

## INTRODUCTION

This appendix contains the complete list of standard mitigation measures. The list provides a brief description of each measure and lists the main ecosystem components targeted by each one.

Most of the mitigation measures are mentioned in section 6, but some are not. This is because the list includes measures that are not applicable to the Project, but that could apply to other assessment groups (see Table 2.3). This approach also provides regulatory bodies with the opportunity to require that other numbered standard mitigation measures be implemented.

## 1 TREE REMOVAL AND TIMBER MANAGEMENT (TM)

**Table 1.1 Summary of Mitigation Measures Regarding Tree Removal and Timber Management**

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
TM1	Comply with the <i>Forest Act</i> and all related regulations, particularly the <i>Regulation respecting standards of forest management for forests in the domain of the State</i> and the <i>Forest Protection Regulation</i> . Take the necessary measures to ensure that tree removal complies with the stipulated requirements.	No change	The regulation stipulates buffer zones and vegetation management. If these zones and practices are respected, habitat loss will be minimized.	<ul style="list-style-type: none"> <li>These regulations ensure that forests are managed in a sustainable manner, thereby helping to preserve fauna habitat.</li> <li>Respectful timber management will minimize damage to caribou habitat and facilitate the restoration process. In turn, this will allow more effective restoration of caribou habitat.</li> <li>By complying with the <i>Forest Act</i>, a buffer strip 20 m wide along the banks of a peat bog with a pond, of a swamp, of a marsh, of a lake or of a permanent watercourse will be preserved ensuring habitat for most several migrating birds including species at risk, Rusty Blackbird.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Caribou Avifauna Subsistence harvesting
TM2	Before removing trees, ensure that the person in charge has a permit for public lands or an authorization in the case of private land.	Good practice	-	-	-	No specific component
TM3	Do no clearing in the riparian strip along watercourses or in wetlands without authorization.	Do no clearing in the riparian strip along watercourses or in wetlands without <i>regulatory</i> authorization.	Such authorizations are in place to preserve habitats. If	<ul style="list-style-type: none"> <li>These regulations ensure that habitats are managed in a</li> </ul>	Any time during the Howse Property Construction,	Water quality Wetlands Avifauna

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
			these practices are respected, habitat loss will be minimized.	sustainable manner, thereby helping to preserve them. <ul style="list-style-type: none"> <li>It will ensure that the impacted areas will be limited to those that were identified.</li> <li>This measure will preserve breeding and foraging habitats for several migrating birds including species at risk, Rusty Blackbird.</li> </ul>	Operations and/or decommissioning phases.	Aquatic fauna Subsistence harvesting
TM4	Use a forest technician for the tree removal work and obtain supervisor's authorization to begin cutting	Good practice	-	-	-	Avifauna Subsistence harvesting
TM5	Be particularly careful in wetlands and protected areas.	Good practice	-	It will ensure that the impacted areas will be limited to those that were identified.	-	Water quality Wetlands
TM6	Before removing any trees, clearly mark work sites (right-of-way, storage area, etc.) and required clearing to be done around the work sites (branches to be trimmed) so that they can be readily inspected at any time during the work.	No change	Inspections serve to verify that the work is being done per regulations, which are established to preserve habitat. If these practices are respected, habitat loss will be minimized	<ul style="list-style-type: none"> <li>Relevant to habitat protection/minimizing habitat destruction.</li> <li>It will ensure that the impacted areas will be limited to those that were identified.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Wetlands Avifauna Aquatic fauna Subsistence harvesting
TM7	For marking use strong, weather- and tear-resistant material of a colour that is visible at a distance. If possible, use short lengths of biodegradable tape.	No change.	See TM6	See TM6	See TM6	See TM6
TM8	Remove trees in a way that does not damage vegetation bordering the work sites. Prevent trees from falling outside the work site or into watercourses. If this does occur, remove the trees carefully to avoid any unnecessary disturbance to the area. Do not remove or uproot trees with machinery near the edges of a work site.	If trees fall outside the work site and/or into watercourses, remove the trees to avoid any unnecessary disturbance to the area	Measure will be successful if work site edges are undisturbed	General environmental protection. <ul style="list-style-type: none"> <li>It will help to maintain vegetation near worksite and ensure a faster recolonization by vegetation.</li> <li>By preventing trees from damaging vegetation bordering the work sites, residual habitats for species breeding in the open, such as White-crowned Sparrow, are preserved.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Wetlands Avifauna Aquatic fauna Subsistence harvesting
		Do not remove or uproot trees with machinery near the edges of a work site	Measure will be successful if work site edges are undisturbed	Habitat protection <ul style="list-style-type: none"> <li>It will help to maintain vegetation near worksite and ensure a faster recolonization by vegetation.</li> </ul>	Any time during the Howse Property Construction, Operations and/or	Water quality Wetlands Avifauna Aquatic fauna Subsistence harvesting

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
				<ul style="list-style-type: none"> <li>By preventing trees from damaging vegetation bordering the work sites, residual habitats for species breeding in the open, such as White-crowned Sparrow, are preserved.</li> </ul>	decommissioning phases.	
TM9	Maintain a transition zone around work site in which trees are removed, but stumps are left intact to preserve the shrub stratum.	Good practice		<ul style="list-style-type: none"> <li>It will help to maintain vegetation near worksite and ensure a faster recolonization by vegetation.</li> <li>Shrub stratum can be both used for foraging and breeding by species under the Migratory Bird Convention (Blackpoll Warbler, American Tree Sparrow).</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Avifauna Wetlands Subsistence harvesting
TM10	Ensure that cleared areas that are left bare and exposed to the elements are kept to a strict minimum.	Good practice	-	<ul style="list-style-type: none"> <li>Minimizing bare areas will reduce potential for airborne dust generation by wind erosion during dry periods.</li> <li>By keeping bare and exposed habitats to a minimum, more usable habitats for breeding and foraging will be preserved.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	-
TM11	When a tree on the bank of a watercourse must be cut, preserve its root structure to maintain bank stability.	No change	Measure will be successful if watercourse banks are left intact	General environmental protection.	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Aquatic fauna Subsistence harvesting
TM12	If access to a watercourse or lake is necessary, clear only five-meter-wide openings at intervals of at least 100 m.	No change	Effects on water quality will be measured during the proponent's follow up and monitoring activities	General environmental protection.	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Wetlands Aquatic fauna Subsistence harvesting
TM13	When line cutting and surveying, clear a maximum width of one meter.	No change	Measurable during planned bird surveys	By limiting to one metre the maximum width, more trees will be available to birds for breeding and foraging	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Avifauna Subsistence harvesting

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
TM14	Use only manual tools for line cutting.	Good practice	-	-	-	No specific component
TM15	Do not pile organic matter from topsoil stripping or logging and commercial wood waste less than 20 m from a lake or watercourse, in a wetland or in the water.	No change	Effects on water quality will be measured during the proponent's follow up and monitoring activities	<ul style="list-style-type: none"> <li>General environmental protection.</li> <li>Reduce the possibility of sediment contamination in wetlands.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Wetlands Aquatic fauna Subsistence harvesting
TM16	Determine the most suitable method of disposing of logging and commercial wood waste (e.g., in swaths, chipping, burning, elimination at an authorized disposal site).	Good practice	-	-	-	No specific component

## 2 EROSION AND SEDIMENTATION CONTROL (ES)

**Table 2.1 Summary of Mitigation Measures Regarding Erosion and Sedimentation Control**

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
ES1	Identify erosion-sensitive zones using surface deposit and slope class maps, and avoid working in these areas if possible.	Good practice	-	This measure will prevent the migration and deposition of sediments in the riparian wetlands and it will limit the loss of surface areas.	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Wetlands Aquatic fauna Subsistence harvesting
ES2	To follow the site's natural topography and prevent erosion, keep stripping, clearing, excavation, backfilling, and grading operations to a strict minimum on the work sites.	Good practice	-	<ul style="list-style-type: none"> <li>Limiting disturbance of the natural land will limit the effect on the natural water creeks, lakes and river.</li> <li>This measure will prevent the migration and deposition of sediments in the riparian wetlands and it will limit the loss of surface areas.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
ES3	Excavation and reshaping must be done from the top of the embankment and closely monitored in order to detect any possibility of slippage and to modify work methods if necessary.	Good practice	-	This measure will prevent the migration and deposition of sediments in the riparian wetlands and it will limit the loss of surface areas.	Any time during the Howse Property Construction, Operations and/or	Water quality Wetlands Aquatic fauna Subsistence harvesting

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
					decommissioning phases	
ES4	Respect the area's natural drainage and take all appropriate measures to permit the normal flow of water.	Good practice	-	This measure will maintain the natural flow to wetlands and ensure that wetland will not dry-out.	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
ES5	Comply with instructions on plans and specifications with respect to the area and location of the work as well as the volume of material excavated.	-	-	It will ensure that the impacted areas will be limited to those that were identified.	-	-
ES6	Transport heavy material in multi-axle trailers for better load distribution.	-	-	-	-	-
ES7	Do not dump plant cutting or soil stripping waste in watercourses or lakes.	No change	Effects on water quality will be measured during the proponent's follow up and monitoring activities	General environmental protection.	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Wetlands Aquatic fauna Subsistence harvesting
ES8	Avoid removing vegetation from slopes bordering roads or near watercourses. When building or improving a road that crosses a watercourse, preserve a 20 m strip of shrub vegetation on either side, hereafter called the "riparian strip."	No change	Effects on water quality will be measured during the proponent's follow up and monitoring activities	<ul style="list-style-type: none"> <li>■ Maintaining natural buffer zones helps to preserve habitat.</li> <li>■ It will ensure that the impacted areas will be limited to those that were identified.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Wetlands Aquatic fauna Subsistence harvesting
ES9	No ditches must be dug in the riparian strip on either side of a watercourse. Within the riparian strip, ditch water must be diverted toward a vegetated area, ideally a wetland. If necessary, build a settling pond outside the riparian strip to receive runoff and sediments. Pond dimensions will depend on the inflow and outflow volume.	No change	Effects on water quality will be measured during the proponent's follow up and monitoring activities	<ul style="list-style-type: none"> <li>■ Maintaining natural buffer zones helps to preserve habitat.</li> <li>■ It will prevent the migration and deposition of sediments in the riparian wetlands and it will limit the loss of superfcies.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Wetlands Aquatic fauna Subsistence harvesting
ES10	Trenches dug on sloping land must be stepped or terraced. Ensure that slopes adjacent to access roads are designed for maximum stability.	Good practice	-	-	-	Water quality Wetlands Aquatic fauna Subsistence harvesting
ES11	In sloped areas, use techniques such as the installation of trenches, retaining banks or diversion ditches perpendicular to the slope.	Good practice	-	This measure will prevent the migration and deposition of sediments in the riparian	-	Water quality Wetlands

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
				wetlands and it will limit the loss of superficies		Aquatic fauna Subsistence harvesting
ES12	No road must be built within 60 m of a lake or permanent watercourse or less than 30 m from an intermittent watercourse. If, by exception, such a road is necessary, an authorization must be obtained. The slope of the embankment must be reduced for all built or improved roads located less than 60 m from a lake or permanent watercourse and less than 30 m from an intermittent watercourse. Note, however, that watercourses can be crossed at a more or less perpendicular angle.	No change	Effects on water quality will be measured during the proponent's follow up and monitoring activities	Maintaining natural buffer zones helps to preserve habitat	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Wetlands Aquatic fauna Subsistence harvesting
ES13	Install anti-erosion barriers to prevent soil, rocks, or other material from reaching watercourses. Plant wooden stakes one to two meters apart. At the base of the anti-erosion barrier, dig a trench about 10 cm deep and 10 cm wide. Attach the filter fabric to the stakes, being careful to keep 20 cm of filter fabric free to be placed in the trench perpendicular to the barrier. Fill in the trench over the filter fabric and compact the soil. Check the condition of the barrier every six months or after heavy rains.	No change	Effects on water quality will be measured during the proponent's follow up and monitoring activities	Maintaining natural buffer zones helps to preserve habitat	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Wetlands Aquatic fauna Subsistence harvesting
ES14	Along steep slopes bordering rights-of-way, use sediment barriers at the foot of the embankment or install protective material (straw, wood chips or mats) directly on the slope to reduce the volume of sediments that are transported.	No change	Effects on water quality will be measured during the proponent's follow up and monitoring activities	<ul style="list-style-type: none"> <li>■ Maintaining natural buffer zones helps to preserve habitat</li> <li>■ This measure will limit erosion and sediment transportation. Furthermore, it will promote infiltration.</li> <li>■ This measure will prevent the migration and deposition of sediments in the riparian wetlands and it will limit the loss of superficies.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
ES15	Avoid storing excavated material on steep slopes and ensure they are properly compacted. To ensure better compaction of fill more than 60 cm thick, it is preferable to deposit several thin layers rather than a single layer. In zones with no transversal slope, the height and depth of the fill must be limited to three meters.	Good practice	-	Airborne dust from wind erosion of excavated material piles will be transported on shorter distances if their height is limited.	-	Air quality Water quality Wetlands Aquatic fauna Subsistence harvesting
ES16	Stabilize slopes of excavated material or fill using native plants wherever erosion is likely to deposit sediments in watercourses.	Good practice	-	-	-	Water quality Wetlands

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
						Aquatic fauna Subsistence harvesting
ES17	Store excavated material more than 20 m from watercourses, i.e. outside the riparian strip.	No change	Effects on water quality will be measured during the proponent's follow up and monitoring activities.	Maintaining natural buffer zones helps to preserve habitat	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Wetlands Aquatic fauna Subsistence harvesting
ES18	Control the quality of surface runoff and water pumped from excavations by filtering, decanting or treating the water, or by any other method. Do not release it directly into a waterbody.	No change	Effects on water quality will be measured during the proponent's follow up and monitoring activities.	Maintaining natural buffer zones helps to preserve habitat	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Wetlands Aquatic fauna Subsistence harvesting
ES19	Contain the drilling waste storage area and take the necessary measures to prevent runoff from dispersing into the ground or ensure that it is filtered before it reaches a drainage component.	Good practice	-	-	-	Water quality Aquatic fauna Subsistence harvesting
ES20	When excavating a trench, put the topsoil, subsoil and excavated rock in separate piles no more than one or two meters high. This makes it possible to backfill the trenches without using material from elsewhere.	-	-	-	-	No specific component
ES21	Backfill trenches as soon as possible and in reverse order to their excavation, replacing excavated mineral soil first and finishing with the topsoil.	-	-	-	-	No specific component
ES22	If there is not enough topsoil, keep it for areas where erosion could cause the most damage.	Good practice	-	-	-	Water quality Wetlands Aquatic fauna Subsistence harvesting
ES23	Do not put the topsoil in a water-saturated area. Ideally, it should be used within 12 months of piling.	Good practice	-	It will reduce the possibility of sediment contamination in wetlands.	-	Water quality Wetlands Aquatic fauna Subsistence harvesting
ES24	Take the necessary measures to avoid stripping the soil during snow removal operations.	Good practice	-	-	-	Water quality Aquatic fauna Subsistence harvesting

**3 WATERCOURSE CROSSINGS (WC)**

**Table 3.1 Summary of Mitigation Measures Regarding Watercourse Crossings**

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
WC1	Check whether a permit or authorization is needed for building watercourse crossings.	-	-	-	-	Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
WC2	Arched culverts must be installed at all watercourse crossings where potential or confirmed fish habitat is present.	No change	Measurable by fish habitat surveys (planned via MMR) and feedback from locals	<ul style="list-style-type: none"> <li>This will prevent erosion as the littoral of the crossing will remain intact.</li> <li>Prevents fish habitat loss and ensures fish passage</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Aquatic fauna Subsistence harvesting
WC3	Keep the scale and duration of work in the water to a minimum and confine the work to minimum-flow or low-water periods.	No change	Measurable by fish habitat surveys (planned via MMR) and feedback from locals	<ul style="list-style-type: none"> <li>This measure will limit the amount of erosion generated during water crossing construction activities.</li> <li>Limit fish disturbance and habitat degradation through sedimentation</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Aquatic fauna Subsistence harvesting
WC4	Ensure that fish can move freely at all times and avoid critical periods for fish (spawning, incubation, nursing, etc.).			Minimizes effects on fish life cycle		Aquatic fauna Subsistence harvesting
WC5	Build bridges and install culverts on narrow, straight sections without reducing the width of the watercourse, choosing ground with adequate load-bearing capacity and gentle slopes. Build them as far as possible from watercourse mouths or confluences.	No change	Measurable by fish habitat surveys (planned via MMR) and feedback from locals	<ul style="list-style-type: none"> <li>Reducing imprint on shoreline maintains a natural protection from erosion.</li> <li>Limit fish habitat degradation through sedimentation</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
WC6	Accurately assess the watercourse's peak flow in order to choose the appropriate diameter of pipe.	No change	Measurable by fish habitat surveys (planned via MMR) and feedback from locals	Ensures fish passage and reduces habitat degradation through sedimentation	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
WC7	Choose the type of culvert (arched, round, elliptical, etc.) based on the characteristics of the site and the fish habitat.	No change	Measurable by fish habitat surveys (planned via MMR)	Prevents fish habitat loss and ensures fish passage	Any time during the Howse Property Construction, Operations and/or	Water balance Wetlands Aquatic fauna Subsistence harvesting



Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
			and feedback from locals		decommissioning phases	
WC8	For more information on suggested types of structures (bridges and culverts, corrugated metal, ice bridges and snow fill crossings) read MRNF's <i>Guide d'aménagement de ponts et ponceaux dans le milieu forestier</i> .	-	-	-	-	-
WC9	Build crossings perpendicular to the watercourse.	No change	Measurable by fish habitat surveys (planned via MMR) and feedback from locals	<ul style="list-style-type: none"> <li>Reducing imprint on shoreline maintains a natural protection from erosion.</li> <li>Limit fish habitat degradation through sedimentation</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Wetlands Aquatic fauna Subsistence harvesting
WC10	Use existing crossings on roads, cleared strips or paths as far as possible to avoid disturbing riparian vegetation.	No change	Measurable by fish habitat surveys (planned via MMR) and feedback from locals	<ul style="list-style-type: none"> <li>Reducing imprint on shoreline maintains a natural protection from erosion.</li> <li>Limit fish habitat degradation through sedimentation</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Wetlands Aquatic fauna Subsistence harvesting
WC11	Limit tree felling along the shore and mark trees to be left standing.	-	-	-	-	No specific component
WC12	Preserve plant cover and stumps in road rights-of-way.	No change	Measurable by fish habitat surveys (planned via MMR) and feedback from locals	<ul style="list-style-type: none"> <li>Reducing imprint on shoreline maintains a natural protection from erosion.</li> <li>Limit fish habitat degradation through sedimentation</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Wetlands Aquatic fauna Subsistence harvesting
WC13	Set aside organic matter and soil for site rehabilitation.	Good practice	-	-	-	-
WC14	Before starting work, confine the work area to avoid sediment transport into water and ensure that work methods and materials used do not generate excessive turbidity.	No change	Measurable by fish habitat surveys (planned via MMR) and feedback from locals	<ul style="list-style-type: none"> <li>This measure reduces sediment transport into water and ensure that work methods and materials used do not generate excessive turbidity.</li> <li>Limit fish habitat degradation through sedimentation</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Wetlands Aquatic fauna Subsistence harvesting
WC15	When building a winter road that crosses a watercourse, install bridging or build an ice bridge.	-	-	-	-	Water quality Wetlands

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
						Aquatic fauna Subsistence harvesting
WC16	When building a bridge or installing a culvert in an area without fish habitat, do not reduce the width of the watercourse more than 20% (measured from the natural high-water mark).	No change	Measurable by fish habitat surveys (planned via MMR) and feedback from locals	This measure will prevent road material from reaching the river	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Water balance Wetlands
WC17	Install a culvert at least 45 cm in diameter.	-	-	-	-	-
WC18	Maximum flow depth must not exceed 85% of the culvert's vertical clearance.	-	-	-	-	-
WC19	Ensure the stability of soil, shorelines, banks, fill and structures during the construction of watercourse crossings (geotextile liner, rip-rap on embankments and watercourse bed, etc.)	No change	Measurable by fish habitat surveys (planned via MMR) and feedback from locals	<ul style="list-style-type: none"> <li>This measure will prevent road material from reaching the river.</li> <li>Limit fish habitat degradation through sedimentation.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Wetlands Aquatic fauna Subsistence harvesting
WC20	Install transversal drains to divert the flow of water from road ditches. The transversal drains must be placed about every 30 m and be 60 cm wide and 30 cm deep.	No change	Measurable by fish surveys (planned via MMR)	Ensure fish passage	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Water balance Wetlands
WC21	Do not block the flow of water and respect the slope, natural drainage of the soil and direction of the watercourse when installing a culvert.	No change	Measurable during wetland surveys and monitoring	<ul style="list-style-type: none"> <li>This measure will ensure that erosion will not occur downstream the culvert.</li> <li>This measure will maintain the natural flow to wetlands and ensure that wetlands will not dry-out.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
WC22	Backfill around the culvert and stabilize the fill. The end of the culvert must extend at least 30 cm beyond the base of the fill.	No change	Measurable by fish habitat surveys (planned via MMR) and feedback from locals	<ul style="list-style-type: none"> <li>This measure will ensure that erosion will not occur downstream the culvert.</li> <li>Limit fish habitat degradation through sedimentation.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Wetlands Aquatic fauna Subsistence harvesting
WC23	The base of the culvert must be buried beneath the natural bed of the watercourse to a depth equivalent to 10% of the	-	-	This measure will ensure that erosion will not occur downstream the culvert	-	Aquatic fauna Subsistence harvesting

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
	culvert's height. Maximum burial depth must not exceed 30 cm, however, or a bottomless arched culvert must be used.					
WC24	Tubular culverts may not have more than two parallel pipes, and they must be separated by at least one meter.	-	-	-	-	Aquatic fauna Subsistence harvesting
WC25	All temporary structures must be stabilized upstream and downstream and demolished when the work is finished.	No change	Measurable by fish habitat surveys (planned via MMER) and feedback from locals	<ul style="list-style-type: none"> <li>■ This measure will reduce sediment transport into water and ensure that erosion not begin downstream of working zones.</li> <li>■ Limit fish passage obstacles and fish habitat degradation through sedimentation.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
WC26	Once work is finished, restore the bed of the watercourse to its natural profile, stabilize the banks and revegetate as needed with native species.	No change	Measurable by fish habitat surveys (planned via MMER) and feedback from locals	<ul style="list-style-type: none"> <li>■ This measure will reduce sediment transport into water and ensure that erosion not begin downstream of working zones.</li> <li>■ Restore degraded fish habitat and limit further degradation through sedimentation.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Wetlands Aquatic fauna Subsistence harvesting
WC27	Monitor culverts and bridges periodically, especially in the spring or after heavy rains. Pay particular attention to signs of erosion, poor plant regrowth, obstacles blocking water flow and structural integrity.	No change	Measurable by fish habitat surveys (planned via MMER) and feedback from locals	<ul style="list-style-type: none"> <li>■ This measure made sure to prevent the road material from reaching the river.</li> <li>■ Ensure fish passage and limit habitat degradation through sedimentation.</li> </ul>	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
WC28	If necessary, spread the work out over time to take into account the life cycles of the species found in the area.	No change	Measurable by fish habitat surveys (planned via MMER) and feedback from locals	Minimizes effects on fish life cycle.	Any time during the Howse Property Construction, Operations and/or decommissioning phases	Wetlands Aquatic fauna Subsistence harvesting

4 WASTE MANAGEMENT (WM)

**Table 4.1 Summary of Mitigation Measures Regarding Waste Management**

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
WM1	Before starting exploration, estimate, if possible, the quantity of waste that may be generated based on information such as the number of project participants, the presence of a camp on the site and project duration.	-	-	-	-	No specific component
WM2	Emphasize, in the following order, reduction at source re-use, recycling and conversion of waste. Replace hazardous products with less harmful ones if possible. The quantity of waste can be reduced at source by using up products completely, buying in bulk and accurately estimating required amounts.	-	-	-	-	No specific component
WM3	Do not dump any waste into aquatic environments, including waste from cutting vegetation or stripping the soil. All waste accidentally introduced into aquatic environments must be removed as quickly as possible.	No change	Effects on water quality will be measured during the proponent's follow up and monitoring activities	Maintaining natural buffer zones helps to preserve habitat	Any time during the Howse Property Construction, Operations and/or decommissioning phases.	Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
WM4	Domestic and construction waste, as well as recyclable materials, must be shipped to authorized sites according to type.	-	-	-	-	No specific component
WM5	If quantities are minimal, dry materials (concrete, asphalt, etc.) can be used as fill buried directly behind the protective work. Wood and plant debris can be buried in the bank directly above the protective work.	-	-	-	-	Air quality Wetlands
WM6	Plan a storage site for use before and after processing large quantities of waste, particularly plastics, which are difficult to extinguish once they catch fire.	-	-	-	-	No specific component
WM7	Comply with applicable regulations that prohibit the burning of waste.	-	-	-	-	Air quality Water quality Water balance Aquatic fauna Subsistence harvesting
WM8	Store waste temporarily in a single location inaccessible to wildlife, employees and the public.	-	-	-	-	No specific component

5 HAZARDOUS MATERIALS MANAGEMENT (HM)

**Table 5.1 Summary of Mitigation Measures Regarding Hazardous Materials Management**

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Effects analysis update Target Component
HM1	Implement a hazardous waste management plan in the event that fuel or other hazardous substances are spilled.	Good practice	-	-	-	Water quality Water balance Wetlands Avifauna Aquatic fauna Subsistence harvesting
HM2	Comply with laws and regulations regarding the transportation of hazardous materials.	-	-	-	-	No specific component
HM3	Spill kits for recovering oil products and hazardous materials must be present on the worksite at all times.	Good practice	-	-	-	Water quality Water balance Wetlands Avifauna Aquatic fauna Subsistence harvesting
HM4	Each vehicle and piece of machinery on the site must contain enough absorbent materials to intervene rapidly in the event of a spill. A list of materials and intervention methods to be used in the event of a spill must be approved by the supervisor.	Good practice	-	-	-	Water quality Water balance Wetlands Avifauna Aquatic fauna Subsistence harvesting
HM5	All accidental spills must be reported immediately to the person in charge of the emergency response plan, which will have been drawn up and approved before work start-up.	Good practice	-	-	-	Water quality Water balance Wetlands Avifauna Aquatic fauna Subsistence harvesting
HM6	If harmful substances are spilled, the responsible authority must be contacted.	Good practice	-	-	-	Water quality Water balance Wetlands Avifauna Aquatic fauna Subsistence harvesting
HM7	It is prohibited for any employee to dump any hazardous material in the environment or wastewater treatment system. This includes scrap and volatile materials, particularly mineral spirits and oil or paint thinners.	Good practice	-	-	-	Water quality Water balance Wetlands

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Effects analysis update Target Component
						Avifauna Aquatic fauna Subsistence harvesting
HM8	In the event of a spill during vehicle refuelling, the spilled fuel must be cleaned up before restarting the engine.	-	-	-	-	No specific component
HM9	If hazardous materials are spilled, the contaminated areas must be marked and the surface layer removed for disposal in accordance with regulations in effect in order to limit contamination of waterbodies by runoff. Contaminated areas must be backfilled and stabilized to permit revegetation.	Good practice	-	-	-	Water quality Water balance Wetlands Avifauna Aquatic fauna Subsistence harvesting
HM10	Keep hazardous substances, including fuel, at least 100 m from waterbodies or surface drainage channels.	-	-	-	-	No specific component
HM11	Hazardous materials must be handled and stored in accordance with regulations.	-	-	-	-	No specific component
HM12	When a site is closed, ensure that all tires have been removed and properly disposed of.	-	-	-	-	Water quality Water balance Wetlands Avifauna Aquatic fauna Subsistence harvesting

## 6 DRILLING AND BLASTING (DB)

**Table 6.1 Summary of Mitigation Measures Regarding Drilling and Blasting**

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
DB1	An explosives management plan must be drawn up to minimize the amount of ammonia and nitrates released into the natural environment.	Good practice	Water quality will be monitored via MMER and local's concerns will be addressed.	This measure will preserve the water quality from any deleterious forms of nitrogen contamination	During blasting	Air Quality Water quality Aquatic fauna Subsistence harvesting

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
				in surface or groundwater.		
DB2	All explosives must be used in accordance with applicable laws, orders and regulations.	Good practice	Noise levels will be monitored and local's concerns will be addressed	Using best practices will ensure efficient blasting is achieved. Efficient blasting procedures lead to a reduction of explosives use and consequently of noise and vibration due to these blasting events.	During blasting	Noise
DB3	Only properly qualified and trained personnel may handle and detonate explosives as per the manufacturer's instructions and applicable laws and regulations.	Good practice	-	Best practices used for drilling and blasting will minimize short-term air emissions associated with these activities. Combine these standard measures to the specific measure for management of NOx from Blasts.	During blasting	Air Quality Noise
DB4	The manufacturer's instructions must be followed to ensure that blasting procedures are safe both for humans and the environment.	Good practice	-	Best practices used for drilling and blasting will minimize short-term air emissions associated with these activities. Combine these standard measures to the specific measure for management of NOx from Blasts.  These measures will preserve the water quality from any deleterious forms of nitrogen contamination in surface or groundwater	During blasting	Air Quality Noise Water quality Water balance Aquatic fauna Subsistence harvesting

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
DB5	Fisheries and Oceans Canada <i>Guidelines for the Use of Explosives in or near Canadian Fisheries Waters</i> must be followed when blasting on land.	Good practice	-	Prevent fish mortality	During blasting	Water quality Aquatic fauna Subsistence harvesting
DB6	No explosive is to be detonated in or near fish habitat that produces an instantaneous pressure change greater than 100 kPa in the swimbladder of a fish.	-	-	Prevent fish mortality	-	Aquatic fauna Subsistence harvesting
DB7	No explosive is to be detonated that produces, or is likely to produce, a peak particle velocity greater than 13mm s <sup>-1</sup> in the spawning bed during the period of egg incubation.	No explosive is to be detonated that produces, or is likely to produce, a peak particle velocity greater than 13mm s <sup>-1</sup> in the spawning bed during the period of egg incubation.	Measure will prevent the destruction of fish eggs	Relevant to Aquatic fauna Subsistence harvesting Prevent fish mortality	Period of egg incubation	
DB8	To keep the fish away when blasting near water, small charges must be fired to scare the fish shortly before the main charge is fired.					No specific component
DB9	No explosive must be used in or near water.	Good practice	-	These measures will preserve the water quality and wetlands from any deleterious forms of nitrogen contamination in surface or groundwater	-	-
DB10	Blasting must be suspended in certain circumstances to avoid excessive disturbance of wildlife.	<ul style="list-style-type: none"> <li>■ Activities will cease if caribou are seen within 5 km of an active pit or the processing complex and TSMC will contact the NLDEC to discuss any further steps to be taken.</li> <li>■ Work activities will be re-scheduled for as long as caribou as within a 5 km radius of the site.</li> </ul>	Measure will be successful if caribou are seen at the Howse site and the activities cease.  Measurable by number of caribou.	<ul style="list-style-type: none"> <li>■ This will ensure that caribou suffer less indirect habitat loss</li> <li>■ Relevant to caribou and subsistence activities (caribou hunting)</li> </ul>	Any time during the Howse Project construction, operations and/or decommissioning phases	Since caribou have not been seen near the Howse site lately, no update needed
DB11	To prevent spills of explosive materials, trained employees must ensure that all containers, tanks, storage trailers and loading equipment receive regular maintenance.	Good practice	-	-	-	No specific component
DB12	Blasted rock may be used as backfill.	Good practice	-	-	-	No specific component



Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
DB13	Water left after drilling must be blown out using compressed air before the pneumatic loading of the ANFO.			Limit effect on fish health		Water quality Aquatic fauna Subsistence harvesting
DB14	Depending on blasting conditions, the explosives used can greatly affect the overall quantity of explosives waste, so it is important to choose the appropriate type of explosive.	Chose explosive-type based on blasting conditions	Measure is successful if air and water quality are maintained	Relevant to air quality and surface water quality Limit effect on fish health	During blasting activities	Water quality Aquatic fauna Subsistence harvesting
DB15	Explosives waste must be recovered and disposed of in an appropriate manner after each blast.	Good practice	-	<ul style="list-style-type: none"> <li>This measure preserves the quality of the water for direct or indirect from deleterious form of nitrogen.</li> <li>Limits effect on fish health</li> </ul>	-	Water quality Aquatic fauna Subsistence harvesting
DB16	Use multiple detonators in bore holes as per the manufacturer's recommendations and optimize the arrangement of blasting holes to minimize misfires.	No change	Measure is successful if no misfires occur	<ul style="list-style-type: none"> <li>Using best practices will ensure efficient blasting is achieved. Efficient blasting procedures lead to a reduction of explosives use and consequently of noise and vibration due to these blasting events.</li> <li>These measures will preserve the water quality from any deleterious forms of nitrogen contamination in</li> </ul>	During blasting activities	Noise Water quality Water balance Aquatic fauna Subsistence harvesting

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
				surface or groundwater <ul style="list-style-type: none"> <li>Limit effect on fish health</li> </ul>		
DB17	To minimize explosives waste, minimum distances between collars and charges must be determined for all underground blasting charges, based on geological conditions and the application.	-	-	-	-	-
DB18	Prevent misfires by establishing time delay blasting cycles as per the explosives manufacturer's recommendations.	No change	Measure is successful if no misfires occur	<ul style="list-style-type: none"> <li>Using best practices will ensure efficient blasting is achieved. Efficient blasting procedures lead to a reduction of explosives use and consequently of noise and vibration due to these blasting events.</li> <li>Limit effect on fish health</li> </ul>	During blasting activities	Noise Water quality Aquatic fauna Subsistence harvesting
DB19	Use reliable triggering systems that allow for precise firing of the explosives.	Good practice	-	<ul style="list-style-type: none"> <li>Using best practices will ensure efficient blasting is achieved. Efficient blasting procedures lead to a reduction of explosives use and consequently of noise and vibration due to these blasting events.</li> <li>These measures will preserve the</li> </ul>	During blasting activities	Water balance Aquatic fauna Subsistence harvesting

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
				<p>water quality from any deleterious forms of nitrogen contamination in surface or groundwater.</p> <ul style="list-style-type: none"> <li>▪ Limit effect on fish health</li> </ul>		
DB20	Use blasting mats, if necessary, to prevent excessive scatter of rock.	Good practice		For safety and nuisance reduction		Air quality Noise
DB21	Take the necessary precautions to control dust emissions from drilling.	Good practice		Best practices used for drilling and blasting will minimize short-term air emissions associated with these activities. Combine these standard measures to the specific measure for management of NOx from Blasts.		Air quality
DB22	Fill borehole necks with clean crushed rock to eliminate dust and gas emissions during blasting.	Good practice		Best practices used for drilling and blasting will minimize short-term air emissions associated with these activities. Combine these standard measures to the specific measure for management of NOx from Blasts.		Air quality
DB23	Use explosives in such a way as to minimize the scattering of blasting material outside the blasting site.	Good practice	-	-	-	Air quality
DB24	Keep blasting data for two years, including the following: vibration speed, vibration frequency on the ground, air pressure and blasting patterns. Respect maximum vibration speeds.	-	-	<p>For safety and nuisance reduction</p> <p>These data will be available for future uses to evaluate the</p>	-	Noise Avifauna

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
				effects on migrating birds, especially waterfowl		
DB25	Blasting must be carried out in such a way that air pressure at the receptors (camps) is less than 128 db.	Blasting must be carried out in such a way that air pressure at the receptors (camps) is less than 128 db.	Amount of noise at fixed distance is measurable	<ul style="list-style-type: none"> <li>Relevant to noise effects at camp</li> <li>For safety and nuisance reduction</li> <li>By limiting the number of decibels during blasting, the effects radius of disturbance on birds will be considerably reduced</li> </ul>	Anytime a blast occurs	Avifauna

## 7 CONSTRUCTION EQUIPMENT (CE)

**Table 7.1 Summary of Mitigation Measures Regarding Construction Equipment**

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
CE1	Store all equipment and machinery in areas specifically designed for this purpose, particularly parking, washing and maintenance areas. These zones must be located 60 m or more from watercourses and waterbodies.	No change	Water quality will be monitored throughout the project	<ul style="list-style-type: none"> <li>These measures will preserve water quality and wetlands from direct or indirect hydrocarbons contamination.</li> <li>Reduced risk of fish habitat degradation through contamination</li> </ul>	Any time during the Howse Project construction, operations and/or decommissioning phases	Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
CE2	Washing of equipment in aquatic environments is prohibited.	No change	Water quality will be monitored throughout the project	<ul style="list-style-type: none"> <li>This measure preserves the overall water quality and wetlands for all LSA natural water bodies.</li> </ul>	Any time during the Howse Project construction, operations and/or	Water quality Water balance Wetlands

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
				<ul style="list-style-type: none"> <li>Reduced risk of fish habitat degradation through contamination</li> </ul>	decommissioning phases	Aquatic fauna Subsistence harvesting
CE3	Only qualified personnel may refuel and maintain equipment.	-	-	-	-	No specific component
CE4	Construction equipment must be delivered to the site in good working order, without leaks and equipped with all emissions filters required to comply with emissions regulations and reduce noise disturbance. The equipment must be regularly inspected to detect any leaks or mechanical defects that could lead to fuel, lubricant or hazardous material spills.	No change	Air quality will be monitored during the follow up and monitoring programs.	<ul style="list-style-type: none"> <li>Well maintained engines will keep air emissions and noise levels in-line with regulations and preserve water quality and wetlands from direct or indirect hydrocarbons contamination.</li> <li>Reduced risk of fish habitat degradation through contamination</li> </ul>	Any time during the Howse Project construction, operations and/or decommissioning phases	Air Quality Noise Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
CE5	Fuel-related operations (storage, transportation and handling) must comply with the relevant standards and guidelines. All equipment must be refuelled more than 15 m from a waterbody.	Good practice		<ul style="list-style-type: none"> <li>Preserve water quality and wetlands from direct or indirect hydrocarbons contamination.</li> <li>Reduced risk of fish habitat degradation through contamination</li> </ul>		Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
CE6	No machinery must circulate in the riparian strip unless regulations permit it.	Good practice		<ul style="list-style-type: none"> <li>As long as the littoral of the crossing remains intact, erosion cannot begin. Furthermore, it will ensure infiltration of possible run off.</li> <li>Reduced risk of fish habitat degradation through contamination</li> </ul>	Any time during the Howse Project construction, operations and/or decommissioning phases	Wetlands Water balance Aquatic fauna Subsistence harvesting
CE7	Equipment and vehicles must yield to passing animals.	Install appropriate road signs and follow speed limits in order to minimize accidents and disturbance to the environment.	Measure is successful if no wildlife collisions occur	Measure reduces potential for wildlife collisions	Any time during the Howse Project construction, operations and/or decommissioning phases	Caribou Subsistence harvesting

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
CE8	Install appropriate road signs and follow speed limits in order to minimize accidents and disturbance to the environment.	Install appropriate road signs and follow speed limits in order to minimize accidents and disturbance to the environment.	Measure is successful if no wildlife collisions occur	<ul style="list-style-type: none"> <li>Measure reduces potential for wildlife collisions</li> <li>Road dust emissions are minimized at lower speed.</li> </ul>	Any time during the Howse Project construction, operations and/or decommissioning phases	Air quality Caribou Subsistence harvesting
CE9	All pumps and generators near waterbodies must be equipped with a drip pan.	Good practice		<ul style="list-style-type: none"> <li>This measure will preserve water quality and wetlands from direct or indirect hydrocarbons contamination.</li> <li>Reduced risk of fish habitat degradation through contamination</li> </ul>		Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
CE10	Inspect equipment at each use to detect leaks and drips. Any leaks must be repaired and reported immediately to the field supervisor.	Good practice		<ul style="list-style-type: none"> <li>This measure will preserve water quality and wetlands from direct or indirect hydrocarbons contamination.</li> <li>Reduced risk of fish habitat degradation through contamination</li> </ul>		Water quality Water balance Wetlands Aquatic fauna Subsistence harvesting
CE11	All employees driving company vehicles must hold a valid driving licence. Personnel must attend an orientation and employee safety session and must be familiar with the procedures to follow in the event of a collision with an animal.	-	-	-	-	No specific component
CE12	Road access must be limited to project personnel.	-	-	-	-	No specific component
CE13	Respect speed limits and all traffic regulations. Install signs warning drivers of the presence of animals along project roads and railways.	Install appropriate road signs and follow speed limits in order to minimize accidents and disturbance to the environment.	Measure is successful if no wildlife collisions occur	Measure reduces potential for wildlife collisions	Any time during the Howse Project construction, operations and/or decommissioning phases	Caribou Subsistence harvesting
CE14	Use low sulfur content fuels.	Limit fuel sulfur content to 15 ppm, as per Canadian regulations	Air quality will be monitored during the follow up and monitoring programs.	There is a direct relationship between SO <sub>2</sub> emissions and fuel sulfur content. Low fuel sulfur content, means low SO <sub>2</sub> emissions.	Any time during the Howse Project construction, operations and/or decommissioning phases	Air quality

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
CE15	The dust-control liquid used must comply with GNL regulations.	Good Practice	-	<ul style="list-style-type: none"> <li>This measure preserve the overall quality of the water for natural water body.</li> <li>Reduced risk of fish habitat degradation through contamination</li> </ul>	-	-
CE16	When making the final choice of equipment, ensure that their noise levels are equal or less than those described in the environmental impact study.	No change	Noise levels will be measured during the follow and monitoring. Measure is successful if noise levels comply with those described in Howse Property EIS.	Measure reduces effects on wildlife, land use and overall noise. Noise assessment for this EIS is based on a series of noise data for equipment and shows compliance with standards	Any time during the Howse Project construction, operations and/or decommissioning phases	Noise

## 8 MINING OPERATIONS (M)

**Table 8.1 Summary of Mitigation Measures Regarding Mining Operations**

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
M1	Crushers, dryers, sieves, conveyors, elevators and hoppers must not generate airborne dust that is visible more than two meters from the emission source.	No change	Air quality will be monitored during the follow and monitoring.	Measures reduces effects on air quality.	Any time during the Howse Project construction, operations and/or decommissioning phases	Air Quality
M2	The noise level of mining operations must be no higher than 40 dba at night and 45 dba during the day at each receiver (Quebec Guidelines for Stationary Noise Sources for Type I Zoning Area).	No change	Noise levels will be measured during the follow and monitoring. Measure is successful if noise levels comply with those described in Howse Property EIS.	Measure reduces effects on wildlife, land use and overall noise.	Any time during the Howse Project construction, operations and/or decommissioning phases	Noise
M3	Reports required by governments must be submitted by the stipulated deadlines.	-	-	-	-	-

9 MANAGEMENT OF ORE, ROCK PILES, WASTE ROCK, TAILINGS AND OVERBURDEN (MO)

**Table 9.1 Summary of Mitigation Measures Regarding Management of Ore, Rock Piles, Waste Rock, Tailings and Overburden**

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
MO1	Take the necessary steps to prevent wind erosion of stored tailings and avoid slippage around the mine tailing storage sites.	Good practice		Limit fish habitat degradation through sedimentation		Water quality Water balance Aquatic fauna Subsistence harvesting
MO2	Locate the storage area more than 100 m from the high water mark.	Good practice	-	-	-	-
MO3	Only mine tailings shall be deposited in the storage areas.	-	-	-	-	-
MO4	Prepare scenarios for using tailings, particularly waste rock. For example, tailings could be used to build roads and railways.	-	-	-	-	No specific component
MO5	The physico-chemical parameters of the ore and tailings must be characterized.	-	-	-	-	No specific component
MO6	Control dust emissions from tailing storage and handling.	-	-	-	-	-

10 WATER MANAGEMENT (H<sub>2</sub>OM)

**Table 10.1 Summary of Mitigation Measures Regarding Water Management**

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
H <sub>2</sub> OM1	Fresh water supply pipes must be equipped with water meters.	-	-	-	-	No specific component
H <sub>2</sub> OM2	Re-use of waste water from mining operations will be encouraged.	Good practice		This measure will limit the use of fresh water and limit the variation of the natural water balance of the LSA.		Water balance



Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
H <sub>2</sub> OM3	Facilities posing risks (ore processing complex, tailings storage area, oil products and chemical storage area, etc.) must be built and operated in a manner that prevents any significant deterioration in groundwater quality before and during the mine's operation.	-	-	-	-	No specific component
H <sub>2</sub> OM4	Observation and sampling shafts around facilities posing risks (ore processing complex, tailings storage area, oil products and chemical storage area, etc.) must be used to monitor groundwater quality.	Good practice				No specific component
H <sub>2</sub> OM5	Once mining operations are finished, but before restoration work begins, establish a surface water and groundwater monitoring program approved by the competent authority and proceed with required sampling.	Good practice		This method will ensure that if water quality does not improve after mining operations, the source and solution to the problem will be identified quickly.		Water quality Water balance Aquatic fauna Subsistence harvesting
H <sub>2</sub> OM6	At the end of restoration work, implement the surface water and groundwater monitoring programme.	Good practice				Water quality Water balance Aquatic fauna Subsistence harvesting

## 11 AIR QUALITY CONTROL (AQ)

**Table 11.1 Summary of Mitigation Measures Regarding Air Quality Control**

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
AQ1	Dust extractors with filter bags will be used to control dust emissions at the crude ore recovery tunnel, the secondary crusher and the dryer.	No change	Air quality will be monitored using standard reference and site-specific sampling methods as per: (Guidelines for Ambient Air Monitoring, December 16, 2010).	Well maintained fabric filter dust emission control reduces dust emissions by >95%	Any time during the Howse Project construction, operations and/or decommissioning phases	Air Quality
AQ2	Dust recovered from the dust extractor must be disposed of in a manner that prevents dust emissions.	No change	Air quality will be monitored using standard reference and	Reduces effects on air quality as good practices in dust	Any time during the Howse Project construction,	Air Quality

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
			site-specific sampling methods as per: (Guidelines for Ambient Air Monitoring, December 16, 2010).	handling minimizes punctual releases in the environment	operations and/or decommissioning phases	
AQ3	Use a water-spraying system at conveyor transfer and drop points.	No change	Air quality will be monitored using standard reference and site-specific sampling methods as per: (Guidelines for Ambient Air Monitoring, December 16, 2010).	Reduces effects on air quality as water spraying is efficient in reducing dust releases	Any time during the Howse Project construction, operations and/or decommissioning phases	Air Quality
AQ4	Mix the ore with water in the drum scrubber.	-	-	Water mixing is efficient in controlling dust from being released at the source	-	No specific component
AQ5	A dust extractor will be used to limit dust emissions from drills.	No change	Air quality will be monitored using standard reference and site-specific sampling methods as per: (Guidelines for Ambient Air Monitoring, December 16, 2010).	Reduces effects on air quality as the dust extractor limits the area in which wind gusts could blow dust away from the drill	Any time during the Howse Project construction, operations and/or decommissioning phases	Air quality
AQ6	Roads will be sprayed to reduce dust emissions during dry periods.	No change	Air quality will be monitored using standard reference and site-specific sampling methods as per: (Guidelines for Ambient Air Monitoring, December 16, 2010).	Reduces effects on air quality as the application of a dust control agent will reduce road dust emissions	Any time during the Howse Project construction, operations and/or decommissioning phases	Air quality Health Subsistence harvesting

12 REHABILITATION (R)

**Table 12.1 Summary of Mitigation Measures Regarding Rehabilitation**

Code	Standard Measure in EIS	Revised Standard Mitigation Measure	Measurable	Relevant	Time Bound	Target Component
R1	Follow good practices presented in the rehabilitation plan.	Good practice				Water quality Water balance Wetlands Avifauna Aquatic fauna Subsistence harvesting
R2	Draw up a rehabilitation plan	Good practice				Water quality Water balance Wetlands Caribou Avifauna Aquatic fauna Subsistence harvesting
R3	Produce post-mining and post-rehabilitation monitoring reports.	Good practice				Water quality Wetlands Avifauna Aquatic fauna Subsistence harvesting