

## Webb, Bruce (CC)

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**From:** Dorward, Kurt (CC)  
**Sent:** April-23-20 10:34 AM  
**To:** Webb, Bruce (CC)  
**Subject:** RE: Request for Review/Comment by April 23, 2020: Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels, Environmental Impact Statement File: 5966.00

Dear Bruce,

I have completed a review of the Environmental Impact Statement for the Lake Manitoba Outlet Channel/ Lake St. Martin Outlet Channel as requested in your email of March 9, 2020. The following are the items that were identified as relevant to programs overseen by the Environmental Compliance & Enforcement Branch of Manitoba Conservation and Climate.

- 1) How will Manitoba Infrastructure mitigate the potential problems with solid manure that has been field-stored in locations that will be directly affected by the excavation of the channels and related activities? Where will these materials be placed and how will they be managed?
- 2) The ECE would like to have a list of projected receiving locations (lagoons) and volumes for septic waste produced by the work camps. Additionally, copies of agreements with Municipalities in this regard are requested.
- 3) In order to appropriately manage any surges in solid waste receiving at local Waste Management Facilities, a list of facilities entering into agreements with contractors involved in the project are requested. Also, please provide projections for waste materials being delivered to these facilities, both in type (kitchen waste; trees & shrubs from clearing operations etc.) and volumes of such.
- 4) If waste trees, brush and shrubs are to be burned, what mitigation measures will be observed?
- 5) In the event of a spill of a contaminant, where will the affected soils and materials be delivered?
- 6) Contractors are required to have Permits for any jobsite petroleum storage tanks over 5000 L. The local Environment Officer requires copies of all of these permits.
- 7) Job site petroleum storage tanks are required to have collision protection in the form of appropriate bollards. Appropriate measures must be taken during refuelling as well as product transfer.
- 8) In terms of the disposal of waste materials categorized as Dangerous Goods, a list of potential materials, destinations and agreements is requested.
- 9) As per the Environmental Accidents Reporting Regulation (M.R. 439/87), a person who is responsible for or who has custody and control of a contaminant involved in an environmental accident shall immediately after the occurrence report the accident by calling the Environmental Emergencies hotline at 1-855-944-4888. Reportable quantities and volumes are available in Schedule "A" of the Regulation.

Regards,

**Kurt G. Dorward**, B.Sc., M.Env.

Environment Officer

Emergency Response Team member

**Manitoba Conservation & Climate**

Environmental Compliance & Enforcement Branch, Interlake Region

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**Webb, Bruce (SD)**

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**Subject:** FW: Request for Review/Comment by April 23, 2020: Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels, Environmental Impact Statement File: 5966.00

**From:** Matthews, Rob (SD) <Rob.Matthews@gov.mb.ca>

**Sent:** March-09-20 2:20 PM

**To:** Webb, Bruce (SD) <Bruce.Webb@gov.mb.ca>

**Cc:** Little, Kelsey (CEN) <Kelsey.Little@gov.mb.ca>; Kowalchuk, Sheldon (SD) <Sheldon.Kowalchuk@gov.mb.ca>; Amarakoon, Shiromi (SD) <Shiromi.Amarakoon@gov.mb.ca>; Morin, Michael (SD) <Michael.Morin@gov.mb.ca>; Singh, Purushottam (SD) <Purushottam.Singh@gov.mb.ca>

**Subject:** RE: Request for Review/Comment by April 23, 2020: Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels, Environmental Impact Statement File: 5966.00

Bruce,

Please advise the project managers that the Lake Winnipeg Water Power Reserve will need to be removed from the proposed right-of-way for the Lake St. Martin Outlet Channel in the vicinity of the western shore of Lake Winnipeg.

The project manager is directed to contact Mr. Puru Singh of the Water Power Act Licensing Section at 204-945-3613 concerning the procedure to effect the removal of the Reserve under Section 7 of the Water Power Act.

Sincerely,

Rob Matthews  
Manager  
Water Power Act Licensing Section

## Webb, Bruce (SD)

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**Subject:** FW: Request for Review/Comment by April 23, 2020: Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels, Environmental Impact Statement File: 5966.00

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**From:** Vitt, Cory (SD) <Cory.Vitt@gov.mb.ca>

**Sent:** March-11-20 8:14 AM

**To:** Webb, Bruce (SD) <Bruce.Webb@gov.mb.ca>

**Cc:** Barlishen, Kim (SD) <Kim.Barlishen@gov.mb.ca>; Phipps, Graham (SD) <Graham.Phipps@gov.mb.ca>

**Subject:** RE: Request for Review/Comment by April 23, 2020: Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels, Environmental Impact Statement File: 5966.00

Office of Drinking Water (ODW):

Baseline, prior to construction, full water chemistries from ALS Laboratories must be established in coordination with the Office of Drinking Water, for the Watchorn Provincial Park Semi-Public Water System (SPWS #4243.00).

A full water chemistry test, including EC/TC, {Escherichia coli (E. coli)/ Total coliforms}, must be performed each year (annually) during the construction of the Lake Manitoba to Lake St. Martin Channel.

A full water chemistry test, including EC/TC, {Escherichia coli (E. coli)/ Total coliforms}, must be performed the year following the construction of the Lake Manitoba to Lake St. Martin Channel.

The costs of these additional water chemistry tests will be assumed under the project and not by the Office of Drinking Water or Watchorn Provincial Park.

If you require any clarifications, or further information, please let me know.

Thanks.

Cory Vitt

**Cory Vitt, CMMA M.Eng. P.Eng.**

*(My name is Cory. Please refrain from any prefixes like "Mr. Vitt")*

Approvals Engineer

Office of Drinking Water

Department of Conservation and Climate

1007 Century Street

Winnipeg, Manitoba R3H 0W4

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## Webb, Bruce (CC)

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**Subject:** FW: Request for Review/Comment by April 23, 2020: Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels, Environmental Impact Statement File: 5966.00

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**From:** Kowalchuk, Sheldon (ARD) <Sheldon.Kowalchuk@gov.mb.ca>

**Sent:** April-23-20 4:24 PM

**To:** Webb, Bruce (CC) <Bruce.Webb@gov.mb.ca>

**Subject:** RE: Request for Review/Comment by April 23, 2020: Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels, Environmental Impact Statement File: 5966.00

Hi Bruce,

The information was circulated to IRMT members and if they have any concerns they have provided those comments directly through their Branch.

From a Regional Crown Lands perspective I would like to offer the following comments:

- Overall the various documents are very thorough and provide a lot of information.
- Throughout the various document it is identified that Crown Land Work Permits are required (e.g. Temporary Construction Camps, Staging Areas etc.). It is important to note that Manitoba Agriculture and Resource Development / Manitoba Conservation and Climate will determine when a Crown Land Work Permit is required depending on the circumstances, the approvals that are in place and who the proponent is for the work.
- There is reference to the distribution line that will have to be installed by Manitoba Hydro for the Lake St. Martin Outlet Channel. Although this will be completed by a third party (Manitoba Hydro), Manitoba Infrastructure should be including this as part of the entire project when they are consulting with Indigenous Peoples. That will help to avoid potential confusion for all people involved and potential delays.
- Manitoba Infrastructure should be consulting on the entire project (i.e. the components that they are managing as well as those being implemented by third parties) as the lead department for the Province of Manitoba, so that it is done efficiently and effectively for all communities and parties involved.

If you have any questions, please let me know.

**Sheldon Kowalchuk**

Regional Land Manager

Agriculture and Resource Development

Government of Manitoba

75 - 7th Avenue, Gimli, MB

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## Webb, Bruce (CC)

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**Subject:** FW: Request for Review/Comment by April 23, 2020: Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels, Environmental Impact Statement File: 5966.00

**From:** Porteous, Marianne (ARD) <Marianne.Porteous@gov.mb.ca>

**Sent:** April-23-20 5:33 PM

**To:** Webb, Bruce (CC) <Bruce.Webb@gov.mb.ca>

**Subject:** RE: Request for Review/Comment by April 23, 2020: Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels, Environmental Impact Statement File: 5966.00

Hello Bruce,

I haven't received feedback from regional staff yet, but below are comments from our Peatlands Lead.

Marianne

### General Comments

Asides from Departmental and Branch name changes (i.e. Forestry and Peatlands Management Branch is now Forestry Branch), there are some inconsistencies when referencing peat & the current peat harvest regulatory framework. For instance:

- Chapters 1-5, page 17, Definitions
  - "Quarry lease Refers to a 10-year lease granted by the Crown with the exclusive rights to excavate quarry minerals (e.g. sand, gravel, clay, shale, gypsum, peat, salt, rock or stone)."
  - Quarry lease does not refer to the exclusive right to excavate peat. Peat is no longer considered a mineral and, if there are plans to harvest it, would not be subject to a 10-year Quarry Lease, but rather a Peat Harvest License under the Peatlands Stewardship Act.
- Volume 4, page 9.4
  - "The Peatlands Stewardship and Related Amendments Act Administered by MSD, this Act takes over the administration of Crown peat and peatlands from The Mines and Minerals Act. There are no mineral peat areas within the PDA."
  - Although there are no Peat Harvest Licenses within the planned development area, there *are* peat areas, as indicated elsewhere in the Soils component of the documents. Further, peat is not considered a mineral under the current regulatory framework.
- Volume 4, Mineral and Aggregate Resource, 9.45
  - "There are peat mining lease blocks in the vicinity on the west side of Lake Winnipeg between Sturgeon Bay and Kinnow Bay (IISD 2015). Current peat harvest licences (as of 2017) are in the vicinity of the Jackhead River and in Moose Creek Provincial Forest, outside of the RAA (MSD 2017c)."
  - The current peat harvest licenses, referenced as MSD 2017c, are the only peat harvest licenses that exist. The "peat mining lease blocks", referenced as IISD 2015, includes what was referred to as "pending quarry leases", which were all cancelled when the Peatlands Stewardship Act came into effect. Including these areas over-represents that current amount of area under peat license.
- Volume 4, Minerals and Aggregate, 9.101
  - "The Project is not expected to disturb or disrupt various existing mineral extraction operations within the PDA, including quarry leases, casual quarry permits, private quarry permits, quarry withdrawal

areas, peat mine and other mining areas (e.g., aggregate deposits) of varying potential economic quality, some of which are associated with existing sand and gravel pits. An aggregate deposit of medium potential will be intersected by the LMOC PDA along the southern shore of Lake St. Martin (Rural Municipality of Grahamdale 2006). One other aggregate deposit will be intersected by the LSMOC PDA, along the shore of Sturgeon Bay on Lake Winnipeg. The aggregate potential of the deposit is unknown (Manitoba Energy and Mines 1988b)."

- I include these just so there is no confusion that peat is not a mineral, and should not be interpreted that it is regulated along the same lines, with the same Branch and approvals, as other minerals. "Peat mines" do not require quarry permits, they require Peat Harvest Licenses issued by Forestry branch.
- Volume 4, Forestry, 9.102
  - "The outlet channel routes avoid a known timber supply area, peat harvest licence areas, and provincial tree improvement sites and permanent sample plots."
  - This is correct.

#### Uses of topsoil and peat soils

- Chapter 1-5, page 3.3
  - "Topsoil will be temporarily stockpiled to later be spread over the earthen dikes as a seed bed"
  - As there will be up to 1m of peat excavated in some areas, especially around the LSMOC, does topsoil include peat? Section 3.3.1 stated: "Grubbing is the removal of stumps and root masses, and stripping is the removal of topsoil and peat soils." Which indicates that topsoil and peat soils are two distinct soil types. If peat is not included in the above mentioned "temporary stocked piles", what will peat be used for? How will it be stored?

#### Greenhouse gas emissions resulting from disruption of hydrological connectivity.

- EIS Summary, page 50
  - "The LSMOC route will pass through wetland areas. The wetland water levels can be disturbed by channel construction. The effect caused by disturbed shallow groundwater levels can occur up to 1,600 m perpendicular to the channel based on preliminary assessment but could be less than 500 m based on acquired experience from the past EOC project. It is anticipated that natural surface and shallow subsurface drainage flow may be affected along the approximately 24 km length of the LSMOC, affecting drainage over an area of up to approximately 1,200 ha on either side of the channel. Consequently, there is an increased potential for inundation and flooding on the east side of the channel, while the west side of the channel would be expected to dry down and experience reduced surface and near-surface moisture conditions."
  - This project does make reference to greenhouse gas emissions over the course of its construction, however, if there is a disruption in hydrological connectivity – where one side gets drier and the other side gets wetter – both sides will result in increased greenhouse gas emissions. On the dry side, enhanced microbial activity will consume the now exposed organic materials in the soil, resulting in increased CO<sub>2</sub> emissions; on the wet side, enhanced flooding will increase methane production, a greenhouse gas equivalent of 25x that of CO<sub>2</sub>. Depending on the size of the area affected, this could result in much larger greenhouse gas emissions than is reported.

#### Wetland Loss

- EIS Summary, page 74
  - "Unmitigated wetland loss will be compensated following provincial wetland offsetting requirements of The Water Rights Act."
  - Although it won't officially be released until June 1, 2020, the Boreal Wetlands Conservation Codes of Practice document, a commitment in the Made-in-Manitoba Climate and Green Plan, can help address wetland mitigation, including minimizing and offset components for boreal wetlands. The document however is primarily concerned with resource and access roads, but it may be helpful.

**Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels –  
Environmental Impact Statement – File: 5966.00**

**Comments from the Wildlife Component of the Wildlife and Fisheries Branch**

April 2020

**General Comments**

- We appreciate that there will be a low degree of slope within the channel, which appears to mitigate our previous concerns about impediments to large mammal crossings, and increased mortality risks. We also appreciate that riprap will not be used along the entire length of the channel, rather only where needed to increase stability, prevent erosion and protect other project infrastructure. We look forward to seeing plans showing where and how much armoring will occur throughout the project. Please see our comments about identifying potential wildlife-riprap conflict areas below.

- There are various statements about allowing for active or passive revegetation of channel berms, which we comment on below, but we'd also like to know if the portions of the project footprint between the berms and excavated channel (~50-75 m of level ground) will be allowed to revegetate with either small shrubs or wetland vegetation (i.e. cattail), as has been permitted in other provincial channels (e.g. Portage Diversion).

- The document states that outside drains will be excavated along the west side of the LMOC and on the east side of LSMOC. It also states that they will be used to **“capture drainage and manage water level changes in adjacent wetlands”**. We are left wondering how this will be done, and if these outside drains will be allowed to either revegetate throughout their entire length, or be expanded in certain areas. Attempts should be made to slow water movement, and allow active or passive wetland creation to ensure that they function appropriately as an offset to project related wetland losses. We look forward to seeing more details on wetland management and rehabilitation in the Environmental Protection Plan.

- There are multiple statements about new project infrastructure, such as the water control structures, bridges, and the distribution line potentially increasing habitat and supporting species that are adapted to nesting on anthropogenic features. Rather than this being a positive interaction with the project, has there been any consideration made to exclude nesting of these species, in order to prevent the future need to remove inactive nests, or disturb active nests that may be conflicting with operational activities? Noting that this includes potential disturbance to species at risk.

- The document refers to Manitoba Conservation Data Centre Setback Distances for Birds dated January 22, 2014. This document has been updated, and the 2015 document should be used in future project related material (see - [https://www.gov.mb.ca/sd/pubs/conservation-data-centre/mbcadc\\_bird\\_setbacks.pdf](https://www.gov.mb.ca/sd/pubs/conservation-data-centre/mbcadc_bird_setbacks.pdf)).

### *Revegetation of Channel Berms*

- We appreciate that active cover plantings of shrubs and trees is proposed to provide escape cover and break up sight lines for species crossing the outlet channel ROWs. We look forward to reviewing future rehabilitation plans, and request that more details and guidelines on line of sight be developed. We suggest that lines of sight greater than 300 m along the ROW be impeded through the proposed establishment of cover vegetation. This is based on blanket guidelines of 500 m, and tighter species-specific (e.g. elk) mitigation used within the provincial forest industry.
- It is stated that cover plantings will be implemented **“Where consistent with adjacent land use, allow low growing shrubs and trees to re-stablish...”**, which suggests that long portions of the berm may be maintained at low height or grass cover if they are adjacent to open lands. We understand this rationale from a landscape perspective; however, we feel that a general 300 m line of sight rule should be applied across the length of the berms, regardless of if the surrounding landscape has longer sightlines, since Manitoba Infrastructure should be mindful of the conversion from private to Crown land. This transfer of ownership will result in access changes and may increase the risk of harvest mortality to some wildlife.
- We also understand that it may not be possible to adhere to a 300 m line of sight rule along the top portions of the berm, where vehicle access trails must be maintained for maintenance and safety reasons. However, we suggest either allowing only one side of the channel to remain passable, or including slight deviations that break up line of sight where the access trail goes through cover plots, where possible.
- Revegetation and tree plantings should include appropriate and proportionate deciduous and coniferous species mixes that are as close as possible to the surrounding forest types.

### **Section Specific Comments**

#### **8.2.2.2**

No submerged aquatic vegetation sampling appears to have been conducted on Lake St. Martin or wetlands areas, rather observations from Lake Winnipeg and Delta Marsh are provided to show what species may occur. Site-specific sampling would allow a proper assessment of potential project related impacts to waterbirds and wetland function. Section 12.6.2 mentions that **“Additional pre-construction surveys will be completed for species of conservation concern (SOCC) and wetlands”**, and an assessment of submerged aquatic vegetation should be considered. Post-construction/operational changes to submerged aquatic vegetation could also be monitored.

#### **8.3**

Canada warbler, listed as Threatened under the Species at Risk Act and the Endangered Species and Ecosystems Act, is not identified in any of the species at risk text and tables of the EIS, just in Table



8.3A-1 as a potential bird species that may occur in the RAA. This species does breed in the RAA and should have been assessed in the same manner as all other SAR.

#### **8.3.1.3**

It is mentioned later in the document that channel operation during flood years may affect bird nests. This should be included in the morality risk portions of this section as well, including table 8.3-1. Has Manitoba Infrastructure determined a way to mitigate the loss of overwater nests, and potentially upland and island nests, during operation?

#### **8.3.2.2**

More recent aerial moose survey information from 2017 could have been included in this section. This information should be used in future project related documents (see - [https://www.gov.mb.ca/sd/pubs/fish\\_wildlife/hunting/survey\\_results2016\\_17.pdf](https://www.gov.mb.ca/sd/pubs/fish_wildlife/hunting/survey_results2016_17.pdf)).

#### **8.3.3.1**

Colonial waterbird data published in 2014 is presented as the most recent colonial waterbird surveys for the Lake St. Martin islands, however surveys were also conducted by the federal government in 2017. This information should have been requested and would have provided additional useful baseline data to compare to earlier surveys, which were conducted in 2012 during high-water events. It is possible that an increase in colonial waterbird nesting was observed as water receded in 2017 (as has been documented for American White Pelican in the West Shoal Lake area). The IBA designation was focused on Caspian tern concentrations, with more than 3% of the North American breeding population occurring within Lake St. Martin at times. Much of the species breeding habitat (low-level sand and gravel bars) were submerged during recent flooding events, and may have only recovered in recent years, or will after this development. This data should be requested and included in the further colonial waterbird assessment that we recommend below.

#### **8.3.4.2 and Table 8.3A-2**

Some species designations have changed recently, including horned grebe listed as Special Concern under SARA, barn swallow as Threatened under SARA, red-headed woodpecker as Endangered by COSEWIC, and eastern wood-pewee as Special Concern under SARA. There is also an absence of Canada warbler, as mentioned above. These changes should be reflected in all future documents.

#### **8.3.6.2**

**“Trees containing large nests of sticks and areas where active dens or burrows occur will be identified as part of the Wildlife Management Plan”**

Stick nest surveys are presented, but it is unclear on how dens or burrows will be identified.

**“Under average (non-flood) water conditions, it is predicted that opening the WCS gates will result in a 2.4 cm and 6.4 cm decrease in water levels in Lake Manitoba and Lake St. Martin, respectively (Chapter 6.3.2.4). Opening the gates will result in marked decreases in maximum water levels during major flooding events (38.7 cm in Lake Manitoba and 74.1 cm in Lake St. Martin), while resulting in 3.1 cm increase in Lake Winnipeg water levels.”**

The EIS should provide more information on colonial nesting islands within the RAA, and what potential impact project operation and change in water levels will have on specific species and nesting sites. There is a historic importance of Lake St. Martin for breeding tern colonies, and water stability could lead to vegetation encroachment in some of their breeding areas, provided enough water does not remain for seasonal wave action to prevent encroachment (e.g. Caspian terns typically nest on low vegetated gravel and sand areas, about 2 metres above the waterline). Alternatively, this could also describe negative impacts of past flooding events, and habitat improvements that may occur after project construction.

**“Mitigation measures will be implemented to limit public access to the outlet channel ROWs: however, increase mortality risk to furbearers and ungulates will persist as a result of hunting and trapping. The linear feature provides an efficient mechanism to move across the landscape that also provides relatively clear, elevated sightlines that are desirable to resource users. Furthermore, while access may be controlled at regular crossings (i.e., road), it will not be controlled adjacent to private property.”**

Please provide more details on the proposed access control measures. We understand that it will be difficult to control access off adjacent land, and acknowledge that Crown land is generally open to all resource users, but suggest that it may be possible to limit the amount of unimpeded vantages onto adjacent lands through the proposed cover plantings. Establishing as much treed vegetation as possible along the channel berms is desired. We also suggest that Manitoba Infrastructure discuss line of sight mitigation with Manitoba Hydro when designing, constructing and maintaining the associated distribution line.

#### **Appendix 8D**

It is mentioned that remote camera data will be used to determine areas that will benefit most from project mitigation (cover planting and breaks in channel rip-rap), with a particular focus on elk movement areas. Other large mammals (bear, moose, white-tailed deer) could be impacted by channel armoring, and their presence and movement patterns should also be considered when selecting mitigation areas.

## **Environmental Protection Program**

We appreciate that proper waste disposal, and conflicts with nuisance wildlife will be considered in this program. We would like to provide the following information to assist with the development of future documents:

### *Attractant Management in Areas Associated with Project Implementation*

- All potential wildlife attractants will be secured so as to prevent access to them by wildlife. Attractants include, but are not limited to: human food, drink, and excreta; garbage; food compost; cooking oil; grey water; domestic animals and their food; bait; toiletries; and organic compounds/chemicals.

### *Wildlife Encounter Safety*

- All staff or contractors working in the project area will be trained on wildlife encounter safety to be in compliance with The Workplace Safety and Health Act.

### *Operational Guidelines for Beaver and Muskrat Removal*

- Under Subsection 40 (3), The Wildlife Act, “The minister may authorize a person to destroy a muskrat house, beaver dam or beaver lodge, or the den, nest or lair of a fur bearing animal, subject to such terms and conditions as the minister may prescribe.” Authorizations for these purposes must be requested from a Conservation Officer in the local Conservation and Climate office, prior to initiating these activities. Authorizations are typically issued for the protection of human safety, property, or habitat; or to remove an impediment to an approved land development. Similarly, if the removal of a beaver or muskrat is requested for these purposes, a permit must first be requested from a Conservation Officer in the local Conservation and Climate office. This authorization is per section 64 of The Wildlife Act.

## **Vegetation and Wildlife Monitoring Programs**

- We appreciate the remote camera trap methods provided in Appendix 8D. We also look forward to seeing more details on other vegetation and wildlife surveys in monitoring plans, including: if additional post construction aerial mammal surveys are planned; if colonial waterbird assessments are planned to address our above comments; and further details on the additional pre-construction SOCC and wetland surveys mentioned (including potential submerged aquatic vegetation assessment and monitoring).

- We appreciate that red-headed woodpecker and eastern whip-poor-will mitigation and offset plans will be developed, and look forward to reviewing these documents. It should also be noted that some of the proposed project mitigation, and additional revegetation measures that we are requesting along the channel berms and distribution line, could potentially benefit other SAR species like golden-winged warbler. Habitat creation and management for this species should be considered where possible.

- We encourage MI to consider conducting trapper reports and interviews during the future monitoring program to help determine changes in furbearer abundance and distribution. Wildlife and Fisheries Branch staff can provide the RTL holder names and can assist with identifying Open Area trappers. A program like this could ask/support certain trappers to set up near the project at different locations, and report their harvest. Any furbearer monitoring should be at least 4 years in length to account for the population cycles of certain species. It would also contribute to the Traditional Land and Resource Use monitoring and information sharing identified in Section 12.13.

## Fisheries Section Review

Submitted May 4, 2020

Fisheries section of Wildlife and Fisheries Branch has reviewed the Environmental Impact Statement from the Lake Manitoba and Lake St. Martin Outlet channels.

Overall the proponent has provided a fairly comprehensive overview of potential project effects and mitigation measures during the construction and operation of these channels. There are major components of this project to which further description/detail is required. Particularly around monitoring for, and addressing certain project effects. While this is not uncommon for this phase of the project, what they propose to do and how they will do it will be critical to confirming or refuting, and therefore adapting, if required, to any project effects. We look forward to the details of these project elements.

### Specific areas for consideration

Change in habitat at channel inlets and outlets:

- MI has indicated that the change in habitat within the excavation areas to be a net gain with respect to the outlet channels and offset in general due to the permanent habitat created in the channels.
- Fisheries does not consider the outlet channels to be a net gain in fish habitat. We suspect the channels will be of uniform habitat and depth much like we see in two-mile and eight mile channels in Playgreen Lake. As old as those channels are, they remain of little value to fish and provide a good indication of what we can expect from the LM / LSM outlet channels.
- Furthermore, it is unclear how often the excavation areas will require routine dredging which will maintain these areas as uniform habitats over time.
- With respect to the channels themselves becoming permanent new habitat, see the next section.

LMOC and LSM channels create fish habitat:

- MI is building the LMOC so it will be permanently wetted. While this design feature should help to minimize any fish stranding and ultimately mortalities, Fisheries does not agree that these channels equate to creating permanent fish habitat. Fisheries would like to encourage MI to consider creating in channel habitat features within the basic hard packed uniform trapezoidal design being constructed.
- The LSMOC will have 8 rock weirs installed within the steeper reaches of the channel. The intent again is to provide enough depth and flows for fish to survive within the channels with egress to Lake Winnipeg only when the LSMCS is closed. MI does indicate that although the “drop structures are designed to facilitate downstream movement of fish during the open water season, there remains the potential that fish may have difficulty leaving the channel when flows are reduced.”
- While the intent of providing enough flow and depth in both channels is to minimize fish stranding, once the channels are in use and flows are being regulated, what is the plan for

monitoring to ensure fish stranding is not occurring, and/or becoming an issue? Monitoring is also necessary to confirm that sufficient depth and water quality parameters are present during ice cover.

- It will be necessary to understand fish usage (including egg deposition as noted in Volume 3 Table 7.2-8) of these channels when they are and are not in operation. This information can inform implications of ramping up and ramping down phases of their operation.
- There was also the mention that when the channels were not in operation, water quality and fish habitat would be maintained by surface runoff and augmenting with lake water (Lake Manitoba\_base flows/LSM\_limited flows through the WCS). How will it be determined if and when additional measures are required to maintain water quality.

#### Change/loss in surface water and ground water inflows:

- The construction of the LMOC will isolate approximately 27 % of the Birch Creek watershed and 4% of the Watchorn Creek watershed. The construction of the LSMOC will redirect headwater streams in Big Buffalo Creek and affect the natural hydrology within Big Buffalo Lake bog complex. Many water bodies and wetlands receive groundwater inflows which will be altered during the construction and long term.
- MI has indicated throughout the documents provided that surface water and groundwater flows can be diverted or discharged to affected water bodies and wetlands during construction and lifetime of the channels, if required. This includes possibly repurposing the LSM EOC to divert flows to the Big Buffalo Lake bog complex. It is not clear what was done or will be in place to confirm or refute these project effects and inform when actions are required.
- MI has also indicated they will be assessing the potential project effects Lake Whitefish spawning in Lake St. Martin as a result of groundwater effects (7.53). This monitoring would be done during the operation of the LMOC and LSMOC “to determine the validity of this potential pathway to Lake Whitefish spawning habitat in Lake St. Martin.” In the preceding paragraph it is noted that, “ Any pressure reduction in the confined carbonate aquifer would be expected to continue after construction but be smaller than during construction and limited to less than 200 m from the channel.” Has there been some investigative work to determine what if any groundwater upwelling exists in LSM, and why would monitoring not be done until after construction when pressure reduction would be smaller?

#### Change in habitat due to deposition of sediment:

- Deposition of sediments/TSS/turbidity where the LM channel empties into LSM and where the LSM channel empties into Sturgeon Bay. What is the plan for monitoring and mitigation?

#### Document Specific Comments/concerns:

- 6.5.5.1: Nearshore wetlands are provide more than just spawning habitat for large bodied fish species. They provide nursery and feeding areas for juvenile life stages of large bodied fish species as well as small bodied fish species.

- 6.5.1.4: Aquatic Invasive Species: mis-information regarding some of the “15 AIS with direct routes of dispersal to colonize the LAA and RAA”. This statement reads like Curly leaf pondweed, Eurasian water milfoil, Mosquito fish and round goby are found in Manitoba waters. They are not. Also common carp is not on Schedule A: Aquatic Invasive Species under Manitoba’s AIS Regulation.
- 6.5.3.1: Mitigation measures:
  - a. Access Management Plan will identify the need to clean and disinfect heavy machinery to reduce the risk of spreading AIS. “Disinfect” is not terminology used or what we require of heavy machinery. “Decontamination” may be required. If MI would like to go through what requirements are needed under the AIS Regulations we would be happy to assist.
  - b. Design and operate such that the hydraulic conditions in the Fairford and Dauphin Rivers during spring and fall spawning periods are suitable for upstream fish passage and egg incubation. In another volume a flow regime has been determined for Fairford River. Has there been any consideration of doing this for Dauphin River.
- 6.6.2.2: Unclear how wetland loss will be determined to account for the following: “Unmitigated wetland loss will be compensated following provincial wetland offsetting requirements of The Water Rights Act.”
- Volume 3:7.47: indicates Bigmouth buffalo does not occur in Lake Manitoba. It is present in Delta Marsh.

*Licence specific considerations:*

- Requirement to discuss AEMP, Surface and Groundwater Plans, Sediment Plans with Fisheries.
- Requirement for LFHP for any fish salvage works associated with the project, and potentially Aquatic Invasive Species permits.

## Memorandum

**Date:** May 4, 2020

**To:** Bruce Webb  
Conservation and Climate  
1007 Century Street  
Winnipeg MB R3H 0W4

**From:** Water Science and Watershed  
Management Branch  
Agriculture and Resource  
Development  
200 Saulteaux Crescent  
Winnipeg MB R3J 3W3  
<http://www.gov.mb.ca>

**Subject:** Lake Manitoba and Lake St. Martin  
Outlet Channels Project Environmental  
Impact Statement - File No: 5966.00

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Staff in the Water Science and Watershed Management Branch have reviewed the environmental impact statement (with a focus on the summary document) for the Lake Manitoba and Lake St. Martin Outlet Channels Project and have the following comments:

- Based on the information provided in the Environmental Impact Statement (EIS) Report, it is inferred that the carbonate bedrock makes a regional groundwater confined aquifer in the Project Development Area (PDA). The carbonate aquifer is overlain predominantly by till deposits, which are underlain by glaciolacustrine silts, clays, shoreline sands and gravels. The recharge to the carbonate aquifer occurs in the uplands areas under unconfined conditions where bedrock is either exposed or found at shallow depths. The report does not provide any information/map showing groundwater flow mechanism in the PDA. However, it is inferred that groundwater generally flows from the uplands in all directions and discharges into surface water bodies. In the region, groundwater is also discharged through natural springs.
- The proposed project will alter groundwater conditions in the region. The proposed project may cause changes in groundwater flow that can affect discharge to surface water and well water levels and quality.
- It is recommended that a Hydrogeological Assessment be completed prior to commencing the proposed works to establish baseline conditions, estimate potential construction dewatering/control requirements, delineate the resulting zone of influence and assess potential impacts to natural surface water features, infrastructure, private wells and groundwater quality. Assessment of private wells should include a private well survey to establish baseline water quality. The assessment should include recommendations for potential discharge options for construction-related water and an appropriate monitoring, mitigation and contingency plan. Groundwater monitoring should include activities pre-project, post-project and during construction.
- It is recommended that the operating guidelines be included in the Environment Act license.



- The Branch is concerned with elevated sediment transport during Project construction or operation that would impair water quality and negatively impact aquatic life in the local and regional study areas. Can the proponent provide additional details on how sediment transport will be minimized during the construction and operation phases of the Lake Manitoba and Lake St. Martin Outlet Channels Project?
- The Branch is concerned with any additional nutrients that may be transported to the local and regional study areas as result of the construction and operation of the Lake Manitoba and Lake St. Martin Outlet Channels. Can the proponent provide information on the expected nutrient concentrations and loads in the local and regional study areas as a result of the project?
- It is recommended that the proponent develop and implement a comprehensive sediment and water quality monitoring program during the construction and operation of the outlet channels to identify any potential impacts pertaining to sediment, nutrients and metals. The proponent should also develop and implement a mitigation plan to address any water quality impacts.
- The Manitoba Water Quality Standard Objectives and Guidelines should be used to assess impacts to water quality during all Project phases.

Thanks very much,



Digitally signed by Nicole  
Armstrong  
Date: 2020.05.04 08:28:56 -05'00'

Nicole Armstrong.

cc. Elaine Page, Mark Lee, Graham Phipps

## Webb, Bruce (CC)

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**From:** +WPG574 - HRB Archaeology (SCH)  
**Sent:** April-21-20 1:33 PM  
**To:** Webb, Bruce (CC)  
**Subject:** RE: Request for Review/Comment by April 23, 2020: Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels, Environmental Impact Statement File: 5966.00

Dear Bruce,

The Archaeological Assessment Services Unit (AASU) is in agreement with the heritage concerns outlined in Section 6.12 of the Lake St. Martin Outlet Channel Environmental Impact Statement (EIS) Summary dated March 2020 [File 5966.00].

Under Section 12(2) of *The Heritage Resources Act*, if there is reason to believe that heritage resources or human remains are known, or thought likely to be present, on lands that are to be developed, then the owner/developer is required to conduct at his/her own expense, a heritage resource impact assessment (HRIA) and mitigation, if necessary, prior to the project's start.

The AASU is in agreement with the EIS (2020) that,

- A heritage resources impact assessment (HRIA) is required prior to construction (termed "pre-construction HRIA in the EIS) and is to include non-invasive geophysical survey of affected cemetery properties as identified the EIS
- A Cultural and Heritage Resources Protection Plan (CHRPP) outlining mitigation measures during and post-construction is required.

Manitoba Infrastructure (MI) must contract a qualified archaeological consultant to conduct an HRIA in order to identify and assess any heritage resources that may be negatively impacted by the development. The Branch can work with MI and its consultant to draw up terms of reference for this project with the understanding that a predictive model will not be the lone means of assessment.

Please be aware the following heritage reports posted on the "Lake Manitoba and Lake St. Martin Outlet Channel Resources" webpage do not address the heritage concerns or pre-HRIA recommendations identified in the March 2020 EIS (see <https://www.gov.mb.ca/mit/wms/lmbismoutlets/resources/reports.html>)

- Northern Lights Heritage Services (2017) *Heritage Resources Characterization Study: Lake Manitoba Outlet Channel Route Options*, and
- Northern Lights Heritage Services (2017) *Heritage Resources Characterization Study: Lake St. Martin Outlet Channels and Proposed All Season Access Road*

Sincerely,  
Suyoko

Suyoko Anne Tsukamoto  
Senior Impact Assessment Archaeologist  
Historic Resources Branch | Manitoba Sport, Culture and Heritage  
213 Notre Dame Avenue, Main Floor | Winnipeg, MB | R3B 1N3  
e. [suyoko.tsukamoto@gov.mb.ca](mailto:suyoko.tsukamoto@gov.mb.ca)

## Webb, Bruce (CC)

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**Subject:** FW: Request for Review/Comment by April 23, 2020: Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels, Environmental Impact Statement File: 5966.00

**From:** Roberecki, Susan (HSAL) <Susan.Roberecki@gov.mb.ca>

**Sent:** April-29-20 3:50 PM

**To:** Webb, Bruce (CC) <Bruce.Webb@gov.mb.ca>

**Cc:** Robinson, Karen (HSAL) <Karen.Robinson@gov.mb.ca>

**Subject:** RE: Request for Review/Comment by April 23, 2020: Manitoba Infrastructure - Lake Manitoba and Lake St. Martin Outlet Channels, Environmental Impact Statement File: 5966.00

Hi Bruce

Here are my comments on the Lake Manitoba and Lake St. Martin Outlet Channels Environmental Impact Statement:

- Much more information is needed on the planned temporary camps
  - Where is the camp proposed to be located? What type of drinking water and sewage facilities will be provided? What other services will be provided for the workers?
  - How long will the camp operate and what would be the plan for decommissioning?
  - How will the relationship between the camps and First Nation and other communities be managed? Manitoba Hydro may have some valuable experience to provide here in terms of managing the worker impact on communities.
  - In terms of the impacts of the development on human health, can consideration be given to the influences of migrant populations on human health with mitigation strategies developed?
  - Can there be information provided on COVID 19 social distancing strategies as well?
  - Public Health would be interested in further discussions in relation to the planned siting of the camp and some of the monitoring and mitigation strategies that may need to take place.
  - Have discussions occurred with Interlake - Eastern RHA related to the planned development and the impact on health services?
- Drinking Water
  - Can more detailed information be provided on mitigation if wells are impacted? Will there be ongoing support, particularly the plan for ongoing monitoring and assessment for loss of pressure?
  - There is now a health based guideline for manganese. [https://www.gov.mb.ca/sd/pubs/water/drinking\\_water/manganese.pdf](https://www.gov.mb.ca/sd/pubs/water/drinking_water/manganese.pdf)
  - The section on page 103 of the EIS executive summary should be reviewed by the Office of Drinking Water. It is not recommended to drink untreated surface water.
- Is there consideration for a community liaison group, where issues of concern can be brought forward to the project team?

Thanks

Susan Roberecki

Susan Roberecki, MD, FRCPC, MSc.  
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Health, Seniors and Active Living  
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