

**STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION**  
**ROUTE PERMIT FOR CONSTRUCTION OF A HIGH-VOLTAGE TRANSMISSION**  
**LINE AND ASSOCIATED FACILITIES**

**IN**  
***HUBBARD, WADENA AND BECKER COUNTIES***

**ISSUED TO**  
***GREAT RIVER ENERGY AND MINNESOTA POWER***

**PUC DOCKET NO. ET-2, E-015/TL-14-797**

In accordance with the requirements of Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850, this route permit is hereby issued to:

***GREAT RIVER ENERGY AND MINNESOTA POWER***

Great River Energy and Minnesota Power are authorized by this route permit to construct approximately 22.5 miles of new 115 kV Transmission Line and three new substations known as the “Menahga Area” Project in Hubbard, Wadena and Becker counties, Minnesota.

The transmission line and associated facilities shall be built within the route identified in this permit and as portrayed on the official route maps, and in compliance with the conditions specified in this permit.

Approved and adopted this 14<sup>th</sup> day of March, 2016

BY ORDER OF THE COMMISSION

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Daniel P. Wolf,  
Executive Secretary

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Official Route Maps

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- Attachment A – Complaint Procedures for High-Voltage Transmission Lines
- Attachment B – Compliance Filing Procedure for Permitted Energy Facilities
- Attachment C – Compliance Filing List

## **1.0 ROUTE PERMIT**

The Minnesota Public Utilities Commission (Commission) hereby issues this route permit to Great River Energy and Minnesota Power (Permittee) pursuant to Minnesota Statutes Chapter 216E and Minnesota Rules Chapter 7850. This permit authorizes the Great River Energy and Minnesota Power to construct approximately 22.5 miles of new 115 kV Transmission Line and three new substations known as the “Menahga Area” Project in Hubbard, Wadena and Becker counties, Minnesota and as identified in the attached route permit maps, hereby incorporated into this document.

### **1.1 Pre-emption**

Pursuant to Minn. Stat. § 216E.10, this route permit shall be the sole approval required to be obtained by the Permittee for construction of the transmission facilities and this permit shall supersede and preempt all zoning, building, or land use rules, regulations, or ordinances promulgated by regional, county, local and special purpose government.

## **2.0 PROJECT DESCRIPTION**

The Project includes the construction and operation of approximately 22.5 miles of new 115 kV transmission line in Hubbard, Wadena and Becker counties. The 115 kV transmission line would run westward from the existing Hubbard substation to a new Straight River substation in the SW corner of Straight River Twp., and then southward to a new Blueberry substation near the city of Menahga and to a new Red Eye substation approximately 3 miles north of Sebeka, MN.

The Project entails: 1) construction of 4.5 miles of double-circuit 115 kilovolt (kV) transmission line and approximately 2.5 miles of single-circuit 115 kV transmission line, 2) construction of approximately 15.5 miles of primarily single-circuit 115 kV transmission line, and 3) construction of the new Todd-Wadena Electric Cooperative Red Eye Distribution Substation (to serve the proposed Minnesota Pipe Line Company (MPL) Sebeka pump station); construction of the Minnesota Power Straight River Substation, and the construction of the Great River Energy Blueberry Substation; relocation of the existing Todd-Wadena Menahga Distribution Substation to the Blueberry Substation site and convert the voltage from 34.5 kV to 115 kV; and modify the existing Great River Energy Hubbard Substation and Minnesota Power Pipeline Substation.

### **2.1 Project Location**

The Project is located in West-Central Minnesota in Hubbard, Wadena and Becker counties, specifically within the townships of Hubbard, Straight River, Runeberg, Blueberry, and Red Eye in the service territory of Todd-Wadena Electric Cooperative.

County	Township Name	Township	Range	Section
Hubbard	Hubbard	T139N	R34W	29, 30
Hubbard	Straight River	T139N	R35W	25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35
Wadena	Blueberry	T138N	R35W	6, 7, 18, 19, 20, 29, 30, 31, 32
Becker	Runeberg	T138N	R36W	1, 12, 13, 24
Wadena	Red Eye	T137N	R35W	5, 6, 7, 8, 9, 10, 14, 15, 16, 17, 18, 22, 23

**2.2 Associated Facilities and Substations**

The associated facilities for the Project include construction of the proposed new Minnesota Power Straight River Substation, Great River Energy Blueberry Substation, and Todd-Wadena Red Eye Substation (that will serve the proposed new MPL pump station); relocation of the existing Todd-Wadena Menahga Substation to the proposed new Blueberry Substation site and conversion of the voltage from 34.5 kV to 115 kV; and modifications to the existing Great River Energy Hubbard Substation and the Minnesota Power Pipeline Substation.

**2.2.1 Minnesota Power Straight River Substation**

The Straight River Substation is located in the SW 1/4 of the SE 1/4 of Section 30 in Straight River Township. Minnesota Power will construct and own the Straight River 115/34.5 kV Substation near the existing MPL Park Rapids Pump Station to re-establish 34.5 kV service to the Minnesota Power Pipeline Substation after removal of the 34.5 kV source from Hubbard. The 34.5 kV 522 feeder line from the Hubbard Substation to the Pipeline Substation will be removed to accommodate the interconnection and routing of the new 115 kV transmission line. It is anticipated that the fenced area of the 115 kV substation will be approximately 115’ by 180’.

Facilities at the Straight River Substation will include:

- 115/34.5 kV transformer
- A 115 kV “transrupter” and a 34.5 kV recloser
- A 3-way 115 kV motor operated switch and tap line (approximately 700 feet)
- Structural steel, grounding
- 115 kV and 34.5 kV substation switches
- Communications and metering equipment

**2.2.2 Great River Energy Blueberry Substation**

Great River Energy will construct the Blueberry 115/34.5 kV Substation south of the existing Menahga distribution substation near Menahga, Minnesota. Great River Energy has an option to purchase 10 acres in the NW ¼ of the SW ¼ of Section 29 of Blueberry Township. It is anticipated that the fenced area of the 115 kV substation will be approximately 240' by 415'.

Facilities at the Blueberry Substation will include:

- Relocated 115/34.5 kV transformer from the Hubbard Substation
- A 115 kV breaker and a 34.5 kV breaker
- 115 kV switches
- Electrical Equipment Enclosure
- Structural steel
- Bus work and fittings
- SCADA/Relay/Control Equipment
- Conduit
- Grounding
- Fiber optic communication
- 115/12.47 kV distribution transformer
- Low side sectionalizing equipment

### 2.2.3 Todd-Wadena Menahga Substation

Todd-Wadena will relocate the existing Menahga Substation to the new Blueberry Substation site and convert the voltage from 34.5 kV to 115 kV. The existing Menahga Substation will be completely retired, including all equipment, structures and fence. The Menahga Substation will occupy approximately 100' by 100' at the Blueberry site.

Facilities at the relocated Menahga Substation will include:

- 115/12.47 kV transformer
- Structural steel
- Meter building
- Bus work
- Low side sectionalizing equipment

### 2.2.4 Todd-Wadena Red Eye Substation

Todd-Wadena will construct the Red Eye 115/4.16 kV Substation to support the motor loads for the MPL Sebeka pump station. Todd-Wadena plans to construct the proposed new substation on MPL's property in the SE ¼ of the NE ¼ of Section 22 in Red Eye Township. It is anticipated that the fenced area of the 115 kV substation will be approximately 125' by 125'.

Facilities at the Red Eye Substation will include:

- 115/4.16 kV transformer
- Electrical Equipment Enclosure
- January 2015 Menahga Area 115 kV Project 4-11
- Structural steel
- Bus work and fittings
- Low side sectionalizing equipment
- Meter equipment
- Conduit, Grounding
- Fiber optic communication

### 2.2.5 Great River Energy Hubbard Substation

Great River Energy will modify the existing Hubbard Substation to accommodate the new 115 kV transmission line. One 115/34.5 kV transformer will be relocated to the proposed Blueberry Substation. The existing 34.5 kV breakers and foundations associated with the transformer will be retired. New equipment to be installed at the Hubbard Substation includes:

- A 115 kV breaker in the ring bus
- 115 kV switches
- Structural steel, bus work and fittings
- SCADA/Relay/Control Equipment
- Conduit, grounding
- Grounding
- Fiber optic communication

### 2.2.6 Minnesota Power Pipeline Substation

The existing Minnesota Power Pipeline 34.5/4.16 kV Substation, which provides a dedicated source to the MPL Park Rapids pump station, may need to be modified to accommodate the connection of a 34.5 kV feeder from the proposed new Straight River Substation. The extent of these modifications, if they are needed, will not be known until further engineering is completed on the Straight River Substation.

## 2.3 Structures

The majority of the new 115 kV line will consist of single circuit, single pole wood structures spaced approximately 275 to 400 feet apart. Spans for the double circuit portion of the Project will range from 350 to 450 feet. Transmission structures will typically range in height from 60 to 90 feet above ground, depending upon the terrain and environmental constraints (such as highway crossings, river and stream crossings, and required angle structures). The average diameter of the wood structures at ground level is 20 inches. Some sections of the new line will

have distribution underbuild, which would be attached to new 115 kV transmission line structures spaced 250 to 300 feet apart.

H-Frame design structures may be used in areas with rugged topography and where longer spans are required to avoid or minimize impacts to wetlands or waterways. Span lengths average 600 to 800 feet, with 1,000-foot spans possible with certain topography. Structure heights typically range from 60 to 90 feet above ground with taller structures required for exceptionally long spans and in circumstances requiring additional vertical clearance exceeding the National Electrical Safety Code (NESC) and other agency requirements.

The table below details specifics on the various structure types as presented in the route permit application.

Line Type	Conductor	Structure		Diameter (inches)	Height (feet)	Span (feet)
		Type	Material			
115 kV	477 ACSR	Single Pole	Wood	20	60-90	250-300
115 kV	477 ACSR	Single Pole	Wood	20	60-90	275-400
115 kV	477 ACSR	H-Frame	Wood	20	60-90	600-1,000

## 2.4 Conductors

The single circuit structures will have three single conductor phase wires and one shield wire. It is anticipated that the phase wires will be 477 thousand circular mil ACSR with seven steel core strands and 26 outer aluminum strands.

The shield wire will be 0.528 optical ground wire.

## 2.5 Safety Codes and Design Requirements

The transmission line and associated facilities shall be designed to meet or exceed all relevant local and state codes, the National Electric Safety Code (NESC), and North American Electric Reliability Corporation (NERC) requirements. This includes standards relating to clearances to ground, clearance to crossing utilities, clearance to buildings, strength of materials, clearances over roadways, right-of-way widths, and permit requirements. The transmission line shall be equipped with protective devices to safeguard the public if an accident occurs.

## 3.0 DESIGNATED ROUTE

The route designated by the Commission in this permit is the route described below and shown on the route maps attached to this permit. The route is generally described as follows:

- Construction of approximately 7 miles of east-west transmission line between the existing Great River Energy Hubbard Substation and proposed new Minnesota Power

Straight River Substation, which will replace the existing Minnesota Power 34.5 kV “522” feeder line. The first 4.5 miles between the Hubbard Substation and County Road (CR) 115 will be double-circuit 115 kV line to accommodate a future Great River Energy project to the north. The approximate 2.5 miles between CR 115 and the proposed Minnesota Power Straight River Substation will be single-circuit 115 kV line.

- Construction of a generally north to south, single-circuit transmission line (approximately 15.5 miles) between the proposed Minnesota Power Straight River Substation and the proposed new Todd-Wadena Red Eye distribution substation.
- Construction of the proposed new Minnesota Power Straight River Substation, Great River Energy Blueberry Substation, and Todd-Wadena Red Eye Substation (that will serve the proposed new MPL pump station); relocation of the existing Todd-Wadena Menahga Substation to the proposed new Blueberry Substation site and conversion of the voltage from 34.5 kV to 115 kV; and modifications to the existing Great River Energy Hubbard Substation and the Minnesota Power Pipeline Substation.

#### **4.0 RIGHT-OF-WAY**

The approved right-of-way width for the project is as follows:

The route for the Project will be 500-foot wide (250 feet either side of the transmission line in areas where the transmission line will be cross-country, or 250 feet either side of the centerline of road right-of-ways (ROW) in areas where the transmission line follows a road). In a few areas (particularly around proposed substations), Applicants are requesting a route width wider than 500 feet to accommodate facility designs as described below:

- At the existing Hubbard Substation, an additional 150 by 650 feet north of the route width that encompasses the substation.
- In Section 26 of Straight River Township, a wider triangular route width is proposed to allow flexibility for the crossing of Minnesota Power’s 230 kV “909” Line, although only a single alignment with an easement that is 50’ on each side of the transmission line will be required in this area.
- Around the Straight River Substation, an area that accommodates the proposed location, plus an additional 650 feet to the west of the north-south alignment; and 500 feet north and 250 south of the road centerline is necessary to accommodate the transmission line.
- Around the Blueberry Substation, an additional route width of 100 feet to the north, 150 feet to the south, and 450 feet to the west of the substation is necessary to accommodate the transmission lines that will go in and out of the substation.

- Around the Red Eye Substation, an additional area of 400 feet by 750 north of the east-west alignment that extends into the substation (property owned by MPL) to allow flexibility in design and to minimize conflict with MPL and Todd-Wadena's facilities.
- The Minnesota Power DC Line will need to be raised where the proposed 115 kV transmission line would cross under it in Section 7, T148, R35W. However, no additional right-of-way is anticipated to be needed to raise the line.

This permit anticipates that the right-of-way will generally conform to the anticipated alignment as described in the EA and record and as provided for in this permit and noted on the attached route permit maps unless changes are requested by individual landowner or unforeseen conditions are encountered or are otherwise provided for by this permit.

The identified route widths will provide the Permittee with flexibility for minor adjustments of the specific alignment or right-of-way to accommodate landowner requests and unforeseen conditions. The final alignment (i.e., permanent and maintained rights-of-way) will be located within this designated route unless otherwise authorized below.

Any alignment modifications within the designated route shall be located so as to have comparable overall impacts relative to the factors in Minn. R. 7850.4100, as does the alignment identified in this permit, and shall be specifically identified and documented in and approved as part of the plan and profile submitted pursuant to Section 9.1 of this permit.

Where the transmission line route parallels existing highway and other road rights-of-way, the transmission line right-of-way shall occupy and utilize the existing right-of-way to the maximum extent possible, consistent with the criteria in Minn. R. 7850.4100, the other requirements of this permit, and for highways under the jurisdiction of the Minnesota Department of Transportation (Mn/DOT) rules, policies, and procedures for accommodating utilities in trunk highway rights-of-way.

## **5.0 GENERAL CONDITIONS**

The Permittee shall comply with the following conditions during construction of the transmission line and associated facilities over the life of this permit.

### **5.1 Notification to Landowners**

The Permittee shall provide all affected landowners with a copy of this permit and, as a separate information piece, the complaint procedures at the time of the first contact with the landowners

after issuance of this permit. The Permittee shall contact landowners prior to entering the property or conducting maintenance along the route. The Permittee shall work with landowners to locate the high-voltage transmission line to minimize the loss of agricultural land, forest, and wetlands, and to avoid homes and farmsteads.

At the time of first contact, the Permittee shall also provide all affected landowners with a copy of the Department of Commerce's Rights-of-Way and Easements for Energy Facility Construction and Operation fact sheet.<sup>1</sup>

## **5.2 Construction Practices**

The Permittee shall follow those specific construction practices and material specifications described in Great River Energy and Minnesota Power Application to the Commission for a route permit for the Menahga Area 115 kV Transmission Line Project, dated January 15, 2015 unless this permit establishes a different requirement in which case this permit shall prevail.

### **5.2.1 Field Representative**

At least 14 days prior to commencing construction, the Permittee shall advise the Commission in writing of the person or persons designated to be the field representative for the Permittee with the responsibility to oversee compliance with the conditions of this permit during construction.

The field representative's address, phone number, emergency phone number, and email shall be provided to the Commission and shall be made available to affected landowners, residents, public officials and other interested persons. The Permittee may change the field representative at any time upon written notice to the Commission.

### **5.2.2 Employee Training and Education of Permit Terms and Conditions**

The Permittee shall inform all employees, contractors, and other persons involved in the transmission line construction of the terms and conditions of this permit.

### **5.2.3 Public Services, Public Utilities, and Existing Easements**

During construction, the Permittee shall minimize any disruption to public services or public utilities. To the extent disruptions to public services or public utilities occur these would be temporary and the Permittee will restore service promptly. Where any impacts

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<sup>1</sup> [http://mn.gov/commerce/energyfacilities/documents/Easements%20Fact%20Sheet\\_08.05.14.pdf](http://mn.gov/commerce/energyfacilities/documents/Easements%20Fact%20Sheet_08.05.14.pdf)

to utilities have the potential to occur the Permittee will work with both landowners and local agencies to determine the most appropriate transmission structure placement.

The Permittee shall work with the landowners, townships, cities, and counties along the route to accommodate concerns regarding tree clearing, distance from existing structures, drain tiles, pole depth and placement in relationship to existing roads and road expansion plans.

The Permittee shall cooperate with county and city road authorities to develop appropriate signage and traffic management during construction.

#### 5.2.4 Temporary Work Space

The Permittee shall limit temporary easements to special construction access needs and additional staging or lay-down areas required outside of the authorized right-of-way. Temporary space shall be selected to limit the removal and impacts to vegetation. Temporary easements outside of the authorized transmission line right-of-way will be obtained from affected landowners through rental agreements and are not provided for in this permit.

Temporary driveways may be constructed between the roadway and the structures to minimize impact using the shortest route possible. Construction mats should also be used to minimize impacts on access paths and construction areas.

#### 5.2.5 Noise

Construction and routine maintenance activities shall be limited to daytime working hours, as defined in Minn. R. 7030.0200, to ensure nighttime noise level standards will not be exceeded.

#### 5.2.6 Site Sediment and Erosion Control

The Permittee shall implement those erosion prevention and sediment control practices recommended by the Minnesota Pollution Control Agency (MPCA) Construction Stormwater Program.

The Permittee shall implement reasonable measures to minimize erosion and sedimentation during construction and shall employ perimeter sediment controls, protect exposed soil by promptly planting, seeding, using erosion control blankets and turf reinforcement mats, stabilizing slopes, protecting storm drain inlets, protecting soil

stockpiles, and controlling vehicle tracking. Contours shall be graded as required so that all surfaces provide for proper drainage, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation and prevent erosion. All areas disturbed during construction of the facilities shall be returned to pre-construction conditions.

Where larger areas of one acre or more are disturbed or other areas designated by the MPCA, the Permittee shall obtain a National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Construction Stormwater permit from the MPCA.

#### 5.2.7 Aesthetics

The Permittee shall consider input pertaining to visual impacts from landowners or land management agencies prior to final location of structures, rights-of-way, and other areas with the potential for visual disturbance. Care shall be used to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the Project during construction and maintenance.

Structures shall be placed at a distance, consistent with sound engineering principles and system reliability criteria, from intersecting roads, highway, or trail crossings and could cross roads to minimize or avoid impacts.

#### 5.2.8 Vegetation Removal and Protection

The Permittee shall minimize the number of trees to be removed in selecting the right-of-way specifically preserving to the maximum extent practicable windbreaks, shelterbelts, living snow fences, and vegetation where vegetative screening may minimize aesthetic impacts, to the extent that such actions do not violate sound engineering principles or system reliability criteria.

Tall growing species located within the transmission line right-of-way that endanger the safe and reliable operation of the transmission facility will be removed by the Permittee. The Permittee shall leave undisturbed, to the extent possible, existing low growing species in the right-of-way or replant such species in the right-of-way to blend the difference between the right-of-way and adjacent areas, to the extent that the low growing vegetation that will not pose a threat to the transmission facility or impede construction.

#### 5.2.9 Application of Herbicides

The Permittee shall restrict herbicide use to those herbicides and methods of application approved by the Minnesota Department of Agriculture and the U.S. Environmental

Protection Agency. Selective foliage or basal application shall be used when practicable. The Permittee shall contact the landowner or his designee to obtain approval for the use of herbicide prior to any application on their property. The landowner may request that there be no application of herbicides on any part of the right-of-way within the landowner's property. All herbicides shall be applied in a safe and cautious manner so as not to damage crops, orchards, tree farms, or gardens.

#### 5.2.10 Noxious Weeds

The Permittee shall take all reasonable precautions against the spread of noxious weeds during all phases of construction. When utilizing seed to establish temporary and permanent vegetative cover on exposed soil, the Permittee shall select site appropriate seed certified to be free of noxious weeds. To the extent possible, the Permittee shall use native seed mixes. The Permittee shall consult with landowners on the selection and use of seed for replanting.

#### 5.2.11 Restoration

The Permittee shall restore the right-of-way, temporary work spaces, access roads, abandoned right-of-way, and other public or private lands affected by construction of the transmission line.

Restoration within the right-of-way must be compatible with the safe operation, maintenance, and inspection of the transmission line. Within 60 days after completion of all restoration activities, the Permittee shall advise the Commission in writing of the completion of such activities.

#### 5.2.12 Wetlands and Water Resources

Wetland impact avoidance measures that shall be implemented during design and construction of the transmission line will include spacing and placing the power poles at variable distances to span and avoid wetlands, watercourses, and floodplains.

Unavoidable wetland impacts as a result of the placement of poles shall be limited to the immediate area around the poles. To minimize impacts, construction in wetland areas shall occur during frozen ground conditions. When construction during winter is not possible, wooden or composite mats shall be used to protect wetland vegetation. Soil excavated from the wetlands and riparian areas shall be contained and not placed back into the wetland or riparian area.

Wetlands and riparian areas shall be accessed using the shortest route possible in order to minimize travel through wetland areas and prevent unnecessary impacts. No staging or

stringing set up areas shall be placed within or adjacent to wetlands or water resources, as practicable. Power pole structures shall be assembled on upland areas before they are brought to the site for installation.

Areas disturbed by construction activities shall be restored to pre-construction conditions. Restoration of the wetlands will be performed by Permittee in accordance with the requirements of applicable state and federal permits or laws and landowner agreements.

All requirements of the U.S. Army Corps of Engineers (wetlands under federal jurisdiction), Minnesota Department of Natural Resources (Public Waters/Wetlands), and County (wetlands under the jurisdiction of the Minnesota Wetland Conservation Act) shall be met.

#### 5.2.13 Archaeological and Historic Resources

The Permittee shall consult with the State Historic Preservation Office (SHPO) concerning the extent of a Phase I archaeological survey and appropriate mitigation measures for the Project. Permittee shall document and submit to the Commission the results of the consultation, including those portions of the Project that will be surveyed and the extent of the survey.

For those portions of the Project that are surveyed, Permittee shall submit, with the plan and profile for these portions, the results of the survey and all applicable avoidance and mitigation measures employed or to be employed.

Prior to construction, workers shall be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction.

#### 5.2.14 Avian Mitigation

The Permittee's standard transmission design shall incorporate adequate spacing of conductors and grounding devices in accordance with Avian Power Line Interaction Committee standards to eliminate the risk of electrocution to raptors with larger wingspans that may simultaneously come in contact with a conductor and grounding devices.

The Permittee will consult with the Minnesota Department of Natural Resources and USFWS regarding type and placement of bird diverters.

#### 5.2.15 Cleanup

All waste and scrap that is the product of construction shall be removed from the right-of-way and all premises on which construction activities were conducted and properly disposed of upon completion of each task. Personal litter, including bottles, cans, and paper from construction activities shall be removed on a daily basis.

#### 5.2.16 Pollution and Hazardous Wastes

All appropriate precautions to protect against pollution of the environment must be taken by the Permittee. The Permittee shall be responsible for compliance with all laws applicable to the generation, storage, transportation, clean up and disposal of all wastes generated during construction and restoration of the right-of-way.

#### 5.2.17 Damages

The Permittee shall fairly restore or compensate landowners for damage to crops, fences, private roads and lanes, landscaping, drain tile, or other damages sustained during construction.

### **5.3 Electrical Performance Standards**

#### 5.3.1 Grounding

The Permittee shall design, construct, and operate the transmission line in a manner so that the maximum induced steady-state short-circuit current shall be limited to five milliamperes root mean square (rms) alternating current between the ground and any non-stationary object within the right-of-way, including but not limited to large motor vehicles and agricultural equipment. All fixed metallic objects on or off the right-of-way, except electric fences that parallel or cross the right-of-way, shall be grounded to the extent necessary to limit the induced short-circuit current between ground and the object so as not to exceed one milliamperes rms under steady state conditions of the transmission line and to comply with the ground fault conditions specified in the NESC. The Permittee shall address and rectify any induced current problems that arise during transmission line operation.

#### 5.3.2 Electric Field

The transmission line shall be designed, constructed, and operated in such a manner that the electric field measured one meter above ground level immediately below the transmission line shall not exceed 8.0 kV/m rms.

### 5.3.3 Interference with Communication Devices

If interference with radio or television, satellite, wireless internet, GPS-based agriculture navigation systems or other communication devices is caused by the presence or operation of the transmission line, the Permittee shall take whatever action is feasible to restore or provide reception equivalent to reception levels in the immediate area just prior to the construction of the line.

## 5.4 Other Requirements

### 5.4.1 Applicable Codes

The Permittee shall comply with applicable NERC planning standards and requirements of the NESC including clearances to ground, clearance to crossing utilities, clearance to buildings, right-of way widths, erecting power poles, and stringing of transmission line conductors.

### 5.4.2 Other Permits and Regulations

The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the Project and comply with the conditions of these permits. A list of the permits known to be required is included in the permit application. The Permittee shall submit a copy of such permits to the Commission upon request.

## 6.0 SPECIAL CONDITIONS

The Permittee shall provide a report to the Commission as part of the plan and profile submission that describes the actions taken and mitigative measures developed regarding the Project and the following special conditions. Special conditions shall take precedence over other conditions of this permit should there be a conflict.

### 6.1 Alajoki Cemetery

The Permittees shall avoid placing structures along the existing frontage of the Alajoki Cemetery and its planned future expansion, consistent with engineering constraints for the line.

### 6.2 Avian Mitigation Plan

The Permittees shall consult with the DNR and USFWS to develop an avian mitigation plan for the Project. It is appropriate for the plan to incorporate expressed

recommendations of the DNR and USFWS, including the use of bird flight diverters at public water crossings and near the Red Eye WMA and the use of raptor perch deterrents for structures near the Red Eye WMA.

### **6.3 Vegetation Management Plan**

The Permittee shall consult with the DNR to develop a vegetation management plan for the Project. It is appropriate for the plan to incorporate expressed recommendations of the DNR including management of vegetation within the ROW to maintain low-growing plants on the border of the ROW (wire zone / border zone management) and maintaining natural vegetation within a 50 foot buffer on both banks at all stream crossings (Kitten, Blueberry, Shell, and Fish Hook). The Vegetation Management Plan shall also include ROW management approach, invasive species control and prevention measures, shoreland vegetation management, and herbicide used.

### **6.4 Rare and Unique Natural Resources**

The Permittees shall implement those mitigation strategies recommended by the DNR for rare and unique natural resources as identified in Finding 164.

### **6.5 Erosion Control**

The Permittees shall implement erosion control measures near Kettle Creek and the Blueberry River to mitigate potential impacts to the Creek Heelsplitter mussel as identified in Finding 165.

### **6.6 Bat Studies**

The Permittees shall file with the Commission the results of any additional Northern Long-Eared Bat (“NLEB”) studies conducted for the Project. If the permittees are required to obtain an incidental take permit from the USFWS, the permittees should file a copy of the permit with the Commission.

## **7.0 DELAY IN CONSTRUCTION**

If the Permittee has not commenced construction or improvement of the route within four years after the date of issuance of this permit the Permittee shall file a report on the failure to construct and the Commission shall consider suspension of the permit in accordance with Minn. R. 7850.4700.

## **8.0 COMPLAINT PROCEDURES**

Prior to the start of construction, the Permittee shall submit to the Commission the procedures that will be used to receive and respond to complaints. The procedures shall be in accordance with the requirements of Minn. R. 7829.1500 or Minn. R. 7829.1700, and as set forth in the complaint procedures attached to this permit.

Upon request, the Permittee shall assist the Commission with the disposition of unresolved or longstanding complaints. This assistance shall include, but is not limited to, the submittal of complaint correspondence and complaint resolution efforts.

## **9.0 COMPLIANCE REQUIREMENTS**

Failure to timely and properly make compliance filings required by this permit is a failure to comply with the conditions of this permit. Compliance filings must be electronically filed with the Commission.

### **9.1 Plan and Profile**

At least 30 days before right-of-way preparation for construction begins on any segment or portion of the Project, the Permittee shall provide the Commission with a plan and profile of the right-of-way and the specifications and drawings for right-of-way preparation, construction, and structure specifications and locations. The documentation shall include maps depicting the plan and profile including the right-of-way, alignment, and structures in relation to the route and alignment approved per this permit.

The Permittee may not commence construction until the 30 days has expired or until the Commission has advised the Permittee in writing that it has completed its review of the documents and determined that the planned construction is consistent with this permit. If the Permittee intends to make any significant changes in its plan and profile or the specifications and drawings after submission to the Commission, the Permittee shall notify the Commission at least five days before implementing the changes. No changes shall be made that would be in violation of any of the terms of this permit.

### **9.2 Periodic Status Reports**

The Permittee shall report to the Commission on progress regarding finalization of the route, design of structures, and construction of the transmission line. The Permittee need not report more frequently than monthly.

### **9.3 Notification to Commission**

At least three days before the line is to be placed into service, the Permittee shall notify the Commission of the date on which the line will be placed into service and the date on which construction was complete.

#### **9.4 As-Builts**

Within 90 days after completion of construction, the Permittee shall submit copies of all final as-built plans and specifications developed during the Project.

#### **9.5 GPS Data**

Within 90 days after completion of construction, the Permittee shall submit to the Commission, in the format requested by the Commission, geo-spatial information (e.g., ArcGIS compatible map files, GPS coordinates, associated database of characteristics) for all structures associated with the transmission line and each substation connected.

### **10.0 PERMIT AMENDMENT**

This permit may be amended at any time by the Commission. Any person may request an amendment of the conditions of this permit by submitting a request to the Commission in writing describing the amendment sought and the reasons for the amendment. The Commission will mail notice of receipt of the request to the Permittee. The Commission may amend the conditions after affording the Permittee and interested persons such process as is required.

### **11.0 TRANSFER OF PERMIT**

The Permittee may request at any time that the Commission transfer this permit to another person or entity. The Permittee shall provide the name and description of the person or entity to whom the permit is requested to be transferred, the reasons for the transfer, a description of the facilities affected, and the proposed effective date of the transfer.

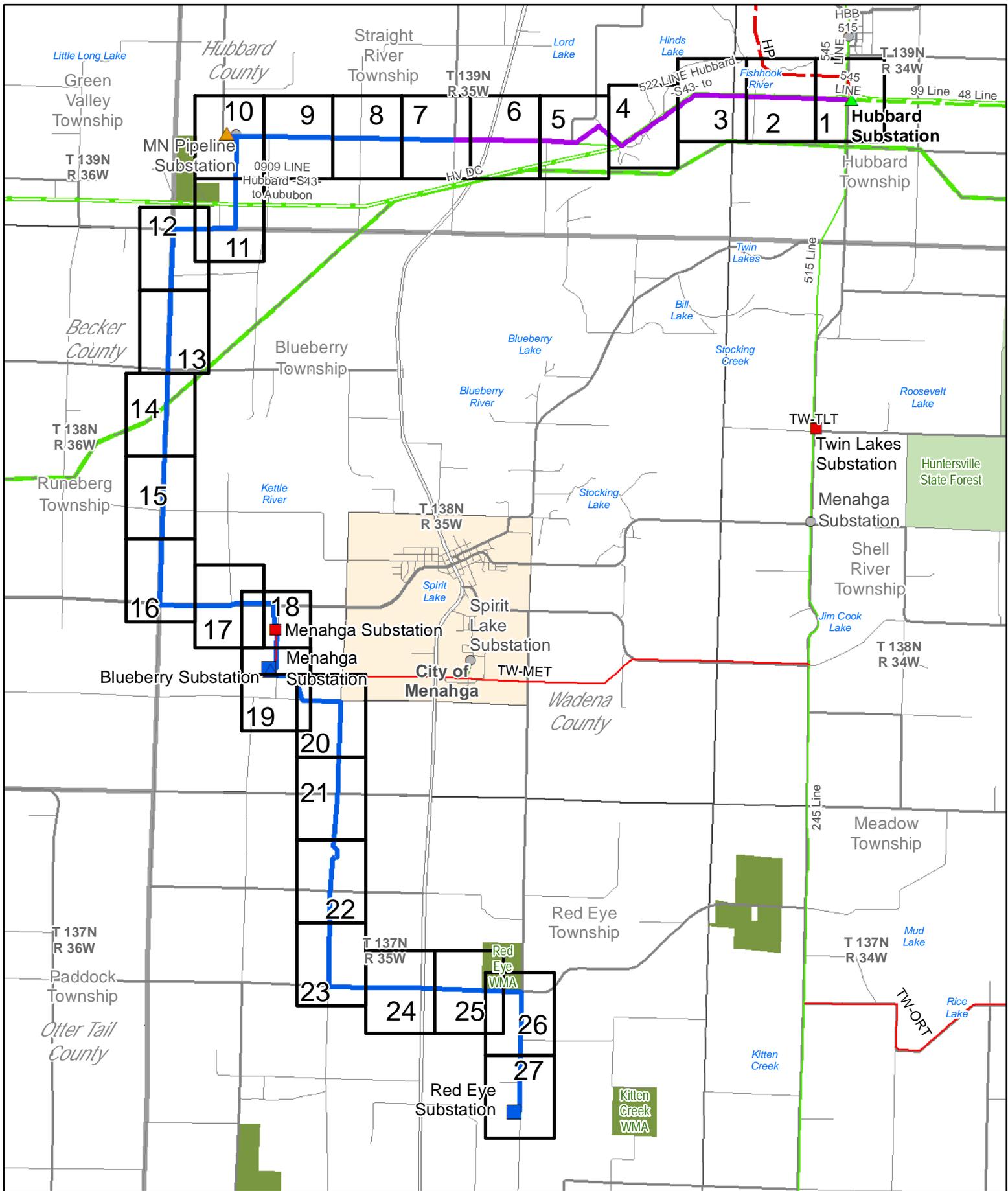
The person to whom the permit is to be transferred shall provide the Commission with such information as the Commission shall require to determine whether the new Permittee can comply with the conditions of the permit. The Commission may authorize transfer of the permit after affording the Permittee, the new Permittee, and interested persons such process as is required.

### **12.0 REVOCATION OR SUSPENSION OF THE PERMIT**

The Commission may initiate action to revoke or suspend this permit at any time. The Commission shall act in accordance with the requirements of Minn. R. 7850.5100, to revoke or suspend the permit.

**STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION  
PUC DOCKET NO. ET-2, E-015/TL-14-797**

**ROUTE PERMIT FIGURES – ROUTE MAPS**



- Great River Energy
- Anticipated alignment double circuit 115 kV transmission line
- Anticipated alignment single circuit 115 kV transmission line
- ▲ Proposed transmission substation

- ▲ Existing transmission substation
- Todd-Wadena
- Proposed distribution substation
- Existing distribution substation
- Minnesota Power
- ▲ Proposed transmission substation

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy. Aerial Imagery from ESRI web service

0 5,000 Feet

**Menahga Area  
115 kV Project  
Route Permit  
Key map**

Updated: 2/9/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

- Great River Energy
- Anticipated alignment double circuit 115 kV transmission line
- Right-of-way area
- Permitted route
- ▲ Existing transmission substation

- - - Existing 115 kV transmission line
- Minnesota Power
- Existing 34.5 kV transmission line
- · - Existing 115 kV transmission line
- · · - Existing 230 kV transmission line

GIS Data sources include:  
 MNGEO, MNDNR, MNDOT,  
 and Great River Energy.  
 Aerial Imagery from ESRI web service

0 250 500 Feet



**Menahga Area  
 115 kV Project  
 Route Permit  
 Map Sheet 1 of 27**  
 Updated: 2/10/2016





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, Swisstopo, and the GIS User Community

- Great River Energy**
- Anticipated alignment double circuit 115 kV transmission line
  - Right-of-way area
  - Permitted route
  - XX** Proposed bird diverter location

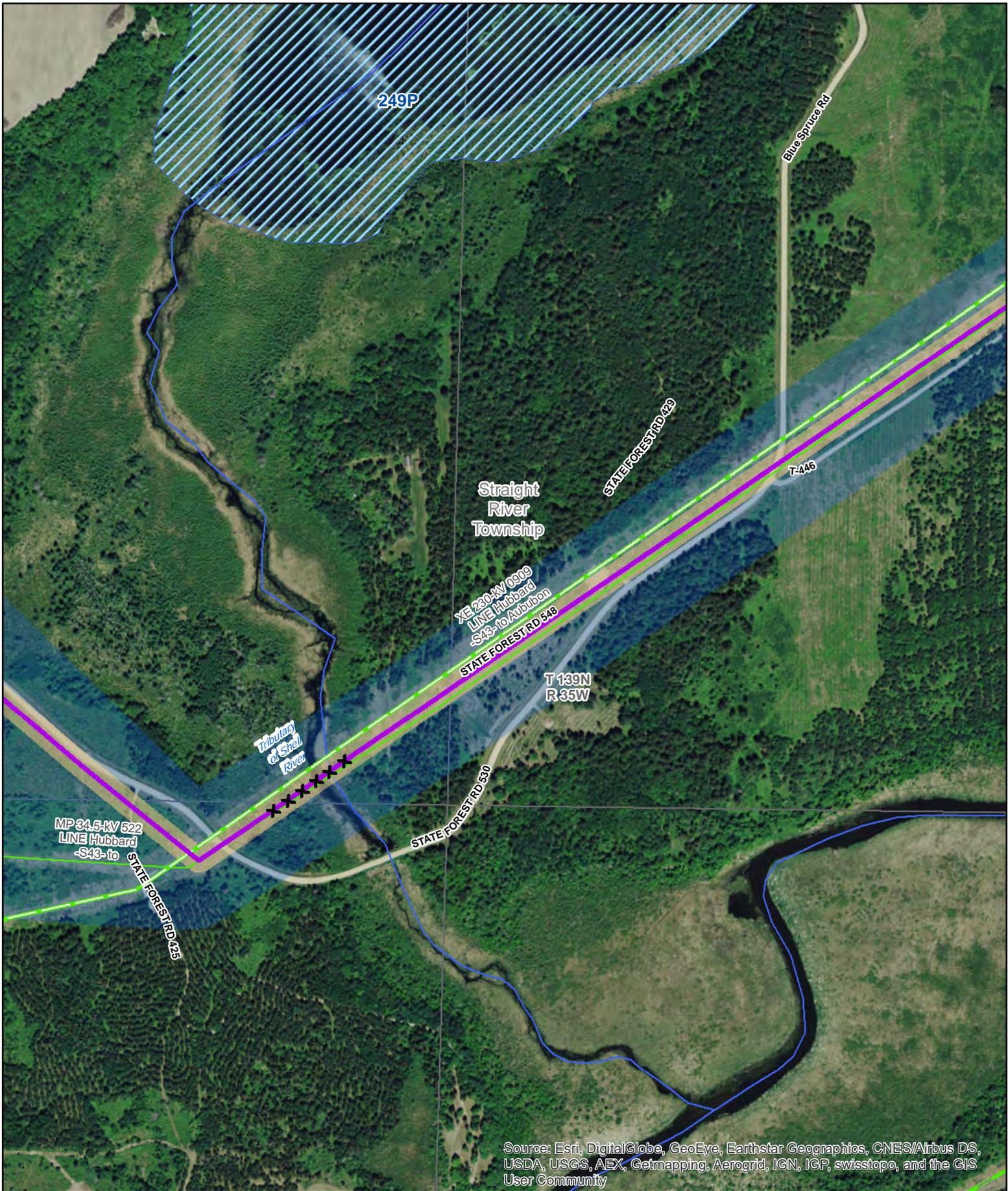
- Minnesota Power**
- Existing 34.5 kV transmission line
  - Existing 230 kV transmission line
  - Existing 250 kV DC transmission line

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy. Aerial Imagery from ESRI web service

0 250 500 Feet



**Menahga Area  
115 kV Project  
Route Permit  
Map Sheet 3 of 27**  
Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

- Great River Energy**
- Anticipated alignment double circuit 115 kV transmission line
  - Right-of-way area
  - Permitted route
  - XX** Proposed bird diverter location

- Minnesota Power**
- Existing 34.5 kV transmission line
  - Existing 230 kV transmission line
  - Existing 250 kV DC transmission line

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy. Aerial Imagery from ESRI web service

0 250 500 Feet



**Menahga Area  
115 kV Project  
Route Permit  
Map Sheet 4 of 27**  
Updated: 2/10/2016

248W

Straight River Township

145th Ave

145th Ave

Elite Spruce Rd

110th St

110th St

T 139N  
R 35W

MP 34.5-kV 522  
LINE Hubbard  
-S43- to

XE 230-kV 0909  
LINE Hubbard  
-S43- to Aububon

MP 250 kV HV DC

T 36

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

- Great River Energy**
-  Anticipated alignment double circuit 115 kV transmission line
  -  Right-of-way area
  -  Permitted route

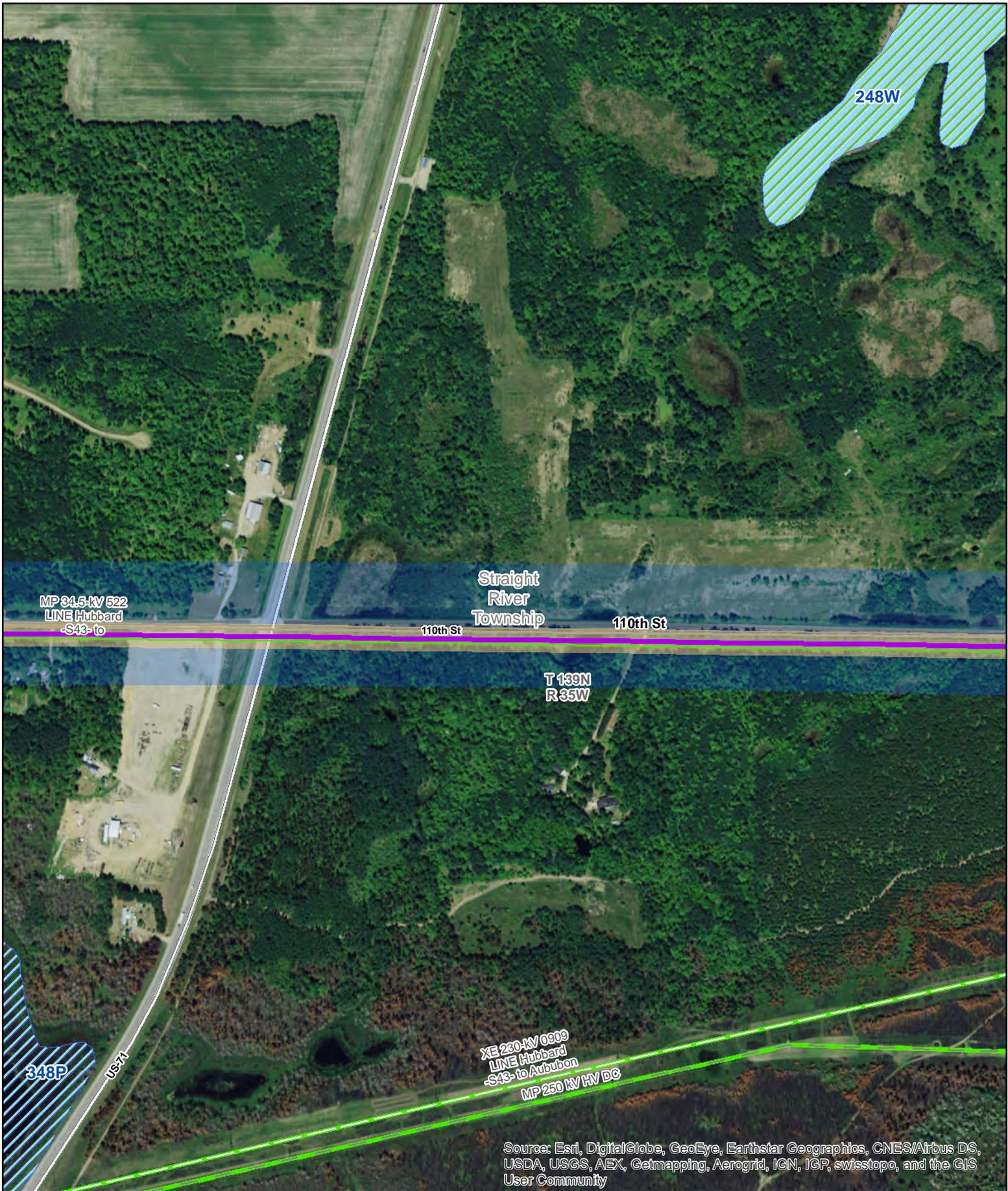
- Minnesota Power**
-  Existing 34.5 kV transmission line
  -  Existing 230 kV transmission line
  -  Existing 250 kV DC transmission line

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy. Aerial Imagery from ESRI web service

0 250 500 Feet




**Menahga Area  
115 kV Project  
Route Permit  
Map Sheet 5 of 27**  
Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

- Great River Energy**
-  Anticipated alignment double circuit 115 kV transmission line
  -  Right-of-way area
  -  Permitted route

- Minnesota Power**
-  Existing 34.5 kV transmission line
  -  Existing 230 kV transmission line
  -  Existing 250 kV DC transmission line

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy.  
 Aerial Imagery from ESRI web service

0 250 500 Feet




**Menahga Area  
 115 kV Project  
 Route Permit  
 Map Sheet 6 of 27**

Updated: 2/10/2016

T 139N  
R 35W

Straight  
River  
Township

129th Ave

129th Ave

110th St

110th St

MP 34.5-kV 522  
LINE Hubbard  
-S43-to

348P

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Great River Energy

Anticipated alignment double circuit  
115 kV transmission line

Anticipated alignment single circuit  
115 kV transmission line

Right-of-way area

Permitted route

Minnesota Power

Existing 34.5 kV transmission line

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

Aerial Imagery from ESRI web service

0 250 500 Feet

Scale bar



**Menahga Area**  
**115 kV Project**  
**Route Permit**  
**Map Sheet 7 of 27**

Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

- |   |                                    |
|---|------------------------------------|
| <b>Great River Energy</b>                                     | <b>Minnesota Power</b>             |
| Anticipated alignment single circuit 115 kV transmission line | Existing 34.5 kV transmission line |
| Right-of-way area   |                                    |
| Permitted route   |                                    |

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy. Aerial Imagery from ESRI web service



**Menahga Area  
115 kV Project  
Route Permit  
Map Sheet 8 of 27**  
Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

- |   |                                    |
|---|------------------------------------|
| <b>Great River Energy</b>                                     | <b>Minnesota Power</b>             |
| Anticipated alignment single circuit 115 kV transmission line | Existing 34.5 kV transmission line |
| Right-of-way area   |                                    |
| Permitted route   |                                    |
| Proposed bird diverter location                               |                                    |

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy.  
 Aerial Imagery from ESRI web service  
 0 250 500 Feet



**Menahga Area  
 115 kV Project  
 Route Permit  
 Map Sheet 9 of 27**  
 Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

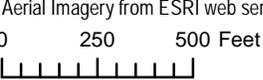
**Great River Energy**

- Anticipated alignment single circuit 115 kV transmission line
- Right-of-way area
- Permitted route

**Minnesota Power**

- Existing 34.5 kV transmission line
- ▲ Proposed transmission substation
- Existing distribution substation

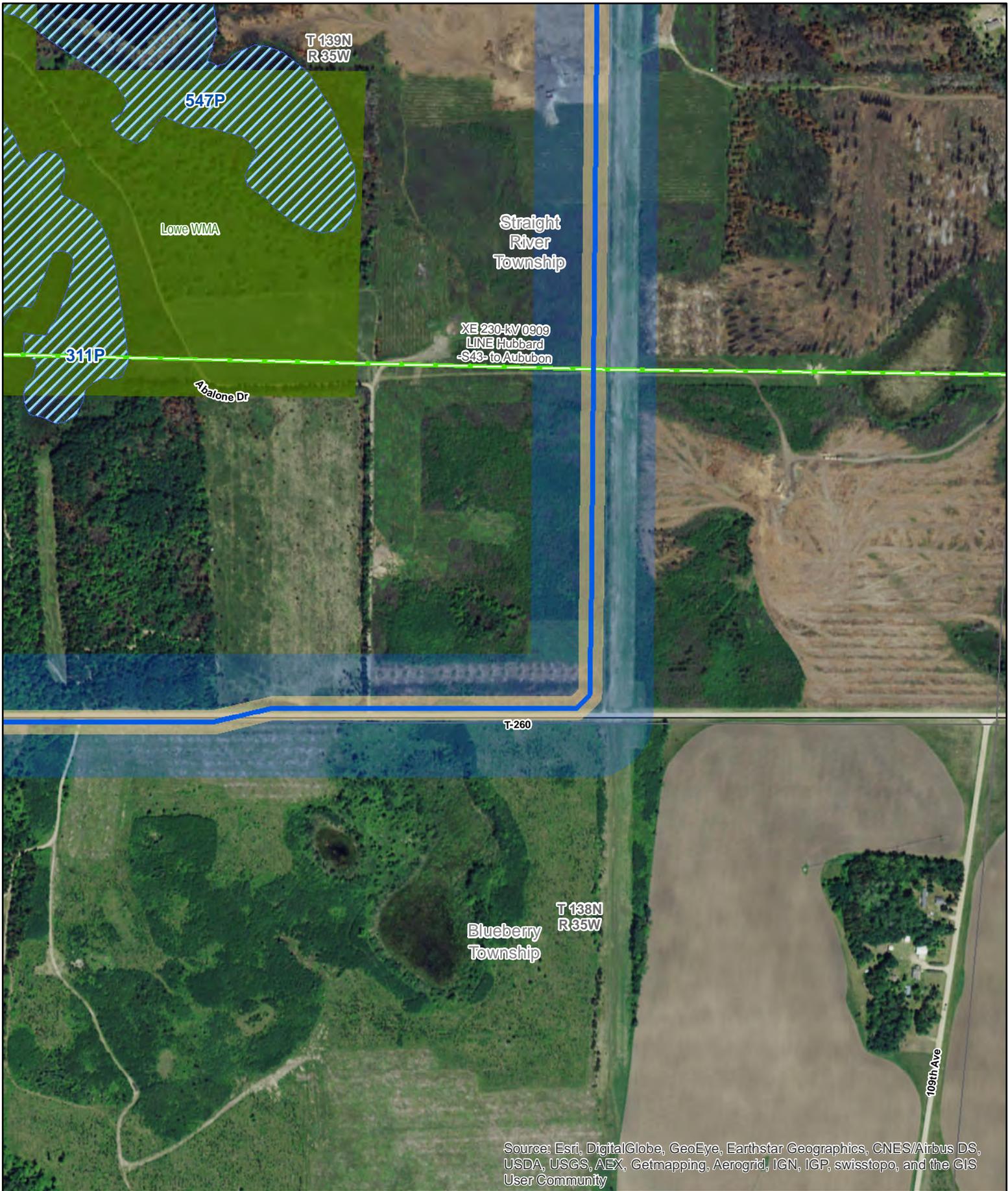
GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy. Aerial Imagery from ESRI web service



**Menahga Area  
115 kV Project  
Route Permit**

**Map Sheet 10 of 27**

Updated: 2/10/2016



XE 230-kV 0909  
LINE Hubbard  
-S43- to Aububon

T-260

Blueberry Township  
T 133N  
R 35W

109th Ave

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Great River Energy**

-  Anticipated alignment single circuit 115 kV transmission line
-  Right-of-way area
-  Permitted route

**Minnesota Power**

-  Existing 230 kV transmission line

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy. Aerial Imagery from ESRI web service



**Menahga Area  
115 kV Project  
Route Permit**

**Map Sheet 11 of 27**

Updated: 2/10/2016

T 139N  
R 36W

Green  
Valley  
Township

T 139N  
R 35W

Straight  
River  
Township

CR-136

CR-136

590th Ave

T-260

Runeberg  
Township

T 133N  
R 36W

Blueberry River  
CR-156

Blueberry  
Township

T 138N  
R 35W

394th St

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

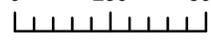
Great River Energy

-  Anticipated alignment single circuit 115 kV transmission line
-  Right-of-way area
-  Permitted route
-  Potential bird diverter location

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

Aerial Imagery from ESRI web service

0 250 500 Feet



**Menahga Area  
115 kV Project  
Route Permit**

**Map Sheet 12 of 27**

Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

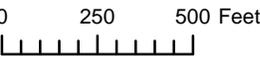
**Great River Energy**

- Anticipated alignment single circuit 115 kV transmission line
- Right-of-way area
- Permitted route

**Minnesota Power**

- Existing 250 kV DC transmission line

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy. Aerial Imagery from ESRI web service



**Menahga Area  
115 kV Project  
Route Permit**

**Map Sheet 13 of 27**

Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

- |   |                                      |
|---|--------------------------------------|
| <b>Great River Energy</b>                                     | <b>Minnesota Power</b>               |
| Anticipated alignment single circuit 115 kV transmission line | Existing 250 kV DC transmission line |
| Right-of-way area   |                                      |
| Permitted route   |                                      |
| Potential bird diverter location                              |                                      |

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy.  
 Aerial Imagery from ESRI web service

0 250 500 Feet

**Menahga Area  
 115 kV Project  
 Route Permit  
 Map Sheet 14 of 27**  
 Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Great River Energy

-  Anticipated alignment single circuit 115 kV transmission line
-  Right-of-way area
-  Permitted route

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

Aerial Imagery from ESRI web service  
 0 250 500 Feet  




**Menahga Area**  
**115 kV Project**  
**Route Permit**  
**Map Sheet 15 of 27**

Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Great River Energy**

- Anticipated alignment single circuit 115 kV transmission line
- Right-of-way area
- Permitted route

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy. Aerial Imagery from ESRI web service



**Menahga Area  
115 kV Project  
Route Permit  
Map Sheet 16 of 27**

Updated: 2/10/2016



- Great River Energy
- Anticipated alignment single circuit 115 kV transmission line
  - Right-of-way area
  - Permitted route

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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

Aerial Imagery from ESRI web service

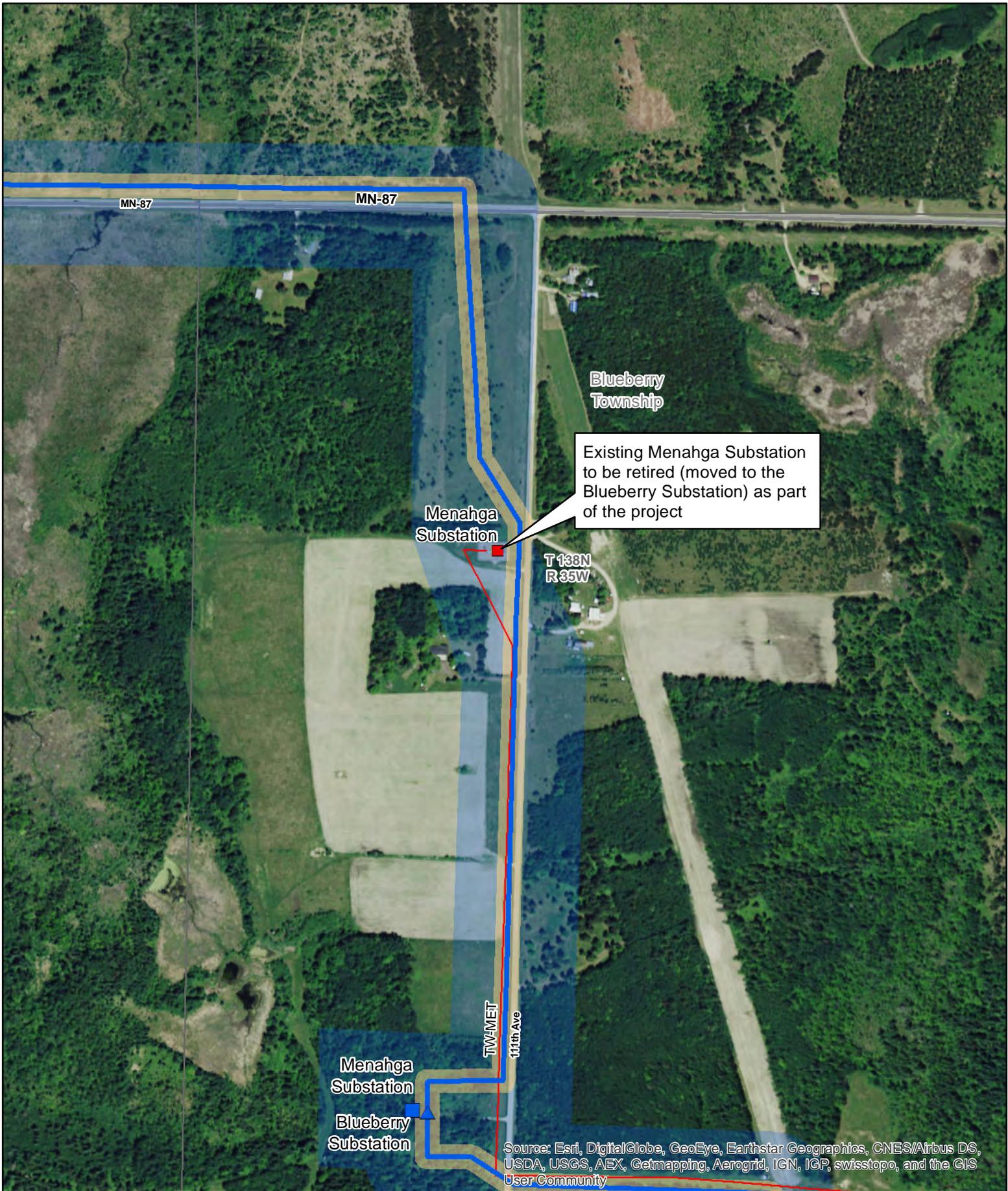
0 250 500 Feet



**Menahga Area  
115 kV Project  
Route Permit**

**Map Sheet 17 of 27**

Updated: 2/10/2016



Existing Menahga Substation to be retired (moved to the Blueberry Substation) as part of the project

- Great River Energy
- Anticipated alignment single circuit 115 kV transmission line
  - Right-of-way area
  - Permitted route
  - ▲ Proposed transmission substation

- Todd-Wadena
- Existing 34.5 kV transmission line
  - Proposed distribution substation
  - Existing distribution substation (to be retired)

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy. Aerial Imagery from ESRI web service

0 250 500 Feet



**Menahga Area 115 kV Project**  
**Route Permit**  
**Map Sheet 18 of 27**  
 Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

- Great River Energy
- Anticipated alignment single circuit 115 kV transmission line
- Right-of-way area
- Permitted route
- ▲ Proposed transmission substation

- Existing 34.5 kV transmission line
- Todd-Wadena
- Proposed distribution substation

GIS Data sources include:  
 MNGEO, MNDNR, MNDOT,  
 and Great River Energy.  
 Aerial Imagery from ESRI web service

0 250 500 Feet



**Menahga Area  
 115 kV Project  
 Route Permit  
 Map Sheet 19 of 27**  
 Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Great River Energy**

- Anticipated alignment single circuit 115 kV transmission line
- Right-of-way area
- Permitted route
- Existing 34.5 kV transmission line

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

Aerial Imagery from ESRI web service

0 250 500 Feet



**Menahga Area  
115 kV Project  
Route Permit**

**Map Sheet 20 of 27**

Updated: 2/10/2016



Great River Energy

- Anticipated alignment single circuit 115 kV transmission line
- Right-of-way area
- Permitted route

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy. Aerial Imagery from ESRI web service

0 250 500 Feet



**Menahga Area  
115 kV Project  
Route Permit**

**Map Sheet 21 of 27**

Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Great River Energy**

- Anticipated alignment single circuit 115 kV transmission line
- Right-of-way area
- Permitted route

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

Aerial Imagery from ESRI web service

0 250 500 Feet



**Menahga Area  
115 kV Project  
Route Permit**

**Map Sheet 22 of 27**

Updated: 2/10/2016



Red Eye  
Township

T 137N  
R 35W

CSAH-13

CSAH-13

119th Ave

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Great River Energy

- Anticipated alignment single circuit 115 kV transmission line
- Right-of-way area
- Permitted route

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy. Aerial Imagery from ESRI web service



**Menahga Area  
115 kV Project  
Route Permit**

**Map Sheet 23 of 27**

Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Great River Energy

-  Anticipated alignment single circuit 115 kV transmission line
-  Right-of-way area
-  Permitted route

GIS Data sources include: MNGEO, MNDNR, MNDOT, and Great River Energy.  
 Aerial Imagery from ESRI web service  
 0 250 500 Feet  




**Menahga Area  
 115 kV Project  
 Route Permit  
 Map Sheet 24 of 27**

Updated: 2/10/2016

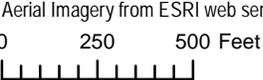


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Great River Energy

-  Anticipated alignment single circuit 115 kV transmission line
-  Right-of-way area
-  Permitted route
-  Potential bird diverter location

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



**Menahga Area  
115 kV Project  
Route Permit**

**Map Sheet 25 of 27**

Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Great River Energy**

- Anticipated alignment single circuit 115 kV transmission line
- Right-of-way area
- Permitted route
- XX Potential bird diverter location

GIS Data sources include:  
 MNGEO, MNDNR, MNDOT,  
 and Great River Energy.  
 Aerial Imagery from ESRI web service

0    250    500 Feet



**Menahga Area  
 115 kV Project  
 Route Permit**

**Map Sheet 26 of 27**  
 Updated: 2/10/2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Great River Energy**

 Anticipated alignment single circuit 115 kV transmission line

 Right-of-way area

 Permitted route

 Potential bird diverter location

**Todd-Wadena**

 Proposed distribution substation

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

Aerial Imagery from ESRI web service

0 250 500 Feet



**Menahga Area  
115 kV Project  
Route Permit**

**Map Sheet 27 of 27**

Updated: 2/10/2016

**STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION  
PUC DOCKET NO. ET-2, E-015/TL-14-797**

**ROUTE PERMIT ATTACHMENT A –  
COMPLAINT PROCEDURES FOR HIGH-VOLTAGE TRANSMISSION LINES**

**A. Purpose**

To establish a uniform and timely method of reporting complaints received by the permittee concerning permit conditions for site preparation, construction, cleanup and restoration, operation, and resolution of such complaints.

**B. Scope**

This document describes complaint reporting procedures and frequency.

**C. Applicability**

The procedures shall be used for all complaints received by the permittee and all complaints received by the Minnesota Public Utilities Commission (Commission) under Minn. R. 7829.1500 or Minn. R. 7829.1700 relevant to this permit.

**D. Definitions**

**Complaint:** A verbal or written statement presented to the permittees by a person expressing dissatisfaction or concern regarding site preparation, cleanup or restoration or other route and associated facilities permit conditions. Complaints do not include requests, inquiries, questions or general comments.

**Substantial Complaint:** A written complaint alleging a violation of a specific permit condition that, if substantiated, could result in permit modification or suspension pursuant to the applicable regulations.

**Unresolved Complaint:** A complaint which, despite the good faith efforts of the permittee and a person, remains to both or one of the parties unresolved or unsatisfactorily resolved.

**Person:** An individual, partnership, joint venture, private or public corporation, association, firm, public service company, cooperative, political subdivision, municipal corporation, government agency, public utility district, or any other entity, public or private, however organized.

## **E. Complaint Documentation and Processing**

1. The permittee shall designate an individual to summarize complaints for the Commission. This person's name, phone number and email address shall accompany all complaint submittals.
2. A person presenting the complaint should to the extent possible, include the following information in their communications:
  - a. name, address, phone number, and email address;
  - b. date of complaint;
  - c. tract or parcel number; and
  - d. whether the complaint relates to a permit matter or a compliance issue.
3. The permittee shall document all complaints by maintaining a record of all applicable information concerning the complaint, including the following:
  - a. docket number and project name;
  - b. name of complainant, address, phone number and email address;
  - c. precise description of property or parcel number;
  - d. name of permittee representative receiving complaint and date of receipt;
  - e. nature of complaint and the applicable permit condition(s);
  - f. activities undertaken to resolve the complaint; and
  - g. final disposition of the complaint.

## **F. Reporting Requirements**

The permittee shall commence complaint reporting at the beginning of project construction and continue through the term of the permit. The permittee shall report all complaints to the Commission according to the following schedule:

**Immediate Reports:** All substantial complaints through the term of the permit shall be reported to the Commission the same day received, or on the following working day for complaints received after working hours. Such reports are to be directed to the Commission's Consumer Affairs Office at 1-800-657-3782 (voice messages are acceptable) or [consumer.puc@state.mn.us](mailto:consumer.puc@state.mn.us). For e-mail reporting, the email subject line should read "PUC EFP Complaint" and include the appropriate project docket number.

**Monthly Reports:** During project construction and restoration, a summary of all complaints, including substantial complaints received or resolved during the preceding month, shall be filed

by the 15th of each month to Daniel P. Wolf, Executive Secretary, Public Utilities Commission, using the eDockets system. The eDockets system is located at:  
<https://www.edockets.state.mn.us/EFiling/home.jsp>

If no complaints were received during the preceding month, the permittee shall file a summary indicating that no complaints were received.

#### **G. Complaints Received by the Commission**

Complaints received directly by the Commission from aggrieved persons regarding site preparation, construction, cleanup, restoration, operation and maintenance shall be promptly sent to the permittee.

#### **H. Commission Process for Unresolved Complaints**

Commission staff shall perform an initial evaluation of unresolved complaints submitted to the Commission. Complaints raising substantial permit issues shall be processed and resolved by the Commission. Staff shall notify the permittee and appropriate persons if it determines that the complaint is a substantial complaint. With respect to such complaints, each party shall submit a written summary of its position to the Commission no later than ten days after receipt of the staff notification. The complaint will be presented to the Commission for a decision as soon as practicable.

#### **I. Permittee Contacts for Complaints and Complaint Reporting**

Complaints may be filed by mail or email to:

Carole Schmidt  
Supervisor, Transmission Planning  
Great River Energy  
12300 Elm Creek Blvd.  
Maple Grove, MN 55369  
763-445-5214  
[cschmidt@grenergy.com](mailto:cschmidt@grenergy.com)

This information shall be maintained current by informing the Commission of any changes as they become effective.

**STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION  
PUC DOCKET NO. ET-2, E-015/TL-14-797**

**ROUTE PERMIT ATTACHMENT B –  
COMPLIANCE FILING PROCEDURE FOR PERMITTED ENERGY FACILITIES**

**A. Purpose**

To establish a uniform and timely method of submitting information required by the Commission energy facility permits.

**B. Scope and Applicability**

This procedure encompasses all compliance filings required by permit.

**C. Definitions**

**Compliance Filing:** A filing of information to the Commission, where the information is required by a Commission site or route permit.

**D. Responsibilities**

1. The permittee shall file all compliance filings with Daniel P. Wolf, Executive Secretary, Public Utilities Commission, through the eDockets system. The eDockets system is located at: <https://www.edockets.state.mn.us/EFiling/home.jsp>

General instructions are provided on the eDockets website. Permittees must register on the website to file documents.

2. All filings must have a cover sheet that includes:
  - a. Date
  - b. Name of submitter/permittee
  - c. Type of permit (site or route)
  - d. Project location
  - e. Project docket number
  - f. Permit section under which the filing is made
  - g. Short description of the filing

3. Filings that are graphic intensive (e.g., maps, engineered drawings) must, in addition to being electronically filed, be submitted as paper copies and on CD. Paper copies and CDs should be sent to: 1) Daniel P. Wolf, Executive Secretary, Minnesota Public Utilities Commission, 121 7th Place East, Suite 350, St. Paul, MN 55101-2147, and 2) Department of Commerce, Energy Environmental Review and Analysis, 85 7th Place East, Suite 500, St. Paul, MN 55101-2198.

The Commission may request a paper copy of any electronically filed document.

**STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION  
PUC DOCKET NO. ET-2, E-015/TL-14-797**

**ROUTE PERMIT ATTACHMENT C – COMPLIANCE FILING LIST<sup>2</sup>**

PERMITTEE: Great River Energy and Minnesota Power  
 PERMIT TYPE: HVTL Route Permit  
 PROJECT LOCATION: Hubbard, Becker, Wadena Counties  
 PUC DOCKET NUMBER: ET-2, E-015/CN-14-787, TL-14-797

Filing Number	Permit Section	Description of Compliance Filing	Due Date
1	9.1	Plan and profile of right-of-way (ROW)	30 days before ROW preparation for construction
2	5.2	Contact information for field representative	14 days prior to construction
3	5.2.11	Restoration complete	60 days after completion of all restoration activities
4	9.2	Periodic status reports	Monthly
5	8.0	Complaint procedures	Prior to start of construction
6	Complaint Handling Procedures	Complaint reports	By the 15th of each month
7	5.1	Notification to landowners	First contact with landowners after permit issuance
8	9.3	Notice of completion and date of placement in service	Three days prior to energizing

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<sup>2</sup> This compilation of permit compliance filings is provided for the convenience of the permittee and the Commission. It is not a substitute for the permit; the language of the permit controls.

Filing Number	Permit Section	Description of Compliance Filing	Due Date
9	9.4	Provide as-built plans and specifications	Within 90 days after completion of construction
10	9.5	Provide GPS data	Within 90 days after completion of construction
11	5.2.13	Notification of previously unrecorded archaeological sites	Upon discovery
12	6.3	Invasive species management plan	14 days prior to submission of plan and profile