

## **ATTACHMENT 7 - EXPLORATION WASTE MANAGEMENT PLAN**



**BACK RIVER PROJECT**  
**Exploration Non-Hazardous Waste Management**  
**Plan**

**June 2022**



# BACK RIVER PROJECT

## Exploration Non-Hazardous Waste Management Plan

### Table of Contents

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Table of Contents.....	i
Document Revision Record .....	1-1
1. Introduction.....	1-2
1.1 Existing Facilities.....	1-2
1.2 Scope and Objectives .....	1-2
1.3 Related Documents.....	1-3
2. Roles and Responsibilities.....	2-5
2.1 All Employees .....	2-5
2.2 Environmental Superintendent/ Manager .....	2-5
2.3 Operations Superintendent.....	2-5
3. Exploration Waste Classification and Management.....	3-6
3.1 Combustible Wastes.....	3-6
3.2 Recyclable and Reusable Wastes .....	3-6
3.3 Other Non-Hazardous Wastes .....	3-7
3.4 Contact and Grey Water Management.....	3-7
3.4.1 Camp Greywater .....	3-7
3.4.2 Contact Water Management .....	3-7
3.5 Mineral Waste Management .....	3-7
3.6 Hazardous Waste Management .....	3-8
4. Plan Review .....	4-8



## Document Revision Record

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Date	Section	Page	Revision	Prepared by:
January 2013			Document prepared in support of Back River exploration activities	Sabina Gold and Silver Corp. (Sabina)
October 2019	All	All	Updates throughout, removal of overlap with the Comprehensive Hazardous Waste Management Plan and conversion to current Sabina management plan format	Katsky Venter on behalf of Sabina
June 2022	All	All	Updates throughout to focus on exploration activities and to outline use of existing Back River Project waste management facilities and approved plans	Katsky Venter (RainCoast Environmental) on behalf of Sabina

# 1. Introduction

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Sabina Gold & Silver Corp.'s (Sabina's) Exploration Non-Hazardous Waste Management Plan (the Plan) has been developed to outline waste management practices related to Sabina's exploration activities throughout the Back - Wishbone area. The purpose of this Plan is to ensure sound management of non-hazardous waste, to minimize the amount of waste generated, and to ensure the safe handling and disposal of all wastes.

This Plan is a part of Sabina's overall waste management program. It describes how combustible, non-combustible, recyclable, and reusable wastes as well as mineral waste and wastewater is managed. as non-hazardous wastes, mineral wastes, contact water, non-hazardous (both combustible and non-combustible) and hazardous wastes generated from exploration activities in the Back-Wishbone area are managed. In general, exploration waste management practices (along with exploration activities themselves) make use of the existing Back River Project facilities at the Goose Property, Marine Laydown Area (MLA), or George Property and follow the Back River Project (BRP) approved management plans.

## 1.1 EXISTING FACILITIES

The Back River project is located in western Nunavut, south of Bathurst Inlet within the Slave Structural Province. It lies approximately 525 kilometres northeast of Yellowknife, Northwest Territories and 400 kilometres south of Cambridge Bay, Nunavut. The Back River Project includes the established Goose and George camp and a seasonally operated Marine Laydown Area (MLA). The MLA is located on Bathurst Inlet and receives bulk supplies during the open water season which are then transported to Goose over a 160 km winter ice road.

Exploration activities are conducted seasonally with support from these permanent Back River Project facilities, including waste management infrastructure. Waste management infrastructure at Goose, George and the MLA is described in Sabina's various waste management plans.

For safety, environmental, and/or economic reasons temporary camps may also be established in seasonal exploration areas located 20 km or more from the main camps. With the exception of mineral and water waste, all wastes generated at these remote camps are transported by air or winter trail to the more permanent BRP facilities for management and disposal per the applicable management plan.

## 1.2 SCOPE AND OBJECTIVES

This Plan applies to all Sabina exploration projects in the Kitikmeot Region. Subject to internal review and revision this Plan will remain applicable until a material change in the scope of the Project occurs.

This plan outlines the waste management practices related to exploration activities, roles and responsibilities, and identifies how non-hazardous exploration wastes are managed.

The goal of any waste management plan is to reduce and prevent impacts to the environment. Managing wastes and working responsibly will also ensure personnel safety while involved in mineral exploration activities.

Sabina conducts waste management under the following guidance:

- Wherever and whenever possible, Sabina and its employees will work toward the 3Rs - reduce, reuse and recycle;
- Sabina is committed to considering additional best management practices and alternatives to hazardous products; and if an appropriate method and/or substitute is identified then it will be incorporated into exploration activities;
- Concerted effort will be made to purchase products from suppliers with programs and policies of return for used containers and/or unused product where available and economically feasible to do so; and
- Compliance with company policies, legislation and terms and conditions of water licenses and land use permits.

With this guidance, the steps of waste management to include:

- Understand waste streams
- Reduce amount generated
- Separate wastes
- Safe handling/transportation and disposal

### 1.3 RELATED DOCUMENTS

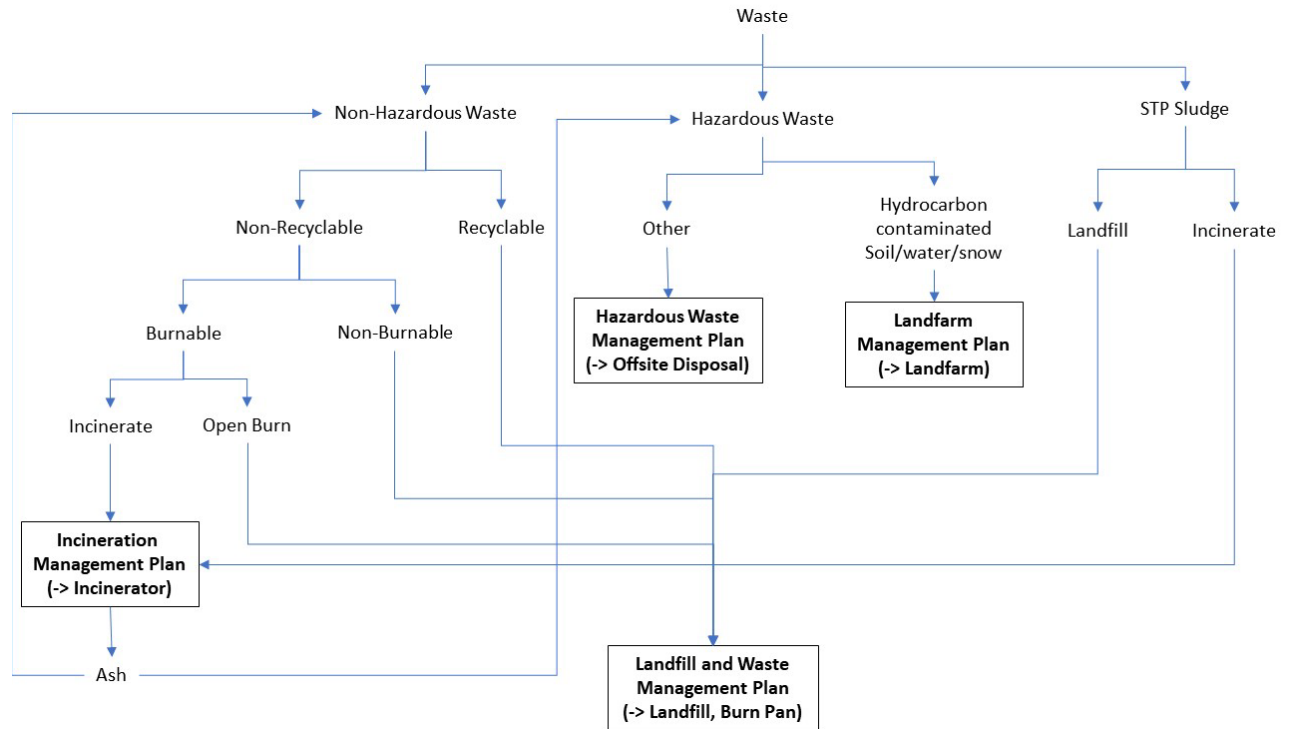
This Plan is a part of the Back River Project's overall Waste Management Strategy. It is complimented by various waste management plans approved for the Back River Project, including:

- Incineration Management Plan (outlines procedures for incineration of appropriate wastes)
- Comprehensive Hazardous Materials Management Plan (outlines procedures for hazardous waste disposal and recycling related to exploration)
- Landfill and Waste Management Plan (outlines procedures for management and landfilling or burning of suitable non-hazardous wastes)
- Tailings Management Plan (outlines procedures for tailings waste)

An overview of how these plans relate to exploration wastes is provided in Figure 1-1.



## Exploration Non-Hazardous Waste Management Plan



*Figure 1-1. Overview of Exploration Waste Management at Back River Project Facilities*

## **2. Roles and Responsibilities**

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### **2.1 ALL EMPLOYEES**

- Place all waste in appropriate containers.
- Encourage and participate in general good housekeeping within camp boundaries and buildings.
- Ensure wastes potentially attractive to wildlife is never accessible to wildlife.

### **2.2 ENVIRONMENTAL SUPERINTENDENT/ MANAGER**

- Periodically verify waste management practices are being followed.
- Assist Operations Superintendent with tracking, monitoring and reporting as per terms and conditions of permits and licenses.
- Co-ordinate any inspections by applicable agencies.
- Ensure Waste Management Plans are updated as needed.

### **2.3 OPERATIONS SUPERINTENDENT**

- Evaluate waste reduction options
- Responsible for the overall management of waste as per this Plan.
- Ensure all staff are instructed on site waste management practices.
- Ensure appropriate waste receptacles are available and clearly labelled
- Ensure all legal requirements, including the completion of waste manifests, are filed prior to any shipment.
- Record backhaul volumes for non-hazardous waste.
- Conduct ongoing monitoring as required as per terms and conditions of permits and licenses.
- Summarize and report waste management information required by permits and licenses, or Sabina Senior Management.

### 3. Exploration Waste Classification and Management

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Exploration wastes may be generated by:

- Drill sites - used oil, antifreeze, used absorbent pads, greases, lubricants, batteries, scrap metal, empty fuel drums, timber/lumber scraps, drill rods, drilling fluids and additives, and drill cuttings.
- Generators and Heavy Equipment - used oil, antifreeze, used absorbent pads, greases, lubricants, batteries, scrap metal, empty fuel drums
- Camp (kitchen, offices, bathing and sleeping quarters) - recyclables, food, wood, cardboard, plastic, rubber, glass, batteries, solvents, scrap metal, empty fuel drums, sewage, greywater, construction debris, paint.
- Fuel storage - contact water from within berm, used absorbent pads, scrap metal, empty fuel drums

The non-hazardous wastes generated have been divided into:

1. Combustible
2. Recyclables & Reusables
3. Other Non-Hazardous Waste
4. Mineral Waste
5. Contact & Grey Water

To the extent practical, exploration waste is disposed of using existing BRP waste management facilities and in accordance with the approved BRP waste management plans. An overview of the destination of exploration wastes which are disposed of at the primary BRP waste disposal facilities, and the management plan which outlines the associated final disposal procedures see Figure 1-1. For a description of these wastes, along with mineral and wastewater, and how they are managed see the below sections.

Hazardous waste, including used oil, oil filters, used absorbent pads, paint, chemicals, batteries and used grease is addressed in Sabina's Comprehensive Hazardous Materials Management Plan.

#### 3.1 COMBUSTIBLE WASTES

Combustible wastes include kitchen waste, pacto sewage waste, cardboard, and wood. These wastes are kept separate and backhauled to an appropriate BRP waste management facility for appropriate disposal. The Back River Project Incineration Management Plan outlines specifically what wastes can

be incinerated and how, while Sabina's Landfill and Waste Management Plan outlines what may be landfilled or disposed of through open burning. Any wastes that are potentially attractive to wildlife must be backhauled daily or stored in a manner inaccessible to wildlife.

#### 3.2 RECYCLABLE AND REUSABLE WASTES

Recyclable and Reusable wastes may include plastic and aluminum drink containers, printer cartridges, metal containers, plastics (#1 thru #6) and scrap metal such as 205L drums. These wastes are collected,

sorted and stored until they can be backhauled to Yellowknife for inclusion in their recycling program or (for non-combustible inert recyclable or reusable waste only) managed as outlined in Sabina's Landfill and Waste Management Plan. Empty 205L fuel drums or other containers which may contain residual fluids that must be stacked and stored in secondary containment until disposed of.

### **3.3 OTHER NON-HAZARDOUS WASTES**

Non-combustible inert waste will be backhauled to an appropriate BRP waste management facility for management per Sabina's Landfill and Waste Management Plan. Any wastes that are potentially attractive to wildlife must be backhauled daily or stored in a manner inaccessible to wildlife.

### **3.4 CONTACT AND GREY WATER MANAGEMENT**

#### **3.4.1 Camp Greywater**

Greywater may be generated from camp kitchens and bathroom sinks and showers. Kitchen water is run through a grease trap and all greywater effluent is consolidated and periodically discharged to a sump approved by the inspector or defined in the applicable licence.

#### **3.4.2 Contact Water Management**

Contact water in this Plan refers to waste waters associated with fuel storage. It is the water that may accumulate in the secondary containment following precipitation or spring melt. The water is inspected for visible sheen and odour prior to release and, per licence requirements, may require additional testing prior to discharge criteria. Should water not meet licence requirements it will be treated with an oil-water separator and only released on receipt of compliant results and Inspector approval. For other fuel storage facilities (e.g., temporary fuel storage), water will be filtered through an oil-water separator prior to discharge. All discharges to the environment will occur in a manner that does not cause erosion or channelization and at least 31 m from the nearest waterbodies' high-water mark. Any water that is not suitable for discharge will be treated as hazardous waste.

### **3.5 MINERAL WASTE MANAGEMENT**

Where exploration drilling occurs without the use of calcium chloride, near or on lakes, the drill return water containing drill cuttings will be pumped well back from the shore of the lake to a natural depression or sump, the location of which is surveyed and recorded. Because drill cuttings are mechanically pulverized rock, they are geologically similar to the locally present glacial till. If the drill cuttings have a potential for acid rock drainage/metal leaching, it is anticipated that the distance from the water will minimize the impact if the potential is realized. It is expected that drill cuttings will, in time, be colonized by plants and lichen.

Mineral waste from drilling with brine or rock saw use is collected, consolidated through settlement and/or drying, and transported to a designated cuttings consolidation trench for permanent disposal.

In future, disposal of the cuttings with tailings or waste rock for management under Sabina's Tailings Management Plan and Waste Rock and Ore Management Plan may be possible, once these facilities have been constructed.

### **3.6 HAZARDOUS WASTE MANAGEMENT**

Hazardous wastes include petroleum products and lubricants such as diesel fuel, oils, greases, anti-freeze, and solvents used for equipment operation and maintenance, as well as chlorine (for water treatment) and calcium chloride for exploration drilling. Any such wastes are handled in accordance with their Safety Data Sheets and disposed of as outlined in Sabina's Comprehensive Hazardous Materials Management Plan. These materials are stored within secondary containment until disposed of off-site.

## **4. Plan Review**

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The activities and costing of waste management activities will be reviewed as required by changes in operations and/or technology and will be modified accordingly. Any necessary revisions shall be submitted to the Nunavut Water Board.