



Existing Conditions Fact Sheet: Acoustic and Vibration Environment

Issued: October 2023

The various study areas associated with the Community Access Road have the potential to be impacted by noise and vibration levels (i.e., acoustic environment). Background noise and vibration levels within the study areas are influenced by nature-based sources, with little or no contribution from human-made noise.

Our Studies

Our studies looked at noise levels close to the footprint referred to as the Project Development Area. In addition our Local Study Area looked at an 8 km wide buffer and the Regional Study area looked at an 18 km buffer along the proposed routes to learn the indirect impacts.

The noise effects due to the Project operations and construction activities will be assessed using the Health Canada Noise Guidance (Health Canada 2017), Ontario Ministry of Transportation's Environmental Guide for Noise (the MTO Noise Guide – MTO 2022) and the MOE/MTO Noise Protocol (MOE/MTO 1986). There are no provincial or federal guidelines that provide ground and air vibration limits for Project operation. There are provincial and federal guidelines with air vibration limits for blasting activities which will be used.

Noise measurements and monitoring were completed in November 2019, in general accordance with Ministry of Environment, Conservation, and Parks guidelines. The field program included a 48 hour (long-term) monitoring component and 20 minute (short-term) measurement component. A noise monitoring location was chosen in a more populated area of Marten Falls First Nation, where it is expected that noise levels are influenced by human activities.



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 direct 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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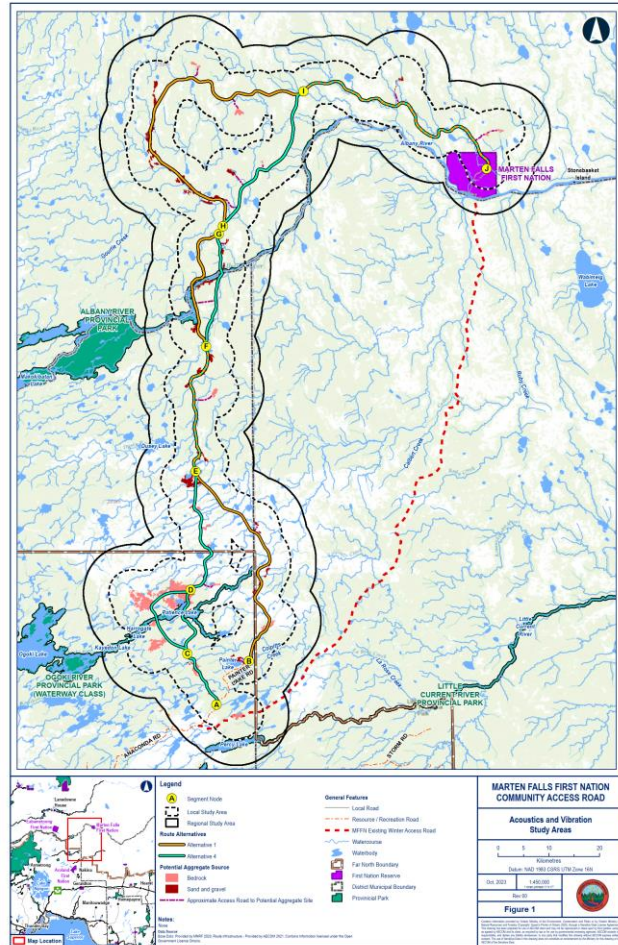
A second noise monitoring location further from human activities was chosen to understand the background noise levels in remote or natural sites. To supplement the 48 hour noise monitoring program, seven 20 minute measurements at various locations were selected throughout the area of Marten Falls First Nation. These locations provide information about how noise levels varied over time.

A preliminary desktop review was carried out to identify potential points of reception in the Acoustic and Vibration local study area which included a review of available Indigenous Knowledge for areas of human activity.

Our Findings

Community noise levels, caused by community activities, road traffic, animals (e.g., dogs) and wind, were found to generally vary between 22 decibels to 38 decibels, indicating a quiet environment with occasional noise level increases of up to 55 decibels due to human activity, wind gusts and diesel generators. Remote noise levels were caused by sounds of nature (i.e., wind in vegetation and wildlife) and were lower than the Health Canada Noise Guidance for rural or remote areas.

Existing vibration levels within the vibration environment are expected to be influenced by nature-based sources with little or no contribution from human-made vibrations.



Contact Information

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

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