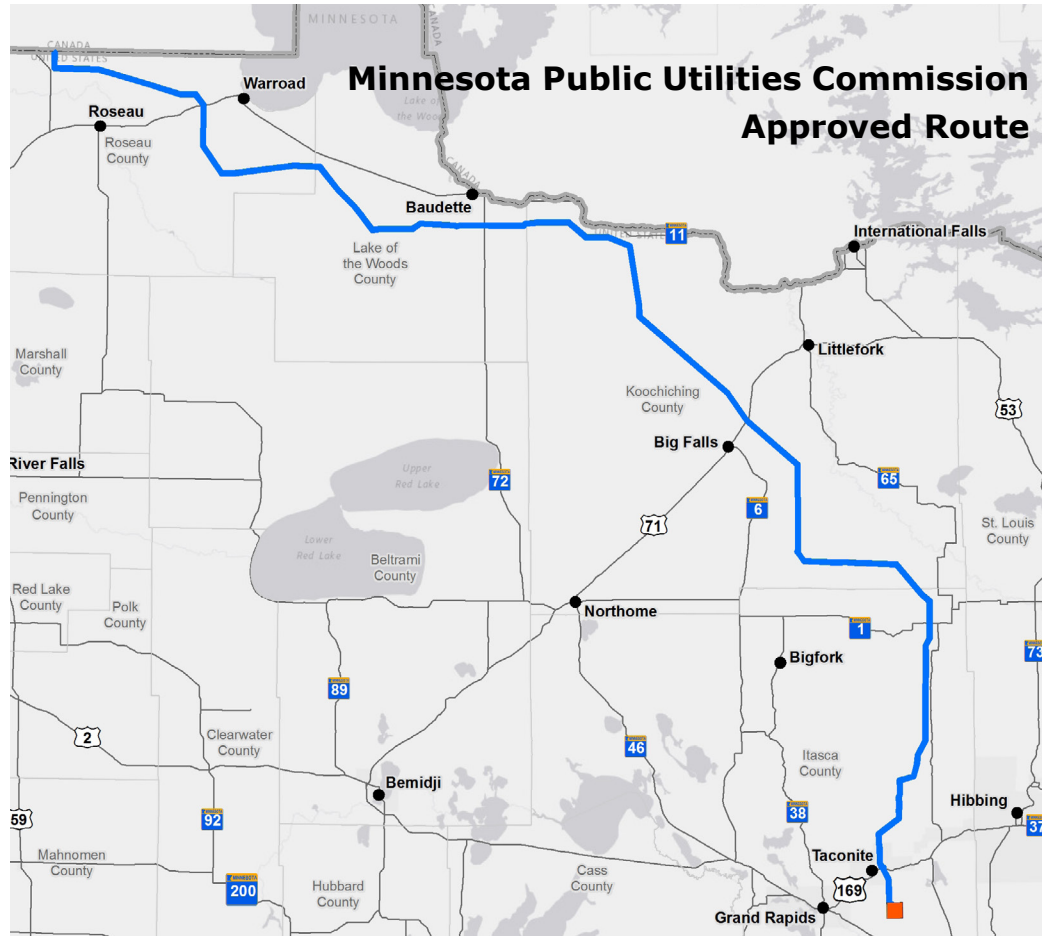


The Minnesota Public Utilities Commission approved the final route for the Great Northern Transmission Line. As we continue project development, we will be conducting a variety of field survey activities. We are requesting access to private and public property in order to complete required field surveys prior to construction. We anticipate field activities to take place in 2016 and 2017, with the majority of the surveys between April and October 2016.

The Project is located in Roseau, Lake of the Woods, Koochiching and Itasca Counties. Minnesota Power is requesting access permission for:

- About 500 feet to allow survey crews to identify resources adjacent to the right-of-way, if necessary based on survey protocol.
- Any locations of cross-county access routes.



Survey Overview

► Cultural Resources (Archaeological)



Teams of four to six people will be conducting cultural surveys to assess the likelihood that a cultural resource or historic property may be present in the project area. Most areas will require only walk-over survey. If areas are assessed to have a high probability for buried archaeological deposits, manual shovel testing will be required. Shovel tests involve hand digging a small hole roughly 2 feet in diameter and up to 3 feet deep. Soils would be screened for artifacts and holes are backfilled immediately after testing to previous conditions, to the extent practical. If artifacts are found, they are collected, bagged, and analyzed for reporting purposes. Collected artifacts are returned to the landowner after analysis unless the landowner wishes to donate the artifacts to a museum or historical society. In rare cases, an archaeological site may appear to be significant, and additional formal excavation may be necessary to assess integrity and eligibility for the National Register of Historic Places. Formal testing usually involves hand digging 3 by 3 foot holes with soils processed similarly to shovel testing. Formal test units are also backfilled upon completion. The survey team will be in communication prior to any shovel testing.



May -
Oct 2016

Field Survey Factsheet: Survey Overview

Crews & Timeline

▶ Land Surveys

Teams of two people will conduct land surveys to identify section corners, road and utilities crossings, and assist with staking locations for soil borings and structures for engineering review. The survey will occur on the project right-of-way.



Ongoing
2016

▶ Rare Plants



Teams of two people will conduct rare plant surveys to identify the presence and location of state listed species within the project area. Surveys will occur within the ROW, but may expand beyond the ROW in order to identify the extent of the population for design considerations. The survey typically involves field staff slowly meandering through areas of potentially suitable habitat to visually locate occurrences of listed species. Occurrences of target species will be mapped using a GPS unit. If needed, a qualified botanist will collect a sample of the species.



Summer -
Fall
2016 &
2017

▶ Wetlands



Teams of two to three people will conduct wetland surveys to identify wetlands within the project area. The surveys typically involve observing soils to depths of 24 inches using a hand auger or drain spade/sharpshooter style shovel, depending on the soil texture and soil moisture present on-site. Hand augers are typically used in moist soils and shovels are typically used in drier or sandy soils. Holes dug by shovel will be backfilled upon completion. Other survey activities include walking the boundary with a GPS unit, observing plants, collecting photographs and, in some cases, marking the wetland edge with wire flags or lath and ribbon.



to



Spring - Fall
2016

▶ Weeds



Teams of two people will conduct weed surveys to identify locations of noxious weeds so that spread of weeds during construction can be minimized. Occurrences of noxious weeds will be mapped using a GPS unit. Before entering and leaving each property, field staff will check clothing, gear, vehicles and equipment and remove caked mud, dirt clods, and reproductive plant parts (seeds, berries, fruit, cones, flowers or seed stalks, and roots) to minimize the spread of noxious weeds.



Summer -
Fall
2016

▶ Soil Borings



Teams of 3 to 4 people will conduct soil borings to identify hydrogeologic and geotechnical soil data used to design and construct the foundations for the transmission line structures. The survey consists of drilling 8-inch diameter borings approximately 40 to 50 feet below the surface to collect soil and bedrock samples. A temporary work area of approximately 40 by 40 feet will be required at each boring location. Equipment may include a drill rig, support vehicle and trailer used to haul equipment, water truck, and a 4-wheel drive vehicle. Once completed, the crews will backfill the hole to existing grade. Average drilling time per site is approximately one-half day. Conditions in the field may increase or decrease the actual required time.



to



Spring
2016 -
Winter
2017