



Tłıchǫ All-season Road Wildlife Management and Monitoring Plan

Insert applicable LWB project numbers

March 2016

Version 1

Government of
Northwest Territories

REVISION HISTORY

Version	Date	Notes/Revisions
1	March 2016	Original version (in draft) to accompany permit application to Board for preliminary screening.

The Department of Transportation and the Wildlife Division of Environment and Natural Resources will work collaboratively in revising this draft WMMP into the final Wildlife Management and Monitoring Plan, which will be utilized during the construction of the Tłıchq All-season Road.

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DEFINITIONS AND ACRONYMS

AANDC	Aboriginal Affairs and Northern Development Canada (reverted to INAC)
Adaptive management	A systematic process for continually improving management policies and practices by learning from the outcomes of operational programs.
CWS	Canadian Wildlife Service
Deleterious	Any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to use by man of fish that frequent that water (Fisheries Act).
DFO	Fisheries and Oceans Canada
DOT	Department of Transportation, GNWT
EC	Environment Canada
ENR	Environment and Natural Resources, GNWT
Environmental monitor	Individuals who observe project activities in relation to permit conditions, and report observations to the relevant regulator.
GNWT	Government of the Northwest Territories
Habitat	The area or type of site where a species or an individual of a species of wildlife naturally occurs or on which it depends, directly or indirectly, to carry out its life processes (NWT Wildlife Act).
INAC	Indigenous and Northern Affairs Canada
MBCA	Migratory Birds Convention Act
Mitigation	Measures taken to eliminate or reduce a potential project effect.
Monitoring	The process of observing and documenting project activities.
NGO	Non-governmental organization
NWT	Northwest Territories
PDR	Project Description Report
Project	Any development that requires a land use permit or water licence.
ROW	right of way
SARA	Species at Risk Act
SOP	standard operating procedure
TASR	Tłıchq All-season Road
TG	Tłıchq Government
TK	Traditional Knowledge
Wildlife	"wildlife" means (a) all species of vertebrates and invertebrates found wild in nature in the Northwest Territories, and individuals of those species, except (i) fish as defined in section 2 of the Fisheries Act (Canada), and (ii) other prescribed species and subspecies, (b) species of wildlife referred to in paragraph (a) that are domesticated or held in captivity, and individuals of those species, and (c) prescribed species or subspecies of vertebrates and invertebrates, and individuals of those species or subspecies. (NWT Wildlife Act).
Wildlife monitor	Individuals who work with field crews to mitigate disturbance to animals in the

	area, following guidelines set out in the Wildlife Management and Monitoring Plan.
WLWB	Wek'èezhìi Land and Water Board
Worker	A person employed by the Developer or the Contractor to work on the project.
WRRB	Wek'èezhìi Renewable Resources Board
WMMP	Wildlife Management and Monitoring Plan

1 INTRODUCTION

1.1 PURPOSE

The Wildlife Management and Monitoring Plan (WMMP) is intended to apply to the construction and operation of the proposed Tłıchq All-season Road (TASR). This WMMP is part of a larger Environmental Management Plan, which addresses environmental protection for activities associated with project construction. It is supplemented by the plans listed in [Section 1.4](#).

The WMMP is intended to describe 1) wildlife and wildlife habitat mitigation measures, 2) applicable legislation and regulations, 3) monitoring, and 4) reporting requirements, applicable to species at risk and species of management concern, including caribou, bears, moose, bison, furbearers (wolf, wolverine, marten, beaver, muskrat, etc.) and birds. These species are protected by legislation or are of importance to local Wek'èezhì harvesters. Mitigation measures related to reestablishment of habitat on disturbed sites, prevention of introduction of invasive plant species and prevention of dust impacts are also included.

The purpose of the WMMP is to minimize adverse effects to wildlife and wildlife habitat surrounding the proposed TASR corridor from activities associated with construction. The WMMP:

- Summarizes the statutory requirements for wildlife and wildlife habitat that will potentially be encountered during project construction ([Section 1.2](#))
- Describes engagement that was undertaken in developing the WMMP ([Section 1.3](#))
- Describes potential impacts to wildlife and wildlife habitat ([Section 3](#))
- Describes surveys to be conducted prior to construction ([Section 4](#))
- Describes requirements for compliance monitoring by project monitors ([Section 4](#))
- Describes measures to reduce or prevent the potential for interaction between people and wildlife to ensure human safety during project activities ([Section 4](#))
- Describes how the WMMP is to be reviewed as part of an adaptive management process ([Section 5](#))
- Describes reporting requirements ([Section 6](#))
- Summarizes requirements for training and education of project personnel pertaining to wildlife ([Section 7](#))

1.2 STATUTORY REQUIREMENTS RELEVANT TO WILDLIFE AND WILDLIFE HABITAT

Several federal and territorial acts and regulations apply to wildlife and wildlife habitat in relation to the Project (e.g. SARA, MBCA, Fisheries Act, NWT Wildlife Act, and Species at Risk Act [NWT]; [Table 1](#)). Specific sections of the relevant acts are provided in [Appendix A](#).

Table 1 Wildlife and Wildlife Habitat Protection Regulatory Requirements

Regulator	Regulatory Guidelines	Applicability to WMMP
EC ¹ /CWS ²	<i>Species at Risk Act</i> (SARA)	Under SARA, it is forbidden to kill, injure, harass, destroy the residence of, critical habitat of, capture or take an individual designated as extirpated, endangered, or threatened on federally-regulated lands (Sections 32 and 33), or territorial lands (Section 34 [1]). An order by the Governor in Council may, based on the recommendation of the Minister of Environment, apply Sections 32 and/or 33 on territorial lands if the territorial laws do not effectively protect the species or its residences in question (Section 34 [2] and [3]). (Government of Canada 2011a)
EC/CWS	<i>Migratory Birds Convention Act</i> (MBCA) and <i>Migratory Birds Regulations</i>	The MBCA protects migratory birds and their nests throughout Canada. Migratory birds covered under the act include: waterfowl, cranes, shorebirds, and songbirds (a full list of species is at http://www.ec.gc.ca/nature/default.asp?lang=EN&n=0836045B-1). The MBCA is the enabling statute for the <i>Migratory Birds Regulations</i> , 1994. These regulations state that without authorization of a permit, the disturbance or destruction of a nest or eggs of a migratory bird is prohibited (Government of Canada 2011b). See Appendix A for relevant excerpts of the MBCA.
EC/DFO ³	<i>Fisheries Act</i> – <i>Pollution Prevention Provisions</i>	The <i>Fisheries Act</i> states that unless authorized by federal regulation, no person shall deposit or permit the deposit of deleterious substances of any kind in water frequented by fish. This protection of water can contribute to protection of wildlife and wildlife habitat.
ENR ⁴	NWT ⁵ <i>Wildlife Act</i>	The NWT <i>Wildlife Act</i> pertains to all wildlife harvesting and management within the NWT. The Act states that a Wildlife Management and Monitoring Plan is required for projects that may cause significant disturbance to big game, substantially alter, damage or destroy habitat, pose a threat of serious harm or contribute to cumulative effects. The Act also states that no person shall, without a permit, chase, disturb, or harass wildlife. It prohibits the destruction, disturbance, or taking of the eggs or nests of birds identified in the list of prescribed wildlife. Permits to haze wildlife or engage in an activity that may result in disturbance to an animal or destroy/damage a den, dam, or lodge, or eggs or nests of birds not listed under the MBCA may be issued by ENR under the Act. The Act also states that a person is permitted to kill wildlife in defense of human life or property (GNWT 2010). See Appendix A for relevant excerpts of the <i>NWT Wildlife Act</i> .
ENR	<i>Species at Risk (NWT) Act</i>	The <i>Species at Risk (NWT) Act</i> applies to both public and private lands throughout the NWT and includes private lands owned under land claims agreements. The Act applies to any wild animal, plant, or other species managed by the Government of Northwest Territories (GNWT). The Act is intended to be complementary to the federal <i>Species at Risk Act</i> and addresses concerns at the territorial level.
NOTES: ¹ Environment Canada ² Canadian Wildlife Service ³ Fisheries and Oceans Canada ⁴ Department of Environment and Natural Resources ⁵ Northwest Territories		

1.3 ENGAGEMENT

DOT is committed to involving community and regulatory agencies in the design and implementation of wildlife programs during construction. The Project's Engagement Plan details the communications that have occurred between Tłıchq communities, regulatory agencies such as ENR and NGOs such as WRRB

regarding wildlife and wildlife habitat protection during construction. Community input and traditional knowledge (TK) are important factors that have been considered in developing mitigations for the proposed TASR. During the implementation and review of the WMMP, DOT will make a continued effort to ensure adequate engagement continues.

1.4 SUPPORTING MANAGEMENT PLANS

The TASR's overall Environmental Management Plan contains numerous individual plans that are also relevant to the protection of wildlife and wildlife habitat. These plans are as follows:

- Waste Management Plan
- Emergency Response Plan
- Spill Contingency Plan
- Erosion and Sediment Control Manual
- Fish and Fish Habitat Protection Plan
- Quarry Operations Plans (site-specific)
- Engagement Plan (including Record)
- Archaeological Site Chance Find Protocol
- In-Field Water Analysis Plan

2 PROJECT DESCRIPTION

The TASR involves changing the location of the Tłıchq access road between Highway 3 and the community of Whatı from the existing winter road alignment to the overland all-season alignment shown in Map 1. The TASR is defined as an all-season road approximately 94 km in length and 60 m in width with a cleared driving surface of approximately 8.5 m in width to accommodate a two lane gravel road with culverts and/or two lane bridges over water crossings as necessary.

The project is located within Mqwhı Gogha Dı Nıttı, the traditional territory of the Tłıchq Dene. The TASR is intended to provide improved service to the Tłıchq community of Whatı. The route is within the Taiga Plains and is within the zone of discontinuous permafrost (ECG 2007). The region provides habitat for a wide range of wildlife, fish and vegetation species. A description of environmental conditions within and surrounding the TASR corridor is included in the Project Description Report (PDR).

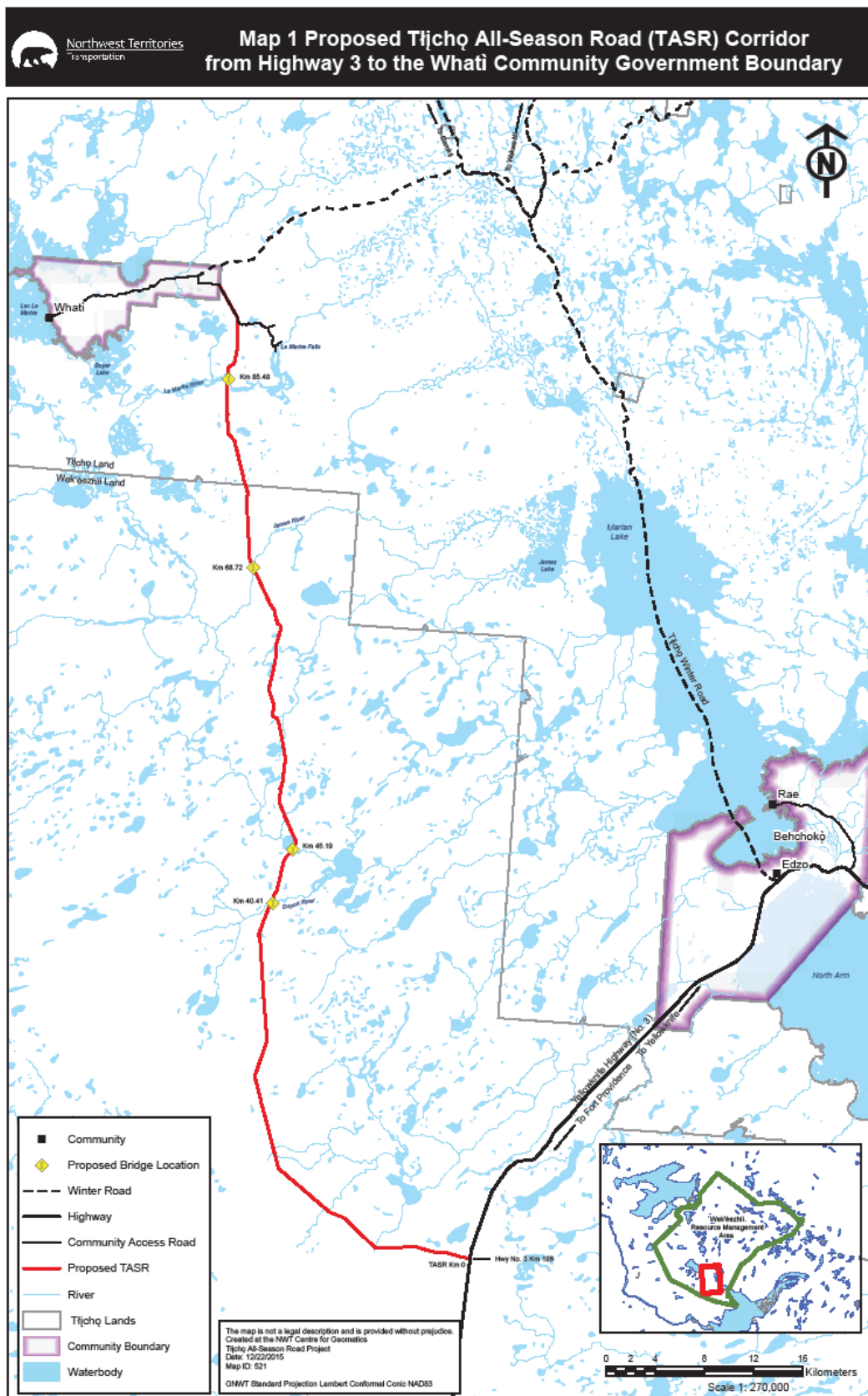
The proposed road begins approximately 40 km southwest of Behchokı at KM 196 along Highway 3 and continues in a northwesterly direction to the community government boundary of Whatı. The alignment is situated within the geographic coordinates 62°28'54" to 63°10'37" N latitude and 116°29'07" to 117°00'05" W longitude. It is entirely contained within the Wek'ıezhıı area. Approximately 17 km of the road is located on Tłıchq lands.

Map 1 shows the proposed TASR corridor, major bridges, waterbodies, nearby communities, and roads, while archaeological sites and significant traditional knowledge sites are included in the PDR.

Construction is estimated to take up to four years from approval. The area in which the project is located should allow for year-round construction. Timing of construction activities will attempt to minimize wildlife impacts and will follow design conditions. It is estimated that up to five borrow sources, including their accompanying access roads, will be developed as a part of construction. Two 150-person camps located near the midway points (KM 25 and 75) are also expected. DOT's intention is to decommission and reclaim the first 60 kilometres of the Tłıchq Winter Road System once the TASR has been constructed.

3 POTENTIAL IMPACTS TO WILDLIFE AND WILDLIFE HABITAT

Potential impacts associated with construction and operation of the TASR include: 1) direct habitat loss, 2) habitat degradation and functional habitat loss due to noise, dust, spills of toxic or hazardous substances or other sensory disturbances, 3) injury or mortality due to vehicle collisions, 4) increased access to harvesters or wildlife-human interactions, and 5) wildlife attraction.



4 WILDLIFE AND WILDLIFE HABITAT MITIGATION AND MONITORING

4.1 DIRECT HABITAT LOSS AND HABITAT DEGRADATION

Direct, permanent habitat loss will occur in the 60 m corridor and the area required for borrow sources and their respective access roads. Overall new habitat disturbance is expected to be low as the corridor has already been significantly impacted by recent forest fires and a previous winter road route with parts of the corridor having already been characterized as disturbed by Environment Canada's human disturbance mapping. Habitat disturbance associated with all other construction facilities such as access roads and camps will be temporary. When habitat disturbance is required for construction activities, appropriate mitigation and monitoring actions will be used so that potential long-term effects to soil and vegetation are prevented or reduced. Mitigation measures designed to protect wildlife habitat during construction activities are outlined in [Table 2](#).

Table 2 Habitat Loss and/or Alteration Mitigation Measures

Issue	Mitigations
Habitat loss and/or Alteration	<ul style="list-style-type: none"> Clearing will be limited to only those areas required Borrow source areas will be minimized and will be located close to the TASR ROW so that access roads are short Progressive reclamation of borrow sources and access roads will occur The use of borrow sources that have been impacted by recent forest fires and establishing the proposed TASR corridor along the existing disturbed alignment will be considered where operationally reasonable Personnel will not travel off- corridor unless there is a specific requirement (e.g. waste retrieval) Access roads to borrow sources will be closed to prevent recreational users from using the roads in the future If a key wildlife feature of a species at risk is discovered, ENR and/or EC will be contacted and activity might be temporarily suspended pending consultation with these agencies Reclamation of the terrestrial portions of the current Tłıchǫ winter road (KM 0-60) will eventually offset some of the new habitat loss Dust suppression techniques (as per the GNWT <i>Guideline for Dust Suppression</i> and DOT's <i>Erosion and Sediment Control Manual</i>) will be used to minimize dust from spreading onto vegetation outside of the ROW. Enforcing slow speeds and using blast mats during construction will also help with dust suppression Equipment will be cleaned prior to entering the construction zone so that non-native/invasive species of vegetation do not spread and impact native species populations. If non-native/invasive species are identified within the corridor due to construction, a response plan will be prepared DOT's <i>Erosion and Sediment Control Manual</i>, in conjunction with a suitable road design, will be used to manage erosion, sediment and slope stabilization issues to avoid damaging riparian, stream, wetland and lake habitat A Spill Contingency Plan will be used to prevent and respond to spills
Vegetation disturbance	<ul style="list-style-type: none"> Equipment will be cleaned prior to entering the construction zone so that non-native/invasive species of vegetation do not spread and impact native species populations. If

	<p>non-native/invasive species are identified within the corridor due to construction, a response plan will be prepared</p> <ul style="list-style-type: none"> • Annual monitoring of roadsides for invasive species will be conducted each year of construction and if non-native/invasive species are identified due to construction, a response plan will be prepared • Reclamation of the terrestrial portions of the current Tłıchq winter road (KM 0-60) will help to eventually offset some of the new habitat loss • DOT's Erosion and Sediment Control Manual, in conjunction with a suitable road design, will be used to manage erosion, sediment and slope stabilization issues to avoid damaging riparian, stream, wetland and lake habitat • Re-vegetation with native species, where possible and necessary • Construction on highly saturated soil (primarily during freshet) will be avoided where practical or suitable ground equipment will be used to prevent unnecessary soil damage through rutting, etc. • Borrow sources will be selected by considering various criteria, such as distance from TASR corridor and whether the area has already been disturbed by the 2014 forest fires • To protect vegetation from spills of deleterious substances, contractors and employees will follow the procedures detailed in SOPs and the Spill Contingency Plan
Increased erosion or slumping, which changes plant communities	<ul style="list-style-type: none"> • Vegetation removal will be minimized at the clear-span abutments and culvert installations. Site-stabilization will be conducted as required • Standard erosion and sedimentation control best management practices will be used during construction by following DOT's <i>Erosion and Sediment Control Manual</i> (2013)
Alteration of hydrology (ponding or reduced flow), which changes plant communities	<ul style="list-style-type: none"> • Culverts will be used where appropriate to maintain existing hydrological conditions in lowland areas and to avoid or minimize ponding along the TASR or the drying out of isolated sections of potentially affected wet lowlands • Culverts will be inspected, particularly during spring flows, and blockages will be removed to prevent ponding
Loss and alteration of vegetation and wetland communities within proposed TASR	<ul style="list-style-type: none"> • Reclamation of the current Tłıchq winter road (KM 0-60) will eventually offset some of the new habitat loss • Borrow pits will be closed when they are no longer required, and reclaimed in a progressive manner, as described in the applicable Quarry Operations Plan • Borrow sources and road design will be selected to minimize footprint • Use of a predominantly pre-disturbed route cleared of vegetation limits the amount of vegetation required to be removed during construction. Widths vary along the route, but in general, there is at least a 3 m cleared corridor for the entirety of the proposed route. The sandy south end of the route is naturally wider as is the north end of the route, which was used as a timber harvesting area • Where reasonable, borrow source locations that have been disturbed by the forest fires will be selected to reduce loss of vegetation • Low ground pressure equipment will be used for initial construction to reduce compaction and rutting
Loss of rare plant species and rare ecological communities	<ul style="list-style-type: none"> • Setbacks will be established around wetlands, rare plant populations and rare ecological communities, where practical, to restrict adjacent vegetation clearing activities. If avoidance is not an option, suitable mitigation strategies will be determined in consultation with ENR • Flagging and/or fencing of rare plant populations and rare ecological communities situated adjacent to the TASR will occur where practical • The project footprint will be surveyed by a qualified biologist/botanist for the presence of rare plant species in advance of construction, if required. If rare plant species are found, ENR will be consulted to determine next steps

Sensory and other Disturbances	<ul style="list-style-type: none"> • Construction activities will be limited during sensitive periods to minimize effects on wildlife. For example surface blasting will be suspended when caribou are identified within a 'danger zone' and the period for no harm or disturbance to migratory birds and their nesting habitat will be observed. Further details pertaining to wildlife and blasting can be found in the WMMP and Quarry Operations Plan, respectively • Equipment will be in good operating condition and will have mufflers to minimize construction noise • During construction, the number of vehicles in operation will be reduced by transporting workers to site via vans or extended crew cabs • Observations of species at risk by project staff will be reported to ENR • Construction operations will be temporarily suspended when species at risk and barren-ground caribou are within 500 m of construction activities • A pre-disturbance survey will be conducted for active dens and nests with the help of ENR, within 500 m of the proposed TASR footprint, to try to avoid important bear, wolverine, and bird habitat • Setback distances for dens identified in Appendix B will be adhered to at the very least, or as required in the land use permit • In the event that an active den is identified during construction, ENR will be consulted to determine an appropriate strategy • Wildlife monitors will be on site to monitor wildlife and manage risks • During winter, snow banks within the proposed TASR footprint will be kept low and escape points will be ploughed out for wildlife crossing every 300 metres • Water from nearby, suitable water sources, as per the GNWT <i>Guideline for Dust Suppression</i> (2013), will be applied during summer construction • Slow speeds (50 km/h) for haul trucks and other vehicles susceptible to creating excessive dust during summer construction will be enforced • Blast mats will be used
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4.2 WILDLIFE DISTURBANCE AND MORTALITY

4.2.1 General Wildlife Disturbance and Mortality Mitigation

Environmental Monitors will monitor activities during construction to observe whether work is conducted in accordance with applicable regulations, commitments, and mitigation measures. Project Wildlife Monitors will record wildlife observations and the project's activities in relation to the mitigations and procedures in the WMMP. Both environmental monitors and wildlife monitors will provide advice to the construction contractor(s) and report their observations to the appropriate management agency and designated Project contact. Details regarding reporting requirements specifically for Wildlife Monitors are outlined in **Section 6 - Reporting**.

Mitigations outlined in **Table 3** are designed to reduce wildlife disturbances and prevent wildlife-human interactions/conflicts. Wildlife sensitive periods and recommended minimum setback distances for wildlife habitat and wildlife use areas are specified in **Appendix B**. When setbacks cannot be followed, the Wildlife Monitor will contact the local GNWT ENR or EC-CWS office to determine adjustments for specific situations. In the case of exceptions to setback distances applied to nests of breeding birds, nests will be monitored to ensure breeding activity is not disrupted.

Additional wildlife mitigation measures specific to birds, caribou, bison, and bears are outlined separately in subsequent sections of this WMMP.

Table 3 General Wildlife Disturbance, Mortality and Wildlife-Human Interaction Mitigations

Issue	Mitigations
Wildlife Incidents	<ul style="list-style-type: none"> An appropriately designated supervisor will educate field workers on the applicable practices contained within the various environmental management plans, including the WMMP An appropriately designated supervisor will provide field workers with Bear Aware training and general wildlife awareness The successful contractor will follow the wildlife-human interaction procedures outlined in the WMMP, which includes Bear Aware training and safe working distances from wildlife Workers will avoid all interactions with wildlife unless crew safety is at risk Field workers will not feed, harass or approach wildlife Birds, nests and eggs will be left intact. If an active nest is directly near or in the path of a borrow source site, a no-work zone will be established and crews will work in another area within the approved borrow site until birds have vacated the nests (May to mid-August) Clearing during bird nesting and fledging season in all habitat types will be avoided (May to mid-August); however, if vegetation clearing is required within this time, pre-clearing nest surveys will be conducted and no-work zones for identified active nesting sites will be established Humans/wildlife conflicts and incidents, including the use of deterrents, will be reported to the appropriately designated supervisor and documented Significant wildlife features, such as nests and dens will be documented and reported. This includes possible raptor nest and bear den surveys prior to commencing construction Firearms will not be allowed on-site except for firearms in the possession and control of authorized wildlife monitors No hunting or fishing by field workers will be permitted All food and stored garbage will be kept in bear-proof areas or bear-proof containers to prevent wildlife attractants Grease, oils, fuels stored on-site will be stored in bear-proof areas or containers and the approved Waste Management Plan will be followed Workers will implement the Observe, Record and Report Policy, encouraging workers to report any activities related to wildlife as indicated in the mitigation tables. The appropriately designated supervisor will be responsible for obtaining and reporting this information to the appropriate responsible agency Wildlife sightings will be recorded (including GPS location data if possible) and submitted to the DOT Environment Division on a monthly basis and included in annual permit reporting to WLWB
Wildlife Mortality	<ul style="list-style-type: none"> Any key species mortality will be immediately reported to appropriate territorial (ENR) and federal (EC) wildlife authorities Maintenance measures to reduce attraction of wildlife to the proposed TASR corridor will be employed Additional mitigation to minimize effects on wildlife will be developed through ongoing discussions with ENR and the approval of a WMMP Multiple mortalities of other species will be reported to EC (e.g. multiple birds striking infrastructure over several months, or single incident of a large flock of migratory birds striking infrastructure)
Spills of Hydrocarbons or Toxic Substances Resulting in Injury to Wildlife and/or	<ul style="list-style-type: none"> Vehicles will be equipped with spill kits and fuelled 100 m away from waterbodies Fuel storage areas will be equipped with spill kits, will be located at least 100 m away from waterbodies and large fuel storage tanks (2,000 L to 50,000 L) will be double walled Spill response and containment will be completed expeditiously in accordance with the approved site-specific Spill Contingency Plan and the contractor's HSE manual and procedures

Wildlife Habitat	<ul style="list-style-type: none"> • Appropriate deterrents will be used to discourage wildlife from entering affected area • Territorial (ENR) and federal (EC) authorities will be contacted immediately to determine appropriate course of action, which may including capturing, relocating or treating contaminated wildlife
Wildlife Attraction to Site and Waste Management	<ul style="list-style-type: none"> • Waste products will be stored in secured containers and transported to appropriate facilities • Wildlife deterrent mechanisms (including fencing and lights) will be used as needed • Camps and buildings will be designed to prevent wildlife interactions • Adequate lighting will be installed in areas where it is essential to detect bears that may be in the vicinity • Personnel will follow an approved Waste Management Plan

4.2.2 Bird-Specific Disturbance Mitigation

The risk of disturbances to breeding birds and their nest or young birds is negligible during winter construction. However, summer activities will include: embankment compaction, bridge deck installation and grading. Summer construction activities will mostly be confined to the surface of the previously constructed highway embankment and will not occur on undisturbed land. The primary objective of the bird-specific mitigation (see [Table 4](#)) is to prevent or minimize impacts to birds, their nests and habitat. Results from baseline project surveys may provide some indication of areas of particular concern based on habitat modeling or previous observations.

Table 4 Bird-specific Mitigation Measures

Issue	Mitigations
Disturbance to birds and bird habitat	<ul style="list-style-type: none"> • Any vegetation clearing necessary for construction activities (e.g. to install water crossings) will be conducted during frozen ground conditions, and will be done by hand, where practical. • Highway construction activities during summer will be primarily limited to road base compaction and grading, and culvert remediation and maintenance, with activities confined to the surface of the previously constructed embankment; no work is expected to take place on undisturbed land. • For any construction activities, including vegetation clearing, planned during the breeding bird season (generally April 25 – August 24 with some exceptions; see Appendix B), a pre-disturbance survey will be conducted prior to the commencement of activity; this survey will focus on the embankment and immediately adjacent habitat visible from the embankment. • If an active nest is found, setback distances (as defined in Appendix B) will be applied and maintained until the nest is no longer active, unless exceptions are approved in consultation with ENR and/or CWS. • To reduce the probability of birds establishing nests on the embankment, and to conduct regular inspections of the embankment and all water course crossing structures, efforts will be made to drive regularly along the constructed embankment during freshet and the early part of the nesting season (late May through mid-June), taking care to look out for early nests while doing so. • If concentrations of waterfowl are present in nesting habitat, the Wildlife Monitor will contact DOT (in consultation with CWS and ENR, if necessary) to determine whether Project activities should be minimized to avoid disturbance until nesting is completed (i.e. young have left the vicinity). • Efforts will be made to implement aircraft setback distances (Appendix C, Table C) during periods when birds are particularly sensitive to disturbance and are concentrated, such as during migration and molting. If aircraft are required to operate during sensitive bird periods, flights should be minimized over important bird habitat and a minimum flight altitude of 650 m should be maintained (1100 m over areas where birds are known to concentration; specific restrictions are indicated in Appendix C, Table C).

Project facilities and bird protection	<ul style="list-style-type: none"> When construction activities require lighting, directed lighting rather than broad lighting will be used whenever possible during spring, summer and fall months to avoid attracting birds. At camps and associated infrastructure, lights will be positioned to shine downwards and/or will be fixed with shielding to minimize the distribution of peripheral light wherever possible. Lights will be shut off whenever possible if camps are not in use. Birds will be deterred from nesting on infrastructure by placing covers/screens on vents, holes, and crevices where birds could potentially nest, and if necessary through active (but non-lethal) disturbance of birds to discourage them from establishing a nest on a construction site. If bird nesting occurs, the nest will not be disturbed until after the birds have left the area, with clearance to be discussed in consultation with ENR/CWS.
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4.2.3 Caribou-Specific Disturbance Mitigation

Effective communication among ENR, TG, WRRB, DOT, DOT contractors, and Wildlife Monitors will ensure appropriate and updated information is available on caribou observations, including data from radio collars where applicable, which may help predict the seasonal occurrence of caribou along the Project route. Implications regarding current caribou observations and other information relevant to wildlife protection should be frequently shared and discussed among the necessary parties. Numerous activities associated with the highway construction project could potentially affect caribou. Blasting at borrow sources, material hauling and general construction activities will occur throughout the year. This may potentially affect caribou by way of road mortalities and interruption of movement patterns due to sensory disturbance. Mitigation measures to protect caribou from potential effects of construction activities are outlined in **Table 5** along with general construction activity mitigations.

Table 5 Caribou-Specific Mitigation Measures

Issue	Mitigations
Ground vehicle traffic near caribou	<ul style="list-style-type: none"> The presence of caribou in areas of construction and access roads will be communicated to other drivers and all construction vehicles will stop or reduce speeds when caribou are within 500 m of the road The location, time, and group size is to be recorded when caribou are sighted, and then submitted to Wildlife Management Information System (WMIS) Vehicle speeds during construction will be 50 km/h to reduce the potential of caribou mortality due to collisions. Work stoppages may be required during periods of high caribou presence should observations indicate a need (e.g. when large numbers of caribou (>10) are in the vicinity of the road alignment or winter access routes). Activities may resume after these groups of caribou have moved >500 m from the activity or are no longer visible
Project-related aircraft flights over caribou	<ul style="list-style-type: none"> The number of flights will be kept to the minimum necessary Flight paths will be altered as necessary to avoid important areas, especially during sensitive periods If caribou are sighted they will not be approached, followed, hovered above, or circled around Higher altitude flight paths or paths that veer away from caribou will be chosen when the animals are observed running, panicking or exhibiting other startled response Minimum altitudes for flights are outlined in Appendix C, Table C
Construction activities near caribou	<ul style="list-style-type: none"> Blasting activities have the potential to affect caribou and therefore blasting will only occur when caribou are >500 m away A blasting restriction during the calving season may be implemented between April 30 – June 6 All sightings and movements of caribou will be monitored and reported to Wildlife Monitors in real

	<p>time, including geographic coordinates, nearest km post along the road, time, and number of caribou sighted. Observations will include the behavioural response of animals to the development activities</p> <ul style="list-style-type: none"> Workers or construction equipment should maintain a minimum distance of 500 m from caribou. Temporary construction suspensions may be recommended by DOT, in consultation with ENR, if deemed necessary to protect caribou from potential disturbances If it is clear that caribou will likely remain in the development area for extended periods the Wildlife Monitor may gently encourage individual or small numbers of caribou to move away from the area using methods pre-approved by ENR
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4.2.4 Bison Specific Disturbance Mitigation

Potential effects on bison include physical and physiological disturbance from road construction, and loss or gain of habitat.

Bison may be somewhat more tolerant of sensory disturbances (noise from machines, human presence and vehicles) and are known to habituate to vehicles. Many factors affect the size of a zone of influence of a disturbance, such as topography, the presence of security cover, and environmental conditions such as wind and snow cover. Displacement of bison from areas of project activity could cause temporary reductions in core security areas and foraging efficiency, and increased movement resulting in increased stress and higher energy expenditure as observed for moose and caribou (Leblond et al. 2013; Bradshaw et al. 1998; Horejsi 1981). Construction traffic along the proposed TASR may affect the behaviour and movement of bison. Traffic can disrupt foraging and resting bison while the proposed TASR corridor is likely to act as a travel corridor. Given the temporary nature of construction activities and implementation of mitigation measures, indirect habitat loss and sensory disturbance to bison is expected to be negligible.

Vehicle collisions are a significant source of mortality for the Mackenzie wood bison population. There have been nearly 300 recorded collisions resulting in over 400 bison killed on highways in the NWT since 1998. Over 5% of the Mackenzie population was killed in collisions on Highway 3 in each of 2012 and 2013; however, it should be noted that the posted speed limit for Highway 3 (90-100 km/hr) is greater than speeds that will be used during construction. Mitigation measures to protect bison from potential effects of construction activities are outlined in [Table 6](#).

Table 6 Bison-Specific Mitigation Measures

Issue	Mitigations
Ground vehicle traffic near bison	<ul style="list-style-type: none"> The presence of bison in areas of construction and access roads will be communicated to other drivers and all construction vehicles will stop or reduce speeds when bison are within 500 m of the road To facilitate normal herd movements, consideration of changes in construction activities will be determined by the Wildlife Monitor, in consultation with ENR, on an ongoing basis; this may include restriction of highway access and/or reduced speed limits during peak bison migration periods (e.g. arrival during fall rut and departure to calving grounds in spring)

	<ul style="list-style-type: none"> Vehicle speeds during construction will be 50 km/h to reduce the potential of bison mortality due to collisions. Work stoppages may be required during periods of high bison presence should observations indicate a need (e.g. when large numbers of bison (>10) are in the vicinity of the road alignment or winter access routes). Activities may resume after these groups of bison have moved >200 m from the activity or are no longer visible
Project-related aircraft flights over caribou	<ul style="list-style-type: none"> The number of flights will be kept to the minimum necessary Flight paths will be altered as necessary to avoid important areas, especially during sensitive periods If bison are sighted they will not be approached, followed, hovered above, or circled around Higher altitude flight paths or paths that veer away from bison will be chosen when the animals are observed running, panicking or exhibiting other startled response Minimum altitudes for flights are outlined in Appendix C, Table C
Construction activities near bison	<ul style="list-style-type: none"> The temporary nature of construction activities and implementation of mitigation measures means that indirect habitat loss and sensory disturbance to bison is expected to be negligible Blasting activities have the potential to affect bison and therefore blasting will only occur when bison are >500 m away All sightings and movements of bison will be monitored and reported to Wildlife Monitors in real time. Observations will include the behavioural response of animals to the development activities Workers or construction equipment should maintain a minimum distance of 500 m from bison. Temporary construction suspensions may be recommended by DOT, in consultation with ENR, if deemed necessary to protect bison from potential disturbances If it is clear that bison will likely remain in the development area for extended periods the Wildlife Monitor may gently encourage individual or small numbers of bison to move away from the area using methods pre-approved by ENR

4.2.5 Bear-Specific Disturbance Mitigation

During the winter, bears inhabit dens and go into a physiological fasting and energy-sparing state, and pregnant females give birth and nurse their young. Bears may be particularly vulnerable to disturbance while occupying winter dens. The energetic costs associated with relocating to another den after a disturbance, especially when cubs are present, could have negative consequences on survival and reproduction. Construction related activities in the vicinity of active bear dens may potentially cause bears to relocate, especially early in the denning season. To mitigate potential disturbances to denning bears, setback distances for development activities (see [Table 7](#)) will apply to all known and suspected active dens during the highway construction phase. Surveys will be conducted each fall by qualified biologists and Wildlife Monitors in areas of new construction, at borrow sources, and winter access areas.

Table 7 Bear Mitigation Measures

Issue	Mitigations
Locating active dens	<ul style="list-style-type: none"> Prior to each winter of construction, aerial surveys will be conducted, while ground-based inspections of stockpiles and active borrow sources will be conducted to locate active and suspected active bear dens within setback distances of areas scheduled for winter work. Results from these

	<p>surveys will be discussed with the TG prior to winter work, recognizing the sensitive nature of the information</p> <ul style="list-style-type: none"> • All suspected or freshly dug dens will be recorded and mapped • If signs of active bear use are observed within 800 m, the Wildlife Monitor may implement measures to deter bears from denning within 800 m of construction activity (e.g. borrow sites and access roads) and permanent development sites. The Wildlife Monitor will abide by response measures outlined in the Bear Encounter Response Guidelines for Construction (Appendix D). Escalation of deterrent measures will follow these guidelines. Use of any deterrent measures will be reported to ENR • If the Wildlife Monitor is unable to deter the bear and the animal represents an immediate threat to public safety or property, ENR personnel may be called on for assistance • To prevent the establishment of active dens on high suitability denning sites, temporary electric fences may be installed in the late summer around primary borrow sites and other areas to be disturbed the following winter. Location of fencing will be determined in consultation with ENR
Construction activities near grizzly bear den	<ul style="list-style-type: none"> • If an active den or if a bear is observed during winter operations (October 1 – May 30) within 800 m of activity (1500 m of blasting), activities will be immediately suspended within this exclusion zone and ENR will be contacted to determine appropriate mitigation • Minimum flight altitude guidelines in Appendix C will be adhered to when helicopter transport is necessary
Bears observed near construction sites, camps, or facilities	<ul style="list-style-type: none"> • The site supervisor will inform project personnel if bears are present near construction or camp areas and review potential safety issues (see bear safety training in Section 7 - Education and Training)
Potential vehicle-bear collisions	<ul style="list-style-type: none"> • Construction vehicles will always stop or reduce speeds when bears are on or near the road. Construction vehicle speeds will be less than 50 km/h to reduce the potential of bear mortality due to vehicle collisions, except on ice roads with extended visibility
Bear safety issues	<ul style="list-style-type: none"> • Field supervisors will ensure proper storage, transportation and disposal of wastes to avoid attracting bears and other carnivores to camps or other work sites (See Waste Management Plan) • The Wildlife Monitor and designated/trained staff will have access to bear deterrent materials including bear spray, cracker shells, and a 12 gauge shotgun with rubber slugs and slugs. All work crews will have at least one can of bear spray or bear banger while bears are active. The use of any deterrent method will be reported to ENR • All ENR bear response guidelines will be followed. These response guidelines and other bear safety issues will be communicated to all employees and contractors as part of orientation and training (See Section 7 - Education and Training)

4.3 PRE-CONSTRUCTION SURVEYS, MONITORING, AND INSPECTION

Compliance and effects monitoring activities will be conducted as required to fulfill the terms and conditions set out in regulatory approvals, licences and permits, to meet commitments, and to check the effectiveness of mitigation measures in avoiding or minimizing potential effects. Ultimately, site supervisors will be responsible for ensuring that commitments in the WMMP are met and for monitoring the implementation of wildlife and wildlife habitat mitigation measures. Project Wildlife Monitors will conduct monitoring of construction activities as they relate to wildlife and wildlife habitat protections and the mitigation measures outlined in the WMMP. Wildlife Monitors will also be responsible for conducting and recording observations of wildlife throughout construction activities and participating in wildlife surveys. There may be periods when more than one Project Wildlife Monitor is

required due to separation of construction activities; the number needed will be determined by the ability to fulfill the duties and responsibilities listed below.

Monitoring activities will provide a means of measuring the effectiveness of mitigation measures in avoiding or minimizing potential effects on wildlife. A Wildlife Sighting Form ([Appendix D](#)) will be used during construction to report on daily wildlife observations. This form will be used to describe the types of wildlife observed, the frequency and location of observations, and report on effectiveness of mitigation. Wildlife Sighting Forms will be distributed to project personnel, carried in vehicles, and will be completed in consultation with the Project Wildlife Monitor. Project Wildlife Monitors will be contracted project personnel, but will be expected to report observations in accordance with the WMMP and without consideration for potential implications on construction activities. The TG will be approached to identify potential wildlife monitors.

Project Wildlife Monitors will be on-site during construction to monitor wildlife and manage risks. They will require independent transportation (ATV/Argo/truck as appropriate) to allow them to access and survey project sites in advance of construction crews, as well as equipment required to execute their duties (e.g. GPS, bear deterrents). Duties and responsibilities of Project Wildlife Monitors are outlined below:

- Observing activities during construction to ensure work is conducted in accordance with applicable regulations, commitments and mitigation measures
- Communicating with DOT and coordinating activities as per DOT direction
- Providing wildlife briefings as part of daily tailgate meetings, and on supplementary occasions as required
- Collecting and compiling data for the Wildlife Sighting Form
- Monitoring and ensuring that setback distances for construction activities ([Appendix A](#)) are being followed. Particular attention will be paid to wildlife during periods when they may be particularly vulnerable to disturbance from construction activities (i.e. denning, nesting, calving, fall rut) to ensure that natural behaviours and movements are allowed to continue
- Taking appropriate steps to minimize project encounters with wildlife (see flow chart) including recommending temporary work stoppages or avoidance practices to the appropriate Project Construction Manager when necessary to prevent wildlife disturbance
- Acting as the lead responder to all wildlife incidents. This may, if necessary, include bear denning deterrent methods or bison deterrent methods following the advice of ENR in regard to wildlife deterrence
- Maintaining detection and deterrent equipment

- Notifying and communicating with ENR/CWS (after communicating with DOT) in accordance with legislation and the WMMP, including communication of any road kills or naturally occurring carcasses.

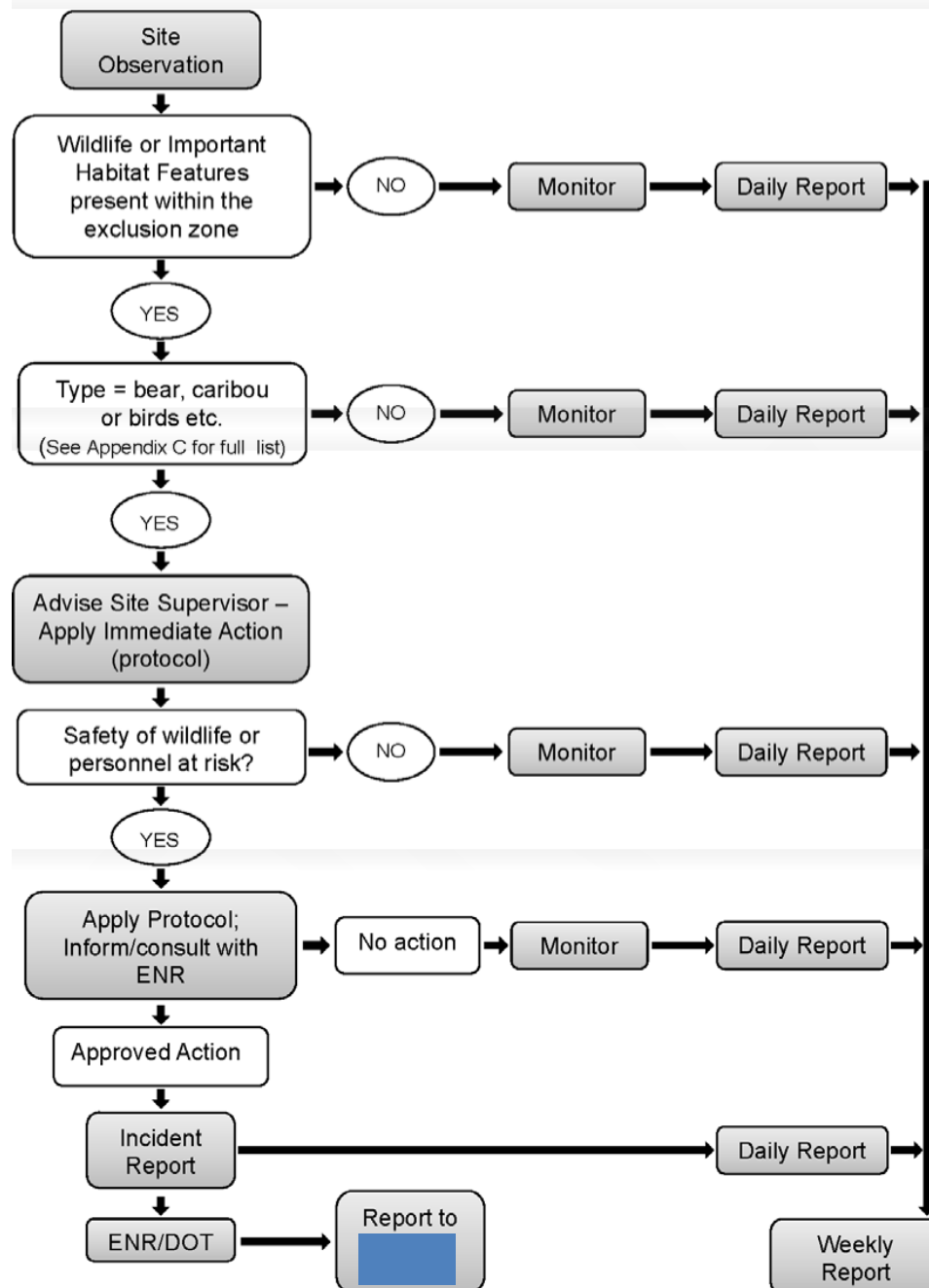


Figure 1 Wildlife Monitor Action Flow Chart

5 ADAPTIVE MANAGEMENT

TO BE COMPLETED

Lessons Learned (Pre-Construction)

Documents from other projects in the NT were reviewed in the preparation of the draft WMMP included:

Avalon Rare Metals Inc. Nechalacho Rare Earth Elements Project Thor Lake, NWT, Preliminary Site Preparation Phase, Wildlife Management and Monitoring Plan Version 2 (Sept 2014).

Department of Transportation, GNWT. Inuvik to Tuktoyaktuk Highway, NWT, Wildlife and Wildlife Habitat Protection Plan (December 2013).

De Beers Group of Companies. Gahcho Kue Mine Wildlife Management and Monitoring Plan (Oct 2014).

Fortune Minerals Limited. Nico Project, Wildlife Management and Monitoring Plan Version 1 (Oct 2013).

GGL Resources Corp. PGB Project, Wildlife, Archaeological & Environmental Awareness Plan (Jan 2015).

Government of the Northwest Territories. Mackenzie Valley Fibre Link Project. Wildlife and Wildlife Habitat Protection Plan (January 2015).

6 REPORTING PROTOCOLS

As per the action flow, Project Wildlife Monitors will notify the Site Supervisor of observations of certain wildlife species. The Wildlife Monitor will follow an appropriate wildlife control method depending on the situation. DOT, ENR or CWS biologists can help in developing an appropriate response to potentially dangerous wildlife situations, wildlife-vehicle interactions, and wildlife-construction interactions in accordance with the action flow. A Wildlife Monitor Form (**Appendix D**) will be completed daily by Wildlife Monitors. The Wildlife Monitor Form includes location (UTM coordinates, latitude/longitude or highway kilometer), date, species, number, sex/age if known, wildlife behaviour and, as required, type of any wildlife-vehicle and wildlife-human interactions. Sign of certain species will also be recorded. All project personnel will be asked to record incidental wildlife observations on a simplified Wildlife Sightings Form (**Appendix D**). Any wildlife encounters involving injury, mortality, or threats to project personnel should be recorded on a Wildlife Incident Form (**Appendix D**). Observations of note, such as repeated encounters with a species of concern or a nest should be followed up by the Wildlife Monitor. All wildlife records will be acquired and maintained by the Wildlife Monitors. The developer will provide these records to ENR on a monthly basis, but is expected to report as soon as possible on any human-

wildlife interactions. Species to be recorded by Wildlife Monitors (whether inside or outside any applicable setbacks) include:

- Species at Risk
- COSEWIC assessed species
- Waterbirds – waterfowl (ducks, geese, swans), loons, cranes, terns
- Upland Birds – rock and willow ptarmigan
- Other Species of Management Concern – moose, foxes, wolves, beaver, marten, muskrat, and bison

In addition, any wildlife mortalities or other human-wildlife interactions with any species should be reported using the form.

The Bear Encounter Response Guidelines (**Appendix D**) will be followed in the event of a bear encounter. These guidelines outline roles and responsibilities and mitigations for bear encounter scenarios. All bear encounters will be reported to the ENR office closest to the area of operation. The ENR Bear Report Checklist (**Appendix D**) will be completed by the Wildlife Monitor following all bear encounters prior to contacting ENR. The use of any deterrent method on wildlife will be reported to ENR. ENR will maintain all wildlife observations in the GNWT departmental Wildlife Management Information System. ENR will enter migratory bird observations in eBird.

In addition to the above mentioned wildlife reporting requirements, DOT contractors will also prepare and submit an annual Construction Wildlife Monitoring Report by May 15. This report will include work completed to date, any work stoppages, relevant observations on the success and failures of mitigation measures from the WMMP and will focus on potential and real effects to wildlife during construction activities. Shapefiles of work conducted to date will also be provided to ENR so habitat loss and potential disturbance can be monitored. The reports will be used to highlight any unforeseen shortcomings in the WMMP so that improvements can be made throughout the construction phase of the Project and will include a summary of the Wildlife and Wildlife Habitat Monitoring Daily Report Forms Wildlife and Wildlife Habitat Effects Monitoring Table. The Construction Wildlife Monitoring Report will also specifically report on the adequacy of mitigations for SARA species and report on any adaptive management that is required.

7 EDUCATION AND TRAINING

The DOT's contractor(s) will be responsible for educating and training staff on applicable practices contained within the WMMP. To ensure the safety of Project employees and wildlife, the field supervisor and safety advisor will, in consultation with ENR and CWS, educate all field workers on the

applicable practices. All training will be documented and recorded in the Construction Monitoring Report. Information provided to contract employees during training will include the following:

- Review of the WMMP
- An understanding of wildlife response protocols including reporting requirements and procedures related to wildlife observations, wildlife incidents, and wildlife-related accidents. Posters on display in camps illustrating species that require real-time reporting will reinforce the training information
- Understanding of confidentiality of observations made during work
- Instructions not to disturb any birds or nests of observed birds
- Reporting procedures for all wildlife observations, including provision of a completed version of [Appendix D](#) (Agency Contact Information)
- Instructions regarding Project restrictions and operating protocols (e.g. wildlife right-of-way and speed limits)
- An understanding of Species at Risk, including identification (posters in camps) and reporting procedures
- Wildlife policies (i.e., no feeding, no harassment, no hunting, and no trapping)
- Instructions on waste and wildlife attractant management including the implications of wildlife human-habitation, food conditioning, and unsecured wildlife attractants
- An understanding of working safely in wildlife areas and avoiding wildlife encounters through familiarization with the ecology of potentially dangerous predators, including bears, wolves and wolverines. This will include education on the identification, behaviour, seasonal movements, and habitat preferences of these species, as well as specific bear awareness and safety training, referencing regulations, permit conditions, industry standards, and Project commitments/policies, and information on managing non-natural attractants. Appropriate videos/DVD's such as "Staying Safe in Bear Country" and "Working in Bear Country", as well as the GNWT Bear Safety Brochure (see [Appendix E](#)) will be provided as part of the bear awareness and safety training. Workers will be educated on proper procedures for exiting vehicles or buildings in bear areas, where high risk bear-human interaction areas are likely to occur (i.e. areas where vegetation or terrain limit visibility and might hide a bear, and locations where sounds may mask the sound of an approaching bear), and to watch for bear signs and avoid potential denning and feeding areas if possible
- Instructions regarding worker safety precaution protocols for working in remote areas. These include, working in pairs or larger groups, packing out waste for proper disposal, having adequate communication with supervisors and wildlife monitors (radios, cell phones, and satellite phones), and regular check-in times

- Instructions for the wildlife monitors and other designated/trained staff on how to use non-lethal deterrent materials (e.g. bear spray and bear bangers). These individuals will be given access to non-lethal deterrent materials while working and living on construction sites

8 REFERENCES

Aboriginal Affairs and Northern Development Canada, Fisheries and Oceans Canada, Environment Canada – Canadian Wildlife Service and GNWT – Department of Environment and Natural Resources (AANDC). 2012. Northern Land Use Guidelines – Volume 9a: Northwest Territories Seismic Operations.

Environment Canada. 2012. Final technical submission respecting the Inuvik to Tuktoyaktuk highway, NWT. EIRB File Number 02/10-05. 53 pp.

Government of Canada. 2011a. SARA public registry. Government of Canada website: <http://www.sararegistry.gc.ca/default.asp?lang=en&n=24F7211B-1> Accessed October 15, 2012.

Government of Canada. 2011b. Migratory Birds Regulations. Government of Canada website: <http://laws-lois.justice.gc.ca/eng/regulations/C.R.C., c. 1035/>. Accessed October 15, 2012.

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Government of the Northwest Territories (GNWT). 2010. Government of the Northwest Territories website: <https://www.justice.gov.nt.ca/en/files/legislation/wildlife/wildlife.a.pdf> Accessed October 15, 2012.

Government of the Northwest Territories (GNWT). 2012. Inuvik to Tuktoyaktuk Highway Wildlife Effects Monitoring Program (WEMP): Initial Design and Cost Estimates of Proposed Wildlife Studies – DISCUSSION DRAFT.

Government of the Northwest Territories Department of Environment and Natural Resources (GNWT ENR). 1998. Guidelines for Dust Suppression on Commissioner's Lands. February 1998.

KAVIK-STANTEC Inc. 2012a. Inuvik – Tuktoyaktuk Highway Baseline Data Acquisition Program: Wildlife Habitat Potential Mapping, Final Report. Prepared for the Government of Northwest Territories

KAVIK-STANTEC Inc. 2012b. Inuvik to Tuktoyaktuk Highway – Vegetation Atlas with Waterbird Counts. Prepared for the Government of the Northwest Territories.

KAVIK-STANTEC Inc. 2012c. Inuvik to Tuktoyaktuk Highway – Wildlife Habitat Potential Supplemental Maps for Borrow Sources 177, 174, 309 and PW2. Prepared for Government of the Northwest Territories.

Appendices:

Standard Operating Procedures

Monitoring forms/data collection sheet templates

Reporting forms templates

WMMP revisions tracking table

Measures, conditions and developer commitments concordance table

Appendix A

STATUTORY REQUIREMENTS RELEVANT TO WILDLIFE AND WILDLIFE HABITAT

Summary of territorial and federal prohibitions pertaining to wildlife and wildlife habitat

Table A – Summary of territorial and federal prohibitions pertaining to wildlife and wildlife habitat

NWT Wildlife Act		
Topic	Section of new <i>Wildlife Act</i> (coming into force Nov. 2014)	Notes
Birds and nests	51. (1) Subject to section 17, no person shall, unless authorized by a licence or permit to do so, destroy, disturb or take (a) an egg of a bird; (b) the nest of a bird when the nest is occupied by a bird or its egg; or (c) the nest of a prescribed bird.	In the new <i>Wildlife Act</i> , prescribed birds will likely include raptors from the following families: <ul style="list-style-type: none"> • Falconiformes • Strigiformes • Accipitriformes <p>Bullet (c) of the new <i>Wildlife Act</i> does not specify that the nest has to be active.</p>
Wildlife abodes	51. (2) Subject to section 17, no person shall, unless authorized by a licence or permit to do so, break into, destroy or damage a den, beaver dam or lodge, muskrat push-up or hibernaculum.	
Disturbance and harassment	52. Subject to section 17, no person shall, unless authorized by a licence or permit to do so, (a) engage in an activity that is likely to result in a significant disturbance to big game or other prescribed wildlife; or (b) unnecessarily chase, fatigue, disturb, torment or otherwise harass game or other prescribed wildlife.	"big game" means species of wildlife prescribed as big game, or an individual of a species of big game;
Chasing Wildlife	55. Notwithstanding any other provision of this Act or the regulations, a person may chase wildlife away from a dwelling place, camp, work site, municipality or unincorporated community, or its immediate vicinity, if doing so is necessary to prevent injury or death to a person or damage to property.	"wildlife" means (a) all species of vertebrates and invertebrates found wild in nature in the Northwest Territories, and individuals of those species, except (i) fish as defined in section 2 of the <i>Fisheries Act</i> (Canada), and (ii) other prescribed species and subspecies, (b) species of wildlife referred to in paragraph (a) that are domesticated or held in captivity, and individuals of those species, and (c) prescribed species or subspecies of vertebrates and invertebrates, and individuals of those species or subspecies.
Defence of life and property	56. (1) Notwithstanding any other provision of this Act or the regulations but subject to subsection (4), a person may harvest and consume wildlife or take and consume the	

	<p>eggs of birds if it is necessary to prevent starvation of a person.</p> <p>(2) Notwithstanding any other provision of this Act or the regulations but subject to subsection (4), a person may kill wildlife if it is necessary to prevent injury or death to a person.</p> <p>(3) Notwithstanding any other provision of this Act or the regulations but subject to subsection (4) and any regulations specified as applying in respect of this section, a person may kill wildlife if it is necessary to prevent damage to property.</p> <p>(4) Subsections (1), (2) and (3) do not provide a defence to a contravention of this Act or the regulations for a person who resorts to harvesting or killing wildlife as a result of his or her mismanagement.</p>	
Reporting	<p>57. Subject to the regulations, a person shall, as soon as is practicable, report the harvest or kill of big game or other prescribed wildlife to an officer, if</p> <p>(a) under section 56, the person harvested big game or other prescribed wildlife to prevent starvation, or killed big game or other prescribed wildlife to prevent injury or death to a person or damage to property; and</p> <p>(b) the harvest or kill would, but for subsection 56(1), (2) or (3), be a contravention of this Act or the regulations.</p>	
Accidental kill or wounding	<p>58. A person who, with a motorized vehicle, accidentally kills or seriously wounds big game or other prescribed wildlife on a highway as defined in section 1 of the <i>Motor Vehicles Act</i>, shall report the event to an officer within the time fixed in the regulations.</p>	
Feeding wildlife	<p>65. (1) Subject to subsection (2), no person shall intentionally feed big game, fur-bearers or other prescribed wildlife.</p> <p>(2) Subsection (1) does not apply in respect of a person feeding wildlife lawfully kept in captivity or in circumstances permitted by the regulations.</p>	
Wildlife	<p>66. (1) No person shall deposit, place or</p>	

Attractants	<p>leave in, on or about land or premises food, food waste or another substance if there is a reasonable likelihood that it could attract big game or other prescribed wildlife to the land or premises and endanger a person, a domestic animal or wildlife.</p> <p>(2) Subsection (1) does not apply in respect of</p> <ul style="list-style-type: none"> (a) the drying or caching of meat, pelts or hides, except in a manner contrary to regulations respecting the treatment, caching and identification of wildlife and parts of wildlife left temporarily on the land; (b) a person lawfully harvesting fur-bearers with bait; or (c) other persons and circumstances exempted by the regulations. 	
Damage to habitat	<p>93. (1) No person shall substantially alter, damage or destroy habitat.</p> <p>(2) A person who establishes that he or she acted with legal justification in altering, damaging or destroying habitat shall not be convicted of an offence under subsection (1).</p>	<p>“habitat” means the area or type of site where a species or an individual of a species of wildlife naturally occurs or on which it depends, directly or indirectly, to carry out its life processes;</p>
Requirement for plan	<p>95. (1) A developer or other person or body may be required, in accordance with the regulations, to prepare a wildlife management and monitoring plan for approval by the Minister, and to adhere to the approved plan, if the Minister is satisfied that a development, proposed development, or other activity is likely to</p> <ul style="list-style-type: none"> (a) result in a significant disturbance to big game or other prescribed wildlife; (b) substantially alter, damage or destroy habitat; (c) pose a threat of serious harm to wildlife or habitat; or (d) significantly contribute to cumulative impacts on a large number of big game or other prescribed wildlife, or on habitat 	
Species at Risk (NWT) Act		
Topic	Section of the Act or Regulations	Notes
Designated Habitat	80. No person shall destroy any part of designated habitat.	
Species	151. (1) The Commissioner, on the	For up-to-date information on

conservation	<p>recommendation of the Minister, may make regulations respecting the conservation of pre-listed species or listed species, including but not limited to</p> <ul style="list-style-type: none"> (a) requiring the doing of things that may conserve the species; (b) prohibiting activities that may adversely affect the species; (d) imposing prohibitions against <ul style="list-style-type: none"> (i) killing, harming, harassing, capturing or taking an individual of a species, 	<p>Regulations and Permits issued under the Act go to http://nwt-species-at-risk.ca/en/Regulations</p>
Habitat conservation	<p>152. The Commissioner, on the recommendation of the Minister, may make regulations respecting the conservation of habitat of pre-listed species or listed species or the area in which the habitat is located or the surrounding area, including but not limited to</p> <ul style="list-style-type: none"> (a) requiring the doing of things that may conserve the habitat or area; (b) prohibiting activities that may adversely affect the habitat or area; (c) imposing prohibitions against damaging or destroying the habitat or area; (d) controlling, restricting or prohibiting any use of, access to, or activity in the habitat or area; and (e) controlling, restricting or prohibiting the release of any substances in or into the habitat or area. 	<p>For up-to-date information on Regulations and Permits issued under the Act go to http://nwt-species-at-risk.ca/en/Regulations</p>
Designating habitat	<p>153. (1) The Commissioner, on the recommendation of the Minister, may, by regulation, designate habitat, or a component or combination of components of habitat, of a pre-listed species or a listed species.</p>	<p>For up-to-date information on Regulations and Permits issued under the Act go to http://nwt-species-at-risk.ca/en/Regulations</p>
Designated habitat	<p>154. The Commissioner, on the recommendation of the Minister, may make regulations respecting the conservation of designated habitat or the area in which designated habitat is located or the surrounding area, including but not limited to</p> <ul style="list-style-type: none"> (a) requiring the doing of things that may conserve the designated habitat or area; (b) prohibiting activities that may adversely affect the designated habitat or area; (c) imposing prohibitions against damaging the designated habitat or area; (d) controlling, restricting or prohibiting any use of, access to, or activity in the 	<p>For up-to-date information on Regulations and Permits issued under the Act go to http://nwt-species-at-risk.ca/en/Regulations</p>

	designated habitat or area; and (e) controlling, restricting or prohibiting the release of any substances in or into the designated habitat or area.	
Migratory Birds Convention Act		
Topic	Section of the Act or Regulations	Notes
Deposit of harmful substances	5.1 (1) No person or vessel shall deposit a substance that is harmful to migratory birds, or permit such a substance to be deposited, in waters or an area frequented by migratory birds or in a place from which the substance may enter such waters or such an area.	
Migratory Birds Regulations (federal) enabled under the <i>Migratory Birds Convention Act</i>		
Topic	Section of the Act or Regulations	Notes
Disturbance and/or destruction of migratory birds, their nests and eggs	<p>5(1) of the Migratory Bird Regulations states that no person shall hunt a migratory bird except under authority of a permit.</p> <p>6. Subject to subsection 5(9), no person shall (a) disturb, destroy or take a nest, egg, nest shelter, eider duck shelter or duck box of a migratory bird, or</p>	<p>"Hunt" means to chase, pursue, worry, follow after or on the trail of, lie in wait for, or attempt in any manner to capture, kill, injure or harass a migratory bird, whether or not the migratory bird is captured, killed or injured.</p> <p>Currently, the regulations do not provide for authorizations or permits for the inadvertent harming or killing of migratory birds and the disturbance or destruction of their nests and eggs (a.k.a. "incidental take") in the course of industrial or other activities.</p> <p>For further advice on how to avoid incidental take or reduce risks to migratory birds and their nests and eggs, refer to the avoidance guidelines and frequently asked questions related to the protection of migratory bird nests and eggs as well as the fact sheet "Planning Ahead to Reduce Risks to Migratory Bird Nests" at: http://www.ec.gc.ca/paom-itmb/</p>
Species at Risk Act (federal)		
Topic	Section of the Act or Regulations	Notes
Killing, harming, etc., listed wildlife species	32. (1) No person shall kill, harm, harass, capture or take an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species.	"individual" means an individual of a wildlife species, whether living or dead, at any developmental stage and includes larvae, embryos, eggs, sperm, seeds, pollen, spores and asexual propagules.
Damage or	33. No person shall damage or destroy the	"residence" means a dwelling-place, such

destruction of residence	residence of one or more individuals of a wildlife species that is listed as an endangered species or a threatened species, or that is listed as an extirpated species if a recovery strategy has recommended the reintroduction of the species into the wild in Canada.	as a den, nest or other similar area or place, that is occupied or habitually occupied by one or more individuals during all or part of their life cycles, including breeding, rearing, staging, wintering, feeding or hibernating.
Destruction of critical habitat	58. (1) Subject to this section, no person shall destroy any part of the critical habitat of any listed endangered species or of any listed threatened species — or of any listed extirpated species if a recovery strategy has recommended the reintroduction of the species into the wild in Canada — if (a) the critical habitat is on federal land, in the exclusive economic zone of Canada or on the continental shelf of Canada; (b) the listed species is an aquatic species; or (c) the listed species is a species of migratory birds protected by the Migratory Birds Convention Act, 1994.	“critical habitat” means the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species’ critical habitat in the recovery strategy or in an action plan for the species.
Destruction of critical habitat	61. (1) No person shall destroy any part of the critical habitat of a listed endangered species or a listed threatened species that is in a province or territory and that is not part of federal lands. (1.1) Subsection (1) does not apply in respect of (a) an aquatic species; or (b) the critical habitat of a species of bird that is a migratory bird protected by the <i>Migratory Birds Convention Act, 1994</i> that is habitat referred to in subsection 58(5.1). (2) Subsection (1) applies only to the portions of the critical habitat that the Governor in Council may, on the recommendation of the Minister, by order, specify.	
Agreements and Permits	73. (1) The competent minister may enter into an agreement with a person, or issue a permit to a person, authorizing the person to engage in an activity affecting a listed wildlife species, any part of its critical habitat or the residences of its individuals. 2) The agreement may be entered into, or the permit issued, only if the competent minister is of the opinion that (a) the activity is scientific research relating	

	<p>to the conservation of the species and conducted by qualified persons;</p> <p>(b) the activity benefits the species or is required to enhance its chance of survival in the wild; or</p> <p>(c) affecting the species is incidental to the carrying out of the activity.</p> <p>(3) The agreement may be entered into, or the permit issued, only if the competent minister is of the opinion that</p> <p>(a) all reasonable alternatives to the activity that would reduce the impact on the species have been considered and the best solution has been adopted;</p> <p>(b) all feasible measures will be taken to minimize the impact of the activity on the species or its critical habitat or the residences of its individuals; and</p> <p>(c) the activity will not jeopardize the survival or recovery of the species.</p>	
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Appendix B

TIMING RESTRICTIONS AND SETBACK DISTANCE GUIDELINES FOR WILDLIFE AND WILDLIFE AREAS

TIMING RESTRICTIONS AND SETBACK DISTANCE GUIDELINES FOR WILDLIFE AND WILDLIFE AREAS (ADAPTED FROM AANDC ET AL. 2012 AND ENVIRONMENT CANADA 2012)

When seasonal avoidance is not possible, the setbacks outlined in the table below will be taken into consideration, and if deviations are required, will be discussed with CWS (migratory birds) or ENR (other wildlife) and documented by Wildlife Monitors to evaluate potential effects and allow for adaptive management of future situations. Nest setback distances are intended to apply linearly along the embankment (e.g. if a shorebird nest is discovered on the embankment, the default mitigation is to stay at least 100 m away on either side, but no surveys are required to search for nests off the embankment). The dates presented reflect typical seasonal timing, but are not intended to be restrictive (e.g. if a bird nest is initiated prior to the start of the defined breeding season, or depended young remain in the area after the end, the same precautions should apply). If nests are not on top of the embankment (i.e. not at risk of direct destruction), traffic passing by should be minimized, but may not need to be entirely avoided, pending case-specific discussion with CWS.

Table B Timing Restrictions and Setback Distances

Wildlife Species	Feature or Habitat	Specific Conditions	Period ¹	Setback Distance
Caribou (barren-ground, woodland)	N/A	General development activities when caribou are in the area	Year round	500 m
Caribou (barren-ground, woodland)	N/A	Snowmobile distance when caribou are in the area	Snow period	250 m
Ungulates (general)	Mineral/salt lick	General development activities	Year round	1 km
Grizzly bear, black bear	Den	If activity is blasting	Oct 1 – May 30	1.5 km
Grizzly bear, black bear	Den	General development activities	Oct 1 – May 30	800 m
Grizzly bear, black bear	Berry habitat	General development activities when bears are observed foraging	Jul 15 – Sep 15	300 m
Wolverine	Den	General development activities	Oct 15 – Jul 15	800 m
Lynx	Den	General development activities	Apr 1 – Jul 15	250 m
Fox	Den	General development activities	May 1 – Jul 15	150 m
Wolf	Den	General development activities	May 1 – Sep 15	800 m
Wolf	Den	Entering area by foot	May 1 – Sep 15	500 m
Waterfowl (general)	Staging area	General development activities when large concentrations of birds are present	Spring/Fall	1.5 km
Horned grebe	Edge of waterbody with a nest	General development activities	May 15 – Aug 31	100 m
Swans/Loons/Cranes	Nest	General development activities	May 15 – Aug 31	750 m
Swans/Loons/Cranes	Nest	Pedestrians/ATVs	May 15 – Aug 31	500 m
Ducks	Nest	General development activities	May 15 – Aug 31	150 m
Ducks	Nest	Pedestrians/ATVs	May 15 – Aug 31	50 m

Tłı̨chǫ All-season Road Wildlife Management and Monitoring Plan

Geese	Nest	General development activities	May 15 – Aug 31	500 m
Geese	Nest	Pedestrians/ATVs	May 15 – Aug 31	300 m
Shorebirds	Nest	General development activities	May 15 – Jul 31	100 m
Shorebirds	Nest	Pedestrians/ATVs	May 15 – Jul 31	50 m
Terns/Gulls	Nest	General development activities	May 15 – Jul 31	300 m
Terns/Gulls	Nest	Pedestrians/ATVs	May 15 – Jul 31	200 m
Bald eagle	Nest	General development activities	Apr 15 – Aug 31	500 m
Golden eagle	Nest	General development activities	Apr 15 – Aug 31	800 m
Osprey	Nest	General development activities	May 1 – Aug 31	1 km
Peregrine falcon	Nest	General development activities	May 1 – Aug 31	1.5 km
Short-eared owl	Nest	General development activities	May 1 – Jul 31	1.5 km
Raptors (general)	Nest	General development activities	Year round	500 m
Rusty blackbird	Nest	General development activities	May 1 – Jul 31	300 m
Songbirds (general)	Nest	General development activities	May 1 – Jul 31	100 m
Songbirds (general)	Nest	Pedestrians/ATVS	May 1 – Jul 31	30 m
All other wildlife	Nest/den	Varies with region and species; contact ENR or EC office	Breeding, nesting, birthing seasons	100 m
<p>1: The wildlife sensitive periods presented are a general guide as the specific timing of wildlife and bird activities may vary from year to year. Year-round avoidance may not be possible in all cases; exceptions will be discussed with ENR to develop appropriate mitigation.</p>				

Appendix C

FLIGHT RESTRICTIONS FOR PROJECT-RELATED AIRCRAFT

Table C Summary of Environmentally Acceptable Minimum Flight Altitudes

Species/Situation	Recommended Altitude (above ground level)
Over areas likely to have birds	>650 m (2100 ft)
Over areas where birds are known to concentration (colonies, moulting areas)	>1,000 m (3500 ft)
Over large mammals during ferry flights	>300 m (975 ft)
During wildlife surveys	>100 m (325 ft)
When flying point to point in vicinity of caribou and other wildlife species	>610 m (2000 ft)

SOURCE: Environmental Impact Screening Committee (EISC). June 29, 2012. Environmental Impact Screening Guidelines. Retrieved from: http://www.screeningcommittee.ca/pdf/eisc_guidelines.pdf

Appendix D

FORMS

This section comprises four distinct forms and associated guidelines:

1. Bear Encounter Response Guidelines and Bear Report Checklist form
2. Wildlife Monitor Form – for daily reporting by designated wildlife monitors
3. Wildlife Sightings Form – for reporting incidental observations of wildlife by anyone in the Project area
4. Wildlife Incident Form – for reporting wildlife encounters involving injury or death to wildlife, or potential risk to people

Bear Encounter Response Guidelines

I. Principles:

1. Protection of Life and Property
2. Conservation

II. Operational Guidelines:

- A. Deterrence
- B. Re-locate, if feasible
- C. Destroy

III. Operational Procedures:

Contacts:

Initial contact during regular hours:

Environment and Natural Resources _____

Initial contact after regular hours and weekends:

Renewable Resource Officer on call May 1 to October 31 _____

_____, Regional Superintendent _____

Response Personnel:

The following personnel can be available for responding to problem bear situations:

Initial Contact:

The reporter should complete the attached checklist prior to calling Department of Environment and Natural Resources (ENR). It is critical that as much information as possible be provided at this point in order to determine the appropriate response.

IV. Response:

Wildlife Monitors will be the initial responders to problem bears. It is imperative that they have a sufficient supply of approved deterrents at their disposal. All bear sightings and encounters shall be reported to the ENR office closest to the area of operation.

The potential responses will be considered in the following order:

a) Camps

1. Wildlife Monitors will employ conventional means of deterring problem bears that threaten public safety or property. This may involve chasing a bear out of the camp with a vehicle or snowmobile, or using noise makers and rubber bullets. If these methods prove ineffective, and where a

helicopter is available or can be obtained in the area, the bear may be chased from camp. Pilots must be careful not to over stress the bear during this flight and must back off when the bear is a sufficient distance from the camp and keeps running in the desired location. If circumstances allow, a Renewable Resource Officer (RRO) should be contacted prior to using aircraft to deter bears. Undue harassment is illegal and must be avoided. All incidents involving any means of deterrence should be reported to a Renewable Resource Officer as soon as possible.

2. Should for some reason, the Wildlife Monitor is unable to deter a bear, and where the bear does not pose an immediate threat to public safety or property, the Department of Environment and Natural Resources (ENR) may send a deterrent or capture team to site.

b) Denning Bears

If a bear is located in, at or near a den site, work in the area must halt. All employees should safely retreat from the area and report the occurrence to the Wildlife Monitor, Site Supervisor and the RRO in your area as soon as possible. The establishment of an 800 m exclusion zone would happen immediately. The Wildlife Monitor will assess the situation and then the Wildlife Monitor and Site Supervisor will call ENR to report and discuss the situation.

Each situation will be assessed individually but mitigations include:

If the den is in an area that still allows the program to continue then the exclusion zone will be maintained until the bear emerges in the spring.

If the den would result in the halt of part or the entire program, ENR and TG would be contacted to discuss options. Confidentiality of active bear den locations is an important consideration until after emergence in the spring. Based on consultation with ENR and TG, ENR and TG might need to assess the site to determine the measure the Developer will be required to implement to ensure bears are not unduly disturbed.

Options include (in order of application/severity):

- Adjust the access road or camp location to avoid the bear den by 800 m;
- Do not use all or a portion of granular source for that year of construction in order to avoid the den by 800 m;
- Reduce the size of the exclusion zone and proceed with increased vigilance on behalf of the Wildlife Monitor;
- Contact ENR and/or TG to preselect potential hunter(s) in case a bear needs to be harvested;
- If a den is located directly on the ROW for the road, and no other mitigations can be applied, ENR and/or TG will select a hunter to harvest the bear(s) in a den.

c) Free ranging bears

Prior to active deterrence of free ranging bears, and where public safety or property is not in immediate danger, the Wildlife Monitor will assess the situation. The WM should determine if the bear has been disturbed from a den or if it is denning in close proximity. Bears in the vicinity of a den should not be

deterred and work should cease the WM has discussed the situation with ENR. If the WM has determined that the bear is in fact free ranging, and not lingering around a den site, then active deterrence may commence if necessary.

d) Destruction of the bear

Instructions to destroy the bear will be given when deterrent actions have failed, when additional deterrent actions are not possible, and when it is determined that capture and relocation cannot be conducted or is unlikely to be successful.

The bear can be destroyed if human life or property is in imminent danger.

If a bear is killed, you will be required to:

- 1) Report the kill to Department of Environment and Natural Resources, as soon as possible.
- 2) Skin the bear, leaving the claws and penis (if applicable) attached, and preserved the hide by freezing or salting it and storing it in a cool place. Be generous with the salt.
- 3) Turn the hide, the skull and any other biological samples requested to a Department of Environment and Natural Resources Renewable Resource Officer.

As per the NWT Wildlife Act, no person may retain any part of a bear killed in defence of life or property.

V. Follow-Up

After response measures are completed, the situation will be reviewed with the camp operator and corrective actions identified. These may include a wide array of actions aimed at avoiding future bear problems and ensuring that the operator is made aware of legal obligations. The need for conservation and the vulnerability of bear populations to over harvest is to be stressed.

BEAR REPORT CHECKLIST

1. Report Details:

Date/Time of Report: _____
 Reporter's Name: _____
 Affiliation/Location of Reporter: _____
 Contact Number for Reporter: _____
 Other on Site Contacts: _____
 Wildlife Monitor's Name: _____

2. Camp Details:

Location of Incident: _____
 Latitude/Longitude: _____
 Type of Camp- Permanent/ Mobile: _____
 Number of People in Camp: _____
 How Long has Camp Been Here (if Mobile): _____
 Are there any Aircraft on site? If yes, Type: _____

3. History of the Problem:

Date/Time Bear First Sighted: _____
 Type of Bear: Grizzly _____ Polar _____ Black _____
 Sex of Bear: Male _____ Female _____ Unknown _____
 Age of Bear: Cub _____ Juvenile _____ Adult _____
 Has Bear Been Observed Before: _____
 Den site found (YES NO)? If Yes description/LAT LONG _____

 What was the Bear Attracted To: _____
 Did the Bear Obtain Food: _____
 Behaviour of Bear: Fearful _____ Not Fearful _____ Aggressive _____
 Damage By Bear: _____

4. Deterrent Action:

Was the Bear Deterred? Yes _____ No _____
 If Yes, Type of Deterrent Used: _____

5. Other Information:

Weather on Site at Time of Report: _____
 Checklist Forwarded to: _____

Project Personnel Wildlife Observations Guidelines

1. Separate forms have been prepared for Wildlife Monitors and Project personnel.
2. Wildlife Monitors will use the Wildlife Monitor Form
3. Project personnel will use the Wildlife Sightings Forms and/or Wildlife Incident Form. These forms will be located in the Wildlife Log Books and available in crew vehicles and camps.
4. The Wildlife Monitor will periodically check each Wildlife Log Book and identify occurrences that require action (e.g. repeated bear/wolf/wolverine sightings in particular area, nesting birds). They will also replenish Wildlife Sightings and Wildlife Incident Forms in the log books as needed.
5. Any species observed (e.g. bear, wolf, fox, wolverine, caribou, moose, bison, beaver, muskrat, marten, ptarmigan, owl, falcon, grebes or waterfowl, or bird nests) should be recorded and identified to the best of the observer's ability.
6. The Wildlife Monitor will include species of note recorded by personnel in its regular reports.
7. All Incident Forms will be forwarded to the Wildlife Monitor daily.

ITH WILDLIFE MONITOR FORM

Date (dd/mm/yyyy): _____

Observer(s): _____

Time	Species ¹	Number	Age/sex ²	Location (describe)	UTM coordinates		Notes ³	Photo ID
					Easting	Northing		
Example: 0840	Moose	1	Adult male	KP3	556878	7644255	Cloudy (overcast), moose seen walking by borrow source I401A (KP 3), no construction activity at borrow source	23

1- Target species:			2 – Age:	2 – Sex:	3 – Notes, where applicable
grizzly bear	barren-ground caribou	rusty blackbird	Adult Juvenile	Male	Weather
black bear	boreal caribou	short-eared owl	Other,	Female	Wildlife behaviour (e.g. aggressive, fleeing, courtship, etc.)
wolverine	moose	peregrine falcon	specify Both	Both	Construction activity and nature of wildlife interaction with people or vehicles
gray wolf	beaver	horned grebe	Unknown	Unknown	Location (e.g. highway km)
red fox	muskrat	waterfowl...			Indirect evidence of wildlife (e.g. mineral lick, den site, nest, tracks, scat)
arctic fox	rock/willow ptarmigan				Cause of mortality (if observed)

Additional notes (e.g. details on wildlife interactions or response to mitigation):

ENR Wildlife Officer Contact Number: _____

ITH Wildlife Sightings Form

DATE	TIME	SPECIES	NUMBER	LOCATION	NOTES	NAME	COMPANY
<i>Example: 12/04/2013</i>	<i>1612</i>	<i>Moose</i>	<i>1 cow, 2 calves</i>	<i>Source 177</i>	<i>Crossing the road</i>	<i>John Doe</i>	<i>ACME</i>

WILDLIFE INCIDENT FORM

Date:

Time:

Location (*Coordinates/ Kilometre Post/ Local Name*):

Wildlife Species:

Person(s) Involved:

Description of Incident:

(Example: bear was chased away twice from camp at borrow source X and had to be shot; or found a dead wolverine near the constructed embankment at KP 13)

Description of the deterrent used:

Reporting (*please use a check mark to identify what was completed*):

Called in the incident to the crew lead or supervisor

☐

Provided a copy of this form to the Wildlife Monitor

☐

Incident was reported by the Wildlife Monitor to ENR

☐

Appendix E

GNWT BEAR SAFETY BROCHURE

If You Encounter a Bear...



- Remember the 3 S's... Stop, Stand still, Stay calm.
- Ensure others know that 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 - speak in low tones, slowly wave your arms.
- Quietly walk back 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.
- Climb at least four metres up a tree to escape a grizzly. (Ineffective against black bears).

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 - use with extreme caution.

If a Bear Charges...



- Many charge 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.
- Play dead only during a grizzly bear attack (lie on your side, curl into a ball with your legs tight to your chest, hands clasped behind your neck).

If you must shoot a bear in self-defense, report the kill to a Renewable Resource Officer as soon as possible. If an Officer is not immediately available, skin the bear and preserve the hide. The hide must be turned in to an Officer. You may not keep any part of a bear killed in self-defense.

For Further Information...



For further information, contact any Environment and Natural Resources Office:

Area Code (867)	
Aklavik	978-2248
Deline	589-3421
Fort Good Hope	598-2271
Fort Liard	770-4311
Fort McPherson	952-2200
Fort Providence	669-3002
Fort Resolution	394-4596
Fort Simpson	695-7433
Fort Smith	872-6400
Hay River	875-5554
Inuvik	678-6670
Lutsel K'e	370-3141
Norman Wells	587-3500
Behchokò	392-6511
Tsiigehtchic	953-3605
Tulita	588-3441
Tuktoyaktuk	977-2350
Ulukhaktok	396-4505
Yellowknife	873-7181



Northwest Territories Environment and Natural Resources

May 2009

Safety in Grizzly and Black Bear Country



Black Bear

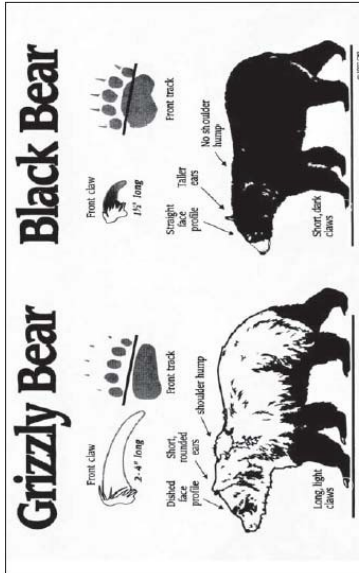
Welcome to Bear Country



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 them with respect. Remember that you are in a bear's territory.

What's the Difference Between...?



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 like shorelines, trails along the water or near berry patches.
- Watch for fresh bear droppings and tracks.
- Carry bear deterrents.



Grizzly Bears

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 camp other than the cook tent.
- 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 odors.
- If you're going to leave the campsite:
 - bearproof your camp - store food and other attractants (dish detergent, toothpaste, 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 away from camp and store them underwater.
- Burn fish guts away from camp.
- Store fish-cleaning knives away from camp.
- Don't wear clothes that smell like fish to bed.

If You are Hunting...



- Avoid hunting late in the day and returning to camp in the dark.
- Stay alert when dressing game or handling meat and only do so away from camp.
- Avoid shooting more than your party can pack out in a single load.
- If you must leave meat in the field, leave it near a visible landmark with a clear approach route and cover it with a tarp to discourage scavengers.
- Don't keep bloodied clothes in your tent.