




A Touchstone Energy® Cooperative 

5301 32nd Ave S  
Grand Forks, ND 58201-3312  
Phone 701.795.4000  
www.minnkota.com

July 20, 2023

RECEIVED

JUL 26 2023

NORTH DAKOTA  
PUBLIC SERVICE COMMISSION

Steve Kahl  
Executive Director  
North Dakota Public Service Commission  
600 East Boulevard; Department 408  
Bismarck, ND 58505-0480

Re: Minnkota Power Cooperative, Inc. –Lake Ardoch Substation Project

Dear Mr. Kahl:

Due to the increased load demands and the need for improved system reliability in northeast North Dakota and northwest Minnesota, Minnkota Power Cooperative, Inc. (Minnkota) determined a new substation is needed. The new substation will be named the Lake Ardoch substation. The proposed substation is located in Township 154, Range 54, Section 1, of Grand Forks County, ND (“Project”). The substation will tap our existing Prairie-Drayton 230 kV High Voltage Transmission Line (HVTL) as shown on accompanying attachments.

The Lake Ardoch substation is proposed to be built within the existing Corridor (as defined by North Dakota Century Code 49-22-03(3)(a)(1)(c)), beneath Minnkota’s existing Prairie to Drayton 230 kV HVTL, sourced via a tap from that HVTL. Please see the attached report for location details for this proposed project.

Once construction is complete, maintenance of the substation would consist of periodic inspections conducted by an inspector walking or riding on a four-wheel ATV. After construction, vegetation would be controlled according to Minnkota’s vegetation management program.

**Impact Assessment Summary:**

- Historic Properties and Cultural Resources – No Historic Properties Affected (the administrative record has been removed to protect sensitive information)
  - A Class 1 Historical\Architectural Survey was completed and a report dated August 3, 2022, was prepared to document the activities. The results of this review indicated that one previously recorded cultural resource and two previously reported cultural resource investigations were within a one-mile radius of the Project. None of the previously recorded cultural resources or previous studies lie within the area of potential effect (APE). The closest cultural resource was located approximately 3,100 feet from the Project.
  - On August 9, 2022, Minnkota submitted the findings, conclusions, and recommendations to the ND State Historic Preservation Office (SHPO). On August 26, 2022, the ND SHPO issued their letter of concurrence with No Historic Properties Affected (attached).
- Threatened and Endangered Species – The proposed project will have no effect on listed species (see attached).
  - Listed as a candidate species, the Monarch Butterfly was mentioned as possibly occurring in the general proposed Project area.

1 PU-23-276 Filed: 7/26/2023 Pages: 87  
Certification and Documentation Relating to N.D.C.C.  
Section 49-22-03(3)(a)(1)(c)

Minnkota Power Cooperative, Inc.  
Samantha Roberts, Environ. Specialist II


- On June 6, 2023, the IPAC tool was consulted and confirmed there was no known Critical Habitat in the proposed Project area.
- Pursuant to ND Century Code (69-06-08-02), for transmission facility corridor and route criteria, no exclusion or avoidance areas are within the Project area. Due to the Project location of being in a previously disturbed agricultural field the presence of areas that are critical to the life stages of threatened or endangered animal or plants species is unlikely. Also, the Project area would be unlikely habitat for unique or rare species due to active farming.
- Floodplain Management – The proposed project lies within a mapped Zone X area of minimal flood hazard (see attached).
- Wetlands Protection – The proposed project will not impact wetlands (see attached).
- Formerly Classified Lands – The proposed project will not impact Formerly Classified Lands (see attached).
- Contamination and Toxic Substances - The proposed project will result in no impacts involving contamination or Toxic Substances. There are no hazardous waste site or contaminated sites within a 1-mile radius of the Project area (see attached)
- Coastal Resources – Not applicable
- Air Quality – The proposed project will have no permanent impact on air quality (see attached).
- Water Quality - The proposed project will result in no impacts to water quality. However, the area is subject to drainage by the use of drain tiles. The flow of groundwater is estimated to be south-southwest, while the surface topography indicates that surface flow is likely northeast towards the Red River. The Project area is not near any sensitive groundwater<sup>1</sup> resources. The influences of surface drainage and the effects of the drain tiles on groundwater have not been evaluated for the purposes of this Project. However, the Project as proposed will have no or minimal effect during construction on water resources. The Project will require a storm water pollution prevention plan (SWPP) to be in compliance with the clean water act.
- Violation of Federal or State Permits – During May 2023, Minnkota initiated communication with the US Army Corps of Engineers (USACE) in regards to a jurisdictional determination (JD) for a ditch and potential connections to a water of the united states (WOTUS). The ditch is located near the Project but does not intersect nor will it be affected by the construction activities. At this time, all JDs are on hold pending guidance from the USACE headquarters office in Washington, D.C. It is unknown, whether the USACE has jurisdiction at this time.

Environmental Justice - The proposed project will result in no impacts associated with Environmental justice – (see attached).

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<sup>1</sup> ND GIS data portal reviewed on 6/28/2023. Information updated as of 2/11/2022.



A Touchstone Energy® Cooperative 

This submittal is in accordance with the North Dakota Century Code 49-22-03(3)(a)(1)(c), (2), and (3)(c). Also, in accordance with North Dakota Century Code 49-22-03, enclosed please find a notarized certification, in accordance with North Dakota Century Code 49-22-03(a)(4).

In addition to the certification, an environmental report which includes a location map and the design specifications for the new substation are included. Please contact me at [sroberts@minnkota.com](mailto:sroberts@minnkota.com) or 701-795-4289 if you have any questions or require additional information.

Sincerely,

A handwritten signature in cursive script that reads "Samantha Roberts".

Samantha L. Roberts  
Environmental Specialist II  
Minnkota Power Cooperative, Inc.


Attachment: Lake Ardoch 230/115 kV Substation – Environmental Report, June 22, 2023

CERTIFICATION OF APPLICANT PURSUANT  
TO N.D. CENTURY CODE 49-22-03(3)(a)(4)  
MINNKOTA POWER COOPERATIVE, INC.

I, Brendan Kennelly, a duly authorized agent of Minnkota Power Cooperative, Inc. (Minnkota) that has authority to bind the company in these matters, do hereby certify under oath:

1. That the construction of the Lake Ardoch substation, as described herein, will not affect any known exclusion or avoidance area as defined under the N.D. Administrative Code 69-06-08-02 (1) and (2).
2. That the construction of the Lake Ardoch substation is intended to improve load demand and system reliability needs of Minnkota's service area.
3. That Minnkota will comply with all applicable conditions and protections in applicable North Dakota siting laws and rules and commission orders that may apply.

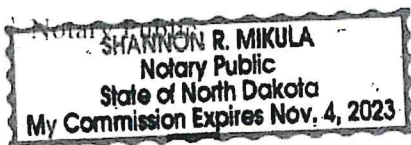
Dated at Grand Forks, North Dakota this day of July 17<sup>th</sup>, 2023.

  
Brendan Kennelly, VP Power Delivery

STATE OF NORTH DAKOTA  
COUNTY OF GRAND FORKS

This instrument was acknowledged before me this 17<sup>th</sup> day of July, 2023 by Brendan Kennelly, VP Power Delivery on behalf of Minnkota Power Cooperative, Inc.

  
Signature





LAKE ARDOCH 230/115 KV  
SUBSTATION  
**Environmental Report**

T154 R54 S1  
Grand Forks County, ND  
22 June 2023



## Contents

1. Project Description .....	2
2. Land Ownership and Use .....	2
2.1. Environmental Justice .....	2
3. Section 106 .....	3
4. Threatened and Endangered Species .....	3
5. Wetlands.....	4
6. Floodplains .....	4
7. Coastal Areas .....	4
8. Important Farmland.....	4
9. Environmental Risk Management .....	5
10. Water Resources .....	5
10.1 USACE & NRCS Communications .....	5
11. Air Quality.....	6
APPENDIX A. PROJECT LOCATION.....	7
APPENDIX B. LAND OWNERSHIP AND LAND USE.....	8
APPENDIX C. ENVIRONMENTAL JUSTICE .....	9
APPENDIX D. HISTORIC PRESERVATION (SECT. 106).....	10
APPENDIX E. THREATENED AND ENDANGERED SPECIES .....	11
APPENDIX F. WETLANDS .....	12
APPENDIX G. FLOODPLAINS.....	13
APPENDIX H. IMPORTANT FARMLAND .....	14
APPENDIX I. ENVIRONMENTAL RISK MANAGEMENT .....	15
APPENDIX J. WATER RESOURCES.....	16
APPENDIX K. AIR QUALITY .....	17



## 1. Project Description

Project Name: Lake Ardoch Substation (Project)

Project Description: Installation of new 230/115 kV substation

The proposed project constructs a new 230/115 kV tap substation and associated control house that will tap on to the existing Prairie-Drayton 230 kV line which will connect to the existing Oslo 115 kV substation.

The site will be graded to 2 to 3.5 inches above the existing topography. The Project will establish a grounding grid within the fenced area for electrical operational safety. 4.5-inch-thick concrete slabs will be beneath transformers. A new control house prebuilt at Minnkota Power Cooperative, Inc (MPC) headquarters, will be wired on site.

The substation construction process will include staging equipment, supplies, and materials, site grading, concrete work, electrical equipment placement, erecting structures, installing conductors, etc. Typical construction equipment that may be used for the proposed Project includes line construction equipment, and general construction equipment on rubber tires or tracks, as appropriate.

Tree clearing and removal is not necessary for this proposed project. To the extent practical, MPC will coordinate these activities with the affected property owner(s) and/or state and local highway departments, as appropriate.

## 2. Land Ownership and Use

The Project is in the Levant township within Grand Forks County, North Dakota, located at T154 N, R52 W, S1 (48.179890, -97.264378). The Grand Forks County tax assessor indicates the parcel identification code is 23-0104-00001-001.

Although the tax assessment shows the Grovum-Narlock family as the owners, the deed was officially granted to MPC on March 2, 2023 (Appendix B). Of the roughly 10.4-acre parcel that MPC now owns, the Project will affect approximately 2.5 acres of land that was previously cropland and not previously graded.

### 2.1. Environmental Justice

An EPA EJScreen report run on February 27, 2023, indicated an approximate population of 10 within 1 mile of the Project. The nearest buildings are about 0.7 miles from the Project.

The associated values for the project area for the lead paint, under age 5 and over age 64 variables were higher than both state and national averages.

The values for the following variables were either equal to or greater than only the state averages: particulate matter 2.5, air toxics cancer risk, superfund proximity, and low income.

The nearest active superfund site, St Regis Paper Co, is 136 miles southeast of the Project at (47.375561, -94.605550). The nearest Underground Storage Tank facility is at Farmers Union Oil Co. about 3.75 miles northwest of the Project.

### 3. Section 106

Juniper Environmental Consulting (Juniper) completed a Class I Survey on August 2, 2022 and prepared a Cultural Resource Literature Report for a one-mile radius study area around the Project dated August 3, 2022 (Report). The Report recommends a finding of No Historic Properties Affected for the Project.

The Report noted one previously recorded cultural resource and two previous investigations within a one-mile radius, although none of those lie within the area of potential effect nor within the legal section for the Project. Administrative record of consultation has been removed to protect potentially sensitive information but is on file with the agency (Appendix D).

On August 9, 2022, MPC submitted the findings, conclusions, and recommendations regarding the cultural resource activities to the ND State Historic Preservation Office (SHPO). Lisa L. Steckler, the Historic Preservation Specialist with ND SHPO, responded on August 26, 2022, issuing a letter of concurrence with a determination of “No Historic Properties Affected.”

A list of tribal organizations and their contacts was obtained using the tribal directory assessment tool (TDAT). On February 16, 2023, the relevant tribal organizations were contacted for consideration. No comments were received within the 30-day comment period from the tribal organizations contacted.

### 4. Threatened and Endangered Species

The USFWS Information for Planning and Consultation (IPaC) website, consulted on February 27, 2023, identified the monarch butterfly as a candidate species that may be found within the Project area, drawn as a 12-acre rectangle around the proposed substation. The IPaC results indicated no critical habitats.

The NRCS Web Soil Survey (WSS) tool, consulted on February 27, 2023, determined the Project site to be on Bearden silty clay loam soil, a saline soil, with a hydric rating of 12.4%. The site is within one of ND Game and Fish’s Action Plan Focus Areas: the Saline Area. A drain tile is located on the neighboring parcel bordering the southwest corner of the Project parcel, which is commonly used in this region to reduce the salinity for growing crops. The site conditions may be conducive for nectar resources and milkweed, regardless of if they’re adapted to the soil’s natural salinity or adapted to altered conditions.

This site will be reseeded with native grasses and forbs as part of the stormwater protection plan. Although habitat beneficial to monarchs may be present along the road edges, the construction will be converting land that was previously agricultural. The previous landowner may continue to farm up to 20 feet from any ditches. The parcel or remainder of native lands may be enrolled into MPC’s in-progress Monarch Candidate Conservation Agreement with Assurances.

Therefore, a determination of “May Affect, but Not Likely to Adversely Affect” for the monarch is applicable.

Four migratory birds protected under the Migratory Bird Treaty Act (MBTA) were identified by the Resource List to be possibly present within the Project area, including the two birds protected under the Bald and Golden Eagle Protection Act (BGEPA) (Appendix E). All four of the migratory birds identified are Species of Conservation Priority included in ND Game and Fish’s State Wildlife Action Plan. The Bobolink is typically found in tall and mixed-grass prairies and found to avoid stretches within 150 meters of roads and near cropland areas. The Marbled Godwit prefers large native short grasslands mostly in the Missouri Coteau, not commonly in the Red River Valley. The Project is located within the Red River Valley amongst cropland parcels. Therefore, the presence of Bobolink nor Godwit is unlikely. Regardless, Minnkota will comply with the MBTA and BGEPA which prohibit “take” of species listed in USFWS regulations.

## 5. Wetlands

The USFWS NWI website, consulted on February 27, 2023, identified three wetlands south and one west of the Project. The three southern water bodies are freshwater emergent wetlands with the classification code PEM1Ad and are located on the parcel south of 35<sup>th</sup> Ave NE. The westerly one is a farmed wetland located on a neighboring parcel. The four wetlands described will not be affected by the Project.

## 6. Floodplains

FEMA’s Flood Insurance Rate Maps (FIRMette), consulted on February 27, 2023, indicated that the proposed project lies within a mapped Zone X area (Appendix G). The Zone X classification corresponds with areas of minimal flood hazard.

## 7. Coastal Areas

No coastal areas are present within or near the Project area.

## 8. Important Farmland

The NRCS WSS tool, consulted on February 27, 2023, determined the substation area as not prime farmland (Appendix H). On May 22, 2023, MPC submitted a letter to Wade Bott, state soil scientist at NRCS, about the need for a farmland conversion impact rating (FCIR) if the farmland is not classified as prime/important. On May 26, 2023, Mr. Bott determined the Project does not need an FCIR, “because there are no important farmland acres within the area of permanent disturbance” (Appendix H).

## 9. Environmental Risk Management

The EPA NEPAassist tool, consulted on February 27, 2023 indicated there are no contaminated sites nor hazardous waste sites within a 1-mile radius of the Project area (Appendix I).

## 10. Water Resources

NEPAassist did not identify the Project as within a 1-mile radius of any sole source aquifers as conducted on February 27, 2023.

On February 27, 2023, the USFWS NWI website identified one other surface water resource aside from the wetlands discussed in section 5. This R4SBCx resource is an east-west, 2.63-mile unnamed roadside ditch that is an excavated, seasonally flooded, and intermittent located on the southern side of 35<sup>th</sup> Ave NE.

EPA's National Hydrography Dataset and WATERS geodatabases, as well as analysis of topography maps around the area, show the Project location draining northeast for 6.71 river miles (rmi) into an intermittent roadside waterway that flows 1.51 rmi east into the perennial North Marais River, which then flows 8.03 rmi northeast into Red River of the North. The topography of the Project gently slopes northeast towards the Red River. Shallow groundwater flow is estimated south-southwest. It is unclear how the neighboring drain tile influences surface and groundwater flow.

### 10.1 USACE & NRCS Communications

MPC initiated email communications with Jason Renschler at US Army Corps of Engineers (USACE) on May 18, 2023. Mr. Renschler initially found the desktop analyses of the water resources to be inconclusive due to proximity to waters of the US (WOTUS). During a call on May 22, 2023, Renschler advised getting local maps and data from the county NRCS office to aid in the decision (Appendix J).

On May 23, 2023, MPC contacted the Grand Forks NRCS office, which transferred the inquiry to the Walsh County Office for processing. Mary Dvorak responded on May 25, 2023 and sent along a satellite image of the property, then advised Minnkota to contact Wade Bott at the NRCS Bismarck State Office. In the same letter responding to the FCIR inquiry, Bott sent along NRCS guidelines for avoiding impacts to wetlands.

On May 25, 2023, Sackett v. EPA's ruling on WOTUS redefines and limits which wetlands are protected under the Clean Water Act towards requiring a continuous surface connection. On May 31, 2023, Mr. Renschler communicated that JDs are on hold until further guidance from USACE headquarters is given. Therefore, USACE interpretation of the site is unknown at this time.

## 11. Air Quality

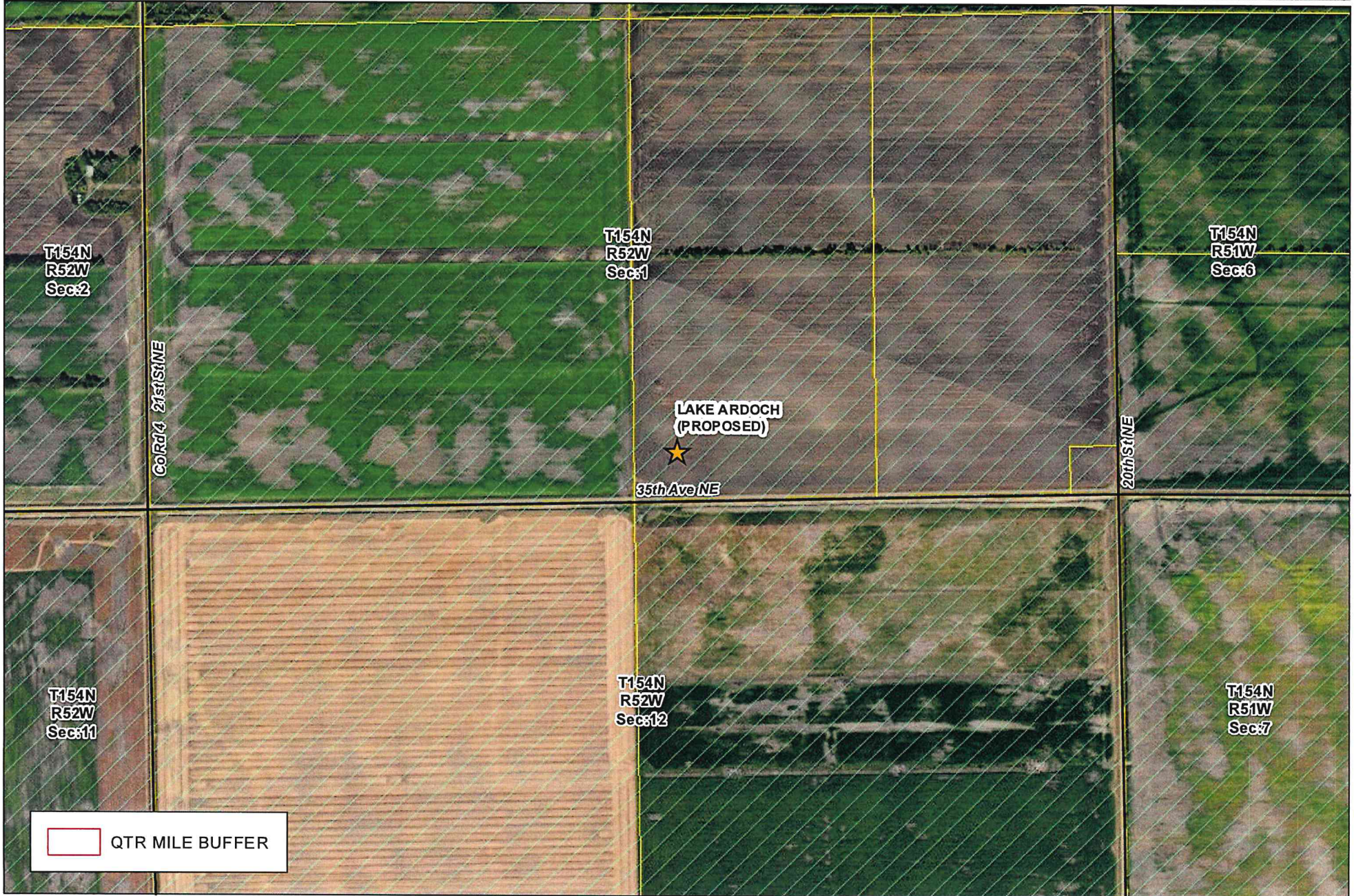
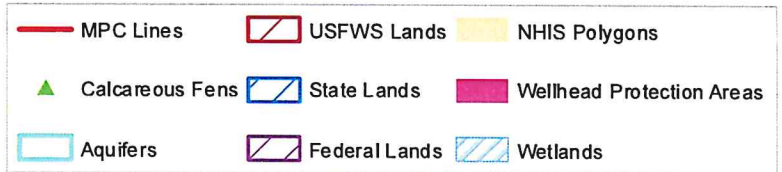
The Project is not located in a non-attainment or maintenance area, nor will it have long-term impacts on air quality. Therefore, a conformity determination is not required (Appendix K).

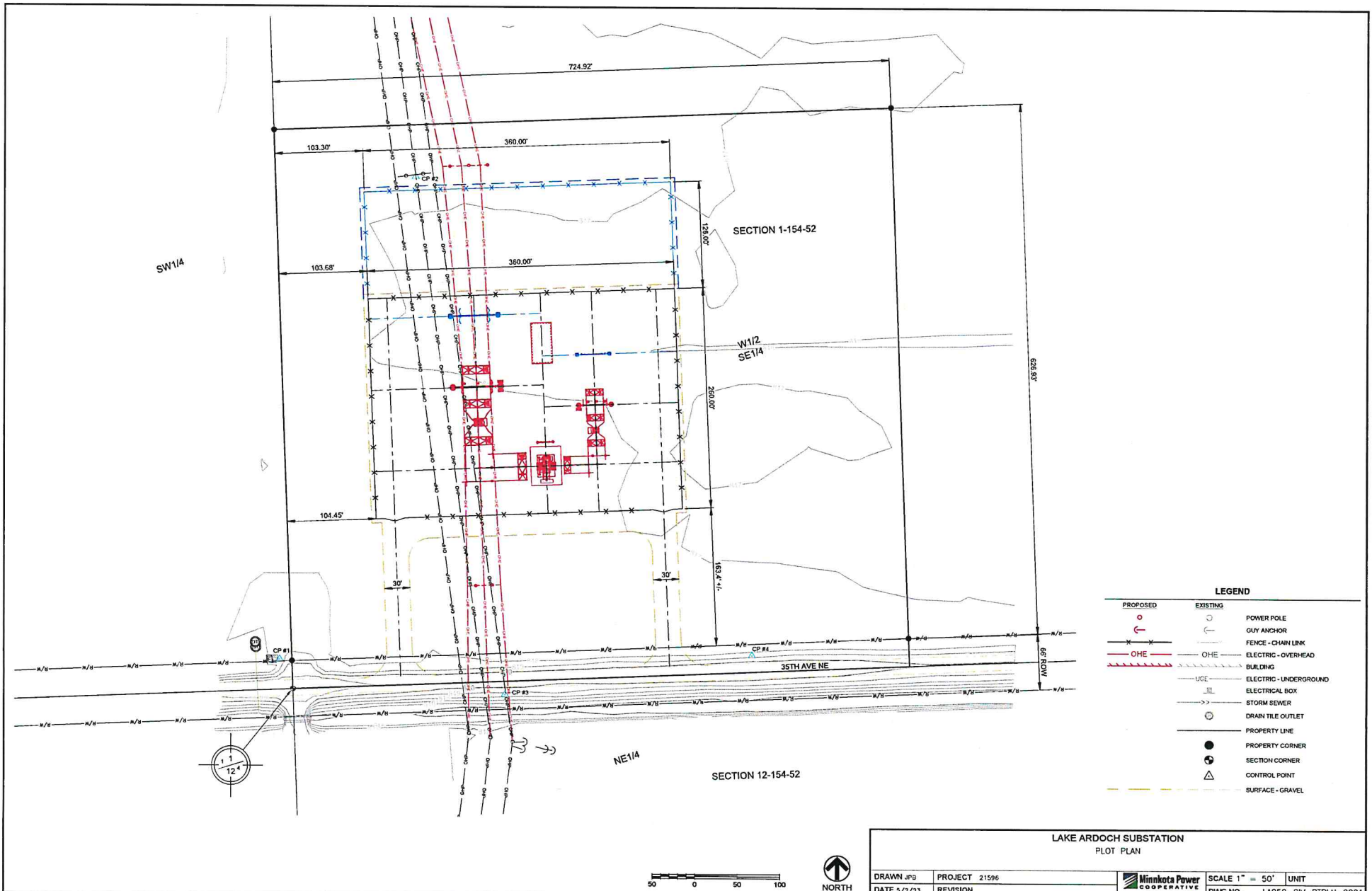
## APPENDIX A. PROJECT LOCATION

# MPC Environmental Review

SITE: LA050/GRAND FORKS Outpost

GRAND FORKS County, ND

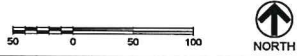




LEGEND		
PROPOSED	EXISTING	
		POWER POLE
		GUY ANCHOR
		FENCE - CHAIN LINK
		ELECTRIC - OVERHEAD
		BUILDING
		ELECTRIC - UNDERGROUND
		ELECTRICAL BOX
		STORM SEWER
		DRAIN TILE OUTLET
		PROPERTY LINE
		PROPERTY CORNER
		SECTION CORNER
		CONTROL POINT
		SURFACE - GRAVEL

**LAKE ARDOCH SUBSTATION**  
PLOT PLAN

DRAWN JPB	PROJECT 21596		SCALE 1" = 50'	UNIT
DATE 3/2/23	REVISION		DWG. NO. LA050-CIV-PTPLN-0001	



## APPENDIX B. LAND OWNERSHIP AND LAND USE



# Grand Forks County



Shopping Cart: 0 items [\$0.00]



New Search



History



Payoff



PayTaxes



Help

**Parcel #:** 23-0104-00001-002

**Status:** Current

**Receipt:** 8284

**2022 Owner(s):**  
GROVUM-NARLOCK FAMILY

**Mailing Address:**

IRREVOCABLE TRUST  
359 WEST TOWNSHIP RD 132  
TIFFIN, OH 44883

**Levy District:**

2308-02, District 2308-02

2022 Value:

**Market:** \$66,900  
**Taxable:** \$3,345  
**Disabled Vet Credit:** \$0  
**Homestead Credit:** \$0  
**Net Taxable:** \$3,345

[Detail](#)

2022 Taxes:



[View Pie Charts](#)

**First Half:** \$683.67 **Due:** 3/1/2023  
**Second Half:** \$374.30 **Due:** 10/15/2023  
**Total:** \$1,057.97

[Show Current Tax Bill](#)

[Detail](#)

2022 Payments:

**First Half:** \$683.67  
**Second Half:** \$374.30  
**Discount:** \$37.43  
**Total:** \$1,020.54  
(May include penalty & interest)

2022 Legal Records:

**Geo Code: Instru#:** 768929 **Doc Type:** QCD **Date:** 2016-08-12

**Property address:** RURAL, LEVANT TWP ND 58200  
**Legal:** W1/2SE1/4,1-154-52  
**Acres:** 80.00

**Note:** The accuracy of this data is not guaranteed.  
Web data was last updated 06/06/2023 10:00 AM.

Send Payments To:

Grand Forks County Treasurer  
P. O. Box 5638  
Grand Forks, ND 58206-5638

Phone: 701-780-8292



**tyler**  
technologies

832105 1 of 2

GRAND FORKS COUNTY Recorded: 3/2/2023 at 12:44 PM  
Return To: THE TITLE TEAM

3374 S 31ST ST - STE A

GRAND FORKS, ND 58201-3575



832105

\$20.00

RECORDER'S OFFICE, GRAND FORKS CO., ND 3/2/2023 at 12: PM

I certify that this instrument was filed for record this date.

GARLYNN HELMOSKI, County Recorder

BY

*[Handwritten Signature]* N-130-



**WARRANTY DEED**

THIS INDENTURE, made this 22 day of Feb, 2023,  
between Brian Narlock, Trustee of the Grovum-Narlock Family Irrevocable Trust Agreement,  
dated the 12<sup>th</sup> day of August, 2016, grantor, and Minnkota Power Cooperative, Inc., grantee,  
whose post office address is:

*5301 3rd Ave S  
Grand Forks ND 58201*

WITNESSETH, for and in consideration of the sum of One (\$1.00) Dollar and other good  
and valuable consideration, grantor does hereby GRANT to the grantee all of the following real  
property lying and being in the County of Grand Forks, State of North Dakota, and described as  
follows, to wit:

The West 725 feet of the South 660 feet of the West Half of the Southeast Quarter  
(W $\frac{1}{2}$ SE $\frac{1}{4}$ ) of Section 1, Township 154 North, Range 52 West of the 5<sup>th</sup> Principal  
Meridian, Grand Forks County, North Dakota.

The above legal description was obtained from a Certificate of Survey prepared by  
Christopher D. Jordheim of Widseth.

And the said grantor for himself, his heirs, executors and administrators, does covenant  
with the grantee that he is well seized in fee of the land and premises aforesaid and has good  
right to sell and convey the same in manner and form aforesaid; that the same are free from all  
encumbrances, except installments of special assessments for special improvements which  
have not been certified to the County Auditor for collection, subject to easements and  
ordinances of record, and the above granted lands and premises in the quiet and peaceable  
possession of said grantee, against all persons lawfully claiming the whole or any part thereof,  
the said grantor will warranty and defend.

**THE TITLE TEAM**

G221392

AUDITOR'S OFFICE  
COUNTY OF GRAND FORKS, NORTH DAKOTA

March 2 2023  
Taxes and Special Assessments paid, all liens  
created under section 57-02-08, 3 satisfied,  
if any, and transfer accepted

[Signature] Auditor  
Deputy





WITNESS, the hand of the Grantor:

*Brian Narlock*

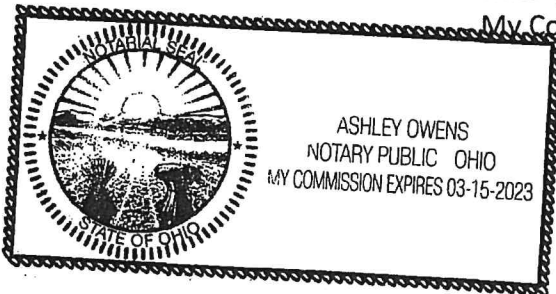
Brian Narlock, Trustee of the Grovum-Narlock  
Family Irrevocable Trust Agreement, dated the 12<sup>th</sup>  
day of August, 2016

STATE OF Ohio )  
COUNTY OF Seneca ) ss.

On this 27 day of February, 2023, before me,  
personally appeared Brian Narlock, Trustee of the Grovum-Narlock Family Irrevocable Trust  
Agreement, dated the 12<sup>th</sup> day of August, 2016, the grantor, known to me to be the person who  
is described in, and who executed the within and foregoing instrument, and acknowledged that  
he executed the same.

*Ashley Owens*

Notary Public  
My Commission Expires:



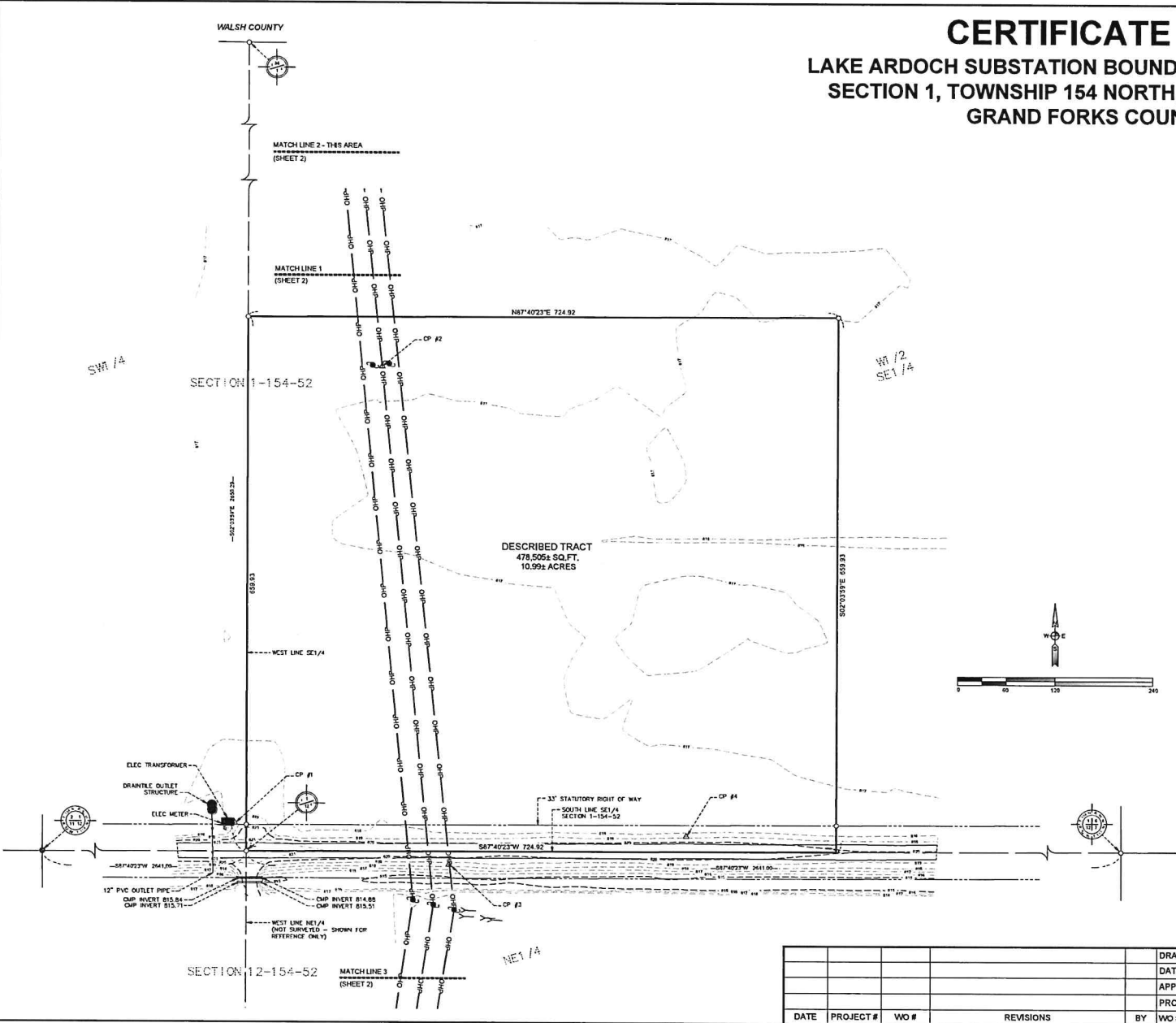
I certify that the full consideration paid for the property described in this deed is exempt under  
NDCC 11-18-02.2(6)(a) or (f).

Signed: *[Signature]* (Grantee or Agent)

Date: 3-1-2023

# CERTIFICATE OF SURVEY

## LAKE ARDOCH SUBSTATION BOUNDARY TOPOGRAPHIC SURVEY WITHIN SECTION 1, TOWNSHIP 154 NORTH, RANGE 52 WEST OF THE 5TH P.M. GRAND FORKS COUNTY, NORTH DAKOTA



CP#	Easting	Northing	Elevation
1	2757390.21'	446815.85'	818.64'
2	2757548.67'	447365.55'	817.57'
3	2757654.72'	446775.41'	818.61'
4	2757944.90'	446822.67'	818.81'

**DATUM NOTE:**  
The bearings, distances, and coordinates shown hereon reflect North Dakota State Plane Coordinate Datum - North Zone.  
To obtain ground distances, a 1/cf factor of 1.0001195143 may be applied.

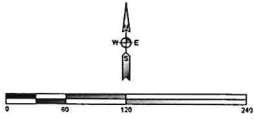
Elevations shown reflect NAVD83 Vertical Datum, as established using the North Dakota Trimble VRS network.

**UTILITY NOTE:**  
Utility lines shown hereon are based on observed evidence and appearances observed on site, and coordination through 800 One-Call ticket no. 2207722. At the time of survey, no flagging was observed on site from this one-call request. The surveyor does not warrant that the survey represents all utilities within the property, either in service or abandon.

**SYMBOL LEGEND**

- OHP — OVER-HEAD POWER LINE
- SECTION LINE
- QUARTER LINE
- RIGHT OF WAY

- ⊙ POWER POLE
- PLSS CORNER SET LS-5773
- PLSS CORNER FOUND
- ▲ CONTROL POINT #5 REBAR MARKED WSN CONTROL



**SURVEYOR'S CERTIFICATE**  
I, CHRISTOPHER D. JORDHEM, DO HEREBY CERTIFY THAT THIS SURVEY, PLAN, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DAILY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NORTH DAKOTA.

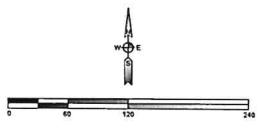
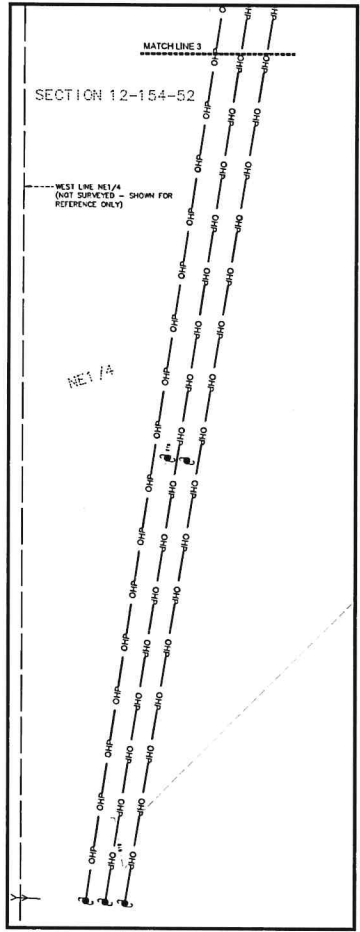
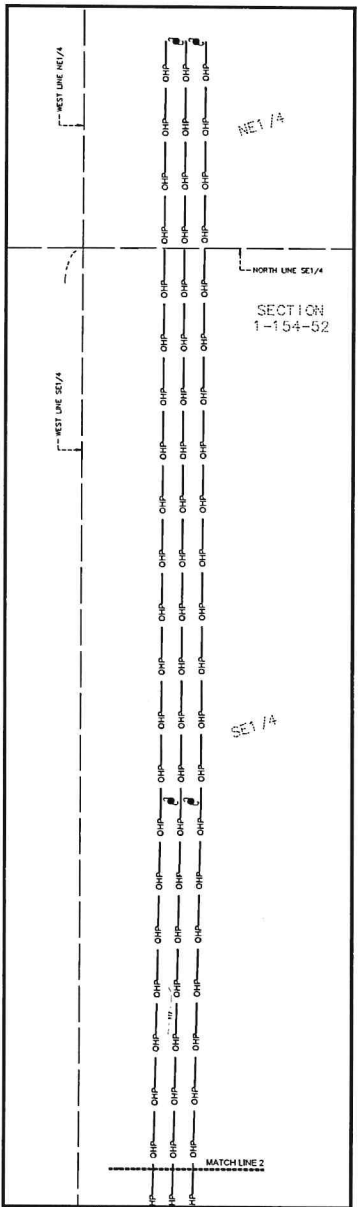
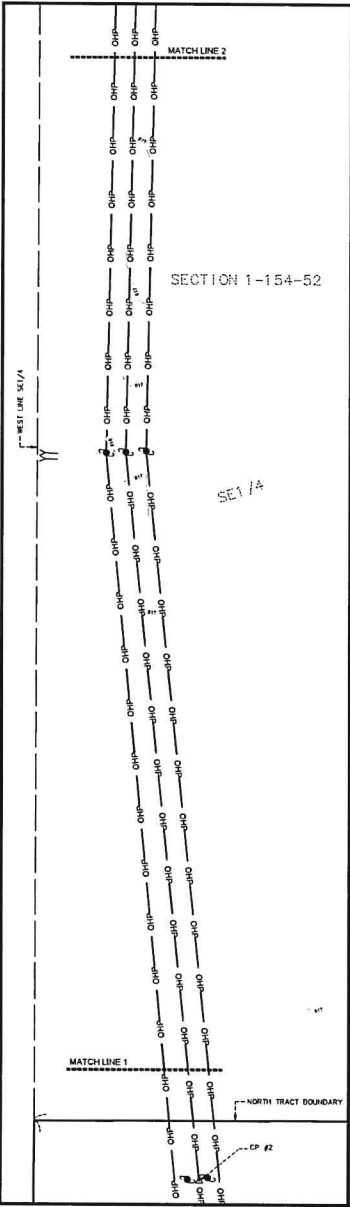
*Christopher D. Jordhem*  
Christopher D. Jordhem, North Dakota LS-5773

SHEET 1 OF 2

DRAWN CDJ		LAKE ARDOCH TOPOGRAPHIC & BOUNDARY SURVEY	
DATE 8/31/2022		SECTION 1, T.154 N., R. 52 W. 5TH P.M.	
APPROVED CDJ		GRAND FORKS COUNTY, NORTH DAKOTA	
PROJECT #		Minnikata Power COOPERATIVE	
DATE	PROJECT #	WO #	REVISIONS
			BY
			WO # 21596ROW.10
			SCALE AS SHOWN SHEET 1 OF 2
			DWG.NO.


# CERTIFICATE OF SURVEY

LAKE ARDOCH SUBSTATION BOUNDARY TOPOGRAPHIC SURVEY WITHIN  
SECTION 1, TOWNSHIP 154 NORTH, RANGE 52 WEST OF THE 5TH P.M.  
GRAND FORKS COUNTY, NORTH DAKOTA



- SYMBOL LEGEND**
- OHP — OVERHEAD POWER LINE
  - SECTION LINE
  - QUARTER LINE
  - - - - - RIGHT OF WAY
  - POWER POLE
  - PLS CORNER SET LS-5773
  - PLS CORNER FOUND
  - ▲ CONTROL POINT #5 REBAR MARKED WSN CONTROL



DATE	PROJECT #	WO #	REVISIONS	BY	DRAWN CDJ DATE 8/31/2022 APPROVED CDJ PROJECT # WO # 21596ROW.10	LAKE ARDOCH TOPOGRAPHIC & BOUNDARY SURVEY SECTION 1, T.154 N., R 52 W. 5TH P.M. GRAND FORKS COUNTY, NORTH DAKOTA  SCALE AS SHOWN   SHEET 2 OF 2 DWG.NO.
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## APPENDIX C. ENVIRONMENTAL JUSTICE

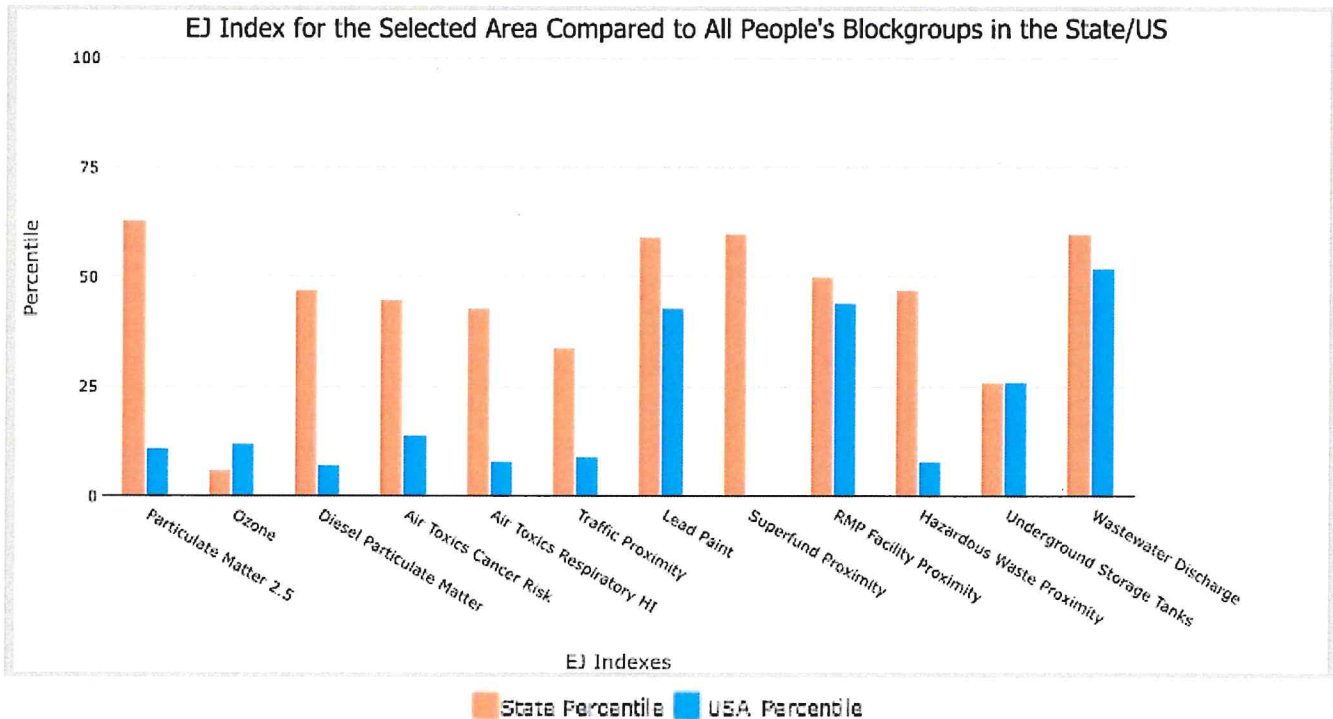
1 mile Ring Centered at 48.180336,-97.263948, NORTH DAKOTA, EPA Region 8

Approximate Population: 10

Input Area (sq. miles): 3.14

Lake Ardoch Substation

Selected Variables	State Percentile	USA Percentile
<b>Environmental Justice Indexes</b>		
EJ Index for Particulate Matter 2.5	63	11
EJ Index for Ozone	6	12
EJ Index for Diesel Particulate Matter*	47	7
EJ Index for Air Toxics Cancer Risk*	45	14
EJ Index for Air Toxics Respiratory HI*	43	8
EJ Index for Traffic Proximity	34	9
EJ Index for Lead Paint	59	43
EJ Index for Superfund Proximity	60	0
EJ Index for RMP Facility Proximity	50	44
EJ Index for Hazardous Waste Proximity	47	8
EJ Index for Underground Storage Tanks	26	26
EJ Index for Wastewater Discharge	60	52



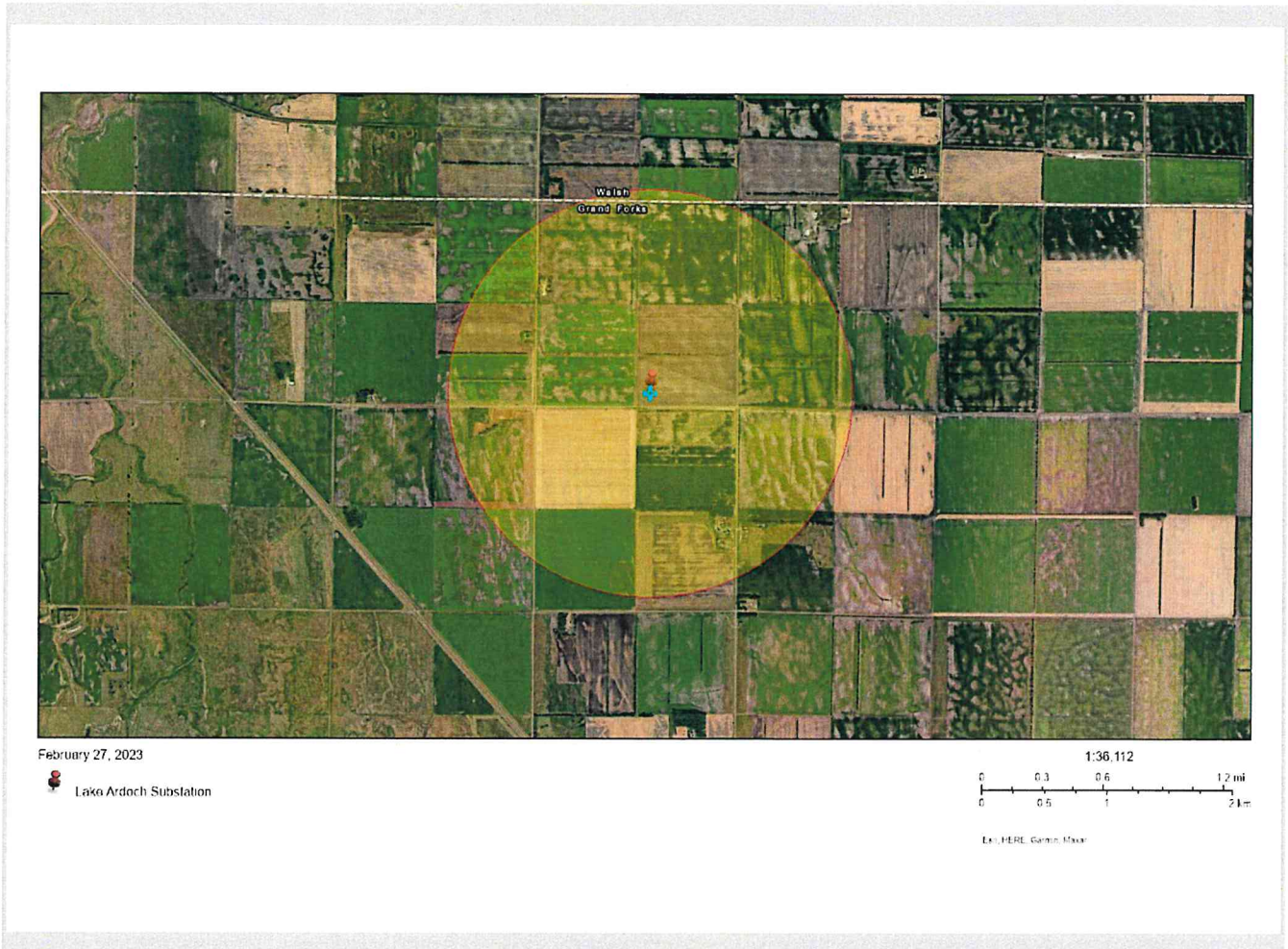
This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

1 mile Ring Centered at 48.180336,-97.263948, NORTH DAKOTA, EPA Region 8

Approximate Population: 10

Input Area (sq. miles): 3.14

Lake Ardoch Substation



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

## EJScreen Report (Version 2.1)



1 mile Ring Centered at 48.180336,-97.263948, NORTH DAKOTA, EPA Region 8

Approximate Population: 10

Input Area (sq. miles): 3.14

Lake Ardoch Substation

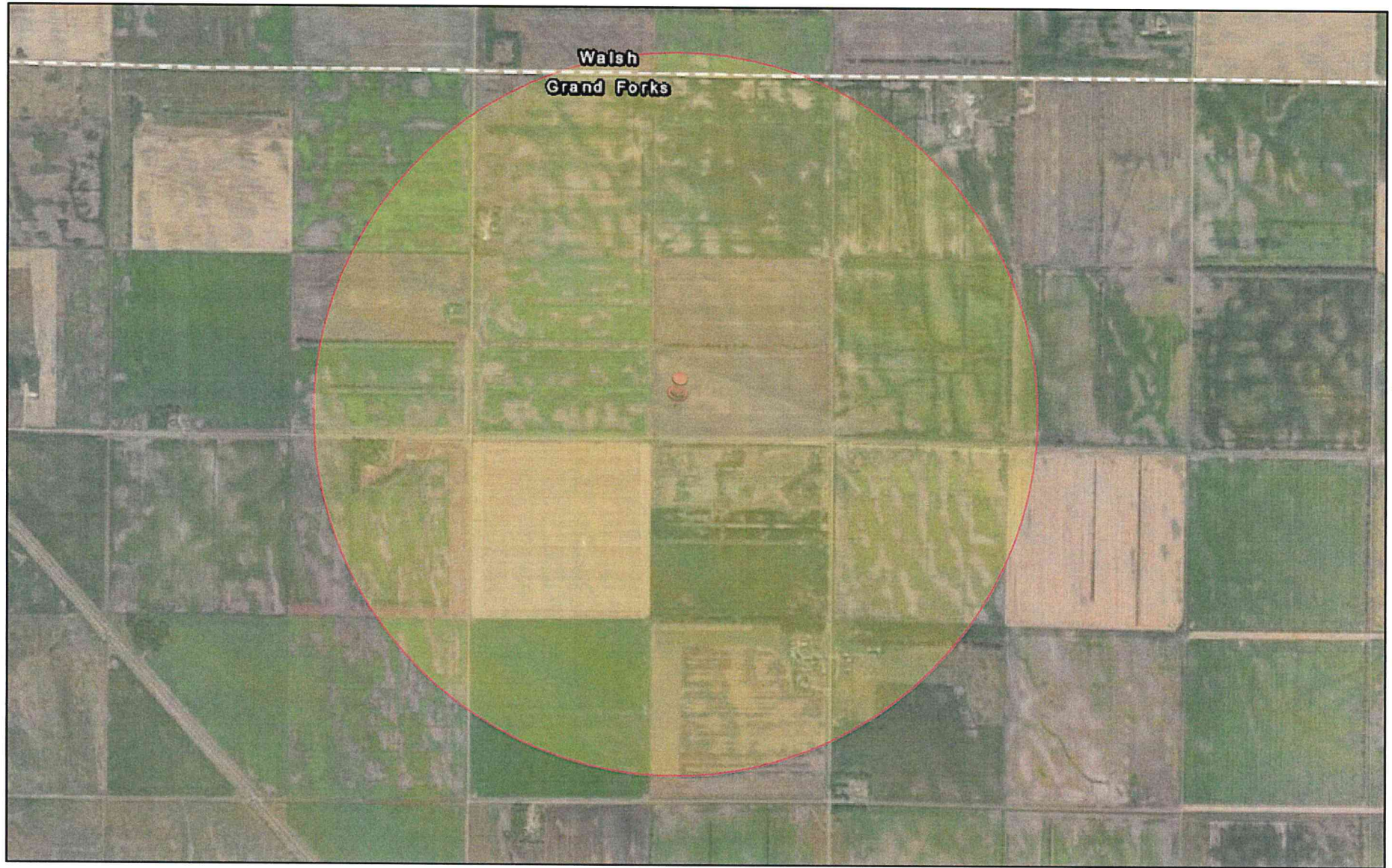
Selected Variables	Value	State Avg.	%ile in State	USA Avg.	%ile in USA
<b>Pollution and Sources</b>					
Particulate Matter 2.5 ( $\mu\text{g}/\text{m}^3$ )	6.84	6.54	62	8.67	11
Ozone (ppb)	36.4	38.7	5	42.5	15
Diesel Particulate Matter* ( $\mu\text{g}/\text{m}^3$ )	0.0743	0.17	38	0.294	<50th
Air Toxics Cancer Risk* (lifetime risk per million)	20	20	89	28	<50th
Air Toxics Respiratory HI*	0.2	0.22	77	0.36	<50th
Traffic Proximity (daily traffic count/distance to road)	11	220	27	760	9
Lead Paint (% Pre-1960 Housing)	0.41	0.25	68	0.27	66
Superfund Proximity (site count/km distance)	0.0049	0.0049	61	0.13	1
RMP Facility Proximity (facility count/km distance)	0.73	1.1	50	0.77	68
Hazardous Waste Proximity (facility count/km distance)	0.05	0.52	39	2.2	9
Underground Storage Tanks (count/km <sup>2</sup> )	0.0037	2.1	18	3.9	0
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.16	6.3	71	12	87
<b>Socioeconomic Indicators</b>					
Demographic Index	15%	21%	43	35%	20
People of Color	5%	16%	31	40%	13
Low Income	25%	25%	52	30%	45
Unemployment Rate	2%	3%	52	5%	33
Limited English Speaking Households	0%	1%	0	5%	0
Less Than High School Education	4%	7%	37	12%	31
Under Age 5	10%	7%	81	6%	84
Over Age 64	17%	15%	50	16%	56

\*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

For additional information, see: [www.epa.gov/environmentaljustice](http://www.epa.gov/environmentaljustice)

EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

# Lake Ardoch- Lead Paint



2/27/2023

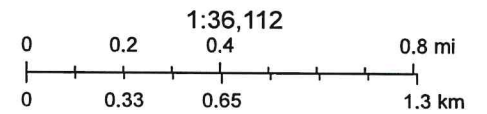
Lead Paint  
(National Percentiles)

Less than 50 percentile



Data not available

Lake Ardoch Substation



Esri, HERE, Garmin, Maxar

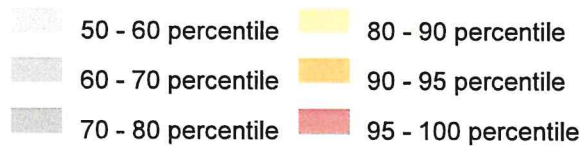
# Lake Ardoch- Under Age 5



2/27/2023

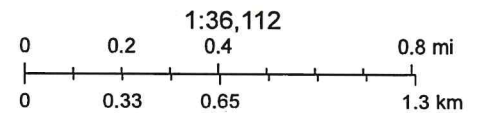
Under Age 5  
(National Percentiles)

Less than 50 percentile



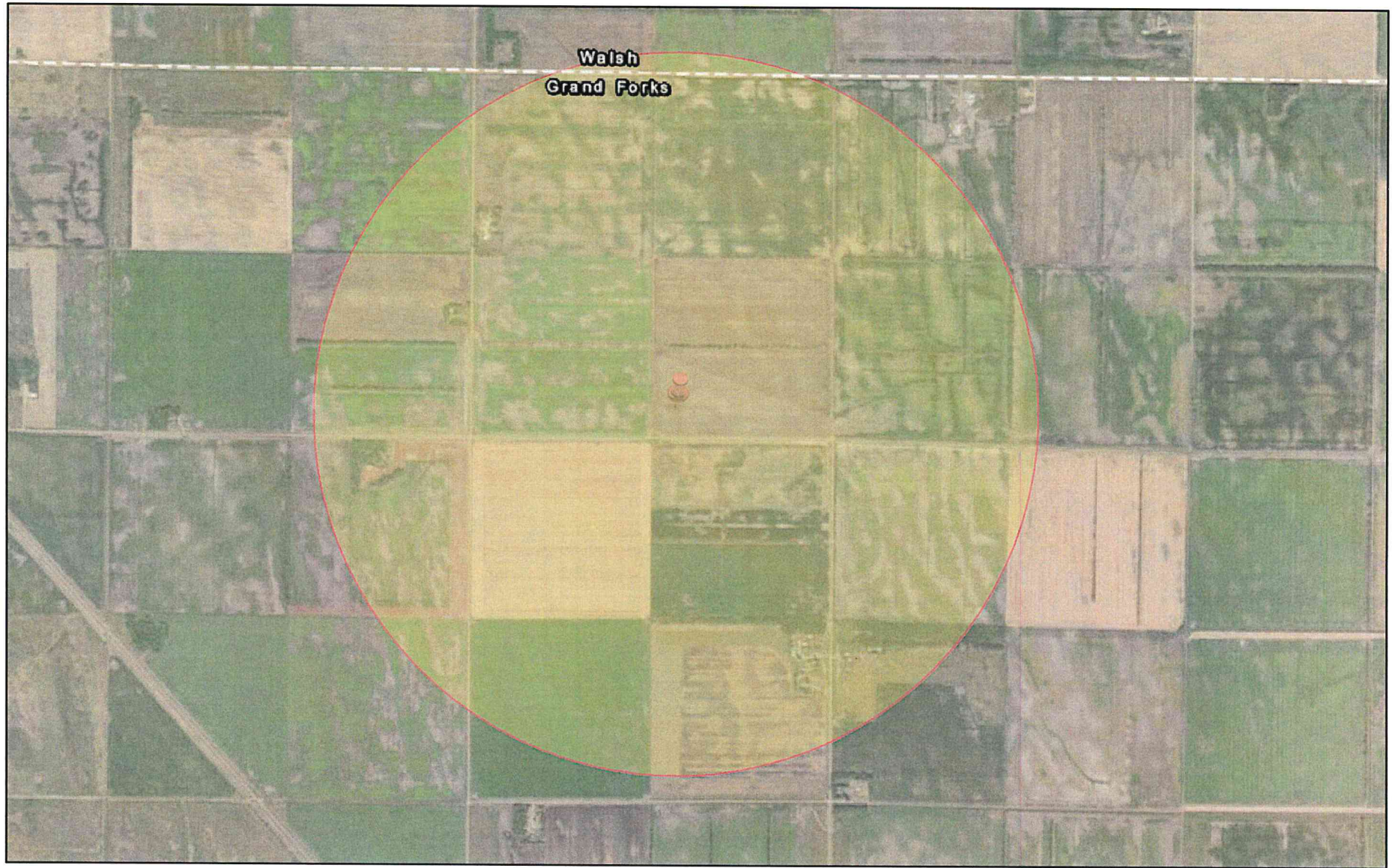
Data not available

Lake Ardoch Substation



Esri, HERE, Garmin, Maxar

# Lake Ardoch- Over Age 64



2/27/2023

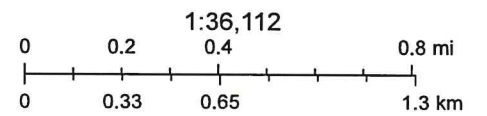
Over Age 64  
(National Percentiles)

Less than 50 percentile



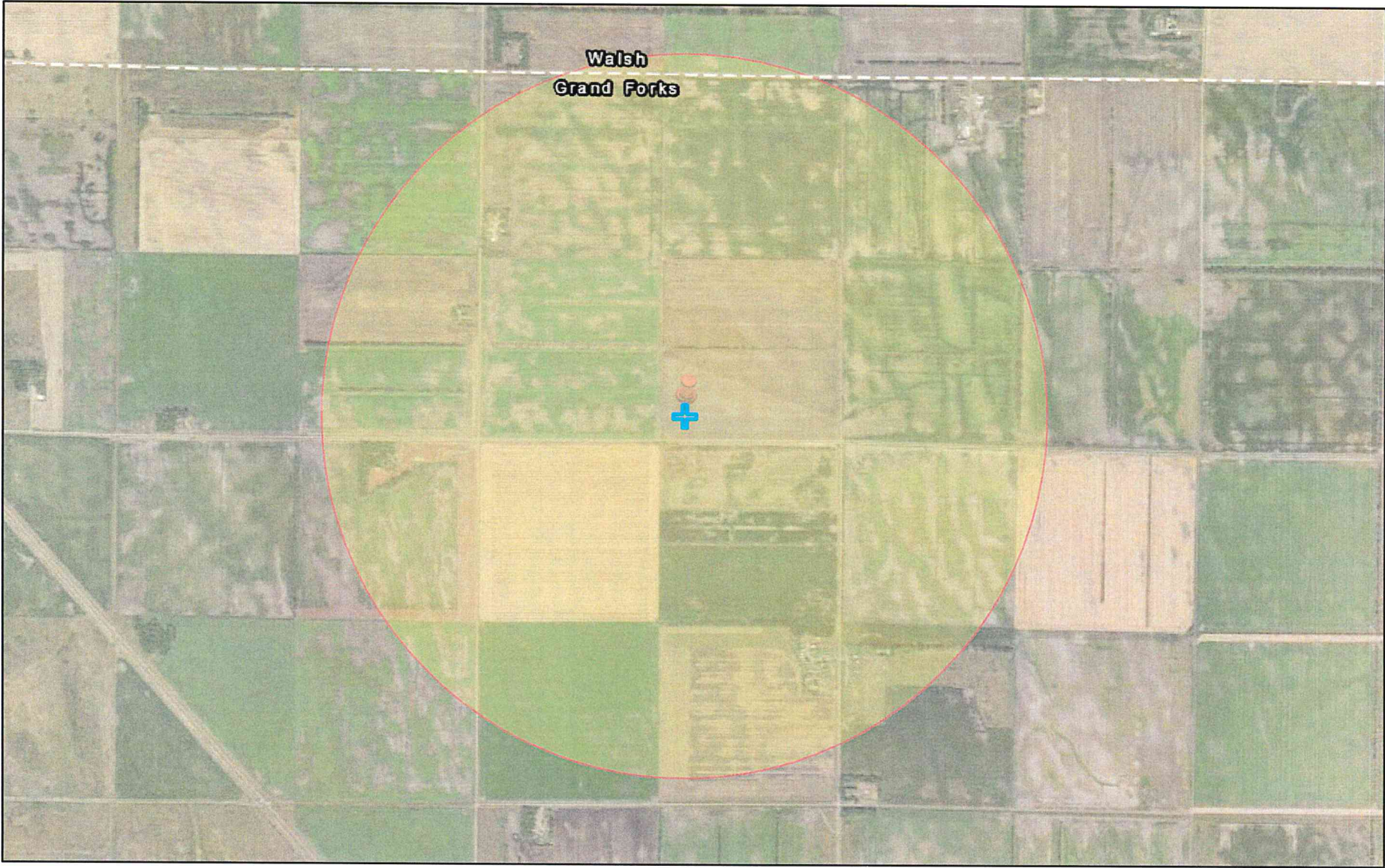
Data not available

Lake Ardoch Substation



Esri, HERE, Garmin, Maxar

# Lake Ardoch- Particulate Matter 2.5



2/27/2023

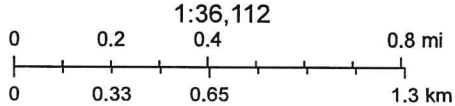
Particulate Matter 2.5  
(National Percentiles)

Less than 50 percentile

- 50 - 60 percentile
- 60 - 70 percentile
- 70 - 80 percentile
- 80 - 90 percentile
- 90 - 95 percentile
- 95 - 100 percentile

Data not available

Lake Ardoch Substation



Esri, HERE, Garmin, Maxar

# Lake Ardoch- Air Toxics Cancer Risk



2/27/2023

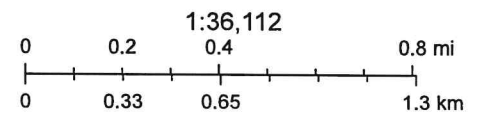
Air Toxics Cancer Risk  
(National Percentiles)

Less than 50 percentile



Data not available

Lake Ardoch Substation



Esri, HERE, Garmin, Maxar

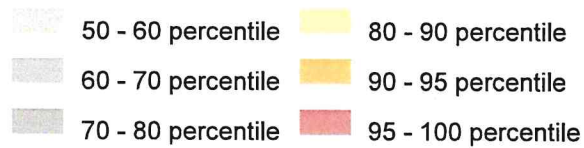
# Lake Ardoch- Superfund Proximity



2/27/2023

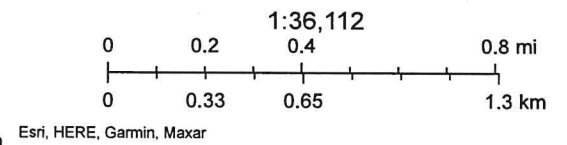
Superfund Proximity  
(National Percentiles)

Less than 50 percentile

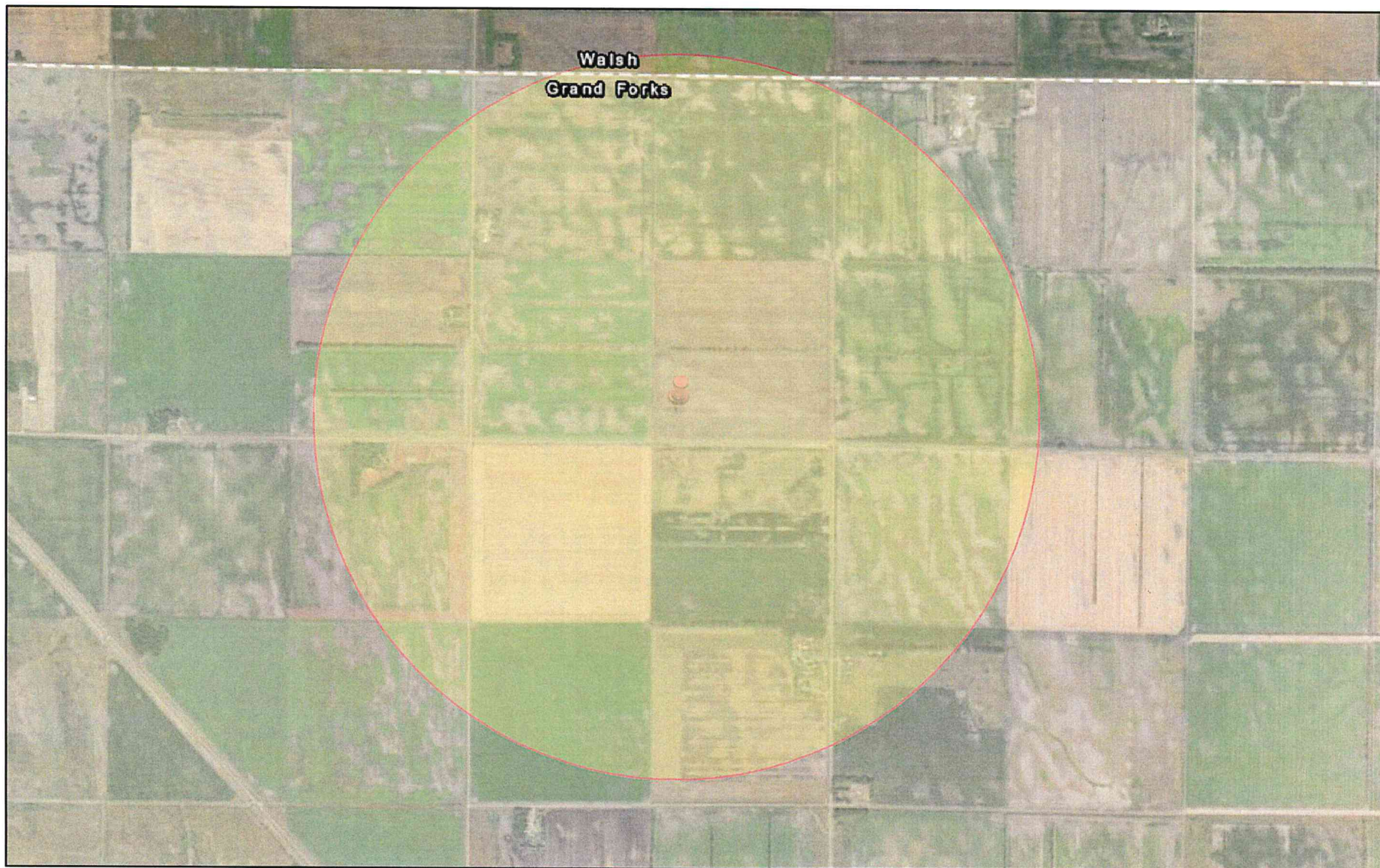


 Data not available

 Lake Ardoch Substation



# Lake Ardoch- Low Income



2/27/2023

Low Income  
(National Percentiles)

Less than 50 percentile



50 - 60 percentile



60 - 70 percentile



70 - 80 percentile



80 - 90 percentile



90 - 95 percentile



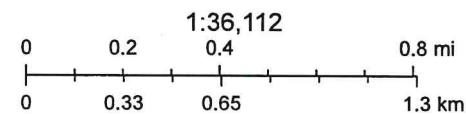
95 - 100 percentile



Data not available

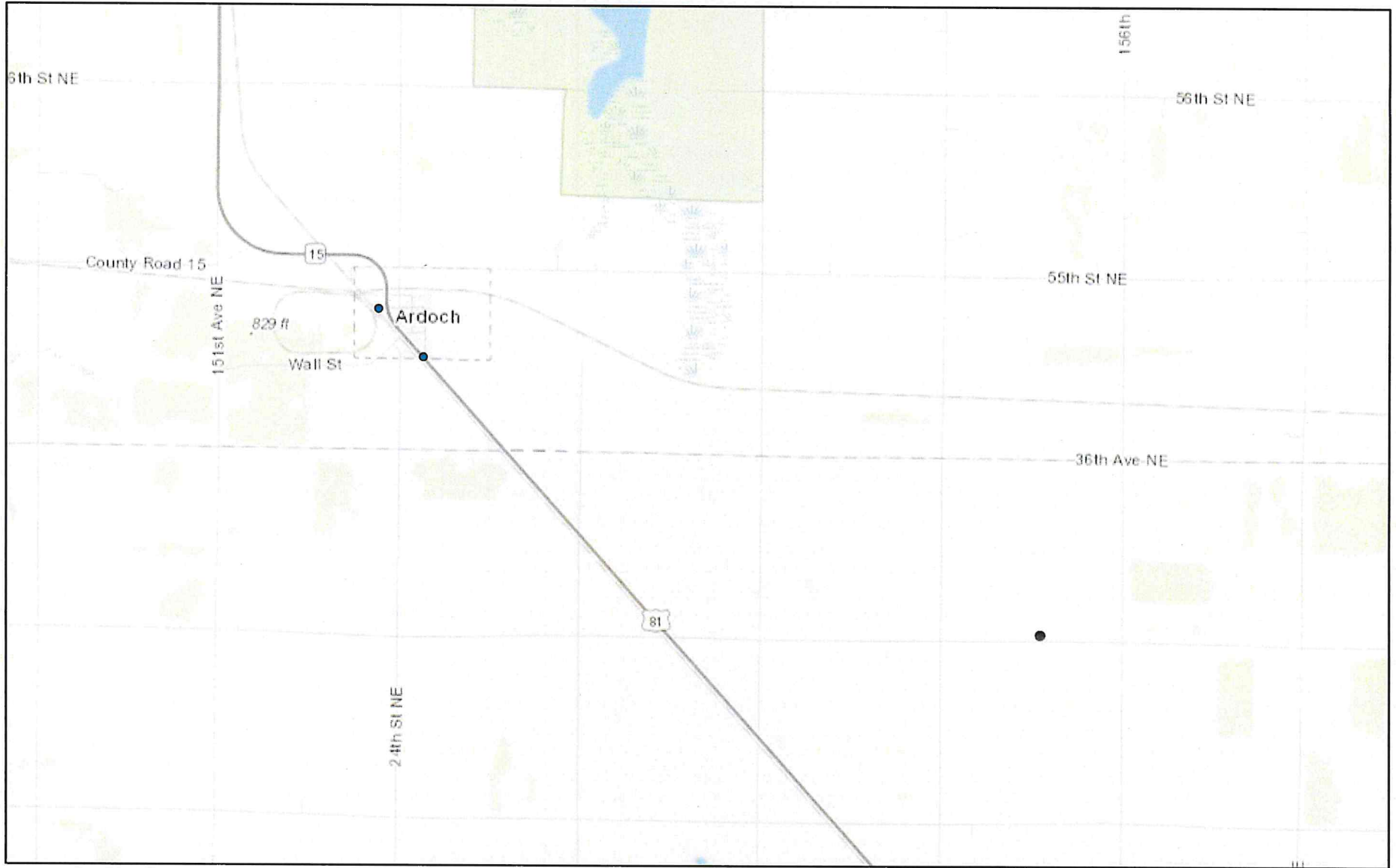


Lake Ardoch Substation



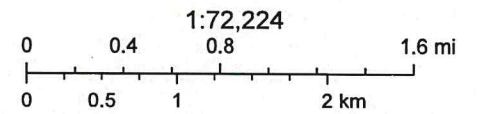
Esri, HERE, Garmin, Maxar

# 21596 LA050 EPA USTs



5/22/2023, 11:45:15 AM

- **Underground Storage Tank - Facilities**



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri

Web AppBuilder for ArcGIS

## APPENDIX D. HISTORIC PRESERVATION (SECT. 106)

The administrative record of consultation has been removed to protect potentially sensitive information.



August 26, 2022

Samantha Roberts  
Environmental Specialist II  
Minnkota Power Cooperative  
5301 32nd Ave S  
Grand Forks, ND 58201-3312

**ND SHPO Ref.: 22-6199 Class I Literature Review Grand Forks County, North Dakota Request for Concurrence, Ardoch Substation, MPC #21596 in portions of [T154N R52W Section 1], Grand Forks County, North Dakota**

Dear Samantha,

We reviewed ND SHPO Ref.: 22-6199 Class I Literature Review Grand Forks County, North Dakota Request for Concurrence, Ardoch Substation, MPC #21596 in portions of [T154N R52W Section 1], Grand Forks County, North Dakota and we concur with a determination of "No Historic Properties Affected" for this project provided it takes place in the location and in the manner described in the documentation and provided all borrow comes from an approved source.

Thank you for the opportunity to review this project. Please include the ND SHPO Reference number listed above in further correspondence for this specific project. If you have any questions please contact Lisa Steckler, Historic Preservation Specialist at (701) 328-3577 or [lsteckler@nd.gov](mailto:lsteckler@nd.gov)

Sincerely,

for William D. Peterson, PhD  
State Historic Preservation Officer  
(North Dakota)

22-6199

## APPENDIX E. THREATENED AND ENDANGERED SPECIES



**Threatened & Endangered Species Evaluation Table**  
 Minnkota Power Cooperative, Inc.  
 Lake Ardoch New Substation  
 6-Jun-2023

Common Name	Scientific Name	Federal Status	Critical Habitat Present	Critical Habitat	Description of Suitable Habitat (cite source(s)*)	Proposed Finding of Effect	Explain Reasoning for Proposed Determination (cite source **)
Monarch Butterfly	Danaus plexippus	Candidate	No		<a href="#">Milkweed and flowering plants</a>	May affect, not likely to adversely affect	<a href="#">2023-06-06 IPaC Species List</a>

\* = USFWS ECOS species profiles

\*\* = 2023-06-06 IPaC Ulen Species List



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
North Dakota Ecological Services Field Office  
3425 Miriam Avenue  
Bismarck, ND 58501-7926  
Phone: (701) 250-4481 Fax: (701) 355-8513



In Reply Refer To:  
Project Code: 2023-0090066  
Project Name: 21596 New Lake Ardoch Sub

June 06, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

### **Section 7 of the Endangered Species Act**

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. The Act requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service *if they determine their project and associated actions "may affect" listed species or critical habitat.* If Federal agencies or their non-federal representatives determine their project and associated actions will have "no effect" on listed species, their habitats, or designated critical habitat, consultation is not required. However, if a "no effect" is determined, we recommend that you maintain a written record in support of your conclusion.

### **Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act**

Additionally, while not all are listed as threatened or endangered, eagles and migratory birds

have protections under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). The BGEPA prohibits take which is defined as, “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb” (50 CFR 22.3). Disturb is defined in regulations as, “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”. The MBTA makes it unlawful without a waiver to pursue, hunt, take, capture, kill, or sell birds listed as migratory birds, including eagles. The statute does not discriminate between live or dead birds and also grants full protection to any bird parts including feathers, eggs, and nests.

### **Service Property Interests**

As part of the National Wildlife Refuge System, the Service administers fee title Refuge and Waterfowl Production Areas, as well as wetland and grassland easements, throughout North Dakota. For exact locations of Service interest lands, please contact the appropriate Wetland Management Districts (WMD) for guidance regarding FWS easements.

Northwest ND WMD Complex: Kyle Flanery, (701) 768-2548

Eastern ND WMD Complex: Dave Azure, (701) 285-3341

Central ND WMD Complex (also covers south and west): Todd Luke, (701) 442-5474

### Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Wetlands

## **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**North Dakota Ecological Services Field Office**

3425 Miriam Avenue

Bismarck, ND 58501-7926

(701) 250-4481

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## PROJECT SUMMARY

Project Code: 2023-0090066

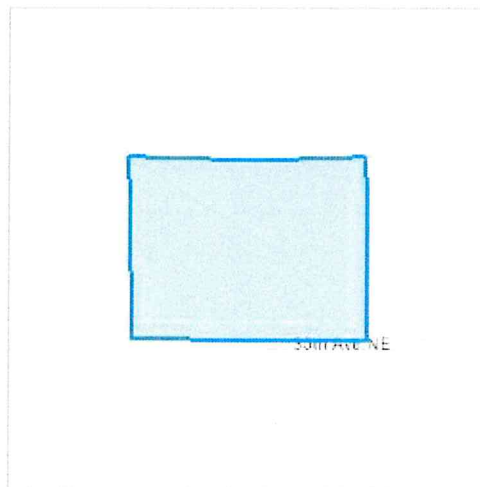
Project Name: 21596 New Lake Ardoch Sub

Project Type: New Constr - Above Ground

Project Description: The proposed project constructs a new 230/115 kV tap substation and associated control house that will tap on to the existing Prairie-Drayton 230 kV line which will connect to the existing Oslo 115 kV substation. Phase I of the project has been equipment and land purchases, environmental reviews, and engineering designs. Phase II of the project will be construction and energization of the substation. The site grading would be for 3-5 weeks, and the energization process another 6 months. The site will be graded to 2 to 3.5 inches above the existing topography. The Project will establish a grounding grid within the fenced area for electrical operational safety. 4.5-inch-thick concrete slabs will be beneath transformers. New control houses are prebuilt at Minnkota Power Cooperative, Inc (MPC) headquarters, then wired on site. The substation construction process will include staging equipment, supplies, and materials, site grading, concrete work, electrical equipment placement, erecting structures, installing conductors, etc. Typical construction equipment that may be used for the proposed Project includes line construction equipment, and general construction equipment on rubber tires or tracks, as appropriate. Tree clearing and removal is not necessary for this proposed project. To the extent practical, MPC will coordinate these activities with the affected property owner(s) and/or state and local highway departments, as appropriate.

### Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@48.1799195,-97.26365819421336,14z>



Counties: Grand Forks County, North Dakota



## ENDANGERED SPECIES ACT SPECIES

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

## **USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES**

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

## **WETLANDS**

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

## **IPAC USER CONTACT INFORMATION**

Agency: Department of Agriculture

Name: Kacey Ann Borin

Address: 5301 32nd Ave S

City: Grand Forks

State: ND

Zip: 58201

Email: kborin@minnkota.com

Phone: 7017954287

## **LEAD AGENCY CONTACT INFORMATION**

Lead Agency: Rural Utilities Service

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# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

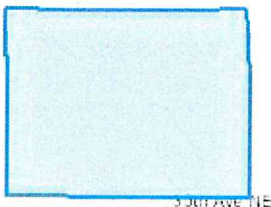
## Project information

### NAME

21596 New Lake Ardoch Sub

### LOCATION

Grand Forks County, North Dakota



### DESCRIPTION

Some(The proposed project constructs a new 230/115 kV tap substation and associated control house that will tap on to the existing Prairie-Drayton 230 kV line

which will connect to the existing Oslo 115 kV substation. Phase I of the project has been equipment and land purchases, environmental reviews, and engineering designs. Phase II of the project will be construction and energization of the substation. The site grading would be for 3-5 weeks, and the energization process another 6 months. The site will be graded to 2 to 3.5 inches above the existing topography. The Project will establish a grounding grid within the fenced area for electrical operational safety. 4.5-inch-thick concrete slabs will be beneath transformers. New control houses are prebuilt at Minnkota Power Cooperative, Inc (MPC) headquarters, then wired on site. The substation construction process will include staging equipment, supplies, and materials, site grading, concrete work, electrical equipment placement, erecting structures, installing conductors, etc. Typical construction equipment that may be used for the proposed Project includes line construction equipment, and general construction equipment on rubber tires or tracks, as appropriate. Tree clearing and removal is not necessary for this proposed project. To the extent practical, MPC will coordinate these activities with the affected property owner(s) and/or state and local highway departments, as appropriate.)

## Local office

North Dakota Ecological Services Field Office

☎ (701) 250-4481

📠 (701) 355-8513

3425 Miriam Avenue

Bismarck, ND 58501-7926

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take->

[migratory-birds](#)

- Nationwide conservation measures for birds

<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON

**Bald Eagle** *Haliaeetus leucocephalus*

Breeds Dec 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

**Bobolink** *Dolichonyx oryzivorus*

Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

**Golden Eagle** *Aquila chrysaetos*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Marbled Godwit *Limosa fedoa*

Breeds May 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9481>

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

### Breeding Season 🟡)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

## Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

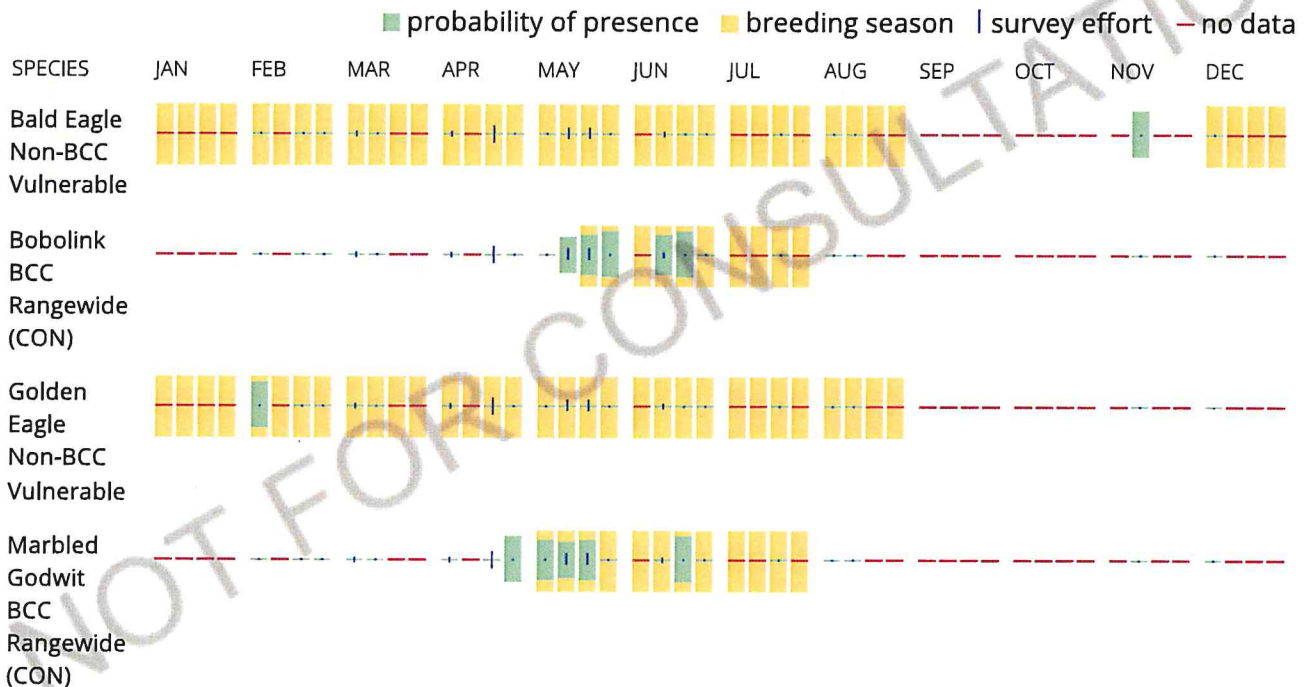
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

## No Data (-)

A week is marked as having no data if there were no survey events for that week.

## Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle [Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#)

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

## APPENDIX F. WETLANDS



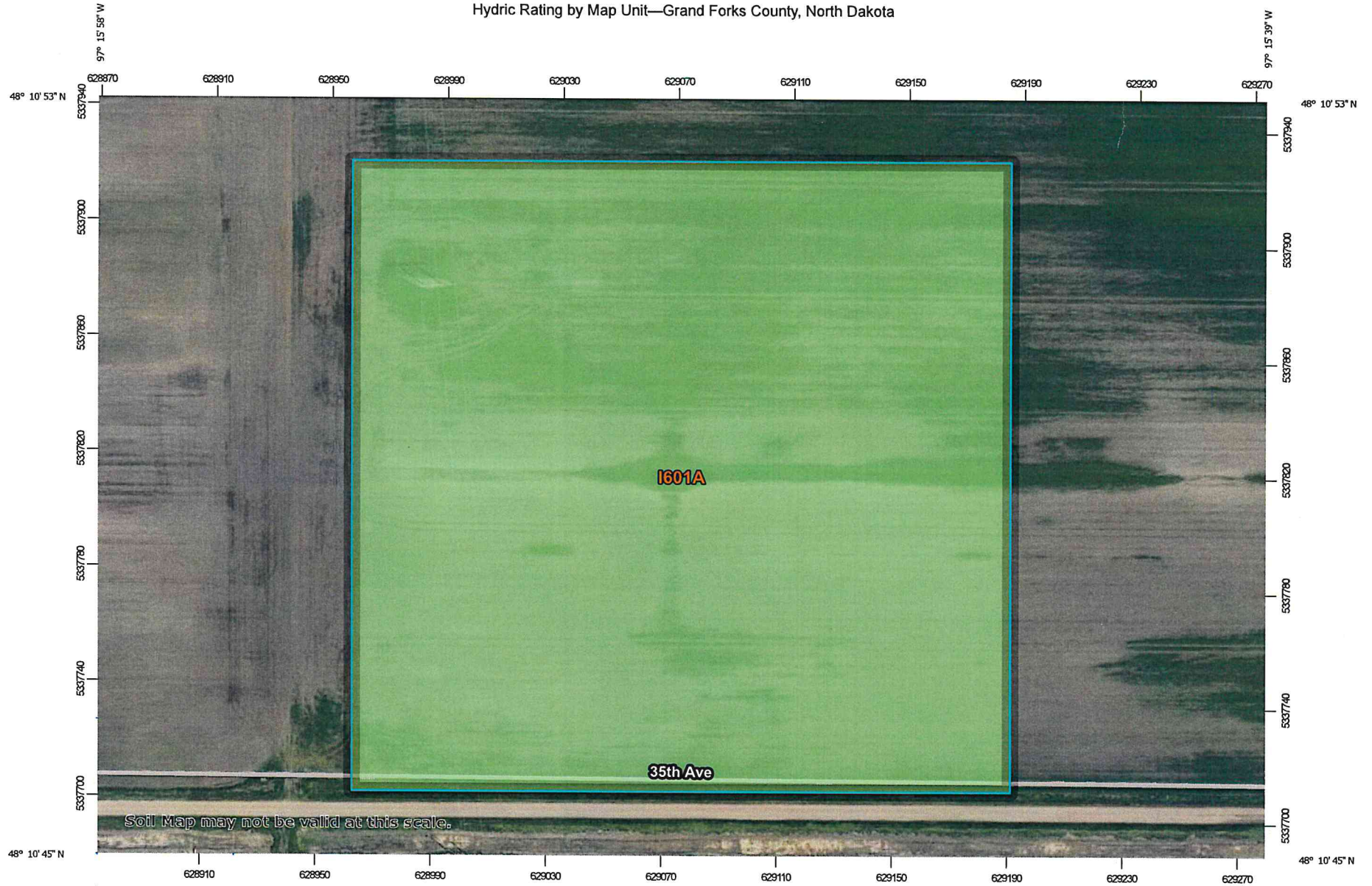
February 27, 2023

### Wetlands

- |                                |                                   |       |
|--------------------------------|-----------------------------------|-------|
| Estuarine and Marine Deepwater | Freshwater Emergent Wetland       | Lake  |
| Estuarine and Marine Wetland   | Freshwater Forested/Shrub Wetland | Other |
| Freshwater Pond                | Riverine                          |       |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Hydric Rating by Map Unit—Grand Forks County, North Dakota



Soil Map may not be valid at this scale.



























Map Scale: 1:1,850 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84



### MAP LEGEND

- Area of Interest (AOI)**
  -  Area of Interest (AOI)
- Soils**
  - Soil Rating Polygons**
    -  Hydric (100%)
    -  Hydric (66 to 99%)
    -  Hydric (33 to 65%)
    -  Hydric (1 to 32%)
    -  Not Hydric (0%)
    -  Not rated or not available
  - Soil Rating Lines**
    -  Hydric (100%)
    -  Hydric (66 to 99%)
    -  Hydric (33 to 65%)
    -  Hydric (1 to 32%)
    -  Not Hydric (0%)
    -  Not rated or not available
  - Soil Rating Points**
    -  Hydric (100%)
    -  Hydric (66 to 99%)
    -  Hydric (33 to 65%)
    -  Hydric (1 to 32%)
    -  Not Hydric (0%)
    -  Not rated or not available
- Transportation**
  -  Rails
  -  Interstate Highways
  -  US Routes
  -  Major Roads
  -  Local Roads
  - Background**
    -  Aerial Photography
- Water Features**
  -  Streams and Canals

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.  
 Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Grand Forks County, North Dakota  
 Survey Area Data: Version 26, Sep 8, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 5, 2021—Aug 15, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
I601A	Bearden silty clay loam, moderately saline, 0 to 2 percent slopes	12	12.4	100.0%
<b>Totals for Area of Interest</b>			<b>12.4</b>	<b>100.0%</b>

## Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

### References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

## Rating Options

*Aggregation Method: Percent Present*

*Component Percent Cutoff: None Specified*

*Tie-break Rule: Lower*

## Grand Forks County, North Dakota

### I601A—Bearden silty clay loam, moderately saline, 0 to 2 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2mbq0  
*Elevation:* 750 to 1,480 feet  
*Mean annual precipitation:* 20 to 26 inches  
*Mean annual air temperature:* 37 to 45 degrees F  
*Frost-free period:* 110 to 160 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Bearden, moderately saline, and similar soils:* 75 percent  
*Minor components:* 25 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Bearden, Moderately Saline

##### Setting

*Landform:* Flats  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Parent material:* Fine-silty glaciolacustrine deposits

##### Typical profile

*Ap - 0 to 8 inches:* silty clay loam  
*ABk - 8 to 15 inches:* silty clay loam  
*Bk - 15 to 39 inches:* silty clay loam  
*C - 39 to 79 inches:* silty clay loam

##### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.14 to 1.42 in/hr)  
*Depth to water table:* About 18 to 42 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 40 percent  
*Gypsum, maximum content:* 5 percent  
*Maximum salinity:* Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 10.0  
*Available water supply, 0 to 60 inches:* Moderate (about 7.3 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 3s  
*Hydrologic Soil Group:* C  
*Ecological site:* R056AY089ND - Saline Lowland  
*Forage suitability group:* Saline (G056XY895ND)  
*Other vegetative classification:* Saline (G056XY895ND)  
*Hydric soil rating:* No

### Minor Components

#### Bearden, slightly saline

*Percent of map unit:* 13 percent  
*Landform:* Flats  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Convex  
*Across-slope shape:* Linear  
*Ecological site:* R056AY087ND - Limy Subirrigated  
*Other vegetative classification:* Subirrigated (G056XY700ND)  
*Hydric soil rating:* No

#### Colvin, moderately saline

*Percent of map unit:* 8 percent  
*Landform:* Depressions  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Ecological site:* R056AY089ND - Saline Lowland  
*Other vegetative classification:* Saline (G056XY895ND)  
*Hydric soil rating:* Yes

#### Perella

*Percent of map unit:* 4 percent  
*Landform:* Depressions  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Concave  
*Across-slope shape:* Linear  
*Ecological site:* R056AY102ND - Wet Meadow  
*Other vegetative classification:* Wet (G056XY900ND)  
*Hydric soil rating:* Yes

## Data Source Information

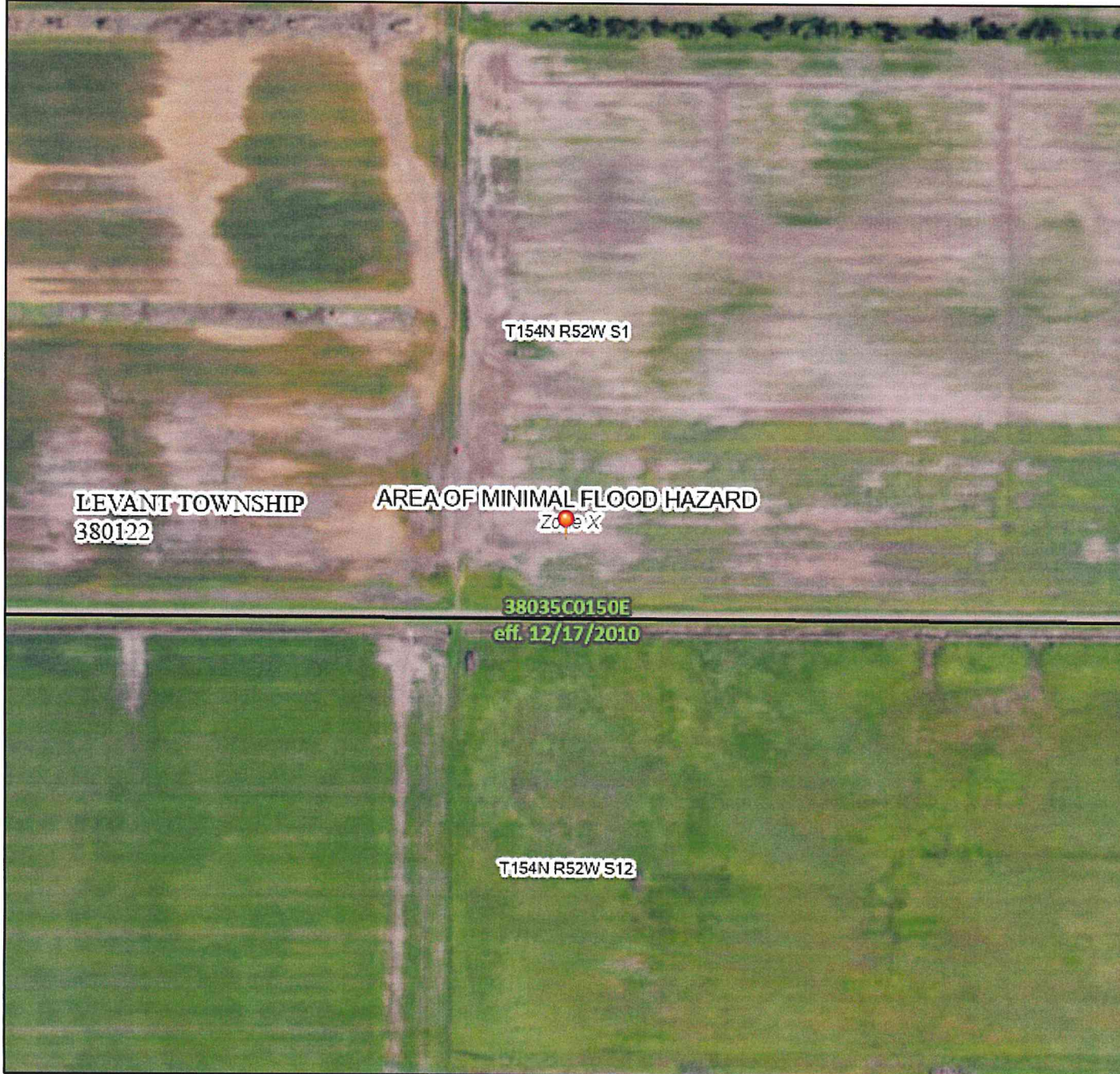
Soil Survey Area: Grand Forks County, North Dakota  
Survey Area Data: Version 26, Sep 8, 2022

## APPENDIX G. FLOODPLAINS

# National Flood Hazard Layer FIRMette



97°16'10"W 48°11'N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

97°15'33"W 48°10'36"N

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- |                                    |   |
|------------------------------------|---|
| <b>SPECIAL FLOOD HAZARD AREAS</b>  | Without Base Flood Elevation (BFE)<br><i>Zone A, V, A99</i><br>With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i><br>Regulatory Floodway  |
| <b>OTHER AREAS OF FLOOD HAZARD</b> | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i><br>Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i><br>Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i><br>Area with Flood Risk due to Levee <i>Zone D</i> |
| <b>OTHER AREAS</b>                 | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i><br>Effective LOMRs<br>Area of Undetermined Flood Hazard <i>Zone D</i>  |
| <b>GENERAL STRUCTURES</b>          | Channel, Culvert, or Storm Sewer<br>Levee, Dike, or Floodwall   |
| <b>OTHER FEATURES</b>              | Cross Sections with 1% Annual Chance Water Surface Elevation<br>Coastal Transect<br>Base Flood Elevation Line (BFE)<br>Limit of Study<br>Jurisdiction Boundary<br>Coastal Transect Baseline<br>Profile Baseline<br>Hydrographic Feature   |
| <b>MAP PANELS</b>                  | Digital Data Available<br>No Digital Data Available<br>Unmapped   |
- The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



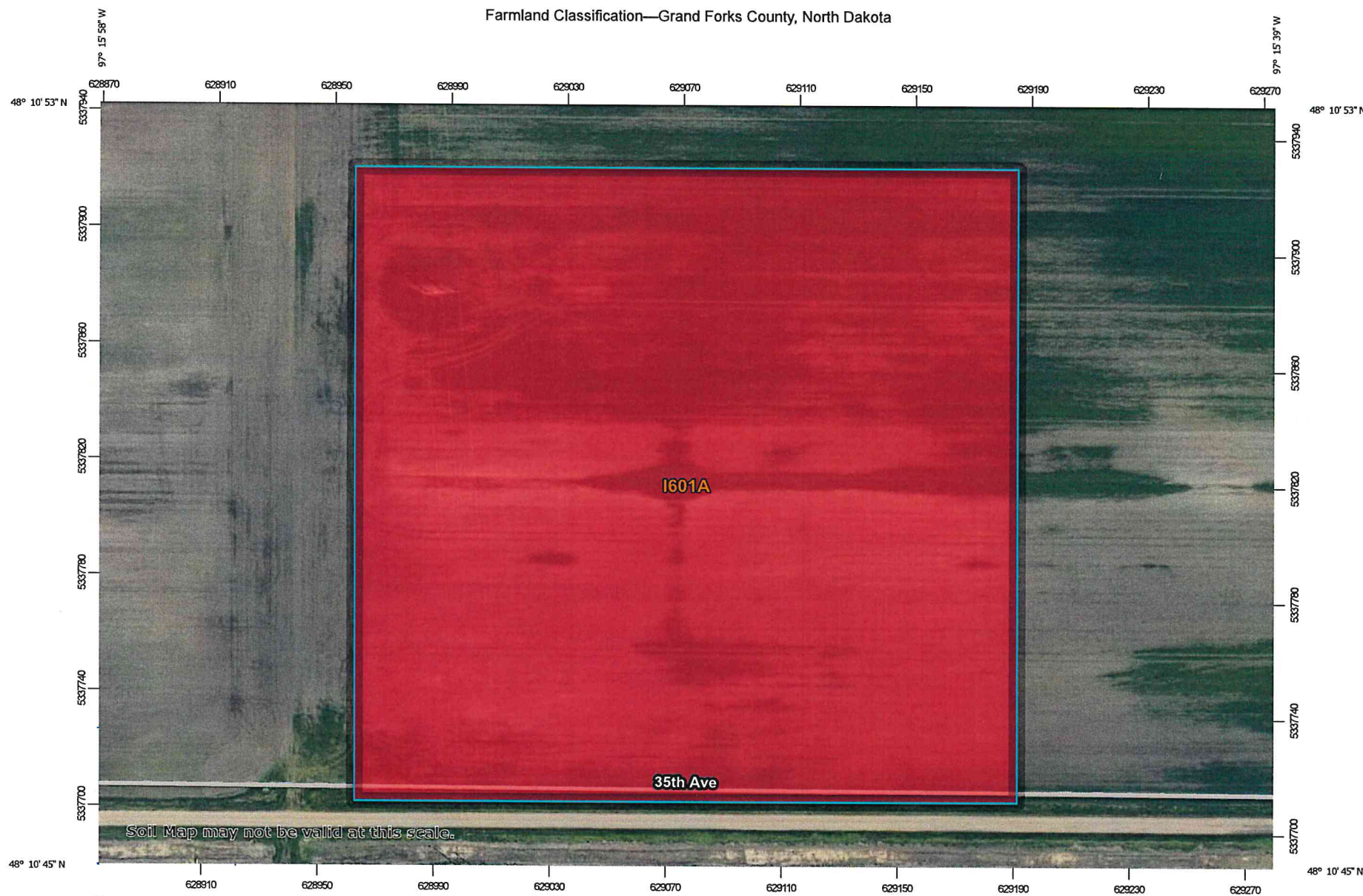
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/27/2023 at 12:02 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

## APPENDIX H. IMPORTANT FARMLAND

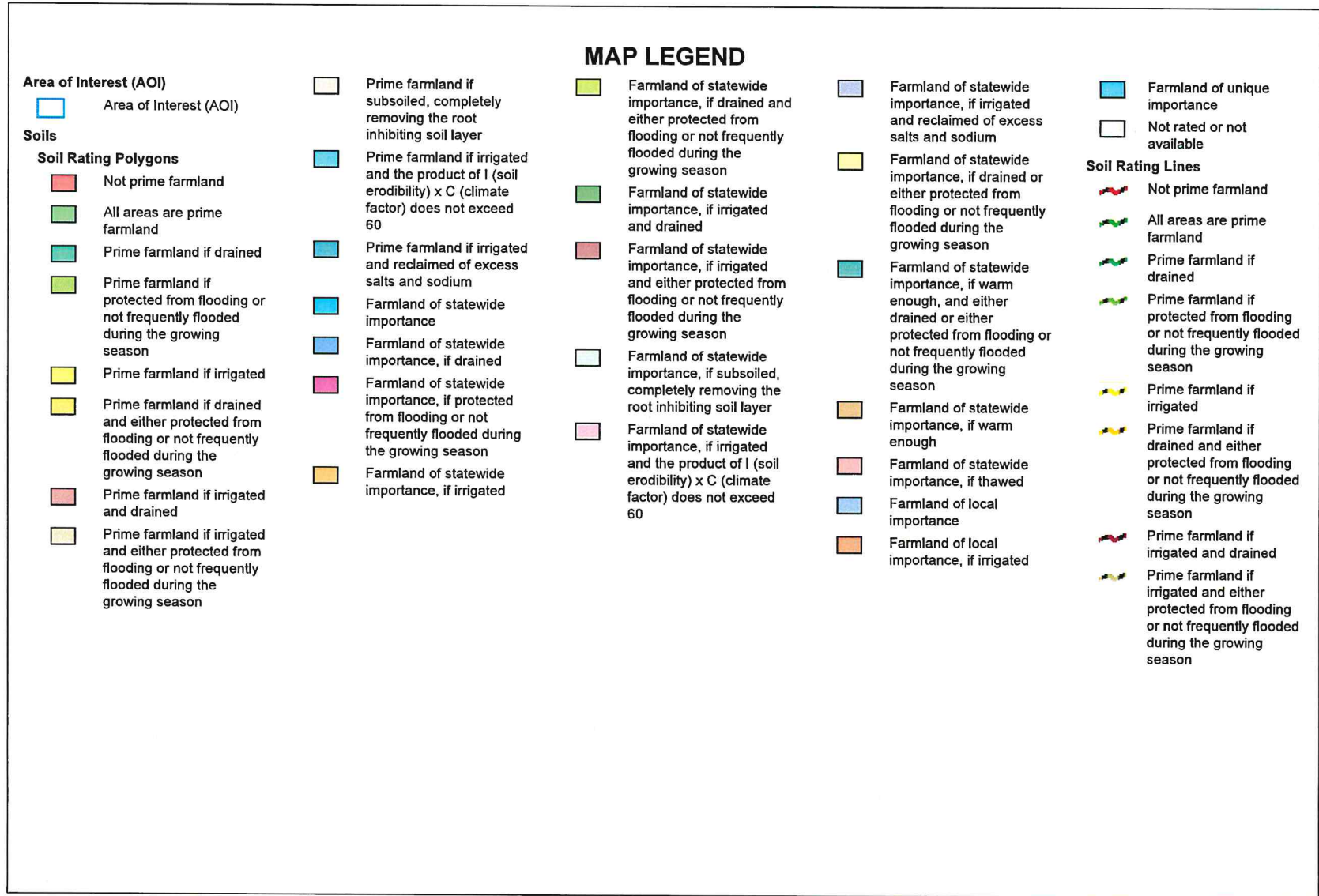
Farmland Classification—Grand Forks County, North Dakota











































Map Scale: 1:1,850 if printed on A landscape (11" x 8.5") sheet.
























Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84



Farmland Classification—Grand Forks County, North Dakota

	Prime farmland if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium		Farmland of unique importance		Prime farmland if subsoiled, completely removing the root inhibiting soil layer	
	Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of statewide importance, if irrigated and drained		Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season		<b>Soil Rating Points</b>		Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60	
	Prime farmland if irrigated and reclaimed of excess salts and sodium		Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if warm enough, and either protected from flooding or not frequently flooded during the growing season			Not prime farmland		Prime farmland if irrigated and reclaimed of excess salts and sodium
	Farmland of statewide importance		Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if warm enough			Prime farmland if drained		Farmland of statewide importance
	Farmland of statewide importance, if drained		Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if thawed			Prime farmland if irrigated		Farmland of statewide importance, if drained
	Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of local importance			Prime farmland if irrigated and drained		Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
	Farmland of statewide importance, if irrigated				Farmland of local importance, if irrigated			Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated

Farmland Classification—Grand Forks County, North Dakota

<ul style="list-style-type: none"> <li> Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season</li> </ul>	<ul style="list-style-type: none"> <li> Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium</li> <li> Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season</li> </ul>	<ul style="list-style-type: none"> <li> Farmland of unique importance</li> <li> Not rated or not available</li> </ul>	<p>The soil surveys that comprise your AOI were mapped at 1:20,000.</p>
<ul style="list-style-type: none"> <li> Farmland of statewide importance, if irrigated and drained</li> </ul>	<ul style="list-style-type: none"> <li> Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season</li> </ul>	<p><b>Water Features</b></p> <ul style="list-style-type: none"> <li> Streams and Canals</li> </ul>	<p>Warning: Soil Map may not be valid at this scale.</p> <p>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</p>
<ul style="list-style-type: none"> <li> Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season</li> </ul>	<ul style="list-style-type: none"> <li> Farmland of statewide importance, if warm enough</li> </ul>	<p><b>Transportation</b></p> <ul style="list-style-type: none"> <li> Rails</li> <li> Interstate Highways</li> <li> US Routes</li> <li> Major Roads</li> <li> Local Roads</li> </ul>	<p>Please rely on the bar scale on each map sheet for map measurements.</p>
<ul style="list-style-type: none"> <li> Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer</li> </ul>	<ul style="list-style-type: none"> <li> Farmland of statewide importance, if thawed</li> </ul>	<p><b>Background</b></p> <ul style="list-style-type: none"> <li> Aerial Photography</li> </ul>	<p>Source of Map: Natural Resources Conservation Service          Web Soil Survey URL:          Coordinate System: Web Mercator (EPSG:3857)</p>
<ul style="list-style-type: none"> <li> Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60</li> </ul>	<ul style="list-style-type: none"> <li> Farmland of local importance</li> </ul>		<p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p>
	<ul style="list-style-type: none"> <li> Farmland of local importance, if irrigated</li> </ul>		<p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p>
			<p>Soil Survey Area: Grand Forks County, North Dakota          Survey Area Data: Version 26, Sep 8, 2022</p>
			<p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p>
			<p>Date(s) aerial images were photographed: Jun 5, 2021—Aug 15, 2021</p>
			<p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p>

## Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
I601A	Bearden silty clay loam, moderately saline, 0 to 2 percent slopes	Not prime farmland	12.4	100.0%
<b>Totals for Area of Interest</b>			<b>12.4</b>	<b>100.0%</b>

### Description


Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

### Rating Options

*Aggregation Method:* No Aggregation Necessary

*Tie-break Rule:* Lower



A Touchstone Energy® Cooperative 

5301 32<sup>nd</sup> Ave. South  
Grand Forks, ND 58201  
Phone 701.795.4000  
[www.minnkota.com](http://www.minnkota.com)

22 May 2023

Wade D. Bott, State Soil Scientist  
USDA-NRCS  
PO Box 1458  
Bismarck, ND

**Subject: Minnkota Power Cooperative, Inc's New Lake Ardoch Substation Project  
T154N R52W S1 SE1/4 SW1/4 (48.179890, -97.264378)  
Grand Forks County, North Dakota**

Dear Wade Bott,

Minnkota Power Cooperative, Inc. (MPC) is seeking financial assistance from the USDA Rural Development (RD), Rural Utilities Service (RUS) under its Electric Infrastructure Loan Program for MPC's Lake Ardoch Substation project (Project). MPC is therefore requesting your review and finding regarding the program converting farmland classified by the NRCS Web Soil Survey as "not prime farmland."

The proposed Project involves constructing a new 230/115kV substation that will tap into MPC's existing Prairie-Drayton 230kV line. Continued load growth in the Grand Forks area prompts the need for this substation to safely supply the demand in Nodak Power Cooperative's distribution territory by maintaining acceptable voltage and facility loading for transmission planning compliance and operations during outages.

The deed was officially granted from the Grovum-Narlock family to MPC on 2 March 2023. Of the 10.4-acre parcel that MPC now owns, the Project will affect approximately 2.5 acres that were previously cropland. The site will be graded to 2 to 3.5 inches above the existing topography. The Project will establish a grounding grid within the fenced area for electrical operational safety.

Because the acquired parcel is located adjacent to existing roadways, there should not be substation land bisection or access impacts to farmland as a result of the Project. MPC is currently coordinating with US Army Corp of Engineers regarding mitigation of impacts to the county ditch on the southern side of 35th Ave NE and other associated water resources.

We are requesting that any comments be forwarded to our office within 30 days of receipt of this letter. Thank you for your consideration of this request. If you require additional information regarding the Project, please contact me via email at [kborin@minnkota.com](mailto:kborin@minnkota.com) or via phone at (701)795-4287.

Sincerely,

A handwritten signature in black ink that reads "Kacey Borin". The signature is stylized and cursive.

Kacey Borin  
Environmental Specialist I

Attachments: 20230522\_FORM AD1006-USDA\_21596 LA050\_Farmland Conversion Impact Rating  
CWP 951.2023.0.6 - Lake Ardoch 230-115 kV Substation  
20230502\_CVL DWG\_21596 LA050-Plot Plan  
20230227\_RPRT-WSS\_21596 LA050-Farmland  
20230302\_DEED 00399-MPC\_21596 LA050-Transfer



May 26, 2023

Natural Resources  
Conservation Service

Bismarck State Office  
PO Box 1458  
Bismarck, ND  
58502-1458

Voice 701.530.2000  
Fax 855-813-7556

Kacey Borin  
Minnkota Power Cooperative  
5301 32<sup>nd</sup> Ave. South  
Grand Forks, ND 58201

Dear Kacey Borin:

The Natural Resources Conservation Service (NRCS) has reviewed your letter dated May 22, 2023, concerning the Minnkota Power Cooperative's New Lake Ardoch Substation Project in Grand Forks County, North Dakota.

The NRCS has a major responsibility with the Farmland Protection Policy Act (FPPA) in documenting conversion of farmland (i.e., Prime, Statewide Importance and/or Local Importance) to non-agricultural use when federal funds are utilized. FPPA does not apply to this project site because there are no important farmland acres within the area of permanent disturbance; therefore, no further action is needed.

#### Wetlands

The Wetland Conservation Provisions of the 1985 Food Security Act, as amended, provide that if a USDA participant converts a wetland for the purpose or to have the effect of making agricultural production possible, loss of USDA benefits could occur. This project may convert or manipulate wetlands or portions of wetlands that will make production possible.

If construction of your project impacts adjacent wetlands, be advised of the following. NRCS has developed guidelines to help avoid impacts to wetlands and possible loss of USDA benefits for producers. If these guidelines are followed the impacts to the wetland will be considered minimal allowing USDA participants to continue to receive USDA benefits. Following are the requirements:

- Disturbance to the wetland must be temporary.
- No drainage of wetland is allowed (temporary or permanent).
- Mechanized landscaping necessary for installation is kept to a minimum and preconstruction contours are maintained.
- Temporary side cast material must be placed in such a manner not to be dispersed in the wetland.
- All trenches in a wetland must be backfilled to the original elevation.

Potentially impacted USDA participants that wish to request a certified wetland determination can be directed to the USDA Farm Service Agency (FSA) to request a Highly Erodible Land Conservation (HELIC) and Wetland Conservation

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(WC) Certification (AD-1026) or they may contact Andrew Willyard, Designated Conservationist, NRCS, Grand Forks, North Dakota at (701) 765-3677, for information about conservation compliance provisions related to the project.

NRCS recommends that impacts to wetlands be avoided.

If you have additional questions pertaining to FPPA, please contact Wade Bott, State Soil Scientist, NRCS, Bismarck, North Dakota, at (701) 530-2021.

Sincerely,

**WADE BOTT**

Digitally signed by WADE BOTT  
Date: 2023.05.30 13:41:51 -05'00'

WADE D. BOTT  
State Soil Scientist

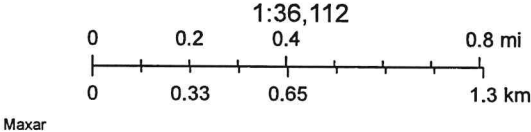
## APPENDIX I. ENVIRONMENTAL RISK MANAGEMENT

# Lake Ardoch- Enviro. Risk Mgmt.



February 27, 2023

-  Lake Ardoch Substation
-  Project Buffer



## APPENDIX J. WATER RESOURCES

# Lake Ardoch- Sole Source Aquifers



February 27, 2023



Lake Ardoch Substation

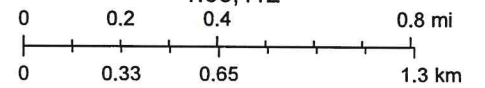


Project Buffer



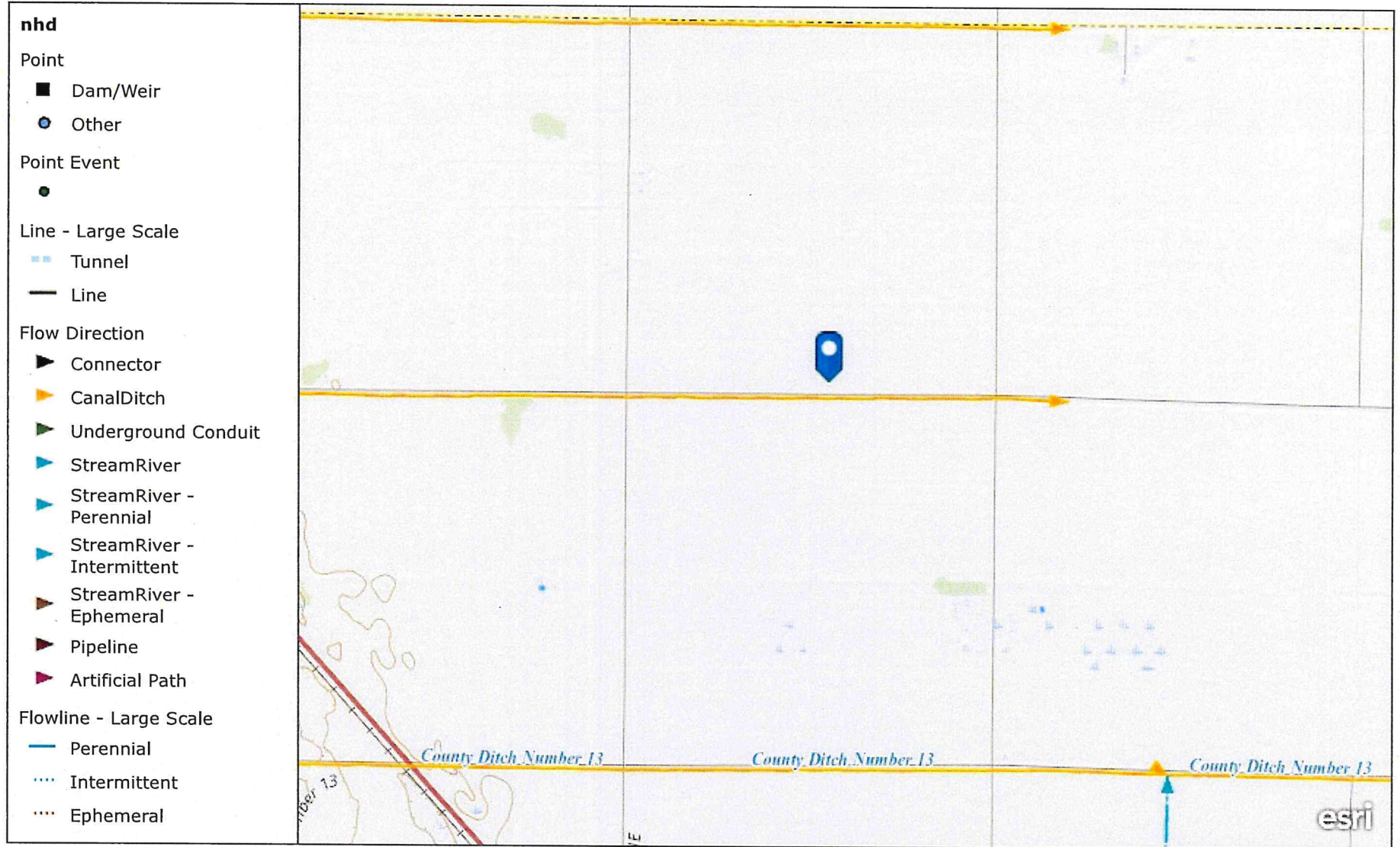
Sole Source Aquifers

1:36,112



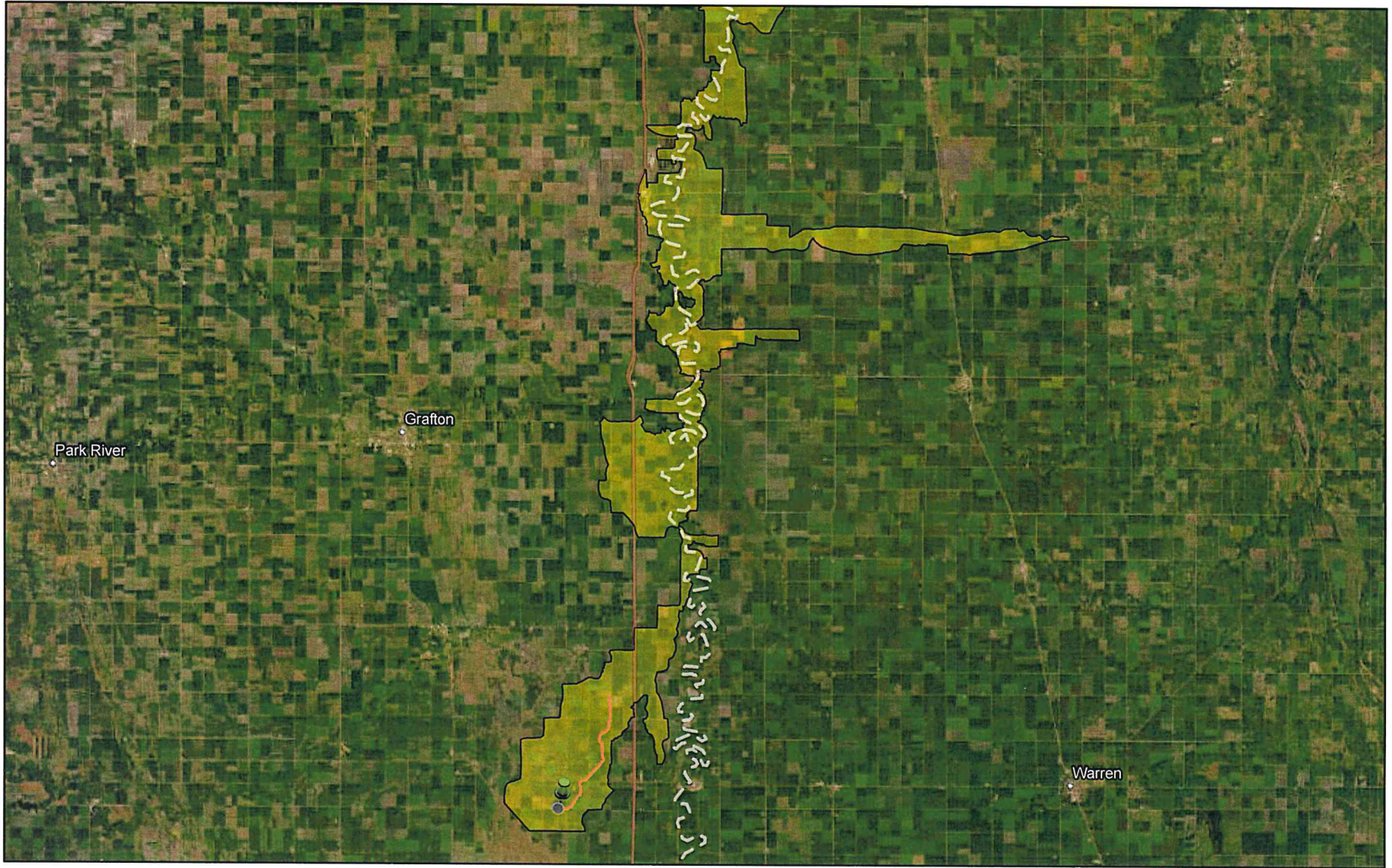
Maxar

# My Map



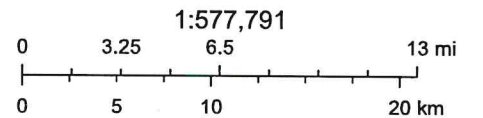
USGS TNM – National Hydrography Dataset. Data Refreshed April, 2023. | USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed April, 2023.

# 21596 LA050 Downstream Drainage Area w/ Divergences



5/17/2023, 10:54:04 AM

- Result: Link Path
- Result: Delineated Area



US EPA, State of North Dakota, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, Earthstar Geographics

**From:** [Renschler, Jason J CIV USARMY CENWO \(USA\)](#)  
**To:** [Kacey Borin](#)  
**Subject:** [EXTERNAL] RE: Minnkota Power Cooperative- Lake Ardoch New Substation Project- Grand Forks County ND  
**Date:** Wednesday, May 31, 2023 11:11:05 AM

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Hi Kacey – your correct, the new WOTUS ruling is once again taking us in a new direction. We are currently waiting for additional guidance from our HQ and were told do not finalize any approved jurisdictional determinations (AJD's) until further notice. But from what i have read I would agree with you that it seems to be moving towards a limiting wetland coverage direction. The NRCS/FSA map you sent does not show any wetlands or wetland type signatures on that tract of land, so my initial call would lean that way, no waters present. I'll keep you posted on what i hear back from my HQ on the new WOTUS ruling. Thanks, Jason.

**From:** Kacey Borin <kborin@minnkota.com>  
**Sent:** Wednesday, May 31, 2023 9:14 AM  
**To:** Renschler, Jason J CIV USARMY CENWO (USA) <Jason.J.Renschler@usace.army.mil>  
**Subject:** [URL Verdict: Neutral][Non-DoD Source] RE: Minnkota Power Cooperative- Lake Ardoch New Substation Project- Grand Forks County ND

Good morning!

Just an update- so I was able to get in contact with the Grand Forks County NRCS, which they then transferred me over to Walsh County, since although it is GF county technically, I guess Walsh is the administrator for that parcel at least? They sent me this aerial shot and then redirected me to the state soil scientist, Wade Bott. I emailed him last Thursday and am still waiting for a response.

The new WOTUS ruling last week seems to be limiting wetland coverage even more- so then would that slice this out of your jurisdiction if there isn't a continuous surface connection? This site seems more like it becomes a subsurface connection with how ~flat the area is, it's not necessarily taking the surface route down the watershed, rather typically takes the subsurface route. What do you think?

**Kacey Ann Borin (*she/her*)**  
*Environmental Specialist I*

Minnkota Power Cooperative, Inc  
5301 32<sup>nd</sup> Ave. S.  
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Web: [www.minnkota.com](http://www.minnkota.com)



**From:** Renschler, Jason J CIV USARMY CENWO (USA) <[Jason.J.Renschler@usace.army.mil](mailto:Jason.J.Renschler@usace.army.mil)>  
**Sent:** Thursday, May 18, 2023 12:37 PM  
**To:** Kacey Borin <[kborin@minnkota.com](mailto:kborin@minnkota.com)>  
**Subject:** [EXTERNAL] RE: Minnkota Power Cooperative- Lake Ardoch New Substation Project- Grand Forks County ND

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These are inconclusive on the exact extent of Corps Jurisdictional WoUS in that area. If you have Barr Eng. working it, they have the capabilities to conduct a field wetland delineation, that is really what i need to start a jurisdictional determination, or we can do a preliminary JD (PJD). A PJD is quick-time driven read that 'yes the waters are jurisdictional for Corps', then we move directly into permitting mode. Probably not the avenue you all (Minnkota) want to go? We can talk tomorrow if that would be best for you. Jason.

**From:** Kacey Borin <[kborin@minnkota.com](mailto:kborin@minnkota.com)>  
**Sent:** Thursday, May 18, 2023 12:12 PM  
**To:** Renschler, Jason J CIV USARMY CENWO (USA) <[Jason.J.Renschler@usace.army.mil](mailto:Jason.J.Renschler@usace.army.mil)>  
**Subject:** [URL Verdict: Neutral][Non-DoD Source] RE: Minnkota Power Cooperative- Lake Ardoch New Substation Project- Grand Forks County ND

I do have mapping data, here's an index of what's in each of the documents attached:

- **Plot Plan:** design of the new substation
- **Hydric Rating:** taken off of NRCS's Web Soil Survey;
  - hydric rating 12 on bearden silty clay loam soils
- **FIRMette:** FEMA's map;
  - zone x little to no flooding vulnerability
- **Site Ditch:** taken from EPA's National Hydrography Dataset;
  - Ditch flow direction east, not recorded much farther from site
- **Downstream Link Path:** taken from EPA WATERS Geoviewer;

- Orange line shows the determined water flow
- **Intermittent Ditch, Perennial Marais:** taken from National Hydrography Dataset;
  - Blue pin shows site location, dotted blue line north of site is the roadside ditch that goes into North Marais River then Red River (all flow going northeast)
  - That dotted blue ditch is the one that the orange link path goes into

As far as I know, there hasn't been a wetland determination here. We officially were granted the deed back in March this year. We currently have Environmental Site Assessment: Phase I in the works through Barr Engineering that should be consistent with ASTM E1527-21 Standard Practice. This is anticipated to return within the next couple weeks.

Let me know if I can get you anything else.

**Kacey Ann Borin (she/her)**

*Environmental Specialist I*

Minnkota Power Cooperative, Inc  
5301 32<sup>nd</sup> Ave. S.  
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Email: [kborin@minnkota.com](mailto:kborin@minnkota.com)  
Web: [www.minnkota.com](http://www.minnkota.com)



**From:** Renschler, Jason J CIV USARMY CENWO (USA) <[Jason.J.Renschler@usace.army.mil](mailto:Jason.J.Renschler@usace.army.mil)>  
**Sent:** Thursday, May 18, 2023 11:49 AM  
**To:** Kacey Borin <[kborin@minnkota.com](mailto:kborin@minnkota.com)>  
**Subject:** [EXTERNAL] RE: Minnkota Power Cooperative- Lake Ardoch New Substation Project- Grand Forks County ND

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Hi Kacey – has a wetland field delineation been completed on the parcel of land in question? Do you have any mapping or other data that shows the area? Location, size (acres), etc.? Jason.

**From:** Kacey Borin <[kborin@minnkota.com](mailto:kborin@minnkota.com)>  
**Sent:** Thursday, May 18, 2023 10:53 AM  
**To:** Renschler, Jason J CIV USARMY CENWO (USA) <[Jason.J.Renschler@usace.army.mil](mailto:Jason.J.Renschler@usace.army.mil)>  
**Subject:** [URL Verdict: Neutral][Non-DoD Source] Minnkota Power Cooperative- Lake Ardoch New Substation Project- Grand Forks County ND

Good morning Jason,

My name is Kacey Borin, and I'm an environmental specialist here at MPC along with Samantha Roberts, who you've been working with. I'm looking to get your insight for WOTUS jurisdiction for this new substation build project.

**The project of topic is located here:**

**(48.179890, -97.264378)**

**T154 R54 S1**

**Grand Forks County, ND**

The proposed project constructs a new 230/115 kV tap substation and associated control house that will tap on to the existing Prairie-Drayton 230 kV line which will connect to the existing Oslo 115 kV substation. The site grading would be for 3-5 weeks, and the energization process another 6 months. The site will be graded to 2 to 3.5 inches above the existing topography. The Project will establish a grounding grid within the fenced area for electrical operational safety. 4.5-inch-thick concrete slabs will be put beneath transformers. The site will have roughly 12,000 gallons of oil within transformers. The engineering team on this project have informed me that they will not be directing any water into the ditch directly and will be designing some drainage filtration basins around the graded parts of the substation, although the whereabouts and specific dimensions are still in working progress.

*A brief summary of what I've noticed thus far:*

There is an unnamed ditch, NWI code- R4SBCx, located across on the southern side of 35<sup>th</sup> Ave NE. This seems to be a less than ephemeral waterbody, that may be wet in response to precipitation. Going along the east-west series of ditches this is connected to, the project is located 5.02 miles from the North Marais River. On the other hand, the EPA's National Hydrography Dataset and WATERS geodatabases don't show that as the downstream path. Instead, the drainage area delineations show a link path from the substation site going northeast for 6.71 river miles (rmi) into an intermittent roadside waterway that flows 1.51 rmi east into the perennial North Marais River, which then flows 8.03 rmi northeast into Red River of the North.

What information would be helpful to provide to analyze WOTUS jurisdiction? I could send along all the support files that I mentioned above if you'd like, I didn't want to overwhelm you preemptively.

Hope to hear soon, thanks!

**Kacey Ann Borin (she/her)**

*Environmental Specialist I*

Minnkota Power Cooperative, Inc

5301 32<sup>nd</sup> Ave. S.

Grand Forks, ND 58201

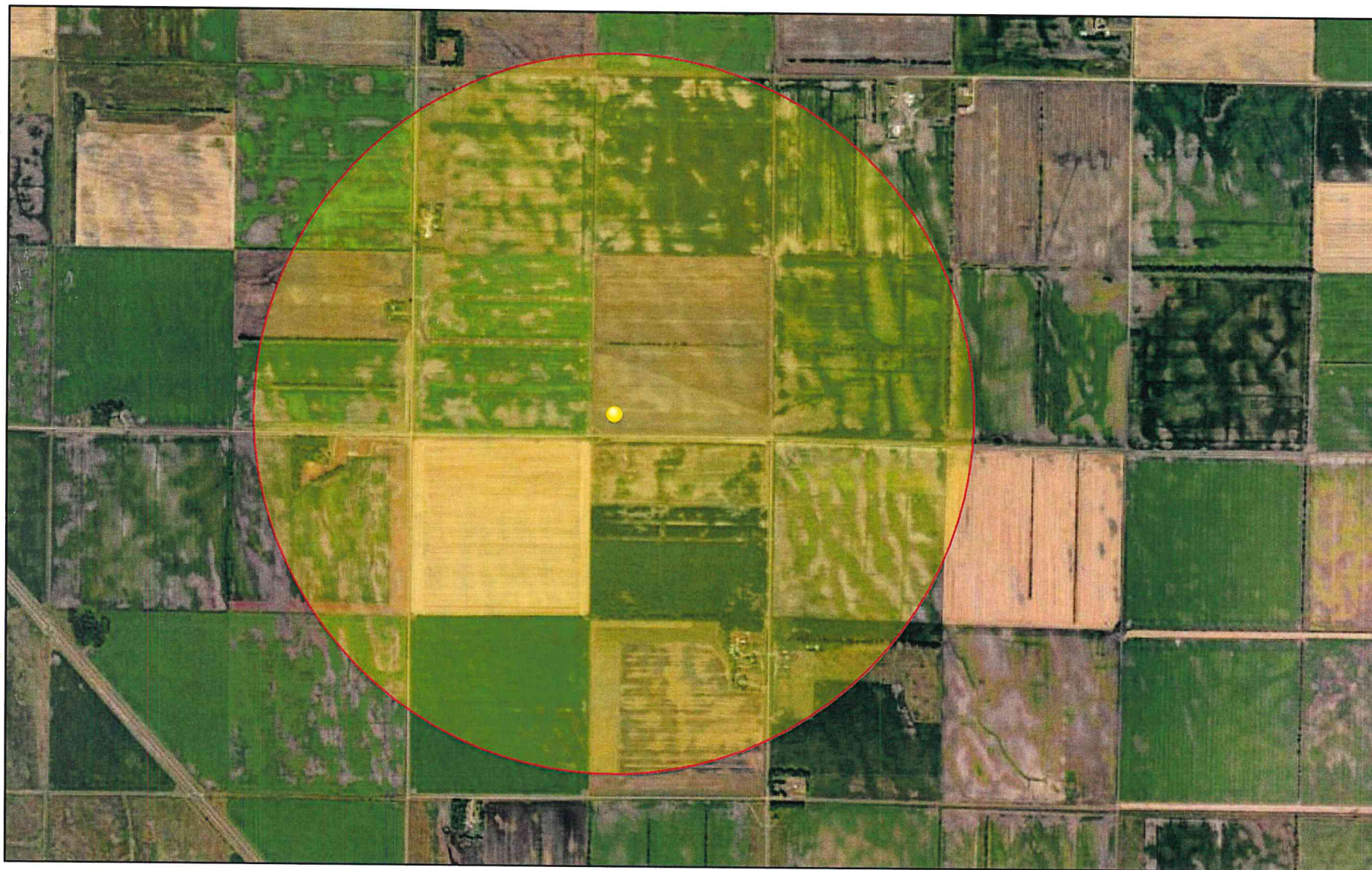
Office: (701) 795-4287

Email: [kborin@minnkota.com](mailto:kborin@minnkota.com)



Web: [www.minnkota.com](http://www.minnkota.com)

## APPENDIX K. AIR QUALITY

# Lake Ardoch- Air Pollution & Non-Attainment Areas



February 27, 2023

-  Lake Ardoch Substation
-  Project Buffer

