



# 2017-2018 Annual Monitoring Report

Nunavut Impact Review Board  
File No. 12MN036  
October 2018

**Report Title:** The Nunavut Impact Review Board's 2017-2018 Annual Monitoring Report for the Back River Gold Mine Project (NIRB File No. 12MN036)

**Project:** Back River Gold Mine Project

**Project Location:** Kitikmeot Region, Nunavut

**Project Owner:** Sabina Gold and Silver Corporation

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**Monitoring Period:** December 2017 – October 2018

**Date Issued:** October 31, 2018

**Cover Photo:** Marine Laydown Area – Bathurst Inlet

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## 1.0 INTRODUCTION

The Nunavut Impact Review Board (NIRB or Board) was established through Articles 10 and 12 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)*. On December 19, 2017, pursuant to Section 12.5.12 of the *Nunavut Agreement*, the NIRB issued Project Certificate No. 007 (the Project Certificate) for the Back River Gold Mine Project (the Project) to Sabina Gold and Silver Corporation (Sabina or Proponent), allowing the Project to proceed in accordance with the Terms and Conditions issued therein. As per Section 12.7.2 of the *Nunavut Agreement*, the NIRB is responsible for project monitoring in order to:

- a. measure the relevant effects of projects on the ecosystemic and socio-economic environments of the Nunavut Settlement Area;
- b. determine whether, and to what extent, the land or resource use in question is being carried out within the predetermined terms and conditions;
- c. provide the information base necessary for agencies to enforce terms and conditions of land or resource use approvals; and
- d. assess the accuracy of predictions contained in the project impact statements.

This report provides findings that resulted from the Board's monitoring program for this Project from December 19, 2017 to September 30, 2018.

### 1.1 PROJECT HISTORY AND CURRENT STATUS

The Back River Gold Mine Project was referred to the NIRB for Review by the Minister of Aboriginal Affairs and Northern Development (AANDC) in December 2012. On April 25-30, 2016 the NIRB conducted a final hearing for the project in Cambridge Bay. Following the Final Hearing and deliberations, the Board recommended in its decision that the project should not be allowed to proceed at this time and submitted its decision to the Responsible Ministers on June 15, 2016. In January 2017, the Minister of Indigenous and Northern Affairs (formerly AANDC) responded to the Board's decision indicating that the responsible Ministers were referring the report back to the Board for further review or public hearings as the report was not clear with respect to some ecosystemic issues. The NIRB then provided Sabina with an opportunity to submit any updates in an FEIS addendum, which was received by the NIRB on February 16, 2017, and initiated further public review.

Technical meetings were held by teleconference on May 4, 2017 and were followed by a supplemental Final Hearing in Cambridge Bay May 31-June 3, 2017. On July 18, 2017 the NIRB issued a revised Final Hearing report, which built on the 2016 Final Hearing Report, to provide a summary of all information provided to the Board throughout the Review of the Project, including all information provided to the Board prior to and during both public

hearings. With this recommendation, the Board also provided recommended Terms and Conditions to the Responsible Ministers to ensure that the Project would be developed in a manner consistent with the objectives set out in Article 12, section 12.2.5 of the *Nunavut Agreement*. On November 28, 2017, the NIRB provided the Minister with a Notice of Errata as follow up to the July 18, 2017, NIRB revised Final Hearing Report in respect of Sabina Gold & Silver Corp.'s Back River Gold Mine Project Proposal. The Errata corrected the wording in NIRB's recommended Term and Condition #91 to clarify that the jurisdiction of Transport Canada extends to the certification of vessels, not individual shipping companies.

On December 5, 2017 the NIRB received notification from the Minister of Crown-Indigenous Relations and Northern Affairs (formerly Indigenous and Northern Affairs) that the Revised Final Hearing Report for the Review of Sabina Gold & Silver Corp.'s Back River Gold Mine Project had been accepted pursuant to section 12.5.7(a) of the *Nunavut Agreement*. On December 19, 2017 the NIRB issued Project Certificate No. 007 for Sabina Gold and Silver Corp.'s Back River Gold Mine Project. On March 13, 2018 Sabina received Type B Water License No. 2BC-BRP1819 from Nunavut Water Board (NWB) which allows for identified Initial Development Works to commence at both the Goose Property and Marine Laydown Area. Sabina has submitted its Type "A" Water License application with the NWB and is currently awaiting a decision. Exploration activities continue as previously approved and Sabina is preparing the site for construction, and maintaining a presence at site, while waiting for approval to begin construction.

## **1.2 PROJECT COMPONENTS**

The Back River Project consists of the proposed mobilization, construction, operation, closure, reclamation, and post-closure monitoring of a gold mine operation in the Kitikmeot region of Nunavut. The Project is located approximately 400 kilometres (km) southwest of the community of Cambridge Bay, 95 km southeast of the southern end of Bathurst Inlet, and 520 km northeast of Yellowknife, Northwest Territories. The Project includes two (2) main development areas with a winter ice road interconnecting the Goose Property with the Marine Laydown Area (MLA) located at Bathurst Inlet.

The Goose Property once developed will comprise of a processing plant, four (4) deposits (Umwelt, Llama, Echo, and Goose Main) to be mined through open and underground mining methods; an all-weather air strip; a camp facility; and associated mining facilities. Ore mined at the Goose Property will be hauled to ore stockpiles located at the Goose Site where the ore would be processed within an ore processing plant (mill) using conventional gravity concentration and cyanidation techniques at approximately 6,000 tonnes of ore per day. A tailings storage facility will be built south-southeast of the Goose Main open pit for tailings deposition during the first two (2) years of production, with tailings then directly deposited into the mined-out Umwelt open pit and later into the mined-out Goose Main open pit for the

remaining mine life. The gold doré bars produced at the processing plant will be stored on-site and then transported off-site by aircraft on a semi-weekly basis.

The MLA is located approximately 130 km north-northwest of the Goose Property and is the primary staging area for equipment, material, fuel, and other supplies required for the construction and operation of the Project. The MLA consists of a single barge terminal, laydown areas, a camp facility, and associated storage and maintenance facilities. The Project will be resupplied annually from southern Canada by barge during the open water season. Project materials would then be transported annually from the MLA to the Goose Property using a winter ice road from mid-January to April.

The George Property is an advanced exploration camp located approximately 50 km northwest of Goose Property and currently has four (4) mineral deposits identified for potential future development. Sabina may construct an annual spur road from the winter ice road to the George Property for transportation of supplies to the site. The continuation of a diamond drilling based mineral exploration program for the George Property and the Wishbone claim of mineral leases was included within the scope of the Board's assessment for the Back River Project. It should be noted that further advanced exploration (i.e., bulk sampling and infrastructure development) was not included with the understanding such activities would require further assessment by the NIRB prior to occurring.

## **2.0 MONITORING ACTIVITIES**

### **2.1 GENERAL REPORTING REQUIREMENTS**

At present, the NIRB has not yet issued an Appendix A of the Back River Project Certificate, and expects to do so once sufficient permits are issued for the Project to understand responsible authorities' operational requirements. Appendix A would provide the project-specific monitoring framework, which would further define the specific reporting requirements of the Proponent and responsible authorities.

During the 2017-18 monitoring period, Sabina provided an annual report associated with their exploration activities under NIRB File No.: 08EN084. Additionally, they have provided NIRB with the following Plans as required by the Project Certificate.

- Pre-Shipment Equipment Cleaning Requirements (February 2018)
- Burrow and Quarry Management Plan (May 2018)
- Quarry Management Plan (May 2018)
- Shipping Management Plan (September 2018)
- Marine Monitoring Plan (September 2018)
- Oil Pollution Emergency Plan (September 2018)

- Risk and Emergency Response Plan (September 2018)
- Wildlife Mitigation and Monitoring Program (Spills) (September 2018)

## **2.2 COMPLIANCE MONITORING**

Compliance monitoring involves an assessment undertaken by regulators and other agencies to establish whether or not a project is being carried out within the legislation, regulations, instruments, commitments and agreements as such are applicable to certain project activities.

### **2.2.1 *NIRB***

#### **2.2.1.1 Compliance with the NIRB Project Certificate No. 007**

The Project is still in the pre-development stage as Sabina continues to secure permits for construction of the Project. During the 2017-2018 reporting period, the Proponent was successful in having met the requirements of the NIRB Project Certificate applicable to the Pre-construction.

The NIRB notes that while Sabina was in compliance with the Terms and Conditions of the Back River Project Certificate, much of the required reporting that was to be submitted prior to the commencement of project related shipping was received late after shipping had commenced. The NIRB recommends that moving forward into the construction phase that Sabina track and submit their plans and reports by the deadlines outlined in the Project Certificate.

[Appendix I](#) outlines a summary of Sabina's compliance to the NIRB's Project Certificate terms and conditions as they apply to this stage of the project's development. As the Project completes its licensing and more activities occur on site, the NIRB will include the Project Certificate in its entirety.

### **2.2.2 *Compliance update by Regulatory Authorities***

#### **2.2.2.1 Kitikmeot Inuit Association**

On April 23, 2018 Sabina finalized the required agreements (including, but not limited to, the Inuit Impact Benefit Agreement and Land Tenure Agreements) with the Kitikmeot Inuit Association (KIA). These agreements allow for advancement of the Project and ensure appropriate long-term benefits are being provided to Inuit of the Kitikmeot Region.

#### **2.2.2.2 Nunavut Water Board**

On March 13, 2018 Sabina received Type "B" Water License No. 2BC-BRP1819 from Nunavut Water Board (NWB) which allows for identified Initial Development Works to commence at both the Goose Property and Marine Laydown Area. In order to commence construction, Sabina requires a Type "A" Water Licence and on August 8 and 9, 2018 the NWB held its

Public Hearing in Cambridge Bay. Sabina is currently awaiting a decision on Type “A” Water License (2AM-BRP1831).

### **3.0 EFFECTS MONITORING – IMPACT ASSESSMENT**

#### **3.1 NIRB SITE VISIT**

On August 14-16, 2018 the NIRB Monitoring Officer conducted a site visit to visually inspect activities occurring related to the project and assess compliance to the requirements of the Back River Project Certificate (see [Appendix II](#)). Based on the observations made during this site visit, all sites related to ongoing exploration and sites being prepared for mining development appear to be well managed and well maintained with appropriate environmental protection measures and procedures in place. Details provided by Sabina during the site visit provided the Monitoring Officer with additional information regarding the company’s ongoing efforts to prepare for construction.

During the site visit the Monitoring Officer did not observe any items of significant concern however noted that some damage (tracks) had occurred on the tundra near the Goose Lake Quarry and at the Marine Laydown Area from the shore to the camp area as well as at some additional areas at the MLA site.

#### ***Condition 34***

*“The Proponent shall have in place a Vegetation Monitoring Plan that is designed to quantify the potential impacts on vegetation from the Project, including the annual construction/operation of the winter ice roads and trails. The plan should include all commitments discussed throughout the Review of the Project, including commitments to consult with the Kitikmeot Inuit Association, the Government of Nunavut, and other relevant parties, as well as:*

- a. Establishment of pre-construction and post-operation vegetation conditions annually with supporting photographs to allow for long-term comparisons of vegetation conditions along winter ice road/trail routings and around project sites;*
- b. Incorporation of measures to prevent or minimize potential destabilization and erosion along winter ice road/trail routings and around project sites;*
- c. Details on the triggers for implementing adaptive management options if effects to vegetation are observed, including potential impacts from dust deposition; and,*
- d. Discussion of how the findings from monitoring efforts would be used to inform reclamation planning.*

#### ***Condition 35***

*“The Proponent shall develop a progressive revegetation program for disturbed areas that are no longer required for operations, such as a program to incorporate measures for the use of test plots, reseeding, and replanting of native plants as necessary. It is further recommended that this program be directly associated with the management plans for erosion control established for the Project.”*



Sabina staff noted that they would be developing as part of their Vegetation Monitoring Plan a revegetation and reclamation strategy to maximize revegetation to the damaged areas on the tundra.

While the Vegetation Monitoring Plan is not required to be submitted to the Nunavut Impact Review Board (NIRB) until at least 90 days prior to the start of construction, the program and any associated revegetation done this year should be provided within the Proponent's annual report submitted to the Nunavut Impact Review Board.

### **3.2 COMMUNITY INFORMATION SESSION**

Associated with the NIRB's 2018 site visit, on August 23, 2018 the NIRB held an afternoon open house and an evening community information session at the Luke Noviligak Community Hall in Cambridge Bay to update, discuss, and receive feedback from community members on the NIRB's monitoring program for the Back River Project. The afternoon session recorded attendance of 14 people and the evening session 10 people. For more information regarding this meeting, please refer to [Appendix III](#) of this report.

## **4.0 FINDINGS**

As stated in Section 1.0, the NIRB is responsible for project monitoring in order to:

- a. to measure the relevant effects of projects on the ecosystemic and socio-economic environments of the Nunavut Settlement Area;
- b. to determine whether and to what extent the land or resource use in question is carried out within the predetermined terms and conditions;
- c. to provide the information base necessary for agencies to enforce terms and conditions of land or resource use approvals; and
- d. to assess the accuracy of the predictions contained in the project impact statements.

The Back River Gold Mine Project received its Project Certificate in December 2017 and remains in the pre-development/preconstruction phase. During the 2017-2018 monitoring period, Sabina remained in communication with the NIRB, provided updates and plans to the Board, and demonstrated general compliance with in the requirements of the Project Certificate, as appropriate for the current development phase of the Back River Gold Mine Project ([Appendix I](#)). However, it should be noted that some required plans were submitted late and the NIRB recommends that moving forward into the construction phase that Sabina track and submit their plans and reports by the deadlines outlined in the Project Certificate.

These items and the Conditions discussed above are addressed in the Board's recommendations provided to the Proponent under separate cover.

The NIRB anticipates further discussions and reporting within Sabina's 2018 Annual Report to the NIRB prior to entering the construction phase of development. It should be noted that as the site becomes more active, more plans and reporting will be required to ensure all parties are aware of what is happening at site and that all plans have been developed and are being adhered to.

Pursuant to sections 12.7.2 and 12.7.3 of the *Nunavut Agreement*, the NIRB will continue to work with Sabina and other agencies in order to provide the necessary information through the licensing process, further develop Appendix A of the Back River Project Certificate as licenses are issued for development of the mine, and continue to support implementation of project-specific monitoring programs to address issues of particular importance to the Board as identified in the Back River Project Certificate.

Prepared by: Jaida Ohokannoak  
Title: Technical Advisor II  
Date: October 31, 2018

Signature: 

Reviewed by: Kelli Gillard  
Title: Manager, Project Monitoring  
Date: October 31, 2018

Signature: 

**Appendix I:  
COMPLIANCE WITH PROJECT CERTIFICATE**

<b>Condition No.</b>	<b>Term or Condition/Reporting Requirement</b>	<b>Date Required</b>	<b>Date Submitted</b>
1	<u>Air Quality Monitoring and Management Plan</u>	90 days prior to start of construction	
3	<u>Dust Management and Monitoring Plans</u>	90 days prior to start of construction	
4	<u>Incineration Management Plan</u>	60 days prior to start of construction	
6	<u>Greenhouse Gas Reduction Plan</u>	Prior to start of construction – results every two (2) years thereafter	
7	<u>Mine Closure and Reclamation Plan</u>	60 days prior to start of construction	
14	<u>Waste Management Plan</u>	60 days prior to start of construction	
15	<u>Progressive Reclamation Plan</u>	90 days prior to start of construction	
16	<u>Geological Features, Surficial and Bedrock Geology, and Geochemistry</u> - The Proponent shall develop site-specific quarry operation and management plans in advance of the development of any potential quarry site or borrow pit.	30 days prior to use of quarry or borrow site	Submitted May 02, 2018

Condition No.	Term or Condition/Reporting Requirement	Date Required	Date Submitted
20	<u>Thermal Monitoring Plan</u>	60 days prior to start of construction	
21	<u>Aquatic Effects Monitoring Plan</u>	90 days prior to start of construction	
22	<u>Site Water Monitoring and Management Plan</u>	90 days prior to start of construction	
25	<u>Freshwater Aquatic Environment – Winter Ice Road</u> - The Proponent shall implement all applicable Fisheries and Oceans Canada best management practices to avoid and mitigate serious harm to fish as a result of the construction, operation, and decommissioning of winter ice roads, and from under ice water withdrawals. This includes adequately screening the water intakes pipes to prevent impingement and entrainment of fish.	To be included in the Annual Report	
26	<u>Freshwater Aquatic Environment – Fish Passage</u> -The Proponent shall engage Fisheries and Oceans Canada, the Kitikmeot Inuit Association, and other interested parties during the regulatory phase on the design, construction, and operation of adequate fish passage to permit migration of Arctic Grayling from Goose Lake to natural spawning and rearing habitat located in upper Rascal Stream East, south of the planned airstrip. Any additional information required to ensure the design of the fish passage will be completed prior to significant construction activities at the Goose Property	30 days prior to construction of the fish passage	
27	<u>Freshwater Aquatic Environment – Water Withdrawal Sites</u> - The Proponent shall provide bathymetry, depth, and location of proposed water withdrawal sites, volumes to be extracted, anticipated water level decreases, and fish habitat features within each waterbody proposed to be used for winter water withdrawal in support of the annual construction of the winter ice roads. If additional waterbodies are required the Proponent shall provide all required information on the additional proposed lakes prior to the use of the waterbodies.	90 days prior to the start of water withdrawal or as directed by DFO or the NWB.	

Condition No.	Term or Condition/Reporting Requirement	Date Required	Date Submitted
33	<u>Vegetation – Invasive Species</u> - The Proponent shall ensure that equipment and supplies brought to the project sites are clean and free of soils that could contain plant seeds not naturally occurring in the area. Vehicle tires and treads in particular must be inspected prior to initial use in project areas. The Proponent shall also incorporate protocols for monitoring for the potential introduction of invasive vegetation species (e.g., surveys of plant populations in previously disturbed areas) into relevant monitoring and management plans for the terrestrial environment. Any introductions of non-indigenous plant species must be promptly reported to the Government of Nunavut - Department of Environment.	30 days prior to first shipment of equipment and supplies to site	Submitted on February 16, 2018
34	<u>Vegetation Monitoring Plan</u>	90 days prior to start of construction	
35	<u>Revegetation and Reclamation</u> - The Proponent shall develop a progressive revegetation program for disturbed areas that are no longer required for operations, such as a program to incorporate measures for the use of test plots, reseedling, and replanting of native plants as necessary. It is further recommended that this program be directly associated with the management plans for erosion control established for the Project.	To be included in the Annual Report	
37	<u>Wildlife Mitigation and Monitoring Plan</u>	90 days prior to start of construction	
38	<u>Wildlife and Wildlife Habitat - Wildlife Monitoring</u> - In consultation with the Government of Nunavut, the Kitikmeot Inuit Association, and other relevant parties, the Proponent shall make efforts to contribute to existing and planned cumulative effects and regional monitoring programs for caribou, grizzly bear, wolverine and muskox, as appropriate. Relevant details of coordination through data sharing arrangements or agreements should be highlighted.	To be included in the Annual Report	

Condition No.	Term or Condition/Reporting Requirement	Date Required	Date Submitted
39	<u>Caribou Mitigation and Adaptive Management Measures</u>	90 days prior to construction and Annual Report	
41	<u>Wildlife and Wildlife Habitat – Caribou Mitigation Measures</u> - The Proponent shall demonstrate consideration for the increased potential of caribou presence in the area when planning outdoor construction activities (including site clearing, blasting, and operation of heavy equipment) during the July 26 to August 31 period.	To be included in the Annual Report	
42	<u>Wildlife and Wildlife Habitat – Caribou Mitigation Measures</u> - The Proponent shall ensure that all caribou mitigation and monitoring measures (including mitigation for shifts in calving and post-calving ranges) included within the Wildlife Mitigation Monitoring Program Plan apply to all caribou, regardless of the herd.	To be included in the Annual Report	
43	<u>Wildlife and Wildlife Habitat – Wildlife Mitigation Measures</u>	90 days prior to start of construction	
44	<u>Wildlife and Wildlife Habitat – Muskox Mitigation Measures</u> - In collaboration with the Government of Nunavut, the Proponent shall specify within its Wildlife Mitigation and Monitoring Plan specific mitigation measures, trigger distances, and group size thresholds for the protection of muskox in proximity to project activities (e.g., blasting, heavy truck traffic, and aircraft).	To be included in the Annual Report	
45	<u>Wildlife and Wildlife Habitat – Wildlife Mitigation Measures</u> - The Proponent shall ensure that safety barriers, berms, and designed crossings associated with project infrastructure, including site roads and the winter ice road, are constructed as necessary to allow for the safe passage of caribou and other terrestrial wildlife and do not interfere with wildlife denning sites.	To be included in the Annual Report	

Condition No.	Term or Condition/Reporting Requirement	Date Required	Date Submitted
46	<u>Wildlife and Wildlife Habitat – Wildlife Monitoring and Adaptive Management Measures</u> - The Proponent shall file an incident report to the local wildlife conservation office for any and all direct wildlife mortalities that occur in association with the Project. All incident reports should include sufficient detail to demonstrate how monitoring and mitigation measures failed to prevent the mortality, as well as information pertaining to what measures would be put in place to prevent the incident from reoccurring. The Proponent shall reach an agreement with the appropriate Designated Inuit Organization regarding compensation for any direct mortality of wildlife resulting from the Project.	To be included in the Annual Report	
62	<u>Marine Monitoring Plan</u> - The Proponent shall maintain a marine monitoring program at the Marine Laydown Area to enable identification of potential impacts of the Project on the marine environment and to inform adaptive management actions. The monitoring program shall be in line with the proposed monitoring in the Aquatic Effects Monitoring Program, or as required by applicable regulatory authorities. At a minimum, water sampling should include end of pipe and control area samples, collected on a regular basis to confirm salinity levels of the discharge and the receiving environment.	60 days prior to commencement of shipping	Received September 4, 2018
89	<u>Accidents and Malfunctions</u> - The Proponent shall include within its Wildlife Mitigation and Monitoring Program Plan measures for preventing fuel spills into the marine environment and mitigating potential effects of an accidental spill on polar bears, seals, other marine wildlife, and migratory birds. Mitigation plan should be provided to NIRB prior to commencement of project related shipping.	Prior to commencement of project related shipping	Received September 05, 2018
90	<u>Accidents and Malfunctions</u> - The Proponent shall maintain an Oil Pollution Emergency Plan (OPEP) with a list of authorized personnel, staff training, and the required Northwest Territories-Nunavut spill report document.	Prior to commencement of shipping	Received September 04, 2018
91	<u>Accidents and Malfunctions</u> - The Proponent shall contract only certified vessels to carry cargo for the Project and will ensure shippers are aware of the requirements of the Shipping Management Plan, the Risk Management and Emergency Response Plan, and the Oil Pollution Emergency Plan.	Prior to commencement of Project related shipping	Received September 04, 2018

Condition No.	Term or Condition/Reporting Requirement	Date Required	Date Submitted
92	<u>Accidents and Malfunctions</u> - The Proponent shall ensure that the necessary spill response equipment and training to employees, contractors, and local community members is available prior to commencing Project shipping.	Prior to commencement of Project related shipping and Annual Report	Received September 04, 2018



**Appendix II:**  
**THE NIRB'S 2018 BACK RIVER PROJECT SITE VISIT REPORT**



# 2018 Site Visit Report

for the NIRB's Monitoring of the  
**Back River Gold Mine Project**



# Nunavut Impact Review Board

File No.: 12MN036

# Back River Gold Mine Project Certificate No. 007

October 2018

**Full Report Title:** The 2018 Site Visit Report for the Nunavut Impact Review Board's Monitoring of the Back River Gold Mine Project (NIRB File No. 12MN036)

**Project:** Back River Gold Mine Project

**Project Location:** Kitikmeot Region, Nunavut

**NIRB File No.:** 12MN036

Back River Gold Mine Project Certificate No. 007

**Project Owner:** Sabina Gold and Silver Corporation

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**Visit conducted by:** Jaida Ohokannoak, Monitoring Officer

**Site visit date:** August 14-16, 2018

**Report prepared by:** Jaida Ohokannoak, Technical Advisor II

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**Pictures by:** NIRB Staff

**Cover Photo:** Marine Laydown Area – Bathurst Inlet

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## **1.0 Introduction**

The Nunavut Impact Review Board (NIRB or Board) was established through Articles 10 and 12 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and is responsible for post environmental assessment monitoring of a Project in accordance with Part 7 of Article 12 of the Nunavut Agreement.

This report provides the findings that resulted from the NIRB's site visit to the Back River Gold Mine Project site on August 14 to 16, 2018 and as such forms a part of the NIRB's monitoring program.

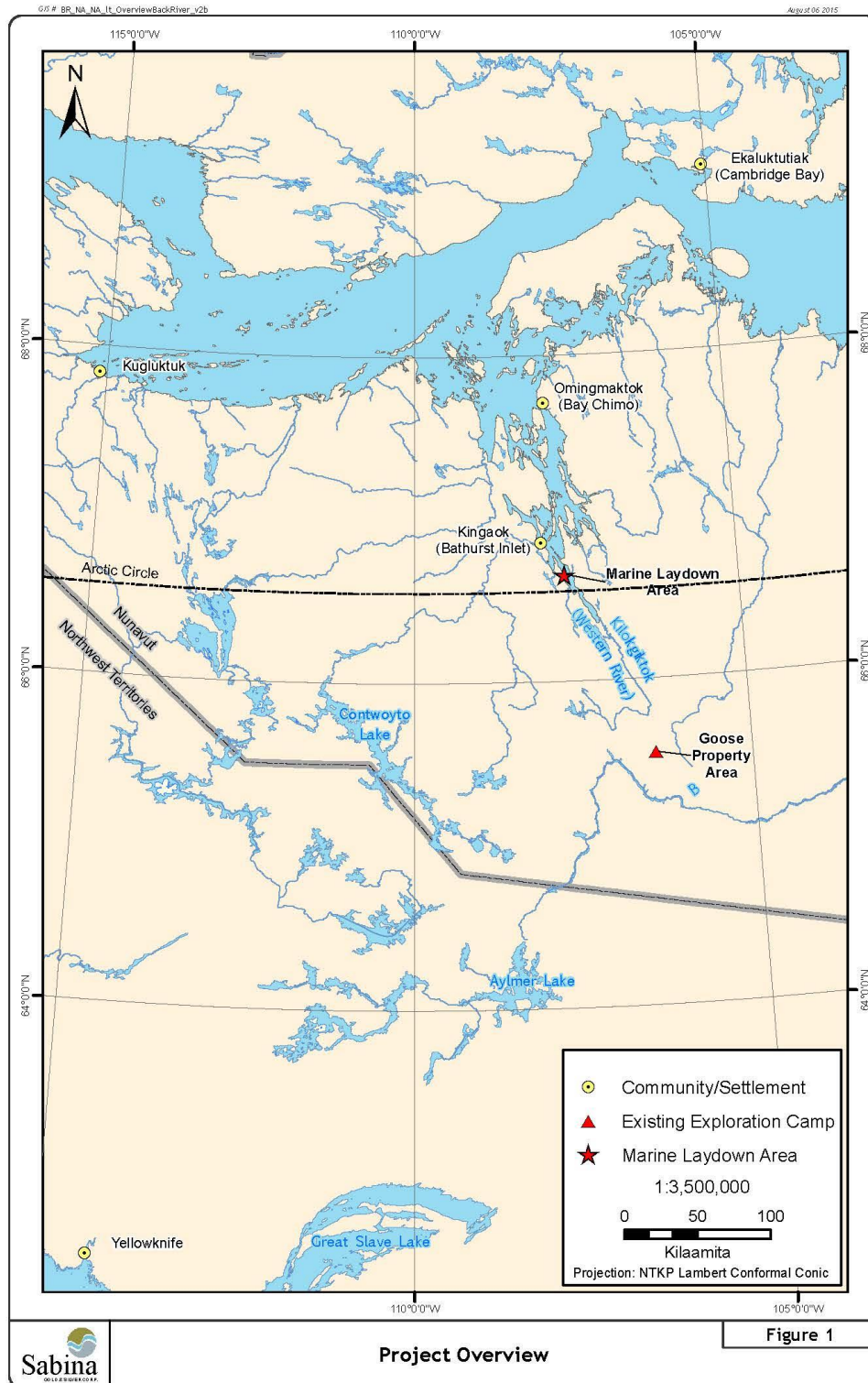
### **1.1 Objectives & Purpose of the Site Visit**

In accordance with sections 12.7.1 and 12.7.2 of the *Nunavut Agreement* as well as the Project Certificate No. 007, the NIRB is responsible for the establishment of a monitoring program for the Project, which includes conducting periodic site visits. The objective of the NIRB's site visit was to determine whether, and to what extent, the land or resource use in question is being carried out within the predetermined terms and conditions of the NIRB's Project Certificate issued for the Back River Gold Mine Project, in accordance with (*Nunavut Agreement*, Subsection 12.7.2(b)) as outlined in the NIRB Project Certificate.

The observations resulting from this site visit shall, wherever possible, be incorporated into the measurement of the relevant effects of the project according to Section 12.7.2(a), as well provide the information necessary for agencies to enforce terms and conditions of land or resource use approvals as required under Section 12.7.2(c). Observations will also be used to assess the accuracy of the predictions contained in the project impact statements according to Section 12.7.2(d) of the *Nunavut Agreement*.

### **1.2 Back River Gold Mine Project History**

The Back River Gold Mine Project (NIRB File No. 12MN036; the Back River Project or the Project) consists of the proposed mobilization, construction, operation, closure, reclamation, and post-closure monitoring of a gold mine operation in the Kitikmeot region of Nunavut. The Project is located approximately 400 kilometres (km) southwest of the community of Cambridge Bay, 95 km southeast of the southern end of Bathurst Inlet, and 520 km northeast of Yellowknife, Northwest Territories. The proponent for the Back River Project is Sabina Gold & Silver Corp. (the Proponent or Sabina). The Back River Project includes two (2) main development areas with a winter ice road interconnecting the Goose Property with the Marine Laydown Area (MLA), which would be located at Bathurst Inlet.

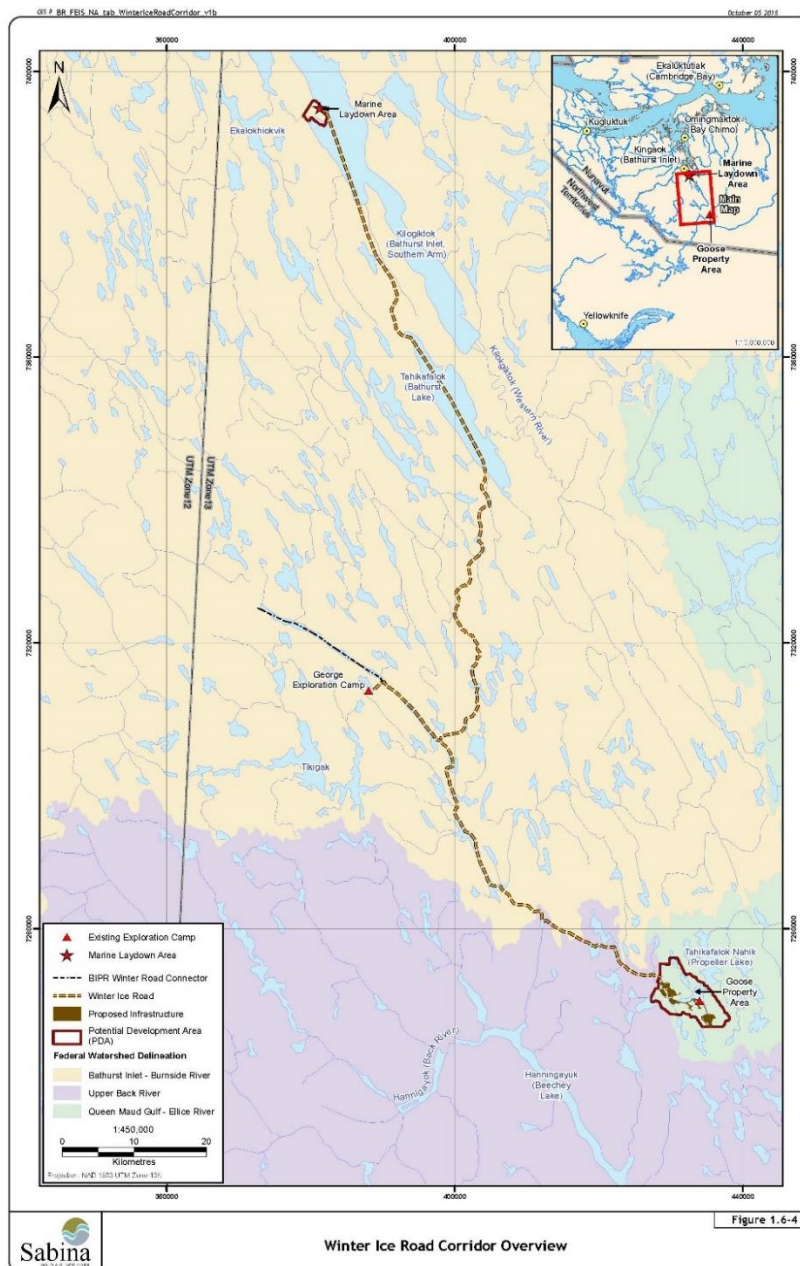


**Figure 1: Project Overview Map**

Figure 1.6-2: Potential Development Area and Layout Goose Property Area. This map shows the layout of the Goose Property Area, including various ponds (A through L), lakes (Swan, Wasp, Leaf, Grapple, Goose, Echo, Ring, Fox), and infrastructure like pipelines, roads, and storage areas. It also shows the Inuit Owned Land (IOL) and Crown Land borders. An inset map shows the location of the Goose Property Area within the larger context of the Bathurst Inlet area, including the Kingslake (Bathurst Inlet) and the Kingslake (Bathurst Inlet) area. The map includes a scale bar (0 to 2 Kilometres) and a north arrow.

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**Figure 3: Winter Ice Road Corridor Between MLA and Goose Property**

The George Property is an advanced exploration camp located approximately 50 km northwest of Goose Property and Sabina may construct an annual spur road from the winter ice road to the George Property for transportation of supplies. The continuation of a diamond drilling based mineral exploration program for the George Property and the Wishbone claim of mineral leases was included within the scope of the Board's assessment for the Back River Project. It should be noted that further advanced exploration (i.e., bulk sampling and infrastructure development) was not included with the understanding such activities would require further assessment by the NIRB prior to occurring.

The MLA is located approximately 130 km north-northwest of the Goose Property and is the primary staging area for equipment, material, fuel, and other supplies required for the construction and operation of the Project. The MLA consists of a single barge terminal, laydown areas, a camp facility, and associated storage and maintenance facilities. The Project would be resupplied annually from southern Canada by barge during the open water season. Project materials would then be transported annually from the MLA to the Goose Property using a winter ice road from mid-January to April.

The NIRB Project Certificate No. 007 was issued for the Back River Gold Mine Project on December 19, 2017. On March 13, 2018 Sabina received Type “B” Water License No. 2BCBRP1819 from the Nunavut Water Board (NWB) which allows for identified Initial Development Works to commence at both the Goose Property and Marine Laydown Area. On April 23, 2018 Sabina finalized the required agreements (including, but not limited to, the Inuit Impact Benefit Agreement (IIBA) and Land Tenure Agreements) with the Kitikmeot Inuit Association (KIA). These agreements allow for advancement of the Project and ensure appropriate long-term benefits are being provided to Inuit of the Kitikmeot Region. In order to commence construction Sabina requires a Type “A” Water Licence and has submitted an application to the NWB. Sabina is currently continuing exploration activities as previously approved and preparing the site for construction, while waiting for approval to begin construction.

### **1.3 Preparations for the Site Visit**

In preparation for the site visit, the Monitoring Officer reviewed the Back River Gold Mine Project Certificate No.007 and Sabina’s 2017 Back River Gold Project Annual Report.

## **2.0 2018 Site Visit**

The NIRB site visit was conducted on August 14 to 16, 2018 by Jaida Ohokannoak, NIRB Monitoring Officer for the Back River Gold Mine Project (the Monitoring Officer). On Tuesday, August 14, 2018, NIRB staff flew from Yellowknife to the Back River, Goose Property site via an aircraft charter. The Monitoring Officer was greeted by Merle Keefe, Environmental Engineer and Mitch Kearney, Environmental Coordinator. While waiting for the charter flight Merle Keefe gave a brief power point presentation including an overview of the recent work at both the Goose Property and at the Marine Laydown Area (MLA). Once on site a basic orientation of health, safety, and environment procedures was provided before commencing the tour.

The NIRB’s assessment of the site focused on general site conditions and observations related to compliance with the NIRB Project Certificate No. 007, and included visual observation of the following features either by vehicle, on foot, or by helicopter:

- Goose camp
  - Water intake and greywater disposal
  - Various infrastructure (e.g., storage areas, warehouse, truck shop, offices, accommodations buildings, and environment and geology work areas);
  - Fuel storage;
  - non-hazardous and hazardous waste areas and receptacles;
  - laydown areas;
  - incinerator;
  - contractor workshops / laydown areas;
  - airstrip; and
  - environmental baseline collection (Aquatic Effects Monitoring Program, weather station).

- Marine Laydown Area
  - Quarry / future bulk fuel storage area;
  - Temporary Fuel Storage;
  - Laydown Area;
  - Summer Sealift and Port;
  - Camp / Accommodations;
  - Incinerator;
  - Airstrip; and
  - Water desalination plant
- Winter road routing
  - Future pit, waste rock piles, tailings facilities and other future infrastructure locations;
  - Goose lake quarry / road; and
  - Exploration / drill rig activities.
- George Lake
  - Fuel storage;
  - Airstrip; and
  - Main Camp.

Upon completion of the tour, the Monitoring Officer discussed observations noted during the site visit with Sabina staff.

### **3.0 General Observations**

The following sections briefly describe the major facilities visited during the tour. Where applicable, the Monitoring Officer noted compliance with specific terms and conditions of the Project Certificate.

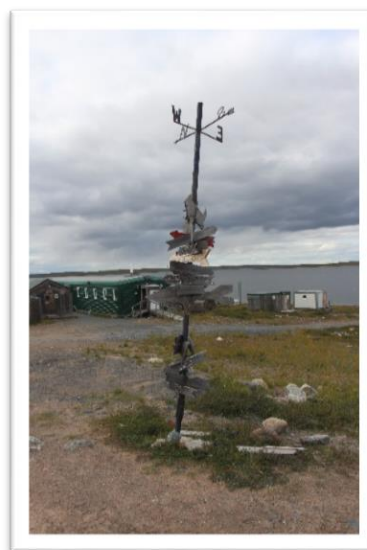
#### **3.1 Goose Property**

The Goose Property encompasses four (4) mineral deposits: Umwelt, Llama, Echo, and Goose Main, which would all be accessed using conventional open pit and underground methods. In February 2018, Sabina resumed seasonal operations at the Goose Lake Camp to conduct exploration drilling programs and to date, has not started any Initial Development Works on the property. The Goose Lake Camp consists of office buildings, sleeping accommodations, washroom (dry), kitchen, medical facility, core tent, maintenance facilities, storage facilities, laydown areas, and other associated infrastructure. The Monitoring Officer was pleased with the orderliness of the site and care and attention made to ensure there was minimal impact to the environment. Throughout the site, fuels and hazardous material were contained in berms and spill kits and fire extinguishers were readily available.



**Photo 1: Goose Lake Camp**

The Goose Lake camp can accommodate up to 158 people; however, during the site visit there were around 45 people employed by Sabina and other contractors.



**Photo 2: Office Buildings Goose Lake Camp**





**Photo 3: Accommodations - Goose Lake**

A small truck shop is housed in tent and was heated by a waste oil burner. Several other buildings on site also use waste oil burners to heat them.



**Photo 4: Truck Shop - Goose Lake**



**Photo 5: Inside Truck Shop**



**Photo 6: Oil and Fluid Containment**



**Photo 7: Waste Oil Burner for Heating**



### 3.1.1 Waste Management

At the Goose Lake Camp, sewage is collected in PACTO toilets and the bags are collected and incinerated. The greywater generated from washing is collected and re-directed onto the tundra ([Photo 8](#), [Photo 9](#)).



**Photo 8: Grey Water Disposal**



**Photo 9: Grey Water Line**

Other waste materials are collected and separated into combustibles, recyclables, and non-combustibles (e.g., aerosol cans and batteries). Combustible waste is incinerated ([Photo 10](#)), cardboard and clean wood are burnt in a burn box ([Photo 11](#)), and recyclables and non-combustibles are collected, stored and then shipped off site.

The Monitoring Officer noted that the incinerator in use at the Back River Project was well maintained and that there appeared to be no “back log” of waste. No stack testing had been done, but it will be once the new incinerator is online at the new camp.

The Monitoring Officer observed waste segregation boxes at different locations on site; however, it was discussed with Sabina staff that prior to construction that a full waste management plan be developed that includes more waste segregation categories (e.g., recyclables (aluminum cans, plastics, drink containers), aerosol cans, batteries, oily rags, kitchen grease, paint, paper/cardboard, food waste etc.) and that the collection bins be more clearly labelled (potentially colour coded) and should be placed around more locations at site. It was also discussed with Sabina staff that waste management portion of the site orientation be improved to provide more detailed direction on how to segregate the waste correctly and to find check measures to ensure all employees are in compliance with the plan.



**Photo 10: Incinerator**



**Photo 11: Burn Box for Wood and Paper**

### **3.1.2 Fuel and Hazardous Material Storage**

Bulk diesel fuel was contained in double walled enviro tanks within a lined berm ([Photo 12](#) and [Photo 13](#)). A lined and bermed vehicle refueling area was located next to the fuel storage facility ([Photo 14](#)). Some ponding was observed as there had been heavy rains in the days prior to the site visit. Should the water become an issue (i.e., will not dry up) it will be tested prior to pumping. The Monitoring Officer also observed the fuel barrel and hazardous materials storage area. All materials were organized and stored correctly in insta-berm liners or in a lined area along with spill kits ([Photo 15](#), [Photo 16](#), [Photo 17](#) and [Photo 18](#)). Heating fuel was also contained to prevent spills at the accommodations buildings ([Photo 19](#)).



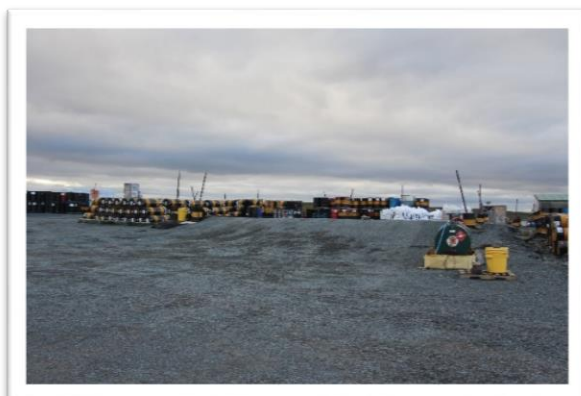
**Photo 12: Fuel Tank Facility**



**Photo 13: Liner and Berm around Fuel Tanks**



**Photo 14: Ponding in Refueling Area - berm and liner**



**Photo 15: Fuel and Hazardous Material Storage Area**



**Photo 16: Insta-berm and Spill Kit**



**Photo 17: Empty Fuel Barrels in Insta-berm**



**Photo 18: Materials stored in Lined Area**





**Photo 19: Heating Fuel Tank Container at Accommodations**

### **3.1.3 Laydown and Storage Areas**

Laydown and storage areas at the Goose Lake Camp were tidy. Materials were placed on top of empty fuel barrels so that they could be located and removed during the snow season.



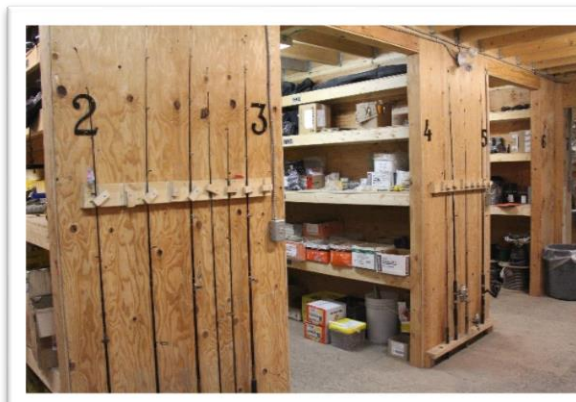
**Photo 20: Material Storage**



**Photo 21: Empty Drill Cutting Bags - to be shipped off site**



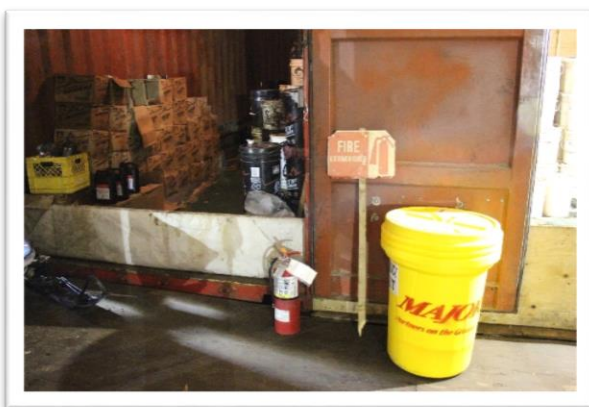
**Photo 22: Warehouse**



**Photo 23: Inside Warehouse**



**Photo 24: Contractor Drilling Laydown Area and Shop**



**Photo 25: Warehouse Materials Stored in Berm**



**Photo 26: Contractor Laydown Area**

### **3.1.4 Exploration Drilling**

An exploration drill program was being based out of Goose Camp by a contractor. During the site visit helicopter supported geological mapping and sampling was occurring on the Goose Property. Geologists were present on site examining core and collected samples were being sent out for analysis. All drill cuttings were captured and transported by helicopter to a sump located at the Goose Camp ([Photo 30](#)).



**Photo 27: Exploration Drill Rig on Tundra**





**Photo 28: Geologist's Drill Core Tent**



**Photo 29: Cut Drill Core**



**Photo 30: Drilling Mud Sump - transported by helicopter from exploration drill site**

At the future location of the Goose Pit, Sabina staff brought the attention of the Monitoring Officer that Crown-Indigenous Relation and Northern Affairs Canada inspector was concerned about the erosion and water accumulation in the depression. While on site it was observed that water was being pumped out but the area continued to contain some water from recent heavy rains. Sabina is currently looking at solutions and would likely fill the location with either fill the depression with soil or potentially use it as drill cutting sump.



**Photo 31: Goose Pit (future) - water being pumped out of depression**



**Photo 32: Helicopter Pads (3)**



**Photo 33: Helicopter Pad**

### 3.1.5 Goose Lake Quarry

The Goose Lake quarry east of camp was operational and spur road construction had begun. The Monitoring Officer observed some damage to the tundra from a tracked vehicle near this area ([Photo 36](#)).



**Photo 34: Quarry - Goose Property**



**Photo 35: Quarry - Road Construction**



**Photo 36: Damage to Tundra near Quarry**



### 3.1.6 Environmental Monitoring



**Photo 37: Environment Lab on Site**

During the site visit the Monitoring Officer observed Sabina's consultant who was on site conducting water and sediment quality sampling as part of the Aquatic Effects Monitoring Program.

Other environmental studies that are occurring on site include hydrological monitoring and permafrost monitoring (thermistors) being conducted via automated systems. Sabina noted that fish monitoring would also occur this summer.



**Photo 38: Water Quality Testing**



**Photo 39: Benthic Samples**



**Photo 40: Weather Station**



**Photo 41: Water Sampling**

A weather station is also located at the camp and collects rainfall, temperature, wind (speed and direction), solar radiation and barometric pressure data.

### 3.2 Marine Laydown Area (MLA)

The MLA is located approximately 130 km north-northwest of the Goose Property and is the primary staging area for equipment, material, fuel, and other supplies required for the construction and operation of the Project. The MLA consists of a single grounded terminal barge, laydown areas, a camp facility, and associated storage and maintenance facilities.



**Photo 42: Marine Laydown Area – Bathurst Inlet**

Sabina commenced initial development works at the Marine Laydown Area (MLA) in March 2018. During the winter materials and supplies were moved in via aircraft using an ice strip on Bathurst Inlet. Short snow and ice roads were constructed to protect the tundra from damage; however, the Monitoring Officer during the site visit however observed some damage (tracks) had occurred on the tundra near from the shore to the camp area ([Photo 43](#)) as well as at some additional areas around site ([Photo 44](#)). Sabina staff noted that these areas are to be repaired and monitored as part of the vegetation monitoring program being established.



**Photo 43: Damage to tundra**



**Photo 44: Visible damage to tundra from overland movement of equipment**

### 3.2.1 Camp

At the time of the site visit, a new permanent 40-person tent camp with associated facilities had been established ([Photo 45](#) and [Photo 46](#)). The new camp was constructed in the same location as the temporary camp, preventing further impact to the tundra. The grey water discharge point was subsequently shifted as a result of the new permanent camp pad location ([Photo 47](#) and [Photo 48](#)).



**Photo 45: MLA Camp**



**Photo 46: MLA Accommodations**



**Photo 47: Greywater discharge pipe from camp**



**Photo 48: Greywater discharge pipe**



### 3.2.2 Bulk Fuel Storage

Bulk diesel fuel was contained in 30,000 L double walled enviro tanks within Insta-berms ([Photo 49](#) and [Photo 50](#)). Sabina will be constructing a permanent bulk fuel tank facility within the quarry area and is proposing a stand-alone bulk fuel pipeline and small vehicle access road in order to pump fuel from the fuel vessel to the yet-to-be built bulk fuel storage tanks.



Photo 49: Temporary Fuel Storage



Photo 50: Fuel Tanks Contained in Insta-berm liners

### 3.2.3 Roads

Permanent roads had been constructed around site, including two (2) trails to access the Explosives Magazine and the Ammonium Nitrate storage ([Photo 51](#)).



Photo 51: Explosives Storage Area

A road was re-aligned, lengthened and widened to create a 3,000 foot airstrip for landing larger aircraft, including Medivac aircraft ([Photo 52](#)).



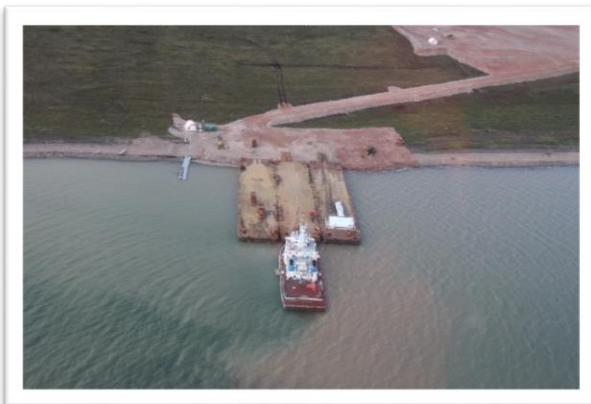
**Photo 52: Airstrip**

### **3.2.4 Laydown Pads**

Laydown pads, a freight storage pad and the shoreline pad for the receipt of sealift barges had been constructed ([Photo 53](#), [Photo 56](#), and [Photo 57](#)). During the site visit the first sealift was just completing the offload of supplies ([Photo 54](#) and [Photo 55](#)).



**Photo 53: Laydown Area Pad and Port**



**Photo 54: Re-supply Tug and Barge in Port**



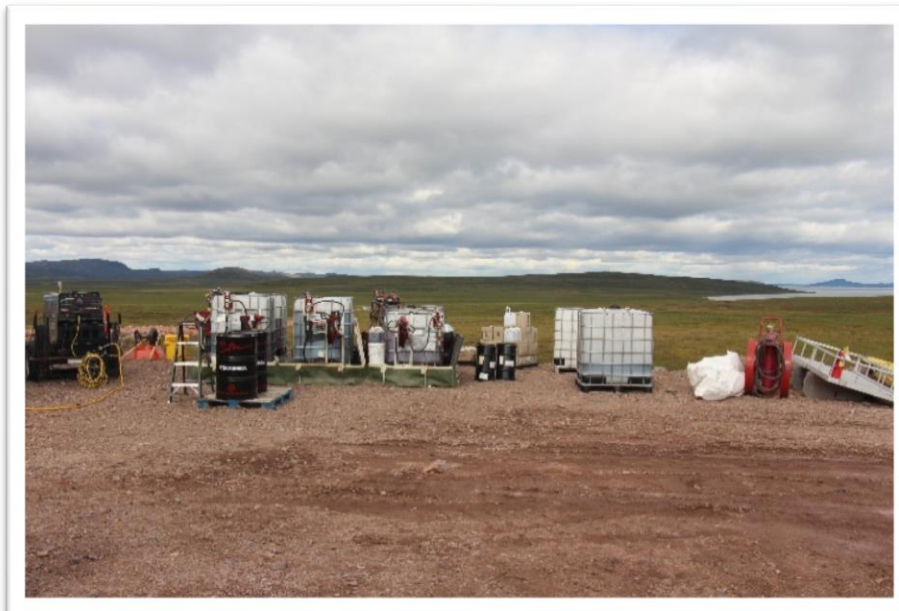
**Photo 55: Offloading Fuel Tanks**



**Photo 56: Laydown Area**



**Photo 57: New Incinerator for MLA - Laydown Area**



**Photo 58: Laydown Area (Fluids contained in berm)**



### 3.2.5 Quarry

A quarry (Photo 59) was established to supply materials for the permanent roads, laydowns, pads and airstrip. It was noted that the quarry materials did not need crushing and that less quarry materials were required than originally anticipated. At the time of the site visit the quarry site was being leveled creating a solid, flat base area for the bulk fuel storage tanks to be constructed (Photo 60). Overall the footprint of the MLA is less than what was projected during the assessment.



Photo 59: Quarry Site - Future Bulk Fuel Storage Facility



Photo 60: Area being leveled for Bulk Fuel Storage Facility

### 3.2.6 Other Camp Infrastructure

#### *Desalination Plant*

Accessing a fresh water supply is a challenge at the MLA so Sabina has commissioned a desalination plant (Photo 61) utilizing temporary intake and discharge lines into the marine environment. Intake lines are placed in the Inlet and then removed after use.



Photo 61: Desalination Plant



Photo 62: Fresh Water Line to Camp

## Spill Containment and Spill Response



Photo 63: Spill Tray and Spill Response Kits



Photo 64: Spill Tray below Fuel Tank



Photo 65: Helicopter Landing Area - Spill kit and Tray for Fuel

## Incinerator

Sabina reported that the incinerator capacity at the MLA was stretched as the initial development works began to ramp up. They brought in a temporary incinerator (Photo 66) until the new one (1) permanent incinerator that arrived on the sealift can be installed.



Photo 66: Temporary Incinerator



### 3.3 Proposed Winter Road Route

The Project will be resupplied annually by barge from southern Canada during the summer open water season and stored at the Marine Laydown Area (MLA), laydown pads and in the fuel storage facility. Project materials and fuel would then be transported annually from the MLA to the Goose Property using a winter ice road from mid-January to April.

NIRB staff flew the proposed winter road route to observe pre-winter road construction conditions.



**Photo 67: Proposed Winter Road Route (Looking South)**



**Photo 68: Bathurst Lake - Proposed Winter Road Route (South)**

### 3.4 George Lake

The George Lake Property is an advanced exploration camp located approximately 50 km northwest of Goose Property, and currently has four (4) mineral deposits identified for potential future development. The camp is currently under care and maintenance by Sabina and no personnel were located at the camp and no exploration activities were occurring around the George Property during the site visit. The weather station was operational and still collecting data.



**Photo 69: George Lake Exploration Camp**

Overall, the camp is well maintained, with proper containment of fuels and hazardous materials ([Photo 70](#), [Photo 71](#), [Photo 72](#) and [Photo 73](#)). During the site inspection it was noted that a wolverine had tried unsuccessfully to break into the roof of the airport building. Wildlife tracks such as wolf, caribou and muskox were observed around the site. Caribou also appear to have bedding down in a storage building ([Photo 77](#)) that was left open to allow for air circulation and to dry up the floor of the building. While no wildlife attractants appeared to be visible within the structure, the Monitoring Officer recommended that the Proponent close the structure to prevent further access by wildlife to the building.



**Photo 70: Fuel Storage / Laydown Area**



**Photo 71: Fuel Tank Farm – Lined and Bermed**



**Photo 72: Equipment Access into berm area**



**Photo 73: Insta-berm around drilling fluids**



**Photo 74: Crushed Fuel Barrels**





**Photo 75: Goose Lake Camp and Airstrip**



**Photo 76: Accommodations Buildings - George Lake**

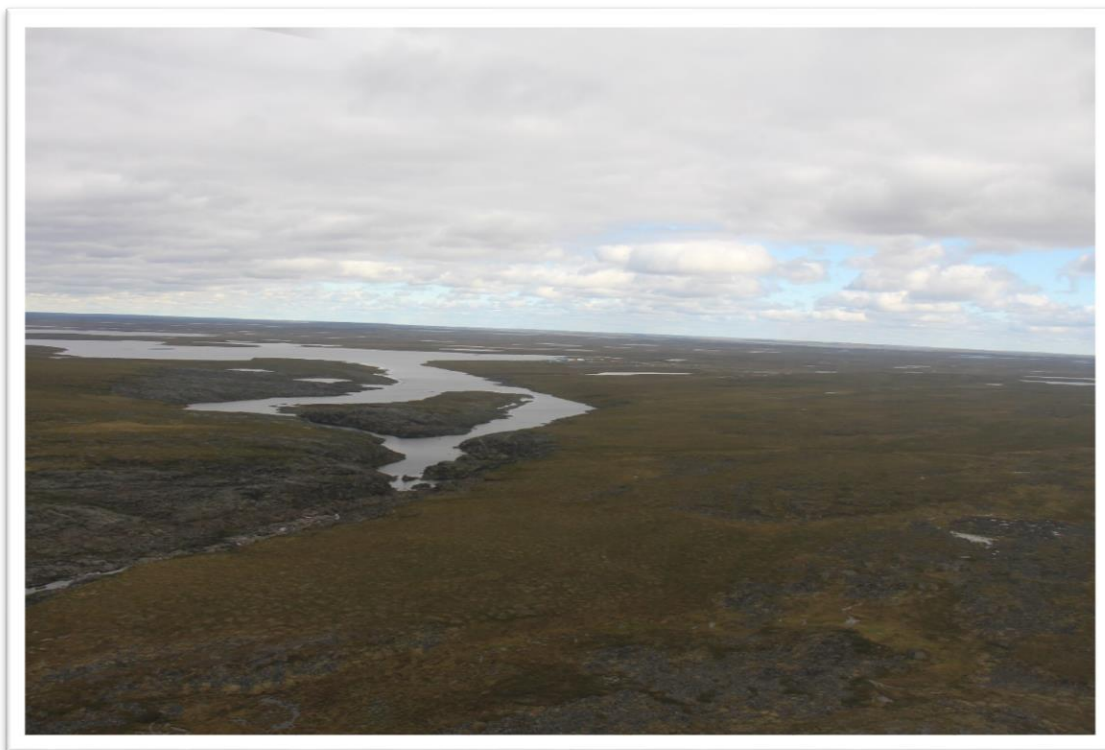


**Photo 77: Open Storage Building (George Lake)**

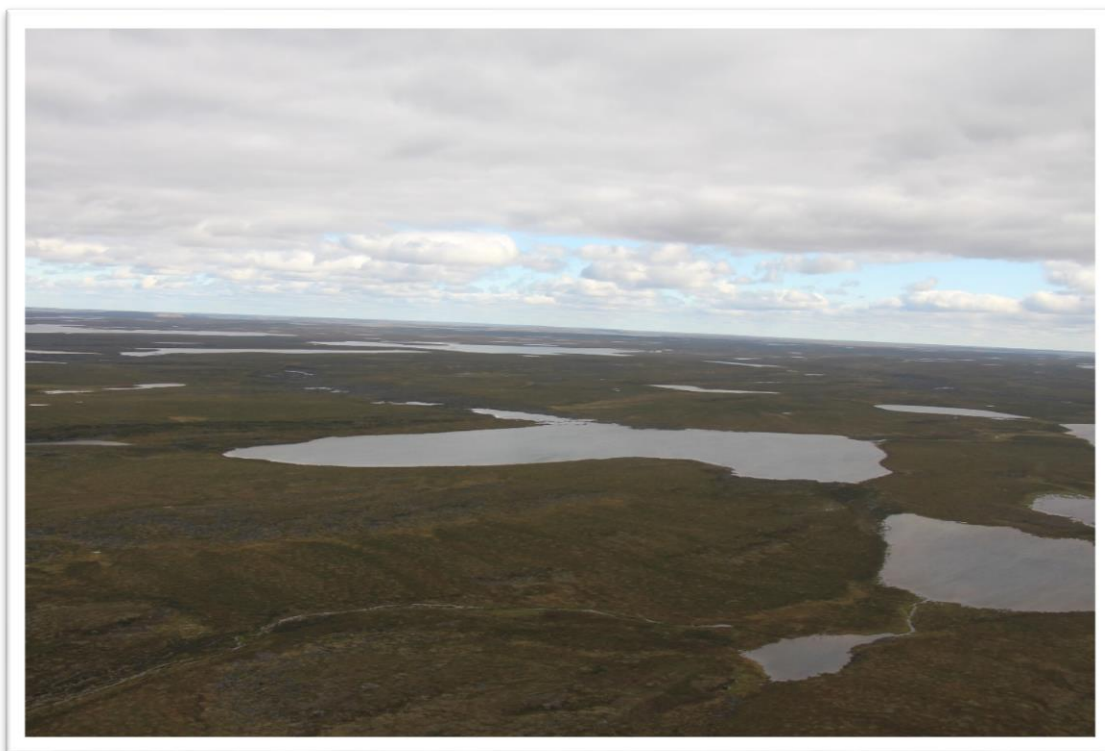
### **3.4 Future Development Areas**

The Back River Project at the Goose Property will encompass four (4) mineral deposits: Umwelt, Llama, Echo, and Goose Main, which would all be accessed using conventional open pit and underground methods. Waste rock piles will be created next to the pits. Ore mined at the Goose Property would be hauled to ore stockpiles located at the Goose Site where the ore would be processed within an ore processing plant (mill) using conventional gravity concentration and cyanidation techniques.

A tailings storage facility would be built south-southeast of the Goose Main open pit for tailings deposition during the first two (2) years of production, with tailings then to be directly deposited into the mined-out Umwelt open pit, and then into the mined-out Goose Main open pit for the remaining life of the mine.



**Photo 78: Proposed Ore Stockpile, Camp and Plant Site Locations (looking east)**



**Photo 79: Future Llama and Umwelt Development Areas**

## 4.0 Findings and Summary

During the site visit, the Monitoring Officer observed that facilities in operation at the Goose Property, Marine Laydown Area, and George Lake Property were very well managed and care and attention has been made to ensure there were adequate environmental protection measures in place and that there was minimal impact to the environment.

Due to the early stage of development of the Back River Gold Mine Project, it is noted that many terms and conditions as contained within Project Certificate No. 007 may not be applicable for this monitoring period and/or have not yet been thoroughly implemented at this time by Sabina. Once all licences and permits have been obtained to begin the construction phase, more conditions of the NIRB Project Certificate would be applicable to site operations, and Sabina would be required to comply with the conditions.

In order to meet the requirements of the Project Certificate terms and conditions, and to ensure potential adverse impacts to the environment are adequately mitigated as the project advances, the Monitoring Officer is making the following recommendations:

### 4.1 Vegetation

The Monitoring Officer observed during the site visit some damage (tracks) had occurred on the tundra near the Goose Lake Quarry and at the Marine Laydown Area from the shore to the camp area as well as at some additional areas at the MLA site.

#### Condition 34

*“The Proponent shall have in place a Vegetation Monitoring Plan that is designed to quantify the potential impacts on vegetation from the Project, including the annual construction/operation of the winter ice roads and trails. The plan should include all commitments discussed throughout the Review of the Project, including commitments to consult with the Kitikmeot Inuit Association, the Government of Nunavut, and other relevant parties, as well as:*

- a. Establishment of pre-construction and post-operation vegetation conditions annually with supporting photographs to allow for long-term comparisons of vegetation conditions along winter ice road/trail routings and around project sites;*
- b. Incorporation of measures to prevent or minimize potential destabilization and erosion along winter ice road/trail routings and around project sites;*
- c. Details on the triggers for implementing adaptive management options if effects to vegetation are observed, including potential impacts from dust deposition; and,*
- d. Discussion of how the findings from monitoring efforts would be used to inform reclamation planning.*

### **Condition 35**

*"The Proponent shall develop a progressive revegetation program for disturbed areas that are no longer required for operations, such as a program to incorporate measures for the use of test plots, reseeding, and replanting of native plants as necessary. It is further recommended that this program be directly associated with the management plans for erosion control established for the Project."*

Sabina staff noted that they would be developing as part of their Vegetation Monitoring Plan a revegetation and reclamation strategy to maximize revegetation to the damaged areas on the tundra.

While the Vegetation Monitoring Plan is not required to be submitted to the Nunavut Impact Review Board (NIRB) until at least 90 days prior to the start of construction, the program and any associated revegetation done this year should be provided within the Proponent's annual report submitted to the Nunavut Impact Review Board.

## **4.2 Waste Management**

While Sabina is handling their waste well with the small camp sizes, the Monitoring Officer is recommending that Sabina make upgrades to its waste management and waste segregation practices site wide prior to ramping up to the construction and operations phases.

### **Condition 4**

*"The Proponent shall develop and implement an Incineration Management Plan that demonstrates consideration for the recommendations provided in Environment and Climate Change Canada's Technical Document for Batch Waste Incineration (2010)."*

### **Condition 14**

*"The Proponent shall provide a Waste Management Plan that describes how the local environment, including permafrost integrity and water quality, will not be harmed by wastes at project landfills. The Proponent shall demonstrate that the use of liners at waste management facilities has been considered and adopted, wherever feasible."*

It is recommended that the Waste Management Plan include more waste segregation categories (e.g., recyclables (aluminum cans, plastics, drink containers), aerosol cans, batteries, oily rags, kitchen grease, paint, paper/cardboard, food waste etc.) and that the waste streams, including collection bins be more clearly identified (colour coded), and that more collection bins placed around the site. It is also recommended that waste management portion of the site orientation be improved to provide more detailed direction on how to segregate the waste correctly and to develop check measures and/or incentives to ensure all employees (including contractors) are in compliance with the plan.

As part of the Incinerator Management Plan the incinerator operator should be trained to maximize burn completeness (wet to dry ratios) following Environment and Climate Change Canada's Technical Document for Batch Waste Incineration (2010), and include visual inspections of all bags prior to incineration, removing any items such as plastics, aluminum cans, batteries etc. prior to incineration.

NIRB staff also made suggestions to Sabina staff during the site visit to give consideration to obtaining a composter for composting biodegradables which would save diesel fuel used in incineration. It was also suggested to consider adopting the use of non-plastic items and investigating more environment conscious products such (e.g., corn based garbage bags and utensils).

### **4.3 Air Quality**

While dust is currently not an issue on site, the Monitoring Officer is recommending that Sabina consider investigating effective dust suppression products that maybe available and obtain permission from the Government of Nunavut prior to using them.

During the site visit discussions were also had with Sabina staff with regards to alternative energy sources (i.e., wind) to supplement diesel generators and save on fuel costs and transportation.



Prepared by: Jaida Ohokannoak  
Title: Technical Advisor II  
Date: October 31, 2018

Signature: 

Reviewed by: Kelli Gillard P.Ag.  
Title: Manager, Project Monitoring  
Date: October 31, 2018

Signature: 

**Appendix III:**  
**PUBLIC INFORMATION SESSION REPORT**



Report Title: Public Information Meeting Summary Report August 23, 2018 for the NIRB's Monitoring of Sabina Gold and Silver Corp's Back River Project (NIRB File No. 12MN036)

Report prepared by: Jaida Ohokannoak, Monitoring Officer

Photos by: Jaida Ohokannoak, Monitoring Officer

Cover photo: Community Information Session in Cambridge Bay, August 23, 2018

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## 1.0 NIRB PUBLIC INFORMATION SESSION

Pursuant to Section 12.7.2 of the Nunavut Land Claims Agreement, and the Back River Project Certificate No. 007, the Nunavut Impact Review Board's (NIRB or Board) monitoring responsibilities include providing periodic updates regarding its Monitoring Program for the communities most affected by Sabina Gold and Silver Corporation's Back River Project (the Project). To further ensure ongoing awareness of Project-specific terms and conditions, and encourage effective participation throughout the Board's monitoring process, the NIRB scheduled a community information session consisting of an afternoon open house (2:00-4:00pm) and an evening update meeting (7:00pm-10:00pm) at the Luke Noviligak Community Hall in Cambridge Bay on August 23, 2018. This session was held in concert with the community information session for TMAC's Doris North Gold Mine Project (05MN047) and an update on the Jericho Diamond Mine (00MN059) site stabilization and remediation activities.

The open house and community information sessions were open to all members of the public. All in attendance, including government, industry representatives and media, were asked to sign in and identify the community or organization they represented. The afternoon session recorded attendance of 14 people and the evening session 10 people ([Appendix A: Sign-in Sheets](#)). The NIRB Staff in attendance included Jaida Ohokannoak, Technical Advisor II/Monitoring Officer for the Back River Project, Kofi Bow-Antwi, Technical Advisor II, and Lena Atatahak, Secretary/Receptionist.

The NIRB made a PowerPoint presentation providing a general update of the NIRB's Monitoring Process, with a focus on update on the project, including an overview of project activities and key components, and issues identified through the project specific monitoring program. The presentation also outlined the ways in which the public can participate in the Board's monitoring process. Consecutive translation was available in Inuinnaqtun for the evening session. The public was encouraged to comment and ask questions relating to the NIRB's process, activities undertaken, project effects, and any concerns related to the Project; however, there were no verbal or written comments and concerns raised with respect to the monitoring of the Back River project. Refreshments and snacks were provided and door prizes were raffled at the end of the meeting.

### 1.1 Meeting Materials

At the public meeting, the following materials were provided by the NIRB:

- The NIRB's PowerPoint presentation (in English and Inuinnaqtun)
- *The Nunavut Land Claims Agreement* (in English)
- *Nunavut Planning and Project Assessment Act* (in English)
- The NIRB's Environmental Assessment Brochures (in English and Inuinnaqtun)
- Comment Forms (in English and Inuinnaqtun)

All document received and pertaining to this project, including copies of consultation materials, the presentation, advertisements and sign-in sheets, can be accessed from the NIRB's online public registry at [www.nirb.ca/project/124149](http://www.nirb.ca/project/124149).

## **1.2 Advertisements**

The following public notification methods were used to advertise the NIRB's public information meeting:

### ***Radio***

A public service announcement in English and Inuinnaqtun was distributed to the radio station in Cambridge Bay with instructions to air twice a day from August 13, 2018 to August 23, 2018.

### ***Posters***

Prior to the NIRB hosting the community meeting in Cambridge Bay, posters (in English and Inuinnaqtun) were distributed around Cambridge Bay, which outlined the dates, times, and purpose of the NIRB meeting.

### ***Facebook***

The community meeting in Cambridge Bay, was also posted (in English and Inuinnaqtun) on the NIRB's Facebook page and on the Cambridge Bay News Facebook page.

## **2.0 SUMMARY AND CONCLUSION**

Community members from Cambridge Bay attended an afternoon and evening information session on the Back River Project monitoring being undertaken by the NIRB. The public was encouraged to comment and ask questions relating to the NIRB's process, activities undertaken, project effects, and any concerns related to the Project. However, there were no verbal or written comments and concerns raised with respect to the monitoring of the Back River project. Future updates on the project will be done annually.

## **APPENDIX A – SIGN IN SHEETS**



**Nunavut Impact Review Board**  
**TMAC's Doris North Gold Mine and Sabina's Back River Gold Mine**  
**Community Information Session**

**SIGN-IN SHEETS**

**Location:** Luke Noviligak Community Hall

**Date:** August 23, 2018

**Time:** 2:00 - 4:00pm

**Page No:** /

Name (Please Print)	Organization or Community	Signature
Johny Avolat	Cambridge	
ALEX BUCHAN	TMAC	
Marlene Tootsa	Cam-Bay	
ANNIE ATIGHIOAK		
Ira Kulktera	Cam-bay	Ida
Betty Ann Maniyoona	" "	Betty Ann Maniyoona
ENNIS ENGALEK	" "	Ennis Engalak
S. MANIYOGINA	" "	
Roslyn AKHOK		Roslyn
Sam AKHOK		Sam
Heather Kiguna	Cam-bay	Heather Kiguna
Allen Hikogak	Cam-bay	Allen Hikogak
G EALIK		
Helen Ailanak	Cam-Bay	Hailanak

## Community Information Session

## SIGN-IN SHEETS

**Location:** Luke Noviligak Community Hall

**Date:** August 23, 2018

**Time:** 7:00 pm - 9:30 pm

Page No:

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