Existing Conditions Fact Sheet: Physiography, Terrain, and Soils

Issued: October 2023

The various study areas associated with the Community Access Road contain many landscape characteristics that are important to the study, including physiography (description of Earth's surface features related to their origin), terrain, and soils.

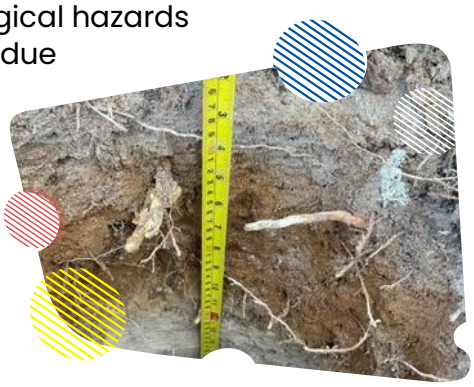
Our Studies

Our studies looked at physiography, terrain, and soils in the area close to the footprint of the proposed routes, plus a buffer of 3 km along the proposed route and associated infrastructure to learn the direct impacts, and an 11 km buffer along the proposed route and associated infrastructure to learn more broadly about the indirect impacts.

Publicly available data about the study area, and data collected from field programs, were used to create terrain and soil maps. A total of 214 inspection sites were completed during the field programs, and soil samples were collected and analyzed from 17 sites.

Our Findings

It was found that 99.3% of the Project Development Area is on stable terrain, therefore events like landslides are unlikely. Other geological hazards were also looked at, including the possibility of damage due to earthquakes, permafrost thawing, flooding, erosion, etc. Risks due to these hazards are generally considered to be low. Flooding due to beavers, spring melt, and heavy rainfall has been documented along floodplains. Within the direct area of the proposed development, approximately 45.4% of the land drains poorly or imperfectly, while 55.5% drains well.



Study Areas

Study areas identify the geographic limit where potential effects of the road may occur. The existing conditions are documented for three study areas:

- Project Development Area (PDA): the area of direct disturbance
- Local Study Area (LSA): the area where indirect effects of the road are likely to take place
- Regional Study Area (RSA): the area where indirect effects are likely to occur

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COMMUNITY ACCESS ROAD

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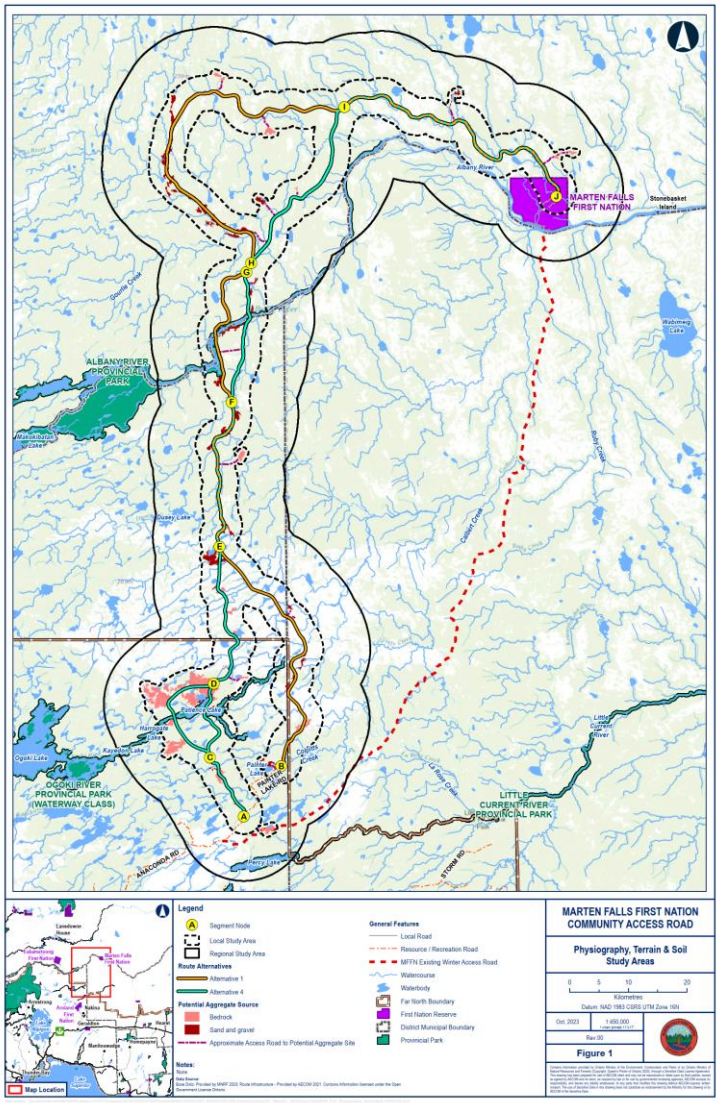
Peatlands, bogs, and fens are abundant throughout the Local Study Area, particularly in the northern reaches, which typically have very poor or poor drainage. Several eskers (ridges of sand and gravel) as wells as pits and quarries have been found in the Local Study Area, and may be used as a source for aggregate materials.

The Regional Study Area largely is located on the Canadian Shield, split between two types of physiography called the Severn Upland (low, rolling hills spotted with lakes and rocks leftover from glaciers) and Hudson Bay Lowland (low-lying bedrock plain with bogs and shallow lakes). The present-day landscape is marked by streams, rivers, and lakes. Soils were analyzed for how easily they can be reused, which is useful in planning and management practices for how to treat the soil. Based on the soil mapping within the Local Study Area, approximately 11% of the soils were assigned an unsuitable rating, and approximately 28% were assigned a poor suitability rating. This does not mean the soil cannot be used for reclamation, but that it may require careful planning, good management, and possible soil amendments.



Contact Information

You are welcome to contact the Project Team at any time with questions or comments.

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