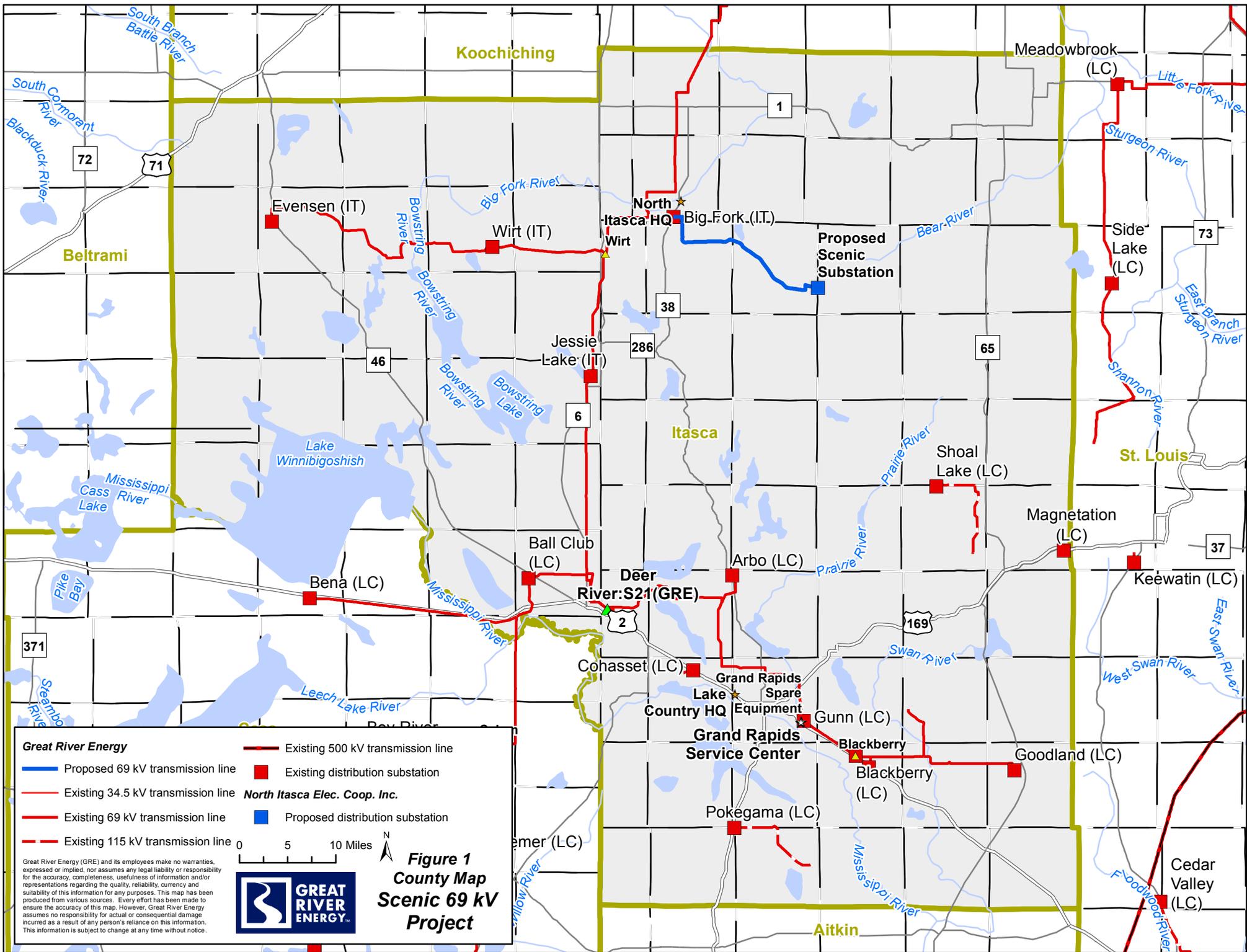


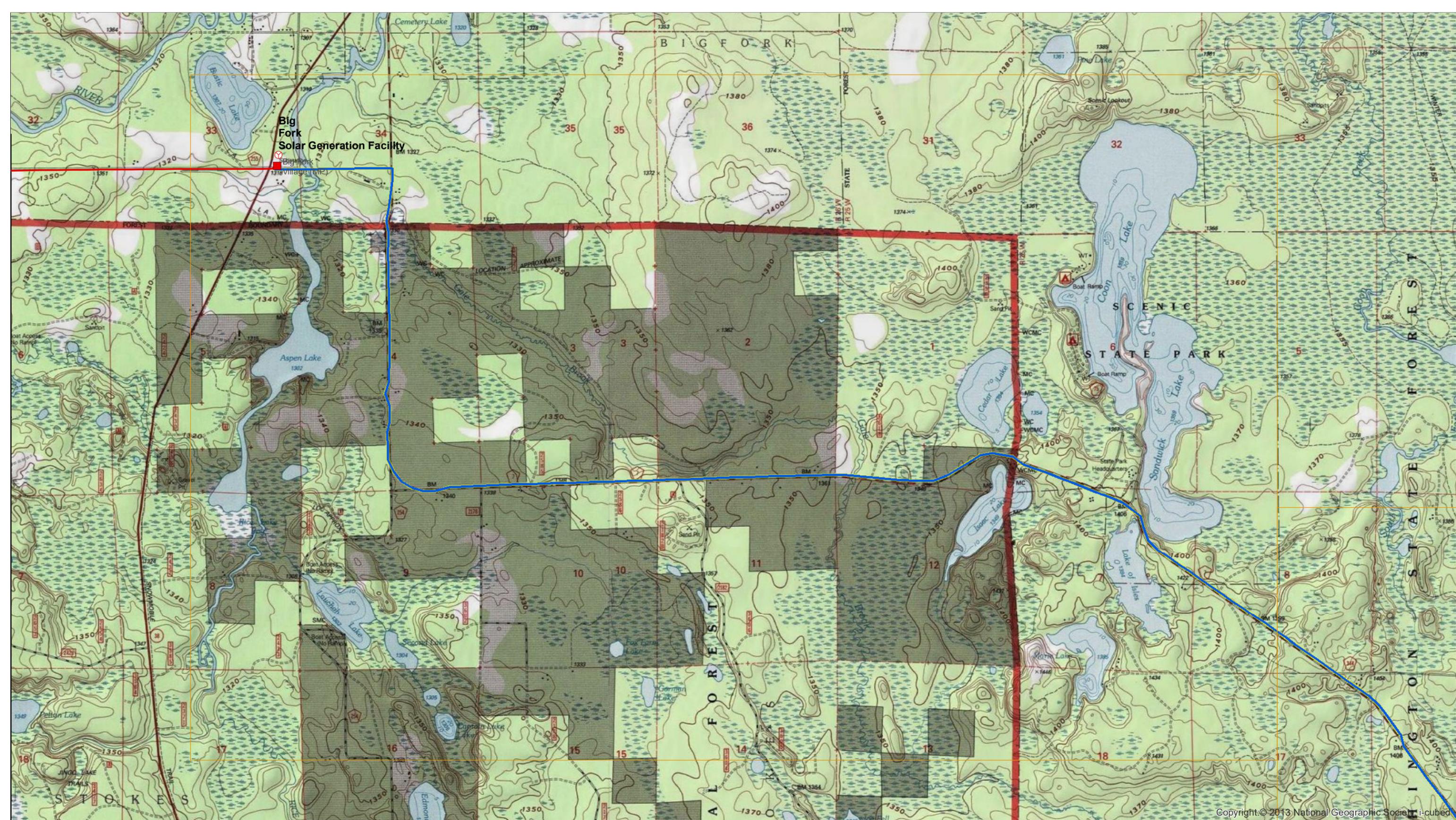
Scenic 69 kV Transmission Line Project

EAW Figures

Figure #	Figure Description
Figure 1	County Map
Figure 2	U.S. Geological Survey Map
Figure 3	Project Site Plan
Figure 4	Project Site Plan for Scenic State Park
Figure 5	Representative Photo of Transmission Line
Figure 6	Western Portion Soils and Water Table Depth
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- Great River Energy
- Proposed 69 kV transmission line
- Existing 69 kV transmission line
- 100 ft easement buffer
- Existing GRE generation Site
- Existing distribution substation

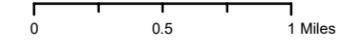
Scenic 69 kV Transmission Line
U.S. Geological Survey Map

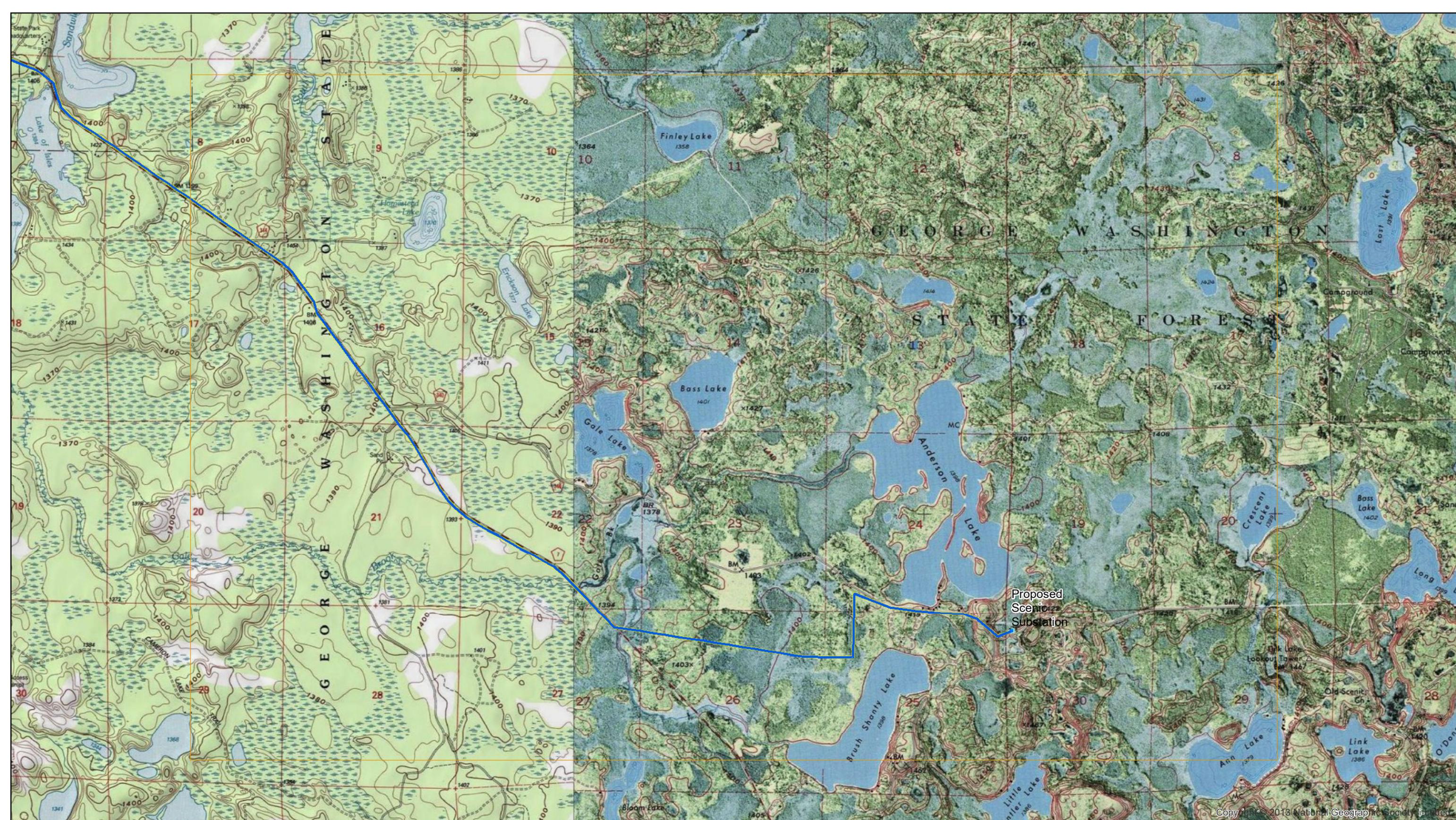
Figure 2
Page 1 of 2



GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy

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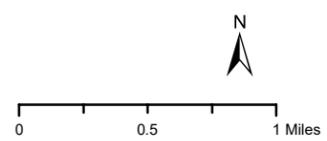


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- Great River Energy
- Proposed 69 kV transmission line
- Substation footprint
- 100 ft easement buffer
- North Itasca Electric Cooperative
- Proposed Distribution Substation

Scenic 69 kV Transmission Line
U.S. Geological Survey Map

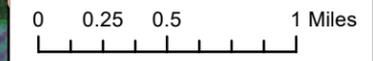
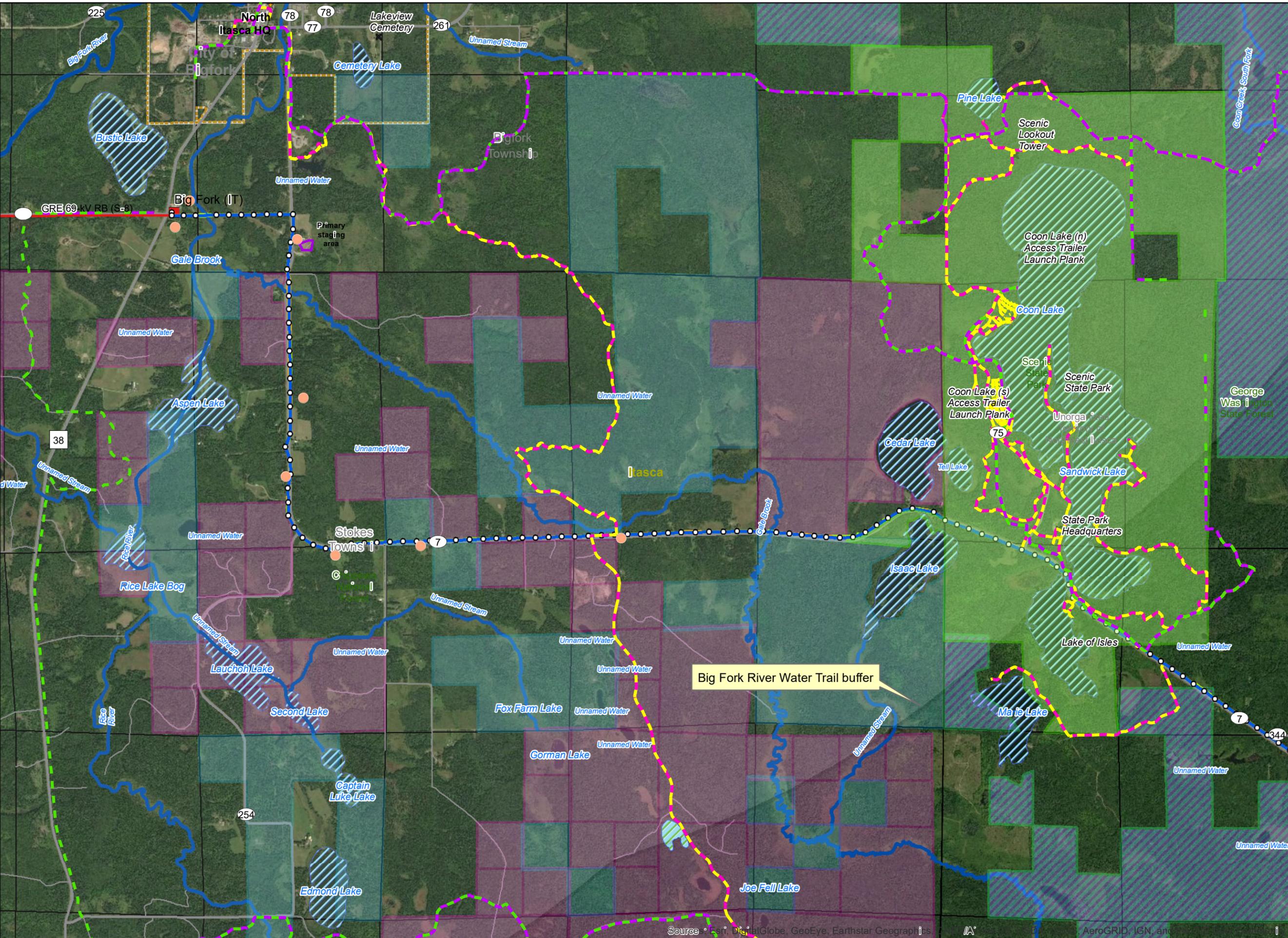
Figure 2
Page 2 of 2





Scenic 69 kV Project

- Great River Energy**
 - Proposed 69 kV transmission line
 - Existing 69 kV transmission line
 - Proposed transmission structure
 - Existing distribution substation
 - 100 ft easement buffer
 - Staging area
- North Itasca Elec. Coop. Inc.**
 - Proposed distribution substation
- Identified Wetlands**
 - Emergent
 - Forested
 - Shrub
 - Riverine
- Public Waters Inventory**
 - Public Water Wetland
 - Public Water Basin
 - MN Public Watercourse
- Landbase Boundary**
 - MN Park Boundary
 - MN Forest Boundary
 - Forest service parcel
 - George Washington State Forest
 - Big Fork River buffer
 - MN trails (Bike, Forest, Park)
 - Snowmobile trail
- Wells**
 - Domestic well



Page 1 of 2

**Figure 3
Project Site Plan**

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Scenic 69 kV Project

Great River Energy

Proposed 69 kV transmission line

Proposed transmission structure

Existing distribution substation

Substation footprint

100 ft easement buffer

Staging area

North Itasca Elec. Coop. Inc.

Proposed distribution substation

Identified Wetlands

Emergent

Forested

Shrub

Riverine

Substation footprint

Public Waters Inventory

Public Water Wetland

Public Water Basin

MN Public Watercourse

Landbase Boundary

MN Park Boundary

MN Forest Boundary

Forest service parcel

George Washington State Forest

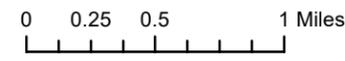
Big Fork River buffer

MN trails (Bike, Forest, Park)

Snowmobile trail

Wells

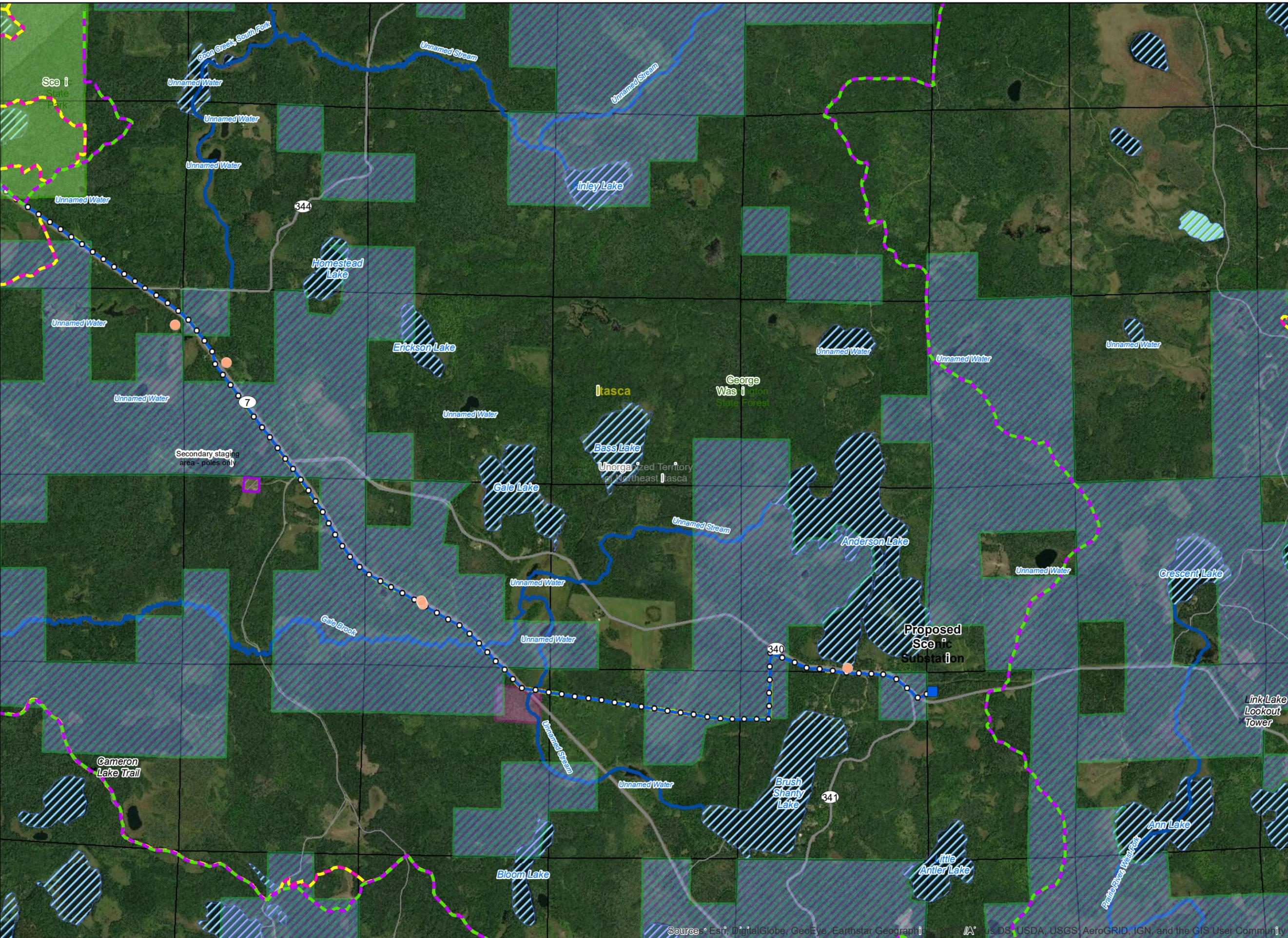
Domestic well



Page 2 of 2

Figure 3 Project Site Plan

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Scenic 69 kV Project

- Great River Energy**
- Proposed 69 kV transmission line
 - Proposed transmission structure
 - Existing distribution substation
 - 2page map series
 - 100 ft easement buffer
- North Itasca Elec. Coop. Inc.**
- Proposed distribution substation
- Identified Wetlands**
- Emergent
 - Forested
 - Shrub
 - Riverine
 - 100 ft easement buffer
- Public Waters Inventory**
- Public Water Wetland
 - Public Water Basin
 - MN Public Watercourse
- Landbase Boundary**
- MN Park Boundary
 - MN Forest Boundary
 - Forest service parcel
 - George Washington State Forest
 - MN trails (Bike, Forest, Park)
 - Snowmobile trail
- Wells**
- Domestic well

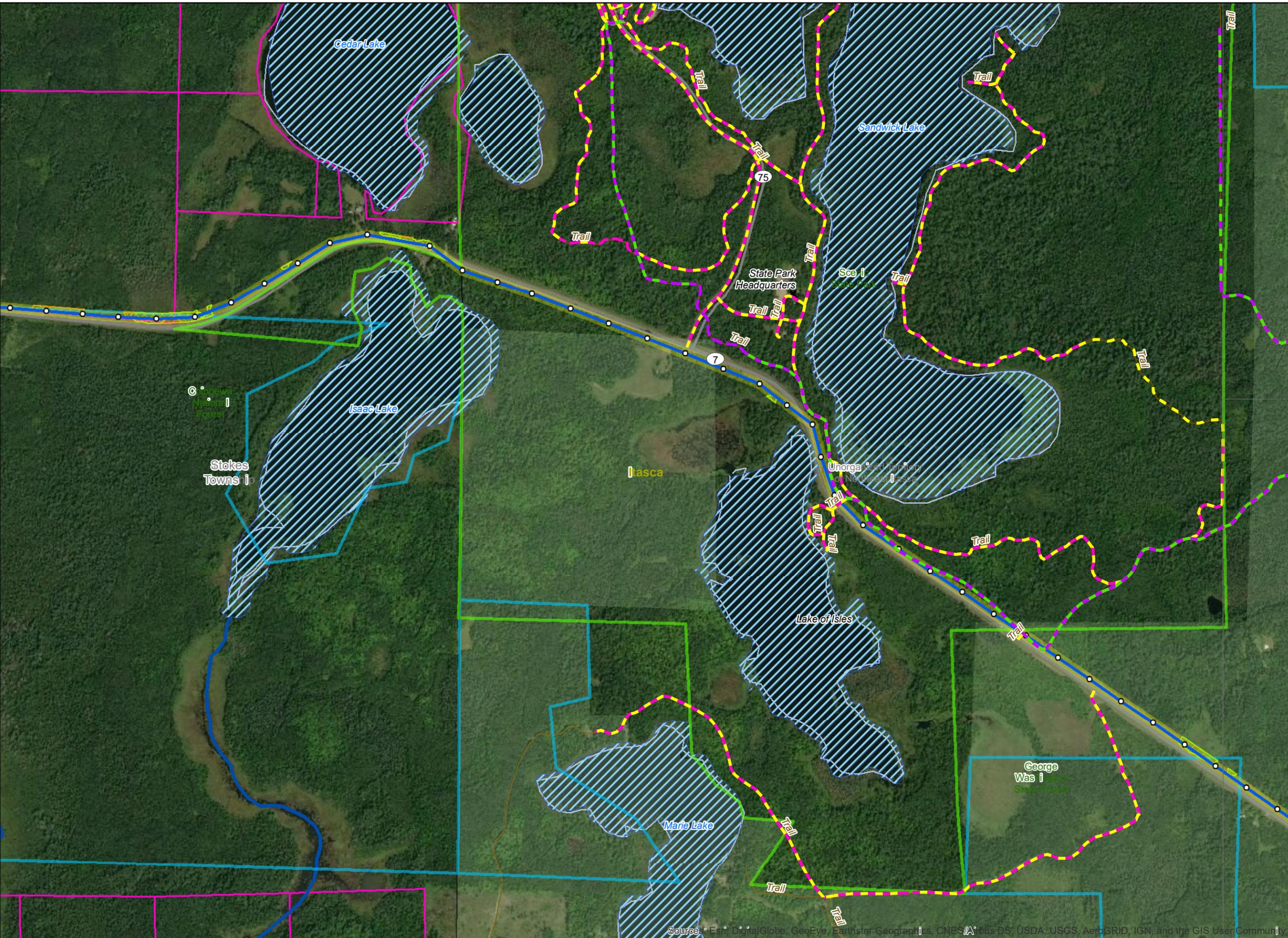


Figure 4 Project Site Plan for Scenic State Park

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Representative Photo of Transmission Line



This project will use two types of wood poles, round wood and laminated wood. The round wood pole is a harvested Douglas Fir tree with a finished length of 65 to 70 feet long. The pole is stripped of bark and treated to prevent deterioration and rot. The pole tapers from 18 inches diameter at the base to 12 inches at the top. The laminated wood pole, is a structural engineered wood pole comprised of layers of dimensional lumber bonded together with durable, moisture-resistant structural adhesives. By laminating together a number of smaller pieces of lumber, a single large, strong, structural pole is manufactured. The base is rectangular in shape. The high strength and stiffness of laminated poles allow for larger un-guyed, unbalanced angles when supporting guy wires are not practical. With both types of poles, they are delivered, framed (holes are drilled and the insulators bolted to the pole top) and erected. The poles are placed in nine to ten foot deep holes then backfilled with rock and dirt for stability.



Scenic 69 kV Project

- Great River Energy**
- Proposed 69 kV transmission line
 - Existing 69 kV transmission line
 - Existing distribution substation
 - Substation footprint
 - 100 ft Easement buffer
- North Itasca Elec. Coop. Inc.**
- Proposed distribution substation

- Soils**
- Water Table Depth**
- 0" - 8"
 - 20" - 35"
 - > 80"

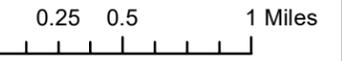
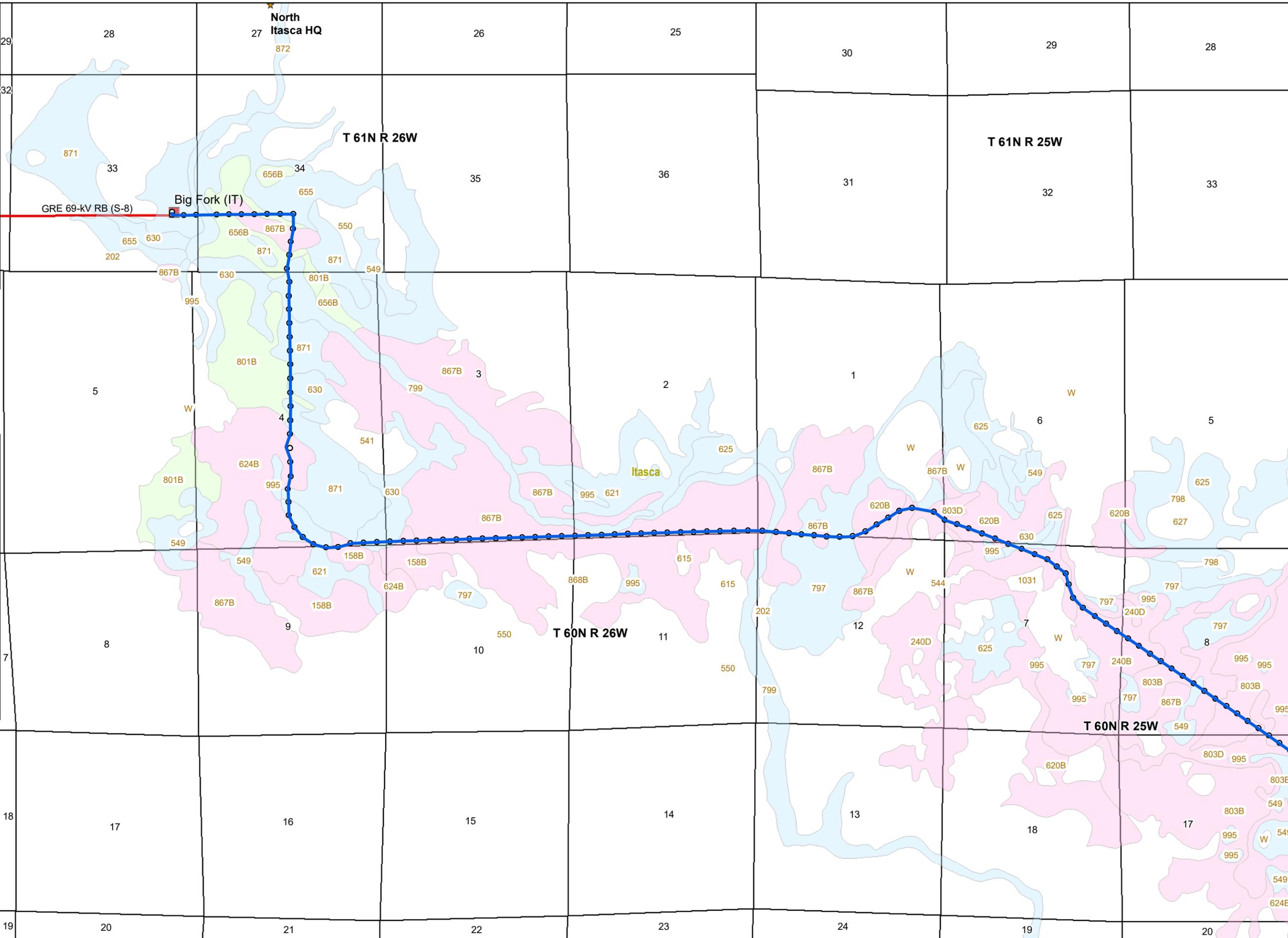


Figure 6
Western Portion
Soils and Water Table Depth

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Scenic 69 kV Project

- Great River Energy**
- Proposed 69 kV transmission line
 - Existing distribution substation
 - Substation footprint
 - 100 ft Easement buffer
- North Itasca Elec. Coop. Inc.**
- Proposed distribution substation
- Soils**
- Water Table Depth**
- 0" - 8"
 - 20" - 35"
 - > 80"

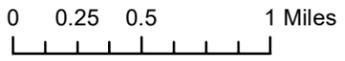
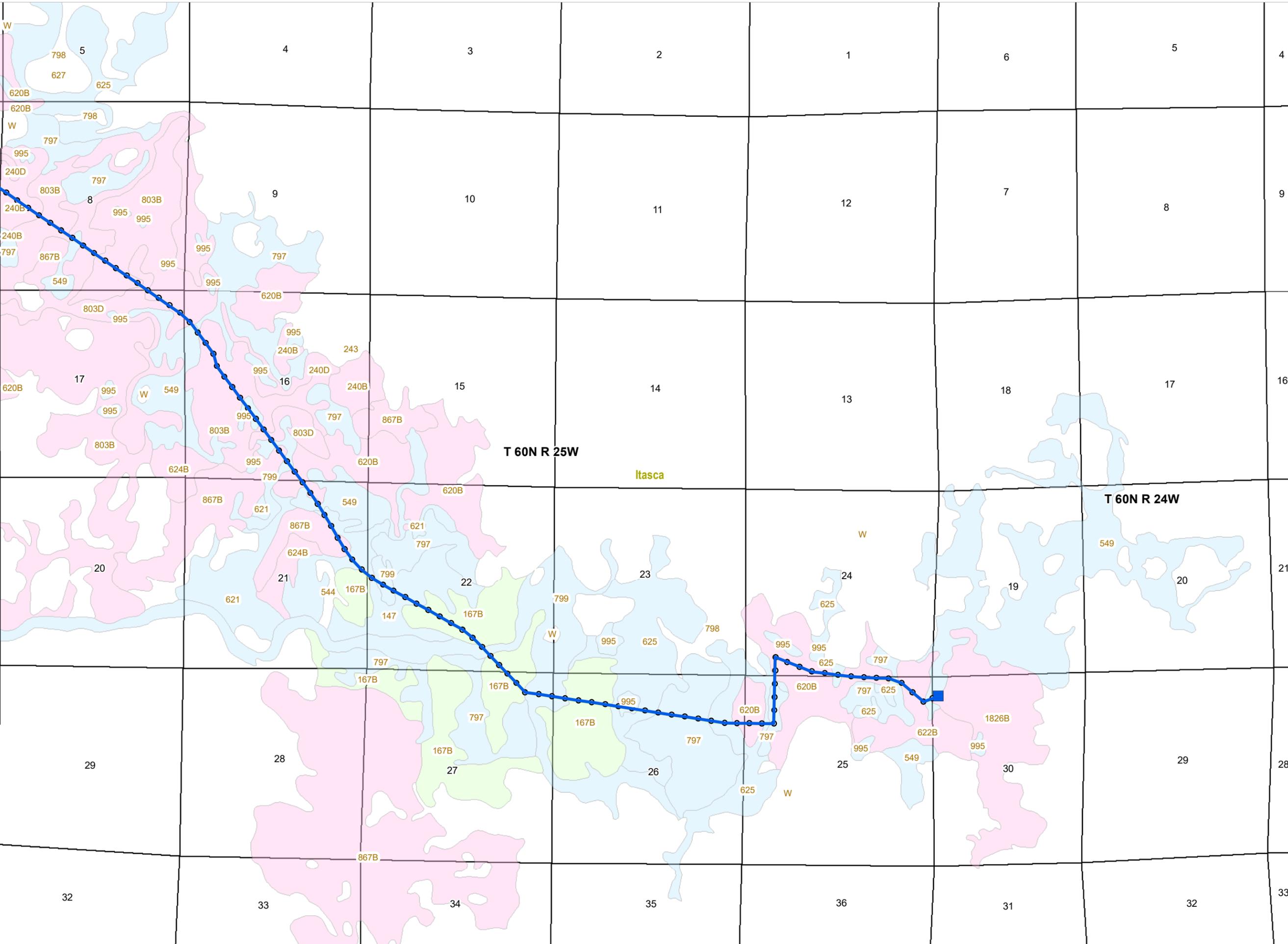


Figure 6a
Eastern Portion
Soils and Water Table Depth

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Scenic 69 kV Transmission Line Project Soils Key

Map Unit Symbol	Soil Name	Acres	Water Table Depth (inches)	Drainage	Erosion Harzard
147	Spooner silt loam	4.740755	6	Poor	0.37
549	Greenwood peat	3.188247	0	Poor	Unknown
621	Morph very fine sandy loam	3.493271	0-8	Poor	Unknown
625	Sandwick loamy fine sand	6.193618	6	Poor	0.32
630	Wildwood muck	3.699198	0	Very Poor	Unknown
655	Bearville loamy sand	1.911197	6	Poor	0.2
797	Mooselake and Lupton mucky peats	9.307714	0	Very Poor	Unknown
799	Seelyeville-Bowstring association	10.188457	0	Very Poor	Unknown
871	Indus and Brickton soils	8.68654	6	Poor	0.28
872	Pengilly-Winterfield association	0.665153	6	Poor	0.43
995	Borosaprists, depressional	3.035586	0	Very Poor	Unknown
158B	Zimmerman loamy fine sand, 1 to 8 percent slopes	2.983432	80+	Excessively	0.1
167B	Baudette silt loam, 0 to 5 percent slopes	11.376832	30	Moderate	0.43
1826B	Nashwauk-Menahga complex, 1 to 10 percent slopes	0.539998	30	Well	0.24
240B	Warba fine sandy loam, 1 to 8 percent slopes	6.815011	80+	Well	0.24
240D	Warba fine sandy loam, 10 to 25 percent slopes	0.008931	80+	Well	0.24
620B	Cutaway loamy sand, 0 to 8 percent slopes	25.661774	80+	Well	0.24
622B	Nashwauk fine sandy loam, 1 to 10 percent slopes	2.119198	30	Well	0.24
624B	Rosy very fine sandy loam, 0 to 6 percent slopes	4.919722	20-35	Moderate/Well	Unknown
656B	Thistledew loamy fine sand, 0 to 6 percent slopes	3.61044	30	Moderate/Well	0.24
801B	Taylor and Dalbo silt loams, 0 to 6 percent slopes	0.87095	30	Moderate/Well	0.37
803B	Warba-Menahga complex, 1 to 8 percent slopes	14.970157	80+	Moderate/Well	0.24
803D	Warba-Menahga complex, 10 to 25 percent slopes	4.944947	80+	Well	0.24
867B	Menahga and Graycalm soils, 0 to 8 percent slopes	32.176952	80+	Excessively	0.1

Grand Total 166.10808