Back River Project

Transportation Management Plan

Revision 1

JANUARY 2013

Table of Contents

1. Introduction 2
1.1. Existing Facilities 3
1.1.1. Goose Camp 4
1.1.2. George Camp 6
1.1.3. Temporary Camps for Resupply and Exploration 8
1.2. Proposed Facilities 8
1.2.1. Goose Camp 8
1.3. Scope 9
2. AIRSTRIP AND ROAD CONSTRUCTION AND OPERATION 9
2.1. Winter Road and Ice Airstrip Infrastructure 9
2.2. All-weather Road and Airstrip Infrastructure 10
2.3. Rock Quarries 11
2.4. Clearspan and Culvert Watercrossings 12
3. INSPECTION AND MAINTENANCE 12
3.1 Surface Inspection and Maintenance 13
3.2 Watercourse Crossings Inspection and Maintenance 14
3.2.1 Regular Crossing Inspection and Maintenance 14
3.2.2 Event Crossing Inspection and Maintenance 15
3.2.3 Culvert Location Inspection 15
3.3 Snow Clearing 15
3.4 Accidents and Malfunctions 16
3.4.1 EMERGENCY RESPONSE 16
3.4.2 ACCIDENTS AND MALFUNCTIONS 16
4. Environment Management 16
4.1 Wildlife 16
5. MONITORING PROGRAM 18
5.1 Wildlife 18
5.2 Water Quality 18
6. REVIEW OF THE TRANSPORATION MANAGEMENT PLAN 18

1. Introduction

Sabina Gold & Silver Corp. (Sabina) is actively exploring the Back River– Hackett River area under valid land use, mineral tenure and water permits. These include:

Table 1. List of licenses and permits applicable to the Back River Project.

Permit No.	Permit Name	Type	Expiry	Agency
N2011F0029	Winter road Beechy Area	Class A	2013-12-13	AANDC
N2010F0017	Winter road Bathurst Inlet to Back River	Class A	2013-09-16	AANDC
N2009F0015	Winter road Hackett to George	Class A	2013-02-28	AANDC
KTL304F049 - Amended	Winter road Bathurst Inlet to Goose Lake and George Lake	Level 3	2012-12-13 (ext pending)	KIA
KTL304F012	WinterWinter road Hackett to George	Level 3	2012-03-31 (ext pending)	KIA
N2010C0016	Back River Mineral Exploration	Class A	2013-10-31	AANDC
KTL304C017 -Amended	Goose Camp	Level 3	2012-12-13 (ext pending)	KIA
KTL204C012 - Amended	Boulder	Level 2	2012-12-13 (ext pending)	KIA
KTL304C018 - Amended	George Camp	Level 3	2012-12-13 (ext pending)	KIA
KTL204C020 - Amended	Boot	Level 2	2013-12-13 (ext pending)	KIA
2BE-GEO1015	George Water	Type B	2015-06-15	NWB
2BE-GOO1015	Goose Water	Type B	2015-03-31	NWB

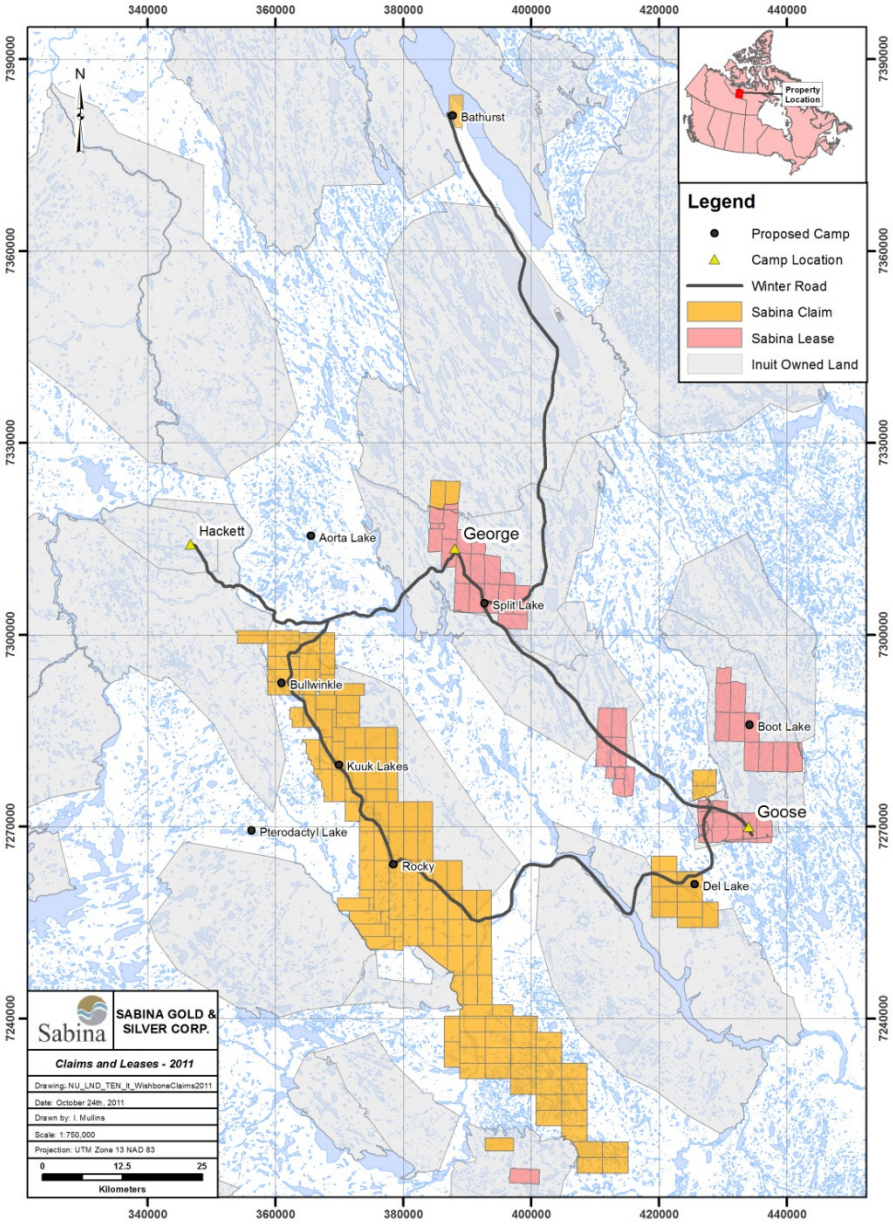
This Transportation Management Plan has been developed to outline construction, operation and management of access and transportation to the Goose Camp including construction, operation and closure of an all-weather airstrip, a connecting road to Goose camp and associated rock quarries. This Plan provides construction and operating maintenance methods and best management practices that will be used at Goose camp as well as all of Sabina's projects. The purpose of this Plan is to ensure sound management of water and waste deposited to water to minimize the impacts to the local environment during construction, operation and closure of the transportation corridors. Implementing best management practices and working responsibly will ensure the protection of the environment and personnel safety.

Sabina will implement this Transportation Management Plan and will continue to look for opportunities to minimize or eliminate negative impacts to the environment as a result of its activities, products and services at Sabina's Projects.

1.1. Existing Facilities

The Back River exploration project is located in western Nunavut, south of Bathurst Inlet within the Slave Structural Province. It lies approximately 525 kilometres northeast of Yellowknife, NWT and 400 kilometres south of Cambridge Bay, NU. The project area is within the zone of continuous permafrost, and is represented on National Topographic System 1:250,000 scale map sheets 76F, 76G, 76J, and 76K.

Figure 1. Location map of the Sabina's exploration properties within western Nunavut.



1.1.1. Goose Camp

The Goose camp is the primary camp for the Back River Project and is located on the slope of the western shore of Goose Lake (Figure 2). It has the capacity to support up to 120 people. The lakeshore is approximately 50 m toward the north and the regional topographical gradient surrounding the camp ranges from 2% to 6% towards the north. The camp is approximately 300 m in length from east to west

and 100 m wide from north to south, covering an area of 30,000 m2. A small creek runs east northeast, east of the camp. The camp facilities are located on natural tundra underlain by a 10 cm organic layer overlying silt-sand parent material.

- Latitude: 65º 32'N, Longitude: 106º 25'W
- UTM Coordinates 569405 E, 7265007N on NTS Map Sheet 76G/09

Supplies and personnel access the site at Goose Lake via charter air carrier; there is currently no all-weather road access to the site at any point through the year. In the winter, an ice strip on Goose Lake is used and float-equipped aircraft are used in the summer time. When possible, wheel-equipped aircraft will use a gravel strip located to the northwest of Goose Lake camp. All travel throughout the project area is accomplished using helicopters, including drill moves and drilling support. In the winter when there is sufficient snow cover to avoid damage to the tundra, local transport in the Goose Lake area is done with snowmobiles; a Caterpillar D6 may be used for drill moves.

The original airstrip at Goose Lake camp is on beach sediments on the northwest side of Goose Lake and was used for a 4-5 week period during spring breakup. This airstrip is approximately 365 m long by 25 m wide, oriented approximately NE-SW. In 2012, a new airstrip, measuring 800 m x 40 m, was built about 500 m SW of Goose camp, aligned NW-SE, visible in the background in Fig. 2.

Ice airstrips on Goose Lake involve clearing of snow and ensuring the appropriate ice thickness. These strips vary with each year, but are approximately 1,585 m long by 36 m wide and oriented approximately NW-SE.

Charter flights to/from Yellowknife are flown at the pilot's discretion depending on weather conditions, but may be expected to be at an altitude of 5,000-10,000' ASL. These flights occur twice weekly with supplemental flights added as required. Resupply flights occur early in the season and may be any day of the week, and 24 hours a day in the case of the Hercules. All of these flights pass over the Ekati/Diavik area enroute to the project sites.

Helicopter flights in the area may occur anywhere from 1 every 2-3 days to several per day, depending on the operational requirements at the time. The most highly travelled flight routes include the corridor between Goose Lake and George Lake. As per several of our operating licenses, the pilots are instructed to maintain a minimum altitude of 1000' (300 m) AGL unless weather or operating requirements indicate otherwise.

Figure 2. Aerial imagery of Goose Lake Camp (August 2012)

1.1.2. George Camp

The George Lake camp is located on the western shore of George Lake (Figure 3) and has capacity for approximately 60 people. These facilities are located on the eastern side of an esker which has been partially leveled for use as an airstrip. The lakeshore is approximately 60 m to the east of the camp buildings. A lined, bermed bulk fuel storage area is located approximately 100 m off the northwest end of the airstrip.

- Latitude: 65º 55'N, Longitude: 107º 25'W
- UTM coordinates: 613886 E, 7311032N on NTS Map Sheet 76 G/14

Supplies and personnel access the site at George Lake via charter air carrier; there is no all-weather road access to the site at any point through the year. In the winter, an ice strip on George Lake is used and float-equipped aircraft are used in the summer time. When possible, wheel-equipped aircraft use the prepared esker strip at the George camp. All travel throughout the project area is accomplished using helicopters, including drill moves and drilling support. In the winter when there is sufficient snow cover

to avoid damage to the tundra, local transport in the George Lake area is done with snowmobiles, and a Caterpillar D6 may be used for drill moves.

The airstrip at George Lake is on an esker which is used throughout the exploration season. The strip is located immediately adjacent to the camp buildings at this site. This airstrip is approximately 365 m long by 25 m and oriented approximately NE-SW, visible beside the camp in Fig. 3. Ice airstrips on George Lake involve clearing of snow and ensuring the appropriate ice thickness. These strips vary with each year, but are approximately 1,585 m long by 36 m wide oriented approximately NW-SE.

Charter flights to/from Yellowknife are flown at the pilot's discretion depending on weather conditions, but may be expected to be at an altitude of 5,000-10,000' ASL. These flights occur twice weekly with supplemental flights added as required. Resupply flights occur early in the season and may be any day of the week, and 24 hours a day in the case of the Hercules. All of these flights pass over the Ekati/Diavik area enroute to the project sites.

Helicopter flights in the area may occur anywhere from 1 every 2-3 days to several per day, depending on the operational requirements at the time. The most highly travelled flight routes include the corridor between Goose Lake and George Lake. As per several of our operating licenses, the pilots are instructed to maintain a minimum altitude of 1000' (300 m) AGL unless weather or operating requirements indicate otherwise.

Figure 3. Aerial imagery of George Camp (Sept 2012)

1.1.3. Temporary Camps for Resupply and Exploration

Temporary camps for up to 20 people are established for a season in target areas located 20 km or more from the main camps and would be established for safety, environmental and economic reasons. Possible locations are shown in Figure 1. The intent is not to establish a network of camps across the exploration area, but to have the opportunity and flexibility to establish these temporary camps as needed. All transportation to and around these camps would be similar to the current practices at Goose and George camps, except that no airstrips on land have been built or planned.

1.2. Proposed Facilities

1.2.1. Goose Camp

Sabina is proposing to complete the construction of the existing 800-m x 40-m all-weather airstrip at the Goose camp and of the existing approximately 600-m long road connecting the airstrip with the camp. This infrastructure will require the development and operation of rock quarries to supply aggregate.

The Goose camp is operational seasonally, February 1 – October 15 inclusive. The camp is shut down during all other periods. Access to the site is via aircraft and, depending on the season, can be on Goose Lake (water or ice) or the gravel airstrip southwest of camp. Sabina sees the completion of the all-weather strip as an important move toward improving operations and personnel safety, fiscal responsibility and environmental protection.

Completion of the airstrip and connecting road will be phased to match weather conditions, design, purchasing and acquisition needs, seasonal operations at camp and the construction schedule. The following presents the general concept of development:

Phase 2	Timing	Activities
	Q1 2013	Award contract and additional permitting needs (e.g. explosives) Start procurement and mobilization of equipment and supplies Develop access and initiate quarry operations. Drilling, blasting and crushing at quarries. On-going quarry activities to stockpile; depends on design/operational needs.
	Q2 2013	Transport of crushed material to airstrip/road area during snow/ice cover conditions
	Q3 – Q4 2013	Use airstrip to support end-of-season exploration activities and camp closure

Phase 1 of the airstrip construction was completed in 2012, involving cutting and filling a strip approximately 900 m long x 50 m wide. A wet area between the airstrip and camp is too wide for a free-span installation and environmental conditions indicate that there are no fish or fish habitat in this area. For this reason, culverts were installed in this section of the corridor.

Phase 2 will involve drilling, blasting and crushing construction material in the quarry. The airstrip and the access road between the airstrip and the camp will be completed by laying down layers of blasted and crushed rock.

1.3. Scope

This Transportation Management Plan has been written to meet requirements under the NWB license and applies to all Sabina projects in the Kitikmeot region. Subject to annual internal review and revision, it will remain applicable throughout the duration of the NWB license, or until a material change in the scope of the project occurs.

The goal of any management plan is to reduce and prevent impacts to the environment while ensuring personnel safety and appropriate fiscal considerations during mineral exploration activities.

2. AIRSTRIP AND ROAD CONSTRUCTION AND OPERATION

2.1. Winter Road and Ice Airstrip Infrastructure

Currently, environmental conditions determine the route selected for winter road corridors including:

- ice of a sufficient thickness to support equipment so that pumping and using water to build up ice will be unnecessary;
- snow thickness will be a minimum of 15 cm on land to prevent damage to soil and vegetation;
- weather conditions permit safe transport of equipment and materials .

Once the camps are open, the road route will be determined by means of reconnaissance trips using helicopters and/or snow machines. The road route determined will be staked to facilitate driving and to help with snow plowing. While the road is in use, any litter or contamination will be removed by Sabina personnel and relocated to the existing camps for disposal. When the winter road corridor use ends, the corridor is inspected for any remaining litter and contamination, cleaned, stakes are removed and snow piled/or removed at the entrance to prevent further use of the route. At break-up the road will melt. During the summer months, the route is inspected using a helicopter and any further reclamation work will be built into progressive reclamation for the exploration program.

Surface preparation will include verification that ice thickness will support equipment weight. It is also anticipated that movement of snow may be required in some areas to ensure a safe operating grade for the equipment and to a minimum thickness to protect underlying vegetation and soil.

Speed and road grades will be determined by safety, operational needs of the equipment, road conditions and weather/environmental conditions. The public will not have access to the corridor.

The routes identified are mainly along frozen lakes and streams with short overland traverses. It is anticipated that these freshwater systems are fish-bearing. Because the corridor is used only during the winter and for a limited number of trips, the risk of impact to fish and fish habitat is minimal.

Construction and operation of the ice airstrips on the local lakes are also dependent on environmental conditions including:

- prevalent wind direction and speeds for safe landing/takeoff;
- ice thickness of a sufficient thickness to support equipment and aircraft so that pumping and using water to build up will be unnecessary;
- weather conditions permit safe transport of equipment and materials.

Once camps are open, the priority is to determine the optimal airstrip route, using snow machines. The orientation determined is staked to facilitate snow plowing; snow is removed using equipment already on-site within the staked area to allow additional freezing and thickening of the ice. Surface preparation will include verification that ice thickness will support aircraft weight. Flooding and ice build-up methods are not used to construct ice airstrip.

Once the appropriate thickness and area is available, the airstrip is inspected by authorities and approved for use.

While the airstrip is in use, any litter or contamination is removed by Sabina personnel and relocated to the existing camps for disposal. When the ice airstrip use is completed, the area is inspected for any remaining litter and contamination, cleaned, and stakes are removed. At break-up the airstrip will melt.

2.2. All-weather Road and Airstrip Infrastructure

The proposed all-weather airstrip and connecting road will be privately-owned infrastructure, built entirely on Inuit-Owned Lands currently permitted by Sabina from the Kitikmeot Inuit Association (KIA). The airstrip and road will be constructed, inspected, and maintained by Sabina to support exploration activity at the Back River Project.

The design of the airstrip is in accordance with Transport Canada's Aerodrome Standards and Recommended Practices (Transport Canada, 2005). The construction of the road follows generally accepted good engineering practices for building roads in permafrost areas of the Northwest Territories

and Nunavut. The airstrip and road design is detailed in the SRK Consulting (Canada) Inc. memo "Goose Lake Airstrip Design", August 2011.

Environmental considerations are incorporated into design and routing. Wind direction and speeds, in addition to existing terrain and ground conditions, determine the optimal airstrip orientation. Road alignment, connecting the airstrip to the camp and airstrip to the quarries, considered the existing terrain and topography to determine the optimal route for equipment movement. The design aimed to minimize the project footprint. Additional fieldwork determined that the airstrip and road alignments did not include any archaeological sites or vegetation/wildlife species under the "Species at Risk" Act. Establishing fish and fish habitat included water quality and quantity, fish population and fish habitat studies. These data have been incorporated to determine the optimal alignment for the airstrip and road and the associated water crossings.

2.3. Rock Quarries

The proposed rock quarry locations will be on Inuit-Owned Lands currently permitted by Sabina from the Kitikmeot Inuit Association (KIA). The proposed 2013 quarry will be constructed, inspected, and maintained by Sabina to support construction and operation of the all-weather airstrip, access road and camp at the Goose Project.

Fieldwork has indicated that the underlying geology of the 2013 quarry area is a gabbro dyke. This material will be suitable to quarry using drill/blast methods followed by crushing and sorting to generate the material needed for construction and operation. The total volume estimated for use in 2013 is approximately 30,000cu.m. Acid Rock Drainage/Metal Leaching (ARD/ML) potential was investigated within the proposed quarry area, and the material has a low potential for generating acidic drainage due to the low sulphide content.

Permafrost conditions exist across the Project area and environmental data collected to date indicate that the active layer is approximately 2-3 m thick and the permafrost extends to a depth of approximately 500m. Given the nature of the gabbro dyke, it is not anticipated that ice lenses would be encountered during quarry operations.

Incorporated into the proposed location are environmental considerations. Proximity of the gabbro units close to the airstrip and road corridor minimizes transport needs for the quarry operations, minimizing the project footprint.

Quarry operations are outlined in the Quarry Management Plan. An important component of the quarry operations will be water management to ensure minimal impact to the local watercourses and groundwater. Quarry operations will be above the current water levels of the area. Ponding of water within the operations will be minimized by sloping the quarry floor and installing drainage channels to direct drainage to an area, or areas, within the quarry boundaries. Minimizing water ponding in the

quarry will minimize permafrost degradation and will allow for on-going monitoring of drainage prior to controlled release to the environment. Sediment fences will be used to eliminate the outflow of silt within the drainage system.

Additional fieldwork determined that the quarry location did not include any archaeological sites or vegetation/wildlife species under the "Species at Risk" Act.

2.4. Watercrossings

The proposed all-weather airstrip and connecting road and the associated water crossings will be privately-owned infrastructure, built entirely on Inuit-Owned Lands currently permitted by Sabina from the Kitikmeot Inuit Association (KIA). The airstrip and road will be constructed, inspected, and maintained by Sabina to support exploration activity at the Back River Project.

The airstrip and road design is detailed in the SRK Consulting (Canada) Inc. memo "Goose Lake Airstrip Design", August 2011. The culvert water crossing is included in this report and includes 0.5m diameter culverts installed along the connecting road and the southern apron of the airstrip.

The preferred water crossing method is currently an snow/ice bridge installed during the winter months, connecting the quarry area to the airstrip as no structures are placed on the stream bed and no alteration of natural channel processes occur. Access between the airstrip/camp area and quarry will cease as soon as the area begins to thaw in spring. Inspection and clean-up will be as for the road corridor in 2.1 above.

Environmental considerations focused on fish and fish habitat for the water crossings (Rescan July 2011). Sabina is of the opinion that the winter water crossing does not result in any fisheries habitat alteration, disruption and destruction (HADD) and compliance with DFO Operational Statements is required. This includes OS–5 (Clear-span bridges), OS-7 (culvert maintenance), OS-10 (ice bridges and snow fills), and OS-24 (mineral exploration activities).

3. INSPECTION AND MAINTENANCE

Sabina has sole responsibility for the ongoing inspection and maintenance of all of the components of the airstrip and road, including the road bed, the airstrip foundation, the culverts and the quarry site. Sabina will have the Site Supervisor, or their designate, responsible for ongoing inspection and maintenance. The following is a summary of the procedures that will be applied.

3.1 Surface Inspection and Maintenance

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

The road and its shoulders will be inspected bi-weekly (at a minimum) 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 granular material and/or crushed rock. Sabina will maintain stockpiles of such material in the quarry area.

The road and airstrip will be inspected for signs of accumulation of 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.

The quarry will also be inspected bi-weekly (at a minimum) to monitor wall conditions, ponding of water and snow accumulations. Remedial action will be taken as soon as problems are noted. The site supervisor will conduct periodic inspections (minimum of bi-weekly) of the road to ensure that the road is maintained for safe travel of personnel, equipment and supplies. These inspections will be recorded and any deficiency recorded and followed up by corrective action.

These periodic inspections will include an inspection of the water crossings and a visual observation of the road surface to assess the status of the road foundation.

During the summer, the road surface will be maintained with gravel being spread as required and regular grading of the road. In fall, winter and spring, maintenance will be adjusted according to the weather conditions. Snow clearing along the road will be done to ensure that the road 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 problems during the freshet.

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 in good state 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.

The amount of dust generated along the road and airstrip is dependent on the dryness of the surface, the number of vehicles, weight and speed, and maintenance of the driving surface. Regular grading of the road and airstrip combined with the addition of granular material to the surface will be needed. This will improve road safety and also reduce dust. In areas or times identified by the site supervisor as being prone to high dust levels or areas where safe road visibility is impaired or in areas where dust deposition is impacting fish habitat and/or water quality, the site supervisor will arrange mitigation measures as appropriate. This could involve actions such as grading of the road surface, placement of new coarser topping, and/or watering of the road surface. Use of chemical dust suppressants will be only used as a last resort and only in accordance with the Environmental Guidance for Dust Suppression published by the Government of Nunavut Department of Environment (January 2002), available online at the following web site: http://env.gov.nu.ca/sites/default/files/Guideline%20Dust%20Suppression.pdf

All Sabina employees and contractors are instructed to report any road and airstrip maintenance problems or hazardous conditions to Project Management. Regular scheduled safety meetings will incorporate discussion and reminders related to all-weather airstrip and road use, operation and maintenance.

3.2 Watercourse Crossings Inspection and Maintenance

The watercourse crossing inspection and maintenance program has three main components:

a) a regular inspection program to identify issues relating to watercourse crossings, such as structural integrity and hydraulic function;
b) an event inspection program to track the impacts of large storm events on watercourse crossings, such as structural integrity and hydraulic function; and
c) a culvert location inspection program to ensure that culverts have been installed in the right location with respect to the watercourse and that culvert capacity is adequate to ensure that the culvert(s) pass the water under all hydraulic conditions. In most cases there will be multiple culverts installed at different elevations at each stream crossing to ensure that these culverts can adequately pass both normal summer flows as well as spring freshet and heavy rainfall flows.

3.2.1 Regular Crossing Inspection and Maintenance

During the freshet period, crossings inspections will be performed twice a week (mid-May through June) and weekly during the remainder of the ice-free period prior to fall freeze-up (July through October).

These inspection activities for each watercourse crossing will consist of:

- Visual inspection of its infrastructure to identify defects, cracks or any other risks to structural integrity. Particular attention will be paid to the inlet and outlet structures of culverts .
- Visual inspection to 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.
- Visual inspection of the upstream and downstream channel to identify bed erosion or scour around the watercourse crossing . Particular attention will also be paid to potential sources of sediment transport at the crossing. Inspection results will be recorded to help track change in conditions over time. Maintenance operations will consist of undertaking remediation of any detected problems and repairing damage as soon as possible.

3.2.2 Event Crossing Inspection and Maintenance

Following heavy or prolonged rainfall, each watercourse crossing will be inspected to identify potential risks to the crossing's structural integrity, debris accumulation and whether erosion and scour have occurred. Results will be recorded to help track changes in condition over time. The remediation of any detected problem and any necessary damage repairs will be undertaken as soon as possible, under the direction of the site supervisor.

3.2.3 Culvert Location Inspection

Culvert crossings will be visually inspected to confirm they have been properly executed and installed. These culverts will initially be installed during low flow conditions and thus it is possible that a culvert will not be sited correctly to pass all ponding of water through the road. The intent is to check for such conditions during the first snow melt and after rain so that adjustments can be made accordingly. Additional culverts will be installed, if necessary, should the inspection indicate that the culverts were installed in a location that does not optimally route water flows.

3.3 Snow Clearing

The Goose Property is expected to experience snow drifts because of strong winds over winter . As much of this snow as possible will be cleared to the downwind side of the road and airstrip to limit the wind re-depositing the same snow on the cleared road. Routine spring snow management will include the removal of any snow that accumulates at culverts so that water at freshet can move freely through the culverts and waterway. In the case of culverts, snow is removed from both ends but not from the inside.

3.4 Accidents and Malfunctions

3.4.1 EMERGENCY RESPONSE

As a private road the responsibility for response to any emergency or accident lies solely with Sabina. It will be Sabina personnel that respond and deal with any emergencies that occur on the road and airstrip. Sabina has people on site trained in emergency response (firefighting, first aid, spill response) and, where appropriate, Sabina in such urgent circumstances will request assistance from other parties in the area (e.g. Xstrata Zinc and Sabina George camp)**.** Sabina does not anticipate that emergency response will result in any demand on local public service providers in Kugluktuk or Cambridge Bay (fire, police, ambulance, medical, maintenance). In most circumstances the emergency response will be met by Sabina personnel.

Sabina's emphasis will be on prevention with on-going awareness, training and on-going safety measures while at the same time keeping resources close at hand to respond to emergencies at the Project in a timely manner.

Sabina is fully responsible for the design, construction and maintenance of the road and airstrip for private use. Sabina will ensure its vehicles and equipment are in good working order and train its employees on airstrip/road safety (including use of helmets, seatbelts, speed limits, and improving visibility using reflective clothing and vehicle lights) and emergency response (first aid, firefighting, emergency response). Emergency response also incorporates nursing/medical staff available at Goose camp.

3.4.2 ACCIDENTS AND MALFUNCTIONS

Despite the preventative and mitigation measures taken, should any incident arise as a result of human error or unforeseen circumstances, the response procedures outlined in the *Comprehensive Spill Contingency Plan (Nov 2011)* will be implemented.

4. Environment Management

4.1 Wildlife

Wildlife may occasionally be observed on or immediately along the side of the all-weather airstrip and connecting road. Caribou and other wildlife will have the right-of-way at all times. In case of problems (e.g. groups of caribou), the project management and environmental personnel on site will be manage the situation. The project personnel will be notified by radio if any wildlife is observed on the road according to current communication procedures.

The following protocol will be implemented on the road and airstrip for the protection of wildlife:

- Vehicular traffic speeds on the access road will be limited to 50 km/hr.
- Prior to aircraft landing on the airstrip, a visual inspection will be conducted to identify the presence of any wildlife. If possible, the wildlife will be escorted off the airstrip; the flight crew will be notified by radio that such action is taking place and that they are not to land until it has been completed. If the wildlife cannot be escorted from the airstrip within a reasonable length of time, the flight crew will be instructed to divert to the George airstrip or to return to Yellowknife at the pilot's discretion.
- Where small to moderate aggregations of caribou (i.e., 1-50 animals) are observed within 100 m of the road, travel speeds will be reduced to 30 km/hr.
- Where large aggregations of caribou (i.e., 50 or more) are observed within 100 m of the road, at the discretion of the site supervisor, vehicle movements may be suspended until the animals have moved away from the road.
- If caribou are on the airstrip, at the discretion of the site supervisor, aircraft movement may be suspended and the aircraft diverted to George camp or back to Yellowknife until the animals have moved away from the area.
- Caribou and all wildlife will be given right-of-way on the road. Vehicles must stop until the animals are off the road.
- Locations of large aggregations of animals must be reported to the site supervisor who will inform all potentially affected employees and the environmental representative.
- All incidents between vehicles and wildlife must be reported to the Project Management/Environmental Department whether they are:
    - near-miss;
    - collision with injury to the wildlife; or
    - accidental death.
- Each incident will be investigated by the site supervisor and the environment department and measures taken to avoid re-occurrence. Disciplinary measures will be taken against any employee if the investigation concludes that the accident is the result of negligence.
- In the case of the accidental death of an animal, the Project Manager/Environmental Department will contact the GN Conservation Officer, KIA Senior Lands Manager and the HTO office in Kugluktuk and Cambridge Bay. The carcass will be removed from the road and incinerated to avoid attracting scavengers such as Arctic Fox, Wolves, Grizzly Bear, and/or Wolverine.

5. MONITORING PROGRAM

5.1 Wildlife

Wildlife monitoring will be incorporated into current wildlife tracking according to the terms and conditions of current land use permits. This includes a log of sightings that detail wildlife observed, estimate of numbers and nearest kilometre marking along the road. The data will be aggregated and made available on-site during inspections.

5.2 Water Quality

Two water crossings use culverts; these are the best locations to monitor water quality. Water in these locations would have a greater probability of being in contact with any construction material, dust and spilled material. These locations provide access to an upstream and downstream component of the waterway and historic data is available as they have been included in baseline monitoring to date.

There could also be drainage from the quarry area. When there is noticeable flow out of a quarry, likely during spring melt, a water sample will be collected before this water enters a receiving water body. Standing water, unless it is to be discharged to the environment, will not be collected as it poses little risk to the receiving environment.

Water samples would be collected on a monthly basis over the open water period, late June to September inclusive. The parameters to be collected are similar to current terms and conditions of the water licence and include:

- Physical parameters – field pH and water temperature, lab pH, conductivity, major anions and cations, turbidity, TSS;
- Total and Dissolved metals.

The results will be compiled in camp, made available during inspection and included in the NWB annual report.

6. REVIEW OF THE TRANSPORATION MANAGEMENT PLAN

The activities and costing of transportation management activities will be reviewed internally on an annual basis relative to the long-term exploration strategy for the Project and operational needs.