



## **BACK RIVER PROJECT**

# **2022 Annual Report for Water Licence 2BE-GOO2028**

**Prepared by  
Sabina Gold and Silver Corp.**

**Prepared for  
Nunavut Water Board**

**March 2023**



# BACK RIVER PROJECT

## 2022 2BE-GOO2028 Annual Report

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### Acronyms

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CIRNAC	Crown Indigenous Relations and Northern Affairs Canada
KIA	Kitikmeot Inuit Association
The Licence	Water Licence 2BE-GOO2028
NIRB	Nunavut Impact Review Board
MLA	Marine Laydown Area
NWB	Nunavut Water Board
The Project	Back River Project
Sabina	Sabina Gold & Silver Corp.

- A summary report of water use and waste disposal;
- A list of unauthorized discharges and a summary of follow-up actions taken;
- Any revisions to plans under this Licence;
- A description of all progressive and or final reclamation work undertaken, if any, including photographic records of site conditions before, during and after completion of operations;
- A report of any artesian flow occurrences; and
- Any other details on water use or waste disposal requested by the Board.

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[illegible]

# 1. Introduction

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This report to the Nunavut Water Board (NWB) has been prepared to summarize the project activities and monitoring undertaken by Sabina Gold and Silver Corp. (Sabina) during the 2022, in accordance with Part B, Item 2 of License 2BE-GOO2028 (the Licence). This License was renewed without change on Feb 17<sup>th</sup> 2020 and will expire on February 18, 2028. The NWB Annual Report Form can be found in Appendix A of this report.

Key activities associated with the Goose Lake Project in 2022 are summarized as follows:

- Operation of the Goose Exploration Camp for exploration drilling and to support Water Licence 2AM-BRP1831 construction activities
- Exploration drilling
- Drill site reclamation

During 2022, fresh water was utilized for both camp use and drilling activities. Potable water for the Goose Lake Camp was obtained from Goose Lake using a dedicated pump and transferred to water storage tanks at camp. Water for exploration drilling was obtained from Goose Lake. All water utilized was metered as per water license requirements.

Waste management included the handling of pack waste, domestic waste in an incinerator, hazardous waste and drill waste. Waste incineration and waste backhaul details are reported in the Annual Report for Water Licence 2AM-BRP1831.

Prior to seasonal cessation of drilling, Sabina reclaimed all 2022 drill sites. Materials removed from sites included any garbage, metal and timbers as well as anchors and casing cut and capped. Sabina continues to exercise drilling procedures where sites are required to be cleaned up prior to moving on to the next drill site, and internal inspections are conducted to ensure that clean up procedures are occurring. Sabina intends to continue to cut and restore historic drill site as part of regular programs in 2022. Ongoing reclamation programs will be documented as conducted in previous programs.

Sabina hosted an inspection under this Licence in 2022. Community consultation undertaken by Sabina in 2022 is outlined in the Annual Report for Water Licence 2AM-BRP1831.

## 2. Annual Report per Part B, Item 2

This section of the report has been constructed to address each of the requirements of Part B, Item 2 of the Licence. For ease of comparison, each subheading corresponds directly with the identically alphabetized subheading of Part B, Item 2 of Water Licence 2BE- GOO2028.

### A. SUMMARY OF WATER USE AND WASTE DISPOSAL

Potable water was extracted from Goose Lake via an electrical submersible pump with a screened intake. This screened intake meets Department of Fisheries and Oceans Freshwater Intake End of Pipe Fish Screen Guidelines requirements. Water was pumped directly from Goose Lake via a pipe into holding tanks within camp. Prior to consumption, potable water is treated with filtration, chlorination and UV disinfection. Appendix B summarizes daily water used for Goose Camp, all of which was withdrawn from Goose Lake. Total annual camp water usage was 4,517 m<sup>3</sup>, daily camp water usage did not exceed the 30 m<sup>3</sup>/day except on November 2, 2022, when 39 m<sup>3</sup> of water was used. Water usage values for August 16<sup>th</sup> through 19<sup>th</sup> or October 6<sup>th</sup> were not available.

Drill water was only obtained from Llama Lake and Goose Lake in 2022. Daily drill water usage is provided in Appendix C by water source. The Licence specifies a daily water usage allowance of up to 267 m<sup>3</sup> for drilling purposes. This daily allowance was not exceeded in 2022. Total annual drill water usage was 41 m<sup>3</sup>.

Wastes disposed of under this Licence include greywater, latrine, non-hazardous and hazardous wastes and drill wastes. All Waste storage area locations are provided in Table 2.A-1. Grey water generated at the Goose Lake camp consists of waste streams collected from the kitchen and camp washing facilities (showers and laundry). Grease traps are installed within the kitchen which removes solid particles prior to discharge. Grey water is discharged at two locations at the Goose Lake camp located at a site away from surface water. At the Goose Lake camp, latrine toilets (pacto toilets) are used and collected human waste is collected and disposed of in camp incinerators.

**Table 2.A-1. Goose Waste Storage Locations**

Description	UTM Coordinates (NAD83)		Latitude	Longitude
	Easting	Northing		
	(m)	(m)		
Goose Lake				
Grey Water Line	434,069	7,269,849	65°32'38.94"	106°25'38.35"
Grey Water Line #2	433,943	7, 269,908	65°32'40.8"	106°25'48.3"
Incinerator	434,155	7,269,817	65°32'38.0"	106°25'31.6"
Hazardous Waste Backhaul Storage Area	433,840	7,270,021	65°32'44.3"	106°25'56.5"
Cuttings Trench (Reclaimed)	434,122	7,269,616	65° 32' 31.5"	106° 25' 33.8"
Cuttings Trench #2 (Reclaimed)	434,140	7,269,738	65° 32' 35.4"	106° 25' 32.6"
Cuttings Trench #3	434,120	7, 269,738	65° 32' 35.3"	106° 25' 32.6"
Open Burn Pit	434,105	7,269,787	65°32'37.0"	106°25'35.4"
Hazardous Materials Storage Area	433,815	7,270,008	65°32'43.9"	106°25'58.4"
Goose Lake Fuel Farm	433,959	7,269,975	65°32'42.9"	106°25'47.2"
Major Drilling Oils/ Additives Location #1	434,079	7,269,648	65°32'32.5"	106°25'37.2"
Major Drilling Oils/ Additives Location #2	434,061	7,269,636	65°32'32.1"	106°25'38.6"

Non-hazardous waste streams consist of kitchen refuse, paper, recyclable food containers, cardboard and inert wood. Kitchen refuse and paper are disposed of in two-stage commercial incinerators daily. Plastic and metal food containers which were deemed appropriate for recycling are shipped off site to an approved disposal facility in Yellowknife.

A lined storage area was previously constructed where materials can be sorted and packaged to be shipped to Yellowknife. Once received in Yellowknife, KBL Environmental was retained to manage and properly dispose of hazardous wastes generated at the Goose Lake Camp. Hazardous wastes generated at the Goose Lake site included waste hydrocarbon liquids, used batteries and contaminated soil. Empty fuel drums are either stored on site for further use or shipped back to the supplier for recycling purposes. Remaining hazardous materials are stored within a lined containment area for future shipment from site.

Types and quantities of solid wastes incinerated, open burned or backhauled from the Back River Project, including from the Goose Property, are detailed in the Annual Report for Water Licence 2AM-BRP1831.

For drilling activities, sumps consisted of an excavated trench at the Goose camp where drill cuttings were deposited. Coordinates of all cutting disposal sites are maintained and are available on request. Continual inspections were conducted of these locations to ensure stability of areas.

The drilling program utilizes a poly drill system whereby brine was recirculated and cuttings were separated and collected in mega bags. Mega bags containing cuttings were kept in containment trays to ensure overflow or remaining brine did not contaminate the tundra. Once full, mega bags were transported to the designated disposal site by an overland vehicle or helicopter.

## **B. UNAUTHORIZED DISCHARGES**

No spills meeting or exceeding the NWT/NU spill reporting thresholds occurred in 2022 under this Licence.

## **C. MANAGEMENT PLAN REVISIONS**

Sabina did not revise any management plans specific to this Licence in 2022.

## **D. PROGRESSIVE AND FINAL RECLAMATION**

Sabina continues to exercise drilling procedures where sites are required to be cleaned up prior to initiating the next drill site, and internal inspections are conducted to ensure that clean up procedures are occurring. Restoration of historic drill sites will continue as practical. As in previous years, ongoing reclamation programs will continue to be documented.

## **E. ARTESIAN FLOWS**

No artesian flows were encountered in 2022.

## **F. INFORMATION REQUESTS AND RESULTS OF MONITORING PROGRAM**

Daily quantities of water used and wastes generated under this Licence are discussed in Section 2.A of this report. Project water source locations are provided in Table 2.F-1.

Personnel were on site at the Goose Property year-round in 2022. No runoff to water was observed, and no sampling per Part J, Item 8 was required.

As no construction specific to this Licence took place in 2022, no construction-related sampling was conducted under this Licence. Note that construction activities related to 2AM-BRP1831 are outlined in the report for that licence.



CIRNAC conducted inspections of Back River Project in both June and November of 2022, including the Goose Camp. Inspection reports as well as Sabina's responses summarizing actions taken to address identified deficiencies can be found on the NWB public registry.

**Table 2.F-1. Goose Project Water Source Locations**

Description	UTM Coordinates (NAD83)		Latitude	Longitude
	Easting	Northing		
	(m)	(m)		
Goose Project				
Goose Camp Intake	434,129	7,269,996	65° 32' 43.7"N	106° 25' 34.0"W
Goose Neck	431,725	7,269,877	65° 32' 38.1"N	106° 28' 41.0"W
Goose Beak	431,391	7,269,957	65° 32' 40.4"N	106° 29' 07.1"W
Llama Lake	428,790	7,272,028	65° 33' 45.2"N	106° 32' 33.7"W
Umwelt Lake	428,921	7,270,948	65° 33' 10.5"N	106° 32' 21.5"W
Rascal Lake	434,038	7,267,812	65° 31' 33.1"N	106° 25' 37.1"W
Vega Lake	413,935	7,279,106	65° 37' 20.8"N	106° 52' 8.0"W
Vega Lake	413,691	7,279,432	65° 37' 31.1"N	106° 52' 27.9"W
Pigeon Lake	413,753	7,280,329	65° 38' 0.1"N	106° 52' 25.1"W

#### **G. BOARD REQUESTS RE: WATER USE AND WASTE DISPOSAL**

No requests related to water use or waste disposal were made by the Board in 2022 in relation to this Licence.



# Appendix A NWB Annual Report Form

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**NWB Annual Report**

**Year being reported:**

Select ▼

2022

**License No:** 2BE-GOO2028

**Issued Date:**

February 19, 2020

**Expiry Date:**

February 20, 2028

**Project Name:**

GOOSE LAKE, BACK RIVER PROJECT

**Licensee:**

SABINA GOLD AND SILVER CORP

**Mailing Address:**

#1800 - 555 Burrard Street, Box 220, Vancouver, BC,  
V7X 1M7

**Name of Company filing Annual Report (if different from Name of Licensee please clarify relationship between the two entities, if applicable):**

SABINA GOLD AND SILVER CORP

**General Background Information on the Project (\*optional):**

**Licence Requirements: the licensee must provide the following information in accordance with**

Part B

Item 2

**A summary report of water use and waste disposal activities, including, but not limited to: methods of obtaining water; sewage and greywater management; drill waste management; solid and hazardous waste management.**

**Water Source(s):**

Goose Lake, Llama Lake

**Water Quantity:**

30

Quantity Allowable Domestic (cu.m/day)

4,517

Actual Quantity Used Domestic (cu.m/yr)

267

Quantity Allowable Drilling (cu.m/day)

41

Total Quantity Used Drilling (cu.m/yr)

**Waste Management and/or Disposal**

☒ Solid Waste Disposal

☒ Sewage

☒ Drill Waste

☒ Greywater

☒ Hazardous

☐ Other:

**Additional Details:**

See Sections 2.A and 2.G of the Annual Report.

**A list of unauthorized discharges and a summary of follow-up actions taken.**

**Spill No.:**

(as reported to the Spill Hot-line)

Date of Spill:

Date of Notification to an Inspector:

Additional Details: (impacts to water, mitigation measures, short/long term monitoring, etc)

See Section 2.B of the Report

### Revisions to the Spill Contingency Plan

SCP submitted and approved - no revision required or proposed



Additional Details:

See Section 2.C of Annual Report.

### Revisions to the Abandonment and Restoration Plan

AR plan submitted and approved - no revision required or proposed



Additional Details:

See Section 2.C of Annual Report.

### Progressive Reclamation Work Undertaken

Additional Details (i.e., work completed and future works proposed)

See Section 2.D of Annual Report.

### Results of the Monitoring Program including:

**The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where sources of water are utilized;**

Details attached



Additional Details:

See Section 2.F of the Annual Report.

**The GPS Co-ordinates (in degrees, minutes and seconds of latitude and longitude) of each location where wastes associated with the licence are deposited;**

Details attached



Additional Details:

See Section 2.A of the Annual Report.

**Results of any additional sampling and/or analysis that was requested by an Inspector**

No additional sampling requested by an Inspector or the Board ▼

Additional Details: (date of request, analysis of results, data attached, etc)

**Any other details on water use or waste disposal requested by the Board by November 1 of the year being reported.**

Additional sampling requested by an Inspector or the Board (See below) ▼

Additional Details: (Attached or provided below)

See Section 2.F of the Annual Report

**Any responses or follow-up actions on inspection/compliance reports**

Inspection Report received by the Licensee (Date): ▼

Additional Details: (Dates of Report, Follow-up by the Licensee)

See Section 2.F of the Annual Report

**Any additional comments or information for the Board to consider**

**Date Submitted:**

March 31, 2023

**Submitted/Prepared by:**

Merle Keefe/Katsky Venter

**Contact Information:**

**Tel:**

**Fax:**

**email:** [mkeefe@sabinagoldsilver.com](mailto:mkeefe@sabinagoldsilver.com)

## Appendix B Goose Daily Camp Water Usage

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# Goose Lake Camp Daily Water Usage

Date	Usage (m3)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	6.30	10.71	11.60	8.56	8.91	11.52	9.28	13.65	11.79	15.20	21.65	16.02
2	3.87	11.65	11.62	12.52	8.15	13.17	12.42	8.91	6.39	13.90	39.10	19.04
3	4.09	11.11	11.89	11.31	9.91	12.10	13.63	12.88	13.34	14.21	17.89	15.08
4	4.18	9.53	6.59	9.40	8.35	11.29	16.11	14.01	16.16	15.58	19.46	15.16
5	3.02	10.55	8.13	9.71	13.97	11.31	15.10	12.65	17.58	18.13	18.63	12.95
6	4.30	10.23	7.47	13.96	10.20	12.27	13.62	16.91	11.46	-	16.55	17.98
7	5.32	7.07	8.63	10.33	8.51	12.37	10.00	13.01	17.84	16.80	15.81	22.78
8	6.12	6.40	11.69	10.51	9.06	12.97	12.81	14.46	12.63	14.82	20.65	12.68
9	5.88	5.17	11.66	9.79	8.90	16.36	13.76	14.07	12.04	16.69	13.68	15.61
10	7.52	9.93	9.30	8.86	9.52	10.15	14.90	12.21	11.66	26.39	17.41	19.75
11	7.06	10.09	7.70	11.10	12.82	10.80	14.88	13.38	10.11	14.44	21.66	21.56
12	5.57	8.05	6.57	11.48	14.43	11.87	14.53	15.75	9.80	13.33	14.02	21.47
13	6.20	9.46	9.77	9.56	6.59	9.78	20.22	17.19	19.77	10.14	20.83	17.51
14	5.83	9.86	12.78	7.25	8.13	14.13	19.68	16.17	11.06	12.17	14.87	17.54
15	7.34	7.71	12.85	6.19	7.45	10.02	16.54	14.67	12.78	19.22	19.10	16.93
16	7.02	6.36	16.64	8.15	10.88	10.12	12.80	0.00	11.22	18.03	15.18	14.95
17	6.32	5.37	11.10	10.19	11.87	12.93	9.90	0.00	10.41	14.08	13.23	17.00
18	7.74	6.58	10.38	10.79	13.99	11.93	8.00	0.00	12.37	14.78	12.17	10.32
19	5.78	10.36	14.00	6.09	12.00	12.63	7.72	0.00	13.78	16.69	25.74	19.39
20	8.18	12.83	9.74	12.18	9.72	11.90	9.27	14.00	14.12	16.75	17.35	17.66
21	5.44	11.11	8.84	10.78	11.17	13.20	11.30	12.30	16.14	14.69	19.89	12.55
22	11.34	8.80	9.98	8.09	11.34	15.54	12.35	11.11	13.88	14.71	11.18	22.12
23	10.41	10.93	10.01	9.37	10.91	9.57	11.81	16.00	17.63	15.57	15.04	16.05
24	9.49	10.35	9.37	7.86	7.23	8.51	11.71	14.07	15.26	19.05	16.26	14.41
25	9.14	9.01	7.90	9.52	7.66	13.69	13.73	17.82	13.88	14.33	18.48	12.30
26	8.65	11.67	8.82	9.64	8.33	15.66	12.84	13.44	16.27	16.27	20.55	14.91
27	8.71	9.31	18.88	10.54	8.41	15.76	12.63	12.81	13.92	17.95	15.69	17.27
28	8.79	10.78	9.01	13.23	11.66	11.90	13.13	15.19	20.00	16.89	16.57	19.66
29	11.51		10.27	7.63	7.24	9.26	12.75	15.66	19.95	17.52	13.62	16.70
30	6.02		13.00	7.50	10.33	10.36	13.16	14.51	14.94	19.87	18.56	21.00
31	6.45		11.50		9.45		12.73	10.66		20.03		16.65
Total	213.60	260.97	327.69	292.09	307.09	363.05	403.30	377.48	418.17	488.21	540.80	525.01

shaded value indicates exceedence



# Appendix C Goose Daily Drill Water Usage

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**Drill Water Usage by Source**

<b>Date</b>	<b>Usage (m^3)</b>	<b>Source</b>
18-Mar-21	1.38	Llama Lake
19-Mar-21	2.08	Llama Lake
20-Mar-21	2.05	Llama Lake
21-Mar-21	1.33	Llama Lake
22-Mar-21	0.00	Llama Lake
23-Mar-21	0.00	Llama Lake
24-Mar-21	0.00	Llama Lake
25-Mar-21	0.00	Llama Lake
26-Mar-21	0.00	Llama Lake
27-Mar-21	0.00	Llama Lake
28-Mar-21	0.00	Llama Lake
29-Mar-21	2.80	Llama Lake
30-Mar-21	1.57	Llama Lake
31-Mar-21	3.32	Llama Lake
1-Apr-21	1.65	Llama Lake
2-Apr-21	0.00	Llama Lake
3-Apr-21	4.55	Llama Lake
4-Apr-21	0.00	Llama Lake
5-Apr-21	2.59	Llama Lake
6-Apr-21	3.64	Llama Lake
7-Apr-21	1.06	Llama Lake
8-Apr-21	1.94	Llama Lake
9-Apr-21	0.00	Llama Lake
10-Apr-21	0.00	Llama Lake
11-Apr-21	0.00	Llama Lake
12-Apr-21	0.00	Llama Lake
13-Apr-21	3.51	Llama Lake
14-Apr-21	3.16	Llama Lake
15-Apr-21	1.49	Llama Lake
16-Apr-21	1.27	Goose Lake
17-Apr-21	1.27	Goose Lake