

LAKE MANITOBA LAKE ST. MARTIN

OUTLET CHANNELS PROJECT

MANITOBA INFRASTRUCTURE

Red-headed Woodpecker Habitat Mitigation Plan

December 1, 2020

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Figure 1: Schematic of LMOC ROW

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DISCLAIMER

This document was developed to support the Lake Manitoba and Lake St. Martin Outlet Channel Environmental Management and Monitoring Program. This document has been prepared by Manitoba Infrastructure as a way to share information and have discussion with Indigenous Communities and Groups and the public. This document has been prepared using existing environmental and preliminary engineering information, professional judgement as well as information from previous and ongoing public and Indigenous engagement and consultation. The contents of this document are based on conditions and information existing at the time the document was prepared and do not take into account any subsequent changes. The information, data, recommendations, and conclusions in this report are subject to change as the information has been presented as draft and will not be considered complete until further engagement and consultation is complete. The plans may be further revised based on information and direction received from provincial and federal environmental regulators. This draft report be read as a whole, and sections or parts should not be read out of context.

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PREFACE

The Lake Manitoba and Lake St. Martin Permanent Outlet Channels Project (the “Project”) is proposed as a permanent flood control mitigation for Lake Manitoba and Lake St. Martin to alleviate flooding in the Lake St. Martin region of Manitoba. The Project includes the construction and operation of two new diversion channels: the Lake Manitoba Outlet Channel (LMOC) will connect Lake Manitoba to Lake St. Martin and the Lake St. Martin Outlet Channel (LSMOC) will connect Lake St. Martin to Lake Winnipeg. Associated with these outlet channels is the development of bridges, control structures with power connections, a new realignment of PR 239, and other ancillary infrastructure.

Manitoba Infrastructure (MI) is the proponent for the Project. After receipt of the required regulatory approvals, MI will develop, manage, and operate the Project in accordance with the Environmental Management Program (EMP). The EMP framework describes the environmental management processes that will be implemented during the construction and operation phases of the Project. Components of the EMP include a Wildlife Monitoring Plan and Revegetation Management Plan, both of which relate to the Red-headed Woodpecker Mitigation Plan. The goal of the EMP is to ensure that the environmental protection measures committed to in the Environmental Impact Statement (EIS) and the requirements of the Environment Act Licence and Federal Decision Statement Conditions are undertaken in a timely and effective manner. This includes the verification that environmental commitments are executed, monitored, and evaluated for effectiveness, and that information is reported back in a timely manner to the Project management team for adjustment if required.

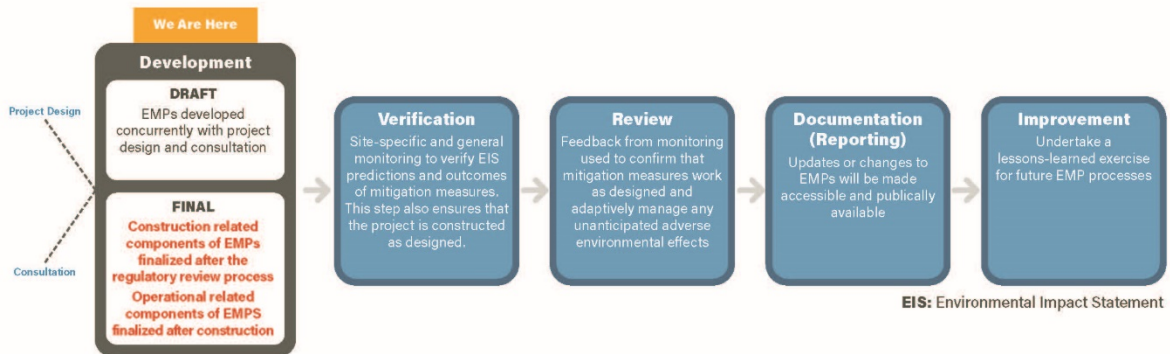
Manitoba Infrastructure remains committed to ongoing engagement and consultation with Indigenous groups and other stakeholders that are potentially affected by the Project. Detailed EMP review discussions have been incorporated into community-specific consultation work plans and additional engagement opportunities will be provided prior to EMP finalization. Engagement opportunities include virtual open house events and EMP-specific questionnaires. EMP-specific questionnaires will be provided to Indigenous groups and stakeholders to obtain feedback and views on the draft plans, in addition to exploring opportunities for Indigenous participation in follow-up monitoring. Feedback and recommendations will be used to inform the completion of the plans.

The EMP provides the overarching framework for the Construction Environmental Management Program (CEMP) and the Operation Environmental Management Program (OEMP), which will be finalized as separate documents prior to Project construction and ideally operation, respectively. Their finalization will consider applicable conditions of the Environment Act Licence and associated approvals, any other pertinent findings through the design and regulatory review processes and key relevant outcomes of the ongoing Indigenous and public engagement and Consultation processes.

The purpose of the CEMP and OEMP is to guide how environmental issues will be addressed during construction and operation, respectively, and how adverse effects of activities will be mitigated. The CEMP is supported by several specific or targeted management plans (e.g., surface water, groundwater, sediment, etc.), as shown in the Figure below, that will guide MI’s development of the Project’s contract documents and subsequently, the Contractor(s) activities, in constructing the Project in an environmentally responsible manner. The OEMP will likely include the same targeted plans developed to manage issues during

construction, but prior to construction completion they would be revised and adapted to suit the specific needs during the operation phase. The purpose of the Red-headed Woodpecker Habitat Mitigation Plan is to describe the habitat mitigation and monitoring activities that will be implemented along the LMOC right-of-way for this species.

Environmental Management Program (EMP) Process



EMPs

- Construction Environmental Management Program¹
 - Operational Environmental Management Program¹
 - Environmental Protection Plan
 - Project Environmental Requirements
 - Access Management Plan
 - Quarry Management Plan
 - Surface Water Management Plan
 - Ground Water Management Plan
 - Revegetation Management Plan
 - Biosecurity Management Plan
 - Dust Control Plan
 - Decommissioning Plan
 - Ice Management Plan
- ¹ includes information on waste management, hazardous materials management, debris management, emergency response, heritage resources protection and wildlife protection planning

**LAKE MANITOBA
LAKE ST. MARTIN**
OUTLET CHANNELS PROJECT



GLOSSARY OF TERMS AND ACRONYMS

Acronyms

EIS	environmental impact statement
HMA	habitat mitigation area
LMOC	Lake Manitoba outlet channel
LSMOC	Lake St. Martin outlet channel
PDA	Project Development Area
PR	Provincial Road
RVMP	Revegetation Management Plan
ROW	right-of-way

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1.0 INTRODUCTION

1.1 Background and Purpose

The Lake Manitoba and Lake St. Martin Outlet Channels Project (hereafter the Project) proposed by Manitoba Infrastructure (MI) overlaps potential critical habitat for red-headed woodpecker (*Melanerpes erythrocephalus*), listed as endangered under the federal *Species at Risk Act* (Government of Canada 2019). Red-headed woodpecker is a cavity-nesting woodpecker that breeds in open deciduous forest or forest edges, and open habitats (e.g., grasslands or pastures containing windrows) where mature or dead trees are available for nesting (COSEWIC 2007, ECCC 2019). In 2019, a federal recovery strategy was proposed to provide guidance aimed at halting and reversing the population decline of red-headed woodpecker and identifying critical habitat (ECCC 2019).

The recovery strategy identifies 10 x 10 km critical habitat squares throughout this species' Manitoba range (ECCC 2019). These standardized spatial units are used to identify known areas containing confirmed breeding evidence and potential critical habitat. The Project overlaps with one of these squares along the Provincial Road (PR) 239 realignment west of the Lake Manitoba Outlet Channel (LMOC; ECCC 2019; Appendix 1, Figure 1). Construction within the Project Development Area (PDA; i.e., Project footprint) will require clearing of forested habitats that may support red-headed woodpecker habitat but not critical habitat as defined in this species recovery strategy (ECCC 2019; Section 1.3).

Despite no evidence that critical breeding habitat will be directly affected by the Project, MI is using a precautionary approach and committing to additional mitigation measures (as described in Chapter 12.7 of the Environmental Impact Statement [EIS]), to reduce potential Project-related effects to red-headed woodpecker habitat.

The purpose of this Red-headed Woodpecker Habitat Mitigation Plan (hereafter called the Plan) is to describe the red-headed woodpecker habitat mitigation and monitoring activities that will be implemented along the LMOC outlet channel right-of-way (ROW).

1.2 Project Overview

The Project will develop a permanent flood control mitigation system for Lake Manitoba and Lake St. Martin for alleviating flooding in the Lake St. Martin region. This will be accomplished through construction of a new outlet channel from Lake Manitoba to Lake St. Martin (LMOC) and a new outlet channel from Lake St. Martin to Lake Winnipeg (Lake St. Martin Outlet Channel [LSMOC]). These new channels will allow for floodwaters to be moved more quickly through Lake Manitoba and Lake St. Martin into Lake Winnipeg. The Project will result in less flooding and reduced lake levels on Lake St. Martin. Other works include re-alignment of PR 239 and a hydroelectric distribution line for operation of the Lake St. Martin Outlet Channel outlet structure (Appendix 1, Figure 1).

1.3 Project Interaction with Red-Headed Woodpecker Habitat

The Project (i.e., part of the PR 239 realignment ROW) overlaps 35.4 ha of the 20,000-ha critical habitat square (0.2%); 19.8 ha of which is open deciduous forest, a preferred broad habitat type for red-headed woodpecker. Existing land cover data indicates that the Project will result in the direct loss of 1.7 ha of old growth (41-80 years) deciduous forest, which suggests the potential loss of decadent trees (potential red-headed woodpecker nest trees) may be minor. Point count surveys completed in 2020 did not reveal the presence of the species where the PR 239 realignment overlaps the critical habitat square (WSP 2020). Additionally, based on Environment and Climate Change Canada data, the only red-headed woodpecker critical habitat polygons known to occur within the LAA are located greater than 600 m from the PR 239 realignment (ECCC pers. comm. 2020). The Project is not expected to interact with these known critical habitat polygons because of the distance between them. The combination of these data suggests that the Project does not interact with critical habitat.

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2.0 MITIGATION GOALS AND OBJECTIVES

The goal of this Plan is to enhance breeding habitat opportunities for red-headed woodpecker along the LMOC ROW. This will be achieved by employing the mitigation measures, best management practices, and adaptive management techniques outlined in this Plan during the construction and operation phases of the Project.

Specific objectives are to:

- Describe revegetation prescriptions (i.e., shrub plantings) and vegetation management practices that provide habitat opportunities for red-headed woodpecker, while adhering to requirements for the safe operation and maintenance of the Project;
- Describe LMOC ROW habitat mitigation, including erecting salvaged snags and/or decadent trees and artificial nest structures; and
- Describe how revegetation prescriptions and nest structure occupancy by red-headed woodpecker will be monitored to verify the effectiveness of mitigation measures.

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3.0 PROJECT MITIGATION

3.1 General Project Mitigation Measures

Construction of the outlet channels will require clearing of the 400 m-wide ROW and parts of the PR 239 realignment ROW, but mitigation measures outlined in the Environmental Protection Plan (MI 2020a) will reduce potential effects to red-headed woodpecker and their habitats. These include:

- Treed habitats within the ROW will be retained where safe and technically feasible to do so.
- Clearing will not occur between April 1 and August 31 to avoid disturbance to nesting birds and other wildlife (ECCC 2018).
- If clearing is scheduled to occur within the nesting period (April 1 to August 31), a nest survey may be undertaken by a qualified wildlife biologist if warranted. In the event an active nest is found, it will be subject to site-specific mitigation measures (i.e., clearly marked protective buffer around the nest and/or non-intrusive monitoring).
- Adhering to the provincially recommended setback distance for vegetation clearing and construction activities of 200 m from an active red-headed woodpecker nest between April 15 to August 15 (MB CDC 2015).

To promote establishment of a healthy vegetation cover for the Project and to allow for the proper function of water flow the following measures are part of the maintenance program during the operations phase:

- Maintenance of the vegetation cover in areas where erosion might be present;
- Ongoing mowing of the outside drain to promote drainage and berms to support geotechnical stability that requires no tree cover; and
- Ongoing weed control.

3.2 Outlet Channel Right-of-way Habitat Mitigation

Habitat mitigation for red-headed woodpecker includes both revegetation prescriptions (and subsequent maintenance during the operation phase, as outlined in the Revegetation Management Plan [RVMP; MI 2020b]) and nest structure replacement.

3.2.1 Revegetation Prescriptions

The goal of the RVMP is to revegetate upland areas of the outlet ROWs in a manner that promotes the establishment of grassland communities consisting of native and agronomic grasses and forbs along LMOC (MI 2020b). To protect structural integrity and maintain hydrological function, shrubs and trees are discouraged from growing along the channel and on spoil piles/berms but are acceptable at the base of spoil piles in peripheral areas of the ROW (Appendix 1, Figure 2). Figure 1 identifies where shrubland prescriptions may be added to a schematic cross section of LMOC. Revegetation prescriptions involving native shrub plantings will provide habitat for wildlife including red-headed woodpecker as this species nests in open deciduous forests and forages in open grassland and shrubland habitat (Appendix 2). For the purposes of this

Plan, red-headed woodpecker habitat mitigation areas (HMAs) are those areas where shrub plantings are planned in the upland portions of the LMOC ROW (i.e., adjacent to the channel berms and in areas of the ROW that lie adjacent to deciduous forest habitats [Figure 1; Appendix 1, Figures 2 and 3]).

Native plant species will be used to revegetate the LMOC ROW where possible, including native shrubs within the HMAs. The ROW outside of the HMAs will be revegetated with herbaceous plant species only (e.g., native grasses; see RVMP [MI 2020b]). Revegetation activities will occur in spring or fall depending on the construction schedule and if applied in the fall, prescriptions may require adjustments to improve survivability of seed during winter for herbaceous cover (see RVMP [MI 2020b]).

Figure 1: Schematic of LMOC ROW

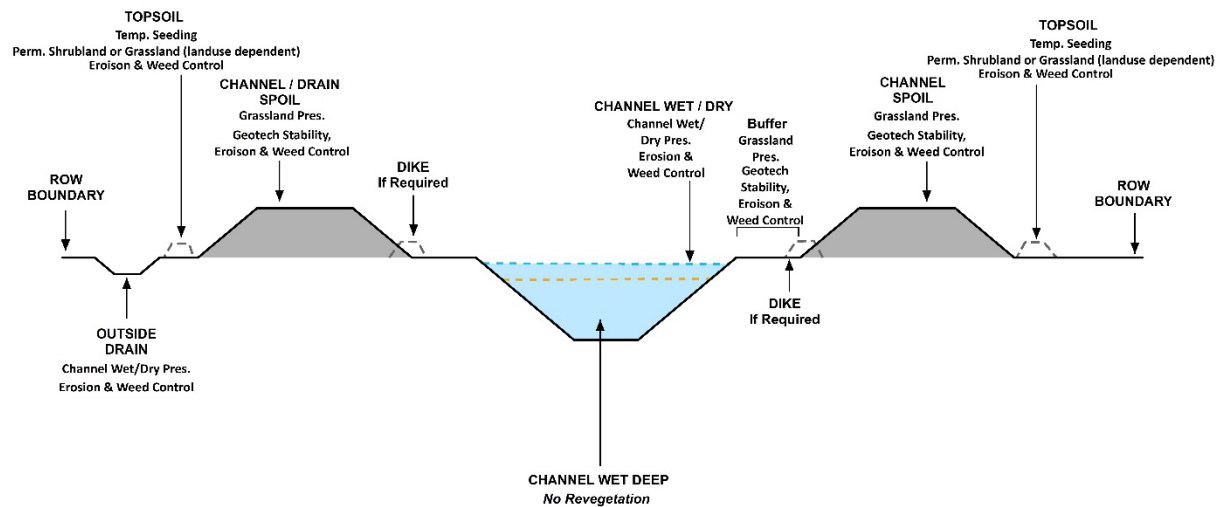


Figure 1 schematic illustrates the main components of the LMOC ROW. The HMAs will be located between the ROW boundary and outside edge of the outside drain (as shown on the left of the diagram) and between the ROW boundary and outside edge of the channel soil berm or topsoil berm (as shown on the right of the diagram).

3.2.2 Nest Structure Mitigation

Red-headed woodpecker habitat will be enhanced using nest structure mitigation that incorporates the salvage and installation of snags and decadent trees and the addition of artificial nest structures which are described in greater detail below.

Salvaged Decadent Trees

Decadent trees, including known nest trees, will be salvaged during ROW clearing and stored off-site until construction has been completed. As described in the EPP (MI 2020), tree salvage will occur in areas of modeled red-headed woodpecker habitat from the EIS (Appendix 1, Figure 1), or other areas of the PDA determined to contain suitable snags and/or decadent trees, which will be identified and flagged by the

environmental monitor prior to clearing. Salvaged trees will include snags and decadent deciduous trees ≥ 18 cm in diameter at breast height or those that have dead or dying limb(s) with a diameter ≥ 13 cm at breast height (ECCC 2019).

Salvaged snags and decadent trees will be installed prior to the addition of the above-described vegetation prescriptions in a subset of HMAs where adjacent open deciduous forest habitats provide potential red-headed woodpecker breeding habitat. The number and size of HMAs and the habitat adjacent to the PDA will be reviewed prior to plan finalization to determine how and where mitigation would be applied. Measures to reduce the likelihood of decadent trees falling over include adherence to best management practices (e.g., attaching decadent trees to treated wooden posts; NRCS 2008) and integrity monitoring (Section 4.2).

Artificial Nesting Structure

Artificial nesting structures will provide cavities for nesting red-headed woodpecker by installing wooden nest boxes in the HMAs within the ROW adjacent to where mature deciduous forest habitats occur. Artificial nesting structures will be installed following the addition of the above-described vegetation prescriptions in a subset of HMAs where adjacent open deciduous forest habitats are potential red-headed woodpecker breeding habitat. Nest boxes, known to be used by woodpecker species (e.g., McComb and Noble 1981) including red-headed woodpeckers (e.g., Grabber and Grabber 1977, Kale II and Maehr 1990), will be constructed and installed in a manner that is consistent with published natural cavity and site characteristics. This includes nest box installation at a height of 7-12 m above ground (cavity direction is unimportant) in a shaded location and construction of interior dimensions of approximately 30 cm deep (vertically), 11 cm wide, and 11 cm deep (horizontally) with a cavity entrance of 6 cm in diameter (Belson 1998, CWF 2020, Frei et al. 2020). Artificial nesting structure development will also follow additional guidance from published instructions on the construction and maintenance of nest boxes (CWF 2020).

4.0 MONITORING AND FOLLOW-UP

To assess the effectiveness of the implementation of this Plan, monitoring activities within the HMAs will include a red-headed woodpecker nest survey and an associated habitat survey which are described in greater detail below.

4.1 Red-headed Woodpecker Nest Survey

Rationale

Mitigation measures have been incorporated into the design of the outlet channels to provide habitat enhancements for wildlife, including red-headed woodpecker. The red-headed woodpecker nest survey will be used to assess the effectiveness of these mitigation measures by examining the habitat use in the HMAs.

Objective

The objective of the red-headed woodpecker survey is to understand if red-headed woodpeckers occupy salvaged decadent trees and artificial nesting structures placed within or adjacent to the HMAs.

Measurable Parameter

The measurable parameter for the red-headed woodpecker nest survey is habitat occupancy of salvaged decadent trees or artificial nesting structures by breeding red-headed woodpecker.

Design

Within the HMAs, red-headed woodpecker surveys will occur at all HMAs where salvaged decadent trees or artificial nesting structures have been installed.

Methods

The red-headed woodpecker survey will follow a standardized ten-minute point-count survey protocol (Ralph et al. 1995) that incorporates a call-broadcast component shown to increase the detection probability for woodpecker species (e.g., BC RIC 1999, Baumgardt et al. 2013, Wisconsin DNR 2013). The sequence of calls will use a five-minute passive listening/viewing period, followed by a three-minute active call-broadcast period (rotation between 30 seconds of red-headed woodpecker calls and drumming and 30 seconds of silence), and completed with a two-minute passive listening/viewing period. Surveys will be conducted during periods of suitable weather (i.e., clear visibility, wind ≤ 20 km/h, temperature $> 0^{\circ}\text{C}$, and precipitation not exceeding a light, intermittent drizzle) and start at sunrise and ending no later than 4.5 hours after sunrise (Bibby et al. 2000).

Surveys will be completed on two separate occasions, between June 1 to 30 (COSEWIC 2007), using a removal sampling design (i.e., once the species is detected at a site, it is not re-surveyed) which will meet the objectives outlined above while also providing a framework for ongoing monitoring efforts.

The resulting data will be summarized by HMA and mapped relative to the Project to provide an understanding of the presence and distribution of red-headed woodpecker and in relation to mitigation measures.

Frequency

The red-headed woodpecker nest survey will be completed twice during the peak breeding period described above. Surveys will be undertaken during 1-6 post-construction.

Decision Trigger / Threshold for Action

Decision trigger(s) and adaptive management action(s) will be developed in consultation with the regulator and Indigenous and stakeholder input.

A summary of the monitoring criteria for red-headed woodpecker is provided in Table 1.

4.2 Nest Structure Survey

Rationale

Mitigation measures have been incorporated into the design of the outlet channels to provide habitat enhancements for wildlife, including red-headed woodpecker. The nest structure survey will be used to assess the effectiveness of these mitigation measures by monitoring the structural integrity of salvaged decadent trees and artificial nest boxes.

Objective

The objective of the nest structure survey is to understand if the salvaged decadent trees and artificial nesting structures placed within or adjacent to the HMAs remain structurally sound and available for breeding red-headed woodpecker.

Measurable Parameter

The measurable parameter for the nest structure survey is a pass/fail for nest structure integrity and availability.

Design

The nest structure surveys will occur at all HMAs where salvaged decadent trees or artificial nesting structures have been installed.

Methods

The nest structure survey will use visual confirmation by a qualified biologist to assess whether the salvaged decadent trees and artificial structures are structurally sound and available (i.e., they remain in place and upright). Notable structural concerns or losses will be reported to MI immediately. The assessment of each structure will include detailed documentation of the findings and photographs.

Frequency

The nest structure survey will be completed once per year prior to the breeding season (April 1). Surveys will be undertaken during years 1-6 post-construction.

Decision Triggers / Thresholds for Action

Over 25% of salvaged decadent trees have compromised structural integrity or have become unavailable.

- Action: Consider replacing the salvaged trees or replacing them with artificial nesting structures and report survey results to Manitoba Conservation and Climate regional wildlife biologist/manager through annual data reports.

Over 25% of artificial nesting structures have compromised structural integrity or have become unavailable.

- Action: Consider adding new artificial nesting structures and report survey results to Manitoba Conservation and Climate regional wildlife biologist/manager through annual data reports.

A summary of the monitoring criteria for the red-headed woodpecker is provided in Table 1.

Table 1: Monitoring Criteria for the Red-headed Woodpecker Nest Survey

Monitoring Objective	Method	Monitoring Metric	Project Phase	Duration	Frequency
Evaluate the effectiveness of mitigation measures for red-headed woodpecker	Red-headed woodpecker nest survey	Species occurrence	Operation	Years 1 to 6 post-construction	Twice during the peak breeding period
	Nest structure survey	Structure availability and integrity	Operation	Years 1 to 6 post-construction	Once prior to the breeding period

4.3 Habitat Monitoring

Habitat monitoring will be undertaken as part of the monitoring activities outlined in the RVMP (MI 2020b) for the LMOC (Section 8) and LSMOC (Section 14).

4.3.1 Adaptive Management

Adaptive management is a structured and systematic process focused on improving environmental management by using lessons learned to reduce uncertainty while updating policies and practices (British Columbia Ministry for Forests and Range 2015). Adaptive management allows for the flexibility to identify and implement new mitigation measures or to modify existing ones (CEA Agency 2015).

Adaptive management will be incorporated into the habitat monitoring described above and as part of the adaptive management process outlined in the RVMP (Section 9; MI 2020b). As part of the adaptive management process, the ability of salvaged decadent trees to satisfy the intended goals and objectives will be evaluated. If salvaged decadent trees are assessed as ineffective based on these criteria, a root cause analysis of why a measure failed to meet the intended objective will be conducted. This type of analysis helps to prevent similar future failures, but also encourages critical thinking and documentation as part of continued learning.

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APPENDIX 1

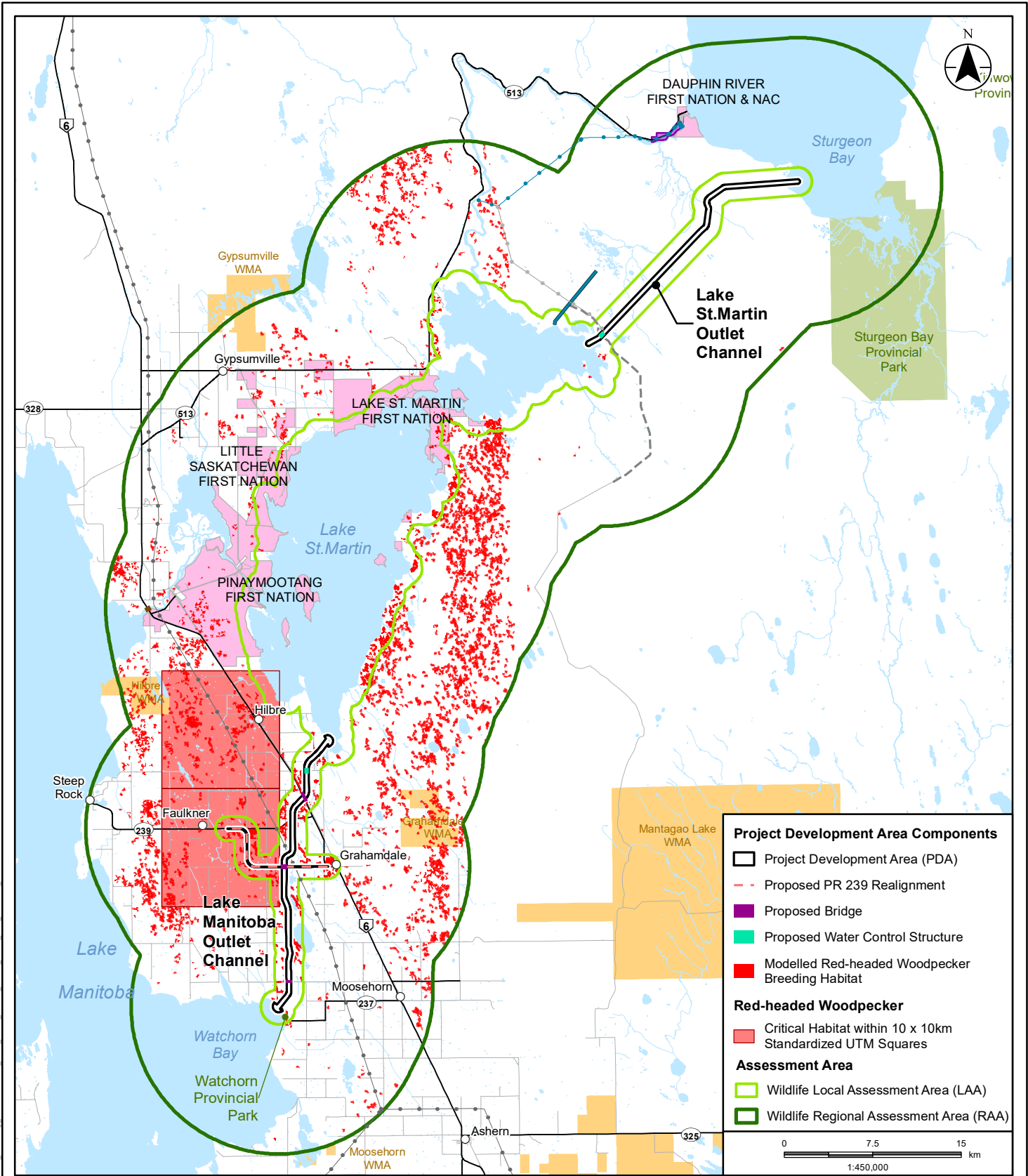
Figures

Figure 1: Project Overview Map

Figure 2: LMOC Red-headed Woodpecker Habitat Mitigation Areas

Figure 3: LMOC Red-headed Woodpecker Habitat Mitigation Areas (SAMPLE)

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Project Development Area Components

- Project Development Area (PDA)
- Proposed PR 239 Realignment
- Proposed Bridge
- Proposed Water Control Structure
- Modelled Red-headed Woodpecker Breeding Habitat

Red-headed Woodpecker

- Critical Habitat within 10 x 10km Standardized UTM Squares

Assessment Area

- Wildlife Local Assessment Area (LAA)
- Wildlife Regional Assessment Area (RAA)

0 7.5 15 km
1:450,000

Legend

- | | | |
|--|--|--|
| Fairford Water Control Structure | Existing Distribution Line | Northern Affairs Community (NAC) |
| Lake St. Martin Emergency Outlet Channel (Reach 1) | Planned Distribution Line | First Nation |
| Lake St. Martin Access Road | Provincial Highway (PTH/PR) | Wildlife Management Area |
| Existing Transmission Line | Municipal Road | Provincial Park |

Notes
 1. Coordinate System: NAD 1983 UTM Zone 14N
 2. Data Sources: Governments of Manitoba and Canada, Manitoba Infrastructure, Environment and Climate Change Canada
 3. Last Update: 11/30/2020 10:28:48 AM



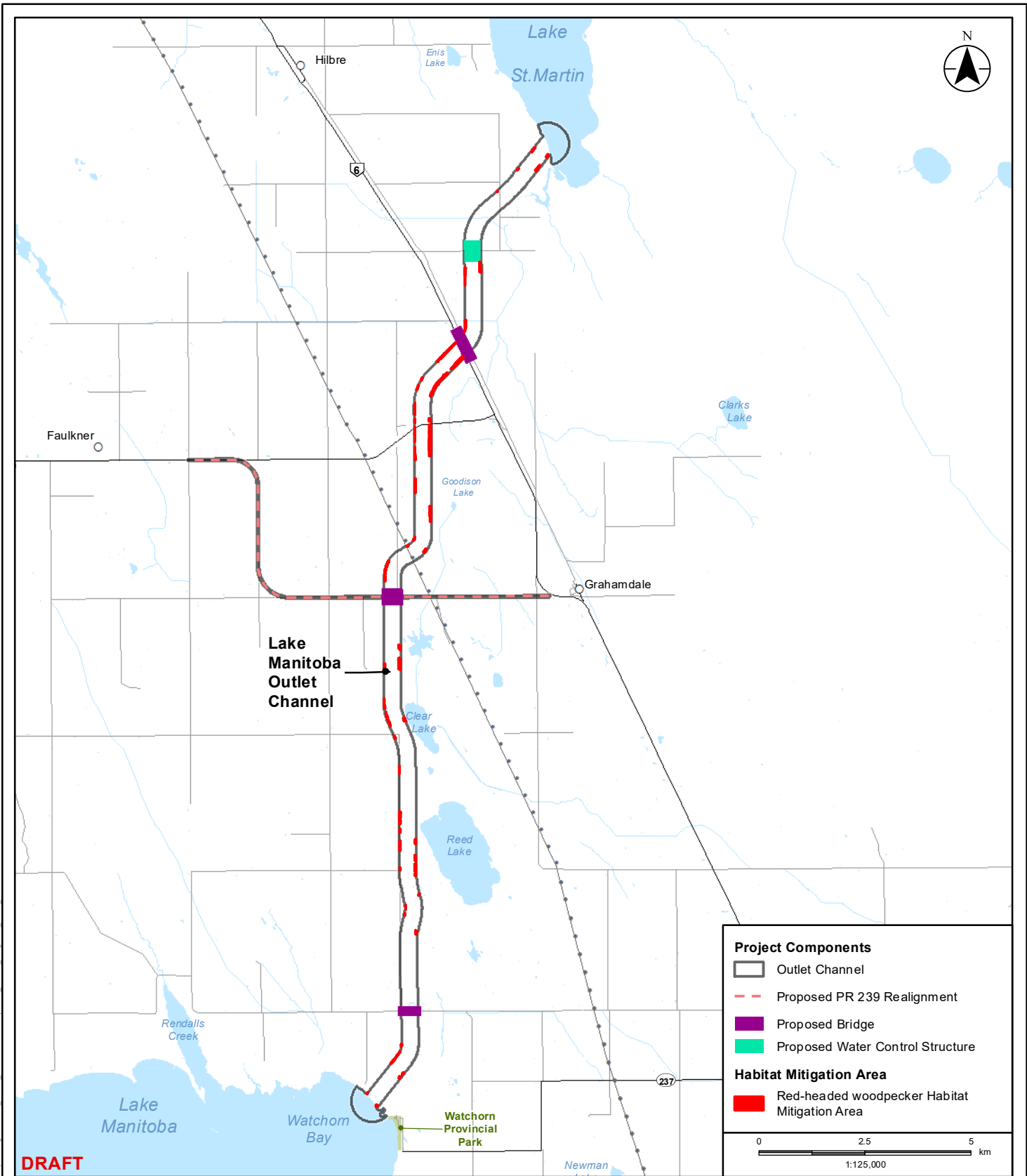
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 Lake Manitoba & Lake St. Martin Outlet Channels Project

Project Overview Map

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Figure 1

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Legend

- Existing Transmission Line
- Provincial Highway (PTH/PR)
- Municipal Road
- Provincial Park

Notes

1. Coordinate System: NAD 1983 UTM Zone 14N
2. Data Sources: Governments of Manitoba and Canada, Manitoba Infrastructure
3. Last Update: 11/26/2020 11:24:37 AM

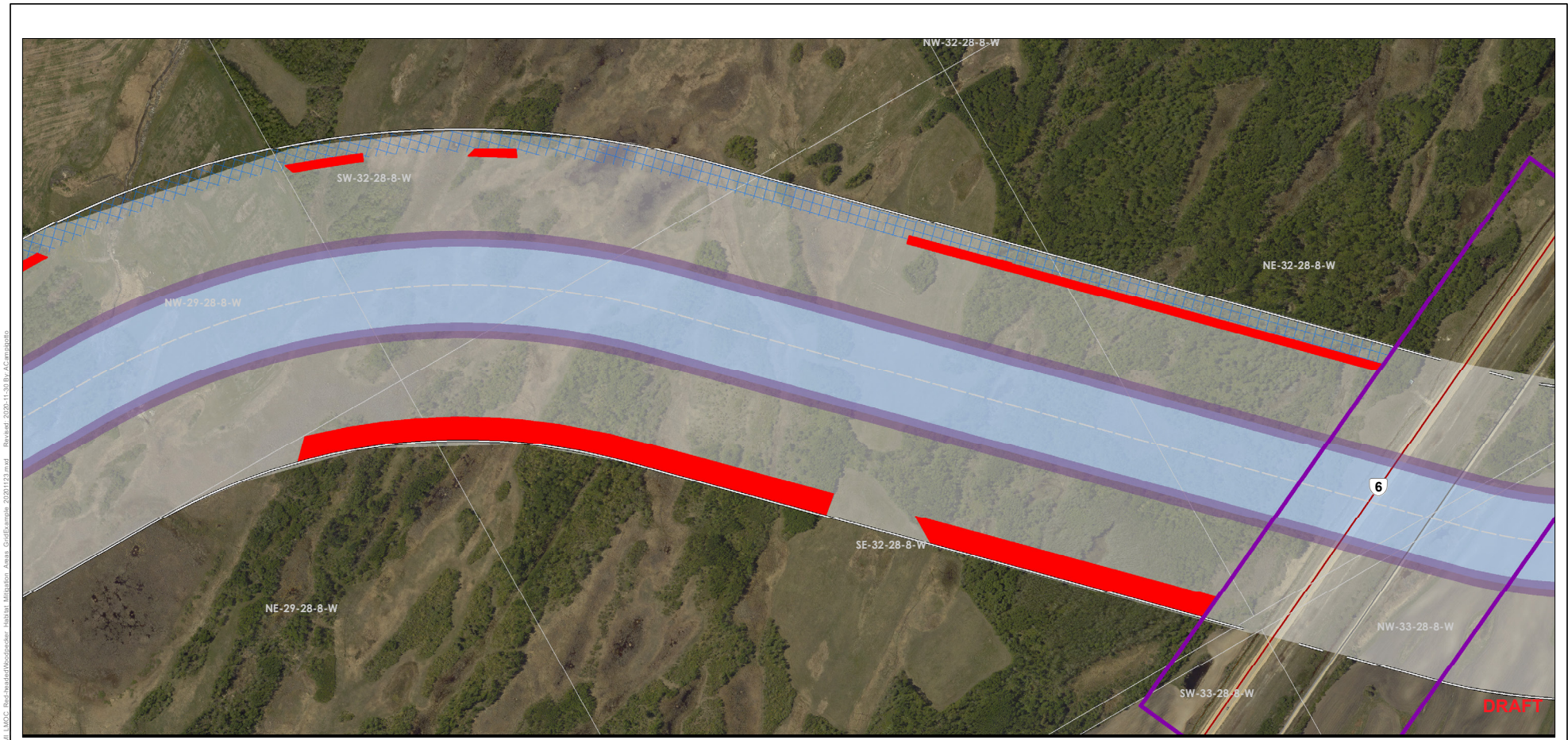


MANITOBA INFRASTRUCTURE
Lake Manitoba & Lake St. Martin Outlet Channels Project

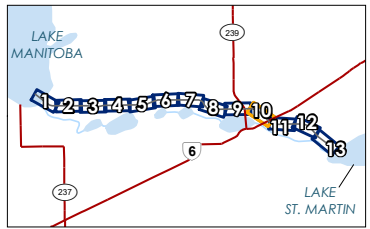
**LMOC Red-headed woodpecker
Habitat Mitigation Areas - Overview**

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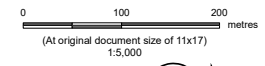
Figure 2



G:\GIS\Project_Folder\111428107_LakeManitobaOutletChannels\Research\Habitat_Mitigation_Areas_GradKamala_20201123.mxd Revised: 2020-11-30 By: ACannigoto



- | | | |
|-----------------------------|-----------------|---|
| Outside Drain - 30m buffer | Proposed Bridge | Red-headed Woodpecker Habitat Mitigation Area |
| Top of Dike buffer | | |
| Channel ROW Boundary | | |
| Top of Channel | | |
| Channel Centerline | | |
| Channel / Drain Spoil Piles | | |
| Channel | | |
| Quarter Sections | | |



Project Location Near Lake Manitoba & Lake St.Martin
 Manitoba

Prepared by AC on 2020-11-30
 TR by LW on 2020-11-30

Client/Project MANITOBA INFRASTRUCTURE
 Lake Manitoba & Lake St.Martin Outlet Channels Project

111475107

Figure No. **Figure 3**
Title **DRAFT - FOR DISCUSSION PURPOSES ONLY**

LMOC Red-headed Woodpecker Habitat Mitigation Areas (SAMPLE)

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APPENDIX 2

Ancillary Information

Biophysical Attributes of Critical Habitat for Red-headed Woodpecker

In 2018, a federal recovery strategy (proposed) was developed to provide guidance aimed at halting and reversing the population decline of red-headed woodpecker and identifying critical habitat (ECCC 2019). The biophysical attributes of critical habitat in which red-headed woodpecker individuals may carry out breeding (e.g., courtship, territory defense, nesting, and post-fledgling), roosting, and foraging activities in Canada include (as per ECCC 2019, pg. 33):

- 1) *“potential nesting/roosting structures: decadent deciduous trees that are 18 cm dbh [diameter at breast height] or more or have dead or dying limb(s) with a diameter of 13 cm or more;*
- 2) *habitat that is located up to 190 m from the dripline (i.e., edge of canopy) of the decadent trees described under 1).*
 - a) *Treed areas for breeding, roosting, and foraging, including:*
 - *In Saskatchewan and Manitoba: sparsely treed woodlands such as those dominated by aspen with some elm and oak; bluffs (clumps or grove of trees) with an open or grazed understory located within pasture, crop fields, farm yards, and urbanized areas; hedgerows and shelterbelts with mature and decadent elm, maple and/or ash trees, and; sparsely treed riparian habitat with aspen, cottonwood, and oak.*
 - *Understory vegetation within treed areas;*
 - *Fruit- and mast-bearing trees/bushes to provide food sources; and*
 - *Coarse woody debris within treed areas.*
 - b) *Other non-built-up areas containing vegetation that supports food sources and that are located up to 50 m from the dripline of a decadent tree described under 1) and/or the edge of habitat described under 2a). Habitat types may include, but are not limited to, the following examples:*
 - *Pastures*
 - *Grasslands*
 - *Old fields*
 - *Wetlands*
 - *Shrublands.”*