ENVIRONMENTAL PROTECTION PLAN

EQUINOXGOLD
VALENTINE GOLD MINE

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Environmental Protection Plan

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Acronyms and Abbreviations

µ	micron
µm	micrometer
AEP	annual exceedance probability
ATV	All-terrain vehicles
CDA	Canadian Dam Association
CEPA	*Canadian Environmental Protection Act*, 1999
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
CWS	Canadian Wildlife Service
DFO	Fisheries and Oceans Canada
EA	environmental assessment
ECCC	Environment and Climate Change Canada
EEM	environmental effects monitoring
EMP	Environmental Management Plan
EMS	Environmental Management System
EPP	Environmental Protection Plan
GHG	greenhouse gas
GPS	global positioning system
HADD	Harmful Alteration, Disruption or Destruction
km	kilometre
km^2	square kilometres
L	litre
m	metres
MDMER	*Metal and Diamond Mining Effluent Regulations*
the mill	processing facilities
mm	millimetre
N_2O	nitrous oxide
NL	Newfoundland and Labrador
	NL Department of Environment Conservation and Climate Change

NLDECCC	
NLDFAL	NL Department of Forestry, Agriculture and Lands
NL ESA	Newfoundland and Labrador *Endangered Species Act*
NOx	nitrogen oxides
NRCAN	Natural Resources Canada
PAG	potentially acid generating
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than 2.5 µm
PM_{10}	particulate matter with an aerodynamic diameter less than 10 µm
the Project	Valentine Gold Project
SAR	species at risk
SARA	*Species at Risk Act*
SDS	Safety Data Sheets
SO_2	sulphur dioxide
SOCC	species of conservation concern
SOP	standard operating procedure
TMF	tailings management facility
TSP	total suspended particulate
WHMIS	Workplace Hazardous Materials Information System

1.0 INTRODUCTION

Equinox Gold Corporation (Equinox)[1] is developing an open pit gold mine near Valentine Lake, located in the central region of the Island of Newfoundland, southwest of the Town of Millertown, Newfoundland and Labrador (NL) (Figure 1.1). Equinox submitted the Environmental Impact Statement (EIS) for the Valentine Gold Project and the Berry Pit Expansion Environmental Registration / Environmental Assessment (Valentine Gold Project) 2022 Update. Regulatory approval of the Berry Pit Expansion EIS was reviewed on October 23, 2022. The combined approved projects are now referred to as the Equinox Valentine Gold Mine (VGM). The VGM is located in central Newfoundland, approximately 57 km south of Buchans, and is comprised of open pits, waste rock, overburden and topsoil stockpiles, ore crushing and stockpiling areas, site infrastructure, a tailings management facility, and mine site roads. Production capacity is estimated at 10,960 tonnes per day, with an operation life of approximately 14 years. The mine site is accessed by an existing gravel road, approximately 82 km in length, which extends south from Millertown to the VGM. In May 2025, a Notification of Change to Designated Project was submitted for the modification and separation of the originally planned high-grade ore (HGO) stockpile into two high-medium grade (HMG) ore stockpiles and two medium-grade (MG) ore stockpiles. Regulatory approval of the Project Change and an amended Decision Statement was received on April 7, 2026. Two of these stockpiles are within the footprint of the originally planned HGO stockpile, and inside the Tailings Management Facility (TMF) drainage footprint, and two of the additional stockpiles proposed are outside the tailings management facility (TMF) drainage footprint. The two stockpiles outside the TMF drainage footprint include water management infrastructure (ditches, sedimentation pond) that are now included in this document. The This Environmental Protection Plan (EPP) is applicable to the ongoing Project construction and operational activities.

1.1 PURPOSE AND SCOPE OF THE EPP

The purpose of the EPP is to outline protection and response measures associated with potential environmental effects related to the VGM construction and operation activities. This plan also describes practical procedures required of all personnel (i.e., VGM employees, contractors and suppliers) to reduce or eliminate potential adverse environmental effects, as well as instructions for addressing planned and unplanned activities/events associated with the VGM construction and operations. To avoid and reduce adverse environmental effects, best management practices will be employed throughout all VGM activities. The EPP is a living document and is subject to updates and refinements based on consultation with regulators, Indigenous groups, and conditions of authorization and will be improved upon based on policy and technology changes as the VGM progresses through the various phases of the mine life.

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[1] In January 2024, Marathon Gold Corp. and the Valentine Gold Project was acquired by Calibre and was referenced as Calibre Valentine Gold Mine (VGM). In June 2025, Calibre merged with Equinox Gold Corp. and the mine is now referenced as the Equinox VGM.

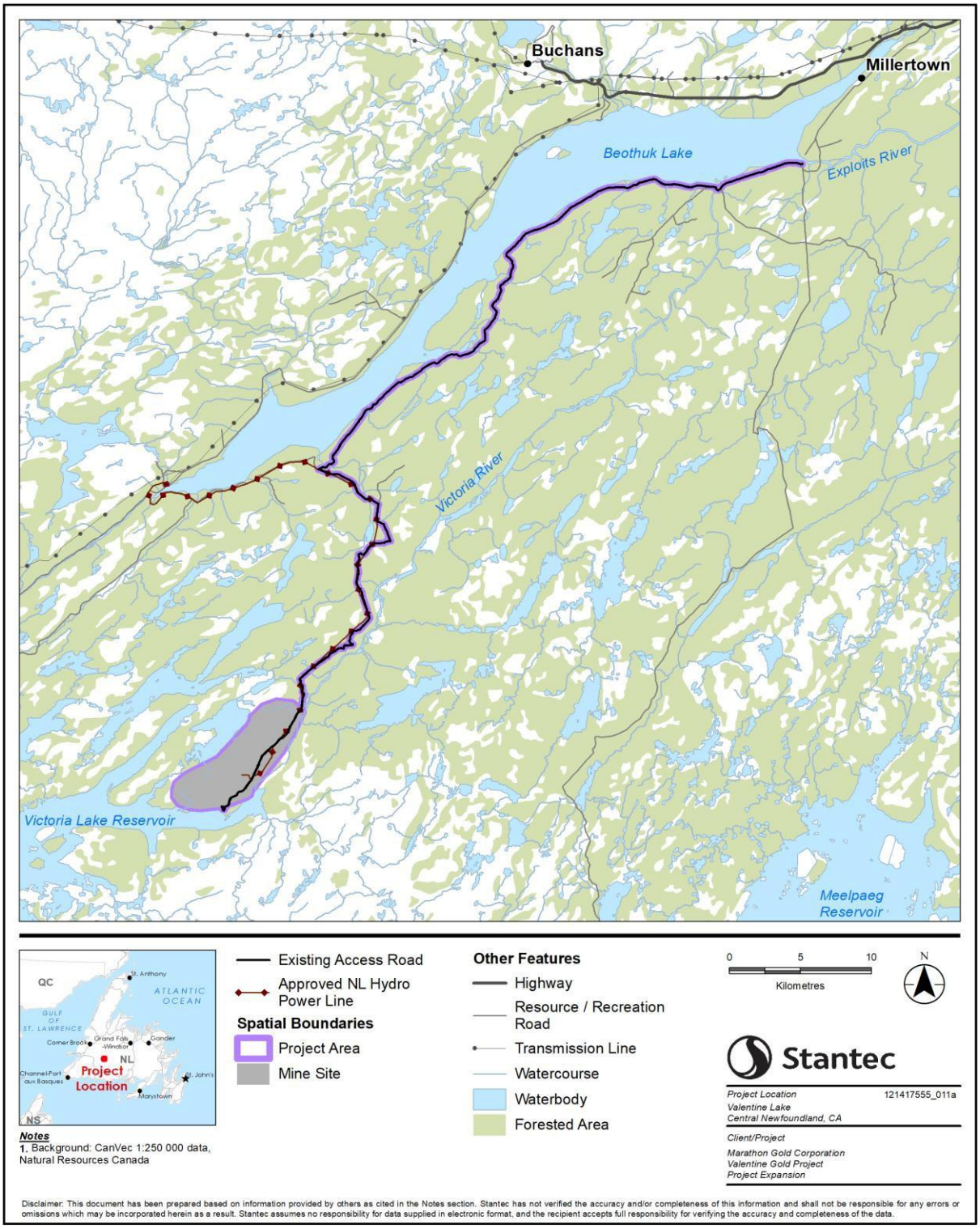


Figure 1.1 Project Area

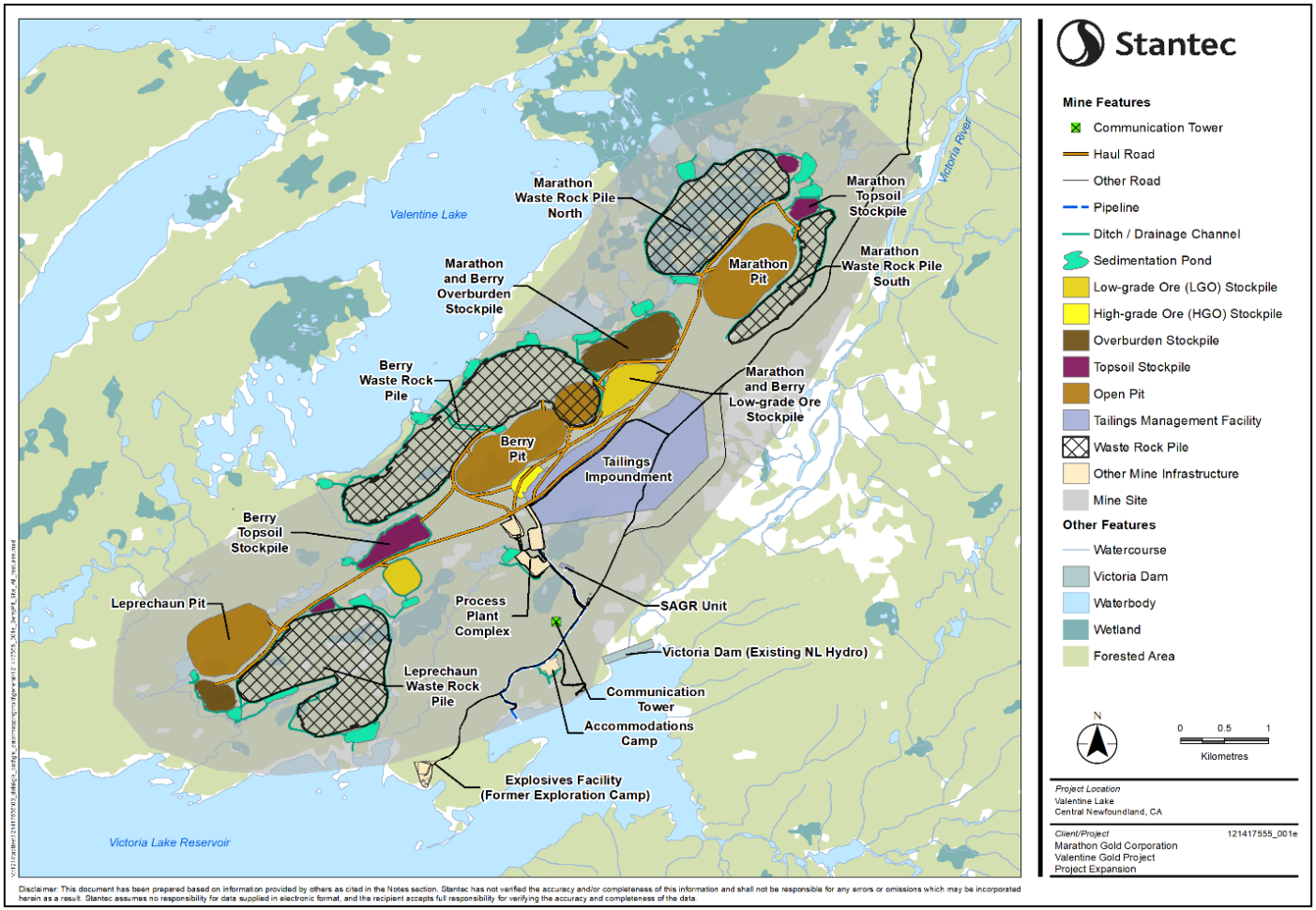


Figure 1.2 Mine Site Layout

1.2 OBJECTIVES OF THE EPP

To support the execution of construction and operation activities in an environmentally responsible manner, this EPP has the following objectives:

- To manage and reduce risks and adverse environmental effects from construction and operational activities
- To identify avoidance and mitigation measures to avoid or reduce adverse construction and operation-related environmental effects
- To identify and document potential environmental concerns and associated protection measures
- To provide a reference document for personnel to guide the planning and/or conduct of specific construction and operational activities
- To provide direction in the event of accidental events or malfunctions
- To communicate changes in the program through the revision process
- To provide a reference to applicable laws, regulations, guidelines and other requirements, including potential permitting
- To provide measures against which to verify that environmental commitments are being met
- To include a quick reference for the VGM team and applicable regulators to monitor compliance / conformance and recommend improvements
- To provide direction at the corporate level for enacting, and monitoring conformance with, corporate commitments

Deviation from the procedures and commitments outlined in this EPP must be discussed with, and approved by, Equinox – Safety and Sustainability Manager.

1.3 ORGANIZATION OF THE EPP

This EPP contains the following sections:

Section 1.0 introduces the EPP. It outlines the overall purpose, objectives, organization, roles and responsibilities of those involved and environmental orientation requirements.

Section 2.0 provides a description of planned construction activities.

Section 3.0 lists the permits, approvals, and authorizations that may be required for the Project and provides an overview of compliance monitoring.

Section 4.0 describes potential environmental concerns, and general environmental protection plans and procedures associated with construction activities.

Section 5.0 describes special environmental protection plans and procedures applicable to construction resources of concern, including wildlife and historic resources.

Section 6.0 outlines the contingency plans, communication procedures and grievance mechanisms for potential unplanned and accidental events that could occur during Project construction and operations

Section 7.0 outlines the procedures for revising the EPP.

Section 8.0 provides a list of key Project personnel and regulatory contacts.

Section 9.0 lists references cited in the EPP, as well as a number of sources of further information.

Section 10.0 contains a signature page for employees and contractor sign-off.

Supporting information and documents are provided in the appendices:

- Appendix A is the Environmental Policy
- Appendix B is an Environmental Site Inspection Checklist
- Appendix C is the Incident Management and Reporting SOP
- Appendix D is the VGM Environmental Incident Investigation Report Form
- Appendix E is a Mapbook of Environmental Sensitivities in the Project Area
- Appendix F is a Traffic Management Plan
- Appendix G is a Revision Request Form
- Appendix G is the Caribou and Traffic Management SOP
- Appendix H is the Noise Follow-up Monitoring Program
- Appendix I is the Ambient Air Quality Follow-up Monitoring Plan
- Appendix J is a Revision Request Form
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1.4 ENVIRONMENTAL POLICY

Equinox is committed to the sustainable and responsible development of the VGM as reflected in its corporate values and Environment and Climate Change Policy (refer to Appendix A). Environmental management and protection are recognized as a corporate priority, which is critical to the successful construction, operation, and decommissioning, rehabilitation and closure of the Project. The Environmental Policy applies to all Equinox personnel, contractors, subcontractors, suppliers, vendors and visitors.

Consistent with its internal policies and corporate values, Equinox will implement processes and procedures to identify, assess, and avoid or reduce environmental risks during all phases of the Project life cycle. These processes and procedures will be developed and maintained under the Equinox VGM Management System (MS), comply with relevant legal requirements and be informed by industry's best practices and standards.

The MS is designed as a conceptual and systematic framework to manage environmental risks, based on principles of adaptive management and continuous improvement. It will guide the development and implementation of Management Plans and Monitoring Programs required to maintain environmental protection during all Project phases – construction, operation, and decommissioning, rehabilitation and closure. The MS and associated plans and programs will function as a set of standards to guide the environmentally and socially responsible development and operation of the VGM through the definition and implementation of the following components:

- Defined objectives informed by Equinox's Environment Policy
- Defined roles, responsibilities and accountabilities
- Risk management processes and operating procedures focused on environmental responsibility
- Monitoring, auditing and reporting processes

This EPP operationalizes Equinox's environmental management commitments, providing a set of standards to guide Project construction and operations in an environmentally and socially responsible manner.

1.5 ROLES AND RESPONSIBILITIES

Please note that the Valentine Gold Mine remains in construction, and there will be construction-related activities for a significant time after operations begin in 2025. As such, Equinox will continue to have a projects team with a VP Projects role, as well as the full operations team with a VP Canadian Operations role at its VGM.

1.5.1 Equinox Staff

Chief Executive Officer (CEO)

The CEO is responsible for overall project governance.

VP Canadian Operations

The VP Canadian Operations is responsible for the overall management of the Valentine Gold Mine Operations. This includes responsibility for mine operations, mobile equipment, technical services, process plant, site services, and associated support services (HSET, IT, Business services, Capital projects). The VP Canadian Operations reports directly to the CEO to ensure that objectives are met.

VP Projects

The VP Projects is responsible for the overall construction and engineering management of the Project including overseeing and taking responsibility for consulting engineering and contracting services relating to the development of the Valentine Gold Mine. The VP Projects reports directly to the CEO to ensure that objectives are met.

VP Regulatory and Government Affairs

The VP Regulatory and Government Affairs is responsible for the overall management of the VGM environmental programs and permits, overseeing all aspects pertaining to compliance with respect to environmental issues and community affairs and corporate social responsibility. The VP Regulatory and Government Affairs reports directly to the Senior VP of Sustainability and coordinates with the VP Canadian Operations and the VP Projects to ensure that objectives are met.

The Mine Operations Manager and the Process Plant Managers

The Mine Operations and Process Plant Managers have overall responsibility for the day-to-day operations at the VGM site, including oversight of on-site environmental monitoring and compliance relating to operation activities. The Mine Operations and Process Plant Managers report to the VP Canadian Operations and coordinates with the VP Regulatory and Government Affairs to ensure that objectives are met.

Construction Manager

The Construction Manager has overall responsibility for the construction of the VGM, including oversight of on-site environmental monitoring and compliance relating to construction activities. The Construction Manager reports to VP Projects and coordinates with the VP Regulatory and Government Affairs to ensure that objectives are met.

VGM Managers - The Mine Operations Manager, Process Plant Manager and Construction Manager will provide support personnel and equipment from applicable departments to assist the Environment Team on an as-needed basis, such as for implementation and maintenance of:

- Environmental procedures outlined in the EPP as well as other stand-alone plans and programs, which could require manual labor and /or heavy equipment needs (e.g., installing sediment and erosion control mitigation measures by hand or with a bobcat)
- Environmental SOPs, which could require manual labor and/or heavy equipment needs (e.g., emptying secondary containment of precipitation build-up [into an oil water separator], dredging sedimentation ponds of sediment build-up with an excavator to keep them functioning as designed)
- Contingency procedures outlined in the EPP, plans, programs and ERPs, which could require manual labor and/or heavy equipment needs (e.g., deploying spill response materials or removing contaminated soil with an excavator)

Safety and Sustainability Manager

The Safety and Sustainability Manager reports to the VP Canadian Operations and is responsible to:

- Support the activities of the VGM site Environment Team, including liaising between the Environment Team and Management Team
- Manage development and submission of regulatory permitting applications, with follow-up through to approval, and associated reporting requirements
- Manage the periodic review and update of the EPP

Sustainability Compliance and Reporting (SCR) Lead

The SCR Lead reports to the Environmental Superintendent and is responsible for:

- Oversee the development and implementation of the Management System (MS) and associated Environmental Monitoring and Management Plans
- Establish environmental monitoring and management programs and associated reporting procedures

- Monitor and report on regulatory compliance, including with conditions of authorization and permits
- Oversee the review process for the MS, the EPP and the Environmental Monitoring and Management Plans, in accordance with the designated review cycles.

Environmental Superintendent

The Environmental Superintendent reports to the Safety and Sustainability Manager, and will:

- Oversee the implementation of the EPP and environmental monitoring and management programs, as part of the overall MS
- Gather pertinent information needed for permits and authorizations and prepare associated applications for submission to regulators
- Liaise with regulators on permit conditions of authorizations/permits, reporting requirements, and environmental incidents
- Implement Environmental Management Plans and Programs and Emergency Response Plans (ERP), required as conditions of authorization
- Prepare and oversee implementation of environment-specific Standard Operating Procedures (SOPs)
- Communicate with the Safety and Sustainability Manager on overall progress, including flagging any environmental risks and hazards, issues and concerns
- Liaise with and support other Equinox department managers and staff on environmental objectives and responsibilities, receive reported concerns and provide guidance, and communicate regarding issues encountered during construction and operations including corrective actions and follow-up
- Provide training and mentoring to Environment Coordinators on EPP procedures
- Oversee implementation of environmental sampling regimes including air, water and effluent required as conditions of authorization
- Provide guidance to other departments on their environment-related responsibilities (e.g., waste management including set up and regularly scheduled maintenance of various waste collection streams and recouperation of recyclables; storage, handling and disposal of hazardous wastes and associated reporting; aspects of the sediment and erosion management plan including set up and regularly scheduled maintenance of mitigation measures and infrastructure; wildlife management including implementation of various deterrent including bears to limit human-wildlife interactions)
- Serve as "On-Scene Commander" for environmental emergency response, including supervising/directing cleanups or other works
- Prepare and submit to the Safety and Sustainability Manager and VP Regulatory and Government Affairs follow-up documentation required by regulators on any environmental incidents/emergencies

Environmental Technicians and Coordinators

The Environment Technicians and Coordinators report to the Environmental Superintendent and will:

- Conduct the various sampling regimes including air, water and effluents as outlined in the permits and authorizations to operate
- Conduct environmental audits and inspections and report on non-compliances to the Environmental Superintendent to bring to the attention of the department responsible or contractor

- Assist with the implementation of the various Environment Plans (including the EPP), Environmental Programs, Environmental Response Plans, Environmental SOPs, and other guidance documents as part of the overall MS

All Equinox Personnel, Contractors, Subcontractors and Visitors

All Equinox personnel, contractors, subcontractors and visitors will:

- Review and become familiar with the procedures contained in the EPP, including any revisions
- Adhere to and implement commitments noted in the EPP, including conditions described in approvals, authorizations and permits
- Demonstrate capacity to perform in a manner consistent with Equinox's commitments, policies and procedures
- Immediately report concerns to a member of Equinox's Environment Team of any spills or other accidental events or malfunctions that could have an adverse effect on the environment
- Carry out clean-up, rehabilitation or restoration as directed by Equinox's Environmental Superintendent/ Environmental Coordinator or regulatory agencies
- Provide feedback to Equinox's Environmental Superintendent/Environmental Coordinator regarding any changes/comments they believe would improve the EPP

1.6 ENVIRONMENTAL ORIENTATION AND TRAINING

Through ongoing orientation and ongoing awareness training, Equinox will confirm that all Project personnel understand their roles and responsibilities, as well as the potential environmental effects of the Project related to their specific work activities.

All new personnel arriving at the site receive an environmental orientation, which includes a review of.

- Environmental management requirements (including this EPP)
- Environmental considerations
- Non-compliance and corrective actions
- Environmental contingency measures
- Incident reporting requirements
- Work subject to regulatory permit requirements
- Construction and Operation site rules and regulations
- Bear awareness training

All workers will receive an orientation from an immediate supervisor prior to the start of any new activity and thereafter on an as-needed basis.

Spill response training will be provided for front-line personnel (including the Environment Team and representatives from other departments) who may be required to respond to environmental incidents. Environmental personnel responsible for site monitoring during construction and operation will receive training to recognize species of conservation concern (SOCC) that may be present in Project Area.

Equinox will also provide training to environmental staff on active nest disturbance and associated avian response behavior.

2.0 PROJECT DESCRIPTION OVERVIEW

2.1 CONSTRUCTION

Following release from the EA process and issuance of regulatory permits and authorizations, Project construction began in October 2022 with upgrading the access road, constructing site roads, removing vegetation for site infrastructure, and pre-stripping the open pits. Civil earthworks including for the TMF, foundations and subsurface utilities, and mill and infrastructure construction were initiated. Construction of the TMF, Process Plant, and associated infrastructure has continued in tandem with development of both the Leprechaun and Marathon open pits and some of the associated stockpiles, water management infrastructure, and improvements to the site access road. These and other construction activities continued into 2025, following the approval for the Berry Pit Expansion (as detailed in section1.0). Activities include clearing and grubbing for phases 1 and 2 of the Berry pit development, Berry ex-pit haul roads, and the north side of the Berry waste rock pile footprint. Other construction activities continuing into 2026 include the TMF Phase 3 development, the removal and stockpiling of topsoil from the cleared pit areas and waste rock pile footprint. Haul road construction will also be completed, linking the Berry pit to the stockpiles, crusher, and tailings dam.

General construction activities for the Project include:

- **Site Preparation:** cutting and clearing of vegetation and removing organic materials and overburden on areas to be developed and developing construction stage water and erosion control (e.g., ditching, temporary / permanent sedimentation ponds) and access roads
- **Earthworks:** facilitating construction of infrastructure development areas by excavating, preparing excavation bases, placing structural fill, and grading; stripping and stockpiling organic and overburden materials from open pits; and use of open pit development rock for earthworks, such as structural fill and road gravels
- **Infrastructure Construction:** placing concrete foundations and constructing buildings and Project infrastructure
- **Equipment Installation:** installing major Project equipment and supporting infrastructure
- **Utilities Installation:** constructing and connecting power, water and fuel supply infrastructure
- **TMF Construction and other Dams:** constructing the TMF Phase 3 dam, effluent treatment plant, and SAGR® unit, as well as water management ponds

Project construction schedule activities for the fourth quarter of 2024 through 2025 are shown in Table 2.1. The schedule is subject to change / revision as the Project advances.

Table 2.1 Anticipated Timeframes, Frequencies and Durations of Construction Activities

Project Activity	Anticipated Timeframe, Frequency, Duration
Mine Site Preparation and Earthworks Clearing and cutting of vegetation, removal of organic materials, development of roads and excavation, preparation of excavation bases within the mine site, grading for infrastructure construction, earthworks for open pits	• Commenced in October 2022 through 2025, and again in 2026 (haul road relocation) • Year-round; avoiding breeding bird season for clearing and cutting vegetation, where feasible
Construction, Installation and Commissioning of Infrastructure and Equipment Placement of concrete foundations, construction of buildings and infrastructure, installation of water control structures, installation and commissioning of utilities on-site	• Commenced in 2023 through 2025, and again in 2026. • Year-round, continual for approximately 42-month period: - Foundations and subsurface utilities: 6 months - TMF earthworks: 12 months - Mill and infrastructure construction: 6 months - Commissioning and start-up: Ongoing
Transportation along Access Road	• Commenced with construction in early 2022, continuing through closure and rehabilitation and beyond (post-closure and long-term monitoring) • Year-round, continual throughout life of Project

While construction activities are expected to continue through 2026, commissioning and start-up occurred during the third quarter of 2025.

2.2 OPERATIONS

Standard surface mining techniques will be used to mine material from the Marathon, Leprechaun and Berry open pits, including blasting, loading, hauling ore from the pit to the mill or stockpiles, processing ore, tailings deposition, hauling and placement of waste rock on the waste rock piles, and phased development of the TMF dams. All three pits (Marathon, Berry and Leprechaun) will be mined simultaneously, with blasting occurring on alternating days. During the Spring and Fall Caribou Migrations, operations in the Marathon pit will be suspended during the Protection Level 4 migrations, as outlined in the Caribou Protection and Environmental Effects Monitoring Plan (CPEEMP).

For the first three years of operation, ore will be processed through the mill where it will be crushed, milled and processed through gravity and cyanidation processes to recover the gold. Initially, 6,800 t of ore will be processed daily, with this quantity anticipated to increase to 10,960 tonnes per day (tpd) in Year 4 through the addition of the flotation process. Tailings will be treated to remove cyanide prior to disposal in an engineered TMF. Gold doré will be shipped from site to market in secured trucks.

The following summarizes key operation and maintenance activities for the Project:

- Open Pit Mining: blasting, loading and haulage of rock from the open pits using conventional mining equipment, in sizes and numbers optimized for the operation
- Utilization of Excavated Rock: rock excavated from the open pits that will not be processed for gold will be used as engineered backfill for post-construction site development (e.g., TMF dam raises), maintenance and progressive rehabilitation, or will be deposited in waste rock piles
- Ore Hauling: ore extracted from the open pits will be hauled to stockpiles and the processing area
- where it will be crushed and ground, then processed to extract the gold via gravity, leaching and flotation processes
- Tailings Management: process waste (tailings) will be pumped to an engineered TMF in Years 1 through 9, and to the exhausted Berry open pit thereafter. Tailings dam raises will be constructed during the operational phase of the Project to achieve the ultimate storage capacity requirement
- Contact Water and Effluent Management and Treatment: contact water and process effluent will be managed on site and treated to remove sediments and deleterious substances prior to discharge to the environment; where feasible, water will be diverted around site features, and site contact and process water will be reused on site where practicable – treatment of discharge from the tailings impoundment will be conducted via a water treatment plant and polishing pond prior to release to the environment
- Transportation, Storage and Use of Reagents, Hazardous Materials and Fuels: will be conducted in accordance with applicable regulations and guidelines
- Infrastructure, equipment and facilities will be subject to regular inspection and maintenance throughout the life of the Project. Equipment and infrastructure will be inspected, maintained and tested in accordance with current and future standards and regulatory requirements. Equinox will maintain the access road that begins at Millertown, aside from the first 8 km which will be maintained by the Province of NL. Equinox will maintain all site roads, including activities such as culvert maintenance, pick up of refuse, grading and road repairs, snow removal and ice control, traffic sign installation and repairs, dust control, traffic signal maintenance, and vegetation control. Maintenance of site power lines (e.g., vegetation control), including regularly scheduled inspections, will be conducted to allow for safe and reliable operation.

3.0 REGULATORY REQUIREMENTS

3.1 APPROVALS, AUTHORIZATIONS AND PERMITS

Various regulatory approvals, permits and authorizations are required for Project construction and operation. Project personnel should consult the Environment Team prior to initiating any new work/activity, to confirm that the applicable permits are in place and to understand environmental and regulatory requirements and conditions of authorization.

Conditions and expiry/renewal dates should be considered as elements of this EPP, and all personnel should be familiar with and adhere to all relevant permits and approvals. A general list of approvals, authorizations and permits that may be required for construction and operation activities are presented in Table 3.1. Additional approvals, authorizations and permits may be required before proceeding with the operations phase of the Project.

Table 3.1 Potential Environmental Approvals, Authorizations, and Permits for the Project

Environmental Permit, Approval or Authorization Activity	Issuing / Approval Agency
Provincial	
Release from EA Process	NL Department of Environment Conservation and Climate Change (NLDECCCC) – Minister
Approval of Environmental Protection Plan	
Monitoring Plan for Certificate of Approval	NLDECCCC – Pollution Prevention Division
Certificate of Approval for Operation (Industrial Processing Works)	
Certificate of Approval for Generators	
Approval of Environmental Contingency Plan / Emergency Spill Response	
Permit to Construct a Non-Domestic Well	NLDECCC – Water Resources Management Division
Certificate of Environmental Approval to Alter a Body of Water	
Culvert Installation	
Fording / Bridge	
Pipe Crossing / Water Intake	
Stream Modification or Diversion	
Other Works Within 15 metres (m) of a Body of Water	
Water Use License	
Real-Time Monitoring Network	
Permit to Occupy Crown Land	NL Department of Forestry Agriculture and Lands
Permit to Control Nuisance Animals	NLDFAL – Wildlife Division
Operating Permit to Carry out an Industrial Operation During Forest Fire Season on Crown Land	NLDFAL – Forestry Division
Permit to Cut Crown Timber	

Table 3.1 Potential Environmental Approvals, Authorizations, and Permits for the Project

Environmental Permit, Approval or Authorization Activity	Issuing / Approval Agency
Permit to Burn	
Surface and Mining Leases	NL Department of Energy and Mines
Development Plan	
Rehabilitation and Closure Plan	
Financial Assurance	
Mill License	
Quarry Development Permit	
Blasters Safety Certificate	NL Department of Government Services
Permit to Construct a Potable Water System	
Approval for Storage and Handling of Gasoline and Associated Products	
Fuel Storage Tank Registration	
Approval for Used Oil Storage Tank System (Oil / Water Separator)	
Certificate of Approval for a Waste Management System	
Certificate of Approval for a Sewage / Septic System	
Application to Develop Land for Septic	
National Building Code –Fire, Life Safety and Building Safety	
Buildings Accessibility Registration and Permit	
Food Establishment License	
Federal	
Release from EA Process	Impact Assessment Agency of Canada (IAAC)
Fisheries Act Authorization permitting serious harm to fish	Fisheries and Oceans Canada (DFO)
Tailings Impoundment Area Designation	Environment and Climate Change Canada (ECCC)
Initiate Metal and Diamond Mining Effluent Regulations (MDMER) authorization and reporting processes with Environment and Climate Change Canada (ECCC) including notification, identification of final discharge point, and all required components of effluent monitoring, and environmental effects monitoring (EEM)	
Approval of MDMER Emergency Response Plan	
Approval of E2 Plan	
Approval to Interfere with Navigation*	Transport Canada
License to Store, Manufacture, or Handle Explosives (Magazine License)	Natural Resources Canada (NRCAN)
*May not be required for Project	

3.2 ENVIRONMENTAL MONITORING

3.2.1 Site Inspections

Site inspections will be conducted by Equinox personnel before, during, and after any site disturbances related to construction and operation activities performed by Equinox, or contractors on behalf of Equinox. For site inspections conducted prior to construction activity, site details including vegetation, general terrain/topography, and drainage patterns will be recorded. Photographs should be taken during each site inspection. The required frequency of site inspections performed during construction and operation activities will be determined by the Safety and Sustainability Manager, Environmental Superintendent, Environmental Coordinator or designate and will depend on the duration and type of activity being performed. The site inspections will be recorded in the Environmental Site Inspection Checklist (Appendix B).

Regular site inspections will aid in the implementation of the environmental protection measures that are specified in this EPP and that will be specified in the applicable contracts and relevant permits, approvals and/or authorizations.

Any environmental issues or concerns should be reported to Equinox's Safety and Sustainability Manager, Environmental Superintendent or designate.

3.2.2 Monitoring

Monitoring is conducted to confirm that activities comply with applicable regulatory requirements and conditions of permits/authorizations; verify accuracy of environmental effects predictions; assess the effectiveness of mitigation and management measures; and identify Project effects which may require further mitigation. Equinox's Safety and Sustainability Manager, Environmental Superintendent or designate will be responsible for on-site environmental effects and compliance monitoring during construction and operation activities.

Project-specific Monitoring Plans are being developed to monitor Project effects and/or regulatory compliance for the following environmental aspects:

- Air quality
- Greenhouse gas emissions
- Groundwater resources
- Surface water resources
- Fish and fish habitat
- Avifauna
- Caribou
- Other wildlife (e.g., bats, American Marten)
- Country foods
- Outfitters

Compliance monitoring will be required for various activities during construction and operations. Federal and provincial government compliance standards that may apply to construction and operation activities (i.e., for which a permit or authorization is not issued, but with which activities must comply) include but are not limited to those listed in Table 3.2. Equinox personnel and contractors will comply with all relevant permits, approvals, authorizations and legislation while conducting construction and operation-related activities.

Table 3.2 Environmental Regulatory Compliance Standards

Legislation/ Guidelines	Activity Requiring Compliance	Responsible Agency	Comment
Federal			
Fisheries Act	Section 36 - Deleterious Substances - run-off from construction and operation sites receiving waters	ECCC	Any deposited substance or discharge must not be deleterious (i.e., must be acutely non-lethal). Liquid effluents that enter freshwater or marine waters must comply with the Act.
	Section 35 – any works affecting fish habitat	DFO	Habitat alteration, disruption or destruction will only occur as permitted by DFO in a *Fisheries Act* Authorization.
	MDMER, Schedule 2 – placement of mine waste in fish-bearing waters	ECCC	Mine waste will not be placed in fish-bearing waters unless those waters have been added to Schedule 2 of the MDMER.
Species at Risk Act (SARA)	Mortality of or harm to species at risk, or damage or destruction of their residences (e.g., nest or den)	ECCC	Species at risk must not be killed, harmed, harassed, captured, taken, possessed, collected, bought, sold or traded. The residences (e.g., nest or den) must not be damaged or destroyed. Measures must be taken to avoid or reduce adverse effects on species at risk (SAR) and monitor effects. Mitigation measures must be consistent with recovery strategies and action plans for species.
Migratory Birds Convention Act, 1994	Mortality of migratory birds and any species under federal authority, or disruption or destruction of nests, eggs, or nest shelters	ECCC - Canadian Wildlife Service (CWS)	ECCC-CWS should be notified about the mortality of any endangered migratory bird in the Project Area, including passerine (songbirds), seabird and waterfowl species. Substances (e.g., oil, waste, etc.) that are harmful to migratory birds must not be deposited into waters that they frequented. Nests, eggs, nest shelters of migratory birds must not be disturbed or destroyed. ECCC-CWS must also be notified regarding the mortality of any endangered species (under federal regulation).
Transportation of Dangerous Goods Act and Regulations	Handling and transporting dangerous goods	Transport Canada	If the materials are transported and handled fully in compliance with the regulations, a permit is not required. A Permit of Equivalent Level of Safety is required if a variance from the regulations is necessary.

Table 3.2 Environmental Regulatory Compliance Standards

Legislation/ Guidelines	Activity Requiring Compliance	Responsible Agency	Comment
Canadian Environmental Protection Act, 1999 (CEPA)	Activities that have the potential to adversely affect the environment and human health	ECCC	CEPA provides framework for setting environmental quality objectives, guidelines and codes of practice, pollution prevention plans, regulation of toxic substances, controlling pollution of other waste and environmental emergency plans
			CEPA addresses the prevention of, preparedness for, response to and recovery from environmental emergencies caused by uncontrolled, unplanned or accidental releases. It also addressed the reduction of any foreseeable likelihood of releases of toxic or other hazardous substances listed in Schedule 1 of the Environmental Emergency Regulations, 2019 (E2 Regulations).
Provincial			
Environmental Protection Act	Construction and Operations	Pollution Prevention Division, NLDECCC	All waste material shall be considered, prior to disposal, for reuse, resale or recycling. All waste materials, associated with construction and operations, shall be disposed of at an approved waste disposal site.
	Construction and Operations	Pollution Prevention Division, NLDECCC	All activities associated with operations are subject to the *Air Pollution Control Regulations*. Materials as stipulated in the Regulations cannot be burned in the open.
	Site drainage during construction and operation activities	Pollution Prevention Division, NLDECCC	All waters discharged from construction and operation activities must comply with the *Environmental Control Water and Sewage Regulations*.
	Storage, handling and disposal of gasoline and other fuels	Department of Government Services NL	Petroleum storage and handling is subject to the *Storage and Handling of Gasoline and Associated Products Regulations*. Refer to Section 5.1 of the EPP for the Fuel and Hazardous Material Spills Contingency Plan.
	Disposal of used oil and glycol	Department of Government Services NL	The storage and disposal of used oil and glycol is subject to the *Used Oil and Glycol Control Regulations*.
	Handling and storage of hazardous materials	Department of Government Services NL	Activities involving the use of designated hazardous materials are subject to Workplace Hazardous Materials Information System (WHMIS). WHMIS outlines procedures for handling hazardous materials and provides details on various hazardous materials.
Dangerous Goods Transportation Act and Regulations	Transporting fuel to the site	Department of Transportation and Infrastructure	Transporting goods considered dangerous to public safety must comply with regulations.

Table 3.2 Environmental Regulatory Compliance Standards

Legislation/ Guidelines	Activity Requiring Compliance	Responsible Agency	Comment
Historic Resources Act	General construction and operation activities, particularly when clearing and grubbing	Provincial Archaeology Office, Department of Tourism, Culture, Arts and Recreation	All archaeology sites and artifacts are considered the property of the Crown and must not be disturbed. Any archaeology materials encountered must be reported to the Provincial Archaeology Office.
Forestry Act	Clearing, burning	NL Department Forestry, Agriculture and Lands	Cutting and burning of trees must comply with the Act.
Minerals Act	Construction and Operations	NL Department of Energy and Mines	All work must comply with the *Minerals Act*.
Occupational Health and Safety Act & Regulations	Construction and Operations	Digital Government and Service NL	All activities must comply with the *Occupational Health and Safety Act* and Regulations.
Wildlife Act	Construction and Operations	NL Department Forestry, Agriculture and Lands	All work must comply with the *Wildlife Act*.
Endangered Species Act	Construction and Operations	NL Department Forestry, Agriculture and Lands	All work must comply with the *Endangered Species Act*.

3.3 REPORTING AND COMMUNICATIONS OF ENVIRONMENTAL ISSUES / CONCERNS AND INCIDENTS

3.3.1 Internal Communication

Environmental performance or concerns associated with any construction and operation activities will be communicated internally as required. Equinox's Safety and Sustainability Manager is responsible to ensure that policies, procedures, legal, and other requirements are communicated to personnel by the Environmental Coordinators, including any new or additional mitigation measures such as those resulting from incident investigations, regulatory changes/updates, or adaptive management.

Construction and operation personnel and contractors are required to communicate all environmental incidents to Equinox's Safety and Sustainability Manager and/or Environmental Coordinators as per Equinox's Incident Management and Reporting Procedure (see Appendix C). The purpose of the Incident Investigation Policy is to ensure that incidents are investigated in accordance with applicable legislation, which will help identify opportunities to improve safety and environment performance by identifying direct and root causes that led to the incident.

In the event of an environmental incident, the investigation will be conducted by the Environmental Superintendent (or designate), with corrective actions identified through root cause analysis. Each corrective action identified will be assigned to a person who will be responsible to ensure that the action is carried out within the prescribed timeframe. Equinox's investigation process is summarized below.

1. Initial Verbal and Written Reporting: When an environmental incident occurs, immediate steps must be taken to respond to the scene, in accordance with Equinox's emergency response procedures. The immediate supervisor and other trained authorized personnel will secure the scene, verbally report the incident to the Environmental Superintendent/Environmental Coordinator and, in consultation with the Environment Team, take action to avoid/reduce further impact to the environment and ensure the area is made safe. The supervisor will then be responsible for working with the established investigation team to complete an investigation and entering all relevant incident details into a report in the incident data management system (e.g. incident description, direct and root causes, corrective actions, and key learnings).

2. Investigation Team: A trained and/or qualified supervisor or management representative and, when applicable, a member of the Occupational Health and Safety Committee, will perform an investigation of the incident, which may include others as appropriate to the severity or potential severity and type of incident.
3. Investigation Process: The incident site will be visited, and photographs, witness statements and other evidence will be collected. The investigation team will determine a sequence of events to identify relevant actions and decisions that occurred leading up to, during and immediately following the incident. When all pertinent information has been gathered, a root cause analysis will be conducted to determine the root cause(s) of the incident (for example, did the hose that malfunctioned have the appropriate pressure rating, was there a lack of scheduled inspection / maintenance that led to the eventual malfunction through wear and tear, etc.).
4. Recommended Corrective Actions: The investigation team will develop recommendations for corrective actions in response to the direct and root cause(s) that were identified during the investigation.
5. Investigation Report: The findings of the investigation as well as recommendations for corrective actions will be recorded in the incident investigation report and will include signatures of the investigation team. A copy of the investigation report will be distributed by the investigation team to senior management for review and approval of corrective actions. If required, a copy of the investigation will be provided to Government Regulators covered in Section 3.3.2, External Communication.
6. Corrective Action Implementation and Tracking: The supervisor will be responsible for implementing the actions in the specified timeframe and documenting completion. The incident data management system will be used to confirm that corrective actions were implemented and that the report was closed.
7. Insights: The incident data management system will be utilized to identify trends and determine if corrective actions were effective in prevention of recurrence, to help identify trends, and determine areas for improvement.
8. Communication with Regulator(s): The Environmental Superintendent/ Environmental Coordinator, in consultation with the Safety and Sustainability Manager, will be responsible for following up with the applicable regulator(s) on progress of the investigation, corrective actions, and following these through to closure.

3.3.2 External Communication

Equinox's Safety and Sustainability Manager or designate will report, as applicable, to the NL Department of Environment, Conservation and Climate Change (NLDECCC) and other applicable regulators on environmental issues relating to construction and operation activities, such as the following:

- Air quality (e.g., dust)
- Erosion and sedimentation
- Historic resources (communication will include Provincial Archaeology Office)
- Wildlife encounters / effects on wildlife (communication may include NL Department of Agriculture and Lands [NLDFAL] and Canadian Wildlife Service [CWS])
- Fish and fish habitat (communication will include Fisheries and Oceans Canada)
- Conditions of permits and authorizations (other departments as applicable)
- Environmental incidents (e.g., reportable spills)

Wildlife-vehicle collisions, near misses or observations of wildlife (e.g., caribou, moose, black bear) road mortality on site roads and/or involving Project vehicles on the access road will be reported to the on-site Environment Team and the NLDFAL – Wildlife Division. Adaptive management measures will be implemented should locations of high-frequency wildlife-vehicle interactions be identified.

If a caribou mortality is observed or discovered on site or reported by Project personnel, Equinox will report this event to NLDFAL – Wildlife Division immediately.

Wildlife (e.g., birds and bats) collisions with Project infrastructure or equipment and the discovery of a nest or hibernaculum will also be reported to the on-site Environment Team and the NLDFAL – Wildlife Division and CWS.

Fires will be reported to NLDFAL's **24-Hour Forest Fire Emergency Line - (1-866-709-FIRE (3473)).**

Any spills of petroleum products or other hazardous materials will be reported to the **Environmental Emergencies 24-Hour Report Line** (Coast Guard Traffic Centre, St. John's **(1-800-563-9089)**.

Refer to Section 4.17, Storage, Handling and Transfer of Fuel and Other Hazardous Materials for the definition of reportable spills on land versus in freshwater environments. Other compliance reporting required by permits or through compliance requirements not listed above will be submitted to the NLDECCC and/or the applicable regulator.

4.0 GENERAL ENVIRONMENTAL PROTECTION PROCEDURES

This chapter of the EPP describes sensitive timing windows (Section 4.1) and buffer zones (Section 4.2) to be observed during construction and operations and general environmental protection measures for the following aspects of construction and operations:

- Surveying (Section 4.3)
- Laydown and Storage Areas (Section 4.4)
- Borrow Areas and Quarries (Section 4.5)
- Clearing (Section 4.6)
- Grubbing (Section 4.7)
- Trenching and Excavation (Section 4.8)
- Rock and Soils Management (Section 4.9)
- Erosion and Sediment Control Plan (Section 4.10)
- Blasting (Section 4.11)
- Working in or Near Water (Section 4.12)
- Working in or Near Wetlands (Section 4.13)
- Borehole and Water Well Drilling (Section 4.14)
- Site Water Management (Section 4.15)
- Equipment Use and Maintenance (including Generators) (Section 4.16)
- Storage, Handling and Transfer of Fuels and Other Hazardous Materials (Section 4.17)
- Propane Storage (Section 4.18)
- Waste Management (Section 4.19)
- Sewage Disposal (Section 4.20)
- Vehicle Traffic and Site Access (Section 4.21)
- Concrete Handling and Placement (Section 4.22)
- Dam Construction (including TMF) (Section 4.23)
- Air Emissions Management Plan (including Greenhouse Gas Emissions) (Section 4.24)
- Noise Control (Section 4.25)
- Lighting (Section 4.26)
- Progressive Rehabilitation (Section 4.27)

With the exception of dam construction, separate, specific sections on infrastructure construction, including road construction/upgrades, have not been included as these works require compliance with several individual procedures outlined above.

Some of the aspects above will relate to specific management plans which will provide further detail than is necessary to include in the EPP. This EPP will be updated to reflect changes to management plans, as applicable.

4.1 SENSITIVE TIMING WINDOWS

Environmentally sensitive timing windows include:

- Freshwater Fish: October 1 to May 31 (for tributaries and headwaters of scheduled salmon rivers on the island of Newfoundland; DFO 2021)
- Avifauna (Breeding Migratory Birds): April 15 to August 15 (ECCC 2018)
- Avifauna (Migration): March 15-June 7 and July 15-November 30 (ECCC 2022)
- Avifauna (Waterfowl): April 15 to July 31 (ECCC 2018)
- Caribou: Spring Migration (April 1 to May 19); Fall Migration (November 1 to December 15)[1] (Emera Newfoundland and Labrador 2013)
- Newfoundland Marten: Natal and Maternal Denning (April 1 to June 30)
- Myotis (Bat) Species: Maternity Roosting (April 1 to August 31); Hibernation (November 1 to May 31)

Potential Environmental Concerns

Construction and operation activities during sensitive time periods may exacerbate adverse effects on species and are to be avoided where practicable.

Environmental Protection Procedures

Sensitive time periods outlined above will be considered in Project planning, where practicable. Where construction and operation activities are to be carried out during sensitive time periods, the following additional mitigations shall be applied, as applicable:

a) A complete schedule of activities will be completed prior to commencement of any construction or operational task and restrictions on timing will be noted on the schedule.

b) While the ideal time of year for construction located near a body of water is typically in early June through to late October, construction may occur outside of this window, and additional environmental mitigations may be applicable during this period. Efforts will be made to avoid carrying out in-water works from October 1 to May 31 to limit impacts during the spawning, incubating and hatching period. Consultation and approval by DFO are required prior to conducting in-water work between October 1 and May 31.

c) Sequencing stripping, grading, excavating and/or rehabilitation activities will be scheduled to reduce the amount of time the soil is exposed to elements.

d) Activities will be conducted in such a way as to reduce the amount of time spent working in or around a stream or waterbody (in-water work should be carried out during periods of low flow).

[1] The dates associated with the timing window for spring/fall migrations are subject to change based on the availability of new data regarding the timing of migrations.

e) Construction and operation activities will be planned, where possible, to avoid locations associated with fish and wildlife use during sensitive periods as noted above.

f) Where/if the schedule requires vegetation clearing during bird breeding season, experienced biologists / scientists will inspect the area to assess occupancy before clearing vegetation.

Refer to the following sections for additional details and mitigation measures that may apply: 5.2, Caribou; 5.3, Avifauna Management Plan; 5.4, Wildlife Management Plan; and 5.6, Fish and Fish Habitat.

4.2 BUFFER ZONES

Potential Environmental Concerns

Waterbodies and sensitive and/or rare environmental receptors (e.g., raptor nesting sites, denning sites, historic resources) could be adversely affected by construction and operation activities. Buffer zones of natural vegetation or undisturbed areas separate environmental receptors from construction and operation activities. In the absence of other applicable mitigation measures, without adequate buffer zone vegetation adjacent to waterbodies, streams, ponds and lakes can become laden with silt from run-off. Vegetation also provides cover for fish in various aquatic environments. Buffer zones also help reduce sensory disturbance to wildlife and may also provide wildlife habitat and/or travel corridors near work areas.

Environmental Protection Procedures

Sensitive areas (e.g., wetlands, hibernacula, mineral licks, roosts, caribou migration corridors) will be identified prior to construction and operation activities and appropriate buffers will be flagged and maintained around these areas, where feasible. Appendix E is a Map book of Environmental Sensitivities which includes locations of wetlands, watercourses, archaeological sites and areas of archaeological potential, and caribou migration corridors. The intended buffer zones for various activities and receptors are described in Table 4.1.

NOTE: Additional and different buffer zones may exist within regulatory documents (e.g., permits, certificates of approval, etc.). If there are differing buffers use the most stringent buffer. For example, if the development of land around a waterbody requires a 15m buffer, and removal of vegetation near a waterbody requires a 30m buffer around the waterbody, use the 30m buffer zone. If removing vegetation around Victoria River, the requirement is for a 50m buffer zone.

Table 4.1 Intended Buffer Zones for Construction and Operation Activities

Activity	Environmental Receptor	Recommended Buffer Width
Development around watercourses in urban or other developed area	Waterbody	15 m depending upon site specific considerations
Resource roads running adjacent to waterbodies	Waterbody	20 m + 1.5 X slope (%)
Removal of vegetation	Victoria River Other water body	50 m vegetated buffer 30 m vegetated buffer
Piling of wood and slash - grubbing	Waterbody	30 m
Fuel and hazardous materials storage	Waterbody	100 m
Fueling or servicing of mobile equipment	Waterbody	100 m
Fuel and hazardous materials storage	Salmon river or tributary	200 m
All construction and operation activities	Wetland	30 m
All construction and operation activities	Archaeological site	50 m
Clearing	Black bear denning site (late October – late April)	50 m
Clearing	Active raptor nest	800 m (between May 1 and August 15)
All other construction and operation activities	Active raptor nest	200 m (between May 1 and August 15)
All construction and operation activities	Active waterfowl/waterbird nests	100 m
All construction and operation activities	Active passerine nests (species not of conservation concern)	30 m
All construction and operation activities	Active species at risk (SAR) nests	75 m
Clearing	Waterbody occupied by a beaver	30 m
Blasting	Caribou	1000 m
All other construction and operation activities	Caribou	1km for shutdowns of any activities if caribou are observed

4.3 SURVEYING

Potential Environmental Concerns

Potential environmental concerns with respect to surveying include loss or alteration of habitat, sensory disturbance to wildlife, and disturbance to historic resources.

Environmental Protection Procedures

The following procedures shall be implemented with respect to surveying:

a) Cutting of survey lines will be kept to a minimum. Where possible, alternate areas not requiring cut lines will be used.

b) Width of survey lines will be limited to that necessary for line of sight and unobstructed passage.

c) Whenever possible, cutting lines to the boundary between treed and open areas will be avoided.

d) Trees and shrubs will be cut flush with the ground wherever possible.

e) Trees not intersecting with transit lines shall be left standing.

f) There will be no cutting in areas designated as sensitive without prior approval of the Safety and Sustainability Manager.

g) Any historic resource discoveries will be reported to the Provincial Archaeology Office (PAO) (see Section 6.6, Discovery of Historic Resources).

h) All sites where surface disturbances are planned or may occur will be inspected and monitored prior to, during, and after work.

i) Use of motorized vehicles (including all-terrain vehicles (ATVs)) will be in accordance with Section 4.2.1, Vehicle Traffic and Site Access.

4.4 LAYDOWN AND STORAGE AREAS

Potential Environmental Concerns

Areas will be needed for temporarily storing and maintaining equipment and supplies during construction and operations. Clearing and use of these areas could result in erosion and run-off of sediment and other hazardous substances into nearby waterbodies.

Environmental Protection Procedures

The following procedures shall be implemented with respect to laydown and storage areas:

a) New laydown and storage areas will be kept to a minimum.

b) Establishing a new laydown or storage area will follow the procedures for vegetation clearing and grubbing (Section 4.6 and 4.7) and erosion prevention (Section 4.10).

c) External storage areas will be placed on level terrain and kept free of ponding and run-off as presented in the Water Management Plan.

d) Drainage from areas of exposed soil will be controlled by grade or ditching, with run-off directed away from waterbodies.

e) Laydown and storage areas no longer required for construction and operation activities will be rehabilitated (Section 4.26).

f) Fuel and other hazardous materials will be stored, handled and transported according to Section 4.17, Storage, Handling and Transfer of Fuels and other Hazardous Materials.

4.5 BORROW AREAS AND QUARRIES

Potential Environmental Concerns

While it is not anticipated that quarried rock will be required for construction and operations, due to the volume of waste rock being available from the open pits, the potential environmental concerns associated with borrow pits and quarries include changes to soil quality and vegetation, and adverse effects on surrounding waterbodies from run-off of sediment and other hazardous substances.

Environmental Protection Procedures

As part of advancing the VGM, Equinox will be investigating several potential quarry sites that exist within the footprints of future mine infrastructure (e.g., the Leprechaun waste rock pile area) in order to minimize environmental impacts overall. Any potential quarry sources will be sampled, and geochemical testing completed as part of this investigation and prior to use in earthworks. Potentially acid generating (PAG) rock will be managed in accordance with the Acid Rock Drainage/Metal Leaching (ARD/ML) Management Plan and will not be used in construction and operations (Section 4.9, Rock and Soils Management Plan).

In addition, the following procedures shall be implemented with respect to borrow areas and quarries:

a) Existing borrow pits or quarries will be used wherever feasible. New borrow pits and quarries will not be located within established buffer zones.

b) Drainage water from borrow pits and quarries will be diverted through vegetated areas or existing drainage ditches or means of sediment control will be employed prior to entering a water body.

c) Garbage, debris or refuse will not be discarded in borrow pits and quarries.

d) Organic material, topsoil and subsoil within borrow pits and quarries will be stripped and stockpiled for use in future rehabilitation.

e) Vegetated buffer areas will be left in place when borrow pits are cleared in accordance with provincial guidelines.

f) Construction materials (soil and rock) will be sourced locally, when possible, which will reduce the probability of importing or spreading potentially invasive plant species.

g) Although new third-party borrow pits and quarries are not anticipated, if required these will be designed, constructed and operated in compliance with provincial legislation and guidelines. This may require registration of the pit or quarry as an undertaking in accordance with the *Environmental Protection Act* and Environmental Assessment Regulations, 2003.

h) All existing or anticipated borrow pits or quarries associated with the Project will adhere to applicable CPEEMP mitigations (e.g. shutdown activities if caribou are observed within 1km).

4.6 CLEARING

Potential Environmental Concerns

Vegetation clearing (e.g., trees, shrubs) will be required prior to earthworks, site development, and infrastructure construction. Potential concerns include loss of habitat, stockpiling vegetation in or near watercourses and wildlife disturbance.

Environmental Protection Procedures

The following procedures shall be implemented with respect to clearing:

a) Equinox will consult with NLDFAL – Forestry Division in advance of construction to incorporate the harvesting of forestry resources in the Project Area as part of site preparation.

b) All sites where surface disturbances are planned or may occur will be inspected and monitored prior to, during, and after the work as described in Section 3.2, Environmental Monitoring.

c) The boundaries of areas to be cleared will be well marked prior to the start of clearing activities.

d) Sensitive areas (e.g., wetlands, hibernacula, mineral licks, roosts, caribou migration corridors) will be identified prior to construction and appropriate buffers (Section 4.2, Buffer Zones) will be flagged and maintained around these areas, where feasible.

e) Clearing and removal of trees will be kept to a minimum. Vegetation will be removed from development areas in accordance with cutting permits.

f) Vegetation will be maintained around high activity areas to the extent practicable, to act as a buffer to reduce sensory (light and noise) disturbance.

g) Clearing for road construction will be limited to the width required for road embankment, drainage requirements, and safe line of sight requirements.

h) Trees will be cut close to ground level, only large tree stumps will be removed, and low ground shrubs left in place for soil stability and erosion protection purposes, where practicable.

i) Clearing will consist of cutting to within 15 cm of the ground or as dictated by permits and removing all standing trees, as well as removing all shrubs, debris and other vegetation from the area indicated on construction and operation drawings. These materials will be stacked clear of on-going construction and operation activities for future rehabilitation. The Environmental Protection Guidelines for Ecologically Based Forest Resource Management (DFRA 1998) will be followed.

j) Merchantable timber (i.e., trees having an outside bark diameter of 9.0 centimetres or greater at a point 1.3 metres above mean ground level) and usable trees will be salvaged for pulpwood or lumber or made available to local communities for fuelwood.

k) There will be no burning of any materials (e.g., slash, cuttings) on site.

l) Slash and any other material or debris related to construction and operation activities will not be permitted to enter a watercourse and, when stacked or piled on the ground, will be above spring flood levels.

m) Chainsaws and other handheld equipment will be used in clearing vegetation except where alternative methods or equipment such as mechanical harvesters are approved by Equinox and applicable permits. The use of mechanical clearing methods, such as excavators, will not be permitted except where it can be demonstrated that there is no merchantable timber (or all merchantable trees have been removed), and where the resulting terrain disturbance and erosion will not result in the loss of topsoil or the sedimentation of nearby waterbodies. Any refueling of equipment will adhere to the procedures described in Section 4.17, Storage, Handling and Transfer of Fuel and other Hazardous Materials.

n) A minimum 15-metre (m) buffer zone of undisturbed vegetation will be maintained between the development area and all waterbodies (Section 4.2, Buffer Zones) (aside from waterbodies planned to be affected as part of the approved Project).

o) Timber shall be felled inward (toward the work area) to avoid damaging any standing trees within the immediate work area and vegetation adjacent to the work area.

p) Workers will not destroy or disturb any features indicative of a cultural or archaeological site. Such features should be avoided until a report has been made to the Provincial Archaeology Office and clearance to proceed has been received. Refer to Section 5.1 Historic Resources for avoidance and mitigation measures related to cultural and archaeological resources.

q) Where feasible, vegetation clearing will avoid the bird breeding season. Refer to Section 5.3, Avifauna Management Plan for avoidance and mitigation measures related to birds.

r) The disturbance of wetlands will be avoided outside the work area. If required to cross or disturb wetlands appropriate permits/approvals will be in place.

4.7 GRUBBING

Potential Environmental Concerns

Concerns associated with grubbing and disposal of related debris include potential adverse effects on freshwater ecosystems and water quality through the release of sediment into watercourses, as well as the potential for disturbing historic resources.

Environmental Protection Procedures

The following procedures shall be implemented with respect to grubbing:

a) Grubbing of the organic vegetation mat and/or the upper soil horizons will be restricted to the minimum area required.

b) Grubbing will avoid the bird breeding season, where feasible. Refer to Section 5.3, Avifauna Management Plan for avoidance and mitigation measures related to birds.

c) If grubbing or disposal of debris is to occur within 15 m of a waterbody, a permit will be obtained.

d) When working in or near wetlands, ground level cutting / mowing / mulching of wetland vegetation will be conducted instead of grubbing, where practicable.

e) Any surplus of such material will be stored or stockpiled for site rehabilitation and revegetation purposes. Topsoil and organics should be stored in low (1 to 2 m high) stable piles (Gosse et al. 1998). The location of the stockpiles will be recorded and accessible for rehabilitation purposes.

f) Measures will be implemented to reduce and control runoff of sediment-laden water during grubbing, and the re-spreading and stockpiling of grubbed materials. Where grubbed materials are re-spread or stockpiled, as many stumps and roots as possible will be left on the ground surface to maintain soil cohesion, dissipate the energy of runoff and promote natural revegetation. Erosion control measures will be implemented in areas prone to soil loss (Section 4.10, Erosion and Sediment Control).

g) The period of time that inactive grubbed areas will be left exposed to the natural elements will be minimized to prevent unnecessary erosion. Mitigations, such as the placement and maintenance of silt curtains, will be used to prevent erosion from exposed areas.

h) Grubbing activities will adhere to the buffer zone requirements outlined in Section 4.2, Buffer Zones.

i) Monitoring water quality in run-off may be required by NLDECCC - Pollution Prevention Division to confirm no adverse effects on the receiving environment.

j) Discovery of historic resources will be managed according to the procedures outlined in Section 6.6, Discovery of Historic Resources.

4.8 TRENCHING AND EXCAVATION

Potential Environmental Concerns

Potential environmental concerns related to trenching and excavation are primarily related to potential runoff of sediment-laden water which could result in effects on freshwater fish and fish habitat, and water quality.

Environmental Protection Procedures

The following procedures shall be implemented with respect to trenching:

a) Topsoil and excavated overburden and bedrock will be managed in accordance with Caliber's Development Plan (see also Section 4.9, Rock and Soils Management) and stored in separate stockpiles for later use during rehabilitation, as outlined in Equinox's Rehabilitation and Closure Plan.

b) Material unsuitable for future rehabilitation will be disposed of in an approved area.

c) Effluent from dewatering of trenches will be managed in accordance with the Water Management Plan (see also Section 4.15, Site Water Management).

4.9 ROCK AND SOILS MANAGEMENT

Potential Environmental Issues

Construction of earthworks will include excavation of unsuitable materials (e.g., organic and/or loose soils), preparation of excavation bases, and placement of fill materials (e.g., rockfill, overburden (glacial till)) to develop the access and haul roads, building and stockpile pads, water management infrastructure, tank containment berms, and associated site infrastructure. Unproperly managed, earthworks construction can result in erosion and sedimentation, dust emissions, terrain instability, and degradation of soil quality. Through proper construction and operation planning and rock and soils management, earthworks can be optimized across the site to reduce excavation and rehandling and maximize the reuse of materials. In addition, a mass balance estimate and plan for all rock and soil materials that will be excavated and handled over the life of mine has been completed and will be updated as appropriate.

Environmental Protection Procedures

The following procedures shall be implemented with respect to the use of soil and waste rock for earthworks:

a) Potentially acid generating (PAG) material generated from Project components and activities will be managed in accordance with the Acid Rock Drainage/Metal Leaching (ARD/ML) Management Plan.

b) PAG will not be used in construction and operations. All rock that will be used for site earthworks and grading during construction and operational development will be subject to appropriate sampling and ARD/ML test work prior to excavation and use, in accordance with the measures outlined in the ARD/ML Management Plan.

c) Construction and operation materials (soils and rock) will be sourced locally, when possible, which will reduce the probability of import or further spread of potentially invasive plant species.

d) No waste rock will be placed in fish-bearing water.

The following procedures shall be implemented with respect to the handling of overburden / soils and associated stockpiles:

a) During excavation, organic and mineral topsoil will be separated from cleared trees and brush and stored for future use during rehabilitation.

b) Care will be taken to reduce topsoil and subsoil mixing during excavation.

c) Soil salvage will occur during appropriate weather conditions (avoiding high winds, dry conditions, and high precipitation events) as practicable.

d) Appropriate machinery will be used for salvage to avoid compaction.

e) Organic and mineral topsoil will be stored and kept separate from subsoil or rock material used for construction and operations.

f) Soil stockpiles will be easily accessible, on well-drained ground, and away from bodies of water (minimum of 30 m) and standing timber. A working space of at least 5 m will be maintained around soil stockpiles.

g) Topsoil and organics will be stored in stable piles to decrease compaction effects.

h) Soil stockpiles will be constructed and maintained in lifts to achieve flatter slopes and to permit terracing, thereby reducing erosion and maintaining moisture within the topsoil. This structure and composition will make the stockpiles less attractive to bank swallows, which are known to construct nesting burrows in soil stockpiles that have steep faces and light soils amenable to burrowing. particularly during the breeding season. In addition, if soil has been removed from a stockpile during the bird breeding season, resulting in a vertical or near-vertical face, the vertical face will be knocked down with an excavator to make it unattractive to swallows.

i) Longer term stockpiles will be seeded to reduce erosion due to wind and precipitation.

j) Sediment control fences will be installed in areas where topsoil is exposed to potential erosion and siltation, such as slopes and embankments and approaches to stream crossings or waterbodies. Sediment control fences will be inspected and maintained over the course of the construction and operation phases until the disturbed area has stabilized and natural revegetation has occurred. Non-biodegradable materials used for sediment control fences will be removed following revegetation.

k) Native seed mix (free of non-native, invasive, and weed species) and native species (where available) will be used as erosion control on exposed soils and overburden stockpiles during site rehabilitation. If a native seed mix is not commercially available, an appropriate seed mix will be selected based on an evaluation of included species. Seed mixes that include invasive species or non-native species that are not already widely established in the areas around the Project Area will not be used for the Project.

4.10 EROSION AND SEDIMENT CONTROL PLAN

Potential Environmental Concerns

Eroded material could potentially cause siltation in water bodies, adversely affecting habitat for aquatic and terrestrial animals. The prevention of erosion and control of sedimentation is a main objective in all work areas where soil may be transported by water, wind or ice.

Environmental Protection Procedures

A site-specific Water Management Plan has been developed for Project construction and operations. The Water Management Plan provides detail on runoff and seepage collection strategies and systems (e.g., sedimentation ponds, berms, drainage ditches, pumps) to collect and contain surface water runoff and groundwater discharge from major Project components (open pit, waste rock piles, TMF, ore stockpile and overburden stockpiles, process plant) during climate normal and extreme weather conditions.

This section of the EPP outlines general measures to be implemented with respect to erosion and sediment control during construction and operations. The Water Management Plan will be updated as Project planning and design progresses and should be consulted for additional details.

Erosion Control

Avoiding activities that may contribute to erosion is the primary mechanism for erosion control. The following measures will be implemented to control erosion during construction and operations:

a) The disturbance of new areas will be limited to the minimum required.

b) Erosion prevention and drainage control measures will be installed or implemented prior to land disturbance.

c) Construction and operation areas will be routinely monitored to identify areas of potential erosion and to apply appropriate mitigation. Progressive erosion and sediment control measures will be implemented, as required.

d) Erosion control options will be considered as appropriate to improve soil stability and reduce surface water runoff. Erosion control options may include:

   i. **Slope treatments** – involves roughening slopes (e.g., step-grading, grooving, tracking) to improve stability and increase seeding success and vegetation growth thereby reducing runoff velocity and increasing infiltration.

   ii. **Erosion control nets/mats/blankets/fibrous rolls** - typically used on short steep slopes where there is high erosion potential and slow vegetation establishment.

   iii. **Rip-rap** - placement of rocks as an erosion -resistant ground cover; typically used on riverbanks and/or bottoms, roadside ditches and tops of slopes.

iv. **Check dams and dikes** - temporary barriers typically constructed of rocks, gravel bags, sandbags or fibre rolls that are installed across a constructed swale or drainage ditch to reduce water velocity.

v. **Energy dissipators** - devices typically made of rocks, concrete blocks or metal prongs that are installed on the downstream end of a culvert or outlet and are used to reduce scour and the velocity of the water flow.

e) Drainage ditches will be stabilized if required (e.g., lining with vegetation or rock, terracing, interceptor swales, installation of rock check dams) to reduce soil erosion. Such measures will be properly inspected and maintained following installation.

f) Work and laydown and storage areas will be monitored for erosion and appropriate remedial actions taken as necessary.

g) Erosion control measures will be inspected regularly (once per week) by the onsite environmental staff, and after a significant storm.

h) Erosion control measures will be maintained in good working order. If a repair is necessary, it will be initiated within 24 hours.

Sedimentation Prevention

Sediment barriers are temporary sediment control devices that are used to protect water quality of downgradient rivers, streams and other waterbodies from sediment in water runoff. The most common barriers are silt fences; however other options include straw bales or berms of erosion control mix. Silt fences are typically used in combination with other site water control measures, including sediment traps and basins. Engineering requirements may vary depending on the locations of sediment barriers and shall take such factors into consideration as drainage/surface area of exposed soils and time of year the device is employed.

The following measures will be implemented to help prevent sedimentation:

a) If an inspection reveals that silt is entering any waterbody, further mitigative measures will be implemented, such as temporary drainage ditches, siltation control (settling) ponds, ditch blocks/check dams or sediment dam traps, to intercept run-off. The necessary or appropriate measures will be determined in the field.

b) Where bales are used for sediment control, these must consist of straw and not hay (i.e., with grain seeds) to avoid introducing potentially invasive species.

c) Existing or new siltation control structures used will be monitored for excessive accumulation of sediment. To maintain effectiveness, accumulated sediment will be removed from control structures when the accumulated sediment reaches 60% of the height/depth of the siltation control structure, or no less than once per month during active accumulation. Effluent from control structures will be released to flow overland for appropriate filtration prior to entering waterbodies.

4.11 BLASTING

Potential Environmental Concerns

Potential environmental concerns associated with blasting include destruction of vegetation; noise disturbance to humans and wildlife; disturbance of archaeological resources; release of chemicals to the environment (explosive mixtures and products); effects on groundwater and surface water flows; and dust generation. Blasting in or near waterbodies can affect fish and other aquatic organisms and introduce sediment into the water column resulting in degradation of surface water quality and effects on aquatic life.

Environmental Protection Procedures

The following procedures shall be implemented with respect to blasting:

a) The explosives storage and production facilities will meet government regulations, including required separation distances as regulated by the Explosives Regulatory Division of Natural Resources Canada (NRCAN). Explosives and accessories will be stored at the planned storage facility, to be approved and permitted by NRCAN.

b) Best practices from Blaster's Handbook (ISEE 2016) and Environmental Code of Practice for Metal Mines (Environment Canada 2009) will be followed to reduce and monitor noise emissions during blasting.

c) Blasting for site development will be conducted by a certified blasting contractor who will develop a conservative Blast Design for engineering review and approval prior to carrying out the work. The Blast Design will be required to meet strict seismic (vibrational) limits at appropriate distances from any existing structures (Victoria Dam), developing infrastructure, and fish habitat.

d) An Explosives and Blasting Management Plan will be developed by the selected licensed blasting contractor and will include direction for the safe storage, handling and use of explosives and explosive components at the Project site, to address the safety of the public and Project personnel, and protection of the environment, Project components and the Victoria Dam. The Explosives and Blasting Management Plan will include requirements for Blast Design vibration limits and seismic monitoring for blasting activities.

e) Blasting activities will be included under a contract service agreement with the explosives' supplier and/or blasting contractor, who will have a valid blasters certificate issued by the NLDECCC.

f) Blasting activities during construction and operations will be limited to only those areas required to achieve foundation grades for site development or open pit pioneering.

g) Equinox will engage with NL Hydro regarding blasting requirements, timing, vibration thresholds and monitoring.

h) Use of explosives in or near water will be avoided; however, if required, Fisheries and Oceans Canada (DFO) blasting guidelines (Wright and Hopky 1998) will be followed.

i) During bird breeding season (April 15 to August 15), blasting will occur outside of the prominent bird singing/calling and activity period (i.e., sunrise to approximately 9:30 am).

j) Visual and/or drone surveys for wildlife will be undertaken prior to blasting, and the search zone will be 1 km from the associated open pit. Blasting will be delayed up to 24 hours if wildlife are observed within 1 km. If after 24 hours, wildlife remain within 500 m to 1 km, planned blasting may be needed to avoid human health and safety concerns. Wildlife response to blasting will be observed for reaction and response.

4.12 WORKING IN OR NEAR WATER

Potential Environmental Concerns

The Mapbook of Environmental Sensitivities (Appendix E) shows planned watercourse crossings. Potential environmental concerns associated with watercourse crossings and culvert installations include potential direct disturbances to and/or mortality of fish, and potential loss of fish habitat resulting from sedimentation and removal of habitat and stream bank vegetation.

Potential environmental concerns related to water withdrawal include potential entrainment of fish and detrimental effects to the habitat in and around the potentially affected waterbody.

Environmental Protection Procedures

Work below the high-water mark of any surface water feature will be conducted as per provincial and federal approvals. Stream crossings will be constructed in compliance with the required Permit to Alter a Body of Water, for culvert installations from NLDECCC- Water Resources Management Division (WRMD) and any approvals required from DFO. Fording will be conducted in accordance with the conditions of a fording permit obtained from NLDECCC -WRMD.

An evaluation of soil erosion potential will be conducted at each of the stream crossings. This assessment of potential erosion risk will assist in the development of specific erosion stabilization methods and effective sedimentation control practices on a site-specific basis.

Work near watercourses will observe the applicable buffer zones as outlined in Section 4.2, Buffer Zones. The following procedures shall be implemented with respect to in-water work in fish bearing waterbodies and watercourses:

a) In-water work will be planned to respect DFO timing windows to protect fish in NL (Section 4.1, Sensitive Timing Windows).

b) Between October 1 and May 31 (sensitive fish life stages) or other times specific to the region, stream crossing during construction and operation activities will be undertaken under the direct supervision of the Environmental Superintendent/ Environmental Coordinator or designate. Consultation and approval by DFO are required prior to conducting in-water work between October 1 and May 31.

c) Weather advisories will be followed, and work will be scheduled to avoid high precipitation and runoff events or periods that may result in high flow volumes and/or increase erosion and sedimentation.

d) Use of explosives in or near water will be avoided; however, if required, will follow DFO blasting guidelines (see Section 4.11, Blasting).

e) Materials (i.e., organic waste material, waste rock or construction debris) will be placed above the high-water mark, free of fines and stabilized or contained to prevent entry into watercourses and waterbodies.

f) Deleterious substances will not be permitted to enter watercourses and waterbodies, including, but not limited to, materials such as sediment, waste materials and fuel.

g) The duration of in-water works will be minimized so that it does not diminish the ability of fish to carry out one or more of their life processes (spawning, rearing, feeding, migrating). In-water worksites will be isolated from flowing water (i.e., by using a cofferdam) to contain or reduce suspended sediment where possible.

h) Siting of Project infrastructure is designed to avoid fish habitat to the extent practicable. Where in-water work is required in fish habitat, applicable authorizations/permits through NLDECCC and DFO will be in place prior to initiating construction. The following measures will also be implemented:

   i. Best efforts will be made by a qualified environmental professional (fish biologist or fisheries technician) to relocate fish from areas of in-water works or areas of water drawn down to an appropriate location in the same watershed, as described in the fish rescue plan

   ii. Any unanticipated anomalies/ unforeseen circumstances (i.e., fish mortalities) during construction and operations will be reported to NLFAA

   iii. the use of heavy equipment will be reduced and restricted in and near watercourses and, where possible, machinery will be operated above the high-water mark or inside of isolated areas, and an excavator will be used from shore rather than a bulldozer in the watercourse; where it is absolutely necessary to do so, instream work will be performed by rubber tired vehicles only (Gosse et al. 1998) and will only be done with prior notification and approval of Equinox's Environmental Superintendent/ Environmental Coordinator, in consultation with applicable regulatory agencies

   iv. unless otherwise indicated, work will take place in dry conditions, either by using cofferdams or by diverting the stream

   v. as required, cofferdams made of clean, low permeability and non-erodible material shall be used to separate work areas from the watercourse when excavating for culverts and footings

   vi. Cofferdams shall be removed upon completion of construction and the streamed returned as closely as possible to its original condition

i) The culverts will be constructed according to all permit specifications and in accordance with the Environmental Guidelines for Culverts from the NLDECCC. The following measures will also be implemented:

   i. culvert(s) will be installed in accordance with good engineering and environmental practices

ii. installation of cylindrical culverts shall be counter sunk where necessary to protect fish habitat such that the culvert bottom is one-third the diameter below the streambed in the case of culverts less than 750 (mm) outside the diameter; for culverts greater than 750 mm outside diameter, the culvert bottom shall be installed a minimum of 300 mm below the streambed
   - maintain an appropriate depth and flow for the protection of fish and fish habitat (i.e., passage)
   - maintain a minimum water depth of 200 mm should be provided throughout the culvert length
   - culverts up to 2000 mm in diameter should be countersunk at a depth of 300 mm below the streambed elevation
   - culverts having a diameter equal to, or exceeding 2000 mm should be countersunk a minimum of 15% of the diameter below the streambed elevation

iii. in multiple (gang) culvert installations, one culvert will be installed at an elevation lower than the adjacent culvert

iv. the natural low flow regime of the watercourse will not be altered

v. a culvert will not be installed before site specific information such as localized stream gradient, fish habitat type and species present have been evaluated; culverts will be installed using the guidelines provided in Gosse et al. (1998)

vi. fish passage will be maintained during construction

vii. new culverts will be sized appropriately and designed to be passable to fish to maintain fish passage

viii. outlets and inlets will be riprapped to prevent erosion of fill slopes

ix. culverts will be of sufficient length to extend a short distance beyond the toe of the fill material

x. backfilling material will be a texture that shall support the culvert and limit seepage and subsequent washing out

xi. culverts will be aligned such that the original direction of stream flow is not significantly altered

xii. fill and construction related debris will be removed from the culvert area to a location above the peak flow level to prevent its entry into the stream

xiii. fill material shall not be removed from streambeds or banks, except if necessary for the foundation when installing a culvert

xiv. culverts will be marked to indicate their position under the snow

j) Follow measures to protect fish and fish habitat outlined in Section 3 of the Temporary Cofferdams and Diversion Channels Code of Practice https://www.dfo-mpo.gc.ca/pnw-ppe/codes/cofferdams-batardeaux-eng.html.

   i. cofferdams using sandbags should; contain clean, sediment-free materials as fill, and all bags and materials removed when work is completed; be of sufficient height to prevent overtopping in the event of sudden increase in water levels; sediment-laden water from the work area inside the cofferdam should be treated by discharging to vegetated areas or sediment traps prior to release in waterbody; care should be taken to seal leaks in cofferdams, and if necessary, damaged sandbags replaced; and when removing cofferdams, the downstream cofferdam should be removed first, followed by the upstream cofferdam;

k) Limit impacts on riparian vegetation to those approved for the work, undertaking or activity:

   i. limit access to banks or areas adjacent to waterbodies;

   ii. limit grubbing on watercourse banks to the area required for the footprint of works, undertaking or activity;

   iii. construct access points and approaches perpendicular to the watercourse or waterbody;

   iv. re-vegetate the disturbed area with native species suitable for the site;

l) Watch for Aquatic Invasive Species (AIS) species in the area and take precautions with respect to any equipment and gear used between affected and unaffected areas to prevent introductions and spread

   i. all equipment used in water should be cleaned, drained and dried on land before and after use for the purposes of preventing the introduction or spread of aquatic invasive/non-indigenous species;

   ii. any AIS and non-indigenous species will be reported to DFO at 1-855-862-1815 or DFO.NLAIS-EAETNL.MPO@dfo-mpo.gc.ca.

m) Avoiding fording as much as possible, however, when fording any watercourse, the NLDECCC Environmental Guidelines and any applicable permits will be adhered to, along with the following:

   i. areas of spawning habitat will be avoided

   ii. crossings shall be restricted to a single location and made at right angles to the watercourse

   iii. equipment activity within the watercourse shall be reduced by limiting the number of crossings

   iv. all equipment will be mechanically sound and inspected prior to each use to avoid leaks of oil, gasoline and hydraulic fluids

   v. no servicing or washing of heavy equipment will occur adjacent to watercourses; temporary fueling, servicing or washing of equipment in areas other than the main fuel storage site will not be allowed within 100 m of a watercourse

   vi. the entire fording area will be stabilized using vegetation mats, corduroy roads, or coarse material (125 mm diameter or greater), when the ford area is not natural bedrock, or i/ Environmentaled by fording; when the substrate of the ford area is not subject to easy disturbance by fording, or coarse material is not easily available within the lease boundaries, fording under existing

substrate conditions may occur under the direction of the Environmental Superintendent/ Environmental Coordinator

vii. fording activities will not decrease the depth of the watercourses to less than 20 cm; where the existing depth is less than 20 cm, that depth shall be maintained

viii. fording activities will be halted during seasonal or precipitation related high flow periods

ix. all bank sections which contain loose or erodible materials will be stabilized; if banks must be sloped for stabilization, no material shall be deposited within the watercourse; sloping shall be accomplished by back-blading and the material removed shall be deposited above the high-water mark of the watercourse

The following procedures shall be implemented with respect to water withdrawal:

a) A Water Use License will be obtained prior to water withdrawal.

b) Appropriately sized fish screens and/or other barriers will be installed and maintained to prevent fish from entering water withdrawal intakes.

c) Withdrawal pumps will be placed in secondary containment in the event of equipment malfunction or fuel spillage during refueling.

4.13 WORKING IN OR NEAR WETLANDS

Potential Environmental Concerns

Wetlands are defined in the federal and provincial policies as land such as bogs, fens, marshes, swamps, and shallow waters that are permanently or temporarily submerged or saturated by water near the soil surface, for long enough that the area maintains aquatic processes (Government of Canada 1991; NLMAE 2001). Wetlands provide important ecological and hydrological functions essential to maintaining the health of natural ecosystems, including the provision of habitat for fish and wildlife. The Newfoundland and Labrador Policy for Development in Wetlands (NLMAE 2001) describes developments that are not permitted within wetlands and defines activities that require permitting under section 48 of the *Water Resources Act*.

Project construction and operations will result in direct disturbance, alteration and/or loss of wetland habitat through direct disturbance (e.g., infilling, sedimentation), changes in vegetation (clearing, potential introduction of invasive/non-native species) and changes in hydrology.

Environmental Protection Procedures

The following procedures shall be implemented with respect to working in or near wetlands:

a) A permit will be obtained under Section 48 of the *Water Resources Act* prior to wetland development.

b) Where crossing of wetlands beyond the area to be cleared is unavoidable, protective layers such as matting or biodegradable geotextile and clay ramps or other approved materials will be used between wetland root / seed bed and construction and operations equipment if ground conditions are encountered that create potential for rutting, admixing or compaction.

c) Grading will be directed away from wetlands, where possible, and will be reduced within wetland boundaries unless required for site specific purposes.

d) Ground level cutting / mowing / mulching of wetland vegetation will be conducted instead of grubbing, where practicable.

e) Quarried, crushed material will be used for road building in and near wetlands, to reduce the risk of introducing or spreading non-native and/or invasive vascular plant species.

f) As waterfowl species are particularly sensitive to disturbance during critical breeding and brood-raising periods (from April 15 to July 31), personnel will be made aware of the importance of the surrounding wetlands to waterfowl and efforts will be made to reduce potential impacts on them during Project activities, such as adherence to wetland buffers (30 m for construction and operation activities, 100 m when active nesting).

4.14 BOREHOLE AND WATER WELL DRILLING

Potential Environmental Concerns

Potential environmental concerns with drilling relate to possible effects from surface disturbances, disposal of drill fluids and cuttings, siltation, generation of dust and noise. These could have potential adverse effects on terrestrial habitats, air quality, aquatic ecosystems and historic resources.

Environmental Protection Procedures

The following procedures shall be implemented with respect to borehole and water well drilling:

a) Drilling of water wells will be conducted in compliance with the *Water Resources Act* and *Well Drilling Regulations*.

b) Completed exploration drill holes will retain casing and remain open for future probing. If a completed drill hole is producing water, it will be temporarily capped or indefinitely sealed with appropriate material to allow for any necessary future downhole testing. When all test work on the holes has been completed, then the casing will be removed.

c) Potential drilling sites in sensitive areas will be inspected prior to drill site preparation by the Environmental Superintendent/ Environmental Coordinator or designate.

d) Vegetation will be cleared following the procedures detailed in Section 4.6, Clearing.

e) Water applications will be used to control dust where necessary. The use of water for dust control or lubrication during drilling will be undertaken in such a manner that runoff will not enter watercourses.

f) A Water Use License will be obtained prior to water withdrawal from a water well.

g) Water used will remain on the drill site. Every effort will be made to prevent turbid water from entering water courses.

h) Cuttings from drill activities will not be removed from the site; they will remain in the immediate location of drilling activities, while taking required buffer zones into consideration.

i) Drilling equipment will have muffled exhaust to reduced generated noise.

j) Fuel will be stored, handled and transported according to Section 4.17, Storage, Handling and Transfer of Fuel and Other Hazardous Materials.

k) Waste oil will be removed from the drill site and properly disposed of according to Section 4.17, Storage, Handling and Transfer of Fuel and Other Hazardous Materials.

l) Garbage and solid waste will be removed from the drill site and deposited in an approved waste disposal area.

m) Drip pans will be placed underneath drilling equipment.

n) Hoses and connections to equipment will be inspected routinely for leaks and drips.

o) Due to the nature of drilling activities, oil drops and leaks may occur, and every attempt will be made to clean up the area. Rigs will be equipped with oil absorbent material in case of a leak or spill, and

spill kits will be kept available in case of a hydrocarbon spill (see also Section 6.1, Fuel and Hazardous Materials Spills). Any spill will be reported immediately to the Environmental Superintendent and/or Environmental Coordinator.

4.15 SITE WATER MANAGEMENT

Potential Environmental Concerns

Surface water is an integral part of the local environment, providing habitat for fish, vegetation and aquatic populations, and contributing to local socio-economic drivers. Uncontrolled surface water runoff and seepage can lead to effects on water quality, potential siltation of wetlands and water bodies, direct fish mortality and/or habitat destruction for freshwater species.

Environmental Protection Procedures

The Water Management Plan includes details for site-specific engineering design measures to manage surface water. The Water Management Plan will also include details on effluent monitoring requirements and how the real-time water quality monitoring network is used for monitoring water quality, water level and climate as an early warning system in addition, the following procedures shall be implemented with respect to site water management.

Water Inventory

To reduce the site water inventory, non-contact water will be diverted away from developed areas, where possible, through construction of diversion berms, dams, channels or grading. Measures to keep clean water clean and reduce water inventory include the following:

a) Perimeter pile ditching will have a continuous berm to divert non-contact or natural precipitation and surface runoff away from contact with mining operations, where practicable.

b) Diversion channels and dams/berms will be constructed around the crest of the open pits.

c) Pre-development drainage patterns will be maintained where possible.

d) Where possible, contact water will be recycled for use on site (e.g., dust suppression).

Scour and Erosion Management

Scour and erosion risks will be managed through the following measures:

a) The topsoil and overburden piles will be vegetated once formed to reduce erosional runoff.

b) Progressive rehabilitation of piles will be conducted to reduce the time water is in contact with the pile and, thereby, the amount of sediment laden runoff.

c) Areas draining into ditching will be stabilized through grading, silt fencing, toe berms, riprap and/or vegetation.

d) Contact water collection ditches will be installed around the overburden stockpiles, ore stockpiles, waste rock piles, plant pad, explosives area, and accommodation camp to collect surface runoff and toe seepage and convey downgradient water management ponds for treatment and flood attenuation.

e) Energy dissipation ponds and/or rock check dams will be constructed in ditching to reduce the scour and erosion potential in high gradient areas and promote sedimentation.

f) Snow/ice blockages will be cleared from ditches and culverts prior to the spring thaw, as necessary and practicable, to maintain ability to convey surface runoff.

g) Pond inlet and outlet structures will be configured to reduce inlet velocity and scour, and to meet sedimentation requirements. Pond outlets will be designed with subsurface inlets to mitigate against chemical stratification in ponds, thermal heating of discharge, and ice blockage of outlets.

h) Contact water management ponds are designed to provide onsite storage of local runoff with the size and residence times designed to provide sediment removal to meet the *Metal and Diamond Mining Effluent Regulations* (MDMER) effluent total suspended solids criterion of 15 mg/L (monthly mean concentration limit), with removal of particles down to 5 micron (µ) in size for up to the 1:10 annual exceedance probability (AEP) flows.

i) Sedimentation or filtration measures will be implemented to site runoff or pumped discharge, including sedimentation ponds, filtration bags, silt fences and dykes to meet applicable water quality requirements

Flood Attenuation

Project water storage features (i.e., water management ponds) will be used to attenuate peak discharges to the environment and will be designed as per the following:

a) Water management ponds are designed to contain (without discharge) runoff resulting from storm events up to the 1:100-year AEP with spring snowmelt event and maintain minimum freeboard of 0.5 m above the emergency spillway. The emergency spillways will accommodate flows up to the 1:200 AEP flow to prevent overtopping during a flood event higher than the 1:100-year AEP storm.

b) Contact water collection ditches will be designed to convey the 1:100-year storm event, and with positive gradients to limit standing water and maintain positive flow.

Roadway Drainage

a) Existing drainage patterns will be maintained to the extent feasible with the use of grading, culverts and bridges.

b) Existing culverts along the site access road will be maintained or upgraded as necessary. This will include placement of culverts of the same size/length or larger/longer, at the same inlet and outlet elevations, and in a manner to not cause flooding or ice jams.

c) Standard construction methods, such as seepage cutoff collars, will be used where trenches extend below the water table to mitigate preferential flow paths.

d) Culverts will be inspected periodically to remove accumulated material and debris upstream and downstream of the culverts.

Monitoring

a) Monitoring of site run-off will be conducted as per regulatory requirements following effluent quality standards.

b) If monitoring indicates exceedances of regulated water quality standards, additional sedimentation control measures will be deployed as soon as reasonably practicable, and protocols developed in consultation with applicable regulatory agencies.

4.16 EQUIPMENT USE AND MAINTENANCE (INCLUDING GENERATORS)

Potential Environmental Concerns

A variety of vehicles and equipment, including drill rigs, pumps and generators, will be used during construction and operation activities. Potential environmental concerns associated with operating and using such equipment include air emissions, accidental spills, and hydrocarbon leaks that could contaminate on-site waterbodies. Soil and vegetative debris on equipment brought to the site could introduce non-native and/or invasive plant species, adversely affecting wetlands and plant communities.

Environmental Protection Procedures

The following procedures shall be implemented with respect to equipment use and maintenance:

a) To reduce the risk of introducing or spreading non-native and/or invasive vascular plant species, equipment will arrive at the Project site clean and free of soil and vegetative debris. Equipment will be inspected by Equinox personnel or designate and, if deemed to be in appropriate condition, will be approved for use. Equipment that does not arrive at the Project site in appropriate condition will not be allowed on the construction and operations footprint until it has been cleaned, reinspected and deemed suitable for use.

b) Equipment maintenance and fueling activities will be performed at sites designated by the Site Manager, in agreement with the Environmental Superintendent and/or Environmental Coordinator and in compliance with applicable regulations.

c) Drip pans will be placed underneath pumps, fuel storage, generators, and other equipment that could leak or spill fuel, oil or other hazardous materials.

d) Hoses and connections to equipment will be inspected routinely for leaks and drips.

e) Only minor repairs and maintenance (e.g., lubrication) of ‘non-mobile’ equipment will be performed on-site. All major repairs are to be performed at a location outside of the Project Area, where possible, until such time as the onsite maintenance facility is operational.

f) All fuel/oil leaks will be repaired and reported immediately to Equinox’s Environmental Superintendent / Environmental Coordinator.

g) All fuel and other hazardous materials will be handled according to the procedures in Section 4.17, Storage, Handling and Transfer of Fuel and Other Hazardous Materials.

h) Waste oil will be removed and properly disposed of according to Section 4.17, Storage, Handling and Transfer of Fuel and Other Hazardous Materials.

i) In addition to spill kits located at fuel storage tanks, spill kits will be located at designated central storage location(s). Personnel who handle fueling, fuel transfer and pumps and generators will be trained in the use of the spill kits.

j) Engines and exhaust systems of construction and operations equipment will be subject to a comprehensive equipment preventative maintenance program to maintain fuel efficiency and performance.

k) To reduce emissions, equipment and vehicle idling times and cold starts will be reduced to the extent practicable.

l) Vehicles and heavy equipment will be maintained in good working order and will be equipped with appropriate noise-reducing mufflers.

4.17 STORAGE, HANDLING AND TRANSFER OF FUEL AND OTHER HAZARDOUS MATERIALS

Typical hazardous substances that may be used on site include, but are not limited to:

- Petroleum, oil and lubricants
- Chlorinated and non-chlorinated solvents (e.g., cleaners, degreasers)
- Flammable gases (e.g., acetylene)
- Waste petroleum products (e.g., used engine oil)
- Oily water (from oily water separator)
- Corrosives (e.g., battery acid)
- Glycol (e.g., antifreeze, waste glycol)

Potential Environmental Concerns

Potential environmental concerns with using hazardous substances relate primarily to a potential uncontrolled release to the environment through spillage, and subsequent adverse effects on terrestrial and aquatic habitat and species, soil, groundwater quality, and human health and safety.

Environmental Protection Procedures

The following procedures shall be implemented with respect to the storage, handling and transfer of fuel and other hazardous materials:

a) The *Workplace Hazardous Materials Information System (WHMIS) Regulations* under the *Occupational Health and Safety Act* apply to all handling and storage of hazardous materials. All relevant current Safety Data Sheets (SDS) will be readily available for the site and kept up to date as required by regulation.

b) All fuel storage systems will be registered with Department of Government Modernization and Service Delivery and comply with the *Storage and Handling of Gasoline and Associated Products Regulations*. Specifically, they shall have an effective secondary containment capacity of at least 110 percent of the chemical storage tank capacity, in the case of a single storage container and if there is more than one storage container, they shall have an effective secondary containment capacity of at least 110 per cent of the capacity of the largest container, or 100 per cent of the capacity of the largest container plus 10 per cent of the aggregate capacity of all additional containers, whichever is greater;

c) Storage tank systems will be visually inspected on a regular basis (every year as a minimum) by the operator as per the *Storage and Handling of Gasoline and Associated Products Regulations*. This involves, but is not limited to, gauging or dipping, reconciliation of records and the proper maintenance of reconciliation records for the applicable timeframe noted within permits and regulations. Flowmeters will be installed on all plumbed storage tanks to support proper reconciliation. NOTE: Every 10 years the spill and leak containment systems will be inspected for their liquid containing integrity and repaired as required.

d) An inventory of Tanks, containing chemicals and petroleum products will be maintained. Updates to the inventory will be communicated to the NLDECCC within three months of the change having occurred.

e) To reduce fire hazards, fuel will not be stored immediately adjacent to generators, and fuel storage areas will be well ventilated.

f) Fuel storage areas and non-portable transfer lines will be clearly marked or barricaded so that they are not damaged by moving vehicles. The markers will be visible under all weather conditions. Barriers will be constructed in compliance with the *Storage and Handling of Gasoline and Associated Product Regulations*.

g) Fuel and hazardous materials storage on site will be located a minimum of 200 m from a scheduled salmon river or tributary and 100 m from other waterbodies (Gosse et al. 1998).

h) Drums containing hydrocarbons or other hazardous materials will be transported, stored, handled and disposed of such that spillage or leakage does not occur.

i) Small quantities of hazardous materials (drums, cans and other containers under 20-litre (L) volume) will be stored in a secure location protected from weather, freezing, and vehicle traffic.

j) Approval must be sought from the Environmental Superintendent or Environmental Coordinator prior to any outdoor storage of hazardous materials. Any outdoor storage will have specific requirements for design, construction, management, monitoring and maintenance (e.g., in an established, graded designated area with sufficient and appropriate secondary containment or an impervious liner, routine clearing of bermed areas, disposal of accumulated precipitation to an oil-water separator).

k) Waste oils, lubricants, and other used oil will be retained in a tank or closed container and disposed of in accordance with the *Used Oil Control Regulations*. Spill trays will be used, and substances will be stored in a secure area, with sufficient ventilation.

l) Contracted fuel suppliers will, prior to transporting or positioning fuel or oil, provide Equinox with a copy of their fuel and hazardous material spills contingency plan.

m) Transportation of hazardous and dangerous materials shall be conducted in compliance with the federal *Transportation of Dangerous Goods Act* and the provincial *Dangerous Goods Transportation Act* and associated regulations. Transportation documents shall be retained in a retrievable filing system and stored for the duration of the undertaking.

n) For volumes greater than 150kg, or containers weighting more than 30kg, gasoline delivered or transported must use a Transport Canada standardized slip tank or IBC (means of containment) that has been certified by the Canadian General Standards Board and manufactured by an ISO certified company.

   i. Slip tanks or IBCs must be a UN standardized mobile tank/IBC or an equivalent specification permitted by the CAN/CGSB-43.146 standard

   ii. Slip tanks/IBCs are subject to periodic leak tests and inspections by a facility registered with Transport Canada

iii. Slip tanks/IBCs used to transport gasoline is/are limited to a total maximum combined capacity of 2000 L.

o) Smoking is prohibited within 10 m of a fuel storage area.

p) Only workers who are qualified and trained in handling these materials as stated in the manufacturer's instructions and government laws and regulations will handle fuel and other hazardous materials.

q) Handling and fueling procedures will comply with the *Storage and Handling of Gasoline and Associated Products Regulations* and any additional requirements put forth by applicable regulators in order to limit potential contamination.

r) Operators will stay present during the entire refueling operation. At no time is a refueling operation to be left unattended. All nozzles used for fueling will be equipped with overflow preventors and any trigger locks will be removed prior to installation.

s) Fueling or servicing of mobile equipment will be conducted in designated areas and should not occur within 100 m of any body of water.

t) All necessary precautions will be taken to prevent and reduce the spillage, misplacement or loss of fuels and other hazardous materials. In the event of a reportable spill on-land or a spill, regardless of size, in the freshwater environment, the **Environmental Emergencies 24-Hour Report Line** will be contacted as noted in the contact list in Section 8.0.

u) A copy of the Contingency Plan (located in Section 6.1) for fuel and hazardous material spills will be readily available.

v) Vehicles transporting fuel will have spill kits, including light vehicles with slip tanks.

i. Mobile Spill Kit used in mobile equipment contents can be contained in a zippered bag or pail, designed for hydrocarbon-based spills of less than 25 liters, The kit contents should include a minimum 20 Liter pail or bag capacity, 10 Universal spill pads; 3 Universal absorbent socks; 2 Pairs nitrile gloves; 2 Disposal bags; Granular absorbent (2-5 lb.);

w) Fire and spill response materials will be kept nearby.

x) Any soil contaminated by small leaks of oil or grease from equipment will be disposed of in accordance with the *Environmental Protection Act*.

y) Decommissioning of any temporary storage tank system will be conducted according to the *Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Products*.

z) Hazardous waste will be moved to an appropriate hazardous waste storage area (refer to Section 4.19, Waste Management), constructed in compliance with all applicable legislation.

4.18 PROPANE STORAGE

Potential Environmental Concerns

Potential environmental concerns with respect to propane storage and use vary depending on the state (e.g., gas, liquid) of the propane. Propane is a flammable substance and poses potential threat to humans and animals. In the liquid form, propane can cause frostbite on skin contact. Propane containers can explode if exposed to heat or fire. Propane is listed in Schedule 1 of the Environmental Emergency Regulations, 2019.

Environmental Protection Procedures

The following procedures shall be implemented with respect to propane storage:

a) Propane storage tanks will be installed, used and maintained as per manufacturers' specifications.

b) Tanks will be free of corrosion and damage.

c) Areas surrounding propane storage tanks will have traffic protection bollards installed and be well ventilated and free of possible ignition sources and combustible materials.

4.19 WASTE MANAGEMENT

4.19.1 Non-Hazardous Waste

Potential Environmental Concerns

Waste (e.g., domestic and industrial wastes, grey water, paper, cardboard and wood), if not properly controlled and disposed of, are unsightly and could pose human safety and health concerns, including by attracting wildlife and leading to the potential for human-wildlife conflicts.

Environmental Protection Procedures

The following procedures shall be implemented with respect to the management of non-hazardous waste:

a) Solid waste will be handled according to the provincial *Environmental Protection Act*.

b) Work areas will be kept clear of waste and litter to reduce the potential for attracting wildlife and reducing potential interactions with wildlife (see procedures in Section 6.5, Wildlife Encounters).

c) Waste accumulated on site prior to disposal will be confined, so that it does not pose an environmental or health hazard.

d) To aid in segregation at the source, several waste disposal containers (i.e., dumpsters) will be available at various locations and labelled with the appropriate waste stream (e.g., Food Waste, Wood Waste, Metal Waste, Recyclable Containers, etc.)

e) Waste that may attract animals (i.e., food) will be stored in covered, wildlife-proof containers.

f) Solid waste materials shall be considered, prior to disposal, for reuse, resale or recycling.

g) Waste will be transported from site to be recycled, reused or disposed of in licensed/approved facilities, in accordance with local statutory requirements. Non-reusable and non-recyclable waste will be sent to the provincial waste management facility in Norris Arm or another approved registered facility, and reuse/recycling materials will be sent to the nearest approved management facility for each material type. Contractors are responsible for their waste and are required to adhere to these same requirements.

h) There will be no burning of materials at site, including non-hazardous waste. The only exception is associated with the controlled burning of explosive boxes which is required by law. Explosive boxes will be burned in a ‘burn barrel’ as outlined in the associated SWP outside of the forest fire season. [

4.19.2 Hazardous Waste

Potential Environmental Concerns

Hazardous wastes that could be generated during Project construction and operations include, but are not limited to, used oil, glycol, and oil filters. The primary concern with disposing of hazardous substances is the potential for uncontrolled release to the environment through leakage or accidental spillage, and subsequent adverse effects on terrestrial and aquatic habitat and species, soil, groundwater quality, and human health and safety.

Environmental Protection Procedures

The following procedures shall be implemented with respect to the management of hazardous waste:

a) All hazardous waste will be handled according to the provincial *Environmental Protection Act*.

b) Hazardous waste materials will only be handled by workers who are qualified and trained in handling these materials as stipulated in government laws and regulations.

c) Hazardous waste accumulated on site prior to disposal will be confined, so that it does not pose an environmental or health hazard.

d) Approval must be sought from the Environmental Superintendent or Environmental Coordinator prior to any outdoor storage of hazardous materials. Any outdoor storage will have specific requirements for design, construction, management, monitoring and maintenance (e.g., in an established, graded designated area with sufficient and appropriate secondary containment or impervious liner, routine clearing of bermed areas, disposal of accumulated precipitation to an oil-water separator).

e) Waste oils, lubricants, and other used oil and glycol will be retained in tanks or closed containers with applicable secondary containment and disposed of in compliance with the *Used Oil and Glycol Control Regulations*. Used oils and glycol will be stored in separate tanks or containers. NOTE: Where greater than 205 litres of used oil or used glycol is stored in one or more containers, the storage shall require approval from the Department or GMSD.

f) Contractors will be responsible for proper storage, handling and disposal of their own hazardous wastes, in compliance with all applicable legislation and conditions of authorization.

g) All necessary precautions will be taken to prevent and reduce the spillage, misplacement or loss of fuels and other hazardous materials. In the event of a spill on-land or in the freshwater environment, refer to the Contingency Plan (Section 6.1).

h) Any soil contaminated by small leaks of oil or grease from equipment will be disposed of according to the *Environmental Protection Act* and disposed of offsite by the contactor at a licensed waste management facility

i) A copy of the Contingency Plan (Section 6.1) will be present at hazardous material storage sites and fuel transfer locations.

j) Waste classified as “hazardous” or “special” that cannot be disposed of in regular landfill sites will be sent for disposal with a licensed hazardous waste management company, for example contaminated soil.

k) Hazardous waste material will not be disposed of on site or in a body of water.

l) There will be no burning of materials at site, including hazardous waste.

m) Waste contractors will have the appropriate licenses to handle and dispose of the various hazardous waste categories (e.g., used oils, glycol).

n) An annual report detailing used oil and glycol will be submitted to NLDECCC (January 31 for the previous calendar year). The report will contain:

- The type(s) of oil and/or glycol used;
- approximate total volume of used oil and/or used glycol generated during the year; and
- the method of disposal for the used oil and/or used glycol.

4.20 SEWAGE DISPOSAL

Potential Environmental Concerns

Potential environmental concerns with sewage disposal relate to the release of untreated sewage which is a potential concern to human health, drinking water quality, and freshwater ecosystems.

Environmental Protection Procedures

The following procedures shall be implemented with respect to the management of sewage:

a) Sewage effluent will be treated and monitored in accordance with the NL *Environmental Control Water and Sewage Regulations* prior to discharge to the environment. Sludge generated as a by-product of the treatment of sewage will be disposed of off-site by a licensed contractor.

b) In the event of a septic system failure, sewage from portable toilets will be delivered to a licensed contractor and disposed of in compliance with the Newfoundland and Labrador Department of Health guidelines, the *Lands Act, Waste Management Regulations, 2003* under the *Environmental Protection Act,* and the *Environmental Control Water and Sewage Regulations, 2003* under the *Environmental Protection Act*.

4.21 VEHICLE TRAFFIC AND SITE ACCESS

Potential Environmental Concerns

Potential environmental concerns with respect to vehicular traffic relate to fugitive dust, emissions and noise which can affect landowners and other land users, wildlife, and wildlife habitat. Vehicular traffic can also bring risk of wildlife injury or mortality through accidental collisions. Equinox is committed to the proper operation and maintenance of its vehicles to reduce environmental impacts.

Environmental Protection Procedures

Equinox has developed a Traffic Management Plan (see Appendix F) which describes key aspects of traffic management and controls to be implemented with respect to employee and contractor transportation during construction and operations, with the goal of protecting the environment, and public, employee and contractor safety. The following procedures shall be implemented with respect to traffic along the access road and at the mine site:

a) Signage will be installed around the mine site to alert the public and land users of the presence of the Project and its facilities.

b) Equinox will implement traffic control measures to restrict public access to the mine site.

c) Project vehicles will be driven by trained and competent drivers who will use approved routes.

d) All vehicle and equipment use, including ATVs and heavy equipment, are restricted to defined work areas and roads and specified corridors between work areas except as dictated by permits.

e) The use of ATVs is restricted to designated trails, thus reducing ground disturbance. ATV use will comply with the Motorized Snow Mobile and All-Terrain Vehicle Regulations, 1996 under the *Motorized Snow Mobile and All-Terrain Vehicle Act* and the Environmental Guidelines for Stream Crossings by ATV issued by the NLDECCC.

f) Haul roads, site roads and the access road will be maintained in good condition. This will include periodically regrading and ditching to improve water flow, reduce erosion, and to manage vegetation growth.

g) Project vehicles will be manually inspected on a regular schedule to confirm serviceability.

h) Vehicles and equipment will be properly maintained to meet emission standards.

i) Maintenance and refueling of vehicles will be restricted to designated areas (See Section 4.17, Storage, Handling and Transfer of Fuel and Other Hazardous Materials).

j) Project vehicles are required to comply with posted speed limits on the access road, site roads and haul roads to limit fugitive dust from vehicle travel on unpaved roads. Speed limits will be set in accordance with provincial regulations and industry standards (e.g., for haul roads). Additional speed restrictions will be implemented during caribou migration periods.

k) All vehicles and equipment will yield to wildlife (see procedures in Section 6.5, Wildlife Encounters) and people, where present, and speed will be reduced accordingly.

l) Chasing and/or harassing wildlife with vehicles and equipment will not be permitted.

m) During dry periods, water will be applied to the access road, site roads and haul roads as needed to mitigate dust emissions (see Section 4.23, Air Emissions Management).

n) Project-related air traffic (helicopter, airplane) will maintain a minimum ferrying altitude of 500 m to the extent feasible.

A Caribou and Traffic Management standard operating procedure (SOP) (see Appendix G) has been developed to provide clear direction for users of the Valentine Gold Mine (VGM) access road, site haul roads and auxiliary roads when encountering caribou and during caribou migration.

4.22 CONCRETE HANDLING AND PLACEMENT

Potential Environmental Concerns

Substantial quantities of concrete will be required for the construction and operations phase of the Project. Cement, concrete additives, agents and aggregates will be used in the production of concrete.

The major concern relating to concrete production activities is the effects of washing water released to the environment. Although cured concrete has little effect on water quality, fresh concrete and concrete products may raise the pH in receiving waters to potentially toxic levels (i.e., well above pH 9).

Cement is very alkaline and wash water from spoiled concrete or from the cleaning of the batch plant mixers and mixer trucks, conveyors and pipe delivery systems can be expected to have very high pH, which may even after dilution exceed the acceptable limit, as determined by the provincial regulation of discharges to a body of water. Similarly, spoiled concrete or wash water would contain concrete additives and agents, some of which are toxic to aquatic species. Aggregates, particularly the finer sand fractions, can be expected to be washed from spoiled concrete or discharged in wash water. Uncontrolled release of such wash water, chemicals and sediments can adversely affect aquatic life and aquatic habitat.

Environmental Protection Procedures

The following measures will be implemented to minimize the potential impacts from concrete production or placement:

a) All chemical additives, agents and other potential hazardous materials will be transported, stored and handled in strict accordance with Section 4.17 Storage, Handling and Transfer of Fuel and Other Hazardous Materials.

b) Dust control measures will be adhered to with respect to the stockpiling and storage of aggregates and the handling of cement.

c) All equipment will be equipped with the required dust and emission control filters as specified in Section 4.16 Equipment Use and Maintenance.

d) Dust control measures will be adhered to with respect to the stockpiling and storage of aggregates and the handling of cement.

e) Mixing of concrete will take place at least 100 m from any watercourse.

f) Cement or fresh concrete shall not enter any watercourse or water body.

g) Dumping of concrete or washing of tools and equipment in any body of water is strictly prohibited.

h) Ensure no seepage or spillage of concrete or concrete residues outside of the work site

i) Wash water from the cleaning of mixers and concrete trucks will be discharged either at the concrete manufacturer's place of business, or to a wash water/waste concrete pond constructed on-site, to a design and at a location approved by Equinox. This wash water will be managed, treated and discharge in accordance with the regulations by the contractor.

4.23 DAM CONSTRUCTION

Potential Environmental Concerns

Dam structures will be constructed as part of the TMF and several sedimentation ponds. Through its Dam Safety Program, the Province of Newfoundland and Labrador recognizes two definitions of dam. A **Canadian Dam Association (CDA) Dam** is defined as a barrier constructed for the retention of water, water containing any other substance, or tailings that: a) is capable of impounding at least 30,000 m^3 of liquid; b) is 2.5 m or more in height when measured vertically to the top of the barrier; or c) is a dam less than 2.5 m in height or impounding less than 30,000 m^3 where the consequences of dam operation or failure are likely to be unacceptable to the public or demonstrate risk to the public. A **Very Small Dam** is defined as a "barrier constructed for the retention of water, water containing any other substance, or tailings that is greater than 1.0 m and less than 2.5 m in height" (NLDECCC undated). Responsibilities, of dam owners, including permitting and monitoring requirements, vary depending on the type of dam.

Dams must be properly designed, constructed and maintained to provide secure confinement of tailings material and/or contact water to reduce adverse environmental effects on groundwater, surface water resources, fish and fish habitat, and terrestrial resources. Mine waste rock will be used as a primary material in dam construction. Use of PAG rock could result in acid rock drainage, contaminate groundwater and surface water, and adversely affect fish and fish habitat.

Environmental Protection Procedures

The following procedures shall be implemented with respect to dam construction:

a) The dams required for the tailings impoundment will be designed, constructed, operated and closed in accordance with the CDA Dam Safety Guidelines, Global Industry Standards on Tailings Management, and Mining Association of Canada guidelines, as well as applicable provincial requirements (e.g., *Water Resources Act*, Dam Safety Program).

b) As required by the CDA, an Operations, Maintenance and Surveillance manual will be developed for the TMF which will dictate the frequency of dam inspections and dam safety reviews (MAC 2021).

c) PAG material will not be used in construction and operations. Where waste rock will be used for site earthworks and grading during construction and operational development, necessary test work will be conducted to avoid using PAG materials.

d) No waste rock will be placed in fish-bearing water.

e) As required by CDA, a Public (Stakeholder) Safety Plan will be developed prior to operations, which will identify the notifications procedures, warnings and alarms to be implemented in the event of failure.

f) Vegetation will be cleared within the TMF tailings containment zone prior to filling/flooding to reduce potential generation of methyl mercury (MeHg) water quality concerns.

4.24 AIR EMISSIONS MANAGEMENT PLAN (INCLUDING GREENHOUSE GAS EMISSIONS)

An Air Emissions Management Plan for construction and operations is presented below. A more detailed stand-alone plan will be prepared for the operations phase of the Project and will include monitoring requirements. A Greenhouse Gas Management Plan is also being prepared for the operations phase of the Project. This section of the EPP presents environmental protection procedures to reduce air contaminants and greenhouse gas emissions during Project construction and operations.

Potential Environmental Concerns

Project construction and operations are expected to generate air contaminants and greenhouse gas (GHG) emissions as outlined below:

- Air contaminants will be generated from the combustion of fossil fuels (e.g., diesel and gasoline) by heavy mobile equipment and vehicles and blasting operations (e.g., nitrogen oxides)
- Particulate matter (dust) will be generated by land clearing, earth moving activities, material handling, and blasting
- Particulate matter (dust) will be generated by equipment movements on unpaved roads

Air contaminants that may be released in substantive quantities during construction and operations include particulate matter, selected trace metals and combustion gases (nitrogen oxides [NO_x], sulphur dioxide [SO_2] and carbon monoxide [CO]). Particulate matter includes total suspended particulate (TSP) matter with an aerodynamic diameter less than 30 micrometres (µm); respirable particulate matter (PM_{10}) with an aerodynamic diameter less than 10 µm; and fine particulate matter ($PM_{2.5}$) with an aerodynamic diameter less than 2.5 µm. GHG emissions to be released during construction and operations primarily include carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O).

Air contaminants can cause potential human health effects and potential effects on aquatic ecosystems and vegetation. GHGs absorb and re-emit infrared radiation from the planetary surface, thereby introducing the potential effect of warming the lower levels of the atmosphere and acting as a thermal blanket for the planet.

Environmental Protection Procedures

A GHG Management Plan will be developed for Project operation. The following procedures shall be implemented with respect to air contaminant and GHG management during construction and operations:

a) Engines and exhaust systems of construction and operations equipment will be subject to a comprehensive equipment preventative maintenance program to maintain fuel efficiency and performance.

b) Emission control technologies will be implanted where necessary to reduce air contaminant emissions, including the use of diesel exhaust fluid in diesel engines.

c) To reduce emissions, equipment and vehicle idling times and cold starts will be reduced to an extent practicable.

Measures to reduce and control dust (particulate matter) emissions include the following:

a) Dust from construction and operation activities will be controlled using water.

b) During dry periods, water will be applied to the access road, site roads and haul roads as needed to mitigate dust emissions.

c) Watering is most effective immediately after application, and repeated watering several times a day might be required, depending on surface and meteorological conditions.

d) The application of water will be limited to non-freezing temperatures to avoid icing.

e) Water used for dust suppression will be sourced from site contact water, not natural waterbodies.

f) The application of dust suppressants other than water (e.g., calcium chloride) as an alternative option to watering will be considered in consultation with NLDECCC.

g) The chosen dust suppressant will be approved by the NLDECCC prior to application. These suppressants, if required, will be applied as per the manufacturer's recommendations.

h) Dust suppression is to be applied on an as-needed basis during high wind conditions or if measured ambient particulate matter concentrations exceed the Newfoundland and Labrador Ambient Air Quality Standards, and if an increase of watering is determined ineffective or unfeasible at the time.

i) Under no circumstances will oil (waste or otherwise) be used for dust control.

j) When loading stockpiles, drop heights will be reduced to be as close to the pile as possible.

k) Surfaces of topsoil and overburden stockpiles will be stabilized during extended periods between usage by means of vegetating or covering the exposed surfaces.

4.25 NOISE CONTROL

Potential Environmental Concerns

A variety of noises associated with construction and operation activities can cause adverse effects on wildlife distribution and abundance. Noises associated with heavy equipment use are temporary in nature and noises associated with drilling are considered long term but localized. A Noise FMP (Appendix H) has been developed to contribute to the mitigation, management and monitoring of VGM-related effects on sound quality and is based on regulatory compliance requirements, approvals and authorizations specific to the VGM. Monitoring is conducted at various locations and results from the program are used to implement adaptive management for noise emissions and validate the acoustic modelling conducted to support the EIS. These results will be included in the annual report submitted to the IAAC Compliance group, by March 31 of the following year, and to additional regulatory authorities, and interested Indigenous groups and local stakeholders, as required.

Environmental Protection Procedures

The following procedures shall be implemented with respect to noise control:

a) Adherence to all permits, approvals and/or authorizations.

b) All vehicles and generators will have exhaust systems regularly inspected and mufflers will be operating properly. Enclosures will be used where feasible to further muffle stationary equipment.

c) Where practicable in accessible areas (e.g., along clear rights-of-way), trees and other vegetation will be left in place or encouraged to grow to obstruct the view of Project facilities, reducing the change in viewshed and muffling noise.

4.26 LIGHTING

Potential Environmental Concerns

Project-related lighting during construction and operations will be limited but may include use of mobile artificial lighting to provide a secure and safe work environment for construction and operation workers. Artificial lighting can result in light trespass and glare, affecting the visual aesthetics of the area and creating a nuisance for nearby land users. Artificial lighting may also cause sensory disturbance to wildlife, particularly migratory birds. VGM has developed an Ambient Air Quality FMP (Appendix I) which details the Light Monitoring Program specific to the Project. The program monitors obtrusive artificial lighting at night during VGM construction and operation, to collect representative data to characterize changes from baseline conditions associated with the Project. Light monitoring reports are not a regulatory reporting requirement; however, reports will be prepared to support an improved understanding of potential environmental conditions and trends following development of the VGM.

Environmental Protection Procedures

The following procedures shall be implemented with respect to Project-related lighting during construction and operations:

a) Project lighting will be limited to that which is necessary for safe and efficient construction and operation activities. Lighting design guidelines such as the Commission Internationale de L'Éclairage, International Dark Sky Association, Illuminating Engineering Society, and lighting requirements for workspaces will be followed, as applicable.

b) Only the amount of lighting required for safe construction and operation activities will be installed; exterior lights will be shielded from above where required.

c) To the extent feasible without affecting safe mine operations, exterior lighting will be reduced and/or have limited time of operation during sensitive wildlife periods, such as migration.

d) Lighting will be located so that the lights are not directed toward oncoming traffic on nearby roads on or off site.

e) Lights will be designed to avoid excessive use of mobile flood lighting units and will be turned off when they are not required.

f) Mobile and permanent lighting will be located such that unavoidable light spilling off the working area is not directed toward receptors outside of the Project Area, to the extent practicable.

g) Full cut-off luminaires will be used wherever practicable to reduce glare, light trespass and sky glow from Project lighting.

h) Where practicable in accessible areas, trees and other vegetation will be left in place or encouraged to grow to obstruct the lighting from Project facilities.

4.27 PROGRESSIVE REHABILITATION

Potential Environmental Issues

Rehabilitation is defined as measures taken to restore a property as close to its former use or condition as practicable, or to an alternate use or condition that is deemed appropriate and acceptable by applicable regulatory agencies. The Rehabilitation and Closure Plan will include progressive rehabilitation, closure rehabilitation, and post-closure monitoring. Progressive rehabilitation involves rehabilitation that is completed throughout the life of the mine prior to closure wherever practicable to do so. This includes activities that contribute to the overall rehabilitation effort and that would otherwise be carried out as part of the closure rehabilitation at the end of mining life. As part of the site decommissioning and restoration process, a registered Site Professional will be hired to complete a site-wide environmental site assessment, as defined in the Guidance Document for the Management of Impacted Sites. Should impacts be identified, the VGM shall proceed through the process outlined in the Guidance Document to achieve regulatory site closure.

Progressive rehabilitation during construction and operation may include removal and rehabilitation of temporary works, including temporary roads, stream crossings, laydown areas, camps, construction-related infrastructure, and quarry and borrow areas (as applicable).

Environmental Protection Procedures

Consideration will be given to progressive rehabilitation throughout the construction and operations period, rather than waiting for the end of construction and operations to begin rehabilitation. The following procedures shall be implemented with respect to progressive rehabilitation during construction and operations:

a) Any solid waste, including petroleum, oil and lubricant containers, will be removed from site and disposed of according to Section 4.19, Waste Management.

b) Pre/post site inspections will be completed as per Section 3.2.1 of this EPP.

c) Project components will be progressively rehabilitated (including revegetation) to reduce dust emissions, including waste rock piles and overburden/topsoil stockpiles.

d) Disturbed areas will be graded and/or scarified and covered with overburden and organic materials, where required.

e) As site conditions dictate, vegetation or other cover materials may be established on slopes to control erosion and dust.

f) Native plant (including seed mix) and soil material will be used for rehabilitation and re-vegetation.

g) If a native seed mix is not commercially available, an appropriate seed mix will be selected based on an evaluation of included species. Seed mixes that include invasive species or non-native species that are not already widely established in the areas around the Project Area will not be used for the Project.

h) Where local plants are not available or do not meet rehabilitation objectives, only species that are non-aggressive and non-persistent will be used.

i) Trees will be planted to manage line of sight to reduce visual and noise disturbance.

j) Efforts will be made to locate open boreholes within the footprints of construction activity prior to construction and decommission them to eliminate pathways for contaminants from these features to enter groundwater.

k) Temporary bridges and culverts will be removed and disposed of appropriately once no longer required.

5.0 RESOURCE-SPECIFIC PROTECTION PROCEDURES

5.1 HISTORIC RESOURCES

Potential Environmental Concerns

Historic resources include sites, materials and, in certain instances, landscapes and/or places of historical, archaeological, cultural / spiritual, paleontological, and architectural importance. Such resources can date to the distant past or to the precontact, historic or contemporary periods, and are valued for their cultural, spiritual, natural, and scientific importance.

Historic resources are located on or immediately beneath the ground surface. Construction and operation activities involving ground disturbance can result in the loss or disturbance of historic and cultural resources. No known historic resources are present within the Project Area. However, several registered archaeological sites have been recorded in proximity to the Project Area and areas of high archaeological potential have been identified (see Mapbook in Appendix E). The potential therefore exists during construction and operations for chance discovery of previously unidentified historic resources (see Section 6.6, Discovery of Historic Resources).

Environmental Protection Procedures

In the fall of 2021, Equinox conducted an archaeological field program to investigate areas of high potential for archaeological resources (see Mapbook in Appendix E). No features, deposits, or artifacts of archaeological significance were identified during the testing, and no further investigations or mitigations were recommended based on the assessment.

a) In the event of an accidental discovery of a historic resource during construction and operation activities, contingency measures will be followed as outlined in the contingency plan for the Discovery of Historic Resources (Section 6.6).

5.2 CARIBOU

Potential Environmental Concerns

Project construction and operations will result in direct habitat loss and sensory disturbance for caribou. Sensory disturbance (e.g., noise and light emissions) may also reduce habitat suitability and result in habitat avoidance. Caribou and their habitat may also be affected by Project-related changes to air and water quality. Loss of habitat and/or habitat avoidance could adversely affect caribou, causing a change in foraging behavior and movement paths or patterns (e.g., alteration of the Buchans herd migration corridor). Caribou population health may be adversely affected by these changes, and individual mortality risk may be increased due to predation and potential collision with Project-related traffic.

Environmental Protection Procedures

Equinox has developed a Caribou Protection and Environmental Effects Monitoring Plan (CPEEMP) which presents baseline data, list all mitigations associated with caribou and caribou habitat, provides detailed monitoring and assessment programs, include provisions for external and regulatory review of monitoring data and assessment reports, identifies thresholds whereby further mitigations will be implemented, and provides other pertinent information. The CPEEMP will be revised regularly and will be the primary source for all current mitigation measures and protection procedures.

The following procedures shall be implemented to protect caribou during construction and operations; further detailed guidance is provided in the CPEEMP:

a) Caribou activities during migratory periods will be monitored in the vicinity of the Project through visual observation (including drone surveys), aerial surveys, and telemetry data from GPS (global positioning system) collars.

b) Activities (e.g., construction related blasting, loading or hauling) in the Marathon pit area that may result in sensory disturbance to migrating caribou will be ceased during Protection Level 4 (PL4), while caribou are migrating through the corridor.

c) The Environment Team will be notified if caribou are observed within 1 km of Project activities such as vegetation clearing, construction, or heavy equipment use. The Environmental Superintendent or designate will notify the NLDFAL – Wildlife Division and determine (in consultation with NLDFAL – Wildlife Division, as applicable) if the activity will be reduced or delayed (this is in addition to the temporal suspension of activities in the Marathon pit area during PL4.

   i. If caribou are within 1 km of clearing activities, all clearing will cease until caribou have moved outside of the buffer zone. If delays are recurring, Wildlife Division will be consulted on paths forward, such as monitoring the response of caribou to a vegetation clearing and potentially reducing a buffer.

   ii. If caribou are within 1 km of construction or operation activities, these activities will cease until caribou have moved outside of the buffer zone. If delays are recurring, Wildlife Division will be consulted on paths forward, such as monitoring the response of Caribou to construction and operation related activities and potentially reducing a buffer.

   iii. If caribou are observed in areas of active heavy equipment, activities will cease until caribou have moved beyond the buffer, if delays are recurring, Wildlife Division will be consulted on paths forward, such as monitoring the response of caribou to activities and potentially reducing the buffer.

d) A visual survey will be conducted for caribou prior to blasting. During pit development, which includes near-surface blasting, the search zone will be 1 km from the blast. Observations will be conducted prior to blasting from heights of land vantage points to scan for caribou present in the area. When practicable aerial drones will be used for searches. Additionally, collar data will be reviewed regularly to identify if there are collared caribou in the blasting areas. After the pit perimeter is developed and blasting is more than 50 m below the pit crest (whereby noise and vibrations will be reduced for receptors) the clearance zone will be 500 m buffer from the final pit perimeter. Blasting will be delayed up to 24 hours if caribou are observed within 1 km. If after 24 hours, caribou remain within 500 m to 1 km, planned blasting may be needed to avoid human health and safety concerns. Caribou response to blasting will be observed for reaction and response. If caribou remain within the 500 m blasting radius buffer zone, blasting will be delayed until animals have left the buffer zone. This is in addition to the temporal suspension of activities in the Marathon pit area during PL4).

e) Berms or barricades will be installed as needed around the crest of the pits and may be installed around the TMF or other Project features to limit interactions with specific components at the mine site and reduce risks to caribou (e.g., rock berms, wire fences, or snow fencing). Note that a barrier (usually large rock) is required to be installed adjacent to the pit crest for closure and is usually completed as part of progressive rehabilitation activities – this barrier may be erected during construction and operations to achieve both purposes. Equinox will consult with NLDFAL – Wildlife Division in this regard.

f) Existing riparian vegetation will be maintained to the extent practicable.

g) Where crossing of wetlands beyond the area to be cleared is unavoidable, protective layers such as matting or biodegradable geotextile or other approved materials will be used between wetland root /

seed bed and construction and operations equipment if ground conditions are encountered that create potential for rutting, admixing or compaction.

h) As part of progressive rehabilitation during construction and operations, disturbed areas will be graded and/or scarified and covered with overburden and organic materials, where required. Areas will be seeded to promote natural revegetation with native species. Trees will be planted to manage line of sight to reduce visual and noise disturbance.

Measures to be implemented to reduce sensory disturbance and risk of collisions associated with Project traffic include the following:

a) Vegetation will be maintained around high activity areas to the extent practicable, to serve as a buffer to reduce sensory disturbance.

b) Air (particularly dust) emissions will be reduced through the implementation of applicable procedures outlined in Section 4.24, Air Emissions Management Plan.

c) Light emissions will be reduced through the implementation of applicable procedures outlined in Section 4.26, Lighting.

d) Applicable equipment will have exhaust systems which will be regularly inspected and maintained so mufflers remain operating in accordance with manufacturers' recommendations.

e) Emission control technologies will be employed where necessary to reduce air contaminant emissions.

f) Vehicle traffic transporting workers and materials to/from the site will be managed through a Traffic Management Plan (see Appendix F).

g) Vehicles (including off-highway vehicles) used by Equinox personnel and contractors are restricted to roads, trails and corridors to the extent practicable.

h) Project vehicles are required to comply with posted speed limits in all areas. Additional speed restrictions will be posted and communicated during the caribou migration periods (CPEEMP CM009, CM010 and CM011).

i) Traffic along the access road will be further reduced during migration periods – supplies will be stockpiled and/or delayed, and shift changes will be altered to the degree possible to reduce traffic during these periods. In addition, speed limits will be reduced, and nighttime driving avoided to the extent practicable, to further reduce sensory disturbance and risk of collisions.

j) Road signage warning of caribou crossing areas will be posted at regular intervals.

k) To reduce the risk of caribou-vehicle collisions, caribou will have the right-of-way except were deemed unsafe to site personnel. If wildlife is on a road, speed is to be reduced and vehicles stop, if necessary, until wildlife have left road.

l) Any caribou mortality observed or discovered on site is to be immediately reported to the Environment Team, who will report this event to NLDFAL-Wildlife Division without delay.

m) Wildlife-vehicle collisions, near misses, or observations of wildlife (e.g., caribou, moose) road mortality on site roads and/or involving Project vehicles on the access road are to be reported to the

Environment Team, who will report to the NLDFAL – Wildlife Division immediately. Further adaptive management measures (e.g., speed limit reductions for site roads, night driving will be limited along the access road except for emergencies, convoys will be utilized to the extent possible, increased traffic control signage within the migration corridor and at known crossing locations – CPEEMP CM011) will be implemented should locations of high frequency wildlife-vehicle interactions be identified.

n) Caribou crossing on roads / features are to be facilitated where they occur (e.g., crossing point across ditch) within the caribou migration corridor. The access road, site roads and haul roads are designed for provision of low areas in the plowed snowbanks, where practicable, to facilitate wildlife movements.

o) Snowbanks on roads, and haul road berms through the migratory corridor will have breaks at approximately 200 m intervals, to the extent practicable, to provide caribou crossing opportunities; where feasible, breaks will be aligned on opposing sides and with existing wildlife trails, where they occur, to facilitate caribou crossing.

p) Snow berms will typically be less than 1 m tall to facilitate caribou crossing during spring and fall migration.

q) Project-related air traffic (helicopters and fix wing) will maintain a minimum altitude of 500 m to the extent feasible at all times of the year. Where caribou are observed along the flight path, the path will be altered by 1 km to avoid passing directly overhead of caribou where safe or possible to do so. Air traffic is expected to be limited, and low altitude flying is only expected to be required adjacent to a site landing area. Protocols will be reviewed with the helicopter contractor prior to flights.

r) Air traffic (helicopters and fix wing) will be limited during caribou migration and calving periods. If air travel is required during the migration period, air traffic will avoid traveling within 5 km of the primary migratory corridor, except on approach/departure from the site. Protocols will be reviewed with the air traffic contractors prior to flights.

s) Please refer to the Caribou Protection and Environmental Effects Monitoring Plan for detailed monitoring and mitigation guidance.

5.3 AVIFAUNA MANAGEMENT PLAN

Potential Environmental Issues

Construction and operation activities can adversely affect avifauna through the loss or alteration of habitat (including direct removal of vegetation and sensory disturbance), as well as cause mortality from vegetation clearing and vehicular collisions, and indirect mortality risk from increased predation or other habitat changes.

Avifauna species at risk (SAR) may be particularly vulnerable to potential adverse effects. An avifauna SAR is defined as a bird species that is Extirpated, Endangered, Threatened, Vulnerable or of Special Concern under the Newfoundland and Labrador *Endangered Species Act* (NL ESA) and/or *Species at Risk Act* (SARA). Table 5.1 lists avifauna SAR that may be present in the Project Area and could be affected by Project construction and operations.

Table 5.1 Avifauna Species at Risk

Common Name	Scientific Name	Conservation Status
Olive-sided Flycatcher	*Contopus cooperi*	Threatened (SARA & NL ESA); Special Concern (COSEWIC)
Common Nighthawk	*Chordeiles minor*	Threatened (SARA & NL ESA); Special Concern (COSEWIC)
Rusty Blackbird	*Euphagus carolinus*	Special Concern (SARA & COSEWIC); Vulnerable (NL ESA)
Bank Swallow	*Riparia riparia*	Threatened (SARA & COSEWIC)
Gray-cheeked Thrush	*Catharus minimus*	Threatened (NL ESA)
Red Crossbill	*Loxia curvirostra*	Threatened (SARA & COSEWIC); Endangered (NL ESA)

SARA – *Species at Risk Act*
NL ESA – NL *Endangered Species Act*
COSEWIC – Committee on the Status of Endangered Wildlife in Canada

Environmental Protection Procedures

This Avifauna Management Plan includes such measures as reducing potential effects to birds through scheduling activities that could pose potential harm (e.g., grubbing and tree clearing), applying various mitigation measures if vegetation clearing is required within the breeding bird season, and applying buffer / set-back distances from active nests.

The following procedures shall be implemented to protect avifauna during construction and operations:

a) Where practicable, clearing and grubbing will be avoided during the breeding season (April 15 to August 15; ECCC 2018).

b) When the bird breeding season timeframe cannot be avoided, the following measures will be implemented:

   i. Conduct a survey (by a qualified biologist / scientist) for migratory and resident bird nests and birds displaying nesting behaviors, not more than five days prior to clearing and grubbing during the nesting season.

   ii. Survey for sensitive habitat that typically supports nests.

   iii. Establish an appropriate buffer zone around identified active nests or areas of active nesting behaviors (see part e) below) until fledging has occurred.

   iv. Employ on-site support of qualified biologists during construction and operations, as required.

   v. Be as selective as possible when cutting.

   vi. Using the most efficient and appropriate clearing techniques and equipment (e.g., pruning tools or chain saws when appropriate vs larger harvesters).

c) Trees that provide actual or potential habitat will be retained where safe to do so and technically feasible. Removal activities, where required, will be scheduled to the extent practicable, outside the migratory bird breeding season. If tree clearing is required during the migratory bird breeding season, experienced biologists / scientists will inspect the trees to assess occupancy before tree removal.

d) Site staff will receive training on active nest disturbance and associated avian response behavior and will be required to check facilities, equipment and vehicles for evidence of nesting prior to use.

   i. As waterfowl species are particularly sensitive to disturbance during critical breeding and brood-raising periods (April 15 to July 31; ECCC 2018), personnel will be aware of the importance to waterfowl of surrounding wetlands and efforts will be made to reduce adverse effects during Project activities such as adherence to wetland buffers (30 m for construction and operation activities, 100 m when active nesting).

   ii. If an active nest is found, or evidence of nesting behaviors observed, work in the area is to be suspended until the Environmental Superintendent and/or Environmental Coordinator have been notified, and any applicable mitigations have been implemented.

e) Appropriate buffer zones/setbacks from nests will be established and remain in place until fledging has occurred. The following setbacks will be used (see also Section 4.2, Buffer Zones):

   i. 30 m for passerine nests

   ii. 100 m for waterfowl/waterbird nests

   iii. 75 m for SAR nests

   iv. Restricted activities within 200 m of active raptor nests to create a “breeding season quiet buffer” (i.e., buffer where land contouring, construction or any unusual or sudden loud activities is to take place [e.g., large trucks, blasting, banging devices, concrete cutters])

   v. Restrict clearing activities within 800 meters of an active bald eagle or osprey nest during the nesting season and 200 meters of all other active raptor nests (e.g., Northern Goshawk, Sharp-shinned Hawk, Merlin, American Kestrel, Great-horned Owl, Boreal Owl, Northern Saw-whet Owl).

   vi. The location of raptor nest sites will be reported to the Wildlife Division. Vegetation clearing can occur outside a 200m radius around any nest either outside the breeding season or if a nest is confirmed to be not occupied.

f) As per the updates to the Migratory Bird Regulations (MBR) in July 2022, there are 18 species of migratory birds (listed on Schedule 1 of the MBRs) whose nests are protected year-round because they are known to re-use nests in subsequent breeding seasons. As a result, the prohibitions related to the removal and/or destruction of the nests of these 18 species remain in place even after fledging has occurred and these nests cannot be removed until they have been shown to be abandoned. More information on the updates to the MBR, 2022 can be found at Fact sheet: Nest Protection under the Migratory Birds Regulations, 2022 - Canada.ca.Bank swallows are known to construct nesting burrows in soil stockpiles with steep faces, particularly in light soils amenable to burrowing. Soil stockpiles will be constructed and maintained in lifts to achieve flatter slopes and to permit terracing, thereby reducing erosion and maintaining moisture within the topsoil. This structure and composition will make the stockpiles less attractive to these birds, particularly during the breeding season. In addition, if soil has been removed from a stockpile during the breeding season, resulting in a vertical or near-vertical face, the vertical face will be knocked down with an excavator to make it unattractive to swallows.

g) Bank swallows are listed as Threatened under the *Species at Risk Act* and are therefore afforded nest protections under SAR, in addition to those afforded by the MBCA. Bank swallow nests are unique in that the “active” status extends beyond incubation and the rearing of flightless chicks to also include the post-fledging period, when fledged young and adults continue to return to the colony to roost. Drawing down soil stockpiles for progressive and ultimate rehabilitation will occur outside of breeding bird season, to the extent practicable.

h) Embankments of the TMF and of sedimentation ponds will be maintained free of vegetation. This will also limit the attraction of waterfowl and/or wildlife to these ponds for foraging or breeding.

i) During bird breeding season (April 15 to August 15), blasting will occur outside of the prominent bird singing/calling and activity period (i.e., sunrise to approximately 9:30 am).

j) Injured or dead birds found at the site, as well as observations of bird collisions with Project infrastructure or equipment, are to be reported to the on-site environmental team and the NLDFAL – Wildlife Division and Environment and Climate Change Canada – Canadian Wildlife Service (ECCC-CWS), as applicable. ECCC-CWS will be immediately contacted if 10 or more birds are found stranded/dead on the same night (24-hour period), or if a single species is at risk or an oiled bird is found.

5.4 WILDLIFE MANAGEMENT PLAN

This Wildlife Management Plan contains general wildlife protection measures (Section 5.4.1), as well as additional specific environmental protection procedures for bat (*Myotis*) species (Section 5.4.2) and American marten (*Martes americana atrata*) (Newfoundland population) (Section 5.4.3). Specific measures for caribou and avifauna are presented in Section 5.2 and Section 5.3 of this EPP, respectively.

5.4.1 General Wildlife

Potential Environmental Issues

Potential environmental issues associated with Project construction and operations on wildlife include changes in habitat and mortality risk. Construction and operations can result in habitat loss or alteration due to vegetation clearing, sensory disturbance, and edge habitat effects. Edge effects can include changes in microclimate, vegetation structure, wildlife presence and/or abundance, and behavioral responses of wildlife. Species that are dependent on interior and mature forests as core habitat, such as marten and lynx, may be most adversely affected, as these may avoid edge habitats. Other species (e.g., moose, black bears) preferentially choose edge habitats for foraging or travelling. Wildlife mortality risk may be increased due to habitat loss or alteration as well as though risk of vehicular collisions and increased predation pressures.

Environmental Protection Procedures

The following procedures shall be implemented to protect wildlife during construction and operations:

a) Equinox will observe changes to species' status prior to and/or during proposed Project activities and review its Project activities in consideration of applicable species/habitat restrictions and species at risk (SAR) recovery strategies.

b) Environmental personnel responsible for site monitoring during construction and operations will receive training to recognize SOCC that may be present in Project Area.

c) Construction and operation activities shall be scheduled considering sensitive wildlife habitat and critical periods of wildlife cycles, and additional mitigation measures will be considered, as required. Annual timing of migration and calving in the vicinity of the Site shall be considered at all times (refer to Section 4.1, Sensitive Time Periods).

d) Hunting / fishing / harvesting of wildlife is strictly prohibited on the mine site. Workers are not permitted to hunt / fish / harvest while staying at the accommodations camp and are not permitted to bring firearms or angling gear to site.

e) Pets are prohibited on site.

f) The discovery of roosts, hibernacula, or dens by on-site personnel or contractors will be reported to the Environmental Superintendent and/or Environmental Coordinator, and appropriate action or follow-up will be guided by consultation with a qualified biologist and/or the applicable federal / provincial regulators.

g) Equipment and vehicles shall yield the right-of-way to wildlife and adhere to construction and operations site speed limits.

h) Wildlife-vehicle collisions, near misses, or observations of wildlife road mortality on site roads and/or involving Project vehicles on the access road are to be reported to the Environment Team, who will report to the NLDFAL – Wildlife Division. Adaptive management measures will be implemented should locations of high-frequency wildlife-vehicle interactions be identified.

5.4.2 Bats (Myotis)

Potential Environmental Issues

Bats that have been recorded on the Island of Newfoundland include the two resident species – little brown myotis and northern myotis – and three migratory species: hoary bat (*Lasiurus cinereus*), eastern red bat (*Lasiurus borealis*), and silver-haired bat (Maunder 1988, Washinger et al. 2020, Aivek Stantec Limited Partnership 2021, McBurney and Segers 2021, J. Humber, personal communication dated December 15, 2023). Both species of *Myotis* were emergency listed in 2014 under Schedule 1 of SARA, due to sudden population decline because of white-nose syndrome. Hoary bat, eastern red bat, and silver-haired bat were recently assessed by COSEWIC as endangered, largely due to potential immediate and concerning threats from wind energy developments (COSEWIC 2023). Baseline surveys in 2021 and 2022 confirmed the presence of northern myotis, little brown myotis, and silver-haired bat in the Project Area (Stantec 2022, 2023).

Project construction and operations can result in myotis habitat loss or alteration due to vegetation clearing, sensory disturbance, and edge habitat effects. Edge effects can include changes in microclimate, vegetation structure, wildlife presence and/or abundance, and behavioral responses of wildlife. Mortality risk may be increased through habitat loss or alteration, as well as through vehicular collisions and increased predation pressure.

Environmental Protection Procedures

The following procedures shall be implemented to protect bats during construction and operations:

a) Observations of bat roosts, colonies, potential hibernacula sites, or sick or dead bats will be reported to the Environmental Superintendent / Environmental Coordinator, who will consult with the provincial Wildlife Division at 709-637-2025. Activities in the immediate vicinity of a roost, colony or hibernaculum are to be stopped, and the site is to be vacated until further notice. Appropriate action or follow-up will be guided by consultation with a qualified biologist and federal and/or provincial regulators.

b) Bat collisions with Project infrastructure or equipment will also be reported to the Environmental Superintendent or Environmental Coordinator and the NLDFAL – Wildlife Division.

c) During the construction of buildings or other structures, bats will be discouraged from establishing roost sites by sealing off openings of 15 mm in diameter or larger. Chutes and ducts will be sealed at the outside / top, to prevent entry by bats. Structures will be assessed to identify and address potential entry points.

d) If a bat colony is found to exist within a Project structure, bats can remain in place when it is safe for people and where there is no chance of contact with people. If it is not safe for bats to remain, NLDFAL – Wildlife Division will be contacted to develop an approved removal plan.

e) Open buckets, garbage bins, tubs and containers will be kept covered, where practicable. Bats may fly into these open containers and may be attracted to water standing within them. Bats cannot climb slippery surfaces and are unable to fly straight up into the air, so can easily become trapped in such containers.

f) Use of sticky traps for problem rodents will be avoided, as bats are often attracted to these.

g) Large-diameter trees will be maintained to the extent possible; especially those that are old, dead, or dying. These types of trees typically have the peeling bark, crevices and cavities that provide important natural roosting habitats for bats.

h) Vegetation clearing will be avoided during the bird breeding season, if feasible, which will also protect other breeding wildlife species by preventing the destruction of small mammal nests and bat maternity roosts. If avoidance is not practicable, Equinox will work with FFA - WD to develop seasonally appropriate techniques to reduce potential harm to bats, including the identification of potential maternal roost trees (i.e., >30cm dbh). Buffers / set back distances will be established if maternity roots are identified. Setback buffers for bats (e.g., roosting sites) may be specified in future, based on Recovery Team's recommendation. When the buffers are established, Equinox will update this plan and associated practices.

5.4.3 American Marten

Potential Environmental Issues

American marten (*Martes americana atrata*) (Newfoundland population) (referred to as marten) is considered Threatened under SARA and the NL ESA; the Atlantic Canada Conservation Data Centre ranks marten as S3 (or Vulnerable) (AC CDC 2020). Based on marten occurrences and habitat suitability, an area of critical habitat (of approximately 6,200 square kilometres [km^2]) was identified in the Recovery Plan for marten on the Island of Newfoundland (The Newfoundland Marten Recovery Team 2010), a portion of which overlaps the Project Area.

Project construction and operations can result in marten habitat loss or alteration due to vegetation clearing, sensory disturbance, and edge habitat effects. Marten is dependent on interior and mature forests as core habitat and may avoid edge habitats. Mortality risk of marten may be increased through habitat loss or alteration, as well as through vehicular collisions and increased predation.

Environmental Protection Procedures

The following procedures shall be implemented to protect American marten during construction and operations:

a) If marten or suspected denning locations are encountered during construction and operation activities, work in the area is to be suspended until the Environmental Superintendent and/or Environmental Coordinator has been notified, the Environment Manager has contacted NLDFAL – Wildlife Division, and any applicable mitigation has been implemented.

b) Adaptive management measures will be implemented should locations of high-frequency wildlife-vehicle interactions be identified for American marten.

5.5 VEGETATION

Potential Environmental Issues

Project construction and operations (particularly clearing and grubbing) will include clearing / removal of vegetation, resulting in loss of plants that are species of conservation concern (SOCC), and changes in species and/or community diversity. Use of equipment and machinery and importing soils and (inadvertently) seeds from other areas can also introduce non-native invasive plant species, affecting ecological communities.

Environmental Protection Procedures

The following procedures shall be implemented to protect vegetation and habitat during construction and operations:

a) Equinox will observe changes to species' status prior to and/or during proposed Project activities and review its Project activities in consideration of applicable species/habitat restrictions and species at risk (SAR) recovery strategies.

b) Environmental personnel responsible for site monitoring during construction and operations will receive training to recognize SOCC that may be present in Project Area.

c) Known occurrences of plant SOCC will be avoided. If avoidance of plant SOCC is not possible, seed collection or transplant of the plant will be considered in consultation with applicable regulators.

d) Quarried, crushed material will be used for road building in and near wetlands, to reduce the risk of introducing or spreading non-native and/or invasive vascular plant species.

e) Construction and operation materials (soils and rock) will be sourced locally, when possible, which will reduce the probability of import or further spread of potentially invasive plant species. To reduce the risk of introducing or spreading non-native and/or invasive vascular plant species, equipment will arrive at the Project site clean and free of soil and vegetative debris. Equipment will be inspected by Equinox personnel or designate and, if deemed to be in appropriate condition, will be approved for use. Equipment that does not arrive at the Project site in appropriate condition will not be allowed on the construction and operations footprint until it has been cleaned, re-inspected, and deemed suitable for use.

5.6 FISH AND FISH HABITAT

Potential Environmental Issues

Fish and fish habitat have the potential to be affected by Project-related changes to groundwater resources, surface water resources, and vegetation and wetlands, through effects such as the direct removal of riparian vegetation (affecting water quality via reduced shade or increased nutrient/energy inputs), alterations to stream flow, introduction of sediments and contaminants, direct injury or death from the presence of equipment, excavation of waste rock and subsequent alteration of groundwater, and water management activities that result in changes in water levels in surrounding waterbodies. Should unanticipated events arise that may affect fish and fish habitat, regulators will be immediately informed.

Environmental Protection Procedures

a) Construction and operation activities will be planned, where possible, to avoid locations associated with fish during environmentally sensitive timing windows (i.e., Avoid carrying out in-water works from October 1 to May 31 to limit impacts during the spawning, incubating and hatching period for tributaries and headwaters of scheduled salmon rivers).

b) Buffer zones for construction and operation activities will be implemented as per Table 4.1 in Section 4.2, Buffer Zones. See Appendix E for a Mapbook of Environmental Sensitivities including fish-bearing waters.

c) Environmental protection procedures presented in the following sections of this EPP shall be implemented to help protect fish and fish habitat:

   i. 4.10, Erosion and Sediment Control

   ii. 4.12, Working in or Near Water

   iii. 4.13, Working in or Near Wetlands

   iv. 4.15, Site Water Management

5.7 VICTORIA DAM

Potential Environmental Issues

The mine site is located directly adjacent to, and could potentially affect, the Victoria Lake Reservoir and the Victoria Dam, which form the headwater of a major hydroelectric system draining to Bay d'Espoir. Ground vibration from Project blasting could potentially affect the stability of Victoria Dam.

Environmental Protection Procedures

The following procedures shall be implemented to protect Victoria Dam during Project construction and operations (see also Section 4.11, Blasting):

a) Blasting for site development will be conducted by a certified blasting contractor who will develop a conservative Blast Design for engineering review and approval prior to carrying out the work. The Blast Design will be required to meet strict seismic (vibrational) limits at appropriate distances from Victoria Dam (as well as developing infrastructure, and fish habitat).

b) An Explosives and Blasting Management Plan will be developed by the selected licensed blasting contractor and will include direction for the safe storage, handling and use of explosives and explosive components at the Project site, to address the safety of the public and Project personnel, and protection of the environment, Project components and the Victoria Dam. The Explosives and Blasting Management Plan will include requirements for Blast Design vibration limits and seismic monitoring for blasting activities.

c) The Construction Manager and the Environmental Department will communicate with NL Hydro regarding blasting requirements, timing, vibration thresholds and monitoring.

    a. Dam construction as part of the TMF will be conducted as per Section 4.23, Dam Construction.

6.0 CONTINGENCY PLANS

6.1 FUEL AND HAZARDOUS MATERIALS SPILLS

Potential Environmental Concerns

Fuel and hazardous materials can damage or harm vegetation, soil, surface water, ground water, wildlife, aquatic organisms, historic resources, and human health and safety.

VGM shall take all necessary precautions to prevent the spill of fuel or other hazardous materials at the site including, but not limited to, the following:

- Implementing the WHMIS program throughout the site in accordance with the Newfoundland Occupational Health and Safety Act and regulations governed by the Workplace Health, Safety and Compensation Commission of Newfoundland;
- Ensuring all employees involved with hazardous materials are appropriately trained;
- Ensuring the approved Fueling and Servicing Equipment SOP is strictly adhered to; and
- Ensuring fuel storage at the site is undertaken in compliance with applicable provincial and federal regulations, codes and guidelines.
- Areas in which chemicals are used or stored shall have spill and leak containment systems constructed with impermeable floors, walls, dykes or curbs as applicable and be configured, maintained, inspected and repaired based on applicable provincial (CoA) and federal regulations, codes and guidelines.

Environmental Protection and Response Procedures

The following procedures shall be implemented in the event of a fuel or hazardous material spill. In addition, consult Table 4-4 of the Accidents and Malfunction Prevention and Response Plan (AMPRP) and the Spill Response and Clean-up Procedure for Petroleum, Oil & Lubricants.

a) The individual who causes or discovers a leak or spill will make reasonable attempts to immediately stop the leakage and contain the flow, only if it is SAFE to do so. Spill kits are located at fuel storage tanks and at designated central storage location(s). Digital photographs of the spill are to be taken at the earliest opportunity.

b) A spill or leak of any volume is to be verbally reported immediately to the Environment Team (Safety and Sustainability Manager, Environmental Superintendent or Environmental Coordinator), with details including the spill location, type of fuel or hazardous material (if known), approximate volume, and terrain condition at the spill site. As soon as possible following verbal reporting, the Incident Report Form (Appendix D) is to be completed and submitted to the Environment Department.

c) The Environmental Superintendent or Environmental Coordinator will immediately report a reportable spill on land, or any spill regardless of size that may enter a waterbody frequented by fish, to the

Environmental Emergencies 24-Hour Report Line 709-772-2083 or 1-800-563-9089.

A spill is defined as reportable, depending on the class and quantity of dangerous goods involved, which varies between applicable regulations:

A.1.1 Reportable spill quantities for hazardous materials are listed in the *Transportation of Dangerous Goods Act*.

A.1.2 A reportable hydrocarbon spill is defined as loss of gasoline or associated products in excess of 70 litres in the *Storage and Handling of Gasoline and Associated Products Regulations, 2003*.

A.1.3 Leakage is defined as a discharge of gasoline or associated products from a storage tank system, pipeline, or tank vehicle. Leakage volume cannot be accurately estimated as it is not normally identified immediately. Therefore leakage, regardless of the volume, must be reported in accordance with the *Storage and Handling of Gasoline and Associated Products Regulations, 2003.*

- A spill or leak on land, regardless of size, that may enter the freshwater environment, must be reported according to the *Fisheries Act*.

Required information may include:

i. name of reporter and phone number
ii. date and time of spill or leak
iii. time of detection of spill or leak
iv. type of product spilled or leaked
v. amount of product spilled or leaked
vi. location of spill or leak
vii. source of spill or leak
viii. type of accident - collision, rupture, overflow, other
ix. owner of product and phone number
x. if the spill or leak is still occurring
xi. if the spill or leaked product is contained, and if not, where it is flowing
xii. wind velocity and direction
xiii. temperature
xiv. proximity to waterbodies, water intakes, and facilities
xv. snow cover and depth, terrain, and soil conditions

d) The Environmental Superintendent or Environmental Coordinator will act as the "On-Scene Commander" for the purposes of cleaning up fuel or hazardous materials spill. The Environmental

Superintendent and Environmental Coordinator will be trained in spill response and clean-up procedures and will have full authority to take necessary and appropriate action without undue delay.

e) The overall responsibility of coordinating a clean-up and adapting response procedures to changing conditions and circumstances will be the Environmental Superintendent or Environmental Coordinator

f) Personnel will be trained in the procedures to follow in case of fuel and hazardous material spills, as well as lines of communication.

g) A complete list of spill response equipment is available onsite, and will have associated inventory minimums that, when reached, trigger the procurement process for resupply.

h) In reaching decisions on containment and clean-up procedures, the following criteria will be applied:

   i. minimize danger to workers and public

   ii. protect water supplies

   iii. minimize pollution of watercourses

   iv. minimize area affected by spill

   v. minimize the degree of disturbance to the area and watercourses during clean-up

i) The Environmental Superintendent or Environmental Coordinator will act in consultation with the Site Manager, the Safety and Sustainability Manager, and the regulating authorities to:

   i. assess site conditions, ensure that the source of the spill has been isolated and stemmed, and determine the appropriate cleanup procedure in consideration of potential environmental effects of various cleanup procedures

   ii. deploy on-site staff to mobilize pumps and empty 215-L drums or other appropriate storage containers to the spill site

   iii. deploy on-site staff to build containment dykes and commence pumping contaminants into drums

   iv. apply absorbent as necessary

   v. dispose of all contaminated debris, soil, cleaning materials and absorbent by placing in an ISO-approved container for shipment and disposal offsite in a licensed disposal facility

   vi. take all necessary precautions to avoid the incident in the future, including through identification of immediate and root causes and corrective actions, communicating these to personnel/contractors as applicable, and following through corrective actions to closure

j) The Environmental Superintendent or Environmental Coordinator will be responsible for the preparation of a written incident investigation, identifying root cause and corrective actions in communication with the applicable personnel/contractor(s). The report will be submitted to the Equinox Safety and Sustainability Manager without delay and, from there, to the applicable regulatory agencies (as soon as possible and no later than 30 days after the date the spill occurred).

k) Every time the Contingency Plan is implemented, or if there is an uncontrolled release of a regulated substance to the environment, the occurrence shall be reported immediately (within one working day) to NLDECCC. All information will be recorded for future reference.

6.2 EXTREME WEATHER

Potential Environmental Concerns

Extreme weather can include severe storms, hurricanes, tornadoes, and drought. Winter storm events can consist of high winds, snow, ice, and freezing rain. During the summer and fall months, the Island is prone to hurricanes and tropical storms, which can bring strong winds and heavy rains. Other forms of severe weather can develop during warmer months including thunder, lightning, hail, and occasionally tornadoes.

Extreme weather can create unsafe working conditions, causing delays in construction and operations activity and transport of materials, supplies and workers, and can also affect the environment. Extreme precipitation and associated surface water runoff from snowmelt, rainfall and freezing rain events have the potential to cause flooding, erosion, and washout of roads. These events could lead to the failure of erosion or sedimentation control structures which, in turn, could result in the release of sediment to surface waterbodies (see Section 6.3, Failure of Erosion and Sediment Control and/or Dams). Extreme snow and ice also have the potential to increase loading on buildings and other Project infrastructure and result in damage if the accumulated loading exceeds design loads. Ice accumulation on power lines and associated infrastructure could cause power outages and delays to operational activities. Extreme snow and ice could also increase the risk of vehicle accidents on Project and access roads.

Environmental Protection and Response Procedures

The following procedures shall be implemented to mitigate effects of extreme weather:

a) The Project will be designed and constructed to meet applicable engineering codes, standards, and best management practices, such as the National Building Code of Canada, the National Fire Code of Canada, and the CDA Guidelines. The codes and standards account for weather variables, including extreme conditions, that could affect the structural integrity of buildings and infrastructure. Designs will also consider projected climate change over the life of the Project.

b) The potential effects of extreme weather including storms, precipitation, flooding/ice jams, and drought will be considered in Project planning, design and construction, including the selection of materials and equipment, and design of components, such as water management infrastructure.

c) Equinox will regularly inspect and monitor Project infrastructure and equipment that could be affected by the environment (in addition to its normal function) and take required action to maintain, repair and upgrade infrastructure / equipment as needed.

d) Work activities will include allowances / procedures for delays due to poor weather.

e) Weather forecasts will be considered when planning construction and operation activities that could be affected by adverse conditions, such as dam construction, receipt of materials and supplies, and product deliveries, particularly deliveries of chemicals, reagents, and diesel fuel. Where required, these activities will be scheduled for periods of favorable weather conditions.

f) Weather forecasts will be regularly monitored, and, prior to anticipated extreme weather events, appropriate preventative measures will be taken to reduce the risk of damage to the Project. This will include site inspection by staff to identify and secure loose items, materials and equipment that could be susceptible to wind events, and inspection and maintenance of sediment and erosion control measures prior to and following precipitation events.

6.3 FAILURE OF EROSION AND SEDIMENT CONTROL MEASURES AND/OR DAMS

Potential Environmental Concerns

Malfunction or failure of erosion and sediment control measures and/or dams (e.g., TMF, sediment ponds) could lead to erosion and sedimentation and/or the unplanned release of contact water into the receiving environment.

Environmental Protection and Response Procedures

The Water Management Plan provides detail on runoff and seepage collection strategies and systems (e.g., sedimentation ponds, berms, drainage ditches, pumps) to collect and contain surface water runoff and groundwater discharge from major Project components (open pit, waste rock piles, TMF, ore stockpile and overburden stockpiles, process plant) during climate normal and extreme weather conditions. See also Section 4.10, Erosion and Sediment Control Plan and Section 4.15, Site Water Management for more information on erosion and sediment control measures.

As required by the MDMER, an effluent emergency response plan will be developed, which will outline how a failure or malfunction of the TMF during mine operations resulting in a release of tailings or tailings effluent will be managed. As required by CDA, a Public (Stakeholder) Safety Plan will also be developed, which will identify the notifications procedures, warnings and alarms to be implemented in the event of failure.

Equinox VGM is committed to working with provincial regulators and conforming with applicable guidelines (incorporating updates as applicable) such that the TMF is designed, constructed, operated and ultimately rehabilitated in a safe and responsible manner.

The following procedures shall be implemented in the event of a failure of erosion and sediment controls and/or dams during construction and operations:

a) Sediment fencing and other sedimentation control measures (e.g., check dams) will be deployed, inspected and maintained as needed adjacent to wetlands and slow-moving water courses.

b) Where feasible, contact water will be pumped back into the collection system.

c) The water management structure will be repaired and/or improved as required to avoid reoccurrence.

d) Affected waterbodies will be monitored, and remedial actions and reporting, if required, will take place in consultation with regulators and in accordance with the tailings / effluent emergency response plan.

6.4 FOREST FIRES

Potential Environmental Concerns

Activities related to construction and operations could result in a fire, which could spread to the surrounding area. Such events could damage vegetation and wildlife, air and water quality, human health and safety, and Project facilities.

Environmental Protection and Response Procedures

All VGM personnel and contractors will take all precautions necessary to prevent fire hazards when working at the site, The following procedures shall be implemented in the event of a forest fire:

a) Flammable waste will be disposed of in accordance with regulatory requirements and on a regular basis.

b) On-site fire prevention and response equipment is provided and maintained onsite, and the VGM has established an Emergency Response Team (ERT) that are trained in safe fire response. The purpose of this response training and equipment is to respond to fire scenarios on the mine site, as NLDFAL would be responsible for responding to a forest fire in the area not related to the Project.

c) The VGM will actively monitor wildfires that could affect the mine site and/or access road and coordinate with provincial authorities with respect to response, including the need for potential shutdown and evacuation of employees.

d) In the event of a fire on site, the VGM or the contractor will take immediate steps to contain or extinguish the fire, if safe to do so.

e) VGM's Environmental Superintendent or Environmental Coordinator will appoint a supervisory staff member as "On-Scene-Commander" for fighting fires, if safe to do so.

f) Fires should be reported immediately to:

   i. the Environmental Superintendent or Environmental Coordinator; and

   ii. NLDFAL's **24-Hour Forest Fire Emergency Line - 1-866-(709) FIRE (3473)**

g) The following information will be provided:

   i. name and phone number of the reporter

   ii. time of detection of the fire

   iii. size of the fire

   iv. location of the fire

6.5 WILDLIFE ENCOUNTERS

Potential Environmental Concerns

Wildlife encounters pose a potential risk for stress or injury to both the wildlife and site personnel. Control measures and environmental protection procedures have been put in place to reduce this potential risk to wildlife and humans.

Environmental Protection and Response Procedures

The following procedures shall be implemented with respect to wildlife encounters:

a) Site and working areas will be kept clean of food scraps and garbage.

b) Waste will be collected for disposal in appropriate containers and routinely transferred to the approved location or facility.

c) No attempt will be made by any worker at the Project site to chase, catch, divert, follow, or otherwise harass wildlife by vehicle or on foot, unless specifically authorized and requested to do so by NLDFAL – Wildlife Division.

d) Equipment and vehicles will yield the right-of-way to wildlife.

e) All personnel will be aware of the potential for encounters with bears, coyotes, caribou, moose, NL marten, etc. Wildlife sightings are to be reported to a member of the Environment Team. For bear or NL marten sightings, the Environmental Superintendent or Environmental Coordinator will assess actions for follow-up.

f) The Environmental Superintendent / Environmental Coordinator, with support from on-site security, will be responsible for all actions in response to nuisance animals (e.g., bears) in the Project Area.

g) Black bear deterrent measures such as bear bangers and bear spray may be used, and translocation of bears shall be undertaken before any lethal means are considered. Under provincial wildlife regulations, the displacement and release of any animal is the sole jurisdiction of the NLDECCC and is to be undertaken only as directed by NLDFAL – Wildlife Division and under appropriate supervision.

h) Wildlife-vehicle collisions, near misses, or observations of wildlife road mortality on site roads and/or involving Project vehicles on the access road are to be reported to the Environment Team, who will report to the NLDFAL – Wildlife Division. Adaptive management measures will be implemented should locations of high-frequency wildlife-vehicle interactions be identified.

6.6 DISCOVERY OF HISTORIC RESOURCES

Potential Environmental Concerns

Historic resource material that is disturbed, destroyed, or improperly removed from a site represents a potential cultural loss of information and history that could otherwise be handled and interpreted in an efficient, informative, and appropriate manner.

Environmental Protection and Response Procedures

The following procedures shall be implemented in the event of the discovery of historic resources:

a) If suspected archaeological material is encountered, all work in the immediate area of the discovery will be stopped until authorized personnel from the VGM, having consulted with the Provincial Archaeologist, permit resumption of the work.

b) The site's visible boundaries will be marked with the applicable buffer (Section 4.2, Buffer Zones). Personnel will not move or remove any artifacts or associated material unless the integrity of the material is threatened.

c) The Safety and Sustainability Manager and / or Manager of Stakeholder Engagement will report the find with the following information to the Provincial Archaeology Office, Department of Tourism, Culture, Arts and Recreation, St. John's, and comply with the instruction provided:

i. nature of the find

ii. precise descriptive and map location and the time of the find

iii. nature of the activity resulting in the find

iv. identity of the worker(s) making the find

v. present location of the material, if moved, and any protective measures initiated for the material and the site

vi. extenuating circumstances

6.7 TAILINGS MANAGEMENT FACILITY MALFUNCTION

Potential Environmental Concerns

Malfunction or failure of the TMF dam could lead to the unplanned release of contact water into the receiving environment, which could damage or harm vegetation, soil, surface water, ground water, wildlife, aquatic organisms, historic resources, and human health and safety.

Environmental Protection and Response Procedures

In the event of a TMF dam failure, initial response would include the steps detailed below. In addition, consult Table 4-4 of the Accidents and Malfunction Prevention and Response Plan (AMPRP):

a) Stop / shut down pumping of tailings to the TMF

b) Conduct inspection to determine if nearby waterbodies are being affected.

c) The Environmental Superintendent or Environmental Coordinator will immediately report a reportable spill on land, or any spill regardless of size that may enter a waterbody frequented by fish, to the

Environmental Emergencies 24-Hour Report Line 709-772-2083 or 800-563-9089.

Refer to Section 6.1 *for the definition of* ***reportable spills*** *on land versus in freshwater environments.*

Required information may include:

i. name of reporter and phone number

ii. time of spill or leak

iii. time of detection of spill or leak

iv. type of product spilled or leaked

v. amount of product spilled or leaked

vi. location of spill or leak

vii. source of spill or leak

viii. type of accident - collision, rupture, overflow, other

ix. owner of product and phone number

x. if the spill or leak is still occurring

xi. if the spill or leaked product is contained, and if not, where it is flowing

xii. wind velocity and direction

xiii. temperature

xiv. proximity to waterbodies, water intakes, and facilities

xv. snow cover and depth, terrain, and soil conditions

d) Notify appropriate regulators, stakeholders, the public, emergency responders and Indigenous groups (refer to the Accidents and Malfunctions Indigenous Communication Plan) of adverse environmental effects, as applicable.

   i) Consult with Fisheries and Oceans Canada (DFO) and Environment and Climate Change Canada (ECCC) for requirements under the *Fisheries Act* and MDMER to determine the length and frequency of water quality monitoring and if fish tissue sampling is required.

e) Immediately engaging the MDMER effluent emergency response plan and developing a remedial action and monitoring plan for the event, and initiate remedial action such as deploying earthworks equipment to reduce further damage to the dam and stabilize escaped tailings to the extent feasible, establishing additional containment as needed around the inundation area, and deploying turbidity curtains and/or other similar mitigation within affected watercourses

f) Affected waterbodies will be monitored, and remedial actions and reporting, if required, will take place in consultation with regulators and in accordance with the tailings / effluent emergency response plan.

g) Given that the VGM access road crosses the Victoria River and Exploits River downstream of NL Hydro dams, the VGM will engage with NL Hydro regarding mutual emergency notification and response procedures in the event of an identified risk, concern or accident / malfunction

6.8 GRIEVANCE AND COMMUNICATION PROCESSES

6.8.1 Grievance Process

A grievance mechanism has been developed to afford a process for addressing grievances on the part of non-Indigenous and Indigenous groups or Indigenous persons resulting from the effects of the VGM to these users, such as effects to land and resource use, health (i.e. noise, dust, etc.), socio-economic conditions, and heritage resources.

This process is intended to provide guidance on the management of external stakeholder complaints and disputes – that is, complaints that are made by communities, residents, Indigenous groups, civil society organizations or any other stakeholder who is not an employee, contractor or investor in the company (internal stakeholders). Remedies for complaints by internal stakeholders are addressed by other corporate policies such as the Worker Grievance Policy or by legal remedies provided for in the terms of contracts or by legislation.

The stakeholder grievance process is intended to respond to complaints and disputes by external stakeholders in relation to the Project, Equinox and its operations, Project contractors and the employees of both Equinox and its contractors. Such disputes may involve:

- Deficiencies in the engagement process
- Noise or emissions that directly affect local residents
- Dust and heavy traffic on local roads
- Interference with access to/use of natural resources
- Damage to private assets and properties
- Access to project benefits (*e.g.*, no or insufficient jobs created for local stakeholders)
- Access to land/land acquisition

Definitions

Community Concern: a generalized concern or issue raised by one or more external stakeholders which relates to VGM's or a contractor's operations or procedures, but which does not involve a personally affected individual and for which there is no requirement of formal resolution.

Complainant: An external stakeholder who has invoked the grievance procedure to resolve a complaint or dispute.

External Stakeholder: an individual, community, group or association (other than an employee, contractor or regulator) potentially affected by the construction or operation of the Project, including by VGM's processes associated with the construction or operation of the Project.

Responsible Person: the person assigned with responsibility to resolve the grievance by the Manager of Stakeholder Engagement.

Stakeholder Grievance (Grievance): a specific complaint or dispute respecting the Project or the operations of VGM and/or its contractors which relates to a specific issue, is made by or on behalf of an impacted stakeholder and which can be investigated, and for which there is a requirement or expectation of formal resolution.

Grievance Procedure

1. VGM shall establish the following:

    a. A 'hot line' and a website portal for the receipt of external stakeholder grievances; and
    b. A stakeholder grievance database.

2. An external stakeholder may make a complaint or raise a dispute with VGM through any of the following means:

    a. Through the website portal and once established, the 'hot line';
    b. Directly (in-person or by phone) or through a third party to an employee of VGM;
    c. By mail or e-mail;
    d. In a community meeting.

3. All complaints or disputes made or raised by external stakeholders shall be referred to by the Manager of Stakeholder Engagement who, in consultation with other personnel as appropriate, shall determine whether the complaint or dispute constitutes a grievance which should be referred to the formal grievance process. Where a complaint or dispute:

    a. Involves an employee of VGM or a contractor, the complaint or dispute shall also be copied to the Vice-President Human Resources, or the contract manager, as appropriate who shall be responsible for determining what, if any, other action may be required; and
    b. Is of an environmental nature, the complaint shall immediately be copied to the Environmental Superintendent (or designate) who shall report the matter to the NL Department of Environment, Conservation and Climate Change (NLDECCCC) in accordance with s. 78 of the Certificate of Approval AA25-055710, and/or to other regulators as required.

3. Where a complaint or dispute involves an employee of VGM or a contractor, the complaint or dispute shall also be copied to the Manager of Human Resources or the contract manager, as appropriate who shall be responsible for determining what, if any, other action may be required.

4. Within 7 days of receipt of the complaint or dispute the Manager of Stakeholder Engagement shall determine whether the complaint meets the criteria of a grievance or is a community concern.

5. Where the complaint or dispute has been characterized as a community issue or concern, the Manager of Stakeholder engagement shall notify the stakeholder and work with the stakeholder and other relevant parties to attempt to address the issue or concern by informal means.

6. Where the complaint or concern has been characterized as a grievance, the Manager of Stakeholder Engagement shall:

    a. Assign the complaint to the responsible person in the Company;
    b. Notify the Stakeholder of this determination, describe next steps in the process and provide the contact information of the responsible person; and
    c. Enter the following information into the stakeholder grievance database:

        i. Identity and contact details of complainant unless the complainant has requested anonymity;

ii. Means by which and to whom the complaint was made;
iii. Description of the circumstances giving rise to the complaint or dispute;
iv. Date on which the complaint was made;
v. Evidence or any supporting documentation;
vi. Person assigned with responsibility to resolve the grievance;
vii. Proposed and actual follow-up actions;
viii. Classification of the complaint or dispute – e.g. environmental, cultural, health and safety, land and resources, socio-economic benefits;
ix. Previous records of similar incidents involving the same stakeholder or member of the stakeholder's family, or stakeholder organization as appropriate; and
x. Estimated timeline to resolve the grievance.

7. The person responsible shall take all necessary steps to investigate the complaint to determine if it is substantiated and strive to complete the investigation of the grievance and propose a resolution within 45 days of assignment.

8. Where a complaint has been determined to be unsubstantiated, the responsible person shall meet with the complainant to discuss the finding and inform the complainant that he or she may appeal this determination to the Grievance Committee under section 12.

9. If a complaint is determined to be substantiated, the person responsible shall develop a provisional resolution proposal that is reasonable and proportional to the grievance and consistent with any cultural norms.

10. Once the provisional proposal has been approved internally, it shall be discussed with the complainant who may elect to:

    a. Accept the proposal;
    b. Propose alternatives; or
    c. Reject the proposal and appeal under section 13.

11. When the complainant has made his or her election under section 10, the responsible person shall prepare a report for the Manager of Stakeholder Engagement setting out:

    a. Steps taken in investigation of the complaint or dispute;
    b. Any meetings with the complainant;
    c. Results of any investigation and whether or not the complaint was substantiated;
    d. Status of the complaint: accepted or rejected;
    e. Outcome of, and any corrective actions taken in response to the complaint;
    f. Closure date;
    g. Where the matter has been resolved to the satisfaction of the complainant, written confirmation that the complainant was satisfied with the response;
    h. Recommendations as to any management action to be taken to avoid recurrence of the complaint or dispute.

The Manager of Stakeholder Engagement shall enter the details of the report into the grievance database.

12. If the provisional proposal is accepted, the complainant shall confirm acceptance in writing and the grievance shall be classified as 'closed out'.

13. Where a complaint has been found to be unsubstantiated or the complainant has elected to reject the provisional proposal, he or she may appeal to the Grievance Committee. The Grievance Committee shall consist of a minimum of three individuals, which shall include the Manager of Stakeholder Engagement and at least 2 other Managers and, where the complainant agrees:

    a. If the complainant is a community resident, a community representative; and
    b. If the complainant is a member of a stakeholder organization, a representative of that organization.

14. The complainant may appear on his or her own behalf and is entitled to be represented by an independent third party.

15. The Grievance Committee shall review the report prepared by the person responsible, inquire into the matter, and attempt to resolve the complaint.

16. Where the complaint has been resolved to the satisfaction of the complainant by the Grievance Committee, the complainant shall confirm agreement in writing, the grievance shall be deemed to be 'closed out' and the Manager of Stakeholder Engagement shall prepare a report containing the details set out in section 7 and enter this report into the grievance database.

17. Where the Grievance Committee cannot resolve the complaint, the Manager of Stakeholder Engagement shall meet with the complainant and provide information as to any alternative dispute resolution mechanisms and shall enter the details of the meeting into the grievance database.

General

18. The grievance procedure shall be set out on the Company's website, and a copy of the procedure shall be made available on request to external stakeholders.

19. The Manager of Stakeholder Engagement shall meet with external stakeholders to explain the operation of the grievance procedure.

20. All members of the Company and all contractors shall receive training on the grievance procedure.

21. The Manager of Stakeholder Engagement shall report monthly to the VGM Executive Team on grievances. Monthly reports shall be consolidated into quarterly reports which shall be presented to the Board of Directors at quarterly meetings.

22. VGM shall track all stakeholder grievances and shall prepare an annual Summary Grievance Report setting out:

    a. The number and types of grievances received over the preceding calendar year;
    b. The time taken to resolve grievances;
    c. The percentage of grievances resolved through agreed outcomes;
    d. The number of instances where substantiated grievances lead to changes in policy or procedures; and
    e. The level of satisfaction among users of the grievance process as determined by an independent annual audit.

The Summary Grievance Report shall be included in the Annual Sustainability Report.

6.8.2 Communication Processes

Purpose

The purpose of the Current Use of Lands and Resources for Traditional Purposes Indigenous Communication Plan (Communication Plan) is to document the processes to be implemented to ensure the sharing of information on preventing (avoiding), reducing, and/or mitigating adverse environmental effects of the VGM on the current use of lands and resources for traditional purposes by Indigenous persons during all phases of the VGM.

As part of the planning and development of the Project, VGM had engaged two Indigenous groups identified in the federal EIS Guidelines:

- Miawpukek First Nation (MFN)
- Qalipu Mi'kmaq First Nation (Qalipu)

Overview

Federal EA Conditions 7.1 and 7.2 require the development/implementation of an Indigenous communication plan with two components: communication of information relating to VGM activities that may affect the current use of lands and resources for traditional purposes; and communication of the results of the follow-up programs referenced in federal EA Condition 7.1.4.

Communications with respect to the potential impacts of the VGM upon the current use of land and resources for traditional purposes must include the following elements:

a. The identification, timing and location of VGM activities that may affect the quality of Indigenous land and resource use, including hunting, trapping, fishing and gathering;

b. Procedures for Indigenous communities to express views and concerns about adverse VGM related effects on the current use of lands and resources for traditional purposes, including access; and

c. Procedures for the Proponent to document and respond to Indigenous concerns in a timely manner and to demonstrate how issues have been addressed.

Communication with respect to follow-up programs must include the following elements:

a. the results of the follow-up programs referred to in federal EA Conditions 3.17 (fish and fish habitat), 3.18 (acid rock drainage and metal leaching), 4.8 (migratory birds) and surface water facilities), 4.9 (mitigation measures respecting migratory birds, eggs and nests) and 6.1 (health and socio-economic conditions); and

b. any additional or modified mitigation measures developed in relation to any of these programs.

Communication Protocol: Potential Effects Upon the Current Use of Lands and Resources for Traditional Purposes

The communication protocol pertaining to federal EA Conditions 7.1.1. – 7.1.3 consists of the following steps:

1. Qalipu and MFN will provide VGM's Manager of Stakeholder Relations with the name(s) and contact information of the individual(s) who have been designated to receive notification under this communication protocol (Indigenous Representatives[2]).

2. Fourteen (14) days prior to the start of construction and on a quarterly basis thereafter, VGM will provide a notice in writing (e-mail or correspondence) to the Indigenous Representatives which notice shall contain:

    a. a Project schedule listing all activities to be conducted in the Designated Project Area for the next three months;

    b. the identification of those Project activities referenced in a. above that may affect access to or the quality of the experience of Indigenous uses of lands and resources for traditional purposes including hunting, trapping, fishing and/or gathering and the location, timing, duration and frequency of these Project activities;

    c. a preliminary identification of any potential effects of the activities referenced in b. above on current use of lands and resources for traditional purposes by Indigenous groups, as identified in the EIS, TKS/TLUS reports or any additional or updated information provided by either Indigenous group and associated mitigation measures; and,

[2] The SEAs concluded with Qalipu and MFN commit to the establishment of a joint Environmental Stewardship Committee with each group. The representatives appointed by each group to the Environmental Stewardship Committee function as the Indigenous Representatives for purposes of this Communications Plan.

d. a preliminary assessment of the nature or magnitude of the effects referenced in c. above and any deviation from EIS predictions.

3. The Indigenous Representatives shall review the information contained in the notice provided by VGM and where the Indigenous Representative has concerns or issues respecting the potential effects of the activity upon the current use of lands and resources for traditional purposes, including access, or the efficacy of proposed mitigation measures resulting from:

    a. new or additional information respecting land use that was not contained in the EIS or any Traditional Knowledge (TK)/Traditional Land Use (TLU) Study; or

    b. a deviation in the nature or magnitude of the effect upon the use of land and resources for traditional purposes from that predicted in the EIS which requires additional or modified mitigation measures.

    The Indigenous Representative shall respond in writing to VGM within 10 days of the receipt of notice or with VGM's consent, such other time as the Indigenous representative may reasonably require, providing the new or additional information or describing the deviation in nature and magnitude of the effect predicted in the EIS.

4. VGM shall document these concerns and respond in a timely manner either in writing or by a meeting with Indigenous Representatives[3] to demonstrate how issues and concerns have been addressed.

5. In the event that a material change occurs in the quarterly Project schedule provided under paragraph (2) or where the nature or magnitude of the predicted effect of a scheduled Project activity deviates from EIS predictions during that quarter, VGM shall immediately:

    a. Notify the Indigenous Representative in writing, providing a description of the material change

    b. Provide an opportunity for the Indigenous Representative to submit comments or identify issues and concerns

    c. respond in writing or meet with the Indigenous Representatives to demonstrate how issues and concerns have been addressed.

6. In the event of a conflict between this Communication Protocol and the terms of any agreement entered into between VGM and either MFN or Qalipu, the latter agreement shall prevail.

Communication Protocol: Follow-up Programs

VGM will follow the communication protocol set out below to implement federal EA Condition 7.1.4.

[3] See footnote 2

The communication protocol will consist of the following activities:

1. VGM will regularly engage with Indigenous groups, in accordance with the EA conditions, EIS commitments, the terms of any agreement concluded between VGM and the particular Indigenous group, including the terms of any SEA, and with the requirements of any Project-specific authorizations.

2. Engagement will include:

    a. Regular updates on upcoming and ongoing VGM activities through e-mail, correspondence, quarterly newsletters, and periodic meetings (either virtual or in-person);

    b. The transmission of the Annual Report prepared pursuant to federal EA Condition 2.10 setting out the results of the specific follow-up programs referenced in federal EA Condition 7.1.4 and any modified or additional mitigation measures which have been implemented by VGM;

    c. Periodic opportunities for Indigenous groups to raise questions, concerns, or observations about the efficacy of the specified follow-up programs or the potential effects of the Project upon the current use of lands and resources for traditional purposes. These opportunities shall include meetings of any joint environmental committee established under a Socio-Economic Agreement or similar agreement to discuss environmental matters. In addition, VGM will hold an annual meeting with each Indigenous group to discuss the Annual Report, the efficacy of programs referenced in EA Condition 7.1.4, and the need for any additional or modified mitigation measures;

    d. Opportunities for Indigenous groups to provide traditional knowledge for consideration during all project phases, including during meetings or through Indigenous involvement in monitoring, reporting and analysis;

    e. Where potential/actual effects on the current use of lands and resources for traditional purposes or upon Indigenous interests are identified under section 3.2 of the Communication Plan, VGM will notify each Indigenous Representative and will provide opportunities to discuss the extent of the effects and potential mitigation measures, including those developed under other monitoring programs or follow-up plans; and

    f. Discussion of opportunities for Indigenous participation in the implementation of the follow-up program, including the conduct of monitoring, the analysis and reporting of follow-up results and whether modified or additional mitigation measures are required.

3. VGM will maintain a tracking document specific to each Indigenous group that will record and document the results of the specific follow-up program, Indigenous issues and concerns, and VGM's response to address identified issues, including any modified or additional mitigation measures.

4. MFN and Qalipu will identify representatives for purposes of engagement under this Part 3 who shall be the Indigenous Representatives for purposes of the Communication Plan.

Reporting

VGM has several external reporting requirements or mechanisms, and documentation associated with these reporting requirements which will be shared with Indigenous communities as required or as appropriate.

These reporting mechanisms include:

- Periodic VGM updates (e.g., quarterly newsletter summarizing the VGM status);
- Mandatory reports to agencies/Indigenous communities and others on specific incidents/occurrences at the VGM (e.g., inadvertent discoveries of historic resources asper Section 6.6 of the EPP; with respect to accidents and malfunctions, as per the Accidents and Malfunctions Response Plan), in accordance with the reporting thresholds or triggers as defined in relevant plan;
- The annual report/schedules submitted to IAAC on federal EA condition implementation;
- Compliance or other reporting required for a specific authorization – this may relate to current/ongoing site monitoring (e.g., management of historic tailings) or 'new' reporting (e.g., for provincial/federal authorizations); and
- Reporting requirements set out in any agreement concluded with an Indigenous group.

Documentation

VGM will continue to maintain its engagement record management system, including the documentation of engagement activities with Indigenous groups.

6.8.3 Accidents and Malfunctions Prevention and Response Plan

Purpose

Accidents and malfunctions refer to events that are unforeseen, and not part of any activity or normal operation of the VGM. The purpose of this Accidents and Malfunctions Prevention and Response Plan (AMPRP) is to:

- Assign roles and responsibilities to VGM staff.
- Identify potential accidents and malfunctions that may cause adverse environmental effects.
- Outline mitigation measures for potential accidents and malfunctions.
- Provide response measures for each type of accident and malfunction to mitigate any additional adverse environmental effect caused by the accident or malfunction.
- Provide directions for communication requirements following an accident or malfunction.
- Provide directions for reporting requirements following an accident or malfunction.

The AMPRP and the associated Accidents and Malfunctions Indigenous Communication Plan address:

- IAAC Conditions 10.1, 10.2, 10.3, 10.4, 10.5, and 10.6 which require the development of these plans.

Classification

Accidents and malfunctions have been classified into three consequence categories: high, medium and low. Consequence categories are defined as follows:

1. High consequence may cause long-term environmental impacts, human fatalities, and/or >$100k in financial damage/loss.

2. Medium consequence may cause medium-term environmental impacts, lost-time injuries, and/or <$100k in financial damage/loss.

3. Low consequence may cause short-term environmental impacts, first aid/medical treatment, and/or <$50k in financial damage/loss.

The accident and malfunctions consequence summary is presented in Table 6.1.

Table 6.1 Accidents and Malfunctions Consequence Summary

Accident or Malfunction	Consequence	Issues of Concern
TMF Malfunction	High	• Damage to terrestrial/aquatic habitat and life • Damage to downstream human environment • Human fatality
Vehicle Accident	High	• Damage to terrestrial/aquatic habitat and life if a spill occurs • Human fatality
Fuel and Hazardous Materials Spill	Medium	• Damage to terrestrial/aquatic habitat and life • Damage to downstream human environment
Fire/Explosion	Medium - High	• Damage to terrestrial/aquatic habitat and life if near surface water • Loss of terrestrial habitat if fire is uncontrolled • Potential lost-time injury • Human fatality (high consequence)
Stockpile Slope Failure	Low	• Damage to terrestrial/aquatic habitat and life
Unplanned Release of Contact Water	Medium	• Damage to aquatic habitat and life • Damage to downstream human environment

Communication and Reporting Requirements

In the event of any accident or malfunction, VGM will meet the following communication and reporting requirements of the IAAC conditions:

1. Refer to the Accidents and Malfunctions Indigenous Communication Plan for communication requirements with Indigenous groups as detailed below in 6.8.3.1.
2. Other stakeholders such as communities will be notified in accordance with VGM's internal procedures.
3. Notify relevant authorities with responsibilities related to emergency response (including environmental emergencies) in accordance with applicable legislative and regulatory requirements, and as outlined in VGM's environmental emergency response plans.
4. Notify IAAC no later than 24 hours following the accident or malfunction with specific information including:
    a. The date and time when and location where the accident or malfunction occurred within the Designated Project area.
    b. A summary description of the accident or malfunction.
    c. A list of any substance potentially released into the environment as a result of the accident or malfunctions.
5. Report to IAAC no later than 30 days ("30-Day report") after the day on which the accident or malfunction occurred, with information including:
    a. A detailed description of the accident or malfunction and of its adverse environmental effects.
    b. A description of the measures taken by VGM to mitigate the adverse environmental effects caused by the accident or malfunction.
    c. Any view from IGs and advice from relevant authorities received with respect to the accident or malfunction, its adverse environmental effects, and the measures taken by VGM to mitigate these adverse environmental effects.
    d. A description of any residual adverse environmental effect and any modified or additional measure required by VGM to mitigate residual adverse environmental effects.
    e. Details concerning the implementation of the AMPRP.
6. Report to IAAC no later than 90 days ("90-Day Report") after the day on which the accident or malfunction occurred, with information including:
    a. A description of the changes made to avoid the subsequent occurrence of an accident or malfunction.
    b. The modified or additional measure(s) implemented by VGM to mitigate and monitor residual adverse environmental effects and to carry out any required progressive reclamation, accounting for the information submitted in the 30-Day Report.
    c. All additional views from IGs and advice from relevant authorities received by VGM since the views and advice received in the 30-Day Report.

The Project Contact List is presented in Table 6.2.

Table 6.2 VGM Contact List

Entity	Contact List	Contact Number
EMERGENCY/MEDICAL	Security	Channel 3
	Air Ambulance	1-709-777-6320
	Newfoundland Helicopter	1-709-636-8908 (Chris – Deer Lake hangar)
	Canadian Helicopter	1-709-686-2095 (Pasadena) 1-709-896- 5259 (Goose Bay 24 hrs.)
	Medical Contractor (Main Street Medical Clinic)	1-877-578-4861
	Buchans Hospital	1-709-672-2111 (Ambulance) 1-709-672-3304 (Emergency Dept)
	Grand Falls-Windsor Hospital	1-709-292-2111 (Ambulance) 1-709-292-2133 (Emergency Dept)
	RCMP – Buchans	1-709-672-3944
	RCMP – Grand Falls-Windsor	1-709-489-2121 (24 hrs. Search and Rescue)
	Workplace Health, Safety, and Compensation Commission (WHSCC)	1-709-729-4444 (24 hrs.) OHS Division
	Canadian Coast Guard Emergency Response	1-800-563-2444
EQUINOX PERSONNEL	Equinox Gold Corporation – Corporate Office	1-604-558-0560
	Equinox Gold Corporation – GFW Office	1-709-489-0069
	Darren Hall (President and CEO, Director)	1-604-628-1011416-987- 0711 (Office) 1-778-829-1073 (Cell) darren.hall@equinoxgold.com
	Jason Cyr (VP Canadian Operations)	1-709-572-5519 jason.cyr@equinoxgold.com
	Jamie Russell (Safety and Sustainability Manager)	1-709-290-1374 jamie.russell@equinoxgold.com
	Noah Buller Rowsell (Logistics)	1-709-672-7878 noah.rowsell@equinoxgold.com
	Valentine Gold Mine Camp	1-709-489-4127

	Nic Capps (Senior Exploration Manager)	1-709-727-7953 nic.capps@equinoxgold.com
	Adam Wall (Senior Mine/Resource Geologist)	1-709-763-5438 adam.wall@equinoxgold.com
PROVINCIAL GOVERNMENT	Environmental Emergencies / Spill Report	1-709-772-2083 (24 hrs.) 1-800-563-9089 (24 hrs.)
	Forest Fires	1-866-709-FIRE (3473)
	Poison Information Center	1-844-POISONX (764-7669)
MUNICIPAL GOVERNMENT	Town of Buchans Town of Millertown Local Service District of Buchans Junction Town of Badger Town of Grand Falls-Windsor Town of Bishop's Falls	1-709-672-3972 1-709-852-6216 On file with VGM 1-709-539-2406 1-709-489-0407 1-709-258-6581
INDIGENOUS GROUPS	Miawpukek First Nation	1-709-882-2470
	Qalipu First Nation	1-709-634-0996
OTHER	Buchans Junction Garage	1-709-852-5181
	Millertown Gas Bar and Store	1-709-852-6486
	Robs / RNR Drilling	1-709-673-8842
	Blundon's Trucking and Excavating Ltd.	1-709-293-0204 (Sheldon Blundon) 1-709-636-9350 (Denis Cross)

6.8.3.1 The Accidents and Malfunctions Indigenous Communication Plan

The Accidents and Malfunctions Indigenous Communication Plan (Plan) which is associated with the AMPRP ensures timely and transparent communication of accidents and malfunctions to IGs. The Plan has been developed, through engagement with Miawpukek First Nation (MFN) and Qalipu Mi'kmaq First Nation (Qalipu) and details the procedures that VGM will employ to notify MFN and Qalipu upon the occurrence of accidents and malfunctions associated with the Project.

Triggering of Notification

IGs will be notified upon the occurrence of an accident or malfunction presented in the AMPRP, which have been included in Table 6.1.

If a specific accident or malfunction occurs which is not listed but has a similar environmental consequence, IGs (MFN, Qalipu) will be notified in accordance with the notification process (Table 6.3).

Notification Information and Procedure

Notification information, timelines and methods (e.g., email, call) will be determined by the consequence rating of the accident or malfunction as set out in Table 6.1 and conducted in accordance with the notification procedures set out in Table 6.3.

Information provided in the initial notification to IGs will include the following:

a. Date and location of the accident or malfunction;

b. Summary description of the event;

c. Information on the accident or malfunction, including the type and quantity of substance(s) rel eased, the location and duration of the release(s) and potential environmental impacts;

d. Remedial actions taken in response and those planned to be undertaken and a schedule of implementation of remedial actions;

e. Resources required and resources available;

f. Any health advisories for IGs; and

g. Details of subsequent monitoring related to the accident or malfunction.

Monitoring will be determined through engagement with IGs (including any environmental stewardship committee or similar body established under an agreement with the Indigenous group) and will comply with any regulatory requirements applicable to the specific accident or malfunction. Reporting will be consistent with relevant regulatory requirements and the terms of any agreement concluded between VGM and an Indigenous group.

Table 6.3 Accidents and Malfunctions Notification Summary

Consequence Level	Timing of Notification	Notifier	Person(s) Notified	Notification Method
Minimal / Localized[4]	**Within 30 days**	Manager of Stakeholder and Indigenous Relations	Environmental Stewardship Committee	Include incident in any periodic report to IGs as required by agreement.
Low	**Within 48 hours**	Environmental Coordinator or Environmental Superintendent	On-site Indigenous Environmental Technicians	In person communication when technician is on site. Email when technician is off site.
		Environmental Coordinator or Environmental Superintendent	Chief/ Director of Natural Resources (MFN) Chief/ Band Manager/ Director of Environment and Natural Resources (Qalipu)	Initial report by e-mail
		Manager of Stakeholder and Indigenous Relations	Environmental Stewardship Committee	Include incident in any periodic report to IGs as required by agreement
		Environmental Coordinator or Environmental Superintendent	Chief/ Director of Natural Resources (MFN) Chief/ Band Manager/ Director of Environment and Natural Resources (Qalipu)	Copy of any compliance reporting to federal or provincial regulator to be provided concurrently to IGs

[4] Includes fuel spills below to provincial reporting threshold of 70L

		Manager of Stakeholder and Indigenous Relations	Chief/ Director of Natural Resources (MFN) Chief/ Band Manager/ Director of Environment and Natural Resources (Qalipu)	Include in Annual Report under federal EA Condition 2.10
Medium	**Within 24 hours**	Environmental Coordinator or Environmental Superintendent	On-site Indigenous Environmental Technicians	In person communication when technician is on site. Email when technician is off site.
		Environmental Coordinator or Environmental Superintendent	Chief/ Director of Natural Resources (MFN) Chief/ Band Manager/ Director of Environment and Natural Resources (Qalipu)	Phone call or text message Email with read receipt within 24 hours of phone call
		Manager of Stakeholder and Indigenous Relations	Environmental Stewardship Committee	Include incident in any periodic report to IGs as required by agreement
		Environmental Coordinator or Environmental Superintendent	Chief/ Director of Natural Resources (MFN) Chief/ Band Manager/ Director of Environment and Natural Resources (Qalipu)	Copy of any compliance reporting to federal or provincial regulator to be provided concurrently to IGs
		Manager of Stakeholder and Indigenous Relations	Chief/ Director of Natural Resources (MFN) Chief/ Band Manager/ Director of Environment and Natural Resources (Qalipu)	Include in Annual Report under federal EA Condition 2.10
High	**Immediately**	Environmental Coordinator	On-site Indigenous Environmental Technicians	In person communication when technician is on site. Email when technician is off site.

		or Environmental Superintendent		
		Environmental Coordinator or Environmental Superintendent	Chief/ Director of Natural Resources (MFN) Chief/ Band Manager/Director of Natural Resources (Qalipu)	Phone calls Follow-up e-mail with read receipt within 6 hours of phone call
		Environmental Coordinator or Environmental Superintendent	Chief/ Director of Natural Resources (MFN) Chief/ Band Manager/Director of Natural Resources (Qalipu)	Incident specific progress updates as appropriate based on the incident.
		Manager of Stakeholder and Indigenous Relations	Environmental Stewardship Committee	Include incident in any periodic report to IGs as required by agreement
		Environmental Coordinator or Environmental Superintendent	Chief/ Director of Natural Resources (MFN) Chief/ Band Manager/Director of Natural Resources (Qalipu)	Copy of any compliance reporting to federal or provincial regulator to be provided concurrently to IGs
		Manager of Stakeholder and Indigenous Relations	Chief/ Director of Natural Resources (MFN) Chief/ Band Manager/Director of Natural Resources (Qalipu)	Include in Annual Report under federal EA Condition 2.10

Contact Information and Management

Emergency contact information for the IGs for purposes of notification is included in Table 6.4 below.

Note: While this list will be regularly reviewed and updated to ensure accuracy and completeness, the IGs are responsible for notifying VGM of contact changes to ensure timely notification of the appropriate people, in the event of an accident or malfunction.

Table 6.4 Emergency Contact Information for Notification Purposes

Entity	Contact List	Contact Information
MFN	General Number	709-882-2470
	Chief	709-538-6231 Brad Benoit: bbenoit@mfngov.ca
	Director of Natural Resources	709-882-3002 Ross Hinks: rhinks@mfn.gov.ca
	Community Liaison Officer (CLO)	General Number Danielle Bungay: dbungay@mfn.gov.ca
Qalipu	General Number (Corner Brook Office)	709-634-0996
	Chief	709-634-6895 Jennifer Brake: j.brake@qalipu.ca
	Chief Administrative Officer (CAO)	Brad Evoy: cao@qalipu.ca
	Director of Environment and Natural Resources	709-634-0998 Ian Sullivan: isullivan@qalipu.ca

Reporting and Engagement

VGM will continue to engage with each Indigenous group following notification of the accident or malfunction, including providing the IG group appointed contact with information on adverse environmental effects and mitigation measures.

Within 30 days after the occurrence of the accident or malfunction, VGM will report to each Indigenous group on any adverse environmental effects of the accident or malfunction and describe the measures taken by VGM to mitigate the adverse environmental effects.

VGM will provide each group with the opportunity to comment upon the described mitigation measures and include the views and advice of each group in the 30- day and 90-day reports to IACC (as per Federal EA Conditions 10.5.4.3 and 10.5.5.3).

7.0 EPP CONTROL REVISIONS

This EPP will be revised as necessary to reflect site-specific environmental protection requirements and allow updates as work progresses or changes. All EPP holders may initiate revisions by forwarding proposed revisions to the Safety and Sustainability Manager, Environmental Superintendent and/or Environmental Coordinator. The following information will be provided on the Revision Request Form (see Appendix J) for all revision requests:

a) section to be revised

b) nature of the revision

c) rationale for the revision (e.g., environment/worker safety)

d) name of the revision requestor

Approval for revisions will be required from VGM. When the Safety and Sustainability Manager approve a revision request, details of the revision will be distributed to all EPP holders and will be documented in the revision history log on the cover page. Each revision will be accompanied by:

a) revision instructions

b) list of sections being superseded

c) an updated Table of Contents indicating the status of each section in the EPP

When EPP holders receive a revision, they will, in a timely manner:

a) read the text of the revision

b) check the control sheet to confirm that all the listed pages have been received

c) remove and destroy the superseded pages from their copy of the EPP

d) insert the revised pages in the proper place in their copy of the EPP

e) page check the EPP, using the updated table of contents to confirm the EPP is complete and current

f) enter the revision number and date entered on the Revision History Log

g) incorporate the revision into the area of responsibility, as applicable

h) confirm that personnel in their purview are informed of and familiar with the revisions

8.0 CONTACT LIST

Department	Contact	Telephone
Equinox Mining Corporation	Jamie Russell, Safety and Sustainability Manager Scott Finlay, Environmental Superintendent Katie Babin, Environmental Superintendent Sara Squires, Sustainability Compliance and Reporting Lead	709-290-1374 709-489-0069
Canadian Coast Guard-Environmental Emergencies	24-Hour Environmental Emergencies Report Line	1-800-465-3722
Environment and Climate Change Canada - Environmental Emergencies	Senior Compliance Promotion Officer for the E2 Regulations ue-atl-e2@canada.ca	709-772-4285
Environment and Climate Change Canada – Canadian Wildlife Service	Rob Ronconi, Wildlife Emergency Response Coordinator	902-266-9864
Fisheries and Oceans Canada (DFO)	Tonya Warren (Fish and Fish Habitat)	709-693-8291
Digital Government and Service NL, Occupational Health and Safety Division	David Legge, Director 24-Hour Accident Reporting Line	800-563-5471 709-729-4444
NL Department of Environment, Conservation and Climate Change – Water Resource Management Division	Haseen Khan, Director	709-729-2563
NL Department of Environment, Conservation and Climate Change – Pollution Prevention Division	Robert Locke, Director	709-729-2556
NL Department of Forestry, Agriculture and Lands – Forestry and Wildlife	St. Georges District Office After Hours Emergency	709-646-3720 709-649-1743
NL Department of Forestry, Agriculture and Lands	24-Hour Forest Fire Emergency Line	1-866-709-FIRE (3473)
NL Department of Tourism, Culture, Arts and Recreation	Jamie Brake, Provincial Archaeologist	709-729-2462
NL Department of Energy and Mines	Kevin Sheppard, Director	709-729-6425
NL Department of Forestry, Agriculture and Lands – Land Management Division	Richard Carey, Director	709-637-2081 1-833-891-3249
Royal Newfoundland Constabulary	Emergency Non-emergency (Corner Brook)	9-1-1 709-637-4100
Royal Canadian Mounted Police	Grand Falls Detachment	709-489-2121

9.0 REFERENCES

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10.0 SIGNATURE PAGE

Equinox Gold

The undersigned certify that, as part of their Environmental Orientation, they have reviewed and understood their role and responsibilities regarding:

Valentine Gold Mine

CONSTRUCTION AND OPERATIONS ENVIRONMENTAL PROTECTION PLAN

Name (printed)	Representing	Company
Signature		Date
Name of Manager or Supervisor		
Manager or Supervisor Signature		Date

APPENDIX A ENVIRONMENTAL POLICY

APPENDIX B ENVIRONMENTAL SITE INSPECTION CHECKLIST

APPENDIX C INCIDENT MANAGEMENT AND REPORTING SOP

APPENDIX D ENVIRONMENTAL INCIDENT INVESTIGATION REPORT FORM

APPENDIX E MAPBOOK OF ENVIRONMENTAL SENSITIVITIES

APPENDIX F TRAFFIC MANAGEMENT PLAN

APPENDIX G CARIBOU AND TRAFFIC MANAGEMENT SOP

APPENDIX H NOISE MONITORING FOLLOW-UP MONITORING PROGRAM

APPENDIX I AMBIENT AIR QUALITY FOLLOW-UP MONITORING PLAN

APPENDIX J REVISION REQUEST FORM