

**Preliminary Screening Report Form**

<b>Preliminary screener:</b> MVLWB <b>Reference / File number:</b> MV2014L3-0008 <b>TITLE:</b> Municipal Water Licence, Fort Resolution <b>ORGANIZATION:</b> Hamlet of Fort Resolution <b>MEETING DATE:</b> December 3, 2015	<b>EIRB Reference number:</b>
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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**

- Water intake through a submerged intake line from Resolution Bay on Great Slave Lake, immediately south of the Slave River Delta. Intake is not to exceed 90,000 cubic metres per year.
- Water treatment at the existing Water Treatment Plant.
- Deposit of solid waste at the existing Solid Waste Disposal Facilities.
- Sewage disposal at the existing Sewage Disposal Facilities.

**Scope**

This Licence entitles the Licensee to use Water and dispose of Waste for the purpose of municipal undertakings at the Hamlet of Fort Resolution, Northwest Territories.

Land Use Eligibility - Section 18 Mackenzie Valley Land Use Regulations

**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

**Principal Activities (related to scoping)**

(CHECK ALL THAT APPLY)

- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Construction</li> <li><input type="checkbox"/> Installation</li> <li><input checked="" type="checkbox"/> Maintenance</li> <li><input checked="" type="checkbox"/> Expansion</li> <li><input checked="" type="checkbox"/> Operation</li> <li><input type="checkbox"/> Repair</li> <li><input type="checkbox"/> Research</li> <li><input checked="" type="checkbox"/> Water Intake</li> <li><input type="checkbox"/> Other:</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Exploration</li> <li><input type="checkbox"/> Industrial</li> <li><input type="checkbox"/> Recreation</li> <li><input checked="" type="checkbox"/> Municipal</li> <li><input type="checkbox"/> Quarry</li> <li><input type="checkbox"/> Linear / Corridor</li> <li><input checked="" type="checkbox"/> Sewage</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Decommissioning</li> <li><input type="checkbox"/> Abandonment</li> <li><input type="checkbox"/> Aerial</li> <li><input type="checkbox"/> Harvesting</li> <li><input type="checkbox"/> Camp</li> <li><input type="checkbox"/> Scientific/</li> <li><input checked="" type="checkbox"/> Solid Waste</li> </ul> |
|---|--|--|

**Principal Development Components (related to scoping)**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> Access Road                     <ul style="list-style-type: none"> <li><input type="checkbox"/> construction</li> <li><input type="checkbox"/> abandonment/removal</li> <li><input type="checkbox"/> modification e.g., widening, straightening</li> </ul> </li> <li><input checked="" type="checkbox"/> Automobile, Aircraft or Vessel Movement</li> <li><input type="checkbox"/> Blasting</li> <li><input checked="" type="checkbox"/> Building</li> <li><input type="checkbox"/> Burning</li> <li><input checked="" type="checkbox"/> Burying</li> <li><input type="checkbox"/> Channelling</li> <li><input type="checkbox"/> Cut and Fill</li> <li><input type="checkbox"/> Cutting of Trees or Removal of Vegetation</li> <li><input checked="" type="checkbox"/> Dams and Impoundments                     <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> construction</li> <li><input checked="" type="checkbox"/> abandonment/removal</li> <li><input checked="" type="checkbox"/> modification</li> </ul> </li> <li><input type="checkbox"/> Ditch Construction</li> <li><input checked="" type="checkbox"/> Drainage Alteration</li> <li><input type="checkbox"/> Drilling other than Geoscientific</li> </ul> | <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Waste Management                     <ul style="list-style-type: none"> <li><input type="checkbox"/> disposal of hazardous waste</li> <li><input checked="" type="checkbox"/> waste generation</li> <li><input checked="" type="checkbox"/> sewage</li> <li><input checked="" type="checkbox"/> disposal of sewage</li> </ul> </li> <li><input type="checkbox"/> Geoscientific Sampling</li> <li><input type="checkbox"/> Trenching</li> <li><input type="checkbox"/> Diamond drill</li> <li><input type="checkbox"/> Borehole core sampling</li> <li><input type="checkbox"/> Bulk soil sampling                     <ul style="list-style-type: none"> <li><input type="checkbox"/> gravel</li> <li><input type="checkbox"/> hydrological Testing</li> </ul> </li> <li><input checked="" type="checkbox"/> Site Restoration                     <ul style="list-style-type: none"> <li><input type="checkbox"/> fertilization</li> <li><input type="checkbox"/> grubbing</li> <li><input type="checkbox"/> planting/seeding</li> <li><input type="checkbox"/> reforestation</li> <li><input type="checkbox"/> scarify</li> <li><input type="checkbox"/> spraying</li> </ul> </li> </ul> |
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- Ecological Surveys
- Excavation
- Explosive Storage
- Fuel Storage
- Topsoil, Overburden or Soil
  - fill
  - disposal
  - removal
  - storage

- re-contouring
- Slashing and removal of vegetation
- Soil Testing
- Stream Crossing/Bridging
- Tunnelling/Underground
- Other:

**NTS topographic map sheet numbers:**  
85 H 04

**Latitude / longitude and UTM system:**  
61°11' N, 113°40' W

**Nearest community and water body:**  
Fort Resolution, Great Slave Lake

**Land Status (consultation information)**

- Free Hold/Private
- Commissioner's/Territorial Lands
- Federal Crown Land
- 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**

<b>Impact</b>	<b>Mitigation</b>	<b>Location of condition</b>
<b>1) Ground Water</b>		
<input type="checkbox"/> water table alteration		
<input checked="" type="checkbox"/> water quality changes	Groundwater contamination may occur in the event of a sewage or fuel spill. Fort Resolution has a Spill Contingency Plan and appropriate equipment.	Part H
	The community does not currently have a designated household hazardous waste area at the landfill. The WL requires creation of a Waste segregation area for household/municipal hazardous Waste to the satisfaction of an Inspector within one year following issuance.	Part D, item 14
	The disposal of waste at the Solid Waste and Sewage Disposal Facilities could impact groundwater. The sewage lagoon operates as a facultative infiltration lagoon, therefore wastewater seeps into the groundwater and follows the groundwater flow, which ultimately discharges into a wetland system about 400 metres north of the sewage lagoons. Runoff from the landfill will also drain downslope to the wetland and may seep into groundwater.	
	SNP site sampling will allow the Hamlet and Inspector to monitor runoff from these facilities and determine whether contamination is occurring.	Annex A
<input type="checkbox"/> infiltration changes		
<input type="checkbox"/> other:		
<input type="checkbox"/> N/A		

<b>Impact</b>	<b>Mitigation</b>	<b>Location of condition</b>
<b>2) Surface Water</b>		
<input type="checkbox"/> flow or level changes		
<input checked="" type="checkbox"/> water quality changes	Surface water may be contaminated in the event of a sewage or fuel spill. Fort Resolution has a Spill Contingency Plan and appropriate equipment to clean up spills.	Part H
		Part D, item 14

The community does not currently have a designated household hazardous waste area at the landfill. The WL requires creation of a Waste segregation area for household/municipal hazardous Waste to the satisfaction of an Inspector within one year following issuance.

Part D, item 7 and Annex A

To monitor and regulate any changes to potential changes in water quality, effluent quality criteria have been included in the Water License. The Surveillance Network Program has also been annexed to this License, which requires the Hamlet to monitor six (6) SNP stations.

Residuals from the Water Treatment Plant (backwash and sediment) are pumped to a waste sump which periodically discharges to Resolution Bay on Great Slave Lake. There is a condition in the Licence requiring the submission of a Plan for the Management of Water Treatment Residuals to ensure that potential impacts due to WTP practices are mitigated.

Part D, item 3

water quantity changes

The amount of water that can be used by the Hamlet is specified in the Licence. The water is to be drawn from Great Slave Lake or as otherwise approved by the Board, as per Part C, Item 1. By removing this amount from the Great Slave Lake, there should not be a decrease in water quantity.

Part C, Item 2

drainage pattern changes

temperature

wetland changes/loss

Wastewater from the sewage lagoon seeps into the groundwater and follows the groundwater flow, which ultimately discharges into a wetland system about 400 metres further north. Runoff from the landfill will also drain downslope to the wetland.

SNP site sampling will allow the Hamlet and Inspector to monitor runoff from these facilities and determine whether contamination is occurring in the wetlands.

Annex A

other:

N/A

**Impact**  
**3) Noise**

**Mitigation**

**Location of condition**

noise in/near water

noise increase

other:

N/A

**Impact**  
**4) Land**

**Mitigation**

**Location of condition**

geologic structure changes

soil contamination

Soil contamination may occur in the event of a sewage or fuel spill. Fort Resolution has a Spill Contingency Plan and appropriate equipment to clean up spills.

Part H

The community does not currently have a designated household hazardous waste area at the landfill. The WL requires creation of a Waste segregation area for household/municipal hazardous Waste to the satisfaction of an Inspector within one year following issuance.

Part D, item 14

The disposal of waste at the landfill could contaminate surrounding soil layers. SNP site sampling will monitor runoff from the landfill site. The Licence requires submission of an updated Operations and Maintenance Plan for the landfill which requires a plan for the management of all existing and new hazardous waste.

Part E

The Licence contains a condition requiring a minimum freeboard of 1 meter for the sewage exfiltration trench. A Plan to Address the Freeboard Requirement at Cell 1 of the Sewage Disposal Facilities is due within 9 months of issuance.

Part D, items 5 and 6

buffer zone loss

soil compaction and settling

Soil is compacted during the operation of the solid waste facility due to the movement of equipment and compaction of the garbage. By compacting the garbage the community is able to utilize less land area, thus limiting the amount of disturbed area.

destabilization/erosion

Damage to the beach and shoreline of Resolution Bay on Great Slave Lake is possible from the periodic discharge of Water Treatment Plant residuals into the bay. There is a condition in the Licence requiring the submission of a Plan for the Management of Water Treatment Residuals to ensure that any impacts from WTP practices are mitigated.

Part D, item 3

permafrost regime alteration

explosives/scarring

other:

N/A

**Impact**

**5) Non-renewable natural resources**

**Mitigation**

**Location of condition**

resource depletion

other:

N/A

**Impact**

**6) Air/climate/atmosphere**

**Mitigation**

**Location of condition**

other: Noxious odours

Noxious odours emitted from the sewage lagoon are mitigated by their location away from the community.

N/A

**BIOLOGICAL ENVIRONMENT**

**Impact**

**1) Vegetation**

**Mitigation**

**Location of condition**

species composition

Vegetation could be impacted in the event of a spill or by wind transported litter.

Fort Resolution has a Spill Contingency Plan and appropriate equipment to clean up spills.

Part H

The Licence contains a condition requiring a Solid Waste Disposal Facility Fencing Plan within 6 months of issuance which will include methods to be used to capture windswept waste. Fencing shall be installed within one year of issuance.

Part D, item 15

The community will maintain a minimum operating freeboard for the sewage exfiltration trench to ensure there is no accidental spill of sewage to the surrounding area.

Part D, item 5

species introduction

toxin/heavy accumulation

The disposal and storage of waste could impact local vegetation. There is a possibility of accumulation of toxins from the sewage exfiltration trench, and contaminants leaching out from the landfill.

The community does not currently have a designated household hazardous waste area at the landfill. The Licence requires creation of a Waste segregation area for household/municipal hazardous Waste to the satisfaction of an Inspector within one year following issuance.

Part D, item 14

SNP site sampling will allow the Hamlet and Inspector to monitor runoff from these facilities and determine whether contamination is occurring in the wetlands.

Annex A

other: Linear Migration routes,

habitat fragmentation

N/A

**Impact**  
2) **Wildlife and Fish**

**Mitigation**

**Location of condition**

effects on rare, threatened or endangered species

fish population changes

A DFO approved screen shall be used on the water intake to ensure there is no entrainment of fish.

Part C, item 3

waterfowl population changes

breeding disturbance

population reduction

Wildlife species that have scavenged at the landfill, such as bears, may be affected if problem animals that have been attracted to the landfill need to be killed.

The Licence contains a condition requiring a Solid Waste Disposal Facility Fencing Plan within 6 months of issuance which will include methods to be used to deter wildlife from entering the site. Fencing shall be installed within one year of issuance.

Part D, item 15

species diversity change

health changes

behavioural changes

Bears and other wildlife may be attracted to the landfill.

The Licence contains a condition requiring a Solid Waste Disposal Facility Fencing Plan within 6 months of issuance which will include methods to be used to deter wildlife from entering the site. Fencing shall be installed within one year of issuance.

Part D, item 15

Conditions included in the Operation and Maintenance Plan are intended to control potential wildlife attractions, such as prevention of windblown debris, segregation of domestic, metal and recyclable waste materials, and method and frequency of site maintenance.

Part E  
and Schedule 2

habitat changes / effects

The quality of the water downstream of the sewage and waste disposal facilities at the wetland is regulated through the effluent quality criteria in the License and monitored by the Surveillance Network Program annexed to the License.

Part D, item 7  
and Annex A

game species effects

toxins/ heavy metals

There is a possibility of accumulation of toxins from the sewage exfiltration trench, and contaminants leaching out from the landfill. The disposal and storage of waste could impact local vegetation.

SNP site sampling will monitor any runoff from the sewage and solid waste disposal sites.

Annex A

The Licence requires creation of a Waste segregation area for household/municipal hazardous Waste to the satisfaction of an Inspector within one year following issuance.

Part D, item 14

forestry changes

agricultural changes

other:

N/A

**Interacting Environment**

**Impact**  
1) **Habitat and Communities**

**Mitigation**

**Location of condition**

predator-prey

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**

**Location of condition**

- planning/zoning changes or conflicts
- increase in urban facilities or services use
- rental house
- airport operations/capacity changes
- human health hazard

The release of sewage effluent from the sewage exfiltration trench could pose a health hazard.

The Licence contains a condition requiring a minimum freeboard of 1 meter for the sewage exfiltration trench. A Plan to Address the Freeboard Requirement at Cell 1 of the Sewage Disposal Facilities is due within 9 months of issuance.

Part D, items 5 and 6

Wastewater from the sewage lagoon seeps into the groundwater and follows the groundwater flow, which ultimately discharges into a wetland system about 400 metres further north. Runoff from the landfill will also drain downslope to the wetland.

Part D, item 9

The quality of the water downstream of the sewage and waste disposal facilities at the wetland is regulated through the effluent quality criteria in the License and monitored by the Surveillance Network Program annexed to the License.

Part D, item 7  
 And Annex A

A fence shall be installed around the sewage lagoon within one year of issuance as per the requirements of the *Public Health Act*.

- impair the recreational use of water or aesthetic quality

Residuals (backwash and sediment) that are periodically discharged from the waste sump next to the Water Treatment Plant into Resolution Bay could impact the aesthetic quality of the beach and local water.

There is a condition in the Licence requiring the submission of a Plan for the Management of Water Treatment Residuals to ensure that potential impacts due to WTP practices are mitigated.

Part D, item 3

- 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**

**Location of condition**

- 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
- other:
- 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**

AANDC
AANDC-CARD
Adventure Northwest
Akaiicho IMA Implementation Office
Bathurst Inlet Lodge
Boxxer Gold Corp.
Canadian Northern Economic Development Agency
CanNor NWT Region
City of Yellowknife
Dene Nation
Deninu K'ue First Nation
Ecology North
Environment Canada
Fisheries and Oceans Canada
Fort Resolution Metis Council
Fort Smith Metis Council
GNWT
GNWT - Department of Transportation
GNWT - Environment and Natural Resources
GNWT - Health
GNWT - ITI
GNWT - Lands
GNWT - MACA
GNWT - Prince of Wales Northern Heritage Centre

Golder Associates
Gov of Canada
Hamlet of Enterprise
Hamlet of Fort Resolution
Hay River Metis Council
Katlodeeche First Nation
Kivalliq Inuit Association
Land and Water Board Staff
Lutsel K'e Dene First Nation - Chief or Wildlife, Lands
Mackenzie Valley Environmental Impact Review Board
Manitoba Denesuline
MVLWB
National Energy Board
North Slave Metis Alliance
Northwest Territory Metis Nation
NWT Metis Nation
Salt River First Nations
Smith Landing First Nation
Snap Lake Environmental Monitoring Agency - SLEMA
Town of Fort Smith
Town of Hay River
West Point First Nation
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 MV2014L3-0008, Hamlet of Fort Resolution, Fort Resolution 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 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 *Waters Act*, has decided that this Water Licence be issued subject to the terms and conditions contained therein.

<b>Preliminary Screening Decision</b>	
<input type="checkbox"/>	<b>Outside Local Government Boundaries</b>
<input type="checkbox"/>	The development proposal might have a significant adverse impact on the environment, <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>
<input checked="" type="checkbox"/>	<b>Wholly Within Local Government Boundaries</b>
<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 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>

**Preliminary Screening Organization**

Mackenzie Valley Land and Water Board

December 3, 2015

**Signatures**

