ATTACHMENT 1: SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT OF LSMOC TEMPORARY WINTER CONSTRUCTION ROAD

Manitoba Transportation and Infrastructure

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Lake Manitoba and Lake St. Martin Outlet Channels Project Supplemental Environmental Assessment of LSMOC Temporary Winter Construction Road

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Abbreviations

ATV	all-terrain vehicle
EIS	Environmental Impact Statement
EMP	Environmental Management Program
EOC	Emergency Outlet Channel
IAAC	Impact Assessment Agency of Canada
ICSER	Indigenous Consultation and Stakeholder Engagement Report
IR	Information Request
km	kilometre
LAA	local assessment area
LSMOC	Lake St. Martin Outlet Channel
m	metre
PDA	Project development area
RAA	regional assessment area
ROW	right-of-way
SAR	species at risk
SOCC	species of conservation concern
TLRU	traditional land and resource use
TWCR	Temporary Winter Construction Road
VCs	Valued Components

1 Introduction

1.1 Overview

On May 31, 2023, Manitoba Transportation and Infrastructure submitted "Lake Manitoba and Lake St. Martin Outlet Channels Project: Environmental Impact Statement: Project Description Update" to the Impact Assessment Agency of Canada (IAAC). It stated (Section 3.4.3.8) that "The existing 14 km (8.7 mi) winter road located several kilometers east of the LSMOC [Lake St. Martin Outlet channel] will be used during construction to access the northern portion of the LSMOC for clearing and peat excavation contracts, but only during winter months".

The rationale for use of that road is it allows earlier commencement of clearing and excavation activities in the northern portion of the LSMOC compared to the original intent of progressively advancing northwards along the LSMOC right-of-way (ROW). As a result, it addresses potential delays in construction start and reduces potential risks of carrying out tree clearing and peat removal activities during sensitive spring breeding periods. It also reduces impacts to working in wetland areas as the ground will be frozen.

This road is referred to here as the Temporary Winter Construction Road (TWCR). The following provides further details of the TWCR and its intended use, summarizes environmental setting, and provides an assessment of potential effects (and their mitigation) of this road as a supplemental to the previously filed project assessment in the March 2020 Environmental Impact Statement (EIS) and responses to subsequent Information Requests (IR). It also describes the evaluation of changes in the residual effects ratings, if applicable, in the context of the overall EIS conclusions.

The following key information is provided to assist understanding and interpretation of this assessment:

- The TWCR ROW has already been cleared (from previous construction of the Emergency Outlet Channel [EOC]) and is currently blockaded to restrict vehicle use.
- The TWCR would only be used for approximately three months in the first winter of Project construction, with relatively low (four vehicles per hour) average anticipated traffic flow rate.
- Similar vehicular use would occur along the adjacent LSMOC ROW if the TWCR were not used; as such, generally, effects of such use are of a similar nature to what was assessed in the Project EIS and IR Responses in association with construction activity fully along the LSMOC ROW.

1.2 Physical Description

Figure 1 shows the location of the TWCR relative to the LSMOC. The southern terminus of the TWCR connects approximately 14 kilometres (km) southeast of the LSMOC ROW with the Lake St. Martin Access Road, which continues to the LSMOC inlet and the EOC (Reach 1). The TWCR then extends generally northwards for 14 km, gradually approaching the LSMOC, with the northern terminus at the LSMOC ROW.

The TWCR is approximately 10 metres (m) wide for vehicle passage within an approximate 25 m cleared ROW. Figure 2 shows the blockading of the southern terminus by boulders across the TWCR surface. The road surface is generally level terrain but overall unsuitable for motorized vehicle traffic due to soft and wet conditions except during winter frozen conditions.

1.3 Use

Given known local historical winter conditions and the extent and type of heavy vehicle use, an approximate three-month period is assumed for use of the TWCR. Specifically, adequate freeze up is anticipated by mid-December, with road preparation and initial equipment mobilization to site assumed completed by year end. This would then facilitate an operational period for the TWCR of early January to mid-March.

Vehicle activity occurs during two time periods: preparation, and materials and personnel transport. Road maintenance also occurs during the latter period. Given the estimates described below, during materials and personnel transport, approximately 4 vehicles per hour (or about one every 15 min) are anticipated to be encountered by an observer at any point between the terminuses along the TWCR.

During use, and consistent with the Project's Access Management Plan, access to the TWCR will be restricted to Project-associated traffic only, through the use of a gate on the Lake St. Martin Access Road, which connects to the TWCR.

Figure 1 Temporary Winter Construction Road

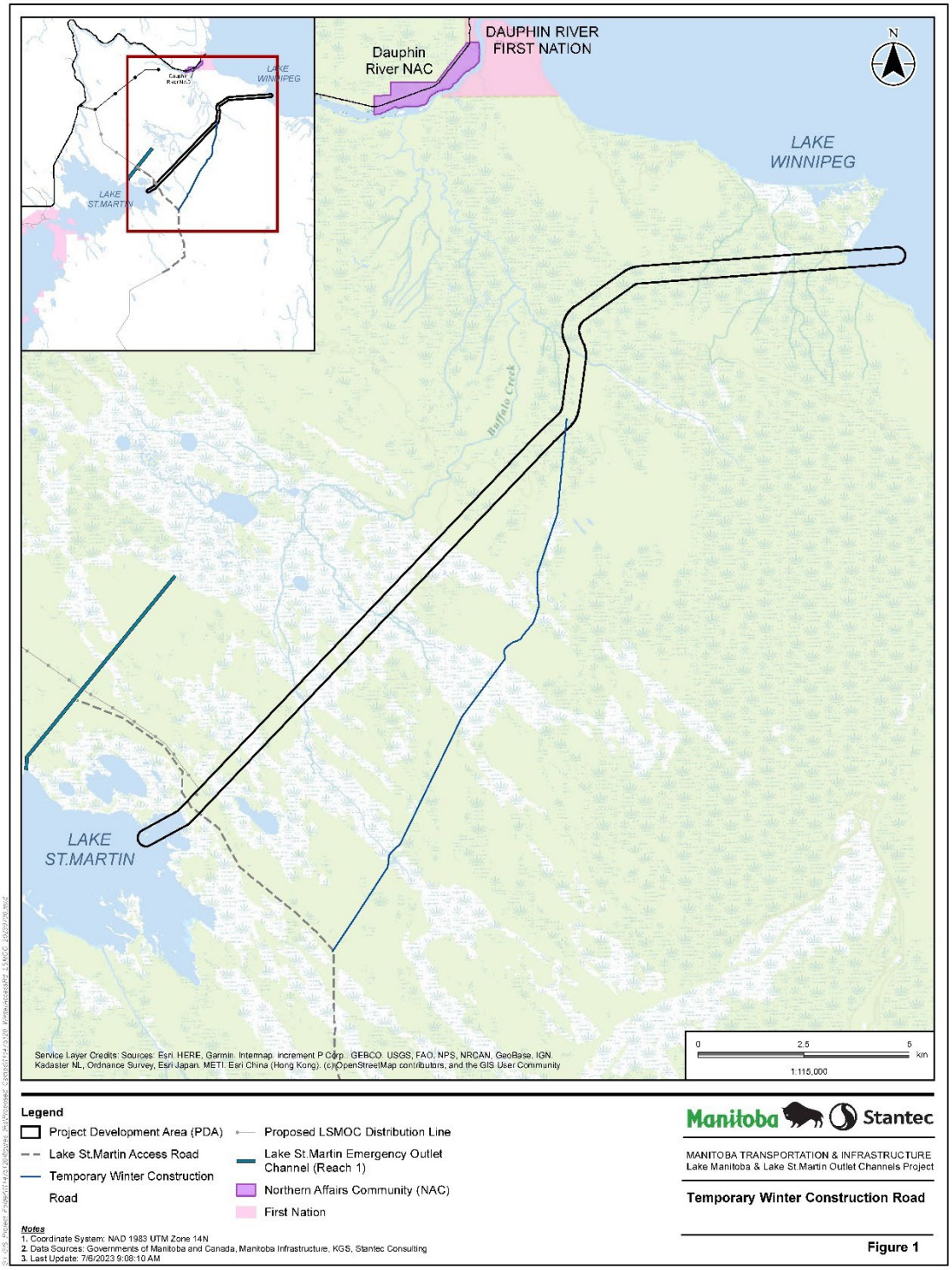


Figure 2 Current Southern Terminus Blockade

1.3.1 Preparation and Maintenance

In preparation for use, as no clearing is anticipated, after removal of the boulder blockade, the TWCR will be cleared of surface snow and compacted to the required 10 m width. This serves to induce frost penetration into the ground and may initially be performed by the use of lightweight low ground pressure equipment such as a snowmobiles. Heavier packing equipment (e.g., “bombardiers” or other flex-tracks) would be mobilized as soon as it is determined the frost has penetrated sufficiently to provide adequate support. Shaping the winter road would commence as soon as the frost has penetrated sufficiently to permit the use of heavier equipment such as graders to begin preliminary levelling and for blading excess snow. Fresh fallen snow or previously windrowed snow will be bladed and compacted to create a reasonably level and smooth road surface. Vehicle turnaround areas are not required.

Maintenance trips would be required approximately every four days. This would consist of snowplowing to remove excess snow from the road, to maintain the constructed width and dragging or patching to maintain the riding quality of surface. It would also include monitoring and surveillance of road conditions and temperatures, particularly at the end of the season. Once the TWCR is no longer in use the barricade boulders would be returned.

1.3.2 Materials and Personnel Transport

The primary intended use of the TWCR is for transporting materials (e.g., aggregate) and commuting construction personnel. Specifically, approximately 12 pickup trucks a day for the commute, 29 dump trucks a day for rock, and over the three months approximately 46 trips by larger trucks (e.g., flatbed semis) for heavy equipment are anticipated. In support of this traffic, approximately two fuel tanker trucks will complete two trips a day. Materials transport is conservatively anticipated to occur on a 24 hour, 7 days a week schedule, while personnel transport would occur twice a day in support of one dayshift.

2 Environmental Setting

The TWCR is located within the regional assessment area (RAA) of all Valued Components (VCs) assessed in the Project EIS, and in the local assessment area (LAA) for many of them. Therefore, the environmental setting and baseline described for Volumes 1, 2, and 3 of the EIS, as well as expanded on in various IR responses, remains applicable to the location and assessment of the TWCR. The assessment described in Section 3 highlights the potential effects in the context of that baseline. A brief summary of key attributes is provided below.

In general, the portion of the RAA north of Lake St. Martin around the LSMOC is largely unaltered by human activity and consists primarily of upland forest and various wetland classes and types. Upland forests include coniferous, deciduous, and mixed wood forest. Wetland classes include bogs, fens, swamps and marshes. Very poorly drained soils are predominant in the LSMOC portion of the LAA and Project development area (PDA) and are in association with organic soils under natural vegetation and wetlands. Wetland types include graminoid, shrubby and forested types. Species typical of the spruce-dominated peatlands found in the central and northern parts of the RAA around the LSMOC and TWCR include moose (*Alces alces*), black bear (*Ursus americanus*), gray wolf (*Canis lupus*), Canada lynx (*Lynx canadensis*), American marten (Martes americana), snowshoe hare (*Lepus americanus*), red squirrel (*Tamiasciurus hudsonicus*), and red-backed vole.

Traditional land and resource use (TLRU) information used for the assessment of effects from the use of the TWCR by the Project was obtained through the Indigenous consultation and engagement process for the Project (see Volume 1, Section 5.3 of the EIS). Information obtained through the Indigenous engagement and consultation program after the submission of the Project EIS (i.e., traditional knowledge reports, socio-economic reports, consultation reports) has been incorporated into the May 2022 responses to IR from IAAC. A summary of TLRU information obtained from each Indigenous group engaged on the Project, current to March 2022, is available in Table IAAC-122-1 in the May 2022 response to IR IAAC-122. A summary of socio-economic information obtained from each Indigenous group engaged on the Project is available in Table IAAC-R2-29-1 in the current response to IR IAAC-R2-29. The Indigenous Consultation and Stakeholder Engagement Report (ICSER; provided in Attachment 2, provides an overview of consultation and engagement efforts, information received to date by Indigenous groups.

Through the Indigenous consultation and engagement process, including Project-specific reports, Indigenous groups have reported TLRU activities during the winter. Fisher River Cree Nation reported that trapping is done in the late fall and winter for most species, further noting that wildlife commonly found in peatlands and bogs during the winter trapping season include wolves, foxes, lynx, rabbits, squirrels, mink, fisher and ermine (FRCN 2021, FRCN 2023). Peguis First Nation reported that fall and winter seasons are mainly used for hunting and providing sustenance for livelihood (Peguis First Nation 2022). Kinonjeoshtegon First Nation reported hunting moose in the winter (Malone et al. 2023a). Pinaymootang First Nation reported that during the winter months, moose rely on willow and muskeg (Malone et al. 2023b). Lake Manitoba First Nation reported snaring rabbits in the winter months (Malone et al. 2023c). Little Saskatchewan First Nation reported that some members fish all throughout the winter

months (Malone et al. 2023d). Pinaymootang First Nation has also reported trapping, camping and harvesting roots and medicines in the winter (Malone et al. 2023b). The Interlake Reserves Tribal Council reported the use of winter trails for ice fishing and winter hunting (Olson 2020).

3 Supplemental Environmental Assessment

3.1 Overview

This section summarizes the evaluation of the potential effects from the planned activity (i.e., use of the TWCR) on those VCs most likely to be affected. Where appropriate, site- and VC-specific mitigation is identified. Table 2 in Section 3.6 provides a summary of potential environment effects for all VCs. Several VCs are unaffected by use of the TWCR, or the existing analysis of potential effects discussed in the EIS are applicable and do not require further discussion. These include:

- Atmospheric Environment – Use of the TWCR will result in vehicle exhaust, but as activities will be occurring in winter there should be no issues with fugitive dust. Construction vehicle emissions and issues/mitigations are the same as those described in the EIS and are addressed through applicable plans that form the Project Environmental Management Program (EMP).
- Geology and Soils – As the activities associated with the use of the TWCR will occur during frozen ground conditions, potential interactions are limited to managing effects prior to the spring thaw period, such as soil compaction and potential fuel spills. Potential issues/mitigations are the same as those described in the EIS and are addressed through applicable plans that form the Project EMP.
- Groundwater and Surface Water – As indicated, activities associated with the use of the TWCR road will occur during frozen ground conditions, and in the spring, local hydrology largely consists of no- to low-flowing wetland areas. Local drainage areas and drainage patterns will not be affected, other than the compacted crossing areas taking slightly longer to thaw. Potential interactions are therefore limited to managing local effects prior to the spring thaw period, such as potential fuel spills. Potential issues/mitigations are the same as those described in the EIS and are addressed through applicable plans that form the Project EMP.
- Fish and Fish Habitat – The TWCR crosses several small drainage areas, but the likelihood of these being fish-bearing at the crossing locations is low, and it is unlikely there is any overwintering habitat present. With water quality issues mitigated and as the road will be used during winter, it is highly unlikely that there would be adverse interactions and as such there are no adverse effects anticipated.
- Land and Resources -- Potential issues/mitigations are the same as those described in the EIS and the various pathways of effects are addressed through applicable plans that form the Project EMP. Traditional land and resource us and Aboriginal and treaty rights are included in the supplemental assessment below in Sections 3.4 and 3.5.
- Infrastructure and Services – Materials transported by truck and movement of heavy equipment will be compliant with weight and speed restrictions set out by Manitoba Transportation and Infrastructure. Once the initial movement of equipment is made to facilitate clearing at the northern end of the LSMOC, other construction-related traffic will be restricted from using the TWCR. No additional truck trips or equipment are required related to using the TWCR.

- Economy – No potential Project-related effects associated with change in the provincial economy, change in regional labour force, and change in goods and services are anticipated from use of the TWCR.
- Human Health – No additional truck trips or equipment are required related to using the TWCR from that described in the EIS. Potential issues/mitigations are the same as those described in the EIS and Potential issues/mitigations are the same as those described in the EIS and the various pathways of effects are addressed through applicable plans that form the Project EMP.
- Heritage Resources – As no new clearing or grading are planned, there is no potential to further disturb heritage resources, if present. If the winter road is packed with snow to create a level driving surface, there is a low potential for vehicular traffic to interact with the ground surface and any disturbed heritage resources it may contain. Any chance finds would be addressed using Heritage Resource Management Plan protocols.
- Indigenous Health and Socio-economic Conditions – Potential issues/mitigations are the same as those described in the EIS and the various pathways of effects are addressed through applicable plans that form the Project EMP. Traditional land and resource use and Aboriginal and treaty rights are included in the supplemental assessment below in Sections 3.4 and 3.5.

The VCs that have greatest potential for interaction with the use of the TWCR and that could have effects beyond those described in the EIS, include:

- Vegetation and Wetlands
- Wildlife and Wildlife Habitat
- Traditional Land and Resource Use
- Aboriginal and Treaty Rights

These VCs are discussed below and highlight key mitigations. The results are also described in the context of the original EIS conclusions. If necessary, these conclusions are revised.

3.2 Vegetation and Wetlands

3.2.1 Potential Interactions with the Activity

Potential TWCR interactions with vegetation include indirect effects on plant species diversity and wetland function. Indirect effects to plant community diversity may also occur. Direct effects to landscape diversity, community diversity, species diversity and wetland function are not expected to occur as no new clearing is required for the TWCR and no wetlands will be infilled or otherwise removed. As described in Volume 3, Section 8.2.1.3 of the Project EIS, the introduction and spread of regulated weeds and invasive plants, and altered changes in surface and ground water are the pathways for indirect effects to plant community and species diversity and wetland function from the Project.

3.2.2 Supplemental Environmental Assessment

The assessment of residual environmental effects on Vegetation is discussed in the Project EIS, Volume 3, Section 8.3.4. Activities listed above in Section 1 could introduce weed or non-regulated invasive plant seeds or other plant material to the area of the TWCR and although the road will be frozen when used for transporting Project construction equipment and personnel, compaction of wetland organic soils may still occur. Changes in peat conditions along the existing TWCR have likely already occurred as a result of its initial construction and use in support of the emergency outlet channel construction. It is therefore expected that additional use of the TWCR during the single winter season will result in no or negligible incremental change to organic soils. No additional vegetation removal will occur.

A total of 26.4 ha of wetland are intersected by the TWCR (Table 1). All of the intersected wetlands are peatlands or expected to be peatlands based on available information for the Project and published results by Locky et al. (2005) for other areas of Manitoba. Use of the road during winter and frozen conditions will limit potential additive effects to organic soils and the vegetation growing on the TWCR. The surface moss layer and regenerating shrubs may be damaged by road use. Incremental changes in vegetation conditions beyond the road, if they occur, would likely consist of localized changes in plant abundance and not loss of plant species or change in wetland class. Changes in growing conditions on and adjacent to the TWCR due to altered surface and subsurface water may occur following spring melt or after heavy rainfall but will likely be difficult to separate from existing conditions. After the spring thaw it is expected that the conditions on and adjacent to the TWCR will be similar to those found prior to use for Project activities, given that the TWCR has been in place for over a decade.

All three of the plant species of conservation concern (SOCC) observed in the LSMOC portion of the PDA are wetland plants, either almost always occurring in wetlands or usually occurring in wetlands (United States Department of Agriculture 2023). Further changes in the moisture conditions, if they occur, may indirectly alter the abundance of these plants if present near the TWCR but are unlikely to result in the loss of the plants.

Mitigation measures are described in several of the plans that form the Project EMP, such as the Project Environmental Requirements, and include the following:

- restricting traffic to the TWCR ROW
- having materials required for spill containment and clean up at work sites and designated areas. Vehicles will carry materials and equipment for emergency spill containment
- spills will be contained and cleaned up immediately by on-site personnel in accordance with the approved on-site emergency response and containment plan
- the TWCR will not be used until adequate freeze up has occurred to support equipment and frost has penetrated sufficiently to reduce compression or compaction of organic soils (i.e., peat)

Table 1 Landcover Intersected by the TWCR

Landcover Category	Landcover Type	Landcover Class	Area	
			ha	%
Anthropogenic	Emergency Outlet Channel	-	0.2	0.5
	Roads and Trails	-	4.5	12.6
		Sub-total	***4.6***	***13.1***
Native Upland	Coniferous Forest	Coniferous Forest – Dense	2.4	6.6
		Coniferous Forest – Open	0.5	1.3
	Deciduous Forest	Deciduous Forest – Dense	0.2	0.7
	Mixedwood Forest	Mixedwood Forest – Dense	1.4	4.1
		Sub-total	***4.5***	***12.7***
Wetland	Bog	Basin Bog – shrubby	0.2	0.5
	Fen	Basin Fen – graminoid	0.0	0.1
		Horizontal Fen – shrubby	0.5	1.5
		Stream Fen – graminoid	0.6	1.8
	Undefined Wetland	Wetland-herb	8.5	24.0
		Wetland-shrub	16.0	45.0
		Wetland-treed	0.5	1.4
		Sub-total	***26.4***	***74.3***
		Grand Total	**35.5**	**100.0**

Given these mitigation measures, the direction for the incremental residual effects to vegetation from use of the road is adverse. Plant composition on and adjacent to the TWCR may be altered from additional use for the Project. The magnitude for change in vegetation is rated none to negligible. Although plant composition may be altered, changes would likely occur in the immediate vicinity of the TWCR, wetland conditions will persist, and the loss of a wetland type is not expected. The geographic extent for change in vegetation, if it occurs, is expected to only a few meters from the edge of the road. The duration for change is long-term due to the slow growth and recovery rates of peatland plants. The frequency for change is infrequent and reversibility is rated reversible as peatland plant growth should return existing hydrology and plant composition after the use of the road ceases. The TWCR is disturbed and the general area adjacent to the TWCR is undisturbed as there are few existing human disturbances.

Given the description provided above, the conclusions in the EIS remain valid.

3.3 Wildlife and Wildlife Habitat

3.3.1 Potential Interactions with the Activity

Potential use of the winter TWCR interacts with wildlife and wildlife habitat. These interactions are associated with indirect effects on habitat due to sensory disturbance and increased mortality risk due to Project traffic and improved access. Direct effects on habitat are not anticipated as the TWCR is an existing feature that will not require any additional land clearing or habitat removal.

As described in Volume 3, Section 8.3.6.2 of the EIS, Project-related sensory disturbance (i.e., noise and presence of moving vehicles) is expected to be the primary pathway for an indirect change in habitat that results in adjacent habitats experiencing reduced ecological function (i.e., animals avoiding otherwise suitable habitats). Use of the TWCR by snowmobiles, trucks, heavy construction equipment, and Project personnel has the potential to disturb wildlife such as moose, lynx, fisher, marten, and other furbearers and change the way wildlife use winter habitat adjacent to the winter road (e.g., habitat avoidance). Sensory disturbance effects on species at risk (SAR) and SOCC (e.g., little brown myotis, eastern whip-poor-will) are not expected as the TWCR does not overlap with SAR and/or SOCC overwintering habitats.

As described in Volume 3, Section 8.3.6.3 of the EIS, construction traffic, including traffic on the TWCR, has the potential to result in increased mortality risk to wildlife due to potential vehicle collisions. Compaction of snow along the TWCR may create more favourable conditions for use by wildlife species (i.e., easier movement instead of through deep snow), and indirectly increase mortality risk to prey species including white-tailed deer (*Odocoileus virginianus*), moose, and snowshoe hare by increasing predator (e.g., gray wolf) access to previously inaccessible areas.

3.3.2 Supplemental Environmental Assessment

The assessment of residual environmental effects on Wildlife and Wildlife Habitat is discussed in the Project EIS, Volume 3, Section 8.3.6.2 and 8.3.6.3. During construction, LSMOC PDA sensory disturbance will result from use of heavy equipment during clearing, excavations, and material transport. The continuous presence of human activity and associated sensory disturbance could affect how animals use the adjacent habitats up to 1 km or more (Project EIS, Volume 3, Section 8.3.6.2; May 31, 2023, response to IR IAAC-R2-21). Comparatively, disturbance associated with mobilizing and demobilizing equipment (see Section 1.3.1) to and from the PDA via the TWCR is expected to be intermittent and short-term. As such, TCWR activity may cause a more localized and temporary reduction in wildlife habitat use adjacent to it (Jalkotzy et al. 1997). Wildlife potentially affected include those known to inhabit the region during this time period, such as lynx, fisher, American marten, black bear, and moose.

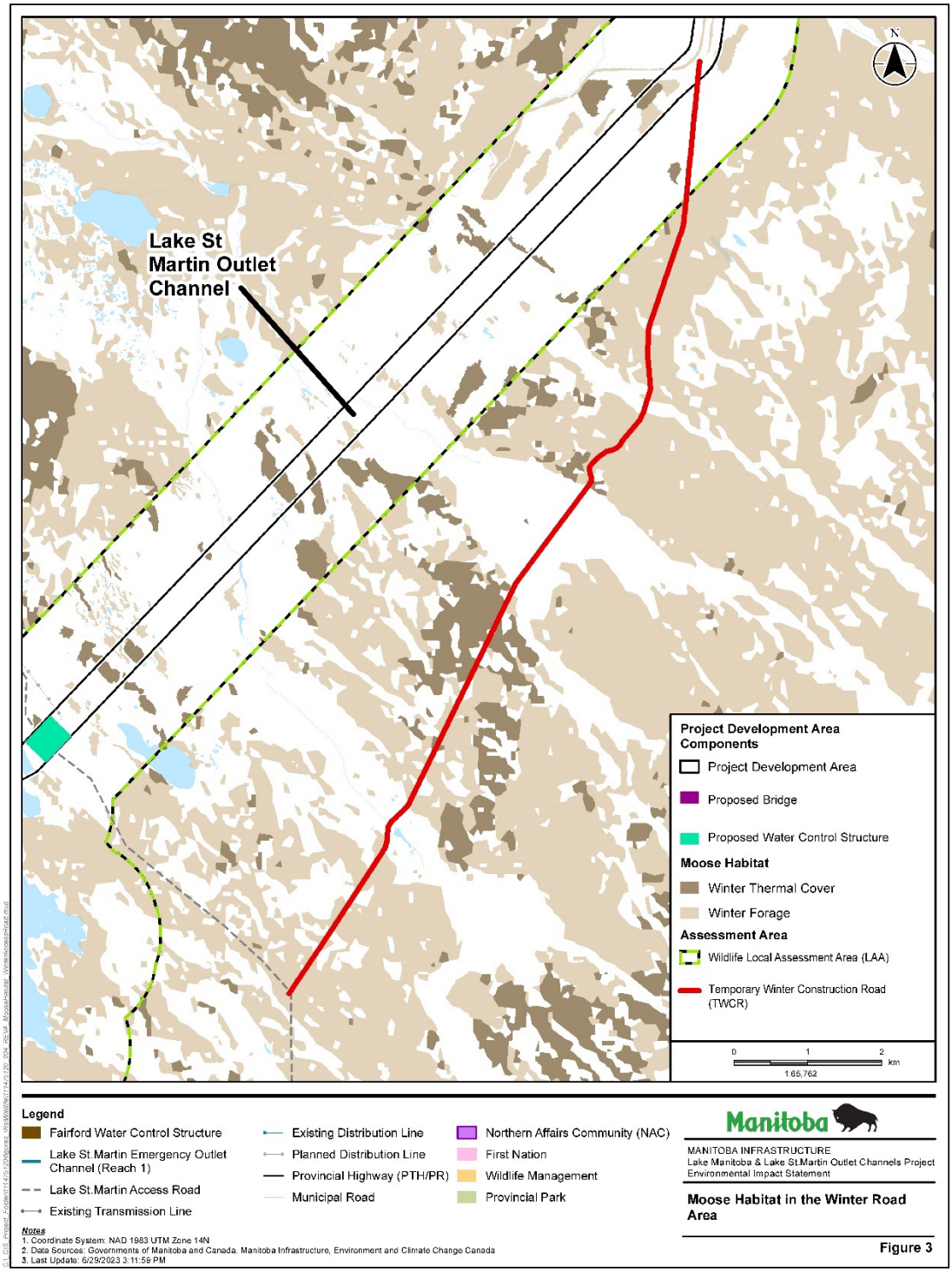
Based on the EIS landcover data (Volume 3, Section 8.2.2), the TWCR traverses moose winter habitat (1,623 ha within 1 km) consisting mostly of forage habitat (1,346 ha) and to a lesser extent, moose winter thermal cover (282 ha; Figure 3; May 31, 2023, response to IR IAAC-R2-20 and 21). Indirect effects to moose and furbearer habitat are expected to be sporadic/ intermittent for the duration of road use. Avoidance of favored habitats in response to human disturbance is anticipated to be short-term, with wildlife such as moose, lynx, fisher, and American marten, returning once the disturbance ends (Andersen et al. 1996; Colescott and Gillingham 1998).

Compaction of snow along the winter road by equipment may encourage road use by moose and wolves inhabiting the area. For moose, collision risk will be higher where the winter road overlaps winter habitat (Figure 3), and when late winter snow depths reduce ease of travel in preferred habitat (Jalkotzy et al. 1997). Wolves are known to use linear corridors for travel, putting them at risk of vehicle collisions (Jalkotzy et al. 1997). Wildlife mortality risk associated with Project traffic would be reduced by adhering to speed limits and travelling during daylight hours when wildlife is most visible to motorists. Access by hunters and other resource users will be restricted during the road operation period through use of a temporary gate. Once the winter road is no longer in use the barricade boulders will be put back in place.

Given the mitigation measures, the direction of residual effects of the changes to Wildlife and Wildlife Habitat is adverse, but the magnitude is rated as low (temporary local shifts in wildlife distributions might occur). Given the winter use, timing is rated as not sensitive, geographic extent is local, frequency is sporadic/intermittent, reversibility is reversible, and ecological context is rated as undisturbed.

Given the description provided above, the conclusions in the EIS remain valid.

Figure 3 Moose Habitat



3.4 Traditional Land and Resource Use

3.4.1 Potential Interactions with the Activity

Volume 4, Section 10.2.4.7 of the EIS documents the assessment of changes to the cultural value or importance associated with current use (i.e., tangible, and intangible aspects influencing TLRU). The TWCR has the potential to cause adverse effects on the ability of Indigenous groups to practice TLRU within and adjacent to the TWCR, through mechanisms such as increased access and harvesting pressure from non-Indigenous peoples, sensory disturbance, loss of wildlife through vehicle collisions, effects on vegetation and wildlife health, loss or alteration of trails and travelways, loss or alteration of habitation, cultural and spiritual sites, and indirect effects on the experience of Indigenous peoples.

Information obtained through the Indigenous engagement and consultation program after the submission of the Project EIS has been incorporated into the May 31, 2022, responses to IR from IAAC. A summary of TLRU information obtained from each Indigenous group engaged on the Project, current to March 2022, is available in Table IAAC-122-1 in the May 2022 response to IR IAAC-R1-122. Following March of 2022, Manitoba Transportation and Infrastructure received TLRU reports from Peguis First Nation and Pinaymootang First Nation. This information has been reviewed against the results of the EIS and included in Project planning and regulatory reporting. A summary of socio-economic information obtained from each Indigenous group engaged on the Project is available in Table IAAC-R2-29-1 in the response to IR IAAC-R2-29. However, this overview should not be considered a comprehensive representation of TLRU by participating Indigenous communities. A lack of information about TLRU does not necessarily indicate the absence of TLRU resources, activities, and sites in the RAA.

The information shared by Indigenous groups in Project-specific TLRU and Socio-Economic and Well-Being reports has been reviewed and there are records of TLRU harvesting areas or cultural use sites in the eastern portion of the LSMOC, where the TWCR is located. With respect to the operation of winter roads in general, Indigenous groups have expressed concerns regarding potential effects from the construction, maintenance and operation of Project access roads, and there are elements that can be apply to the TWCR (Firelight 2022, Firelight 2023, MMF 2023, LSMFN 2020, Manitoba Transportation and Infrastructure Indigenous Engagement Program). These concerns include effects to wildlife, disturbance and contamination of harvesting areas, sensory disturbances, and an increase in hunting pressure.

The Interlake Reserves Tribal Council has previously expressed concerns regarding disruption of wildlife, noting that the potential for animals to disappear due to construction activities and fragmentation by access roads. The Interlake Reserves Tribal Council is also concerned over loss of access to hunting in specific areas resulting from construction and access constraints associated with the new Access Road (name not specified) (Firelight 2023). The Interlake Reserves Tribal Council has also reported that there has been a loss of gathering sites due to multiple floods and destroyed due to contamination or developments such as project access roads (Firelight 2023).

Lake St. Martin First Nation expressed concern regarding the increase in hunting pressure that the Project access roads will promote during construction and post-Project (LSMFN 2020). The Manitoba Metis Federation is concerned that an influx of non-Indigenous harvesters using Project access roads will impact harvesting and may cause declines in key species harvested by Manitoba Metis Federation. Manitoba Metis Federation is further concerned that if harvesting in the Project area becomes unavailable, non-Indigenous harvesters will relocate and put pressures on other areas (MMF 2023).

Pinaymootang First Nation expressed concern that Project access roads will increase non-Indigenous access to areas used by Pinaymootang First Nation members for hunting and trapping. Pinaymootang First Nation noted that, in addition to habitat destruction already experienced, recreational hunters will be in direct competition with Pinaymootang First Nation members for already scarce animals (Firelight 2022). Pinaymootang First Nation has also noted that road building is also attributed to changes in wetland water levels, which impacts wildlife habitat (PFN 2023).

Fisher River Cree Nation has recommended that decommissioning of the temporary access roads will need to include removal of roadbeds and blockage of ROWs to the extent that access by all-terrain vehicle (ATV) is virtually impossible (Manitoba Transportation and Infrastructure Indigenous Engagement Program).

Little Saskatchewan First Nation has expressed concerns about gates on access roads and their ability to access traditional lands (Manitoba Transportation and Infrastructure Indigenous Engagement Program).

As described above in Section 3.3.1, and in the EIS (Volume 3, Section 8.3.6), potential TWCR interactions with wildlife and wildlife habitat are associated with indirect effects on habitat use due to sensory disturbance and increased mortality risk due to Project traffic and improved access. Direct effects on habitat are not anticipated as the TWCR is an existing feature that will not require any additional land clearing or habitat removal.

As detailed in Volume 4, Section 10.2.4.7 of the EIS, Manitoba Transportation and Infrastructure has developed mitigation measures to address the various pathways of effects and concerns and commits to ongoing engagement with potentially affected Indigenous groups. As noted in Volume 4, Section 10.2.8.6 of the EIS, the values associated with enjoyment and use can be intangible, but they are important to Indigenous groups, and, if not mitigated, use or enjoyment of traditional resources could be discontinued as a result of Project-related effects. Change to cultural value or importance associated with current use can include effects to experiential values (spiritual and cultural experiences of activities or practices, sense of place and wellbeing, transmission of Indigenous knowledge, laws, customs, and traditions). Both tangible and identified intangible values contribute to the conclusions for the TLRU assessment. Manitoba Infrastructure appreciates that intangible values are important and will continue to engage with Indigenous groups regarding mitigations to address changes to cultural value or importance associated with current use, and concerning the recommendations identified by Indigenous groups.

3.4.2 Supplemental Environmental Assessment

Volume 4, Section 10.2.4.7 of the EIS documents the assessment of changes to the cultural value or importance associated with current use (i.e., tangible and intangible aspects influencing TLRU), and Indigenous groups shared concerns that relate to potential effects from the use of the TWCR, including increased noise levels, lighting, effects to wildlife and access as a result of the Project. The information shared by Indigenous groups in Project-specific TLRU and Socio-Economic and Well-Being reports has been reviewed and did not identify specific concerns or issues about the TWCR or record specific TLRU harvesting areas or cultural use sites in the eastern portion of the LSMOC. However, it is Manitoba Infrastructure and Transportation's view that if Indigenous groups have not provided information on TLRU in the PDA, LAA and RAA, this lack of information does not diminish the importance of the resources, access to TLRU areas and resources or potential for cultural and spiritual sites to occur in the vicinity of the Project.

Residual effects of the TWCR on the availability and access of traditional resources for current use are anticipated to occur during operation and maintenance. The assessment of residual environmental effects on TLRU is discussed in Volume 4, Section 10.2.2.4 of the EIS. As noted in Section 3.3, sensory disturbance from equipment and activities listed in Section 1 could temporarily reduce wildlife habitat use adjacent to the TWCR. In addition, there could be some increases in wildlife mortality through collisions with vehicles, or through increases access by predators. Wildlife potentially affected include those species that are harvested by Indigenous groups, such as moose. As noted above in Section 3.3.1, indirect effects to habitat are expected to persist for the duration of road use. Avoidance of favored habitats in response to human disturbance is anticipated to be short-term, with wildlife such as moose, returning once the disturbance ends (Section 3.3). Wildlife mortality risk associated with Project traffic would be reduced by adhering to speed limits and travelling during daylight hours when wildlife is most visible to motorists.

Resource use in the form of hunting and trapping potentially occurs in the area encompassing the TWCR. The route is located within Game Hunting Area 21 and an Open Trapping Area. There is potential for hunting and trapping activities to be adversely affected from temporary nuisances (e.g., noise, traffic), and activity-related sensory disturbances during operation of the TWCR. This activity could temporarily or permanently displace some wildlife and movement patterns (see Section 3.3). There may be related disturbances and reduction in harvesting success due to degradation and sensory disturbance due to access along the TWCR affecting the presence of consumptive species. This could result in a reduction of hunting and trapping success rates through disruption to mammals and furbearers. Access to hunted species, such as moose, may be more easily facilitated, especially during the winter season with snowmobiles. Access by hunters and other resource users will be restricted during TWCR operation, through the gate on the Lake St. Martin Access Road. Once the winter road is no longer in use the barricade boulders will be put back in place. As stated above, Project specific TLRU and Socio-Economic and Well-Being reports have been reviewed and did not identify specific concerns or issues about harvesting areas or cultural use sites in the eastern portion of the LSMOC. However, it is Manitoba Infrastructure and Transportation's view that if Indigenous groups have not provided information on TLRU this lack of information does not diminish the importance of the resources, access to TLRU areas and resources or potential for cultural and spiritual sites to occur in the vicinity of the Project.

The residual adverse effects of the TWCR on the availability and access of traditional resources for current use will occur infrequently and be limited. Overall, potential effects to TLRU are anticipated to be adverse, short-term, and low in magnitude. Access by hunters and other resource users will be restricted during the road operation period. However, this will be limited to the road's winter operation and once the winter road is no longer in use the barricade boulders will be put back in place. Given the mitigation measures, the direction of residual effects of the changes to TLRU is adverse, but the magnitude is low (temporary local shifts in wildlife distributions might occur). Given the winter use, timing is rated as not sensitive, geographic extent is local, frequency is sporadic/ intermittent, reversibility is reversible.

Given the description provided above, the conclusions in the EIS remain valid.

3.5 Aboriginal and Treaty Rights

3.5.1 Potential Interactions with the Activity

Volume 4, Section 10.4.5 of the EIS assesses effects on Aboriginal and Treaty Rights. The First Nations engaged by the Project are signatory to treaties 1, 2 or 5, which provided historically defined treaty rights (see Section 10.4.2 of the EIS). Indigenous groups without historic treaty consist of the Manitoba Métis Federation and the residents of the identified Northern Affairs Communities (see Volume 4, Section 10.4.4 of the EIS and ICSER (provided in Attachment2.

Effects on Aboriginal and Treaty rights may occur where the Project has a residual effect on traditional harvesting (hunting, trapping, fishing, plant, or material gathering) or on physical activities associated with traditional use (travel and navigation, use of habitation, cultural and spiritual areas). Volume 4, Section 10.2.3 of the EIS documents the assessment of Project effects on TLRU, including changes in availability of traditional lands and resources currently used for traditional purposes, current use, changes in access to traditional resources or areas for current use, changes to cultural and spiritual sites or areas, and changes to the cultural value or importance associated with current use of lands and resource.

Changes in quantity of Crown Lands available to pursue traditional activities has the potential to affect the exercise of Aboriginal and Treaty rights. This effect may take place through changes in the disposition of Crown land, through sale or conversion from unoccupied to occupied and through alteration of land completed in anticipation of a change in disposition. Indigenous groups have expressed concerns with respect to the ability to exercise Aboriginal and Treaty rights.

Lake St. Martin First Nation has expressed concern over the loss or alteration of aquatic and terrestrial habitat are a permanent impact to traditional and Treaty rights to harvest the vegetative resources that occupy the land for medical, spiritual, cultural, aesthetic, and sustenance purposes (2020). They have further noted that harvesters will need to travel farther from their traditional territory to practice Aboriginal and Treaty rights, due to loss of hunting and trapping areas, and declines in wildlife populations (2020). The Interlake Reserve Tribal Council has expressed concerns about severe impacts on Indigenous and Treaty rights to harvest traditional plant foods and medicines (Olson 2020). The Manitoba Metis Federation has reported that Métis Nation citizens both use and occupy the lands and waters within and surrounding the Project Area, noting that any adverse environmental impacts resulting from the proposed

outlet channels, such as impacts to fish, wildlife, water, and more, have the potential to impact the rights, claims, and interests of the Manitoba Métis (MMF 2021).

Concerns with respect to Project-related alteration of Crown land were also brought forward by the Interlake Reserve Tribal Council, representing Dauphin River, Kinonjeoshtegon, Lake Manitoba, Little Saskatchewan, Peguis and Pinaymootang First Nations. The Interlake Reserve Tribal Council reported that a 23-kilometer route in the Interlake was cleared in preparation for the Project and that the Indigenous groups were not informed by the Government of Manitoba in advance (IRTC 2019).

Indigenous groups recommended measures which may mitigate or accommodate for changes to the quantity of Crown Lands available to pursue traditional activities. The Manitoba Métis Federation (Shared Value Solutions 2018) recommended the establishment of an ongoing process for Project communications and concerns. Manitoba Transportation and Infrastructure will continue to engage with Indigenous groups regarding the recommendations identified.

The Project encompasses unorganized Provincial Crown land; no Crown-leased land parcels are crossed by the TWCR. There are no buildings near the TWCR or rural residential developments or multi-lot subdivisions. There are no agricultural lands with agricultural capability within the TWCR alignment. There is no recreational land use or formal recreational activity, including formal snowmobile or ATV trails along or in the vicinity of the TWCR. The TWCR is not routed through any provincial park. Furthermore, the route is not near any campground, picnic area, recreation site, lodge/resort, cottages, or recreational trails. No navigable waterways are crossed by the TWCR. The TWCR does not cross any reserves or lands identified for Treaty Land Entitlement (TLE). The information shared by Indigenous groups in Project specific TLRU and Socio-Economic and Well-Being reports has been reviewed and did not identify concerns or issues about the original winter road (to be used as the TWCR), or record TLRU-specific harvesting areas, trails or travelways, or cultural use sites in the eastern portion of the LSMOC.

Resource use in the form of hunting and trapping potentially occurs in the area encompassing the TWCR. The route is located within Game Hunting Area 21 and an Open Trapping Area. There is potential for hunting and trapping activities to be adversely affected from temporary nuisances (e.g., noise, traffic), and activity-related sensory disturbances during operation of the TWCR. This activity could temporarily displace some wildlife and movement patterns (see Section 3.3). There may be related disturbances and reduction in harvesting success due to degradation and sensory disturbance due to access along the TWCR affecting the presence of harvested species. This could result in a reduction of hunting and trapping success rates through disruption to mammals and furbearers. Access to hunted species, such as moose, may be more easily facilitated, especially during the winter season with snowmobiles (which the gated access would not be able to restrict). Access will otherwise be restricted during the road operation period in accordance with the Access Management Plan. Once the TWCR is no longer in use the barricade boulders will be put back in place.

3.5.2 Supplemental Environmental Assessment

Residual effects on Aboriginal and Treaty rights are anticipated as a result of changes to TLRU (changes in the sites, resources, and access), in addition to activity-related sensory disturbances during operation of the TWCR. The existing winter road, to be used as the TWCR for only three months in the first winter of Project construction, was constructed in 2011 and therefore, there will be no change in disposition or conversion of Crown Lands. The TWCR does not cross any reserves or lands identified for Treaty land entitlement and no Crown-leased land parcels are crossed by the TWCR. Minimal disruption to the ability to exercise rights is anticipated and the seriousness of effects is categorized as minor. This categorization considers that the persistence and viability of species relied upon to exercise Aboriginal and Treaty rights within the RAA are not anticipated to change as a result of the Project, it is anticipated that activities related to the exercise of Aboriginal and Treaty rights will be able to continue with some restrictions and alteration of behaviour by members of Indigenous groups. As identified previously, Manitoba Transportation and Infrastructure's engagement is ongoing, and Indigenous groups may provide additional information about the potential effects of the Project on Aboriginal and Treaty rights.

Given the description provided above, the conclusions in the EIS remain valid.

3.6 Summary of Potential Environmental effects

Table 2 provides a summary of the potential effects of the TWCR as discussed above.

Table 2 Summary of Potential Environment Effects

Valued Component	Effects Pathways	Key Mitigations	Residual Effects
Vegetation and Wetlands	• The assessment of residual environmental effects is discussed in the Project EIS, Volume 3, Section 8.3.4. • Interactions with vegetation are indirect effects on plant species diversity and wetland function; indirect effects to community diversity may also occur. • Direct effects to landscape diversity, community diversity, species diversity and wetland function will not occur as no new clearing is required for the TWCR and no wetlands will be infilled or otherwise removed. • Introduction and spread of regulated weeds and invasive plants and altered changes in surface and ground water (if they occur) are the potential pathways for indirect effects to community and species diversity and wetland function. • No additional vegetation clearing is planned for the TWCR; therefore, any incremental soil compaction and altered surface and subsurface water flows is expected to be negligible.	• Restricting traffic to the TWCR ROW. • Vehicles will carry materials and equipment for emergency spill containment. • Spills will be contained and cleaned up immediately by on-site personnel in accordance with the approved on-site emergency response and containment plan. • Road will not be used until adequate freeze up has occurred to support equipment and frost has penetrated sufficiently avoid or limit the incremental compaction of organic soils (i.e., peat).	• Direction is rated as adverse. • Duration is rated as long-term due to the slow growth and recovery rates of peatland plants. • Magnitude is rated as low. • Given the winter use, timing is rated as not sensitive. • Geographic extent is local. • Frequency is infrequent. • Reversibility is reversible as peatland plant growth should return existing hydrology and plant composition after the use of the road ceases. • While the TWCR itself is disturbed, the ecological context is rated as undisturbed. • Conclusions in the EIS remain valid.

Valued Component	Effects Pathways	Key Mitigations	Residual Effects
Wildlife and Wildlife Habitat	• The assessment of residual environmental effects is discussed in the Project EIS, Volume 3, Section 8.3.6. • Potential TWCR interactions with wildlife and wildlife habitat are associated with indirect effects on habitat due to sensory disturbance and increased mortality risk due to Project traffic and improved access. • Direct effects on habitat are not anticipated as the TWCR is an existing feature that will not require any additional land clearing or habitat removal.	• Adherence to speed limits and efforts to travel during daylight hours when wildlife is most visible to motorists. • Access by hunters and other resource users will be restricted during the road operation period. • Once the winter road is no longer in use the barricade boulders will be put back in place.	• Direction is rated as adverse. • Duration is rated as short-term. • Magnitude is rated as low (temporary local shifts in wildlife distributions might occur). • Given the winter use, timing is rated as not sensitive. • Geographic extent is local. • Frequency is sporadic/ intermittent. • Reversibility is reversible. • Ecological context is rated as undisturbed. • Conclusions in the EIS remain valid.
Traditional Land and Resource Use	• Volume 4, Section 10.2.4. of the EIS documents the assessment of changes to the cultural value or importance associated with current use (i.e., tangible, and intangible aspects influencing TLRU). • Potential increased harvesting pressure from non-Indigenous peoples. • Potential sensory disturbance to harvested wildlife who could leave the area. • Potential loss of wildlife through vehicle collisions. • Potential effects on harvested vegetation and wildlife health. • Potential loss or alteration of trails and travelways. • Potential loss or alteration of habitation, cultural and spiritual sites. • Indirect effects on the experience of Indigenous peoples.	• Adherence to measures described for physical environment, vegetation, and wildlife VCs. • Ongoing engagement and regular communication with Indigenous groups and stakeholders, including via the Environmental Advisory Committee.	• Direction is rated as adverse. • Duration is rated as short-term. • Magnitude is rated as low (temporary local shifts in wildlife distributions might occur). • Given the winter use, timing is rated as not sensitive. • Geographic extent is local. • Frequency is sporadic/ intermittent. • Reversibility is reversible. • Ecological context is rated as undisturbed. • Conclusions in the EIS remain valid.

Valued Component	Effects Pathways	Key Mitigations	Residual Effects
Aboriginal and Treaty Rights	• Effects are discussed in Volume 4, Section 10.4.5 of the EIS. • Effects may occur where the Project has a residual effect on traditional harvesting (hunting, trapping, fishing, plant or material gathering). • Effects may occur on physical activities associated with traditional use (travel and navigation, use of habitation, cultural and spiritual areas). • Change in the disposition of Crown Lands available to pursue traditional activities has the potential to affect the exercise of Aboriginal and Treaty rights, but this is not anticipated.	• Adherence to measures described for physical environment, vegetation, and wildlife VCs. • Ongoing engagement and regular communication with Indigenous groups and stakeholders, including via the Environmental Advisory Committee. •	• As the existing TWCR was constructed in 2011, there will be no change in disposition or conversion of Crown Lands. • The TWCR does not cross any reserves or lands identified for Treaty land entitlement and no Crown-leased land parcels are crossed by the TWCR. • Minimal disruption to the ability to exercise rights is anticipated and the seriousness of effects is categorized as minor, as the persistence and viability of species relied upon to exercise Aboriginal and Treaty rights within the RAA are not anticipated to change as a result of the Project. • Conclusions in the EIS remain valid.

4 Supplemental Assessment Conclusions

The use of the TWCR was assessed in the context of those VCs with the greatest likelihood for interacting with this activity. Specifically, these included Vegetation and Wetlands, Wildlife and Wildlife Habitat, Traditional Land and Resource Use, and Aboriginal and Treaty Rights. The supplemental assessment concludes that, in general, while use of the TWCR would result in some very local, long term, but reversible changes to wetland hydrology due to peat compression, and some temporary sensory disturbance to wildlife, the local environment would begin reverting back to pre-Project conditions once use of the road ceased at the end of Year 1 of construction. These effects would translate to temporary effects to traditional land and resource use of those species and associated Aboriginal and treaty rights. Manitoba Transportation and Infrastructure remains committed to working with Indigenous groups to control and monitor access through this road during its use. For all other VCs, use of the TWCR results in the same potential effects and conclusions as described in the EIS and subsequent responses to IAAC IRs.

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