



**BACK RIVER PROJECT
Road Management Plan**

March 2021

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Appendix A. Applicable Legislation

Revision Log

Date	Section	Page	Revision
October 2017	All	All	Supporting Document for Type A Water Licence Application, submitted to Nunavut Water Board for review and approval
March 2021	All	All	Revision to address requirements of Project Certificate No. 007 and Water Licence 2AM-BRP1831 and related commitments and to reflect the Project changes outlined in Sabina’s 2020 Modification Package

Acronyms

AEMP	Aquatic Effects Monitoring Plan
AQMMP	Air Quality Monitoring and Management Plan
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
DFO	Fisheries and Oceans Canada
FEIS	Final Environmental Impact Statement
GNWT	Government of Northwest Territories
INAC	Indigenous and Northern Affairs Canada; currently known as Crown-Indigenous Relations and Northern Affairs Canada
KIA	Kitikmeot Inuit Association
MAD	Main Application Document
MLA	Marine Laydown Area
NWB	Nunavut Water Board
Project	Back River Project
RMP or Plan	Road Management Plan
Sabina	Sabina Gold & Silver Corp.
WIR	Winter Ice Road

Introduction

The Back River Project (the Project) is a gold project owned by Sabina Gold & Silver Corp. (Sabina) within the West Kitikmeot region of southwestern Nunavut. It is situated approximately 400 kilometres (km) southwest of Cambridge Bay, 95 km southeast of the southern end of Bathurst Inlet, and 520 km northeast of Yellowknife, Northwest Territories. The Project is located predominantly within the Queen Maud Gulf Watershed (Nunavut Water Regulations, Schedule 4).

The Project is comprised of two main areas, Goose Property and the Marine Laydown Area (MLA), with interconnecting winter ice roads. The majority of annual resupply will be completed using the MLA situated along the western shore of southern Bathurst Inlet, which is connected seasonally to Goose Property via an approximately 160 km long winter ice road (WIR). Both the Goose Property and the MLA make use of local networks of all weather roads and pads.

The Road Management Plan (RMP or Plan) describes how Sabina intends to implement a range of environmental management, mitigation, and monitoring measures related to the design, construction, maintenance, and use of the winter ice roads and all-weather roads and airstrips. These measures outline how Sabina will avoid, minimize, mitigate and/or manage to an acceptable level, the potential adverse effects on the environment associated with Project Roads.

The RMP has been constructed in consideration of all applicable guidelines and requirements, including those of Project Certificate No. 007 and Water Licence 2AM-BRP1831. This Plan will be reviewed and updated as needed to reflect changes in regulatory requirements, facility operation or maintenance, results of environmental monitoring, management reviews, incident investigations, best practice updates or other Project-specific protocols.

Any updates to this Plan will be filed with the Nunavut Impact Review Board (NIRB) and the Nunavut Water Board (NWB) with the submission of the annual reports as per the requirements of the Project Certificate No. 007 and Water Licence 2AM-BRP1831.

1. Scope and Objectives

The purpose of this Plan is to outline and address the requirements related to the WIR and all-weather road construction, use, management, and monitoring and applies to all Sabina projects in the Kitikmeot region.

The Plan outlines construction, operation, and management of access and terrestrial transportation for the Project including construction and operation of all-weather roads and airstrips, WIRs, trails.

All Project roads are private and for the exclusive use of Sabina's operations.

The measures identified in this Plan are intended to protect water quality, fish habitat, terrestrial wildlife, health and safety of employees, and cultural and heritage resources during construction and use of the transportation corridors.

1.1 RELATED PLANS AND STUDIES

This Plan is intended for use in conjunction with the following Plans:

- Vegetation Monitoring Plan
- Spill Contingency Plan;
- Hazardous Materials Management Plan;
- Environmental Management and Protection Plan;
- Water Management Plan (WMP);
- Borrow Pits and Quarry Management Plan;
- Interim Closure and Reclamation Plan;
- Aquatic Effects Management Plan (AEMP);
- Risk Management and Emergency Response Plan;
- Socio-Economic Monitoring Plan (SEMP);
- Air Quality Monitoring and Management Plan (AQMMP); and
- Wildlife Mitigation and Monitoring Plan (WMMP).

2. Applicable Legislation and Guidelines

The RMP has been prepared to comply with existing regulations and follow the available guidelines provided by the federal government and the government of Nunavut. Applicable regulations are provided in Appendix A.

In addition, the following guidance documents have also been used to inform the design and management decisions presented in the Plan:

- Northern Land Use Guidelines Access: Roads and Trails (INAC 2010);
- Aerodrome Standards and Recommended Practices (Transport Canada 2005);
- Geometric Guidelines (Roads and Transportation 1986);
- Protocol for Winter Water Withdrawal from Ice-Covered Waterbodies in the Northwest Territories and Nunavut (DFO 2010);
- Environmental Guidelines for the Construction, Maintenance and Closure of Winter Roads in the Northwest Territories (GNWT DoT 1993); and
- Guidelines for Safe Ice Construction (GNWT DoT 2015).

Road and airstrip construction and use will also adhere to applicable requirements of Project Certificate No. 007, Water Licence 2AM-BRP1831, and all relevant land leases, permits, authorizations, and approvals.

3. Roles and Responsibilities

The implementation of the management, mitigation, and adaptive management specified in this Plan and the ultimate success of the mitigation measures will be the responsibility of the Construction Manager during Construction and the General Mine Manager during Operations. The Construction or General Manager will approve all relevant policies and documents, auditing, action planning, and the verification process.

The Environmental Manager, along with his/her direct reports, is responsible for monitoring the effective implementation of this Plan and for all external reporting. The Environmental Manager will also ensure any concerning results are communicated to the Construction Manager/General Manager for the implementation of adaptive management and will ensure this Plan is reviewed and revised as needed.

The Environmental Manager, along with their direct reports, are responsible for:

- Supporting Plan review and revision;
- Monitoring;
- Internal reporting;
- External reporting; and
- Verifying compliance and application of adaptive management.

4. Planning and Implementation

4.1 ALL-WEATHER ROADS

All-weather roads at the MLA and Goose Property consist of haul roads and service roads. Goose Property will have approximately 5 km of service roads and 10 km of haul roads. The MLA will have approximately 3 km of service roads and no haul roads.

Typical cross-sections of all-weather roads and watercourse crossings are shown in Figure 5.1-1. Studies, reports, and plans relevant to the design of all-weather road infrastructure are presented in Section 2.1.

4.1.1 Design Criteria for All-weather Roads

4.1.1.1 Haul Roads

Design criteria were determined considering the *Mine Health and Safety Act* (Northwest Territories and Nunavut) and the appropriate Transportation Association of Canada Geometric Guidelines. The following design criteria were used for the haul roads:

- Design vehicle: Cat 775G or similar;
- Minimum width of travelling surface: 20 m;
- Design speed: 60 km/h;
- Side slopes: 2H:1V;
- Maximum grade: 10%;
- Safety berms for fills greater than 3 m in height: 1.1 m; and

Drainage: major culverts and bridges are generally designed to a 1-in-100-year return period.

Where there is combined haul and service traffic on a road, surfacing gravel will be used.

4.1.1.2 Service Roads

Service roads are used for smaller vehicles (i.e., light trucks) to access ancillary infrastructure, such as water supply sources, Goose Airstrip, and explosives storage facility. The following design criteria were used for the service roads:

- Design vehicle: light/medium truck;
- Minimum width of travelling surface: 4.5 m for single-lane or 8 m for double-lane;
- Design speed: 50 km/h;
- Side slopes: 2H:1V;
- Maximum grade: 10%;
- Safety berms for fills greater than 3 m in height: 0.55 m; and

Drainage: major culverts and bridges to be generally designed to a 1-in-100-year return period.

Surface gravel will be used on all service roads.

4.1.2 Construction of All-weather Roads

All-weather roads will be constructed with run-of-mine or run-of-quarry rock placed directly onto the tundra to preserve the permafrost. A layer of graded surfacing material will be placed to provide a protective trafficking layer. Construction materials will be sourced from locally developed geochemically suitable overburden and rock quarries as described in the Borrow Pits and Quarry Management Plan.

4.1.2.1 Geotechnical Recommendations

The understanding of ground conditions for design and engineering of Goose Plant Site infrastructure, including all-weather roads, has been informed by geotechnical investigations including test pits, drill holes, thermistor installations, and a variety of laboratory and in-situ testing. Geotechnical design is also supported by ERM Rescan's 2014 Cumulative Permafrost Baseline Data Report which includes observations

on active layer freeze-thaw cycle and active layer depth from 2007 to 2014. Additional details are provided in the Site-Wide Geotechnical Properties Report (MAD Appendix F-2).

All-weather road preparation will heed the following recommendations from geotechnical investigations and thermal modelling for the Goose Plant Site for unheated infrastructure such as roads, pipelines, and airstrips where some differential settlement is acceptable (MAD Appendix F-2):

- 1.0 m compacted run-of-quarry rock-fill pad (or geochemically suitable waste rock) on top of undisturbed grade for service roads;
 - maximum rock size limited to 0.9 m.
- 1.5 to 2.0 m thickness for haul roads to minimize deformation;
 - maximum rock size limited to 0.9 m.
- Rock shatter required where roads cross over rock highs that impact road grade.
- 150 mm of 2" minus topping directly on top of rock-fill pad for trafficability (no need for intermediate 6" minus layer).

4.1.3 Water Crossings

All-weather roads will include four stream crossings, all of which are situated on the Goose Property. Most of the streams will be dry most of the year, but there may be considerable flow during freshet.

Stream crossing designs are waterbody-specific. In general, two types of culverts are considered for the site roads and airstrips:

- Non-fish-bearing crossings; and
- Fish-bearing crossings.

Non-fish-bearing stream crossings will consist of corrugated steel pipe and are currently designed with a diameter dependant on the required flow. A typical stream crossing design for non-fish-bearing crossings is presented in Figure 5.1-1.

Fish-bearing stream crossings will be designed to minimize Permanent Alteration to, or Destruction of, fish habitat, and conform with Fisheries and Oceans Canada (DFO) Measures to Avoid Causing Harm to Fish and Fish Habitat. At Gander Outflow, which serves as a migration corridor between Goose and Rascal lakes, the crossing will be designed to ensure that it does not present a velocity barrier to migrating Arctic Grayling. Additional details on the Gander Outflow Crossing can be found in the WMP. Detailed design drawings for fish-bearing stream crossings will be approved by DFO and provided to the NWB and NIRB at least 60 days prior to construction. Additional measures for the protection of Fish and Fish habitat related to the construction and operations of all-weather roads, including the construction, monitoring, and maintenance of stream crossings, are presented in Sections 5.1.5, 7.1.3, and 7.2.1.

No water courses will be diverted for the purpose of building roads. The potential effects of roads on water movement on site are addressed in the WMP.

4.1.4 Measures to Prevent Permafrost Degradation

Roads have been designed, and will be constructed, to reduce the potential for permafrost degradation. In non-permafrost areas, it is common for road designs to incorporate both cuts and fills to establish the

final grade along the alignment. In permafrost, disturbing sensitive overburden soils and surface vegetation can result in thaw degradation and the creation of unstable ground. Consequently, the Project's all-weather roads will be constructed using limited cuts, with embankment construction favoured to establish the final grade where possible. Embankment material will be sourced from quarries near the road alignment.

Thermal modelling indicates that a run-of-quarry (or geochemically suitable waste rock) haul road thickness of 1.5 to 2-m thick will minimize deformation. Where thinner fill is used, and for roads constructed during summer, some thaw consolidation is expected. Once the active layer is re-established, which would likely be achieved within one or two seasons, no further settlement is expected. Where possible, roads will be constructed in winter months, when soils are frozen, to prevent permafrost degradation and limit differential settlement. More detail can be found in the MAD, Appendix F-2.

The potential for permafrost degradation associated with all-weather roads will be reduced through the incorporation of the following design road features and approaches to construction:

- Avoiding ice-rich, poorly-drained, frost-susceptible soil conditions where possible favouring higher, more competent, well-drained ground;
- Placing road fill directly on top of overburden soil and limiting cuts that can lead to thaw degradation;
- Removing accumulated snow before placing fill;
- Increasing road fill thickness in areas with thaw susceptible soils where necessary; and
- Constructing roads in winter months, when possible, over frozen ground conditions.

4.1.5 Measures to Protect Fish and Fish Habitat

Sabina is committed to ensuring that serious harm to fish is avoided where possible, in compliance with the *Fisheries Act*, when undertaking construction or operations near water. Fish-bearing or potentially fish bearing waterbodies were identified through baseline studies.

Sabina will implement all applicable recommended measures to reducing potential effects on fish and fish habitat, where possible, including those related to Project planning, erosion and sediment control, shoreline re-vegetation and stabilization, fish protection, and the operation of machinery, as per DFO's Measures to Avoid Causing Harm to Fish and Fish Habitat (<http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/index-eng.html>). The timing of in-water construction activities will conform, when possible, to Nunavut timing windows for the protection of fish and their habitat.

The construction and maintenance of all stream crossings, roads, and berms will follow DFO's Measures to Avoid Causing Harm to Fish and Fish Habitat. The exact management, monitoring, and mitigations measures to be used will be detailed in Sabina's Request for Review submitted to DFO. These requirements must be adhered to during construction activities, and may include:

- Design and plan in-water activities and works such that loss or disturbance to aquatic habitat is minimized and sensitive spawning habitats are avoided;
- Instream work will be conducted during approved timing windows presented in the DFO's advice, "Measures to Avoid Causing Harm to Fish and Fish Habitat" (DFO 2013);

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- Where possible, approaches will be designed to be perpendicular to the watercourse to minimize loss or disturbance to riparian vegetation;
- Instream activities will be undertaken in isolation of open or flowing water, or when frozen, to maintain the natural flow of water downstream and avoid introducing sediment into the watercourse;
- Effective erosion and sediment control measures will be installed before starting work to prevent sediment from entering the waterbody;
- Site isolation measures (e.g., silt boom or silt curtain) will be used to contain suspended sediment where in-water work is required;
- Regular inspection and maintenance of erosion and sediment control measures and structures will be conducted during the course of construction;
- Repairs to erosion and sediment control measures and structures will be promptly completed if damage occurs;
- Removal of non-biodegradable erosion and sediment control materials will be completed once site is stabilized;
- Clearing of riparian vegetation will be kept to a minimum to avoid disturbance to the riparian vegetation and prevent soil compaction;
- If replacement rock reinforcement/armouring is required to stabilize eroding or exposed areas, appropriately-sized, clean rock will be installed at a similar slope to maintain a uniform bank/shoreline and natural stream/shoreline alignment;
- All construction equipment and supplies will be removed from the construction site upon Project completion;
- Machinery will be in a clean condition and maintained free of fluid leaks, invasive species, and noxious weeds;
- Whenever possible, machinery will be operated on land above the high-water mark or on ice in a manner that minimizes disturbance to the banks and bed of the waterbody;
- Whenever possible, machine fording of a watercourse will be limited to a one-time event (i.e., over and back), and only if no alternative crossing method is available. If repeated crossings of the watercourse are required, a temporary crossing structure will be constructed;
- Service machinery will be washed, refuelled, and fuel and other materials for the machinery stored, in such a way to prevent any deleterious substances from entering the water; and
- Screens will be used on all water intake hoses and pumps to prevent fish entrapment.

Disposal of excavated material will be disposed of in a location above the ordinary high-water mark to ensure that this material does not enter the watercourse. Efforts shall be made to minimize the duration of any in-stream works and minimize disturbance at stream crossings. This practice will prevent the release of sediment or sediment-laden water into water frequented by fish. Exposed landscape surfaces will be protected, where possible, by the installation of covering material like riprap, aggregate, or rolled erosion control products. All in-stream works for waterbodies frequented by fish shall be completed in accordance with the relevant DFO Guidelines.

Sediment loading in runoff will be minimized by the application of measures to intercept Total Suspended Solids before it reaches the freshwater environment. Sediment control measures could include:

- Buffer zones to trap sediment and to reduce flow velocities;
- Installation of synthetic permeable barriers, fibre rolls, and/or silt fences as required;
- Installation of check dams, gabions, and sediment basins to reduce flow velocities and encourage sediment deposition; or
- Locating stockpiles well away from watercourses.

The effectiveness of sediment and erosion control and runoff collection measures will be monitored on a regular basis (daily or weekly, as appropriate) during construction.

The Environmental Manager, or their delegates, will be responsible for working with the construction team to ensure that culverts are installed in the correct location, appropriately aligned with respect to the watercourse, and installed in accordance with the approved design specifications. Adherence to these guidance documents will be verified through routine inspections of construction activities.

Once constructed, stream crossings will be monitored at periodically to ensure they remain free of barriers (e.g., ice, debris) that could affect fish passage including during freshet when the risk of ice jams is greatest (see Section 7.1.3).

4.1.6 Measures to Protect Wildlife

Mitigation and management measures aimed at minimizing the potential effects of the Project, including effects related to the construction and use of all weather roads, on wildlife are detailed in the WMMP. Mitigation and management measures for the protection of wildlife include road design (e.g., alignment, crossing structures), snowbank management, timing of operational periods, traffic management, precautions to be employed in the presence of wildlife, and wildlife mortality response and reporting.

4.2 WINTER ICE ROADS

Overland access between the Goose Property and the MLA is possible via the WIR each year while weather permits. During the Construction phase as well as prior to, equipment, materials, and supplies delivered mainly overland via the WIR to Goose Property will be staged at the MLA. WIRs are not planned to be constructed during temporary or permanent Closure; however, the WIR may be utilized during the Closure Phase to facilitate back-hauling of materials from Goose Property to the MLA for permanent disposal off-site.

The WIR between the MLA and Goose Property will be approximately 160 km long, travelling over both water and land. The George Exploration Camp could connect to this WIR by a winter spur road approximately 13 km in length.

Preparation of the WIR linking the MLA to Goose Property will be undertaken early winter. Once the WIR is ready for traffic, the equipment, materials, fuel, and supplies staged at the MLA will be transported by trucks over the WIR to Goose Property. The effective use and duration of a WIR depends on a number of variables, the most important of which are the climatic conditions (air temperatures and snowfall), surface conditions, the amount and type of traffic that will be using it, and wildlife concerns (e.g. caribou effects).

4.2.1 Design Criteria for Winter Ice Roads

The following design criteria were used for the WIRs:

- Road widths:

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- On Ice - minimum 30 m.
- On land - minimum 10 m, with maximum 5% grade.
- Operating speeds (maximum 60 km/h):
 - Loaded Trucks (>50% of maximum load limit):
 - 35 km/h on ice.
 - 40 km/h on land.
 - 10 km/h on and off portages (i.e., shoreline-lake transition points).
 - Empty Trucks (<50% of maximum load limit):
 - 60 km/h on ice.
 - 40 km/h on land.
- Load limits:
 - Table 5.2-1 provides minimum ice thickness and total allowable weight for various vehicle configurations.

Table 5.2-1. Load Limit at 100% of Highway Legal Gross Vehicle Weight

Vehicle Configuration	Minimum Ice Thickness (cm)	Total Allowable Weight (kg)
2-Axle Hotshot	66	14,600
3-Axle Hotshot	73	22,500
6-Axle Tractor Trailer	89	46,500
8 Axle Super B Train	99	63,500

4.2.2 Winter Ice Road Alignment

Environmental conditions determine the route selected for WIR corridors including:

- Ice of a sufficient thickness to support equipment so that pumping and using water to build up ice will be limited.
- Snow/ice thickness on land will be sufficient to prevent damage to soil and vegetation.

Weather conditions permit safe transport of equipment and materials.

In response to TK and a request by the KIA, the winter ice road north of Tahikafflok Lake (Bathurst Lake) was realigned to address potential effects to riparian zones identified during two local focus group workshops (Cambridge Bay Hunter Focus Group 2012; Kugluktuk Hunter Focus Group 2012). Sabina realigned a 5.5 km section of the winter road alignment away from the area identified. The WIR route has been assessed for archaeological effects and the Vegetation Monitoring Plan addresses the vegetation monitoring associated with the route including the collection of information prior to initial use.

4.2.3 Winter Ice Road Construction and Use

The “Guidelines for Safe Ice Construction” published by the Northwest Territories Department of Transportation (2015), as well as the Land Use Guidelines published for Government of Northwest Territories and Nunavut (INAC 2010) will guide the construction and maintenance requirements of the WIR. Further details on studies, reports, and plans relevant to the design of WIRs are presented in Section 2.1.

The WIR is anticipated to be constructed in early winter when the subgrade is frozen to a sufficient depth and the ice can support light tracked vehicles. Construction of the WIR will take approximately 45 days utilizing two work fronts from Goose Property and the MLA.

The WIR will be constructed over land and over ice. Overland crossings rely on a frozen subgrade to support the vehicle loads and a prepared surface layer to provide a level driving surface. Surface layers usually consist of compacted snow and/or ice where available. Ice-capped snow roads will be constructed for highway legal loads (e.g., B-trains). A discontinuous pad of granular fill may be required over short areas of rough terrain or where there is insufficient snow cover to create a smooth surface. If this is insufficient to provide an acceptable surface and gradient, additional grading effort may be required to create a road that meets the design criteria. Where fill material is required it will be sourced from approved quarries or borrows with geochemically suitable material as outlined in the Borrow Pits and Quarry Management Plan.

Roads that will be built over floating ice covers on lakes and rivers will be constructed based on the vehicles and loads to be transported. For B-train used, WIRs will be built to a minimum 30 m cleared width. This width is necessary to provide a 5-m buffer along the edges to separate the vehicle traffic from the thinner ice found under snow banks. This minimum width also provides additional lane width for when roads are blown with drifted snow. Snow banks will be managed carefully as they are an additional load on the ice, and the thinner ice underneath is prone to cracking and flooding. The final cleared width to account for floating ice covers will be determined during the next stages of the Project.

In high wind locations, it is often desirable to initially open the road to widths greater than the 30 m, which will provide space for the operational width to narrow due to snow drifting throughout the season to a minimum width of 30 m. The final cleared width to account for high wind locations may vary based on conditions or Project phase. Maintenance will be required over the operating season, with crews accommodated at both the MLA and Goose Property.

4.2.4 Water Use for Winter Ice Road Construction and Maintenance

Water will be drawn from pre-established freshwater sources along the alignment of the WIR. Seawater may also be used from Bathurst inlet, but only for application on the sea ice itself if not desalinated. Seawater use is not counted towards the Water Licence allotment.

Water withdrawal from freshwater sources will adhere to pre-determined maximum withdrawal allotments based on bathymetric data and DFO's Protocol for Winter Water Withdrawal from Ice-covered Waterbodies in the Northwest Territories and Nunavut (DFO 2010), and extensive evaluation and conversations with regulators. Total freshwater usage (i.e., cumulative usage from all sources) for WIR construction and maintenance will be not exceed the annual limits set in the Water Licence in any year. The actual annual volume used will depend on environmental conditions and operational needs.

A technical memorandum will be submitted to the NWB each year, 60 days prior to WIR construction, outlining the WIR plan and water source information, in accordance with 2AM-BRP1831 Part Part E, Item 13.

4.2.5 Measures to Protect Fish and Fish Habitat

WIR construction will follow the DFO advice, "Measures to Avoid Harm to Fish and Fish Habitat" (DFO 2013) and will adhere to the following guidelines based on DFO Operational Statements:

- Use existing trails or WIRs wherever possible as access routes to limit unnecessary clearing of additional vegetation and prevent soil compaction;

- Construct approaches and crossings perpendicular to the watercourse wherever possible;
- Construct ice bridge and snow fill approaches using clean, compacted snow and ice to a sufficient depth to protect the banks of the lake, river, or stream;
- Install sediment and erosion control measures before starting work to prevent the entry of sediment into the watercourse. Inspect them regularly during the course of construction and decommissioning activities and make all necessary repairs if any damage occurs;
- Operate machinery on land or on ice and in a manner that minimizes disturbance to the banks of the lake, river or stream;
- Ensure that the intakes are sized and adequately screened to prevent debris blockage and fish entrapment;
- Crossings do not impede water flow at any time of the year;
- When the crossing season is over and where it is safe to do so, create a v-notch in the centre of the ice bridge to allow it to melt from the centre and also to prevent blocking fish passage, channel erosion and flooding. Compacted snow should be removed from snow fills prior to the spring freshet;
- Stabilize any waste materials removed from the work site to prevent them from entering the lake, river, or stream. This could include covering spoil piles with biodegradable mats or tarps;
- The site should be stabilized using effective sediment and erosion control measures. In areas with permafrost, care should be exercised to ensure these measures do not cause thawing or frost heave; and
- Water withdrawal will adhere to additional DFO guidelines, including ensuring that the intakes are sized and adequately screened to prevent debris blockage and fish mortality; mesh size will not be larger than 2.54 mm.

4.2.6 Measures to Protect Wildlife

Mitigation and management measures aimed at minimizing the potential effects of the Project, including effects related to the construction and use of WIRs, on wildlife are detailed in the WMMP. Mitigation and management measures for the protection of wildlife include road design (e.g., alignment, crossing structures), snowbank management, timing of operational periods, traffic management, precautions to be employed in the presence of wildlife, wildlife mortality response and reporting, and the potential hunters to use WIRs for harvesting. Monitoring for hunter usage of WIRs will be conducted as described in Section 7.3.

4.3 AIRSTRIPS

Airstrips will be constructed and operated at both the MLA and the Goose Property. These private airstrips, in addition to private ice airstrips, will serve as the main air access to the Property throughout the life of the Project and will be classified as a “registered aerodrome.”

4.3.1 Design Criteria for Airstrips

Airstrip design will be in accordance with Transport Canada’s Aerodrome Standards and Recommended Practices (Transport Canada 2005). The construction of the airstrips will follow generally accepted good engineering practices for building airstrips in permafrost areas of the Northwest Territories and Nunavut.

Both airstrips will be all-weather strips with an apron capable of servicing passenger and large cargo aircraft and will be equipped with lights, communications equipment, and instrumentation in accordance with appropriate Federal regulations. The existing exploration airstrip at Goose Property will be expanded up to 1,830 m long and 60 m wide. The MLA airstrip is anticipated to be up to 1,524 long and 40 m wide.

Airstrip design considered wind direction and speeds, terrain, topography, ground conditions, and aimed to minimize effects to vegetation, wildlife, fish and archaeological sites.

4.3.2 Construction of Airstrips

Due to the contiguous permafrost and possible thaw degradation, the airstrips will be constructed with embankment fills of approximately 2 m thick. The fill material will be geochemically suitable quarried rock or waste rock. This will be topped by a compacted granular base trafficable layer.

4.3.3 Water Crossings

The Goose Airstrip will incorporate non-fish-bearing culvert crossing similar to all-weather road water crossings described in Section 5.1.3. Protocols for the construction and operation of water crossings along airstrips will follow the protocols outlined for all-weather roads in Section 5.1.3.

4.3.4 Water Use for Airstrips

Water may be used for dust suppression on airstrips. Water use protocols for airstrips will follow those outlined in in Section 5.1.5.

4.3.5 Measures to Prevent Permafrost Degradation

Airstrips have been designed and will be constructed to reduce the potential for permafrost degradation. Measures to prevent permafrost degradation related to airstrips follow the protocols outlined for all-weather roads in Section 5.1.4.

4.3.6 Measures to Protect Fish and Fish Habitat

Sabina is committed to ensuring that serious harm to fish is avoided where possible in compliance with the Fisheries Act when undertaking construction or operating near water. Construction and operations of airstrips will follow the protocols outlined for all-weather roads in Section 5.1.5.

4.3.7 Measures to Protect Wildlife

Mitigation and management measures aimed at minimizing the potential effects of the Project, including effects related to the construction and use of Airstrips, on wildlife are detailed in the WMMP. Mitigation and management measures for the protection of wildlife include design, snowbank management, timing of operational periods, traffic management, precautions to be employed in the presence of wildlife, and wildlife mortality response and reporting.

5. Traffic Management and Road Safety

Traffic Management and Safety protocols for all-weather roads and airstrips will be developed and implemented by the Health and Safety Manager with input from the Environment Manager or his/her delegate and, in the case of airstrips, the person responsible for aviation safety or his/her delegate. The protocol(s) will address general regulations, enforcement, signage, traffic management, and rules of the road.

Traffic Management and Road Safety protocols for WIRs will be developed and implemented by the contractor responsible for managing the WIR. Traffic management and road safety rules for WIRs will be drawn on practices that have been proven to be effective by the Tibbitt to Contwoyto Winter Road Joint Venture, Winter Road Regulations, and Rules of the Roads. The protocol will address general regulations, enforcement, signage, traffic management, and rules of the road.

5.1 ACCIDENTS AND MALFUNCTIONS

Sabina's emphasis for traffic management and road safety will be on preventing accidents and malfunctions, while keeping resources close at hand to respond to emergencies on the roads in a timely manner.

For example, Sabina will verify its vehicles are in good working order before road use is allowed. Sabina will also train its employees on road safety and emergency response (first aid, firefighting, spill response, etc.). Emergency response equipment will be carried in all Sabina vehicles. This equipment will include survival gear, emergency first aid equipment, and initial spill response equipment. By educating and protecting its workers, Sabina will lead by example in road safety. Additional details on Emergency Response preparedness and procedures can be found in the Risk Management and Emergency Response Plan.

5.2 SPILL PREVENTION AND RESPONSE

Training and awareness are two major elements of spill prevention. All site staff and contractors will review the contents of the Spill Contingency Plan during their on-site orientation and will be informed of where copies of the Plan are stored. The mandatory site orientation will provide hazard awareness training, identify the locations of spill kits and other response equipment, and discuss appropriate application. A more detailed description of the training to be provided to site staff and Spill Response protocols are provided in the Spill Contingency Plan.

Spill prevention practices specific to roads include:

- Inspection and maintenance of roadways and vehicles (Section 7);
- Adhering to traffic management and road safety practices; and
- Ensuring proper storage of materials during transportation.

Spill response will be implemented by environmental staff who will advise, document, and report on initial response and follow-up actions. Additional details can be found in the Spill Contingency Plan.

5.3 MEASURES FOR THE PROTECTION OF WILDLIFE

Mitigation and management measures aimed at minimizing the potential effects of traffic on wildlife are detailed in the WMMP. Mitigation and management measures for the protection of wildlife from traffic include the timing of operational periods of WIRs, traffic management, precautions to be employed in the presence of wildlife, and wildlife mortality response and reporting.

6. Inspection, Maintenance, and Monitoring of Roads and Airstrips

Sabina has sole responsibility for the ongoing inspection and maintenance of all components of roads and airstrips, including the roadbed, airstrip foundations, culverts, water crossings, and quarry sites. The Site Supervisor, or their designate, will be responsible for ongoing inspection and maintenance. This will include regular inspection and maintenance of transportation infrastructure, including service roads, haul roads, road crossings, water crossings, signage, and any service/emergency camps located along the WIRs. The following is a summary of the procedures that will be applied.

6.1 ALL-WEATHER ROAD AND AIRSTRIP MAINTENANCE AND MONITORING

Sabina recognizes that a good inspection program will lead to the early identification of areas of roads and airstrips where improvements are necessary. The early resolution of any deficiencies will result in less ongoing maintenance and repair of the infrastructure.

6.1.1 Structural Maintenance and Monitoring

The shoulders of all-weather roads and airstrips will be inspected regularly during the summer period for evidence of seasonal freeze and thaw adjacent to the toe of the road embankment. Such movements are expected and may lead to longitudinal cracking and thaw settlement especially for portions of the road founded on thaw-susceptible (ice-rich) soil. When such areas are discovered, the affected area will be repaired using geochemically and geotechnically suitable granular material and/or crushed rock. Sabina will maintain stockpiles of such material for this purpose.

All-weather roads and airstrips will be inspected for signs of accumulating, ponded water, either on the surface or along the sides. Where noticed, the Site Supervisor will evaluate and monitor the accumulation to determine why water is accumulating in these areas. Based on these evaluations, the Site Supervisor will take remedial action where and when necessary to correct the cause of such ponding, such as grading of the surface to remove areas of ponding or installation of additional culverts if the road is causing excessive water ponding. Additional details on the management of water along roads can be found in the WMP.

All-weather road and airstrip surfaces will be maintained with regular grading and distribution of gravel when needed. Granular surfacing required for yearly maintenance of the all-weather roads and airstrips will be sourced and stockpiled from local quarries in accordance with the Borrow Pits and Quarry Management Plan

In fall, winter, and spring, maintenance will be adjusted according to the weather conditions. The Project is expected to experience snow drifts due to strong winds and snow accumulation over the winter season. Snow clearing along the roads will be completed to ensure that the roads can be operated safely. The manner in which the snow is cleared will also take into account the road configuration to ensure that snow accumulation will not cause any complications during the freshet (see Section 7.1.3).

Inspection frequency will be increased during the following critical time periods:

- Just prior to spring freshet to ensure that the culverts and stream crossings are ready to accommodate the rapid spring thaw;

- During the spring freshet to ensure that the culverts and stream crossings are not impeding spring freshet and to initiate action when and where required to prevent wash outs; and
- Just after heavy rainfall events to monitor water accumulation, to ensure that culverts and diversion/collection channels and ponds are passing precipitation as planned and to initiate action when and where required to prevent erosion and wash outs.

Roads will be cleared of snow drifts as needed to ensure a safe running surface is maintained.

In addition, all Sabina employees and contractors are responsible for reporting any road or airstrip maintenance problem or hazardous conditions to their supervisor. Regularly scheduled safety meetings incorporate discussion and reminders related to all-weather road and airstrip use, operation, and maintenance.

6.1.2 Dust Management and Monitoring

The amount of dust generated along roads and airstrips is dependent on the dryness of the surface, the number, weight, and speed of vehicles, and maintenance of the driving surface. Dust will not pose a significant concern in the winter and early spring when snow and ice cover road surfaces. The warmer and drier late spring and summer months will lead to more dust generation. It is expected that dust from all-weather roads will not pose a significant problem during the colder winter and early spring months when snow and ice cover roadways.

Regular grading of the roads and airstrips combined with the addition of granular material to the surface will improve road safety and reduce dust. Dust mitigation measures may be implemented in areas that are prone to high dust levels, in areas where visibility is impaired for drivers, in areas where dust deposition may otherwise affect fish habitat and/or water quality, or at times that dust generation is high due to weather conditions. Mitigation measures could involve grading the road surface, placement of new surface gravel, and/or applying water or dust suppressant on the road surface.

Freshwater may be used for dust suppression for all-weather roads, the airstrip, and pads at the Goose Property. At the MLA, water will be sourced from Bathurst Inlet desalination, through freshwater sources may be used instead. All water usage will be documented and freshwater usage will remain within applicable annual Water Licence limits.

Approved chemical dust suppressants may also be used in accordance with the Environmental Guidance for Dust Suppression on Unpaved Roads (GN 2014).

All Sabina employees and contractors are instructed to report any hazardous conditions to Project Management. Additional details on dust management and monitoring can be found in the Mine Waste Rock Management Plan and Quality Monitoring and Management Plan.

6.1.3 Culvert Maintenance and Monitoring

During Operations, the watercourse crossing maintenance and monitoring program will include the following components:

- A regular inspection program to identify issues relating to watercourse crossings such a structural integrity and hydraulic function;
- An event inspection program to track the effects of large storm events on watercourse crossings, such as structural integrity and hydraulic function; and
- Timely repairs and adjustments.

During Operations, routine spring snow management will include the safe removal of any snow and ice that accumulates at both end of the culverts so that water at freshet can move freely through the culverts and waterways. Proper techniques will be used to ensure that ground disturbance is limited during snow and ice removal. Culverts and stream crossings will be inspected just prior to and during freshet to ensure that the culverts and stream crossings are sufficiently clear to accommodate the rapid spring thaw and that action will be initiated (including removing accumulated ice) where required.

Prior to Freshet, water crossings will have snow removed from ice surfaces on the up- and downstream sides of crossings to allow free flow of water prior to freshet. Where a culvert ice blockage is identified during inspection and if watercourse crossings can't accommodate the spring freshet, culvert thawing (steaming) will be considered as a maintenance measure.

Routine crossing inspections will be performed during the ice-free period, from the onset of freshet (approximately mid-May/beginning of June) until fall freeze-up (which typically occurs in October). Each watercourse crossing will be visually inspected to:

- Identify defects, cracks, or any other risks to structural integrity of the infrastructure. Particular attention will be paid to the inlet and outlet structures of culverts;
- Identify potential sources of sediment transport at crossings;
- Identify sediment or other debris accumulation impeding the free flow of water through the crossings. Maintenance operations will consist of hand removal of accumulated debris and repairing damage as soon as possible; and
- Identify bed erosion or scour around the watercourse crossing of the upstream and downstream channel. Any erosion concerns will be addressed as soon as possible.

Inspection results will be recorded to help track changes in conditions over time.

If required, maintenance operations will consist of undertaking remediation of any detected problems and repairing damage as soon as possible. Culvert maintenance will be conducted following the DFO's advice, "Measures to Avoid Causing Harm to Fish and Fish Habitat" (DFO 2013).

6.1.4 Closure

In the event of temporary Closure, service roads will be inspected and maintained to ensure protection of the environment. This includes inspection and maintenance of ditches, spillways and culverts and employing erosion and sediment control measures to verify proper operation or to implement contingency measures. Camp facilities will be operated and maintained to support this effort. The level of effort involved in maintaining the site in a state of temporary Closure will depend upon the Project phase.

In the event of permanent Closure, procedures outlined in the approved Interim Closure and Reclamation Plan will be followed.

Airstrips will remain functional with a gravel surface for use during Post-Closure monitoring. Final closure of the airstrips will be similar to the all-weather roads and is described in the Interim Closure and Reclamation Plan.

6.2 WINTER ICE ROADS INSPECTION AND MAINTENANCE

During WIR operations, WIRs will be inspected and maintained in accordance with the "Guidelines for Safe Ice Construction" (GNWT DoT 2015). These regulations state that ice thickness testing inspections

should be done once a week on snow roads, twice a week on ice roads, and daily on ice bridges. Test hole spacing and frequency as recommended in the field guide are presented below for each WIR construction phase in Table 7.2-1.

Any effects to vegetation and soil underlying the WIR will be monitored as part of the Vegetation Monitoring Plan.

Table 7.2-1. Field Guide for Ice Construction Safety Recommended Ice Testing

	Preconstruction	Construction	Operations and Maintenance
	Initial test run	From start of construction until road is opened to traffic	This may overlap with construction activities at lower load levels
Rivers	If GPR is used, test holes are only required for calibration and for mapping of thin areas 30 meters between test holes along centre line	If GPR is used, test holes are only required for calibration and for mapping of thin areas 30 meters between test holes along alternate edges	If GPR is used, test holes are only required for calibration and for mapping of thin areas 30 meters between test holes along alternate edges Look for thin areas caused by river current
Lakes	If GPR is used, test holes are only required for calibration If within 250 metres of shore: 30 meters between test holes along centre line If more than 250 metres from shore: 250 metres between test holes along centre line	If GPR is used, test holes are only required for calibration If within 250 metres of shore: 30 metres between test holes along alternate edges If more than 250 metres from shore: 250 metres between test holes along alternate edges	If GPR is used, test holes are only required for calibration and for mapping of thin areas 250 metres between test holes along alternate edges
Mackenzie Delta	If GPR is used, test holes are only required for calibration 250 metres between test holes along centre line	If GPR is used, test holes are only required for calibration 250 metres between test holes along alternate edges	If GPR is used, test holes are only required for calibration and for mapping of thin areas

Source: Northwest Territories Department of Transportation. "Guidelines for Safe Ice Construction" 2015.
GPR = ground penetrating radar.

6.2.1 Stream Crossing Inspection and Maintenance

In accordance with DFO guidance, snow and ice accumulation at WIR crossings will be minimized by cutting a v-notch in the WIRs at the crossings prior to melt. Decommissioned ice bridges and snow fills associated with WIRs at fish-bearing streams will be monitored during freshet to ensure stream channels remain clear for fish during spring migration. If present and practical, obstructions will be removed to ensure fish passage is unimpeded.

6.3 PUBLIC USE OF WINTER ICE ROAD CORRIDORS

All Project roads, including the WIR, are private and not intended for public use. Incidental observations of members of the public using the WIR will be recorded along with a description of the activities observed (e.g., travelling, hunting), when possible. Other evidence of hunting from the WIR will also be recorded. Incidental observations will be reported in the Annual Report to the NIRB and trends in usage will be assessed. If warranted, mitigation measures aimed at reducing public usage of the WIR will be developed and outlined in the Annual Report to the NIRB and implemented thereafter.

6.4 WILDLIFE MONITORING

Wildlife monitoring programs related to the construction and use of all-weather roads, WIRs, and airstrips are detailed in the WMMP. Wildlife monitoring will include maintaining a log of sightings that detail the kind of wildlife that was observed, an estimate of numbers, and the location of the sighting (to the nearest kilometre marker along the all-weather roads or WIRs). The incidental sighting data will be aggregated and reported in the annual WMMP Program Report.

7. Adaptive Management

This Plan represents an adaptive approach to understanding the effects of the Project on the landscape and the species that live there. In this context, the Plan is part of a continually evolving process that relies not only on the efficacy of data collection and analytical results, but is also dependent on feedback from the communities, government, Aboriginal groups, and the public. Having an adaptive and flexible program allows for appropriate and necessary changes to the design of monitoring studies, and the mitigation and monitoring plans. Some changes may come about through the observation of unanticipated effects or inadequacies in the sampling methods to detect measurable effects. Other changes may result from ecological knowledge acquired through working with Aboriginal community members and discussions with Elders, both in the field and through workshops.

Sabina is committed to considering and incorporating Traditional Knowledge into the Plan. The incorporation of Traditional Knowledge will occur throughout all stages of the Plan, including identification of mitigation measures, monitoring study design, data collection, and follow-up programs to obtain feedback.

Adaptive management will be triggered in real-time, based on site observations. Examples of adaptive management include road and water-crossing maintenance, the application of dust suppressants, speed limit reductions when excess dust is observed, changes in traffic management, increased patrolling, and addressing pooling water during freshet or heavy rainfall events. Should monitoring programs indicate unanticipated effects related to road and airstrip construction and operations, additional management measures may be implemented, and this Plan may be modified to reflect improved practices. If required, adaptive management measures undertaken to address public use of WIRs will be presented in the Annual Report.

Monitoring related to potential effects of roads and airstrips will also take place under a number monitoring programs targeting various potential effects. This includes the AQMMP for air quality-related effects, the WMMP for wildlife-related effects, the AEMP for aquatic effects, and the WMP for water management-related effects, and the SEMP for usage by non-Project personnel.

8. Plan Revision and Reporting

This Plan will be reviewed on a regular basis to incorporate any lessons learned, major changes to facility operations or maintenance, and the results of monitoring programs. Any updates to the RMP will be filed with the Annual Reports submitted under the active Type A Water Licence and Project Certificate.

Employees will be informed of relevant updates and the updated RMP will be located in a designated area at each site.

Sabina will retain all raw data records and annual reporting for at least two years in digital format. The updated RMP, raw data, and annual reporting will be made available by Sabina at all times for review by the lands and waters inspectors, the NWB, and Environment and Climate Change Canada.

9. References

- DFO (Fisheries and Oceans Canada). 2010. Protocol for Winter Water Withdrawal from Ice-Covered Waterbodies in the Northwest Territories and Nunavut. June 2010.
- DFO. 2013. Advice, Measures to Avoid Causing Harm to Fish and Fish Habitat.
- Environment Canada. 2011. *Analysis and Air Quality Section: National Air Pollution Surveillance Program (NAPS)*. <http://www.ec.gc.ca/rnsps-naps/> (accessed July 2013).
- GNWT DoT (Department of Transportation of Northwest Territories). 1993. G Environmental Guidelines for the Construction, Maintenance and Closure of Winter Roads in the Northwest Territories. October 1993.
- GNWT DoT. 2015. Guidelines for Safe Ice Construction. February 2015.
- GN (Government of Nunavut Department of Environment). 2014. Environmental Guidance for Dust Suppression on Unpaved Roads. Available online: http://env.gov.nu.ca/sites/default/files/guideline_-_dust_suppression_on_unpaved_roads_2014.pdf. April 2014.
- INAC (Indigenous and Northern Affairs Canada). 2010. Northern Land Use Guidelines - Access: Roads and Trails. January 2010. ISBN: 978-1100-14743-7. Link.
- Roads and Transportation Association Canada. 1986. Manual of Geometric Design Standards for Canadian Roads.
- Tibbitt to Contwoyto Winter Road Joint Venture, Winter Road Regulations and Rules of the Road, current version.
- Transport Canada. 2015. Aerodromes Standards and Recommended Practices (TP 312) 5th Edition. Revised July 2015.

Appendix A. Applicable Legislation

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Acts	Regulations	Guidelines
Federal		
<i>Canadian Environmental Protection Act</i> (1999 c.33)	Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (SOR/2008-197) Environmental Emergency Regulations (SOR/2003-307) Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149) Interprovincial Movement of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2002-301) Federal Registration of Storage Tank Systems for Petroleum Products and Allied Petroleum Products on Federal Lands or Aboriginal Lands Regulations (SOR/97-10) Fuels Information Regulations, No. 1 (SOR/C.R.C., c. 407) Sulphur in Diesel Fuel Regulations (SOR/2002-254) Sulphur in Gasoline Regulations (SOR/99-236)	Canadian Council of the Ministers of Environment - Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products Notice with respect to substances in the National Pollutant Release Inventory Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil
<i>Canada Water Act</i> (1985 c.11)		
<i>Canada Wildlife Act</i> (1985 w9)	Wildlife Area Regulations (C.R.C., c. 1609)	
<i>Species at Risk Act</i> (2002 c.29)		(Eskimo Curlew - endangered)
<i>Migratory Birds Convention Act</i> (1994 c.22)	Migratory Birds Regulations (C.R.C., c. 1035) Migratory Bird Sanctuary Regulations, [C.R.C., c.1036]	Avoidance Guidelines: <ul style="list-style-type: none"> • Reducing Risk to Migratory Birds • Technical Information • Guidelines to Avoid Disturbance to Seabird and Waterbird Colonies in Canada • Birds at Sea • General Nesting Periods of Migratory Birds in Canada

Acts	Regulations	Guidelines
<i>Fisheries Act</i> (1985, c. F-14)	Metal Mining Effluent Regulations (SOR/2002-2222) Applications for Authorization Under Paragraph 35(2)(B) of the Fisheries Act Regulations Aquatic Invasive Species Regulations (SOR/2015-121) Regulations Establishing Conditions for Making Regulations Under Subsection 36(5.2) of the Fisheries Act (SOR/2014-91)	Fisheries Protection Policy Statement Framework for Assessing the Ecological Flow Requirements to Support Fisheries in Canada DFO Protocol for Winter Water Withdrawal from Ice-covered Waterbodies in the Northwest Territories and Nunavut Implementing the New Fisheries Protection Provisions under the <i>Fisheries Act</i> - Discussion Paper General Fish-out Protocol for Lakes and Impoundments in the Northwest Territories and Nunavut Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters Freshwater Intake End-of-Pipe Fish Screen Guideline Standard Operating Procedure - Clear Span Bridges
<i>Explosives Act</i> (1985 c.E-17)	Ammonium Nitrate and Fuel Oil Order (C.R.C., c. 598) Explosives Regulations (C.R.C., c. 599)	
<i>Navigation Protection Act</i> (R.S. 1985 c. N-22, s. 1; 2012, c.31, . 316)	Navigable Waters Bridges Regulations (C.R.C., c. 1231) Navigable Waters Works Regulations (C.R.C., c. 1232)	List of Scheduled Waters (Schedule in the Act)
<i>Transport of Dangerous Goods Act</i> (1992, c. 34)	Transportation of Dangerous Goods Regulations (SOR/2001-286)	
<i>Territorial Lands Act</i> (R.S. 1985, c. T-7)	Northwest Territories and Nunavut Mining Regulations (C.R.C., c. 1516) Territorial Lands Regulations (CRC, c 1525) Territorial Land Use Regulations (CRC, c 1524) Territorial Quarrying Operations, [C.R.C., c. 1527] Northwest Territories Mining District and Nunavut Mining District Order	Northern Land Use Guidelines: Administrative Process
<i>Nunavut Waters and Nunavut Surface Rights Tribunal Act</i> (2002, c.10)	Nunavut Waters Regulations (SOR/2013-69)	
<i>Nunavut Act</i> (1993 c.28)	Nunavut Archaeological and Paleontological Sites Regulations (SOR/2001-220)	
<i>Nunavut Land Claims Agreement Act</i> (1993, c.29)		

Acts	Regulations	Guidelines
Territorial		
<p><i>Environmental Protection Act</i> (RSNWT (nu) 1988, c E-7)</p>	<p><i>Spill Contingency Planning and Reporting Regulations</i> (NWT Reg (Nu) 068-93)</p> <p>The removal of hazardous materials will require the registration with the Government of Nunavut, Department of Environment as a waste generator as well as carrier (if applicable) prior to transport.</p> <p>Asphalt Paving Industry Emission Regulations, R.R.N.W.T. 1990 c. E-23</p>	<p>Guideline on Dust Suppression Guideline for the General Management of Hazardous Waste in Nunavut Guideline for Industrial Waste Discharges in Nunavut Guideline for Air Quality - Sulphur Dioxide and Suspended Particulates Guideline for the Management of Waste Antifreeze Guideline for the Management of Waste Batteries Guideline for the Management of Waste Paint Guideline for the Management of Waste Solvents Guideline for Industrial Projects on Commissioner's land Canada-Wide Standards for Particulate Matter (PM) and Ozone Canada-Wide Standards for Petroleum Hydrocarbons (PHC) In Soil</p>
<p><i>Historical Resources Act</i> RSNWT (Nu) 1988, c. H-3)</p>		
<p><i>Wildlife Act</i> (RSNWT (Nu) 1988, c W-4)</p>	<p><i>Wildlife General Regulations</i> (NWT Reg (Nu) 026-92)</p> <p><i>Wildlife Licences And Permits Regulations</i> (NWT Reg (Nu) 027-92)</p> <p><i>Wildlife Management Barren-Ground Caribou Areas Regulations</i> (NWT Reg (Nu) 099-98)</p> <p><i>Wildlife Management Grizzly Bear Areas Regulations</i> (NWT Reg (Nu) 155-96)</p> <p><i>Wildlife Management Zones Regulations</i> (RRNWT (Nu) 1990 c W-17)</p> <p><i>Wildlife Regions Regulations</i> (NWT Reg (Nu) 108-98)</p> <p>Critical Wildlife Areas Regulations, R.R.N.W.T. 1990 c. W-3</p> <p>Polar Bear Defence Kill Regulations, N.W.T. Reg. 037-93</p> <p>Wildlife Management Muskox Areas Regulations, R.R.N.W.T. 1990 c. W-11</p> <p>Wildlife Management Polar Bear Areas Regulations, R.R.N.W.T. 1990 c. W-13</p> <p>Wildlife Sanctuaries Regulations, R.R.N.W.T. 1990 c. W-20</p> <p>Wildlife Preserves Regulations, R.R.N.W.T. 1990 c. W-18</p>	

Acts	Regulations	Guidelines
<i>Territorial Parks Act</i> (RSNWT (Nu) 1988, c T-4)	<i>Territorial Parks Regulations</i> (RRNWT (Nu) 1990 c T-13)	
<i>Scientists Act</i> (RSNWT (Nu) 1988 c S-4)	<i>Scientists Act Administration Regulations</i> (NWT Reg (Nu) 174-96)	
<i>Commissioner's Land Act</i> (RSNWT 1988, c C-11)	<i>Commissioner's Airport Lands Regulations</i> (NWT Reg (Nu) 067-97) <i>Commissioner's Land Regulations</i> (RRNWT 1990, c C-13)	
<i>Mine Health And Safety Act</i> (SNWT (Nu) 1994, c 25)	<i>Mine Health And Safety Regulations</i> (NWT Reg (Nu) 125-95) Mine Health and Safety Regulations, amendment, Nu. Reg. 016-2003	
<i>Workers' Compensation Act</i> (RSNWT, 1988, c. W-6)	<i>Workers' Compensation General Regulations</i> (Nu Reg 017-2010)	
<i>All-Terrain Vehicles Act</i> (RSNWT (Nu) 1988, c A-3)	<i>All-Terrain Vehicles Regulations</i> (RRNWT (Nu) 1990 c A-1)	
<i>Apprenticeship, Trade And Occupations Certification Act</i> (RSNWT (Nu) 1988, c A-4)	Apprenticeship, Trade And Occupations Certification Regulations (RRNWT (Nu) 1990 c A-8) Occupation Designation Order, N.W.T. Reg. 026-96 Trade Advisory Committees Order, R.R.N.W.T. 1990 c. A-9 Trade Designation Order, R.R.N.W.T. 1990 c. A-10	
<i>Electrical Protection Act</i> (RSNWT (Nu) 1988, c E-3)	<i>Electrical Protection Regulations</i> (RRNWT 1990 c. E-21)	
<i>Explosives Use Act</i> (RSNWT (Nu) 1988, c E-10)	<i>Explosives Regulations</i> (RRNWT (Nu) 1990 c E-27)	
<i>Fire Prevention Act</i> (RSNWT (Nu) 1988, c F-6)	Fire Prevention Regulations (RRNWT (Nu) 1990 c F-12) Propane Cylinder Storage Regulations, N.W.T. Reg. 094-91	
<i>Hospital Insurance And Health And Social Services Administration Act</i> (RSNWT 1988, c T-3)	Territorial Hospital Insurance Services Regulations (RRNWT (Nu) 1990 c T-12) Baffin Regional Health and Social Services Board Order, N.W.T. Reg. 059-98 Hospital Standards Regulations, R.R.N.W.T. 1990 c. T-6	
<i>Labour Standards Act</i> (RSNWT (Nu) 1988, c L-1)	<i>Various</i>	
<i>Motor Vehicles Act</i> (RSNWT (Nu) 1988, c M-16)	<i>Large Vehicle Control Regulations</i> (RRNWT (Nu) 1990 c M-30) <i>Motor Vehicle Registration And Licence Plate Regulations</i> (RWT Reg (Nu) 054-94)	

Acts	Regulations	Guidelines
<i>Petroleum Products Tax Act</i> (RSNWT (Nu) 1988, c P-5)	<i>Petroleum Products Tax Regulations</i> (RRNWT (Nu) 1990 c P-3)	
<i>Public Health Act</i> (RSNWT (Nu) 1988, c P-12)	<i>Camp Sanitation Regulations</i> (RRNWT (Nu) 1990 c P-12) <i>General Sanitation Regulations</i> (RRNWT (Nu) 1990 c P-16) <i>Public Water Supply Regulations, R.R.N.W.T. 1990 c. P-23</i> <i>Public Sewerage Systems Regulations, R.R.N.W.T. 1990 c. P-22</i>	
<i>Public Highways Act</i> (RSNWT (Nu) 1988, c P-13)	<i>Highway Designation And Classification Regulations</i> NWT Reg (Nu) 047-92)	
<i>Safety Act</i> (RSNWT 1988, c.S-1)	<i>General Safety Regulations, Amendment NU Reg 021-2000</i> (RRNWT (Nu) 1990 c S-1) Asbestos Safety Regulations, N.W.T. Reg. 016-92 General Safety Regulations, R.R.N.W.T. 1990 c. S-1 Safety Forms Regulations, N.W.T. Reg. 102-91 Silica Sandblasting Safety Regulations, N.W.T. Reg. 015-92 Work Site Hazardous Materials Information System Regulations, R.R.N.W.T. 1990 c. S-2	
<i>Transportation Of Dangerous Goods Act</i> (1990. RSNWT (Nu) 1988, c 81 (Supp))	<i>Transportation Of Dangerous Goods Regulations</i> (1991, NWT Reg (Nu) 095-91)	Emergency Response Assistance Plans (ERAPs)

Applicable Legislation and Guidelines for the Back River Project