

ATTACHMENT: June 30, 2021

Provincial Advice Record: Designation Request under IAA

Response requested by **July 20, 2021**

Lake Diefenbaker Irrigation Expansion Projects

Department/Agency	Environment and Climate Change Canada
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1. Has your department or agency considered whether it has an interest in the Project; exercised a power or performed a duty or function under any Act of Parliament in relation to the Project; or taken any course of action (including provision of financial assistance) that would allow the Project to proceed in whole or in part?

ECCC has not exercised a power or performed a duty or function under any Act of Parliament in relation to the Project.

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2. Is it probable that your department or agency may be required to exercise a power or perform a duty or function related to the Project to enable it to proceed?

The following requirements may apply to this Project:

Species at Risk Act permits

For species listed in Schedule 1 of the *Species at Risk Act* (SARA) as Extirpated, Endangered or Threatened, a permit may be required from ECCC (section 73 of SARA) for activities that affect a listed terrestrial wildlife species, any part of its critical habitat, or the residences of its individuals, where those prohibitions are in place. Such permits may only be issued: if all reasonable alternatives to the activity that would reduce the impact on the species have been considered and the best solution has been adopted; all feasible measures will be taken to minimize the impact of the activity on the species or its critical habitat or the residences of its individuals; and if the activity will not jeopardize the survival or recovery of the species. Permits are also required by those persons conducting activities that contravene the critical habitat destruction prohibitions (subsection 58(1)).

Prohibitions are in place for individuals and residences on federal lands in a province, reserve or any other lands under the *Indian Act*, or lands under the authority of the Minister of the Environment, and for birds listed under the *Migratory Birds Convention Act, 1994* wherever they occur regardless of land tenure.

Furthermore, prohibitions may be in force on land other than federal land pursuant to other orders or regulations under SARA. It is possible that further prohibitions may come into force in the future

through orders in Council for individuals, residences and critical habitat on non-federal lands and / or through ministerial order for critical habitat on federal lands. It is also possible that, over the course of the assessment or after the assessment, additional species could be listed under SARA; permits may be required for Project activities that affect these additional species. Proponents are advised to monitor for such developments on the SARA Registry <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html>.

Examples of activities that could require a Species at Risk Act permit include:

- Species surveys that would affect individuals or residences;
- Site preparation (clearing, grubbing, site access, staging, blasting);
- Construction and operation of temporary and permanent works and infrastructure;
- Creation of new roads, rail lines, or power lines;
- Infilling of wetlands or watercourses;
- Any monitoring that requires capture/release of individuals; and
- Sensory disturbance effects (artificial lighting, noise, vibration, human activity, vehicular traffic).

ECCC will require detailed information on the potential effects of the Project, including locations and/or occurrences of species at risk, their use of habitat and critical habitat within the Project area, and specific effects on federal land, before ECCC can determine whether a SARA permit is required.

Links to publicly available documents:

- Guidelines for permitting under Section 73 of Species at Risk Act <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/policies-guidelines/permitting-under-section-73.html>
- Species at Risk Permitting Policy <https://species-registry.canada.ca/index-en.html#/consultations/2983>

If a permit is issued, the description of the activity and how SARA's preconditions were met will be posted on the SARA Registry here: <https://species-registry.canada.ca/index-en.html#/permits>

Canada Wildlife Act permits

Under the *Canada Wildlife Act*, National Wildlife Areas (NWAs) are protected and managed in accordance with the *Wildlife Area Regulations*. The primary purpose of NWAs is to protection and conserve wildlife and their habitat. For this purpose and according to the legislation, all activities in a NWA that could interfere with the conservation of wildlife can be prohibited. Access to Prairie NWA is not restricted and activities may be permitted in accordance with the conservation objectives of the NWA management plan.

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3. If your department or agency will exercise a power or perform a duty or function under any Act of Parliament in relation to the Project, will it involve public and Indigenous consultation?

ECCC may require public and Indigenous consultation related to the issuance of a SARA permit during the impact assessment process.

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4. Is your department or agency in possession of specialist or expert information or knowledge that may be relevant to any potential adverse effects within federal jurisdiction caused by the Project or adverse direct or incidental effects stemming from the Project?

ECCC has specialist or expert information that may be relevant to the to the Project in the areas listed below; in each of these subject areas we have expertise related to establishing an adequate baseline, assessing potential effects to biophysical valued components, effectiveness of mitigation measures, methods for monitoring and follow-up, as well as information regarding federal policies, standards, and regulations that may be relevant to the assessment. This list may change if additional Project activities or components should come into scope.

Air Quality: ambient air quality; sources of emissions; emissions estimation and measurement; dispersion modelling; and follow-up monitoring.

Greenhouse gas emissions and climate change: estimations of greenhouse gas (GHG) emissions (net and upstream); GHG mitigation measures and determination of Best Available Technologies/Best Environmental practices (BAT/BEP); credible plans to achieve net-zero GHG emissions by 2050;

climate change science to inform evaluation of potential changes to the environment and project resilience to effects of climate change; climate change policies; and national GHG projections.

Water quality and quantity: surface water quality insofar as it could affect fish and fish habitat; water quality predictions and modelling; contaminant sources for surface water; wastewater, seepage and runoff effects; management of contaminated soils or sediments; dredging; erosion and sedimentation; water impoundment; seasonal variation in water quality; nutrient effects; interactions and effects of groundwater on surface water quality; hydrology (streamflow rates data and modelling, flooding and extreme events management, drainage control, water levels, water balances); geochemistry; follow-up and monitoring.

Wildlife, species at risk, and habitat: priority species and places as outlined in the Pan-Canadian Approach to transforming species at risk conservation in Canada; migratory birds, their nests, eggs, and habitat (including native prairie grassland) under authority of the Migratory Birds Convention Act 1994; COSEWIC assessed species, non-aquatic species at risk under authority of the Species at Risk Act, including, individuals, their residences, habitat and critical habitat including recovery strategies, action plans and management plans; ecological function of wetlands; ecotoxicology.

Environmental emergencies: emergency management planning and guidance; atmospheric transport and dispersion modelling of contaminants in air; fate and behaviour, hydrologic trajectory modelling of contaminants in water.

Climate and Meteorology: long-term climate patterns and norms; and weather

5. Has your department or agency had previous contact or involvement with the Proponent or other parties in relation to the Project?

ECCC received and responded to an April 12, 2021 letter from the Battle River Indigenous Relations Council (BRIRC) requesting information about the proposed Project and a meeting with ECCC. The letter notes that the Project “raises important environmental concerns, including quality and quantity of freshwater, effects on the environment, and climate change, and impacts to First Nations’ Treaty and Aboriginal rights.” BRIRC also requests that they be consulted on anything that may impact their Treaty and Aboriginal rights, including any projects taking place in Treaty 6. At the same time they identify that they are limited in both capacity and funding for engagement.

6. From the perspective of the mandate and area(s) of expertise of your department or agency, does the Project have the potential to cause adverse effects within federal jurisdiction or adverse direct or incidental effects as described in section 2 of IAA? Could any of those effects be managed through legislative or regulatory mechanisms administered by your department or agency? If a licence, permit, authorization or approval may be issued, could it include conditions in relation to those effects?

Air Quality

The construction of canals and pipelines requires the use of on-road vehicles and mobile off-road equipment, which has the potential to adversely affect air quality. More specifically, the combustion of fossil fuels can result in the emission of “criteria air contaminants” such as sulphur oxides (SO_x), nitrogen oxides (NO_x), volatile organic compounds (VOCs), and fine particulate matter (PM_{2.5}) which are dispersed to the surrounding region during construction activities. Construction activities that cause a physical disturbance to land, such as earth moving, and transportation, can also introduce particulate matter (including dust) to the surrounding region. Emission of air pollutants can result in local or regional degradation of ambient air quality, with potential impacts on human health, as well as on sensitive ecosystem receptors.

When contaminants settle out of the air in the surrounding environment, their deposition may result in adverse impacts to terrestrial and aquatic ecosystems. Emissions of NO_x and SO₂ may also lead to acidification and potential exceedance of ecosystems’ critical loads. Air contaminant emissions can result in contamination of nearby land and waterbodies, and may affect plants, wildlife, and fish and fish habitat.

Greenhouse Gas Emissions and Climate Change

The construction, operation, and decommissioning of the proposed Project may result in greenhouse gas (GHG) emissions, and may hinder or contribute to the Government of Canada’s ability to meet its

commitments in respect of climate change. Furthermore, the Project has the potential to be affected by future climate change, possibly resulting in impacts to the environment.

The Strategic Assessment of Climate Change (SACC) (revised October 2020) provides guidance related to climate change throughout the federal impact assessment process. The SACC outlines information that the Proponent should provide during the impact assessment process on GHG emissions, impact of the Project on carbon sinks, impact of the Project on federal emissions reduction efforts and on global GHG emissions, GHG mitigation measures, and climate change resilience; the circumstances in which an upstream GHG assessment will be required; and the circumstances in which a credible plan for achieving net-zero GHG emissions by 2050 will be required. More details will be provided in the *Technical Guide Related to the Strategic Assessment of Climate Change: Guidance on quantification of net GHG emissions and impacts on carbon sinks, mitigation measures, and net-zero plan, and upstream GHG Assessment* when published in its draft form in summer 2021.

Net GHG Emissions, emissions intensity and upstream GHGs

If designated, Proponents are required in the Initial Project Description to estimate the net GHG emissions associated a proposed project, following the equation in section 3.1.1 of the Strategic Assessment of Climate Change.

Climate Change Resilience

Given projected changes in future climate for the Project area, climate change considerations are relevant to the project review. The potential for climate change to affect the Project which, in turn, may have impacts on the surrounding environment (e.g. through accidents or malfunctions) should be considered. Climate changes in the Project area, such as possible changes in mean and extreme precipitation and temperature and related environmental conditions, may alter baseline conditions, with implications for climate sensitive aspects of project design and associated effects on the environment.

ECCC anticipates that the Proponent will be required to provide information in their Project Application on how the Project is resilient to, and at risk from both the current and future impacts of a changing climate.

Water Quality and Quantity

Activities associated with construction and operation of canals and pipelines may have negative impacts on the quality of surface water, as well as the hydrological regimes of watercourses and water bodies.

Activities that could result in deposit of contaminants to surface waters include watercourse crossings, hydrostatic tests, access road and right-of-way construction and maintenance, and excavation or movement of soils, sediments or rocks. Disturbance of soils, rock, streambanks, and streambeds during construction or operation may cause erosion/ sedimentation leading to mobilization and deposition of sediments in surface waters and elevated levels of total suspended solids. In addition, impacts to surface water quality could result through runoff, wastewater discharge, groundwater resurgence, and unexpected events, such as a spill. Surface water quality may be degraded by increased runoff/ mobilization of agricultural chemicals (e.g., pesticides, herbicides, fertilizers), wastes (e.g., manure, wastewater), and other contaminants due to agricultural and industrial expansion. Water impoundments may result in mobilization of mercury. Water quality may also be degraded by hydrological changes. If downstream dilution capacity is reduced, contaminant concentrations in surface water from existing downstream inputs (such as any municipal and industrial sources) could increase.

Adverse effects to water quality could, in turn, result in adverse effects to sensitive ecosystem receptors, such as fish and fish habitat, migratory birds, plants and wildlife. These adverse effects could be reduced through mitigation measures.

The Project may impact water availability for both ecological and human needs in the downstream sections of the Saskatchewan River, including into the province of Manitoba. Irrigation and related canals increase the amount of water that is lost to evapotranspiration compared to the natural environment, particularly in low water availability conditions when irrigation demand is highest. In addition, low water availability is projected to be a serious issue for all Prairie Provinces due to climate change.

Wildlife, Species at Risk, and Habitat

Activities associated with the construction, operation, closure and dismantling of canals and pipelines can cause temporary and permanent negative impacts to terrestrial wildlife resources (wildlife). Wildlife resources in the immediate or surrounding area of proposed project sites, including migratory birds protected under the Migratory Birds Convention Act (MBCA) and non-aquatic species at risk protected under the Species at Risk Act (SARA), may be negatively impacted if appropriate mitigation measures are not applied. These may include, but are not limited to: minimizing the project footprint; minimizing the duration of construction; planning the project timing to reduce overlap with species' use of the area; restoring vegetation; and managing weeds. Project activities can cause habitat loss, alteration, and fragmentation; direct and indirect mortality; wetland loss, reduction, alteration, or change in wetland function (which will have an effect on wildlife); sensory disturbance and functional habitat loss; and introduction of invasive species.

Native prairie habitat (native grassland) is one of the most endangered ecosystems in the world; only 13.7% of the historical extent in Saskatchewan remains. Threats to grasslands include cultivation, fragmentation, and species invasion. Native prairie grassland provides ecosystem functions in addition to habitat, including the regulation and storage of water, soil stabilization, nutrient cycling, and carbon storage. The Project has the potential to contribute indirectly to the loss of native prairie habitat as agricultural practices shift to increased cultivation, which would be facilitated by the enhanced ability to irrigate historically less productive land (from a crop perspective). Map showing an approximate location of grassland areas in various phases is shown in Attachments 3 – 6.

The nature of effects to wildlife and habitat (including residences and critical habitat defined under the *Species at Risk Act*) can vary based on a number of factors, including: project location, duration, scale, configuration, ancillary project activities, existing cumulative effects, type of disturbed habitat, and sensitivity of nearby species. The pathway through which potential effects are conveyed will depend on the land, air, and water constituents associated with the site along with the behavioral adaptability, presence and interaction with the species limiting factor (e.g., habitat supporting staging, nesting, roosting or foraging) and population resilience.

ECCC has identified critical habitat for several Species at Risk (SAR) in the proposed Project footprint, based on the mapping provided by the Water Security Agency, as well as in the Saskatchewan River Delta located along the border with Manitoba. A table listing some of the potentially affected species is attached to this submission (Attachments 1 and 2). Additionally, landscape-level impacts from the Project are anticipated due to construction and post-construction irrigation of land that is currently native grassland or tame pasture, and which provides habitat for many species, including grassland birds and waterfowl.

The conversion and use of the land for crops is likely to have a large detrimental effect on many already declining and SARA-listed grassland bird populations in the region. Population-level effects should be evaluated for grassland species of high conservation concern, through a critical assessment of the land to be converted to crops. The loss of habitat would be exacerbated by habitat fragmentation caused by construction activities, noise and traffic disturbances, and the permanent presence of new pipelines, roads, and canals.

The proposed boundary of Phase 2 of the Project (Westside) contains Prairie National Wildlife Area Units 8, 9, 12, 13. Phase 2 (Westside) also includes Goose Lake, which is considered a Migratory Bird Concentration Site for moulting/staging. Prairie National Wildlife Area Unit 5 potentially overlaps with the boundary of Phase 3 (Qu'Appelle). Map showing locations of NWAs in various phases is shown in Attachments 3 – 6. Under the *Canada Wildlife Act*, National Wildlife Areas (NWAs) are protected and managed in accordance with the *Wildlife Area Regulations*. The primary purpose of NWAs is to protection and conserve wildlife and their habitat. For this purpose and according to the legislation, all activities in a NWA that could interfere with the conservation of wildlife can be prohibited. Access to Prairie NWA is not restricted and activities may be permitted in accordance with the conservation objectives of the NWA management plan.

Due to the scale of the proposed Project, impacts may occur outside of the project area, particularly in the Saskatchewan River Delta to the northeast. The Delta is an important ecological feature, has importance to Indigenous communities, and is the subject of conservation interest from various parties including the Cumberland House Cree Nation. The Canadian Parks and Wilderness Society - Saskatchewan and the Cumberland House Cree Nation are jointly proposing the establishment of an Ecological Reserve to protect the Saskatchewan River Delta and surrounding area to conserve biodiversity and traditional cultural practices for local communities. This project is part of Canada's Canada Target 1 Challenge, an investment by the federal government to increase Canada's protected and conserved areas by 25 percent by 2025. The Cumberland House Cree Nation recently indicated their intent to pursue a manifesto (policy) which includes sovereignty on economic development and the protection of their territory located in the Saskatchewan River. The Delta also includes two of

Canada's Important Bird Areas (IBAs), The Pas - Saskatchewan River Delta IBA and the Cumberland Marshes IBA, which are recognized as having global significance based upon the numbers of breeding, staging and migrating waterfowl and fen- and marsh-nesting birds that rely on habitat conditions of the delta.

Environmental Emergencies

The proposed Irrigation Expansion project may include reservoirs, pipelines, waterway crossings, access road, construction trucks and right-of-way construction and maintenance, as well as inherent risks of fuel and hazardous materials spills in both the construction and operations phases. There is a potential for adverse environmental and human-health effects from accidents and malfunctions from these projects. Optimized prevention, preparedness and response measures and systems will be important given the risk of spills of hazardous substances to water and to the surrounding environment.

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7. Does your department or agency have a program or additional authority that may be relevant and could be considered as a potential solution to concerns expressed about the Project? In particular, the following issues have been raised by the requestor:
- a. Potential effects on Inherent and Treaty Rights in Saskatchewan
 - b. Potential impacts to sacred sites and other cultural and heritage-sensitive areas
 - c. Potential effects to food and water security including climate change impacts
 - d. Potential long-term cumulative impacts of water withdrawals and agrochemical inputs to the Saskatchewan River and the Saskatchewan River Delta that flow into Manitoba
 - e. Effects to the following:
 - i. fish and fish habitat
 - ii. migratory birds
 - iii. wildlife and wildlife habitat including federally listed species at risk
 - iv. contaminants from agricultural inputs

Please see responses to Question 6.

It is the responsibility of the Proponent to comply with the following requirement:

- Environment and Climate Change Canada administers Section 36(3) of the *Fisheries Act*, which prohibits the deposit of deleterious substances into waters frequented by fish, unless the deposit is authorized by regulations. The owner/operator will be required to ensure there are no deposits of deleterious substances that would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish.

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8. If your department has guidance material that would be helpful to the Proponent or the Agency, please include these as attachments or hyperlinks in your response.

ECCC Suggested hyperlinks

Important Bird Areas (IBA) sites referenced in Question 6

- <https://www.ibacanada.ca/site.jsp?siteID=MB055>
- <https://www.ibacanada.ca/site.jsp?siteID=SK102>

SARA registry

- [Species at risk public registry - Canada.ca](https://www.species-at-risk.ca/)

Prairie National Wildlife Area (NWA)

- [Prairie National Wildlife Area - Canada.ca](https://www.prairienationalwildlifearea.ca/)

ECCC's Guidelines to Reduce Risk to Migratory Birds

- <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratorybirds/reduce-risk-migratory-birds.html>

Federal Sustainable Development Strategy

- <https://www.canada.ca/en/services/environment/conservation/sustainability/federal-sustainable-development-strategy.html>

Strategic Assessment of Climate Change

- <https://www.strategicassessmentclimatechange.ca/>

ECCC Attachments

Attachment 1 – Table - Species at Risk with potential to interact with the Project based on the location of identified critical habitat, recorded species occurrences, and/or spatial overlap with described species ranges

Attachment 2 – Map of Critical Habitat of SAR

Attachment 3 – Map of Critical Habitat of SAR, NWAs, and grassland areas

Attachment 4 – Phase 1 – Map of Critical Habitat of SAR, NWAs, and grassland areas

Attachment 5 – Phase 2 – Map of Critical Habitat of SAR, NWAs, and grassland areas

Attachment 6 – Phase 3 – Map of Critical Habitat of SAR, NWAs, and grassland areas

<Original signed by>

John Olyslager

Name of departmental / agency responder

A/ Regional Director, Prairie and Northern Region

Title of responder

July 20, 2021

Date

Attachment 1

Table 1: Species at Risk with potential to interact with the Project based on the location of identified critical habitat, recorded species occurrences, and/or spatial overlap with described species ranges

Species at Risk Interests in the Water Security Agency's Mapped Project Area

<u>Species Common Name</u>	<u>SARA Schedule 1 Designation</u>	<u>Notes</u>
<i>Species with critical habitat (CH) and/or reported occurrence in or near the project area</i>		
Bank Swallow (CH)	Threatened	<i>Migratory Birds Convention Act</i>
Ferruginous Hawk (CH)	Threatened	Not protected by the <i>Migratory Birds Convention Act</i>
Piping Plover <i>circumcinctus</i> subspecies (CH)	Endangered	<i>Migratory Birds Convention Act</i>
Gibson's big sand tiger beetle (draft CH)	Threatened	<i>Migratory Birds Convention Act</i>
Alkaline Wing-nerved Moss (CH)	Threatened	<i>Migratory Birds Convention Act</i>
Smooth Goosefoot (CH adjacent)	Threatened	<i>Migratory Birds Convention Act</i>
Slender Mouse-ear-cress (occurrence)	Threatened	<i>Migratory Birds Convention Act</i>
Small-flowered sand-verbena (CH adjacent)	Endangered	<i>Migratory Birds Convention Act</i>
<i>Birds listed on Schedule 1 of the Species at Risk Act which have ranges that intersect the project area</i>		
Whooping crane	Endangered	<i>Migratory Birds Convention Act</i>
Piping plover	Endangered	<i>Migratory Birds Convention Act</i>
Horned grebe	Endangered	<i>Migratory Birds Convention Act</i>
Red-headed woodpecker	Endangered	<i>Migratory Birds Convention Act</i>
Burrowing owl	Endangered	Not protected by the <i>Migratory Birds Convention Act</i>
Common nighthawk	Threatened	<i>Migratory Birds Convention Act</i>
Loggerhead shrike, <i>excubitorides</i> subspecies	Threatened	<i>Migratory Birds Convention Act</i>
Barn swallow	Threatened	<i>Migratory Birds Convention Act</i>
Bobolink	Threatened	<i>Migratory Birds Convention Act</i>
Spague's pipit	Threatened	<i>Migratory Birds Convention Act</i>
Olive-sided flycatcher	Threatened	<i>Migratory Birds Convention Act</i>
Thick-billed longspur/McCown's Longspur	Threatened	<i>Migratory Birds Convention Act</i>
Lark bunting	Threatened	<i>Migratory Birds Convention Act</i>
Chestnut-collared longspur	Threatened	<i>Migratory Birds Convention Act</i>
Yellow rail	Special concern	<i>Migratory Birds Convention Act</i>
Baird's sparrow	Special concern	<i>Migratory Birds Convention Act</i>
Long-billed curlew	Special concern	<i>Migratory Birds Convention Act</i>
Western grebe	Special concern	<i>Migratory Birds Convention Act</i>
Ferruginous hawk	Threatened	Not protected by the <i>Migratory Birds Convention Act</i>
Short-eared owl	Special concern	Not protected by the <i>Migratory Birds Convention Act</i>
Rusty blackbird	Special concern	Not protected by the <i>Migratory Birds Convention Act</i>
Peregrine falcon	Special concern	Not protected by the <i>Migratory Birds Convention Act</i>

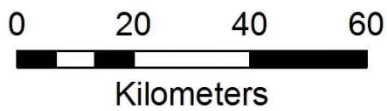
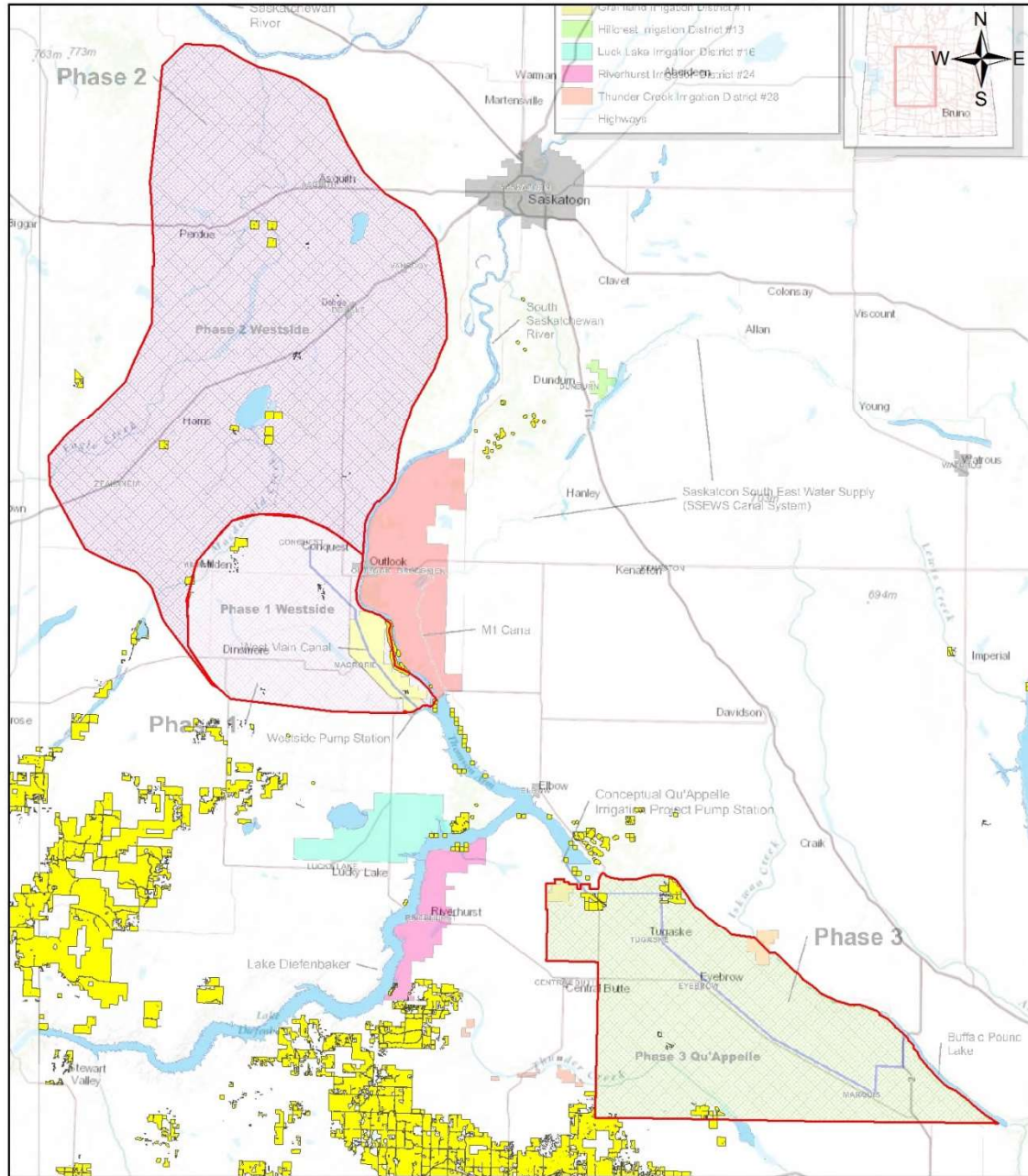
Species in the Saskatchewan River Delta

<u>Species Common Name</u>	<u>SARA Schedule 1 Designation</u>	<u>Notes</u>
<i>Species with critical habitat in the Saskatchewan River Delta</i>		
Little Brown Myotis	Endangered	
Northern Myotis	Endangered	
Woodland Caribou	Threatened	
Eastern Whip-poor-will	Threatened	<i>Migratory Birds Convention Act</i>
<i>Birds listed on Schedule 1 of the Species at Risk Act which have ranges that intersect the Saskatchewan River Delta</i>		
Horned grebe	Endangered	<i>Migratory Birds Convention Act</i>
Bank Swallow	Threatened	<i>Migratory Birds Convention Act</i>
Barn swallow	Threatened	<i>Migratory Birds Convention Act</i>
Olive-sided flycatcher	Threatened	<i>Migratory Birds Convention Act</i>
Canada warbler	Threatened	<i>Migratory Birds Convention Act</i>
Chimney swift	Threatened	<i>Migratory Birds Convention Act</i>
Common nighthawk	Threatened	<i>Migratory Birds Convention Act</i>
Eastern Whip-poor-will	Threatened	<i>Migratory Birds Convention Act</i>
Evening grosbeak	Special concern	<i>Migratory Birds Convention Act</i>
Buff-breasted sandpiper	Special concern	<i>Migratory Birds Convention Act</i>
Yellow rail	Special concern	<i>Migratory Birds Convention Act</i>
Rusty blackbird	Special concern	Not protected by the <i>Migratory Birds Convention Act</i>
Short-eared owl	Special concern	Not protected by the <i>Migratory Birds Convention Act</i>

Attachment 2

Map of Critical Habitat of SAR

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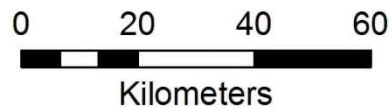
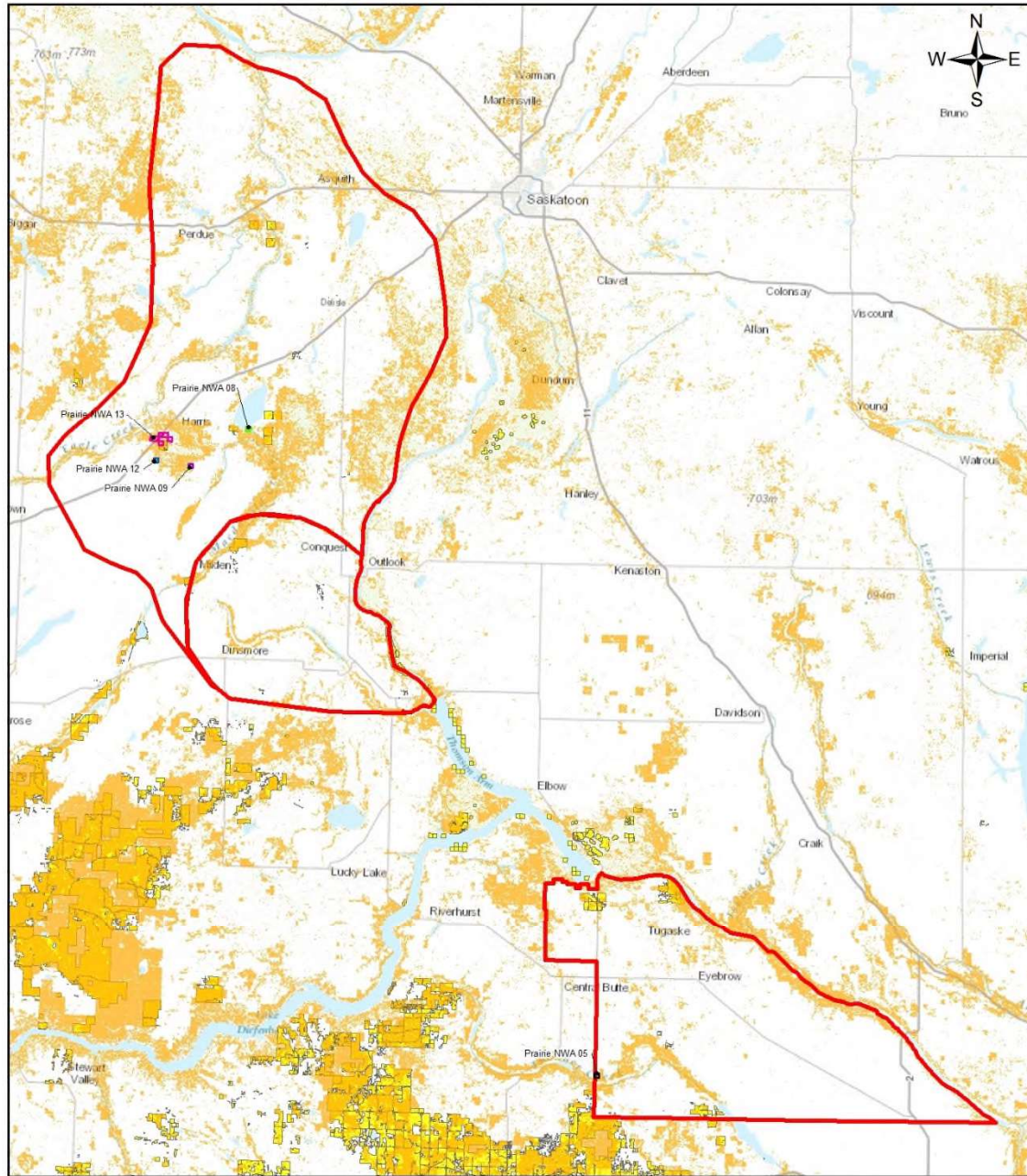


Coordinate System: NAD 1983 UTM Zone 13N

Attachment 3

Map of Critical Habitat of SAR, NWAs, and grassland areas

Lake Diefenbaker Irrigation Project - CH Information Request 2021-07-12



Coordinate System: NAD 1983 UTM Zone 13N

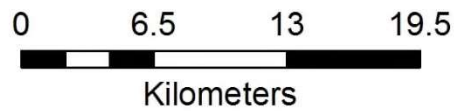
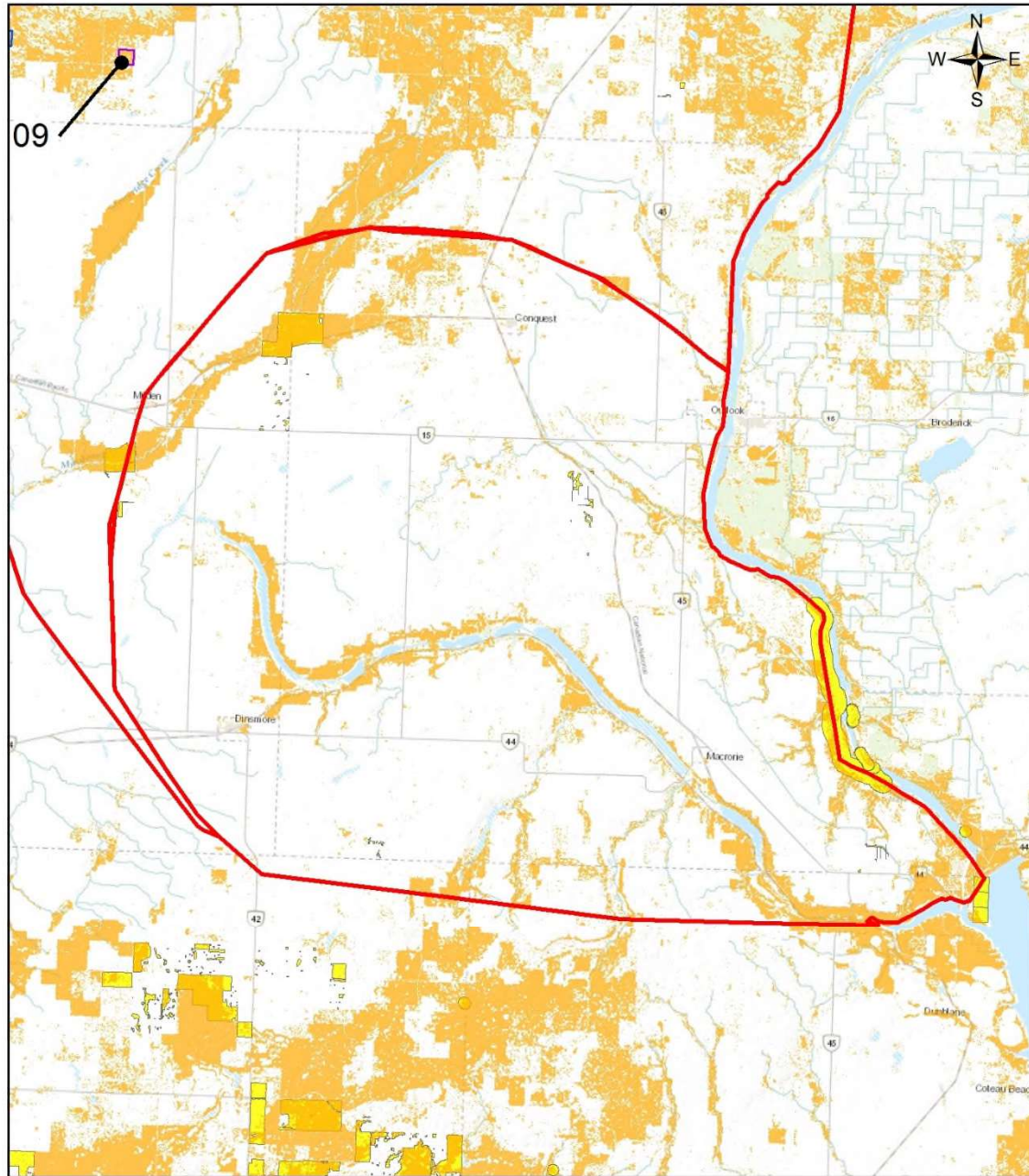
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- Prairie NWA - Unit number 08
- Prairie NWA - Unit number 09
- Prairie NWA - Unit number 12
- Prairie NWA - Unit number 13
- AOI
- AAFC 2019 Grassland / Prairies
- Critical Habitat

Attachment 4

Phase 1 – Map of Critical Habitat of SAR, NWAs, and grassland areas

Lake Diefenbaker Irrigation Project - CH Information Request 2021-07-12



Coordinate System: NAD 1983 UTM Zone 13N

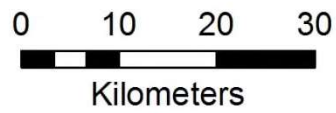
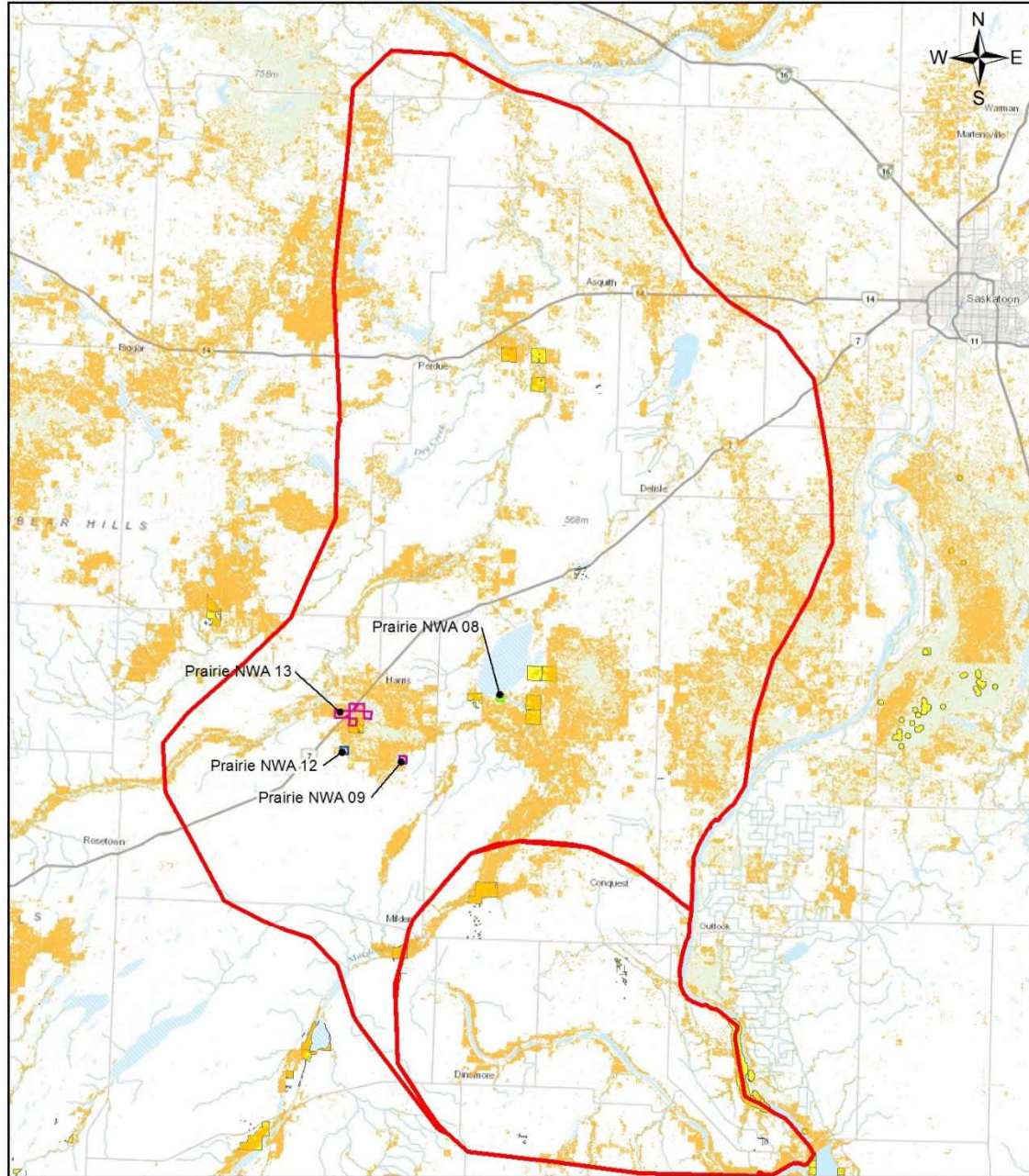
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- Prairie NWA - Unit number 12
- Prairie NWA - Unit number 13
- Prairie NWA - Unit number 09
- AOI
- AAFC 2019 Grassland / Prairies
- Critical Habitat

Attachment 5

Phase 2 – Map of Critical Habitat of SAR, NWA, and grassland areas

Lake Diefenbaker Irrigation Project - CH Information Request 2021-07-12



Coordinate System: NAD 1983 UTM Zone 13N

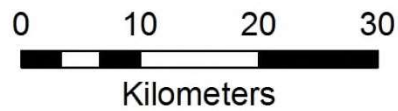
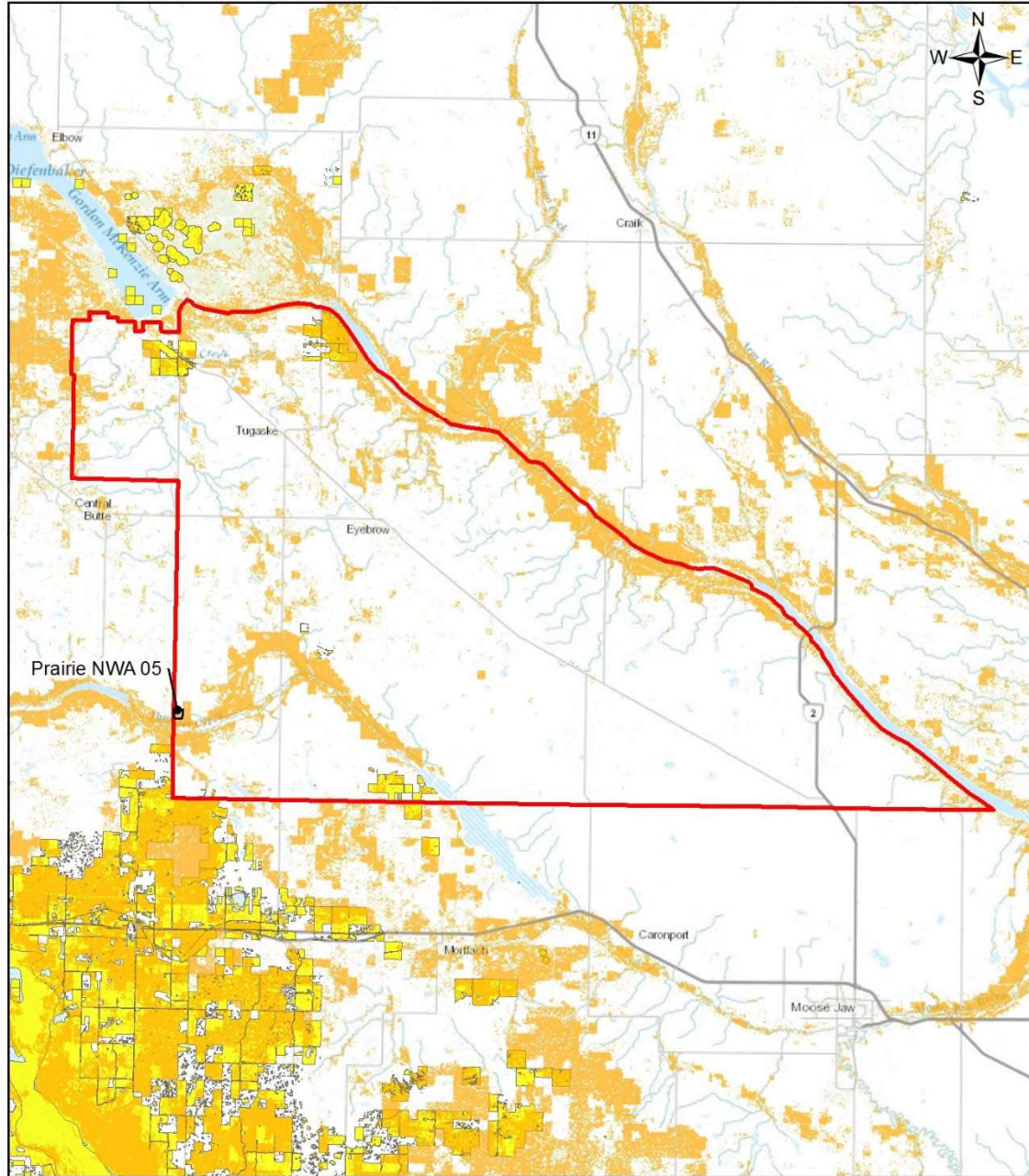
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- Prairie NWA - Unit number 09
- Prairie NWA - Unit number 12
- Prairie NWA - Unit number 13
- Prairie NWA - Unit number 09
- AOI
- AAFC 2019 Grassland / Prairies
- Critical Habitat

Attachment 6

Phase 3 – Map of Critical Habitat of SAR, NWAs, and grassland areas

Lake Diefenbaker Irrigation Project - CH Information Request 2021-07-12



Coordinate System: NAD 1983 UTM Zone 13N

Legend

- Prairie NWA - Unit number 05
- Prairie NWA - Unit number 08
- Prairie NWA - Unit number 09
- Prairie NWA - Unit number 12
- Prairie NWA - Unit number 13
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- Critical Habitat