

Preliminary Screening Report Form

<p>Preliminary screener: MVLWB</p> <p>Reference / File number: MV2008F0027, MV2019F0015, MV2019L8-0008</p> <p>TITLE: Winter Road, Fort Smith to Taltson Hydroelectric Facility</p> <p>ORGANIZATION: Northwest Territories Power Corporation</p> <p>MEETING DATE: July 22, 2019</p>	<p>EIRB</p> <p>Reference number:</p>
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Type of Development:
(CHECK ALL THAT APPLY)

- New
- Amend, EIRB Ref. #
- Requires permit, licence, or authorization
- Does not require permit, licence, or authorization

Project Summary:

The proposed Taltson Winter Road is approximately 56 km long; the start point is a temporary laydown area at the northeast corner of the Fort Smith airport, and the road ends at a temporary laydown area at the southern end of the Taltson Facility airfield. It consists of 11 over land portions (portages) and 10 over ice portions (lakes/rivers). The total length of portages is approximately 45.3 km (81%) and the total length of lakes/rivers is 10.7 km (19%).

Equipment with a low ground bearing pressure will be initially used to travel the route and compact the existing snow cover. Water will be required for construction of overland sections, construction of ramps, and for maintenance of over ice sections. Depending on snow type and humidity, varying amounts of water will be required to obtain adequate compaction over land construction. Construction of the overland sections can begin earlier in the season than over ice sections. Vegetation clearing will be minimized to brushing and danger tree removal only. Once the ice thickness is proven to be adequate, the ice sheet will be cleared of all insulating snow. Both natural and artificial methods of growing the ice can be employed to achieve the desirable ice thickness to support hauling operations. If open water remains at crossings, temporary culverts will be installed, and a minimum cover of 30 cm snow/ice constructed over the top. Culverts will be removed at the end of the season.

The Operations and Maintenance Plan identifies the need for up to 250 m³/day from the Slave River and up to 30m³/day from all other sources (Little Bent Tree Lake, Thetul River, Kenneth River, Lake 2-0, Powell Lake, Lake 5-0, Lake 7-0, and Gertrude Lake) for a total volume use of up to 9,200 m³ per season. Daily water use will not exceed 299 m³.

Sanding units will be used to place sand to assist in traction over all hills and critical turns throughout the operations phase. Sand/gravel used for traction control on the portage on/off ramps, will be scraped off and left on a flat area on each portage at the end of each winter road season so that it is not washed into the lakes and streams during the spring freshet and create sedimentation issues.

Equipment required to construct and maintain the winter road include:

- Five pick-up trucks with 500L fuel tank (*Feb 18, 2009 screening: had 3 light vehicles*)
- One Hagglund Amphibious Vehicle (to support Ground Penetrating Radar operations)
- Two Snowcats
- One Tandem Wheel Plow Truck
- Five Tandem Wheel Water Truck w/ heated water tank (*Feb 18, 2009 screening: had 1 water truck*)
- One Nodwell, with heated water tank
- One Grader
- One Loader
- One Mechanics Service Truck
- One Ground Penetrating Radar

Scope:

Use of vehicles and equipment; water withdrawal for the construction, operation, and maintenance of a winter access road; and progressive reclamation activities and associated closure and reclamation activities for the construction, maintenance and closure of a winter access road originating at Fort Smith, Northwest Territories and terminating at the Taltson Hydroelectric Facility airport.

Land Use Eligibility - Section 18 Mackenzie Valley Land Use Regulations:

Section 18 Mackenzie Valley Land Use Regulations: 18(b)

Type of Disposition

Disposition Number(s)

- Mineral Claims
- Prospecting Permit(s)
- Mineral Leases
- Oil and Gas: EL/SDL/PL
- Quarry Permit
- Timber Permit
- Other:

N/A as confirmed by GNWT-Lands

Principal Activities (related to scoping) (CHECK ALL THAT APPLY)

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Construction | <input type="checkbox"/> Exploration | <input type="checkbox"/> Decommissioning |
| <input type="checkbox"/> Installation | <input type="checkbox"/> Industrial | <input checked="" type="checkbox"/> Abandonment |
| <input checked="" type="checkbox"/> Maintenance | <input type="checkbox"/> Recreation | <input type="checkbox"/> Aerial |
| <input type="checkbox"/> Expansion | <input type="checkbox"/> Municipal | <input type="checkbox"/> Harvesting |
| <input type="checkbox"/> Operation | <input type="checkbox"/> Quarry | <input type="checkbox"/> Camp |
| <input type="checkbox"/> Repair | <input checked="" type="checkbox"/> Linear / Corridor | <input type="checkbox"/> Scientific/ |
| <input type="checkbox"/> Research | <input type="checkbox"/> Sewage | <input type="checkbox"/> Solid Waste |
| <input type="checkbox"/> Water Intake | | |
| <input type="checkbox"/> Other: | | |

Principal Development Components (related to scoping) (CHECK ALL THAT APPLY)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Access Road | <input checked="" type="checkbox"/> Waste Management |
| <input checked="" type="checkbox"/> construction | <input checked="" type="checkbox"/> disposal of hazardous waste |
| <input checked="" type="checkbox"/> abandonment/removal | <input checked="" type="checkbox"/> waste generation |
| <input checked="" type="checkbox"/> modification e.g., widening, straightening | <input checked="" type="checkbox"/> sewage |
| <input checked="" type="checkbox"/> Automobile, Aircraft or Vessel Movement | <input checked="" type="checkbox"/> disposal of sewage |
| <input type="checkbox"/> Blasting | <input type="checkbox"/> Geoscientific Sampling |
| <input type="checkbox"/> Building | <input type="checkbox"/> Trenching |
| <input checked="" type="checkbox"/> Burning | <input type="checkbox"/> Diamond drill |
| <input type="checkbox"/> Burying | <input type="checkbox"/> Borehole core sampling |
| <input type="checkbox"/> Channelling | <input type="checkbox"/> Bulk soil sampling |
| <input type="checkbox"/> Cut and Fill | <input type="checkbox"/> gravel |
| <input checked="" type="checkbox"/> Cutting of Trees or Removal of Vegetation | <input type="checkbox"/> hydrological Testing |
| <input type="checkbox"/> Dams and Impoundments | <input checked="" type="checkbox"/> Site Restoration |
| <input type="checkbox"/> construction | <input type="checkbox"/> fertilization |
| <input type="checkbox"/> abandonment/removal | <input type="checkbox"/> grubbing |
| <input type="checkbox"/> modification | <input type="checkbox"/> planting/seeding |
| <input type="checkbox"/> Ditch Construction | <input type="checkbox"/> reforestation |
| <input type="checkbox"/> Drainage Alteration | <input type="checkbox"/> scarify |
| <input type="checkbox"/> Drilling other than Geoscientific | <input type="checkbox"/> spraying |
| <input type="checkbox"/> Ecological Surveys | <input type="checkbox"/> re-contouring |
| <input type="checkbox"/> Excavation | <input checked="" type="checkbox"/> Slashing and removal of vegetation |
| <input type="checkbox"/> Explosive Storage | <input type="checkbox"/> Soil Testing |
| <input type="checkbox"/> Fuel Storage | <input checked="" type="checkbox"/> Stream Crossing/Bridging |
| <input type="checkbox"/> Topsoil, Overburden or Soil | <input type="checkbox"/> Tunnelling/Underground |
| <input type="checkbox"/> fill | <input type="checkbox"/> Other: |
| <input type="checkbox"/> disposal | |
| <input type="checkbox"/> removal | |
| <input type="checkbox"/> storage | |

NTS topographic map sheet numbers:

75D

Latitude / longitude and UTM system:

The winter road will be located within: Min Lat: 60° 1' 38.95" N, Min Long: 111°23'25.36" W and Max Lat: 60°25'8.38" N and Max Long: 111°55'52.78" W

Nearest community and water body:

Fort Smith, NT, and the Slave River

Land Status (consultation information)

- Free Hold/Private
- Commissioner's/Territorial Lands
- Federal Crown Land (was selected in 2008 Screening)
- Municipal Land

Transboundary/Transregional Implications

- British Columbia
- Nunavut
- Wek'èezhii
- Alberta
- National Park
- Gwich'in
- Saskatchewan
- Inuvialuit Settlement Region
- Sahtu
- Yukon

Type of transboundary implication: Impact / Effect Development

Public concern: _____
(Describe.)

Physical - Chemical Effects

Impact

1) Ground Water

- water table alteration
- water quality changes

Mitigation

There is a potential for the contamination of groundwater and surface waters from the general use of equipment constructing and maintaining the winter road and from vehicles using the winter road. This potential for risk is lowered due to the existing snow and ice cover. Contaminated snow and ice will be removed from the winter road and stored in a contaminated snow tank at the NTPC compound in Fort Smith, NT. When the snow and ice melts in the summer, hydrocarbons floating on top of the contaminated water are recovered with sorbent sheets. The sorbent sheets will be placed into waste drums for disposal at a registered facility. The contaminated water will then be filtered through a granular activated carbon (GAC) filtration system and tested for BTEX (benzene, toluene, ethylbenzene, xylenes) and petroleum hydrocarbons F1 and F2 before it can be safely discharged to the environment.

The adherence of fuel storage, handling, and spill protocols should also mitigate the environmental risk associated with fuel/oil leaks or spills. There will be a limit of one diesel-carrying vehicle travelling on the road at a time. NTPC will assign a Project Monitor who will be responsible to ensure compliance with the Wildlife Management and Monitoring Plan and other safety and environmental policies

- infiltration changes
- other:
- N/A

Impact

2) Surface Water

- flow or level changes
- water quality changes

Mitigation

Winter road construction/maintenance may impact surface water flow and levels. If snow fills are likely to cause greater erosion than normal during the Spring freshet, the snow fill will be removed and moved away from the depression or ravine to prevent excessive erosion. Standard permit conditions require efforts to minimize erosion and obstructions to natural drainage.

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melts in the summer, hydrocarbons floating on top of the contaminated water are recovered with sorbent sheets. The sorbent sheets will be placed into waste drums for disposal at a registered facility. The contaminated water will then be filtered through a granular activated carbon (GAC) filtration system and tested for BTEX (benzene, toluene, ethylbenzene, xylenes) and petroleum hydrocarbons F1 and F2 before it can be safely discharged to the environment.

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water quantity changes

The withdrawal of water for winter road construction may impact local surface water quantity. Water withdrawal will be under 300 m³/day. Most water will return to source or the land once the winter season is over.

drainage pattern changes

temperature

wetland changes/loss

other:

N/A

Impact
3) Noise

Mitigation

noise in/near water

There will be localized increases in noise on ice surfaces. No mitigation identified.

noise increase

There will be localized increases in noise along the winter road corridor. No mitigation identified.

other:

N/A

Impact
4) Land

Mitigation

geologic structure changes

soil contamination

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buffer zone loss

soil compaction and settling

Heavy equipment and vehicle movements have the potential to increase localized soil compaction and settling. Operational best practices, light weight construction equipment, winter road design requirements, and standard conditions are designed to prevent compaction and settling.

destabilization/erosion

No deviation from the historic winter road route is planned; these routes are already disturbed. The operation will cease prior to spring break-up. Sand/gravel used for traction control on the portage on/off ramps, will be scraped off and left on a flat area on each portage at the end of each winter road season so that it is not washed into the lakes and streams during the spring freshet and create sedimentation issues. If snow fills are likely to cause greater erosion than normal during the Spring freshet, the snow fill will be removed and moved away from the depression or ravine to prevent excessive erosion. Standard permit conditions require efforts to minimize erosion and obstructions to natural drainage.

permafrost regime alteration

explosives/scarring

other:

N/A

Impact

5) Non-renewable natural resources

Mitigation

resource depletion

other:

N/A

Impact

6) Air/climate/atmosphere

Mitigation

other: emissions

There will be localized increase in vehicle emissions associated with the operation of heavy equipment and movement of vehicles along the winter road route. No mitigation identified.

N/A

BIOLOGICAL ENVIRONMENT

Impact

1) Vegetation

Mitigation

species composition

species introduction

Check vehicles and equipment entering or leaving the project for dirt or plant propagules.

toxin/heavy accumulation

other: Linear Migration routes, habitat fragmentation

There will be some removal of vegetation that has overgrown the original winter road route. Vegetation clearing will be minimized to brushing and danger tree removal only.

N/A

Impact

2) Wildlife and Fish

Mitigation

effects on rare, threatened or endangered species

There is a potential for impacts on listed or pre-listed species under COSEWIC and SARA. Mitigation includes the use of food handling and garbage disposal procedures that do not attract wildlife and strict speed limits, signage, and use of convoys to limit wildlife collisions. NTPC will assign a Project Monitor who will be responsible to ensure compliance with the Wildlife Management and Monitoring Plan and other safety and environmental policies.

fish population changes

Water withdrawal follow the DFO *Protocol for Winter Water Withdrawal from Ice-covered Waterbodies in the Northwest Territories and Nunavut*.

waterfowl population

changes

- breeding disturbance
- population reduction
- species diversity change
- health changes
- behavioural changes

Local wildlife may avoid or be attracted to the area due to the operation of winter road construction equipment and the increased movement of traffic in the area. Strict rules for drivers will be enforced to avoid potential for wildlife habituation (e.g. feeding wildlife, leaving refuse) and accidental wildlife strikes. This impact will be localized and temporary, no additional mitigation.

- habitat changes / effects

The winter road alignment has been previously disturbed and minimal vegetation clearing (brushing and danger tree removal) is required to reopen the road. Road construction techniques will avoid impacts to beaver dams crossed by the winter road where possible. Encasing the dam with ice during construction supports the structure of the dam and provides load-bearing strength. Maintaining the integrity of beaver dams is critical to maintain water levels under the ice and effectively support the weight of vehicles. Beaver lodges and other features will be avoided when establishing the road alignment. Any impacts to habitat as a result of spills should be mitigated through proper equipment maintenance, training, and adherence to standard conditions and Spill and Waste Management Plans should mitigate impacts.

- game species effects

The existing road alignment is used by hunters its reopening would likely further facilitate vehicle and snowmobile access, increasing harvest levels. Project staff and contractors will be prohibited from hunting, fishing, and trapping.

- toxins/ heavy metals

Fish and wildlife exposure to emissions and fuel and oil spills is expected to be minimal. Proper equipment maintenance and adherence to standard conditions and Spill and Waste Management Plans should mitigate impacts.

- forestry changes

- agricultural changes

- other:

- N/A

Interacting Environment

Impact

1) Habitat and Communities

Mitigation

- predator-prey

The road currently functions as a convenient wildlife corridor and provides a line of sight for predators. Road design will incorporate regular 'jump-outs' along the length of the winter road to allow wildlife to safely vacate.

- wildlife habitat/ecosystem composition changes

- reduction/removal of keystone or endangered species

- removal of wildlife corridor or buffer zone

- other:

- N/A

Impact

2) Social and Economic

Mitigation

- planning/zoning changes or conflicts
- increase in urban facilities or services use
- rental house
- airport operations/capacity changes
- human health hazard
- impair the recreational use of water or aesthetic quality
- affect water use for other purposes
- affect other land use operations
- quality of life changes
- public concern
- other:
- N/A

Impact

3) Cultural and Heritage

Mitigation

- effects to historic property
- increased economic pressure on historic properties
- change to or loss of historic resources
- change to or loss of archaeological resources
- increased pressure on archaeological sites
- change to or loss of aesthetically important sites

effects to aboriginal lifestyle

The area proposed to be used in this land use permit is used by active hunters and trappers.

other:

A Compensation Agreement has been negotiated with Ken Schaefer, trapper.

N/A

- Pursuant to Schedule 4.1 of the **Northwest Territory Métis Nation (NWTMN)** Interim Measures Agreement, the MVLWB determined that written notice was given to the NWTMN and that a reasonable period of time was allowed for NWTMN to make representations with respect to the application.

- Pursuant to subsection 1.6, paragraphs (a) and (b) of the **Akaiicho Territory Dene First Nations (ATDFN)** Interim Measures Agreement, the MVLWB determined that written notice was given to the ATDFN and that a reasonable period of time was allowed for ATDFN to make representations with respect to the Application.

Preliminary Screener / Referring Body Information

Akaiicho IMA Implementation Office
 Bathurst Inlet Development Ltd. Warner
 Bathurst Inlet Lodge Taylor
 BNT Gold Resources Ltd.
 CanNor NWT Region Paradis
 City of Yellowknife
 Dene Nation
 Deninu K'ue First Nation
 Det'on Cho Corporation
 Environment and Climate Change Canada
 Fisheries and Oceans Canada Fisheries Protection Program Triage Group
 Fort Resolution Metis Council King
 Forward Mining Mauchan
 GNWT - ECE
 GNWT - ENR
 GNWT - Health
 GNWT - INF
 GNWT- ITI
 GNWT - Lands
 GNWT - Lands
 GNWT - MACA
 Golder Associates
 Hamlet of Fort Resolution
 INAC-CARD
 INAC-Inspectors
 Katlodeeche First Nation
 Lutsel K'e Dene First Nation
 Mackenzie Valley Environmental Impact Review Board
 Manitoba Denesuline
 National Energy Board
 North Slave Metis Alliance
 Northwest Territory Metis Nation
 NWT & Nunavut Chamber of Mines
 NWT- OROGO
 Salt River First Nation
 Smith's Landing First Nation
 Snap Lake Environmental Monitoring Agency
 Tlicho Government
 Town of Fort Smith Hood
 Wek' eezhii Renewable Resources Board
 West Point First Nation Ireland
 WLWB
 Workers' Safety and Compensation Commission
 Yellowknives Dene First Nation

Reasons For Decision

(List all reasons and supporting rationales for preliminary screening decision)

DECISION

The Mackenzie Valley Land and Water Board (the Board) is satisfied that the preliminary screening of Application MV2019L8-0008 and MV2019F0015, Northwest Territories Power Corporation, Taltson Winter Road, Fort Smith to Taltson Hydroelectric Facility, NT has been completed in accordance with section 125 of the *Mackenzie Valley Resource Management Act* (MVRMA).

The Board is satisfied that communities and First Nations affected by the Application have been notified and provided adequate time to provide comment on the Application as required by land claim and self government agreements, the MVRMA, policy directions relating to Interim Measures Agreements, and any other applicable legislation and agreements.

Having reviewed all relevant evidence on the Public Registry, including the submissions of the Applicant, the written comments received by the Board and any Staff Reports prepared for the Board, the Board has decided that in its opinion:

- The proposed development will not have a significant adverse impact on the environment; and
- The proposed development is not a cause of public concern.

The Board is also of the opinion that the Application can proceed through the regulatory process and that any impacts of the development on the environment can be mitigated through the imposition of the terms and conditions in the attached Land Use Permit and Water Licence.

As a result, the Board, having due regard to the facts and circumstances, the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA and the Mackenzie Valley Land Use Regulations and the *Waters Act* and Waters Regulations has decided that this Land Use Permit and Water Licence be issued subject to the terms and conditions contained therein.

Preliminary Screening Decision	
<input checked="" type="checkbox"/>	Outside Local Government Boundaries
<input type="checkbox"/>	The development proposal might have a significant adverse impact on the environment, <i>refer it to the EIRB.</i>
<input checked="" type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="checkbox"/>	The development proposal might have public concern, <i>refer it to the EIRB.</i>
<input checked="" type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="checkbox"/>	Wholly Within Local Government Boundaries
<input type="checkbox"/>	The development proposal is likely to have a significant adverse impact on air, water or renewable resources, <i>refer it to the EIRB.</i>
<input type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="checkbox"/>	The development proposal might have public concern, <i>refer it to the EIRB.</i>
<input type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>

Preliminary Screening Organization

Mackenzie Valley Land and Water Board

July 22, 2019

Signatures

Mavis Cli-Michaud, Chair