydown area of equipment and materials. There is an existing parking lot.





#### 2.4.4 Alternative 4 (Alternative Action)

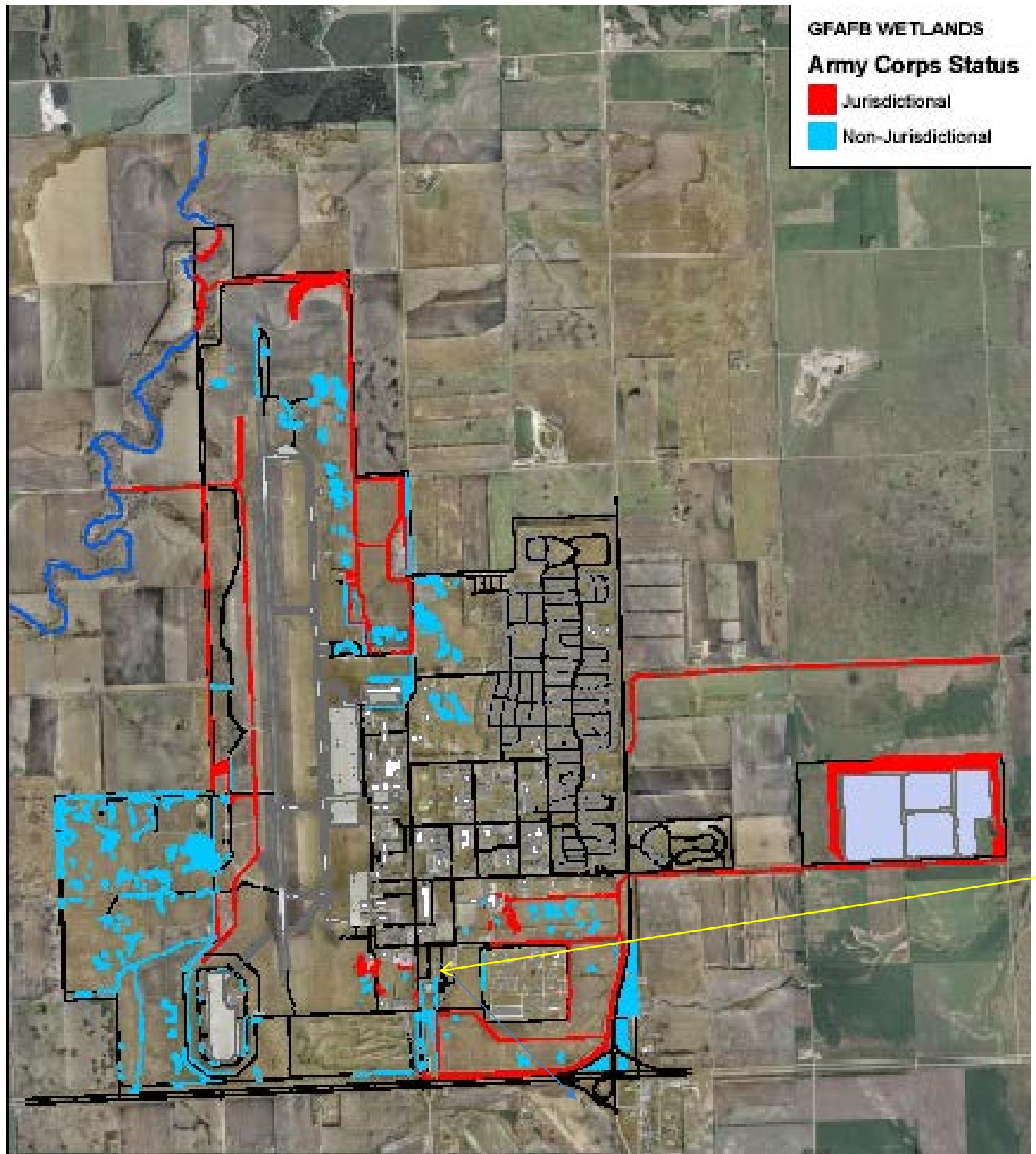
Below is Alternative site A-4. This location is on the east side of the Airfield, southeast of Bravo Ramp, southwest of Building 513 Training Facility. It is the previous location of the demolished Security Forces headquarters. It is located within the Airfield Operations district. This location is high potential airfield real estate. There is an existing parking lot. Administrative and training offices surround the parking lot.



### **2.4.3 Alternative 3 (No Action Alternative): Status Quo**

The No Action Alternative would continue the current mode of operation and there would be no construction of an on-base facility for Nodak Electric. The No Action would not improve the effectiveness of the Base's mission, nor replace inefficient and inadequate facilities, and current deficiencies would not be corrected. This would be in violation of the Electric Utilities Privatization Contract that requires the contractor to provide an on-base facility.

Nodak Electric would have to continue operating from the north end of Building 631 and open storage area 444. The corporate headquarters of Nodak Electric Cooperative remains in the city of Grand Forks. Nodak serves an area covering over 8200 square miles including all or part of Pembina, Walsh, Ramsey, Nelson, Steele, Grand Forks, Griggs, Benson, Eddy and Traill counties.



**Figure 1.3 Yellow arrow-site of the proposed site A-1 for Nodak Electric facility. Wetland Locations on GFAFB are shown in blue.**



Figure 1.4 Proposed Location – Along Contractor’s Row – North of Building 491





**Photo of proposed site on Contractors Row.**

Potential environmental effects include:

7. AICUZ. The last AICUZ study was conducted in 1994 and revalidated in 2003 when GFAFB had 30 KC-135R flights per day. A new AICUZ study has not been performed since the KC-135R tankers left in 2010. Using these noise contours, any changes in noise levels as a result of this proposed action would not be significant. The short-term operation of heavy equipment and tools in the project area would generate additional noise. These noise impacts would exist only during constructions operation, and would cease after completion of the project.

8. Air Quality. Air quality is considered good and the area is in attainment for all criteria pollutants. Short-term effects involve heavy construction equipment emissions (not a concern, as they are mobile sources) and fugitive dust (mentioned on our Title V permit) from earth moving activities. Fugitive emissions from construction activities are expected to be below the regulatory threshold and would be managed in accordance with NDAC 33-15-17-03. Best management practices (BMPs) to reduce fugitive emissions would be implemented to reduce the amount of these emissions. A dust control plan is required.

These actions are not "regionally significant" and do not require a conformity determination in accordance with 40 CFR 93.153(1). The total emission of criteria pollutants from the proposed action are below the de minimus thresholds and less than 10 percent of the Air Quality Region's planning inventory.

9. Stormwater Protection, Dust Control, Spill Control, and Erosion and Sediment Control Plans must be followed to protect ground water, drinking water and storm water.

9.1 Groundwater could be exposed to contaminants leaking from vehicles by infiltration. As they may be intersecting the water table when they dig, great care will need to be taken to prevent contamination. Care should be taken to prevent large spills and leaks, long term damage from normal 'drips' should be negligible. Provided best management practices are followed, there would be minimal impacts to ground water.

9.2 Surface water quality could degrade in the short-term, during and after the event, due to possible erosion contributing to turbidity of runoff and due to possible contamination from spills or leaks from vehicles. The operator shall utilize effective methods to control surface water runoff and to minimize erosion. Proper stabilization and re-seeding the site as needed immediately upon completion of the event will provide beneficial vegetation to control erosion. Wind and water erosion can be potential issues with stabilization. Provided best management practices are utilized, negative surface water impacts should be minimal.

9.3 Water Quality: Provided all containment needs are met and best management practices are used, the proposed action would have minimal impact to water quality.

9.4 Wastewater: The proposed action to include three personnel would have small impact on wastewater.

10. Safety and Occupational Health. The workers must wear appropriate personal protective equipment and follow OSHA rules.

11. Hazardous and Solid Waste: A short-term increase in solid waste generation in the form of construction debris will result from this proposed action. Disposal of hazardous waste, universal waste, trash and construction debris would be accomplished by the proponent, off base, in an approved disposal area, following local, state and federal guidelines. Concrete and other recyclable materials, such as glass, metal, paper, and cardboard will be recycled.

12. Biological Resources. Insignificant natural resources would be affected by the proposed action, as long as equipment stays in proposed areas.

12.1 Vegetation: BMPs and control measures, including silt fences and covering of stockpiles, should be implemented to ensure that impacts to biological resources be kept to a minimum. The amount of vegetation disturbed shall be limited to the designed footprint. Any disturbed areas outside the footprint must be reestablished immediately.

12.2 Noxious Weeds: Public law 93-629 mandates control of noxious weeds. Limit possible weed seed transport from infested areas to non-infested sites. Avoid activities in or adjacent to heavily infested areas or remove seed sources and propagules from site prior to conducting activities, or limit operations to non-seed producing seasons. Wash or otherwise remove all vegetation and soil from equipment before transporting to a new site. Following activities that expose the soil, mitigate by covering the area with weed seed-free mulch and/or seed the area with native species. Covering the soil will reduce the germination of weed seeds, maintain soil moisture, and minimize erosion. If any fill material is used, it should be from a weed-free source. A maintenance plan for controlling weeds is required.

12.3 Wildlife: Construction will have negative impacts to wildlife due to permanent loss of habitat. These areas provide foraging and nesting habitat for animals such as mice and rabbits. The area is maintained. The footprint is adjacent to similar landscape features where the disturbed animals should be able to find similar habitat. Loss of habitat will increase species competition for remaining natural resources.

12.4 Threatened or Endangered Species: No federal endangered or threatened species are known to occur on GFAFB. However, according to the recent surveys at GFAFB, there are fourteen bird species of concern, two state-ranked plant species, and one mussel. They are listed and described in the INRMP – Integrated Natural Resources Management Plan, which can be found on SharePoint at:

<https://cs2.eis.af.mil/sites/10624/GrandForks/Shared%20Documents/Environmental%20Element/Natural%20ResourcesINRMP/INRMP%20Grand%20Forks%2031Jan2018.pdf>. Proposed activities will remove habitat for grassland bird species, and these species will then compete for remaining similar habitat. The state-ranked plant species are not located in the proposed action area and neither was the mussel.

12.5 Wetlands: There are no wetlands in this project site. Activity in any wetlands cannot occur without a Clean Water Act section 404 permit from the Army Corps of Engineers. No



dumping, filling, dredging, or changing of the wetland hydrologic structure is permitted without a permit. The nearest wetland is a ditch 300 feet south of the proposed location.

13. Cultural Resources. In the event any cultural artifacts are discovered during repair activities, the personnel are to be instructed to halt activity and immediately notify Grand Forks AFB Civil Engineer Cultural Resource Manager at 701-747-4774 who would notify the North Dakota State Historic Preservation Officer, and the Tribal THPO's.

14. Geology and Soils. No effects anticipated to minerals, geothermal, seismicity or IRP. If any contaminated soil is discovered during excavation, immediately notify the Grand Forks AFB Civil Engineer Restoration Manager at 701-747-4183.

15. Socioeconomic. This action would have no long-term effect on the local economy. No effect on population and school projections.

**APPENDIX B**  
**Public Notice of Availability**

## Public Notice

### Notice of Availability Draft Environmental Assessment and Proposed Finding of No Significant Impact For Construction of Facility by Nodak Electric At Grand Forks AFB, ND

An Environmental Assessment (EA) has been prepared to analyze the impacts of the construction of a 50' x 100' operations building along Contractor Row on Grand Forks AFB. The Air Force has awarded Nodak Electric Cooperative Inc. a fifty-year privatization contract to perform electric utility service at Grand Forks AFB.

The EA prepared in accordance with the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations, and Air Force instructions implementing NEPA; evaluates potential impacts of the alternative actions on the environment including the No-action Alternative. Based on this analysis, the Air Force has prepared a proposed Finding of No Significant Impact (FONSI).

The Draft EA and proposed FONSI, dated May 2019, are available for review at the following locations:

Grand Forks Library  
2110 Library Circle  
Grand Forks ND 58201

Grand Forks AFB Library  
511 Holzapple Street  
Grand Forks AFB ND 58205

Electronic copies of the documents can also be found on the Grand Forks AFB website at <https://www.grandforks.af.mil/About-Us/Economic-and-Environmental-Information/>.

You are encouraged to submit comments through June 30, 2019. Comments should be provided to 319 CES/CENPL, Attn: Diane Strom, 525 Tuskegee Airmen Blvd, Grand Forks AFB ND 58205-6434.

Public comments on this Draft EA are requested pursuant to NEPA, 42 United States Code 4321, et seq. All written comments received during the comment period will be made available to the public and considered during the final EA preparation. Providing private address information with your comment is voluntary and such personal information will be kept confidential unless release is required by law. However, address information will be used to compile the project mailing list and failure to provide it will result in your name not being included on the mailing list.

APPENDIX C  
Interagency Correspondence



**DEPARTMENT OF THE AIR FORCE**  
**HEADQUARTERS 319TH CIVIL ENGINEER SQUADRON (ACC)**  
**GRAND FORKS AIR FORCE BASE, NORTH DAKOTA**

MEMORANDUM FOR US Fish and Wildlife  
Attn: Kevin Shelley and Scott Larson  
3425 Miriam Avenue  
Bismarck ND 58501

FROM: 319 CES/CD  
525 Tuskegee Airmen Blvd, Bldg. 410  
Grand Forks AFB ND 58205-6405

SUBJECT: Proposed Construction of Facility for Nodak Electric on Grand Forks AFB

1. Grand Forks Air Force Base is preparing an Environmental Assessment (EA) to assess the potential environmental consequences associated with the construction of a 50 by 100' facility for the use of Nodak Electric on Contractor Row on Grand Forks AFB.
2. The environmental impact analysis process for the Proposed Action and alternatives is being conducted in accordance with Council of Environmental Quality (CEQ) guidelines pursuant to the requirements of the National Environmental Policy Act (NEPA) of 1969, as amended (42 US Code 4321, et seq.), CEQ regulations for implementing the procedural provisions of NEPA at Title 40 of the Code of Federal Regulations (CFR) Sections 1500-1508 (40 CFR 1500-1508), and the Air Force Environmental Impact Assessment Process (EIAP) at 32 CFR 989.
3. Enclosed with this letter is a digital copy of the draft EA for Construction of Nodak Electric Facility on Grand Forks AFB. A digital copy can also be found at:  
<https://www.grandforks.af.mil/About-Us/Economic-and-Environmental-Information/>  
Provide your written comments directly to 319 CES/CENPL, Attn: Diane Strom, 525 Tuskegee Airmen Blvd, Grand Forks AFB ND 58205. Please review and provide your comments by June 30, 2019.
4. For additional information, please contact Ms. Diane Strom, at 701-747-6394 or [diane.strom@us.af.mil](mailto:diane.strom@us.af.mil).

LESLIE W. CANARR, DAFC  
Deputy Base Civil Engineer

Attachments:  
1. Draft FONSI  
2. Draft EA

APPENDIX D  
Material Safety Data Sheets  
In use by Nodak Electric

Safety Data Sheets available for:

Acetylene Gas p4559

Aerolex Plus Aerosol

Air Brake Antifreeze

Aluminum Brightener NAPA 1478

Aluminum Welding Wire

Ammonium Hydroxide

Antifreeze Cenex

Antiseptic Towelettes

Argon Gas Mixture

Armor All Cleaner

Aviation Hydraulic Fluid

Bars Leaks Oil Stop Leak

Battery Cleaner Aerosol Cat

Blue DEF Diesel Exhaust Fluid

Brake Cleaner

Brake Fluid, Heavy Duty

Brazing Flux

Break Away Penetrating Oil

Buccaneer Herbicide

Cable Clean Pad 3M

Cable Clean

Carb Cleaner 3M

Carpet Cleaner

Chainsaw Bar Oil

Cleaner 409 Clorox

Computer Screen Cleaner

Denatured Alcohol Solvent

Dielectric Solvent SENTRY

Diesel Fuel #1 Cenex

Diesel Fuel Antigel RSC

Diesel Fuel Blended

Diesel Fuel Conditioner

Diesel Fuel #2

Electrolyte Scholte

Epoxy Bowman

Eye Wash Saline

First Aid Cream

Floor Dry

Floor Finish Lystads

Foamzot Car Soap

Fuel Stabilizer Stabil

Gas Line Antifreeze Scho

Gasket Sealant

Gear Lube 140 Cenex

General Cleaner Zep

Glass Cleaner Lystads

Glass Cleaner Zep 40

Grease Aerosol Zep

Hand Cleaner Go-Jo

Hand Cleaner Zep

Hand Soap Lystads

Heat Shrink 3M

Heavy Duty Cleaner Zep

Hot Stick Cleaner Kit AB

HP Detergent Betco

Hydraulic Fluid Cenex  
Hydraulic Fluid  
Hydraulic Jack Oil  
Ice Melt CRC  
Insect Repellent Deep Woods Off  
Instrument Cleaner LR  
Instrument Rinse LR  
Isobutane  
Liquid Ice Melt  
Lithium Grease Cenex  
Lock Deicer and Lubricant  
Loctite Bowman  
Lysol-IC-Disinfectant Spray  
Mineral Spirits Emco  
Mineral Spirits  
Mobil Grease XHP 222  
Preservative, Wood, Osmose MP400-EXT  
Mystery Oil Marvel  
Brightener, Alum Napa  
OCR Degreaser  
Oil 2 cycle Cenex  
Oil, Cutting  
Orange Degreaser Zep  
Oxygen Union Carbide  
Paint Stripper  
Paint, Cold Galv  
Parts Cleaner  
Parts Washing Solvent, Safety Kleen

PCB Oil Monsanto  
Penetrating Spray Zep  
Penta Treated Pole  
Poison Ivy Bite Cream  
Pole Preservative  
Pole Preserve Osmose  
Power Steering Fluid  
Primer Aerosol  
PVC Glue EZ Weld  
Radnor Alum Weld Wire  
Rechargeable Battery Lithium Ion  
Round Up Monsanto  
RTV Silicone Boman  
Rust Inhibitor  
SDS Triple Antibiotic Ointment 014  
Sea Foam  
Sealer, Silicone  
Silicone Fluid Wacker  
Silicone Grease GE  
Silver Solder  
Soil Stabilizer Miseal  
Solvent Cleaner CG Bath  
Solvent Cleaner Midland  
Spray Paint Krylon  
Spray Paint  
Starting Fluid  
Super Electrosafe  
Thread Sealer



Topdown Aerosol

Transformer Oil

Transmission Fluid Cenex

Unleaded Gasoline Cenex

Virahol Forensic Tech

WD-40

Weather Adhesive 3M

Weed Killer Pramitol

Welding Flux JW Harris

Welding Rods Lincoln

Welding Rods Arcair

Welding Wire Praxair

Windshield Washer Fluid

Wood Preserve Osmose

Zep Green Cleaner

Zep Powerhouse

