



Courageous Lake Project

Wildlife Management and Monitoring Plan

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SEABRIDGE GOLD

REVISION TABLE

Version	Date of Revision	Summary of Changes	Date Approved by MVLWB
1	Sept. 2019	Submitted as supporting document with Land Use Permit application	

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ACRONYMS AND ABBREVIATIONS

AIMAIO	Akaitcho Interim Measures Agreement – Implementation Office
Camp	Matthews Lake Camp
COSEWIC	Committee on the Status of the Endangered Wildlife in Canada
ECCC	Environment and Climate Change Canada
GNWT	Government of the Northwest Territories
GNWT ENR	GNWT Department of Environment and Natural Resources
ha	hectare
km	kilometre
NSMA	North Slave Métis Alliance
MVLWB	Mackenzie Valley Land and Water Board
NWT	Northwest Territories
NWTMN	Northwest Territory Métis Nation
SARA	<i>Species at Risk Act</i> (Canada)
SARA (NWT)	Northwest Territories <i>Species at Risk Act</i>
SARC	Northwest Territories Species at Risk Committee
Seabridge	Seabridge Gold (NWT) Inc.
SOP	Standard Operating Procedure
TCWR	Tibbitt to Contwoyto Winter Road
TK	Traditional Knowledge
WMIS	Wildlife Management Information System (of GNWT)
WMMP	Wildlife Management and Monitoring Plan
WRRB	Wek'èezhii Renewable Resources Board
YKDFN	Yellowknives Dene First Nation

1. INTRODUCTION

Seabridge Gold (NWT) Inc. (Seabridge) is a Canadian based resource exploration company that has been conducting gold exploration in the Courageous Lake area since 2003. The Courageous Lake area is approximately 240 kilometres (km) northeast of Yellowknife, NWT (Figure 1). The property comprises 62 mineral leases and 26 mineral claims, totaling 50,258 hectares (ha) which are wholly owned by Seabridge. The property is located within an historic mining district that includes two past producing mines, underground exploration workings, and undeveloped mineral resources.

Exploration activities since 2012 have been regulated by a Class A Land Use Permit (MV2012C0025) issued by the Mackenzie Valley Land and Water Board (MVLWB). This permit expires December 27, 2019. For the next five to seven years, Seabridge proposes to conduct exploration activities that are focused on growing the mineral resources, maintaining community relationships and expanding the geological, ecological and traditional knowledge of the area.

To authorize these exploration activities Seabridge is submitting one type A land use application and two type B water licence applications to the MVLWB. The land use permit application describes the same activities within the same permit boundary as the expiring permit. Seabridge is submitting two Type B water licence applications to provide greater flexibility and allow Seabridge to operate up to five drills simultaneously. While the proposed exploration activities remain the same as those previously authorized, the use of three or more drills at one time may result in daily water usage that exceeds the 100 m³/day allowed by regulations without a water licence. At Courageous Lake, two Type B water licences are required because the proposed activities will occur on both Territorial lands and Federal lands. With the exception of the winter road, all activities will occur within the land use permit area identified on Figure 2.

Seabridge acknowledges the traditional uses of the land and water resources by Indigenous peoples and the cultural significance of the Courageous Lake area. Seabridge is committed to protecting the environment within which it operates, through compliance to existing regulatory standards and this Plan. More information on Seabridge's Environmental Policy can be found in Appendix A.

1.1 Purpose of the Wildlife Management and Monitoring Plan

This Wildlife Management and Monitoring Plan (Plan or WMMP) is a key supporting document and part of Seabridge's applications for land use permit and water licences. It is intended for use by Seabridge and its contractors. The WMMP defines how Seabridge will mitigate potential effects of exploration activities on wildlife and wildlife habitat, comply with regulatory requirements and address potential public concern. The Plan addresses the exploration activities proposed in the land use permit and water licence applications which are summarized in Section 2.2.

1.2 Concordance with Relevant Legislation, Regulation, Guidelines

Effective July 1, 2019 the Government of the Northwest Territories (GNWT) issued the *Wildlife Management and Monitoring Plan (WMMP) Process and Content Guidelines* (GNWT 2019a) which indicate that certain exploration activities that require a Type B water licence "might" trigger the requirement for a WMMP if wildlife related concerns are identified during community engagement activities and during previous project screening, as defined in section 3 of the Guidelines.

Seabridge assumes that a WMMP will be required and has proactively prepared this Plan following the guidance and template for a Tier 1 Basic WMMP as outlined in the Guidelines. The WMMP Screening Questionnaire is included as Appendix B. Seabridge also referred to other federal and territorial legislation and regulations listed in Table 1 for guidance in the preparation of the WMMP.

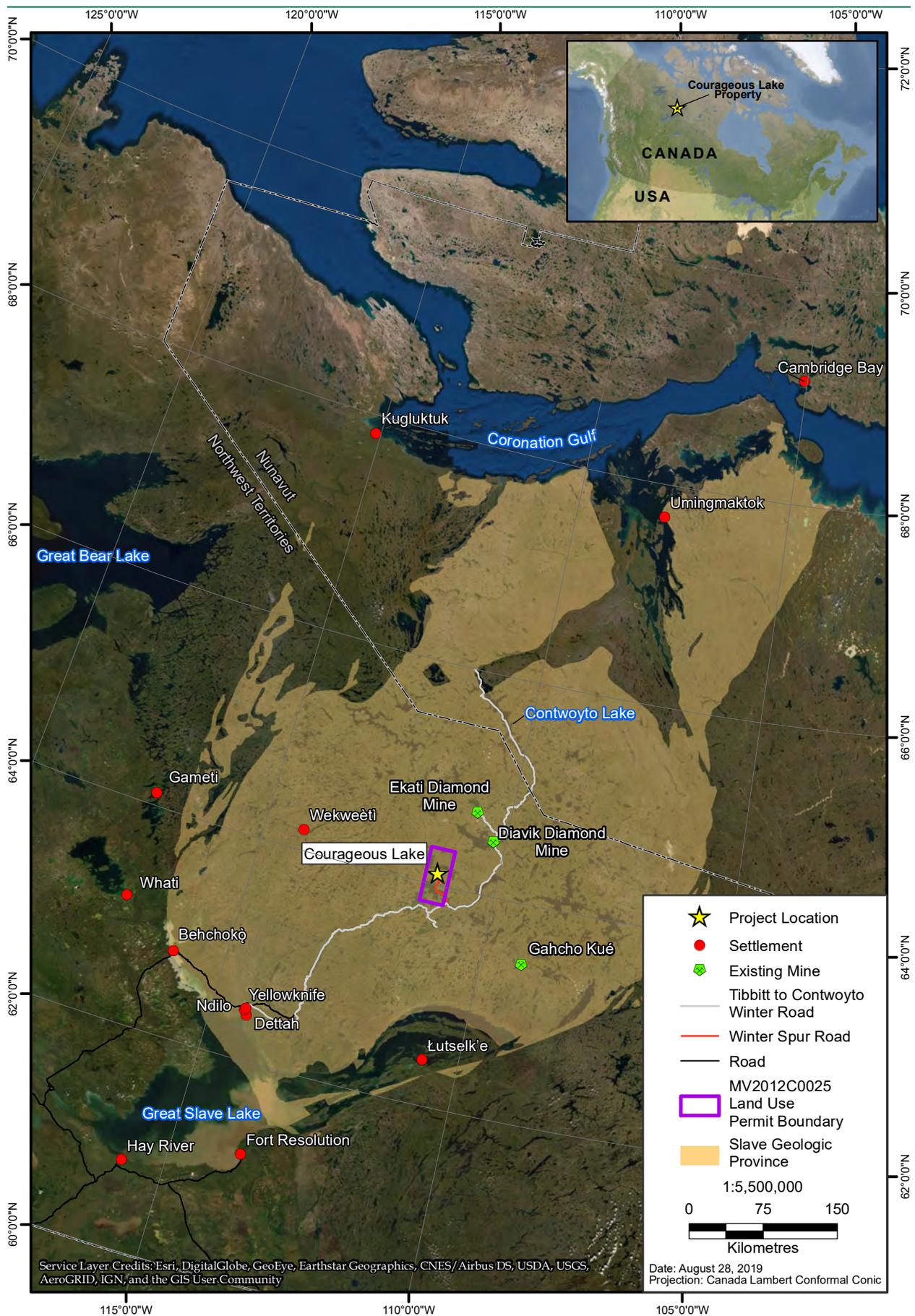


Figure 1: Regional Map of the Courageous Lake Property

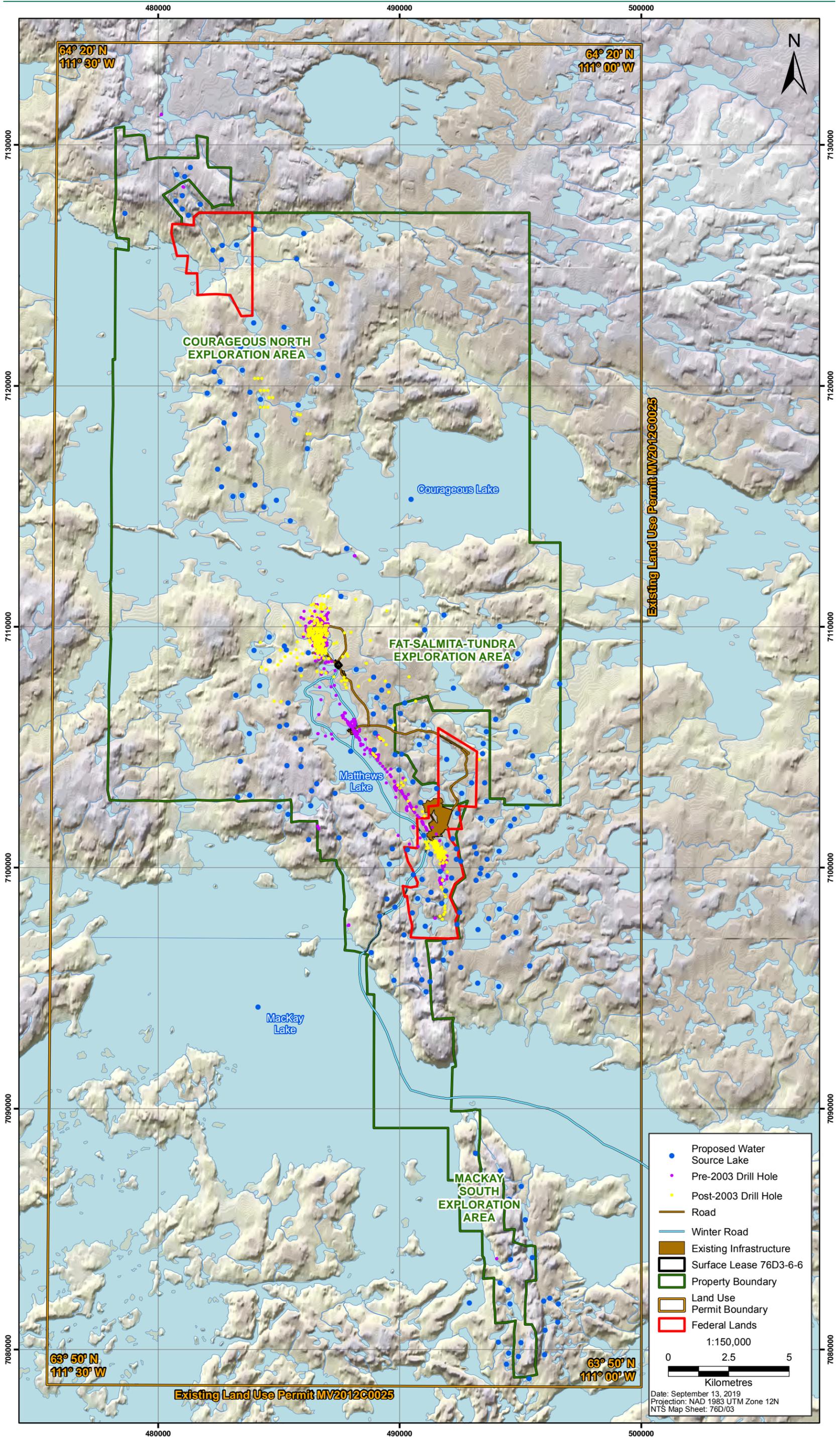


Figure 2: Courageous Lake Property - Proposed Exploration Land Use and Water Use

Table 1: List of Relevant Federal and Territorial Legislation

Legislation	Year	Responsible Agency	Relevance	Relevant Section of WMMP
<i>Species at Risk (NWT) Act</i>	2009	GNWT	Sets out the processes to assess, list, protect and recover species at risk specifically for the NWT.	Section 3
<i>NWT Wildlife Act</i>	2013 (Amended 2017)	GNWT	Defines wildlife, big game, conservation, and habitat. Sets responsibilities for government, renewable resources boards, and local harvesting committees. Sets conditions for wildlife research and observation activities, and habitat protection. Establishes the need and criteria for Wildlife Management and Monitoring Plans.	Entire document
<i>NWT Wildlife Act Phase 2 Regulations</i>	2019	GNWT	May require certain mineral exploration projects that obtain a Class B water licence to have a WMMP.	Section 4
<i>Wildlife Management and Monitoring Plan (WMMP) Guidelines</i>	2019	GNWT	Provides guidance to developers to determine if they are likely to require a WMMP. Establishes the required WMMP contents and the process for its submission, review, and approval.	Entire document
<i>Migratory Birds Convention Act and Regulations</i>	1994	Environment and Climate Change Canada (ECCC)	Prohibits the killing of migratory birds or depositing harmful substances in areas frequented by migratory birds, and also protects their eggs and nests.	Section 3
<i>Canada Species at Risk Act</i>	2002	ECCC	Sets out the processes to assess, list, protect and guide recovery of species at risk and their habitats. Designed to prevent Canadian indigenous species, subspecies, and distinct populations from becoming extirpated or extinct.	Section 3

1.3 Engagement

As part of the pre-submission preparations for the land use permit application and water licence applications, Seabridge contacted the MVLWB and the Federal government (Crown-Indigenous Relations and Northern Affairs Canada [CIRNAC]) to enquire which communities/Indigenous organizations should be contacted. An extensive list was initially identified; however, based on previous permitting activities the following groups were identified:

- Yellowknives Dene First Nation (Dettah and Ndilo)
- Łutsel K'e Dene First Nation
- Tłı̨chq̓ Government
- North Slave Métis Alliance (NSMA)
- Northwest Territory Métis Nation (NWTMN)
- Akaitcho Interim Measures Agreement – Implementation Office (AIMAIO)

Seabridge initiated pre-submission activities in June 2018 and during the fourteen months prior to submitting these land use permit and water licence applications, conducted a variety of engagement activities with Indigenous groups. Topics during those sessions included wildlife. A summary of the engagement activities, the issues raised and Seabridge's responses is provided in section 10 of the Exploration Work Plan.

1.4 Related Management Plans

In addition to this WMMP, Seabridge has four other management plans that outline how activities are performed on site in consideration of operational needs and regulatory requirements. Some actions described in these other plans also mitigate the effects of activities on wildlife and wildlife habitat. The plans that are particularly relevant to the protection and mitigation of effects on wildlife are summarized below (Table 2).

Table 2: Management Plans Related to the Wildlife Management and Monitoring Plan

Document Title	Relevance
Spill Contingency Plan	Describes the spill response procedures to ensure timely and appropriate spill cleanup on land, water, snow and ice, as well as identifying equipment available for fuel spills in water and on land to protect wildlife and aquatic species and their habitat.
Waste Management Plan	Describes the collection, segregation, handling, treatment, storage, transport, and disposal of hazardous and non-hazardous waste. For example: to prevent potential wildlife attractants and access, waste segregation requirements stipulate that potential attractants are appropriately managed and food waste is safely stored and incinerated.
Closure and Reclamation Plan	Defines the closure goal of returning areas affected by exploration activities to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment.
Engagement Plan	Describes ongoing activities to inform, involve and engage Indigenous groups regarding Seabridge activities, such as results of wildlife camera studies. Defines engagement activities that are required prior to submission of documents and permit applications; Seabridge undertook fourteen months of engagement focused on communicating the proposed activities, undertaking traditional knowledge studies, identifying concerns and reviewing the framework and content of the WMMP.

1.5 Development and Distribution of Wildlife Management and Mitigation Plan

Seabridge sought input from the Wek'èezhii Renewable Resources Board (WRRB), GNWT Department of Environment and Natural Resources (GNWT ENR) and Indigenous groups prior to developing this plan. No specific feedback or response was received.

The Plan will be reviewed annually and any updates or changes will be resubmitted to the MVLWB for approval. The Revision Table on page i of this document provides a record of revisions to this Plan.

Distribution of the Plan includes:

- Project Manager (Seabridge)
- On-site Camp Manager (Matrix Aviation)
- On-site Environmental Advisor
- Courageous Lake Camp Office (known as Matrix Office)
- Courageous Lake Exploration Office (known as Seabridge Office)
- Seabridge Head Office – Toronto
- MVLWB public registry – online

2. PROJECT DESCRIPTION

2.1 Courageous Lake Area

The Courageous Lake property is north of the tree line in the zone of continuous permafrost (Figure 1). A number of eskers occur throughout the area, which is characterized by undulating hills of tundra vegetation and exposed bedrock. The temperature range in the area is typical of Arctic Canada. During the winter period (October to March) the mean monthly temperatures range between -26°C and -16°C. During the summer period (June to September) the mean monthly temperatures range between 7°C and 15°C.

2.2 Description of Seabridge Activities

Over the next five to seven years, Seabridge will be conducting mineral exploration activities at their Courageous Lake property. Activities will include Matthews Lake Camp (Camp) operations, exploration drilling throughout the property, use of a helicopter to support drilling and environmental studies, use of fixed wing aircraft to mobilize equipment, personnel and supplies, and use/maintenance of existing gravel roads connecting the Camp with the airstrip and other areas of the property. In some years, Seabridge may construct and operate a winter road spur from the Tibbitt to Contwoyto Winter Road (TCWR) on MacKay Lake to the southeast of the Camp (Figure 2).

The complete exploration workplan is described in the 2020-2025 Work Plan which accompanies the land use permit application. Exploration activities are proposed to occur in two potential scenarios: a Typical Drill Program with up to three drill rigs, including use of the camp for two to three months, potentially progressing to a Large Drill Program that may involve up to five drill rigs, use of the camp with a potential duration of up to six months. In the later scenario, the level of activity will increase and has been addressed in this management plan.

2.3 Past Activities

The Courageous Lake area has seen exploration and mining activities since the 1940s. There are four historic mine development sites that have been reclaimed (Fat, Red-24, Salmita, Tundra), a gravel airstrip and approximately 19 km of gravel roads joining these sites. The historic infrastructure footprint is shown on Figure 3. Areas where Seabridge has conducted recent exploration activities are shown on Figure 4. For a more detailed description, refer to section 3 of the Exploration Work Plan that accompanies the land use permit application.

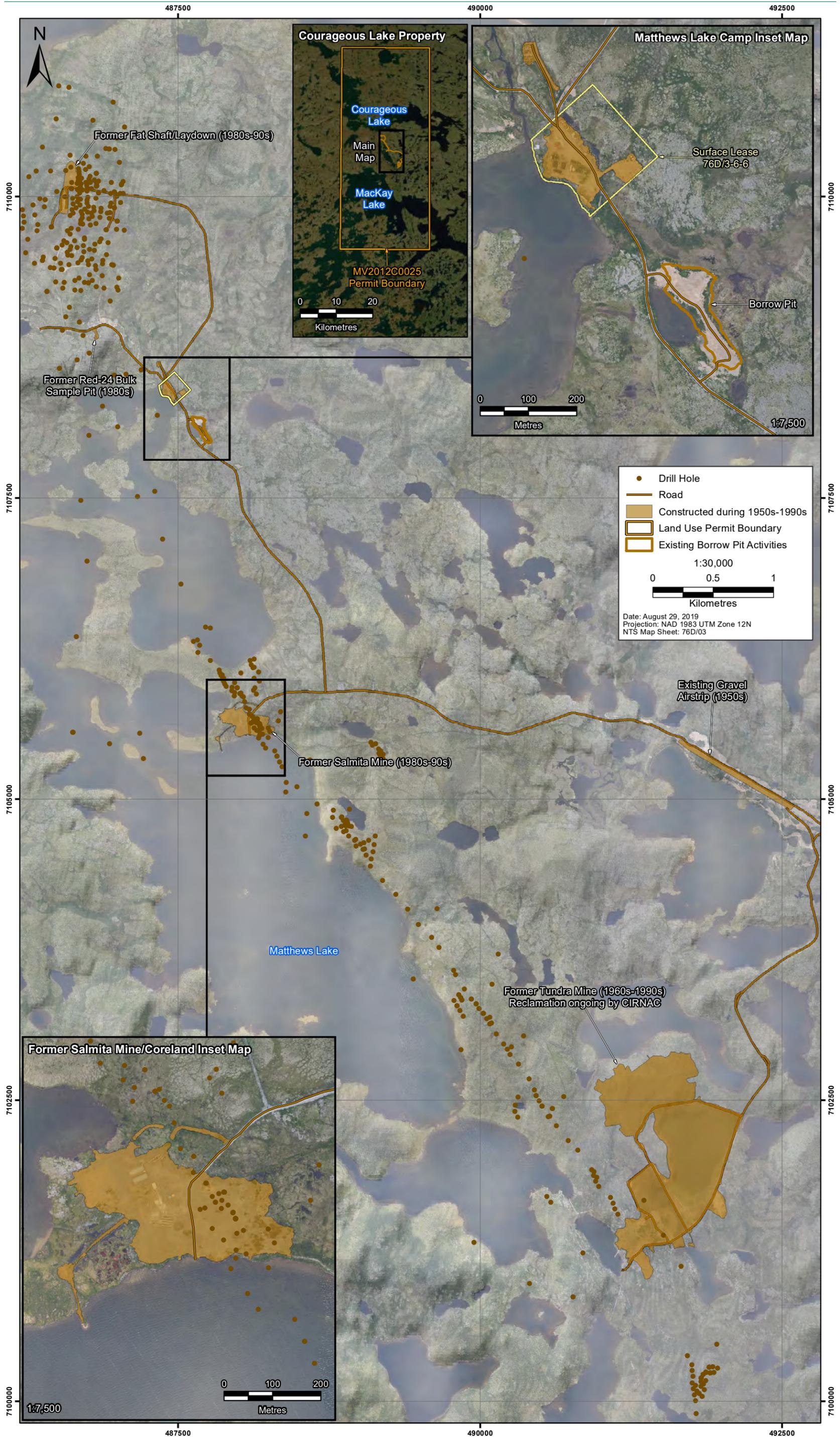


Figure 3: Existing Land Use Disturbances prior to Seabridge Gold Acquisition of Courageous Lake Property

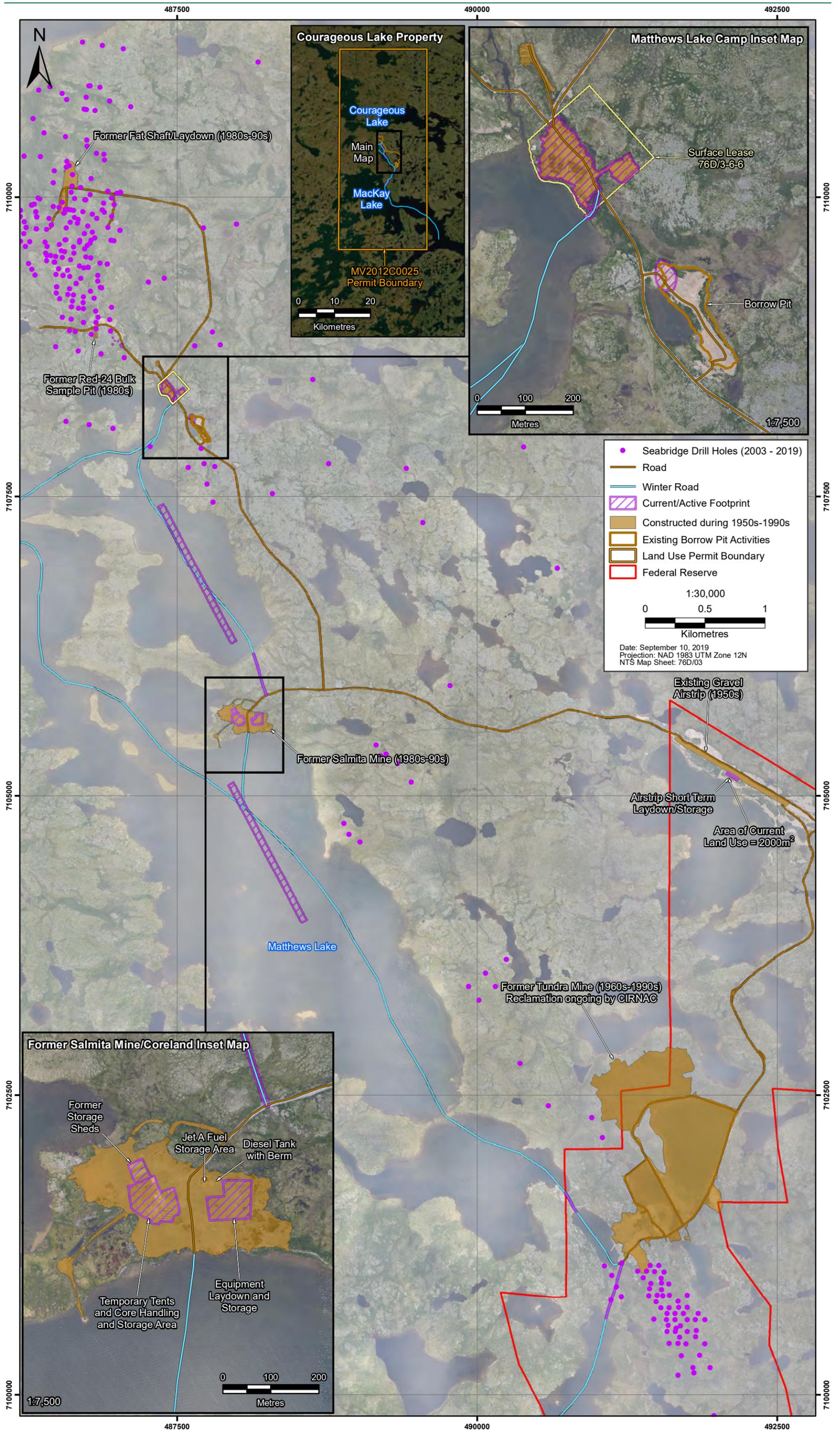


Figure 4: Current Land Use Activities by Seabridge Gold

3. POTENTIAL IMPACTS

3.1 Affected Species or Habitat Features

For the purposes of the WMMP, the wildlife species and wildlife habitat features of concern that have been included are those that may be considered of conservation concern as a result of their federal status on Schedule 1 of the *Species at Risk Act* (SARA; 2002), or territorial status (NWT *Species at Risk Act* (2009), or assessment by the Committee on the Status of the Endangered Wildlife in Canada (COSEWIC). Big game species for the NWT are also included. The list of species of concern was compiled from:

- Big Game species listed in Schedule A of the Northwest Territories Wildlife General Regulations;
- Traditional Knowledge (TK) study by Tłı̄ch̄q that focused on the Courageous - MacKay Lake area (Tsatchia et al. 2013);
- Draft TK study by Yellowknives Dene First Nation that focused on the Courageous - MacKay Lake area (YKDFN 2019);
- Comments during engagement activities such as community site visits, community meetings (refer to the Engagement Plan and Exploration Work Plan);
- Results of a camera monitoring program that has been operating at Courageous Lake property from 2010 to present (ERM 2019);
- Field studies conducted on birds and large mammals at Courageous Lake property between 2008 and 2012;
- Species at risk distribution data provided by GNWT ENR in response to a request for information from the GNWT's Wildlife Management Information System (WMIS; GNWT ENR 2019b); and
- Species distribution maps for those species listed by COSEWIC (Government of Canada 2019a), Schedule 1 of SARA (Government of Canada 2019b), the Northwest Territories *Species at Risk Act* (SARA (NWT) 2019), and the Northwest Territories Species at Risk Committee (SARC).

There are five big game species that may interact with Seabridge's exploration program (Table 3); all five species have been observed at the property since 2003. Muskox were not included as they occur at a very low abundance in the area.

Traditional knowledge studies by Tsatchia et al. (2013) and YKDFN (2019) described the importance of caribou to the Tłı̄ch̄q and Yellowknives and also note the history of wolf and wolverine trapping in the area. As noted in Table 4, three of the big game species (barren-ground caribou, grizzly bear, and wolverine) are also listed as being at risk by two or more of the NWT SARC, SARA (NWT), COSEWIC, and SARA. Table 4 also includes seven avian species of concern: peregrine falcon, rusty blackbird, short-eared owl, red-necked phalarope, horned grebe, Harris's sparrow, and bank swallow. All of these species have the potential to interact with the exploration program and are listed by at least one authority.

The list of wildlife species at risk that may interact with exploration activities (Table 4) informed the development of mitigation measures such as reducing habitat loss and disturbance to large mammals (Sections 4.2 and 4.3), avoiding bird nests when setting up new drill sites (Section 4.2), and managing the Camp and wastes to avoid conflict with wildlife that may be attracted to the Camp (Section 4.4).

Table 3: Big Game Species¹ that May Interact with Exploration Activities

Common Name	Latin Name
Barren-ground caribou (Bathurst Herd)	<i>Rangifer tarandus groenlandicus</i>
Grizzly bear	<i>Ursus arctos</i>
Wolf	<i>Canis lupus</i>
Wolverine	<i>Gulo gulo</i>
Moose	<i>Alces alces</i>

¹ As listed in Schedule A of the Northwest Territories Wildlife General Regulations.

Table 4: Wildlife Species at Risk that May Interact with Exploration Activities

Common Name	Latin Name	NWT SARC Assessment	SARA (NWT) Status	COSEWIC Assessment	Federal SARA Schedule 1 Status
Barren-ground caribou	<i>Rangifer tarandus groenlandicus</i>	Threatened	Threatened	Threatened	Not Listed
Grizzly bear	<i>Ursus arctos</i>	Special Concern	No Status	Special Concern	Special Concern
Wolverine	<i>Gulo gulo</i>	Not at Risk	No Status	Special Concern	Special Concern
Peregrine falcon	<i>Falco peregrinus</i>	Not assessed	No Status	Not at Risk	Special Concern
Rusty blackbird	<i>Euphagus carolinus</i>	Not assessed	No Status	Special Concern	Special Concern
Short-eared owl	<i>Asio flammeus</i>	Not assessed	No Status	Special Concern	Special Concern
Red-necked phalarope	<i>Phalaropus lobatus</i>	Not applicable	Not applicable	Special Concern	Special Concern
Horned grebe	<i>Podiceps auritus</i>	Not applicable	Not applicable	Special Concern	Special Concern
Bank swallow	<i>Riparia riparia</i>	Not applicable	Not applicable	Threatened	Threatened
Harris's sparrow	<i>Zonotrichia querula</i>	Not applicable	Not applicable	Special Concern	No Status

3.1.1 Barren-ground Caribou

Owing to its Threatened status, its distribution, and its importance to the people of the NWT, barren-ground caribou is the species of greatest concern in the Courageous Lake area. The Bathurst caribou herd is one of six barren-ground caribou herds in the NWT and the only herd of caribou expected to interact with the Courageous Lake property on an annual basis. The behaviour and range used by the Bathurst herd varies according to season (Table 5) and its population has declined significantly in recent years (Boulanger et al. 2017; GNWT ENR 2018b).

The historic annual range of the Bathurst caribou herd overlaps the Courageous Lake property but the parts of the range used in different seasons is variable. Radio-collared caribou data collected by GNWT ENR show that seasonal ranges used by the Bathurst herd have also changed from year-to-year in recent years (ERM 2019).

In general, caribou are observed at Courageous Lake during spring and fall migration and the overall number of caribou observations has been declining since 2011 as determined from the camera program data. Recently, there have been more observations of caribou during winter as detected through the camera program at Courageous Lake. This is consistent with collar data that has indicated that the herd has recently been wintering north of the tree-line and on to the tundra where Courageous Lake is located.

Importantly, the calving and post-calving grounds of the Bathurst herd are west of Bathurst Inlet and caribou do not interact with the Project during these periods.

Table 5: Seasonal Activity Period Dates for Bathurst Caribou

Seasonal Period	Dates
Spring Migration	April 20 to June 1
Calving	June 2 to June 16
Post-calving	June 17 to June 28
Summer	June 29 to August 17
Late Summer	August 18 to September 6
Pre-rut	September 7 to October 16
Rut	October 17 to October 31
Post-rut	November 1 to November 30
Winter	December 1 to April 19

Source: As adapted by GNWT ENR (2018a) from Nagy (2011)

3.2 Potential Impacts to Wildlife and Wildlife Habitat

Potential impacts to wildlife and wildlife habitat likely to occur with the proposed mineral exploration program include:

- Direct habitat loss;
- Sensory disturbance (indirect habitat loss);
- Wildlife attraction to camp facilities and waste;
- Wildlife-human conflicts; and
- Human access and harvesting opportunities.

Some direct habitat loss occurred in the area when previous exploration and mining companies altered the tundra to construct the camp, storage areas, and roads and conduct mining operations. Small areas of habitat will be lost or altered during the proposed exploration drilling. The drills are mobile units, designed to be lifted in pieces by a helicopter. They are constructed on a platform on skids which is placed on the tundra and minor alteration to vegetation is expected where the skids rest on the tundra; however, the footprint is limited.

Indirect habitat loss may result from sensory disturbances due to exploration activities (e.g., noise from generators and other equipment in camp, vehicles on site, operation of drilling equipment, and aircraft; odours from equipment, fuel, or humans; visual disturbance by light or human activity). Due to the seasonal nature and short duration of exploration activities, these sensory disturbances are temporary and transient in nature. While the physical habitat (e.g., soils, vegetation, presence of prey) may remain intact, the temporary sensory disturbance may reduce the habitat's value to one or more species of wildlife.

Wildlife may be attracted to camp facilities and wastes, which if left unmanaged can lead to wildlife-human conflict, which can result in wildlife injury or mortality through accidents, or through actions taken for protection of workers.

The presence of winter road infrastructure can increase human presence in remote areas and, in some cases, provide access routes for harvesters. Increased access and harvesting opportunities create potential wildlife management concerns both for harvested species and for species relying on sensitive habitats.

4. WILDLIFE AND WILDLIFE HABITAT MITIGATION

Considering the species most at risk (Table 4) and the list of potential impacts identified above, Seabridge has identified a list of those requiring mitigation. In designing the mitigation, Seabridge has considered the planned exploration activities, concerns identified during community engagement, and experience with mitigations considered effective at the Courageous Lake property and other similar grass-roots level exploration programs. The mitigation program is focused on the top two levels of the mitigation hierarchy: avoidance and minimization of impacts on wildlife and wildlife habitat by keeping wildlife safe and managing disturbance associated with planned exploration activities.

The resulting mitigation program is a set of operational procedures and guidelines designed to avoid or minimize the impacts of the exploration activities on wildlife and wildlife habitat. It incorporates environmental protection measures included in other management plans applicable to Seabridge's activities as well as measures in place at other exploration programs in NWT and Nunavut. A key element is the training and education of personnel. Collectively, these mitigation procedures will reduce the likelihood of wildlife-human conflict and of wildlife injury and mortality.

As needed, GNWT ENR will be contacted for guidance when unusual situations arise not covered by established procedures. This will yield an agreed course of action is undertaken incorporating animal welfare as a prime objective.

4.1 Wildlife Awareness Education and Training

The following policies and management actions are applicable to all personnel on site:

- Training for all personnel about their responsibilities to protect wildlife and wildlife habitat;
- Guidance on how to avoid personnel/wildlife interactions;
- Ongoing education related to the dangers of improper food waste disposal (re: Waste Management Plan);
- Seabridge and its contractors will report all relevant observations of wildlife to the On-site Environment Advisor, especially species of concern and observations of caribou, fox, bears, or wolverines near Camp (Appendix C);
- Bear awareness training (Appendix E) and implementation of bear alert and response procedures;
- A no feeding of wildlife policy;
- A no littering policy;
- A no hunting or trapping policy for all personnel and visitors to site;
- A policy that wildlife has the right-of-way on roads and personnel must remain within their vehicle while waiting for animals to pass; and
- Enforcement of speed limits on roads.

4.2 Mitigation for Direct Habitat Loss and Alteration

Mitigation and management actions to reduce the potential effect of habitat loss include:

- Minimize the size of the exploration drill hole footprint;
- Avoid known and repeatedly used wildlife residences including cliff-nesting raptor nests and carnivore dens;

- Conduct den and nest sweeps prior to commencing drilling activities as appropriate during winter and summer seasons;
- Minimize disturbance to vegetation communities; and
- Minimize disturbance to sensitive caribou habitats such as eskers and known movement corridors.

4.3 Mitigation for Sensory Disturbance

Mitigation and activity management to reduce the potential effect of disturbance on wildlife include:

- Construct and maintain equipment to minimize the generation of noise;
- Educate pilots on maintaining appropriate setbacks from wildlife, when safe to do so, wherever large animals are observed;
- Manage activities and timing to minimize disturbance to wildlife;
- When wildlife are observed on the road operators will stop their vehicles and remain in the vehicles; and
- Prohibit off-road vehicle use by all personnel and visitors to site.

Additional mitigation measures for caribou are listed in Table 6.

Table 6: Protection Measures Specific to Caribou at Courageous Lake Property

Activity/ Location	Monitoring Method	Trigger		Mitigation
		# of Animals	Distance	
Existing Infrastructure Areas	All personnel	1+ animals	Visible from footprint areas	<ul style="list-style-type: none"> ■ On-site Environment Advisor informs personnel who need to be aware of caribou presence.
Existing Gravel Roads and Winter Road	Drivers	1+ animals	On or within 500 m of the road	<ul style="list-style-type: none"> ■ Speed limits of 50 km/h or less. ■ All wildlife are given the right-of-way when they are on the road or appear to be crossing the road. Drivers stay in vehicles when stopped. ■ On-site Environment Advisor notified. ■ On-site Environment Advisor informs personnel who need to be aware of caribou – drivers.
Active Drilling	Drill crew	1+ animals	Within 500 m of drill	<ul style="list-style-type: none"> ■ Crew to remain inside the drill footprint. Allow animals to pass by. ■ Drill may continue to operate if already drilling when caribou approached. ■ Land helicopter at least 500 m from animals when conducting crew changes.
Drill Move	Drill crew	1+ animals	Within 1,000 m of drill sites	<ul style="list-style-type: none"> ■ Delay drill move and monitor wildlife until they leave area.
Helicopter	Pilots	1+ animals	300 m	<ul style="list-style-type: none"> ■ Helicopter flights avoid animals by as large a margin as possible, with a minimum of 300 m vertically and 600 m horizontally when safe to do so.

Activity/ Location	Monitoring Method	Trigger		Mitigation
		# of Animals	Distance	
Airstrip	Pilots or camp personnel, as available	1+ animals	250 m	<ul style="list-style-type: none"> ■ Prior to landing and taking off, the airstrip is checked for animals. If a large group is on the airstrip, then the flight may be held. ■ If an individual or small group of caribou are on the runway, then they may be gently herded off the runway with a vehicle.

4.4 Mitigation for Wildlife-Human Conflict

Personnel training and awareness (Section 4.1) are the most important elements in mitigating wildlife-human conflict. The Spill Contingency Plan and Waste Management Plan are also important in reducing and removing attractants from the site. In addition to staff training and site planning, wildlife-human conflicts will be mitigated through:

- Maintaining the Camp and drill sites in a clean and orderly fashion;
- Managing food to limit the attractiveness of the Camp; no food to be taken outside or to other camp buildings besides the kitchen/dining room;
- Managing attractants such as food, food wastes, grease, oils and other substances with strong odours to limit the attractiveness of site;
- Maintaining and operating the electrified fence around the camp to prevent wildlife from entering the area;
- “Hardening” camp buildings to prevent wildlife from entering – including skirting on buildings, keeping doors closed, etc.;
- Road and traffic management, and aircraft management (Table 6);
- Having at least one person on site at all times during exploration program who is trained in appropriate bear and predatory wildlife responses, including use of deterrents; and
- Contacting GNWT ENR for approval to destroy problem wildlife as a last resort.

These mitigation measures will minimize the risk to both personnel and wildlife.

5. MONITORING PROCEDURES

5.1 Mitigation Monitoring

5.1.1 *Incidental Wildlife Sighting Monitoring*

Incidental wildlife observations are collected by field personnel on an opportunistic basis through:

- Observations reported by on-site personnel using the wildlife sightings forms (Appendix C); and
- Observations of wildlife species from the wildlife camera program (Section 5.2-1).

Incidental wildlife observations are a useful measure to guide adaptive management and to track animals that may be attracted to the camp or habituated to any activities associated with exploration. Incidental observations are also useful for tracking broad trends in wildlife movement or distribution and timing. For instance, incidental observations from multiple camps indicate that bears are most frequently observed at camps during spring, before snow melt, when they are recently finished hibernating and are hungry.

It should be noted that incidental observations have a variety of biases, and so cannot be used as an absolute metric of wildlife abundance. These biases include reporting preference (large animals reported more frequently), reporting frequency, amount of daylight, number of personnel on site and their enthusiasm to report wildlife as well as multiple reports of the same animals.

Observation data from the two sources will be summarized for wildlife species of concern and reported annually (Section 7).

5.1.2 *Sweeps for Wildlife Nests and Dens*

A Seabridge personnel trained to identify active wildlife nests and dens will conduct a sweep of areas prior to new activities on the tundra. Sweeps will be specific to the season; e.g., bird nests during the bird breeding season (June and July). Seabridge will keep a log of when sweeps were conducted and the results.

All mitigation arising from pre-clearance surveys will be recorded. These may include set-backs from residences such as dens and nests. A summary of the pre-clearance monitoring and mitigation will be reported annually.

5.1.3 *Site Surveillance Monitoring*

Keeping the Camp clean and effectively managing attractants such as food and wastes is important to reduce the attractiveness of the Camp to wildlife. When the Camp is occupied, site surveillance checks will include:

- Regular checks of the site waste facilities to ensure that waste management is being done correctly and for any use by wildlife;
- Regular checks of the site buildings and other structures for use by wildlife;
- Incidental observations of use of site roads by wildlife as travel corridors; and
- Incidental observations of locations where wildlife may interact in an unpredicted way with infrastructure.

Seabridge will keep a log of monitoring efforts and observations of wildlife and wildlife sign associated with the roads, waste facilities, and buildings and will be reported annually (Section 7).

5.1.4 Wildlife Incident Monitoring

All wildlife incidents and mortalities will be recorded to the On-site Environment Advisor and reported to ENR (and ECCC as appropriate; Section 7.1; Appendix D). The monitoring of wildlife incidents is an extension of the incidental wildlife sighting monitoring (Section 5.1.1). Wildlife incident reporting will follow the process described in Section 7.1 and includes immediate and summary reporting requirements. The On-site Environment Advisor will provide notifications about potentially dangerous wildlife sightings to staff, contractors, and visitors as needed.

In addition to completed wildlife incident forms, Seabridge will keep a log of potential conflicts with, or deterrence of, animals at the Courageous Lake property when the Camp is occupied. Together these will form the basis of the annual incident reporting. The observations and incident records will be used to identify any adaptive management required to feed back into the mitigation program (Section 4).

5.2 Wildlife Monitoring

5.2.1 Wildlife Camera Monitoring for Caribou

Seabridge has been conducting a long-term wildlife effects monitoring study since 2010. Seabridge worked with Indigenous peoples knowledgeable of the area to identify caribou trails and areas that would be suitable for camera placement. Over 60 wildlife cameras have been operational throughout most years of the study. Seabridge will be continuing this study through the duration of the proposed exploration activities (Figure 5).

From 2010 to 2018 the study documented changing seasonal patterns in caribou observations in photographs and year-to-year changes in caribou observations in the study areas (ERM 2019; Seabridge 2019). The study has established relationships between the numbers of caribou observations and the population size and seasonal range locations of the Bathurst caribou herd. Annual reports are prepared that summarize results and observed trends.

5.3 Regional-scale Wildlife Monitoring

5.3.1 Regional Seasonal Caribou Monitoring

Since 2008 the GNWT ENR has maintained satellite collars on a sample of at least 20 adult caribou in the Bathurst herd. Access to these data has permitted Seabridge to analyze Bathurst herd seasonal range distributions and to compare them with data collected in the camera study area (Section 5.2.1).

Over the longer term, year-by-year analyses of ENR Bathurst herd seasonal ranges will provide guidance on shifts in seasonal distribution patterns of the herd for comparison with observations at site. This will enhance mitigation activities to avoid and minimize disturbance to caribou.

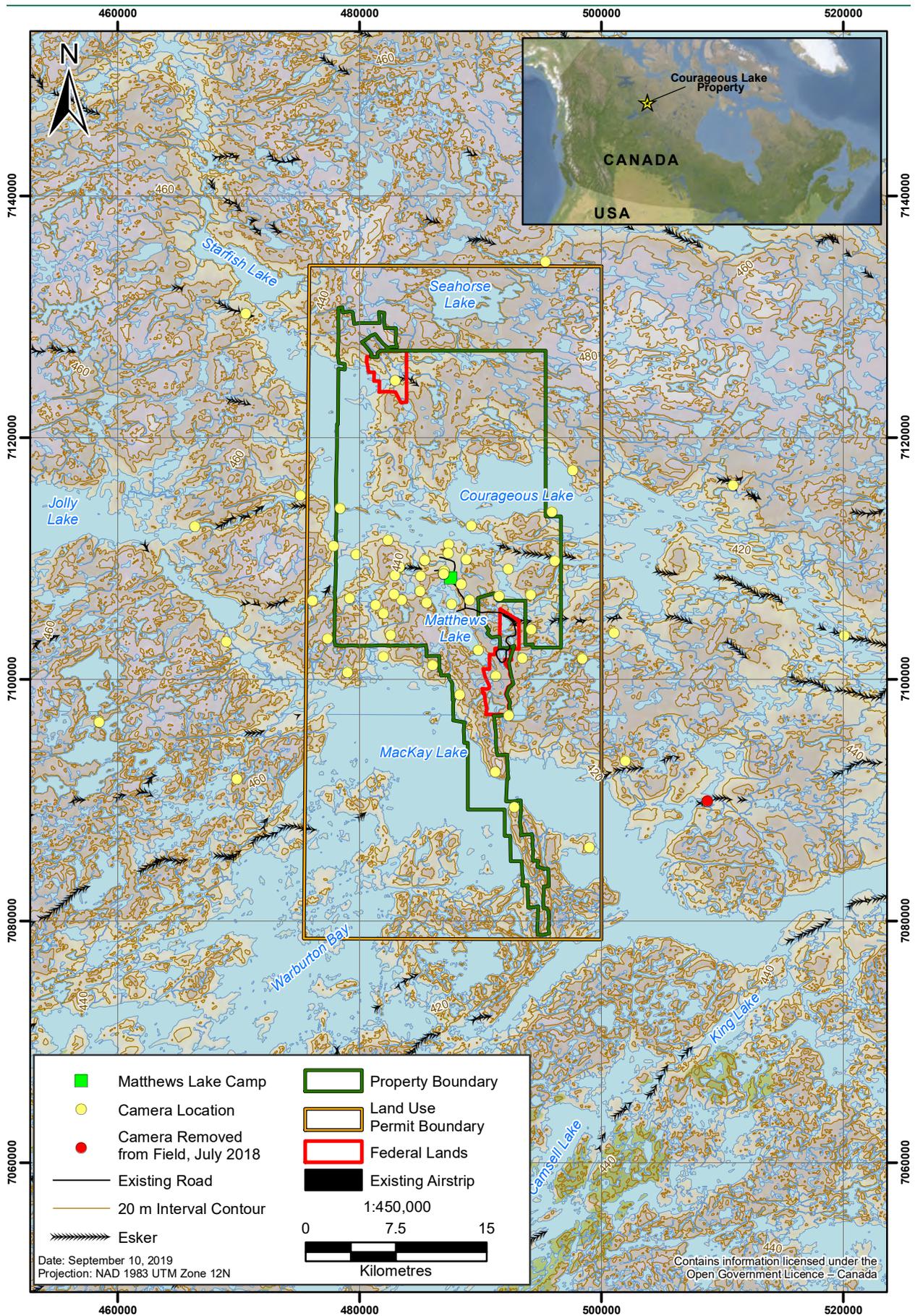


Figure 5: Courageous Lake Wildlife Camera Monitoring Locations

6. ADAPTIVE MANAGEMENT

The Courageous Lake WMMP includes reassessment of the effectiveness of mitigation activities through results obtained in the monitoring programs. The effectiveness of mitigation actions may become evident at the site at which time mitigation options will be assessed, adjusted as necessary, documented, and reported to ENR. During the preparation of annual and comprehensive reports, mitigation program effectiveness will be assessed. Recommended and planned changes will be included in each report.

7. REPORTING PROTOCOLS

Reporting requirements are summarized in Table 7.

7.1 Wildlife Incident Reports

Wildlife incidents, including wildlife injuries, wildlife mortalities, use of deterrents, and threats from wildlife to human safety or property will be reported immediately to GNWT ENR. Incidents involving migratory birds or federally managed species at risk will also be reported to ECCC. Procedures and a form for documenting and reporting of wildlife incidents are provided in Appendix D.

7.2 Annual Reports

Seabridge will submit the following information annually to GNWT ENR:

- Compiled wildlife sighting and monitoring data for inclusion in the GNWT Wildlife Management Information System (WMIS).

Seabridge will submit an Annual WMMP Summary Report which will include:

- A summary of exploration activities undertaken during the year;
- Summaries and records of wildlife incidents, wildlife injuries, wildlife mortalities, use of deterrents, and threats from wildlife to human safety or property;
- Summaries of wildlife monitoring and surveillance program activities;
- Summaries of wildlife monitoring and surveillance program results;
- Other observations made at the site relating to wildlife and wildlife habitats of concern, including unpredicted impacts and species observations;
- An assessment of mitigation program effectiveness; and
- Recommended and planned changes to the wildlife management and monitoring program and its mitigation and monitoring protocols.

The Annual WMMP Summary Report will be provided to WRRB, MVLWB, Cumulative Impact Monitoring Program Discovery Portal, communities, Indigenous groups, GNWT ENR, and ECCC.

7.3 Comprehensive Report

Seabridge will submit a Comprehensive WMMP Report at the end of the land use permit period. In addition to compiling the information provided in the Annual WMMP Summary Reports, the Comprehensive WMMP Report will include:

- Analyses of long-term wildlife incidents, wildlife observations, and wildlife monitoring;
- An assessment of mitigation effectiveness;
- Information about traditional knowledge studies that have been supported;
- A summary of adaptive management actions; and
- Recommendations for future mitigation and monitoring.

The Comprehensive Report will be provided to WRRB, Land and Water Board Registry, Cumulative Impact Monitoring Program Discovery Portal, communities, Indigenous groups, GNWT ENR, and ECCC.

Table 7: Wildlife Information Reporting Requirements

Information Type	Organization for Submission	Timing/Frequency
Wildlife Incidents	Regional ENR office	Immediately
Wildlife Sightings	ENR WMIS	Annually, at minimum
Summary Report	ENR Regional office ENR Wildlife Division MVLWB WRRB CIMP Discovery Portal	Annually
Comprehensive Analysis Report	ENR Regional office ENR Wildlife Division MVLWB WRRB CIMP Discovery Portal	At the end of the land use permit term

8. ROLES AND RESPONSIBILITIES

Seabridge's On-Site Environment Advisor will have the responsibility for implementing:

- Wildlife awareness training for all personnel and site visitors as required;
- Mitigation plans and activities;
- Monitoring;
- Incident reporting and other communications with GNWT ENR and ECCC;
- Overseeing compliance with regulations and this WMMP; and
- In consultation with senior Seabridge staff, making decisions to alter work or modify mitigations.

All personnel will be responsible to follow the environmental training provided to them and the mitigation and monitoring described in the WMMP.

9. REFERENCES

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APPENDIX A SEABRIDGE ENVIRONMENTAL POLICY

ENVIRONMENTAL POLICY

The Company strives to be an exemplary leader in environmental management. We intend to meet or surpass existing regulatory standards and minimize undesirable impacts on the environment to the extent possible. To meet this objective we will:

- At a minimum, meet all regulatory requirements;
- Recognize environmental management as an important corporate priority and integrate environmental considerations into all mine exploration, development, operational and closure planning;
- Assess the potential environmental risks of project design so that effective preventive measures can be established;
- Use industry leading practices and technologies that are aimed to improve environmental performance intended to enhance quality of water, air, vegetation and wildlife;
- Continuously improve the efficient use of resources, processes and materials;
- Participate in recycling programs to the extent possible and commercially feasible;
- Optimize the use of resources to ensure the conservation of natural resources and consumer goods such as energy;
- Require contractors and suppliers to provide operational guidelines and procedures which meet their environmental responsibilities, as part of the bid and procurement process;
- Consider environmental guidelines when purchasing equipment and materials;
- Communicate environmental information to our employees including changes and potential changes to environmental regulations as well as technological developments that may mitigate impacts;
- Develop guidelines for training and education of employees;
- Work with government agencies, the public, Treaty Nations, First Nations and stakeholders to develop open communications for a shared understanding of the Company's environmental protection programs and responsibilities;
- To the extent that is practical and commercially reasonable, work to remediate disturbed ecosystems to enable them to revert to their original state or an alternative sustainable state which optimizes biodiversity and benefits to the wider community.

It is the responsibility of every employee of Seabridge to carry out their daily activities in accordance with this Environmental Policy.

APPENDIX B SCREENING QUESTIONNAIRE: WILDLIFE MANAGEMENT AND MONITORING PLANS



Screening Questionnaire

Wildlife Management and Monitoring Plans

June 2019

Purpose

This screening questionnaire is a tool to be used by the developer to determine the potential impacts of their developments on wildlife and wildlife habitat to inform decisions about mitigations. It is intended to provide the GNWT with basic information about the location, timing, scale and nature of a development in order to assess whether any one of section 95(1) (a-d) of the *Wildlife Act* would apply and a WMMP required for the project.

This questionnaire should be filled out by the developer once they have determined the development is not exempt from the requirement for a WMMP ([Section 3.1.4 of the WMMP Process and Content Guidelines](#)).

Resources

The following information sources can be used to help answer the questions in the questionnaire:

- NWT Species at Risk website and booklet (www.nwt-species-at-risk.ca/content/documents)
- Recovery strategies, management plans, status reports, manuscript reports, file reports (www.enr.gov.nt.ca/en/resources)
- NWT Species and Habitat Viewer (under construction)
- Important Wildlife Areas in the NWT (Wilson & Haas 2012) (www.enr.gov.nt.ca/sites/enr/files/221_public_no_appendix_c.pdf)
- Data requests to ENR's Wildlife Management Information System (www.enr.gov.nt.ca/en/services/research-and-data/wildlife-management-information-system)
- NWT Discovery Portal (nwt-discoveryportal.enr.gov.nt.ca:8080/geoportal/catalog/main/home.page)
- Critical Breeding Periods for Raptor Species of the Northwest Territories (www.enr.gov.nt.ca/sites/enr/files/raptor_species_breeding_periods.pdf)
- Land use plans and supporting documentation
- Ecological assessments for existing or proposed protected areas
- Engagement with communities, renewable resources boards, renewable resource councils, hunter and trapper committees and Indigenous governments and organizations



WILDLIFE MANAGEMENT AND MONITORING PLAN SCREENING QUESTIONNAIRE

Developer Information (Person or Registered Company)

Full Name: Brent Murphy

Company: Seabridge Gold

Job Title: VP, Environmental Affairs

Address: 106 Front Street East, Suite 400, Toronto, Ontario M5A 1E1 Canada

Email Address: brent@seabridgegold.net

Telephone Number: (416) 367-9292

Fax Number: (416) 367-2711

Project Type

Please "✓" all that apply.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Mineral exploration | <input type="checkbox"/> Upgrading of seasonal roads to all-season roads |
| <input type="checkbox"/> Oil and gas exploration and development | <input type="checkbox"/> Timber harvesting |
| <input type="checkbox"/> Pipelines and gathering systems | <input type="checkbox"/> Power generation and transmission |
| <input type="checkbox"/> Mining and milling developments | <input type="checkbox"/> Other (please describe): |
| <input type="checkbox"/> New access for both all-season and winter roads | |

Location

Provide the project location as **EITHER**: 1) geospatial files (GIS data) submitted with this screening document **OR** 2) a printed map AND coordinates for the four corners of a box that encompasses all components of the project. Please specify the coordinates in decimal degrees. If in UTM, please specify the datum and zone.

NW 64°20' N, 111°30' W

NE 64°20' N, 111°00' W

SW 63°50' N, 111°30' W

SE 63°50' N, 111°00' W

Dates

Start Date: 01/01/20

End Date: 01/01/27

Period of operations within a given year (check all that apply):

- Spring (March-May) Summer (June-Aug) Fall (Sep-Nov) Winter (Dec-Feb) Year Round

If a project is seasonal, provide the specific dates within each season where activities will take place.

Exploration activities are expected to occur seasonally and will typically occur within the period from February to April and July through October. The timing of activities will be highly dependent on a number of factors including:

- Exploration results;
- Exploration funding and timing of funding; and
- Weather conditions.

There will be periods of seasonal shut down, typically between November and January, and May to June.

Which ranges of big game species does the project location overlap with?

Please "✓" all that apply. For Bison and Caribou, please indicate which sub-species, ecotypes, and populations/herds apply (e.g. Barren-ground Caribou – Bathurst Herd, Wood Bison – Mackenzie Population)

Species	Comments
<input type="checkbox"/> Bison	
<input type="checkbox"/> Coyote	
<input checked="" type="checkbox"/> Wolf	
<input type="checkbox"/> Cougars	
<input checked="" type="checkbox"/> Wolverine	
<input type="checkbox"/> Mountain Goat	
<input type="checkbox"/> Dall's Sheep	
<input type="checkbox"/> Black Bear	
<input checked="" type="checkbox"/> Grizzly Bear	
<input type="checkbox"/> Polar Bear	
<input checked="" type="checkbox"/> Moose	
<input checked="" type="checkbox"/> Caribou	Barren-ground caribou - Bathurst Herd
<input type="checkbox"/> Muskox	
<input type="checkbox"/> White-tailed Deer	

Which ranges of species at risk does your project overlap with?

Please "✓" all that apply. Based on the NWT *Species at Risk* booklet and website, list the territorially managed species at risk your project overlaps with.

Mammals	Insects
<input checked="" type="checkbox"/> Barren-ground Caribou <input type="checkbox"/> Boreal Caribou <input type="checkbox"/> Collared Pika <input type="checkbox"/> Dolphin and Union Caribou <input checked="" type="checkbox"/> Grizzly Bear <input type="checkbox"/> Little Brown Myotis <input type="checkbox"/> Northern Mountain Caribou <input type="checkbox"/> Northern Myotis <input type="checkbox"/> Peary Caribou <input type="checkbox"/> Polar Bear <input checked="" type="checkbox"/> Wolverine <input type="checkbox"/> Wood Bison <input type="checkbox"/> Other (specify): <input type="checkbox"/> Other (specify):	<input type="checkbox"/> Gypsy Cuckoo Bumble Bee <input type="checkbox"/> Transverse Lady Beetle <input type="checkbox"/> Western Bumble Bee <input type="checkbox"/> Yellow-banded Bumble Bee <input type="checkbox"/> Other (specify): <input type="checkbox"/> Other (specify):
	Amphibians
	<input type="checkbox"/> Northern Leopard Frog <input type="checkbox"/> Western Toad <input type="checkbox"/> Other (specify): <input type="checkbox"/> Other (specify):
	Plants
	<input type="checkbox"/> Hairy Braya <input type="checkbox"/> Mackenzie Hairgrass <input type="checkbox"/> Nahanni Aster <input type="checkbox"/> Other (specify): <input type="checkbox"/> Other (specify):
Birds	
<input checked="" type="checkbox"/> Peregrine Falcon (anatum/tundrius complex) <input checked="" type="checkbox"/> Rusty Blackbird <input checked="" type="checkbox"/> Short-eared Owl <input checked="" type="checkbox"/> Other (specify): Horned Grebe, Bank Swallow <input checked="" type="checkbox"/> Other (specify): Harris's Sparrow, Red-necked Phalarope	

Does your project overlap with or is it in proximity (<2 km) to:

<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	An important wildlife area (as identified in Wilson and Haas 2012)?	List the areas that apply:
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	An area identified as critical habitat for a federally-listed species at risk?	List the species that apply:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	An area identified as designated habitat for a territorially-listed species at risk?	List the species and habitats that apply:
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	A known or suspected winter or maternal den site for big game or prescribed wildlife?	Please provide details: Eight records from wolf dens site visits between 1996 and 2009. Provided by GNWT-ENR.
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	A calving or lambing area for big game?	Please list the species that apply:
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	A known or suspected bird nesting site (only applies to territorially managed birds that meet the definition of prescribed wildlife as outlined in the WMMP guidelines)?	Please list the species: Peregrine falcon
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	A known or suspected hibernaculum or overwintering site for a prescribed species (e.g. bat hibernaculum, amphibian/reptile hibernaculum or overwintering site)?	Please list all that apply:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	A known priority water crossing or land bridge for barren-ground caribou?	Please describe:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	A known key harvesting area for local communities?	Please describe:
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	Another important habitat feature not listed above?	Please describe:

A) Activities that may result in significant disturbance to big game or other prescribed species

Disturbance type	Frequency of disturbance events (# of events per unit time)	Duration of each disturbance event	Total duration over which disturbance events will occur	Timing	Extent of area within which disturbance events will occur
Use the following categories to describe each of the applicable activities for the project	<ul style="list-style-type: none"> • Continuous • >1/hour • >1/day • >1/week • >1/month • >1/year 	<ul style="list-style-type: none"> • <1 min • >1 min • >10 min • >1 hour • >6 hours • >12 hours • Continuous 	<ul style="list-style-type: none"> • <1 day • 1 day to 1 week • 1 week to 1 month • 1 to 3 months • 3 to 6 months • 6 to 12 months • >12 months 	<ul style="list-style-type: none"> • Spring • Summer • Fall • Winter • Year Round 	<ul style="list-style-type: none"> • <1 ha • 1 to 10 ha • 10 to 25 ha • 25 to 50 ha • 50 to 100 ha • 100 to 500 ha • 500 to 1,000 ha • >1,000 ha
Vegetation clearing using machinery					
Excavation					
Blasting					
Crushing					
Drilling	>1/year	>12 hours	1 to 3 months	Spring, Summer, Fall or Winter	1 to 10 ha
Seismic testing					
Operation of heavy vehicles or machines (≥ 5 tonnes)					
Vehicle traffic on roads	>1/day	>1 min	1 to 3 months	Spring, Summer, Fall or Winter	1 to 10 ha
Low-level aircraft flights (<1,000 Ft altitude)					
Other (please describe): Helicopter drill moves	>1/week	>6 hours	1 to 3 months	Spring, Summer, Fall or Winter	25 to 50 ha

B) Activities that may substantially alter, damage or destroy habitat

Disturbance type	Linear Features		Total Area affected (m ²) (for linear features use average width X total length)
	Average width (m)	Total Length (m)	
Vegetation clearing (including timber harvesting)			
Stripping of soils or removal of overburden			
Excavation (including mining and quarrying) Sand and Gravel borrow pit			1,000
Terrestrial seismic exploration			
Access roads, trails, cleared right of ways Existing gravel roads and Airstrip	10	31,000	310,000
Drainage of water bodies or wetlands			
Flooding of terrestrial habitat			
Trenching			
Above ground structures (pipelines, utility lines, fences, buildings) Camp and Coreland Buildings			40,000
Other (please describe): Drill Footprints (maximum of 700 drill sites that are 20x20m each)			280,000
Other (please describe):			
Combined total footprint for all activities undertaken			631,000

C) Activities that may pose a threat of serious harm to wildlife or habitat

Activity type	Examples	Description
		(provide a description according to the examples provided below)
Vehicle traffic (collision risk)	Number and type of vehicles used, daily traffic levels	When exploration activities are underway, there will be 4-6 vehicle trips per week to airstrip; 5-10 vehicle trips per day between Camp and Coreland (road distance to Coreland is ~4km) for crew shifts and equipment; 7 vehicle trips on average per week during the winter road season.
Structures or physical habitat alteration that might cause entrapment, entanglement, electrocution or collisions with wildlife	E.g. fences, open pits, open trenches, netting, tailings ponds, tall structures and overhead wires	
On-site storage of wildlife attractants (e.g. food, food wastes, chemicals, petroleum products)	List the types of wildlife attractants to be stored onsite	Food, food wastes, petroleum products.
Potential for release of contaminants or accidental spills of toxic substances	E.g. fuel/chemical transportation and storage, tailings ponds, particulate emissions from dust, emissions from incineration or flaring, risk of spills or well blow-out	Fuel transport and storage.
Trigger a natural disturbance event such as fire, lands slide, avalanche, altered hydrology, thin ice or open water in winter	What activities might incur a risk of triggering one of the listed disturbance events?	
Risk of accidental damage or destruction of a nest, den, beaver dam or lodge, muskrat push-up or hibernaculum	E.g. vegetation clearing during summer, ice road construction during winter, operating machinery or blasting, flooding/drainage habitat	Low risk. Prior to drill moves during spring/summer, locations will be surveyed for bird nests and dens.
Creation of new access into roadless area	Creation of new trails, access roads, or cleared right of ways, upgrading existing access to all-season road	A spur-road will be built in some years between Courageous Lake and the Tibbit to Contwoyto Winter Road.
Creating an ecological trap	Creating habitat conditions that would attract wildlife to an area where they would be exposed to a higher risk of mortality than under normal circumstances	
Other (please describe):		

D) Activities that may significantly contribute to cumulative impacts on a large number of big game or other prescribed wildlife, or on habitat

If the answer to any of these three questions is "Yes", and the project is deemed likely to satisfy the criteria for section 95(1)(a-c), then a further assessment will be conducted by GNWT to determine if the contribution to cumulative impacts might be significant.

<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Does the project occur within the range of a wildlife species that is currently closed to resident, commercial or Indigenous harvest (e.g. barren-ground caribou herds)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Does the project occur within the range of Boreal Woodland caribou or on the annual range of the Bathurst herd of Barren-ground caribou?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	Does the project involve creating new all-season access (any length) or seasonal access >50 km in length into an area without current road access, or upgrading >25 km of existing seasonal access to an all-season road?

Comments

Seabridge Gold (NWT) Inc. (Seabridge) is a Canadian based resource exploration company that has been conducting gold exploration in the Courageous Lake area since 2003. The Courageous Lake area is approximately 240 km northeast of Yellowknife, NWT (Figure 1). The property comprises 62 mineral leases and 26 mineral claims, totaling 50,258 hectares (ha) which are wholly owned by Seabridge. The property is located within an historic mining district that includes two past producing mines, underground exploration workings, and undeveloped mineral resources.

Exploration activities since 2012 have been regulated by a Class A Land Use Permit (MV2012C0025) issued by the Mackenzie Valley Land and Water Board (MVLWB). This permit expires December 27, 2019. For the next 5 to 7 years, Seabridge proposes to conduct exploration activities that are focused on growing the mineral resources, re-establishing community relationships and expanding the geological, ecological and traditional knowledge of the area.

To authorize these exploration activities Seabridge is submitting a type A land use application and two type B water licence applications to the MVLWB. While the land use permit application describes the same activities within the same permit boundary as the expiring permit, the use of more than two drills at one time will result in daily water usage that exceeds the 100 m³/day allowed by regulations without a water licence. At Courageous Lake, two Type B water licences are required because the proposed activities will occur on both Territorial lands and Federal lands. With the exception of the winter road, all activities will occur within the land use permit area.

Seabridge acknowledges the traditional uses of the land and water resources by Indigenous peoples and the cultural significance of the Courageous Lake area. Seabridge is committed to protecting the environment within which it operates, through compliance to existing regulatory standards and Seabridge's Courageous Lake management plans. More information on Seabridge's Environmental Policy can be found in Appendix A.

Exploration activities will include use of the existing Matthews Lake Camp, a core facility known as Coreland, use of an existing airstrip and existing roads connecting these features. Exploration activities will be conducted using mobile drills that can be moved by snow-cat during winter or helicopter during summer.

APPENDIX C WILDLIFE SIGHTINGS FORM

COURAGEOUS LAKE WILDLIFE SIGHTINGS FORM

<p>Complete this form if you observe wildlife (e.g., caribou, grizzly bear, wolf, wolverine, muskox, or fox), including on-site roads and the winter ice road. Take pictures if possible. Turn this form in to Environment Staff at the end of your shift.</p>					
Date and Time:			Observer Name:		
Job Title:			Photos: Yes / No How many?:		
<p>Animal Information:</p> <p>Species Name (if known, e.g., Caribou, Wolverine, Grizzly Bear): _____ Species Description (size, color): _____ Total Number of Individuals: _____</p> <p>Number of Male: _____ Female: _____ Young: _____ Unknown: _____</p>					
<p>Activity (Circle any that apply):</p> <p>Eating Walking Running Sleeping Playing</p> <p>Flying Nesting Other (describe): _____</p>					
<p>Observer Location (describe, provide GPS if possible):</p>					
<p>Habitat (circle one):</p> <p>Boulder Field Bare Ground Tundra Shrubs Stream/River</p> <p>Lake/Pond Open Water Wetland Shoreline Esker</p> <p>Conifer Forest Deciduous Forest Mixed Forest Other: _____</p>					
<p>Comments (e.g., describe behavior, distance, movement):</p>					

APPENDIX D WILDLIFE INCIDENT REPORTING PROCEDURE AND FORM

Procedures for Wildlife Incidents

Wildlife incident reporting will help reduce the number of wildlife incidents caused by project activities. The goal is to prevent wildlife conflicts and to enable adaptive management if conflicts do occur.

Wildlife incidents include:

- Wildlife injury or mortality, even from natural causes.
- Interactions between humans and wildlife with potential risk of harm to wildlife, personnel, or property.
- Damage to property or delay in operations caused by wildlife.
- Actions taken to deter wildlife.

All personnel must:

- Understand the definition of a wildlife incident.
- Fill out the Wildlife Incident Form when a wildlife incident occurs.
- Notify the On-site Environment Advisor immediately upon seeing injured or dead wildlife or upon causing injury or death to wildlife.
- Notify the On-site Environment Advisor immediately upon seeing a grizzly bear within 1 km of personnel or property.

The On-site Environment Advisor must:

- Immediately report wildlife incidents, including wildlife injuries, wildlife mortalities, use of deterrents, and threats from wildlife to human safety or property to GNWT Environment and Natural Resources (ENR).
- Immediately report any wildlife incidents involving migratory birds or federally managed species at risk to Environment and Climate Change Canada (ECCC), in addition to GNWT ENR.
- Advise personnel on proper procedures with regard to wildlife incidents and mortalities.

This procedure will be reviewed on an annual basis or as needed due to operational changes or in response to incident review.

COURAGEOUS LAKE WILDLIFE INCIDENT FORM

Complete this form if there is an incident involving wildlife approaching people or property, wildlife has damaged property, wildlife are injured or dead (even from natural causes), or if wildlife deterrents were used. Call Environment Staff Immediately.

Date and Time: _____

Observer Name: _____

Job Title: _____

Photos: Yes / No How many?: _____

Animal Information:

Species Name (if known, e.g., Caribou, Wolverine, Grizzly Bear): _____

Number of individuals: _____ Circle one: **Male** **Female** **Young** **Unknown**

Animal Condition (circle one): **Alive** **Injured** **Dead**

Is it wearing a collar?: **Yes / No**

Describe Behavior and other animal observations (crossing road, limping, running, resting, eating):

Incident Information:

Observer Location (Describe, add GPS coordinates if possible): _____

Describe Event (e.g., "animal ran across road, braked and avoided collision". "Animal found dead with no clear injuries"):

OFFICE USE

Form received and entered by: _____ **Date:** _____

Post-Incident Information:

Describe situation, including threats to personnel or wildlife safety, and cause:

Describe measures taken to reduce risk or harm: _____

Describe measures to prevent future occurrence: _____

Describe communications with GNWT ENR and ECCC:

APPENDIX E SAFETY IN GRIZZLY AND BLACK BEAR COUNTRY

Deterrents...

- Include 12 gauge cracker shells, air horns, flares and chemical repellents such as pepper spray.
- Are not completely effective against every bear in every situation.
- Should not make you less careful to avoid bear conflicts.
- Are potentially dangerous so use with extreme caution.
- If you are using a chemical repellent, try to stay upwind of the bear before using.

If a Bear Charges...

- Many charges are bluffs. The bear will often veer to the side at the last minute.
- Use a chemical repellent only at close range.
- If you have a firearm and contact appears unavoidable, shoot to kill.
- If you play dead during a bear attack, lie on your side, curl into a ball with your legs tight to your chest and hands clasped behind your neck.

If you must shoot a bear in self-defence, report the kill to a Renewable Resource Officer as soon as possible and provide an explanation of the incident, the date and location of the incident, and any other information requested by an Officer. You may not keep any part of a bear killed in self-defence.



For more information, contact the
Environment and Natural Resources
regional office nearest you:

Fort Simpson.....	867-695-7450
Fort Smith.....	867-872-6400
Inuvik.....	867-678-6650
Norman Wells.....	867-587-3506
Yellowknife.....	867-767-9238 ext. 53461
Sahtú Wildlife Emergencies.....	867-587-2422
Dehcho Wildlife Emergencies (May – Sept).....	867-695-7433
Fort Smith Wildlife Emergencies (May – Sept).....	867-872-0400
Hay River Wildlife Emergencies (May – Sept).....	867-875-7640
Inuvik Wildlife Emergencies (May – Oct).....	867-678-0289
North Slave Wildlife Emergencies.....	867-873-7181
Wildlife Collisions/ Report a Poacher.....	866-762-2437

www.enr.gov.nt.ca

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Safety in Grizzly and Black Bear Country



Government of
Northwest Territories

Welcome to Bear Country

Grizzly and black bears can be found throughout the Northwest Territories. They are an important part of the northern ecosystem. Northerners are committed to maintaining healthy populations of all wildlife, including grizzly and black bears. Treat bears with respect. Remember, you are in a bear's territory.

What's the Difference Between...?

Grizzly Bear	Black Bear
<ul style="list-style-type: none">1. Long, light claws2. Dished face profile3. Short, rounded ears4. Shoulder hump  <p>Front claw 2 - 4" long</p> <p>Front track</p>	<ul style="list-style-type: none">1. Short, dark claws2. Straight face profile3. Taller ears4. No shoulder hump  <p>Front claw 1.5" long</p> <p>Front track</p>

While You are Travelling...

- Always be alert.
- Travel in groups.
- Travel only during daylight.
- Avoid carrying strong smelling foods.
- Make noise where visibility is limited.
- Avoid bear feeding areas such as flood plains, berry patches and areas rich in horsetails and other grasses.
- Avoid bear travel areas, including shorelines, trails or near berry patches.
- Watch for fresh bear droppings and tracks.
- Carry bear deterrents.

If You are Camping...

- Avoid camping in areas frequented by bears.
- Always sleep inside a shelter (tent, cabin, etc.).
- Don't keep food in tents or areas of your camp other than the cook tent or kitchen/cooking area.
- Keep a clean camp. Wash all dishes and utensils after every meal.

- Avoid cooking greasy foods.
- Burn all garbage every day or take it to a bearproof disposal site. **Burying garbage does not eliminate odours.**
- If you are going to leave your campsite:
 - Bearproof your camp. Store food and other attractants (dish detergent, toothpaste, dog food, etc.) in an inaccessible place.
 - Let someone know where you are going.
 - Take a partner and bear deterrents with you.

If You Are Fishing...

- Be cautious near streams or lakes. Bears frequent these areas.
- Clean fish and dispose of guts away from camp.
- Keep and take home fish you catch on your last day only, to minimize bacterial growth in fish, and fish smells in camp.
- Don't wear clothes to bed that smell like fish.

If You are Hunting...

- Avoid hunting late in the day and returning to your camp in the dark.
- Stay alert when dressing game or handling meat and make sure you are away from your camp.
- Avoid shooting more than your party can pack out in a single load.
- If you must leave meat in the field, protect it from disturbance by other animals or the natural environment. Clearly mark the cache as yours before leaving it. Make sure you have a clear approach route when returning, and retrieve the meat as soon as possible to prevent wastage. Mark the meat to identify the harvester.
- Don't keep bloodied clothes in your tent.

If You Encounter a Bear...

- Remember the 3 S's... Stop, Stand still, Stay calm.
- Make sure others know a bear is in the vicinity.
- Do not run.
- Leave the bear an open avenue of escape.

...at a DISTANCE

- Alert the bear to your presence by speaking in low tones and slowly waving your arms.
- Quietly walk backwards the way you came or make a wide detour.
- Keep an eye on the bear.
- Stay downwind.
- Consider using warning shots, noisemakers.

...that is NEARBY

- Do not shout or make sudden movements.
- Avoid direct eye contact.
- Back away slowly.