



## WEBEQUIE SUPPLY ROAD PROJECT

### Community Newsletter

### Issue 2

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#### Winter Field Activities:

##### Ground Penetrating Radar Survey

In order to design the potential road properly and position the road in the best location, engineers need to understand what is below the surface of the land (subsurface). To help understand what is below the land, a technology called Ground Penetrating Radar was used. Ground Penetrating Radar sends a harmless radar signal through the subsurface and creates a “picture” of what kinds of soil, peat and rock are under the surface and how thick each layer is. The most important piece of subsurface information for the wetland/peat areas in the straighter portion of the proposed road corridor is the thickness of the peat layer. The thicker the peat layer, the more difficult it is to design and build the road and the more expensive it will be to maintain.

Between February 18<sup>th</sup> and 23<sup>rd</sup> 2019, our team, including a Webequie community member, conducted a snowmobile-based Ground Penetrating Radar Survey that consisted of clearing a trail in selected areas along the primarily lowland/east-west section of the proposed road corridor, then pulling a small sled mounted with a Ground Penetrating Radar unit. Results were collected on an onboard computer, then analyzed later to identify the thickness of the peat layer in different locations.

The results of the survey show that the peat layer ranges in thickness from about 1m – 5m. What this means is that road design and construction will be more challenging in the straighter parts of the road corridor in comparison with the curvy or bending portions of the road.



*February 19, 2019: Using a peat probe to verify organic thickness at one of the survey sites*



*February 22, 2019: GPR 100MHz transmitter/receiver setup mounted on skis and pulled by snowmobile*



*February 7, 2019: Field reconnaissance team discusses snow conditions in the area*

## Geotechnical Drilling Program

At locations such as major water crossings and potential aggregate sources, we need to understand in detail what is below the surface of the land. For water crossings, the type of ground that a bridge needs to sit on to support the bridge needs to be understood in order to design the bridge properly and for safety. For potential aggregate source locations, we need to understand whether the subsurface material is suitable for use in road construction and approximately how much of this material is available.

Our team conducted geotechnical drilling between February 15<sup>th</sup> and March 1<sup>st</sup> 2019. Due to challenging weather conditions, six of ten planned locations were successfully drilled. Early observations are that the bedrock in the area may be suitable for road construction. The organic soils in the central and east sections of the proposed road may need to be altered or improved in order to be used as the foundation for road construction.



*February 28, 2019: Drilling crew preparing for helicopter to deliver remainder of drill rig.*





*February 28, 2019: Drilling Crew prepare drill location*



*February 21, 2019: Drill rig slung by helicopter being placed on drilling platform.*

### ***Winter Caribou Survey***

Woodland Caribou are an important indicator of the health of the boreal forest that covers the project study area. Forest-dwelling Woodland Caribou are designated as “Threatened” under the federal Species at Risk Act. The wildlife team conducted the winter survey between February 9<sup>th</sup> and February 13<sup>th</sup> 2019. The main purpose of the survey was to do counts of Woodland Caribou observed, as well as record the GPS location and make observations of the type of wintering habitat where they were seen. At the same time, the team records moose and moose winter habitat observations, as well as that for other wildlife, including Gray Wolf, Wolverine, Canada Lynx, Fisher, American Marten, River Otter, Red Fox, Snowshoe Hare, Hawks and Owls. Other wildlife habitat such as stick nests and possible bat hibernacula (hibernating) sites are also recorded.

A similar study was done covering the same area in the same season in 2018. The results of the two surveys will provide the project team with a better sense of the areas where Woodland Caribou spend their time during the winter. There is also plans for Woodland Caribou Nursery Habitat Survey that will be conducted in July, 2019, which will give us a clearer picture of caribou habitat and dynamics in the project area. This will allow the team to limit any impacts the road corridor may have on Woodland Caribou.





*February 13, 2019: Winter Caribou Survey team prepares to depart*



*February 10, 2019: Herd of Woodland Caribou*



*February 12, 2019: Gray Wolf pack resting along lakeshore*



*February 10, 2019: Fresh Wolverine tracks observed*



**Upcoming Spring and Summer Field Activities:**

**Waterfowl Survey**

In order to understand how waterfowl use the rivers, streams and lakes close to the proposed Supply Road corridor, our team, including a WFN community member and two biologists, will conduct a two-day survey in mid-May, once the ice has broken up on the water bodies and there is open water available. Done with a helicopter, the team will record waterfowl species and associated counts from the air, with drop-down visits to selected areas for deeper investigations.



Snow Goose

**Breeding Bird Survey**

The breeding bird survey will be conducted between May 24 and July 10<sup>th</sup>, the official bird nesting season. The purpose of the survey is to observe and record both the migratory bird species and the year-round resident bird species that may nest in the project study area. Breeding birds will be counted at specific locations in different types of habitat.

**Bat Survey**

There are three bats species (*Little Brown Myotis*, *Northern Myotis*, and *Eastern Small-footed Myotis*) that may be present in the Study Area that are considered “species at risk”. The bat surveys in mid-June and mid-August will be looking to see if these species are present and identify their critical habitat within the Study Area. The survey will be conducted by helicopter and will consist of drop-down visits where temporary acoustic detectors will be installed. These detectors are used to see if there are bats swarming around possible hibernaculum (hibernation sites) entry points.

**Caribou Nursery Habitat Survey**

In order to learn where Woodland Caribou give birth to (calving) and take care of their young (nursery) within the Study Area, aerial photos will be reviewed to identify the types of land features these caribou prefer for giving birth to and taking care of their young. These features include islands, peninsulas and wetland areas.

These areas will then be visited by the field team by helicopter. The field team will look for signs such as tracks, pellets, beds, and hair that may indicate their use for calving and nursery activities.

## Vegetation Survey

The vegetation survey is meant to provide the project team with an understanding of the different types of vegetation that are within the Study Area. The work is done by selecting representative areas based on a review of aerial photos, then visiting these areas by helicopter to conduct vegetation inventories on equally-sized sample areas. Vegetation plant species within each area are identified and soil samples are taken. Where present, vegetation species at risk are identified and mapped.

## Aquatics Survey

The purpose of the aquatics survey is to get an understanding of the habitat in and around the locations where the proposed road crosses rivers and streams (water crossings). The aquatic habitat survey work will be done around the locations of all of the proposed water crossings. The shape and function of the stream (i.e., rapids, pool, etc.) will be recorded, as well as measurements of the channel width and depth. Other information such as bottom type and presence of fish passage barriers will be noted as well. Where possible, fish community sampling will be done in order to record and better understand the fish species present. Sensitivity of the habitat will be rated based on its spawning, migration, rearing and overwintering potential.

## Geotechnical Survey

The geotechnical team will continue to investigate the major water crossing locations to better understand soil conditions for bridge foundations. This will be done by drilling boreholes to see the different soil layers and possibly identify the depth to bedrock. In order to identify potential sources of aggregate, shallow holes will be dug using a mini-excavator at selected locations. This will help identify the suitability of the material for road construction.

## Where can we get more information?

Additional information on the project can be obtained from our project website, [www.supplyroad.ca](http://www.supplyroad.ca), or by contacting:

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