



Figure 7-1: Typical area of natural vegetation

More than 65% of the land in the regional assessment area is used for agriculture (more than 30% in the local assessment area), with most of this consisting of cropland. Less than 12% of the regional assessment area consists of forested areas, with less than 10% of the local assessment area being forested – mainly consisting of the treed areas along waterways. Areas of grass are also common, comprising approximately 15% of the regional assessment area and 25% of the local assessment area, primarily around the portage diversion.

This description is consistent with (Smith, et al. 1998) who noted that the vegetation in the Portage Ecodistrict has been substantially altered by cultivation and urbanization. The only area remaining in a relatively natural state is the Delta Marsh. The remainder of the ecodistrict was mainly tall-grass prairie with some aspen groves. Most forest cover was, and is, confined to floodplains and levees of streams and rivers, where dense stands of American elm (*Ulmus Americana*), green ash (*Fraxinus pennsylvanica*), Manitoba maple (*Acer negundo*) and basswood (*Tilia americana*)

grow. Bur oak (*Quercus macrocarpa*) is present as an additional species on higher sites not prone to flooding.

Table 7-2: Land cover in the regional and local assessment areas, and project development area

| Cover Type | Regional assessment area | | Local assessment area | | Project development area | |
|-----------------|--------------------------|------------|-----------------------|------------|--------------------------|------------|
| | Hectare | Percent | Hectare | Percent | Hectare | Percent |
| Annual Cropland | 58862.0 | 63.9 | 570.5 | 29.3 | 6.2 | 18.2 |
| Barren | 7.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Forest | 10642.4 | 11.6 | 179.3 | 9.2 | 5.1 | 15.1 |
| Grassland | 13474.3 | 14.6 | 506.1 | 25.9 | 18.0 | 53.3 |
| Pasture | 3219.8 | 3.5 | 51.3 | 2.6 | 0.0 | 0.0 |
| Urban | 4657.2 | 5.1 | 419.0 | 21.5 | 3.3 | 9.8 |
| Water | 1045.1 | 1.1 | 210.7 | 10.8 | 1.1 | 3.1 |
| Wetland | 196.6 | 0.2 | 13.5 | 0.7 | 0.2 | 0.5 |
| Total | 92104.9 | 100 | 1950.4 | 100 | 33.8 | 100 |

A vegetation survey was conducted on August 11th and 12th, 2020. Twenty-four sites were visited. The technical report is provided as Appendix D.

The primary objective was to visit various sites to describe the terrestrial vegetation communities and potential for rare plants along the proposed transmission line routes and study area for the project.

Indigenous and public engagement identified concerns for declining natural vegetation in the area due to this project and other developments. Loss of natural vegetation, including mature trees, was identified as a cause of disturbance to wildlife and natural beauty of the area.

Community types delineated in the field were mixedwood/grassland; deciduous forest/tall shrub; oak forest/tall shrub; marsh wetland; riparian; moist grassland; and disturbed land. Mature cottonwood forest was observed in the study area, at sites in the vicinity of the Assiniboine River.

At least six rare vegetation species were recorded during the survey, including one imperiled species and five vulnerable species. Species included hairy sweet cicely (*Osmorhiza claytonii*), common milkweed (*Asclepia syriaca*), alternate-leaved dogwood (*Cornus alternifolia*), cottonwood (*Populus deltoides*), tall coneflower

(*Rudbeckia laciniata*), and riverbank grape (*Vitis riparia*). None of these are considered species of conservation concern in Manitoba.

Invasive species were commonly observed including: smooth brome (*Bromus inermis*), Canada thistle (*Cirsium arvense*), wild barley (*Hordeum jubatum*), field sow-thistle (*Sonchus arvensis*), white sweet clover (*Melilotus alba*), yellow sweet clover (*Melilotus officinalis*), common dandelion (*Taraxacum officinale*) and alfalfa (*Medicago sativa*).

7.8 Wildlife and wildlife habitat

7.8.1 Amphibians and reptiles

Desktop data were analyzed to characterize the existing biophysical information on amphibians and reptiles in the region. Sources included Species at Risk Act Public Registry, COSEWIC List of Canadian Wildlife at Risk, The Manitoba Endangered Species and Ecosystems Act List of Species at Risk, Manitoba Conservation Data Centre Database, the Manitoba Herp Atlas, iNaturalist, and the Amphibians and Reptiles of Manitoba (Preston 1982). Information on species important to Indigenous peoples was received through the Indigenous Engagement Process (Chapter 5). Public engagement documents (Chapter 4) were also reviewed.

The proposed right-of-way (project development area) is on private agricultural and suburban lands in the central Assiniboine River watershed. This watershed supports a variety of amphibians including boreal chorus frog, (*Pseudacris maculate*), leopard frog (*Lithobates pipens*), wood frog (*Lithobates sylvaticus*), spring peeper (*Pseudacris crucifer*), gray tree frog (*Hyla versicolor*) and blue-spotted salamander (*Ambystoma laterale*). Reptiles found in this region include painted turtle (*Chrysemys picta*), snapping turtle (*Chelydra serpentine*), common garter snake (*Thamnophis sirtalis*), plains garter snake (*Thamnophis radix*) and redbelly snake (*Storeria occipitomaculata*) (Preston 1982).

Indigenous and public engagement identified the presence of salamanders that occur in the project area, including near Crescent Lake.

Amphibians and reptiles are not typically found in intensively developed agricultural or suburban areas, and generally prefer natural habitats such wetlands, forests, and grasslands. As shown in Table 7-2, a portion of the project route (approximately 23 ha) does traverse some of these habitats, and in these locations some mitigation may be required.

7.8.2 Birds

Field and desktop data were analyzed to characterize the existing biophysical information about birds in the Project area. Sources included Species at Risk Act Public Registry, COSEWIC List of Canadian Wildlife at Risk, The Manitoba Endangered Species and Ecosystems Act List of Species at Risk, Manitoba Conservation Data Centre Database, the Manitoba Breeding Bird Atlas, and the Environment and Climate Change Canada Bird Conservation Regions. Information on bird species important to Indigenous peoples was received through the Indigenous Engagement Process (Chapter 5). Public engagement documents (Chapter 4) were also reviewed.

Bird Studies Canada (Bird Studies Canada 2021) states that the south-central portion of Manitoba supports approximately 200 species of breeding birds, including 88 species with evidence of breeding identified within the two 10 km by 10 km survey squares around the regional assessment area. Some of these species include Canada goose (*Branta canadensis*), mallard (*Anas platyrhynchos*), blue winged teal (*Anas discors*), mourning dove (*Zenaida macroura*), American robin (*Turdus migratorius*), clay-coloured sparrow (*Spizella pallid*), and the red-tailed hawk (*Buteo jamaicensis*).

Most bird species in this region typically breed in natural habitats including wetlands, forests, and grasslands. As shown in Table 7-2, a portion (approximately 23 ha) of the project development area passes through some of these habitats.

Indigenous and public engagement identified a wide variety of birds using the project area for migration and nesting, including rare bird species, such as the Eastern peewee. Waterfowl were identified as using Crescent Lake and other nearby waterbodies.

A breeding bird survey was conducted on July 4, 2020 (Appendix E). The purpose of this survey was to supplement existing breeding bird data (e.g., Manitoba Breeding Bird Atlas) with relative abundance and habitat conditions along various right-of-way options. The survey also helped identify evidence of breeding of bird species of conservation concern.

The most common aquatic bird species were American white pelican (*Pelecanus erythrorhynchos*), Canada goose (*Branta canadensis*) and mallard (*Anas platyrhynchos*). The most common terrestrial bird species were American crow (*Corvus brachyrhynchos*), common grackle (*Quiscalus quiscula*) and red-winged blackbird (*Agelaius phoeniceus*). Important grassland bird species included western meadowlark (*Sturnella neglecta*) and savannah sparrow (*Passerculus sandwichensis*). Forest birds such as red-eyed vireo (*Vireo olivaceus*) and yellow warbler (*Setophaga*

petechia) were common. No bird species of conservation concern were detected during the survey. One member of the public identified an Eastern Wood Peewee (*Contopus virens*), listed as Special Concern under the Species at Risk Act, near Segment 12. Manitoba Hydro also heard concerns about the risk of bird-wire collisions in this regional assessment area.

The most significant habitat type in the study area is associated with Crescent Lake and the Assiniboine River, where riparian and aquatic bird species (i.e., waterfowl, pelicans) are prominent and tend to be numerous. Most birds observed in this study area are common to suburban developments. Although no species of conservation concern were observed, there is potential for barn swallow (*Hirundo rustica*), bobolink (*Dolichonyx oryzivorus*) and other species at risk to occur.

7.8.3 Mammals

Desktop data were analyzed to characterize the existing biophysical information about mammals in the region. Sources included Species at Risk Act Public Registry, COSEWIC List of Canadian Wildlife at Risk, Manitoba's The Endangered Species and Ecosystems Act List of Species at Risk, Manitoba Conservation Data Centre Database, and the Manitoba Agriculture and Resource Development wildlife and fisheries branch website. Information on mammal species important to Indigenous peoples was received through the Indigenous Engagement Process (Chapter 5). Public engagement documents were also reviewed (Chapter 4).

As indicated, the proposed right-of-way (project development area) is on private agricultural and suburban lands in the central Assiniboine River watershed. This watershed is known to support a variety of mammal species including jackrabbit (*Lepus townsendii*), raccoon (*Procyon lotor*), red fox (*Vulpes vulpes*), coyote (*Canis latrans*), white-tailed deer (*Odocoileus virginianus*), muskrat (*Ondatra zibethica*), beaver (*Castor canadensis*), and mink (*Neovison vison*). No mammal species of conservation concern are known to occur in this regional assessment area.

Indigenous and public engagement identified a wide variety of mammal species using the project area, most commonly in the remaining natural areas including white-tailed deer and beaver.

The mammal species in the regional assessment area are common and widespread in natural habitats including wetlands, forests, and grasslands. As shown in Table 7-2, a small portion (approximately 23 ha) of the project development area passes through some of these habitats.

7.8.4 Species of conservation concern

Table 7-3 lists species of conservation concern that may occur near in the regional assessment area. To identify species of conservation concern that may occur in the regional assessment area, a variety of databases were examined including the Species at Risk Act Public Registry, COSEWIC List of Canadian Wildlife at Risk, The Manitoba Endangered Species and Ecosystems Act List of Species at Risk, Manitoba Conservation Data Centre Database, the Manitoba Breeding Bird Atlas. In addition, a specific project area query of the Conservation Data Centre was made to identify any known occurrence of species of conservation concern (Appendix G).

The species listed in these databases were cross-referenced with Schedule 1 of the *Species at Risk Act* and *The Endangered Species and Ecosystems Act*, to determine the provincially listed rare or sensitive species within the Manitoba plain ecoregion and regional assessment area. Furthermore, distribution maps and habitat requirements were examined to determine the likelihood of occurrence of federally and/or provincially listed species. There are three bird and two amphibian species of conservation concern known to occur in the regional assessment area. There are no known vegetation species of conservation concern in the regional assessment area. The yellow-banded bumble bee is the one invertebrate species of conservation concern known to occur in the regional assessment area. There are no endangered ecosystems, as defined by *The Endangered Species and Ecosystems Act* (Manitoba) known to occur in the regional assessment area. There is no critical habitat, as defined by the *Species at Risk Act*. Field surveys conducted by avian and vegetation specialists did not identify any species of conservation concern at the project development area.

Table 7-3: Species of conservation concern in the regional assessment area

| Species | Federal SARA Species Schedule 1 status | Manitoba Endangered Species and Ecosystems Act status | COSEWIC status | Environmental considerations |
|--|--|---|----------------|---|
| Barn swallow (<i>Hirundo rustica</i>) | Not listed | Not listed | Threatened | Aerial insectivore that nests in agricultural buildings and bridges |

Table 7-3: Species of conservation concern in the regional assessment area

| Species | Federal SARA Species Schedule 1 status | Manitoba Endangered Species and Ecosystems Act status | COSEWIC status | Environmental considerations |
|---|--|---|-----------------|--|
| Western tiger salamander (<i>Ambystoma mavortium</i>) | Special concern | Not listed | Special concern | Breed in shallow wetlands |
| Bobolink (<i>Dolichonyx oryzivorus</i>) | Threatened | Not listed | Threatened | Nests in grassland areas, including pastures often near wetlands |
| Barn Swallow (<i>Hirundo rustica</i>) | Threatened | Not listed | Threatened | Aerial insectivore that nests in agricultural buildings and bridges |
| Northern Leopard Frog (<i>Lithobates pipens</i>) | Special concern | Not listed | Special concern | Breed in shallow wetlands |
| Red-headed Woodpecker (<i>Melanerpes erythrocephalus</i>) | Threatened | Threatened | Threatened | Nests in dead or dying deciduous trees, with a preference for open mature woodlands areas. |
| Chimney Swift (<i>Chaetura pelagica</i>) | Threatened | Threatened | Threatened | Aerial insectivore that nests in chimneys and other urban structures |
| Yellow-banded Bumble Bee (<i>Bombus terricola</i>) | Not listed | Not listed | Special concern | Widespread medium-sized bumble bee |

7.9 Population, employment and economy

According to the 2016 census (Statistics Canada 2021), the City of Portage la Prairie had a population of 13,304, which represents a 2.3% increase over the reported population of 12,996 in 2011. According to Crown-Indigenous Relations and Northern Affairs Canada the total population of Dakota Tipi First Nation is 347 with 180 living on reserve. The Long Plain First Nation population was 3853, with 2,135 on reserve. Dakota Plains Wahpeton First Nation population was 239, with 168 on reserve (Crown-Indigenous Relations Northern Affairs Canada 2021).

The RM and city coordinate planning through the Portage la Prairie Planning District (Portage la Prairie Planning District 2021). This serves to standardize requirements and *“promote a regional approach to industrial, agricultural, and urban fringe development”*.

The RM contains several small communities, such as St. Ambrose, High Bluff, Newton, Oakville, Poplar Point, Skelding and Edwin. All are outside of the regional assessment area.

The Portage la Prairie Self-contained Labour Area (SLA) includes:

- Municipality of Portage la Prairie
- City of Portage la Prairie
- Long Plain First Nation
- Dakota Plains First Nation
- Dakota Tipi First Nation

The total population of the area is over 20,000. Figure 7-2 shows the distribution of the workforce in the self-contained labor area (Government of Manitoba 2021).

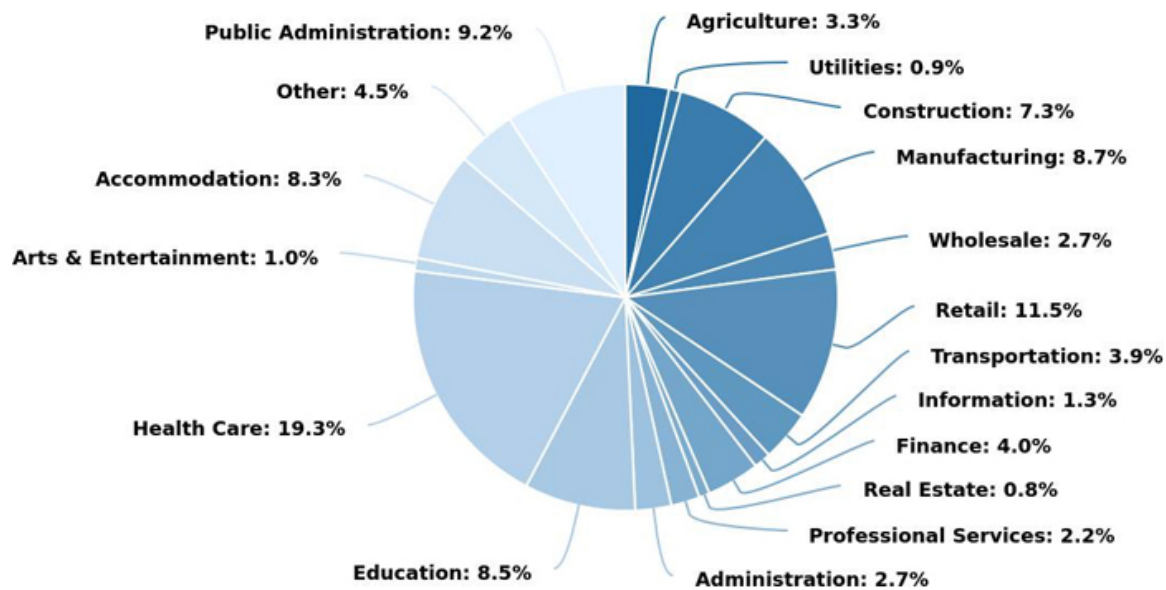


Figure 7-2: Workforce distribution in the Portage la Prairie SLA

7.10 Public safety and emergency services

Emergency services are shared between the City and RM of Portage la Prairie. The Portage District General Hospital, located in the City of Portage la Prairie, is the primary health care centre, with the RM of Portage being served by the Central Region Emergency Medical Services, providing ambulance and paramedic services. The City has several medical clinics, pharmacies, personal care homes, dental clinics, massage therapists and physiotherapists. Emergency services, including 911, are provided by the fire department and the Royal Canadian Mounted Police, both of which are in the City (Rural Municipality of Portage la Prairie 2021).

7.11 Parks and recreation

7.11.1 Provincial parks

Portage Spillway Provincial Park

Portage Spillway Provincial Park is 3.76 hectares in size, situated between the Assiniboine River and Yellow Quill Trail south of Portage la Prairie (Manitoba Conservation and Water Stewardship 2013). The main recreational activities in the park are fishing and picnicking. The purpose of the park is to provide outdoor recreational opportunities and experiences in a natural setting in south-central Manitoba (Manitoba Natural Resources 1997).

Yellow Quill Trail Provincial Park

Yellow Quill Provincial Park is a three hectare plot of land south of Portage la Prairie created to provide outdoor recreational opportunities and experiences in south-central Manitoba (Manitoba Natural Resources 1997). In doing so, the park will provide an off-leash dog walking area for residents of Portage la Prairie and the surrounding area and serve as a highway rest stop (Manitoba Sustainable Development 2017).

Designated lands

According to the provincial Wildlife Management Area (WMA) website (Government of Manitoba 2021), the nearest protected area is the Portage Sandhills WMA, located over 10 km south of the proposed transmission line. It was established to protect “a *unique habitat of sand dunes covered in mixed-grass prairie and aspen-oak forest.*” Two provincial parks are located within the regional assessment area; Portage Spillway Provincial Park and Yellow Quill Wayside Park, established primarily for outdoor recreational purposes.

7.11.2 Recreation

Portage la Prairie is located in the central plains tourism area (Central Manitoba Tourism 2021) and the provision of recreation and leisure facilities in the area is managed by the Portage Regional Recreation Authority Inc. (Portage Regional Recreation Authority Inc. 2021), a non-profit corporation funded in part by the City of Portage la Prairie and the Rural Municipality of Portage la Prairie. Facilities include Stride Place, Splash Island Water Park, Rotary Republic Park and Beaver Stadium, Portage la Prairie Regional Library, Portage Curling Rink, Portage Golf Club, and William Glesby Centre, Portage Industrial Exhibition Campground, Island Park Picnic Shelters, as well as many churches in the City of Portage la Prairie.

The regional assessment area falls within provincial Game Hunting Area 32; Game Bird Hunting Zone 4 (Government of Manitoba 2020a); Open Trapping Area Zone 1 (Government of Manitoba 2021), and the Southern Angling Division (Government of Manitoba 2020b).

7.12 Regional infrastructure

Map 7-2 shows the regional infrastructure. The Trans-Canada Highway runs east to west through the regional assessment area and is paralleled on either side by the Canadian National and Canadian Pacific railways. Highway 240 is the main north-south vehicular route, with an extensive network of city roads also within the area. The

existing temporary line (BP6/BP7) is the only transmission line. There is a network of distribution lines present.

The Trans-Canada Highway that runs through Portage la Prairie has an average annual daily traffic (AADT) of over 12,000 vehicles within the city and around 5000 AADT outside the city limits (Manitoba Infrastructure 2020). Provincial Road 240, north and south of the Trans-Canada Highway also has an AADT of around 5000. In all cases, peak traffic (up to 20% increase over AADT) occurs in the summer (May through September) on these key roadways. Based on basic design principles from the transportation planning manual (Manitoba Department of Highways and Transportation 1998), these highways are not operating near capacity.

There are several communication towers within the regional assessment area. Drinking water for the city and RM is supplied by the city of Portage la Prairie water treatment plant and the Cartier regional water co-operative water treatment plant (City of Portage la Prairie 2019). The city of Portage la Prairie operates a water treatment facility for municipal wastewater from the city and some small surrounding residential and commercial areas located in the rural municipality of Portage la Prairie, as well as final treatment of pretreated industrial wastewater from three major industries.

7.13 Property ownership

7.13.1 Overview

Land use planning responsibilities in municipal jurisdictions falls under the jurisdiction of the respective municipalities or planning districts. Municipal jurisdictions may adopt development plans and zoning by-laws to guide land use decisions within their boundaries. Municipalities can become members of planning districts to work together with respect to land use planning (i.e., development plans). The RM of Portage la Prairie and the City of Portage la Prairie have formed the Portage la Prairie Planning District. The planning district is established to ensure standardized planning requirements through an updated development plan and zoning by-law encompassing both municipal jurisdictions. This promotes a regional approach to industrial, agricultural, and urban fringe development. Lands within the regional assessment area is almost entirely privately owned, with most land either agricultural fields or exurban development (homes, recreation, industrial developments etc.).

7.13.2 Indigenous land

Map 7-3 shows the Crown lands, Reserve lands and Treaty Land Entitlement areas in the RM of Portage la Prairie. The project is in Treaty One Territory, the traditional territories of the Anishinabe, Cree, and Dakota people, the homeland of the Métis Nation and within the Recognized Métis Harvesting Zone (Manitoba Metis Federation 2021).

7.13.3 Provincial and federal Crown land

Crown lands are lands vested in the Crown and described under *The Crown Lands Act*. They include lands such as provincial parks, provincial forests, wildlife management areas, community pastures and ecological reserves. Map 7-3 shows the Crown lands, Reserve lands and Treaty Land Entitlement (TLE) areas.

There are Crown land parcels within the RM of Portage la Prairie. The Assiniboine Diversion is Crown land and both Dakota Tipi First Nation and Long Plain First Nation lands exist within the RM of Portage la Prairie.

The MMF explain in their Métis Specific Concerns, Brandon-Portage (BP6/BP7) Transmission Line Replacement Report, *"how important unoccupied land is to the Manitoba Métis as it represents areas where they have access to exercise their Métis rights that does not require permission. On all other land types, the exercise of Métis rights can be restricted from time to time under certain circumstances."* Crown land use codes were examined within the right-of-way, and although occupied and unoccupied terminology is not provided in the data, it is Manitoba Hydro's interpretation that all Crown land traversed by the project is either road allowance or Manitoba Infrastructure property (including the Portage diversion).

The final preferred route traverses Portage Spillway Provincial Park. It does not traverse any provincial forest, wildlife management area or other provincially protected area, community pasture, Treaty Land Entitlement area or First Nation reserve land.

7.14 Commercial and residential development

The Portage la Prairie Planning District has standardized planning requirements through an updated development plan and zoning by-laws encompassing both municipalities. The regional assessment area is largely zoned agricultural. Rural farm residential development is generally widespread throughout the regional assessment area and is associated with agricultural operations, including farm accessory

buildings. Farming activities are permissible in the regional assessment area under the development plan.

7.15 Agriculture

Map 7-4 shows the land capability for agriculture (Canada Land Inventory; (Agriculture and Rural Development Canada 1965) in the regional assessment area. The land capability classification displays the potential for agricultural production in one of seven classes, based on the characteristics of the soil. Class 1 soils (10% of the regional assessment area), have no significant limitations in use for crops and under good management can be moderately high to high in productivity for a wide range of field crops. Thirty-seven percent the regional assessment area consists of Class 2 soils, which have moderate limitations that can restrict the range of crops or require moderate conservation practices. Under good management, Class 2 soils are moderately high to high in productivity for a wide range of crops. Twenty-seven percent of the route planning area is comprised of Class 3 soils, which have moderately severe limitations that restrict the range of crops or require special conservation practices. In addition, there are small patches of Class 4, 5, 6, and 7 soils, which have severe to very severe limitations that restrict the range of crops, require special conservation practices, are capable only of producing perennial forage crops, or have no capacity for arable agriculture or permanent pasture.

Based on a review of the harvested acres in the R. M. of Portage la Prairie, from 2010-2019 (Manitoba Agricultural Services Corporation 2021), canola, red spring wheat and soybeans were the crops most harvested, followed by barley, grain corn and oats, feed wheat, and winter wheat.

The rural municipality also produces many speciality crops such as carrots, onions, asparagus, parsnips, beans, rutabagas, cauliflower, broccoli, peas, potatoes, various grains and oil seeds, strawberries, Saskatoon berries, and raspberries (PCRC 2018). Much of the rural municipality is under irrigation, and additional acreage can be incorporated into the existing irrigation system. The diverse agricultural production of the Portage area has drawn many food processing plants to the city. These include McCain Foods Ltd., Richardson Milling, Roquette Canada, and JR Simplot's Canadian potato processing plant.

7.16 Traditional practices and culture

As described in Section 5.2.2, Manitoba Hydro worked closely with several Indigenous communities and organizations to understand traditional practices and

culture within the regional assessment area. A description of past and present use of the area is best described by the community submissions provided in Appendix C.

The regional assessment area has been used extensively by Indigenous people over time. In the past, cultural activities, hunting, fishing, trapping, and plant gathering for food and medicines were centred around/near the Assiniboine River and its tributaries.

Although access permissions have changed over time, these activities continue currently. In their 2021 BP6/BP7 report, the MMF indicate that eight participants reported that fishing occurs in the area, including walleye, pike, carp, mariah, sturgeon, and catfish.

The potential for disturbances to these activities, or the loss of access and resources that support these activities, are issues typically shared by Indigenous communities when new transmission lines are planned for an area.

For this reason, Manitoba Hydro engaged with potentially affected communities to understand concerns and relevant mitigation to reduce those impacts.

7.17 Heritage sites / objects

Heritage sites / objects were characterized for the regional assessment area by considering locations of previously recorded archaeological sites, registered century farms and a compiled list of municipally, provincially, and federally designated sites. A review of historic trails and parishes was conducted, and a list of known cemeteries was compiled by the project archeologist.

The following sections provide a summary of heritage sites / objects in the heritage study area (Map 1 in Appendix F). More detail is provided in the heritage technical report (Appendix F).

7.17.1 Cultural setting

The cultural chronology for Manitoba is based on technological innovations and historical happenings. It comprises two major time periods: pre-European contact and historic. These are further divided into early, middle and late sub-periods. The pre-European contact period dates from ca. 300-12,000 years ago, while the historic period dates from after ca. 1700 (ca. 300 years ago to present), when Europeans and fur traders entered the area.

7.17.2 Pre-European contact period

7.17.2.1 Early pre-European contact period (paleo) ca. 6,500-10,000 years ago

According to the archaeological record, the area surrounding Portage la Prairie has been continually occupied since the middle pre-European contact period (ca. 2,500-6,500 years ago); however, it is likely that the area has been occupied since glacial Lake Agassiz receded about ca. 10,000 years ago. The peoples who would have occupied this area were bison hunters, who followed the herds into the area from the south and the west (Pettipas and Buchner 1983).

7.17.2.2 Middle pre-European contact period (intensive diversification) ca. 2,500-6,500 years ago

Several important cultural adaptations occurred within the middle pre-European contact period (Wright 1995), including the appearance of notched or stemmed projectile points, end scrapers, ground stone adzes and other cutting implements. The appearance of new style projectile points and the introduction of the atlatl (a spear extender, which provided leverage to the spear thus increasing the velocity and accuracy of the projectile) suggest adaptive technological changes for procuring food resources. Raw materials used by the middle pre-European contact period people became much more diverse, including the appearance and use of native copper which was used for making tools and adornments (Pettipas 1984). The peoples using such tools are considered by archaeologists to be mainly hunters and fishers who subsisted on a seasonally diverse diet of large and small game, fish, and local plants (Wright 1995).

7.17.2.3 Late pre-European contact period (woodland) ca. 300-2,500 years ago

The introduction of native clay pottery and adoption of the bow and arrow marks the differentiation between the late pre-European contact (ca. 300-2,500 years ago) and middle pre-European contact periods. This period is also referred to as woodland, which has shown to have first developed in eastern North America before moving westward. In Manitoba, the woodland period is further divided into two periods, initial (ca. 2,500 years ago) and terminal (ca. 1,000 years ago), which is based on vessel construction and stylistic attributes.

The terminal Woodland tradition contains several important pottery types that represent local variations that made them distinctive. Although pottery construction is believed to use similar techniques, there are signature differences within this tradition. Lithic tools associated with the terminal Woodland sites include small

triangular and side-notched projectile points, stone drills and smoking pipes (Wright 1972).

The late pre-European contact cultures were also characterized by burying their dead in linear or circular mounds (Syms 1978) and agricultural activities (Malainey 2020), (Syms and Halwas 2019)).

7.17.3 Historic period (1700-1940)

The historic period dates from when European and Canadian fur traders and explorers entered the area to trade goods for furs that could be exported to Europe. Indigenous oral histories were now augmented with primary records, including subjective materials (letters, diaries), statistical records (post inventory records, employee payrolls), maps and photographs.

7.17.3.1 Early historic period (1700-1821)

The arrival of Europeans into the Portage la Prairie area began during the early 18th century with the exploration of new fur trade routes. During this early period, traders were sent inland to cultivate trading relationships with local First Nation groups, while using established Indigenous travel routes (Thistle 1986). Indigenous individuals and groups acted as traders and middlemen and likely benefited from the increased competition between the Hudson's Bay Company and the Montréal-based independents, who were generally referred to as "les Canadians." In 1779, the Montréal traders formed an organization to reduce expenses and ease the rivalry between traders, which became the North West Company (NWC) (Ray and Heinenreich 1976). With the establishment of the fur trade, furs were traded for items of European manufacture, such as kettles, muskets, hatchets, and beads. Gradually, European trade goods filtered into the local Indigenous groups and traditional products such as clay pottery and lithic tools were replaced by copper pots and metal implements.

In 1738, La Vérendrye and his sons established Fort la Reine on the Assiniboine River near present day Portage la Prairie (Burpee 1927). The fur trading post served as the base of operations for much exploration north and west and was chosen in part to intercept the trade of the Indigenous traders crossing the portage to Lake Manitoba en route to the English posts on Hudson Bay. From the fort, explorers made their way to Lac des Prairies (Lake Manitoba) and Lake Winnipegosis, Lake Winnipeg, the Saskatchewan River, and the Missouri River. Abandoned in 1749, the fort was reconstructed in 1751 and burnt down a year later (Goldsborough 2019).

In 1794, the Hudson Bay Company (HBC) established a fur trade post on the Assiniboine River close to the original Fort la Reine site. The HBC operated at Portage la Prairie until around 1821, the time of the amalgamation of the company with the NWC.

While most major fur trade posts were located strategically on waterways, overland access was just as important. An extensive network of cart trails and overland transportation routes that criss-crossed the southern prairies, connecting various trade posts and communities supports the importance of overland access was established.

7.17.3.2 Middle historic period (1821-1870)

As trade routes became established throughout the interior, European goods such as ceramics, copper pots, glass bottles, metal nails and tools became more conspicuous in the regional cultural inventory. This incremental change in the availability of European trade goods is reflected in the archaeological record.

The coalition of the HBC and the NWC in 1821 ended over 25 years of fierce competition between the two establishments and created a fur trading monopoly that covered one quarter of North America. This amalgamation also resulted in a tendency for some bands to congregate near a specific post, causing a more sedentary life way.

In 1832, the Portage la Prairie fort was re-established to replace Brandon House (1793-1811), located east of Brandon, along the Assiniboine River. It acted as a guard house to monitor the trade of Indigenous hunters from the Pembina and Turtle Mountain areas. By 1834, the Portage la Prairie fort appears to have been closed. By the middle of the 19th century, the Métis had become essential partners in the fur trade acting as interpreters, guides, messengers, transporters, traders, and suppliers (Kermoal 2021).

Permanent settlement in Portage la Prairie began after 1851, when the Reverend William Cockran established a mission there (Barkwell 2013). By the late 1860s the parish river-lot survey system was expanded from the Red River Settlement up the Assiniboine River as far as Portage la Prairie (Historic Resources Branch 2021).

7.17.3.3 Late historic period (1870-1940)

Throughout the late historic period, even after the establishment of reserves by the treaty process, Indigenous peoples maintained traditional land use and the seasonal round of activities of hunting and fishing. Despite maintaining aspects of traditional

land use, by this time material culture was almost entirely Euro-Canadian. Settlements and populations grew and oriented to a trading post-mission complex

The two major trails in the study area were the Carlson Trail that ran east-west approximately 900 miles from Fort Garry (Winnipeg) to Upper Fort des Prairies (Edmonton) and the Yellow Quill Trail that ran west to Saskatchewan toward the headwaters of the Missouri River (Barker 1971). The Carlton Trail was the primary trail used by the Métis as they moved westward from the Red River following events of 1870 (Kermoal 2021). Several unnamed minor trails can also be found within the study area. By the 1890s the cart trails had been replaced by the railway.

7.17.4 Heritage sites

Ancient land use practices can be observed within the archaeological record. In relation to cultural ecology, archaeologists examine how past cultures lived on certain landscapes or in a specific environment at a past time (Cromley 1994). Within this landscape, certain features and areas contain tangible evidence of past people. Heritage sites / objects were characterized for the study area based on the locations of previously recorded, archaeological sites, registered century farms and a compiled list of municipally and provincially designated sites. A search of historic trails and parish buildings as well as list of known cemeteries was also compiled.

The archaeological record provides physical and documented evidence of cultural occupations that have occurred over millennia. The Province of Manitoba maintains archaeological site information in an archaeological site inventory database.

A review of existing registered archaeological sites in the study area was undertaken. A request was sent to the Manitoba's Historic Resources Branch to review the archaeological site inventory for registered sites within the study area. The archaeological sites identified in the study area include 14 registered sites. The documented archaeological sites (Table 7-4) reveal a human occupation of the area dating back to the Middle Pre-European Contact period (ca. 2,500-6,500 years ago).

Table 7-4: Heritage sites recorded for the study area (Map 1; Appendix F)

| Borden No. | Site Type | Period | Description |
|------------|----------------------------|-------------------------|--------------------|
| DILn-001 | Campsite fur trade post | Historic | Historic artifacts |
| DILn-002 | Isolated find | Pre-European contact | Grooved maul |

Table 7-4: Heritage sites recorded for the study area (Map 1; Appendix F)

| Borden No. | Site Type | Period | Description |
|------------|---------------|-------------------------------|---|
| DILn-06 | Campsite | Woodland | Prairie side-notched projectile point |
| DILn-010 | Isolated find | Pre-European contact | Hammerstone |
| DILn-011 | Campsite | Woodland | Besant and plains side-notched points |
| DILn-012 | Campsite | Pre-European contact historic | No information provided |
| DILn-013 | Isolated find | Pre-European contact | Hammerstone |
| DILn-014 | Burial | Historic | Burials found during construction |
| DILn-015 | Burial | Historic | Graves |
| DILn-016 | Uninterpreted | Historic | Mid/Late 19th century to modern materials |
| DILn-017 | Burial | Historic Sioux | Graves |
| DILo-Y1 | Uninterpreted | Archaic, Woodland, Historic | Archaic and Woodland projectile points; cannonballs |
| DILo-014 | Campsite | Pre-European contact Historic | Side-notched projectile point, historic ceramics, and glass |
| DILo-Y1 | Uninterpreted | Pre-European contact | Four hammerstones |

In the study area, two centennial farms (Table 7-5) have been recorded.

Table 7-5: Centennial farms in the study area (Map 1; Appendix F)

| Centennial farm | Original date | Legal description |
|---------------------|---------------|-------------------|
| Sissons Family Farm | 1869 | Parish Lot 55 |
| Brydon Family Farm | 1872 | SW 4-12-7W |

All federally, provincially and municipally designated sites relate to land use during the late historic period and consist of historic structures including churches, residences, and public buildings.

In the study area, 10 plaques for designated buildings have been recorded (Table 7-6). There are four recognized active cemeteries in the study area (Table 7-7). There is the potential for active and/or abandoned graveyards or burials to be present within the study area. There are two major historic trails in the study area (Table 7-8).

Table 7-6: Designated buildings in the study area (Map 1; Appendix F)

| Plaque ID | Building name | Designation |
|-----------|--|--|
| F128 | Portage la Prairie Public Building | National Historic Site of Canada |
| F8460 | Portage la Prairie Armoury | Federal Heritage Building |
| P119 | Portage la Prairie Indian Residential School | Provincial Heritage Site National Historic Site of Canada |
| P112 | St. Mary's la Prairie Anglican Church | Provincial Heritage Site |
| P094 | Portage la Prairie Land Titles Building | Provincial Heritage Site |
| M285 | McCowan House | Municipal Heritage Site |
| M038 | Portage la Prairie Dominion Post Office | Municipal Heritage Site |
| M257 | Canadian Pacific Railway Station | Municipal Heritage Site |
| M352 | Hill's Drug Store | Municipal Heritage Site |
| M260 | Taylor House | Municipal Heritage Site |

Table 7-7: Recognized cemeteries in the study area (Map 1; Appendix F)

| Cemetery | Legal Description |
|-------------------------------------|-------------------|
| Dakota Tipi Cemetery | RL-25-PP |
| Hillside Memorial Cemetery | RL-23-PP |
| Old Sioux Village and Cemetery | 11-07W |
| St. Mary's Anglican Church Cemetery | 11-06W |



Table 7-8: Major trails in the study area (Map 1; Appendix F)

| Historic trail | Legal description |
|--------------------|--|
| Carlton Trail | RL-42-PP, RL-44-PP, RL-45-PP, RL-46-PP, RL-47-PP, RL-49-PP through RL-54-PP, follows 1A, |
| Yellow Quill Trail | RL-22-PP, RL-23-PP, RL-49-PP through RL-55-PP |




Additionally, at least 66 Parish Buildings located in the study area, most of which are located along the historic trails.

**BP6 / BP7 Transmission
Lines Replacement Project**

Project Infrastructure

-  Portage - Saskatchewan Station
-  BP6/7 Final Preferred Route

Assessment Area Buffers

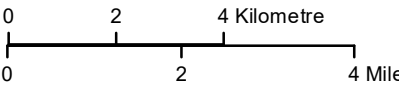
-  1 km
-  5 km
-  15 km

Assessment Area Buffers

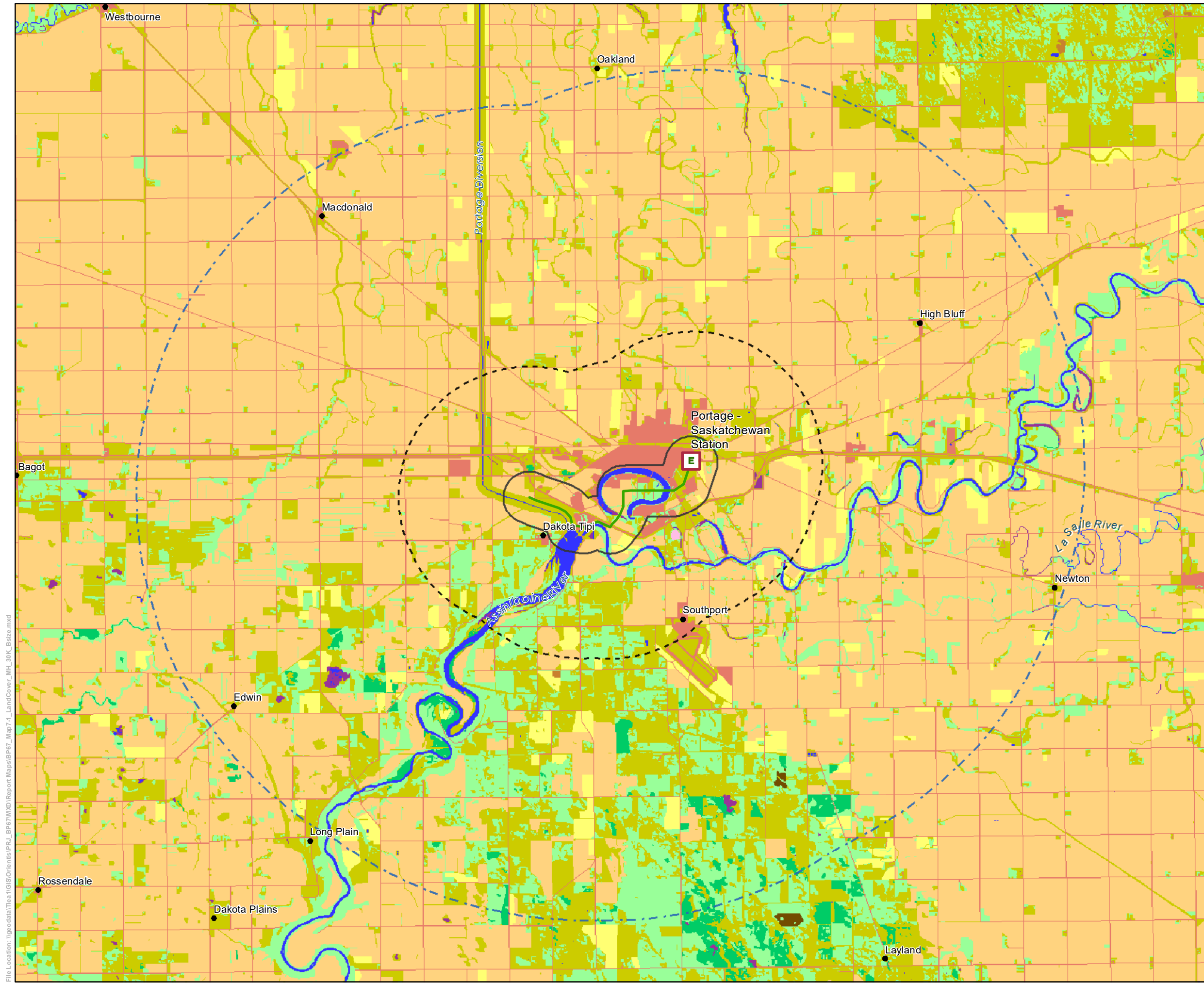
-  Agricultural Cropland
-  Bare Rock, Gravel and Sand
-  Cultural Features
-  Decidious Forest
-  Forage Crops
-  Forest Cutover
-  Marsh and Fens
-  Mixedwood Forest
-  Open Decidious Forest
-  Range and Grassland
-  Treed and Open Bogs
-  Water

Entire map area falls within Metis Natural Resource
Harvesting Zone

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: April 13, 2021





Land Cover




















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**BP6 / BP7 Transmission
Lines Replacement Project**

Route Planning Area

-  Route Planning Area (area for rerouting BP6/BP7)
-  BP6/7 Final Preferred Route

Existing Infrastructure

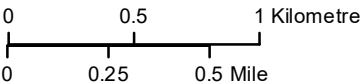
-  Electrical Station
-  Impacted Site
-  Communication Tower
-  Wastewater Treatment Site
-  Irrigation Pivot
-  Pipeline
-  Monument
-  Snowmobile Shelter
-  Snowmobile Trail
-  Transmission Line
-  Existing Gas Line
-  Distribution Line
-  Railway
-  Trail
-  TransCanada Highway
-  Provincial Road
-  Municipal Road

Landbase

-  First Nation
-  Crown Land
-  Provincial Park
-  City/Town

Entire map area falls within Metis Natural Resource
Harvesting Zone

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: April 13, 2021





N
1:30,000


Regional Infrastructure

**BP6 / BP7 Transmission
Lines Replacement Project**


Project Infrastructure

-  Portage - Saskatchewan Station
-  BP6/7 Final Preferred Route









Route Planning Area

-  Route Planning Area (area for rerouting BP6/BP7)

Existing Infrastructure

-  Transmission Line

Landbase

-  TransCanada Highway
-  Provincial Road
-  Railway
-  First Nation
-  Treaty Land Entitlement
-  Crown Land
-  Provincial Park
-  City/Town

Entire map area falls within Metis Natural Resource
Harvesting Zone

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: April 13, 2021

0 0.5 1 Kilometre
0 0.25 0.5 Mile





1:30,000

Designated Lands

**BP6 / BP7 Transmission
Lines Replacement Project**

Project Infrastructure

-  Portage - Saskatchewan Station
-  BP6/7 Final Preferred Route

Land Use Capability

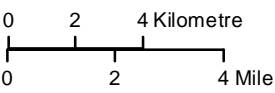
-  Class 1
-  Class 2
-  Class 3
-  Class 4
-  Class 5
-  Class 6
-  Class 7
-  Organic
-  Unclassified

Regional Assessment Area

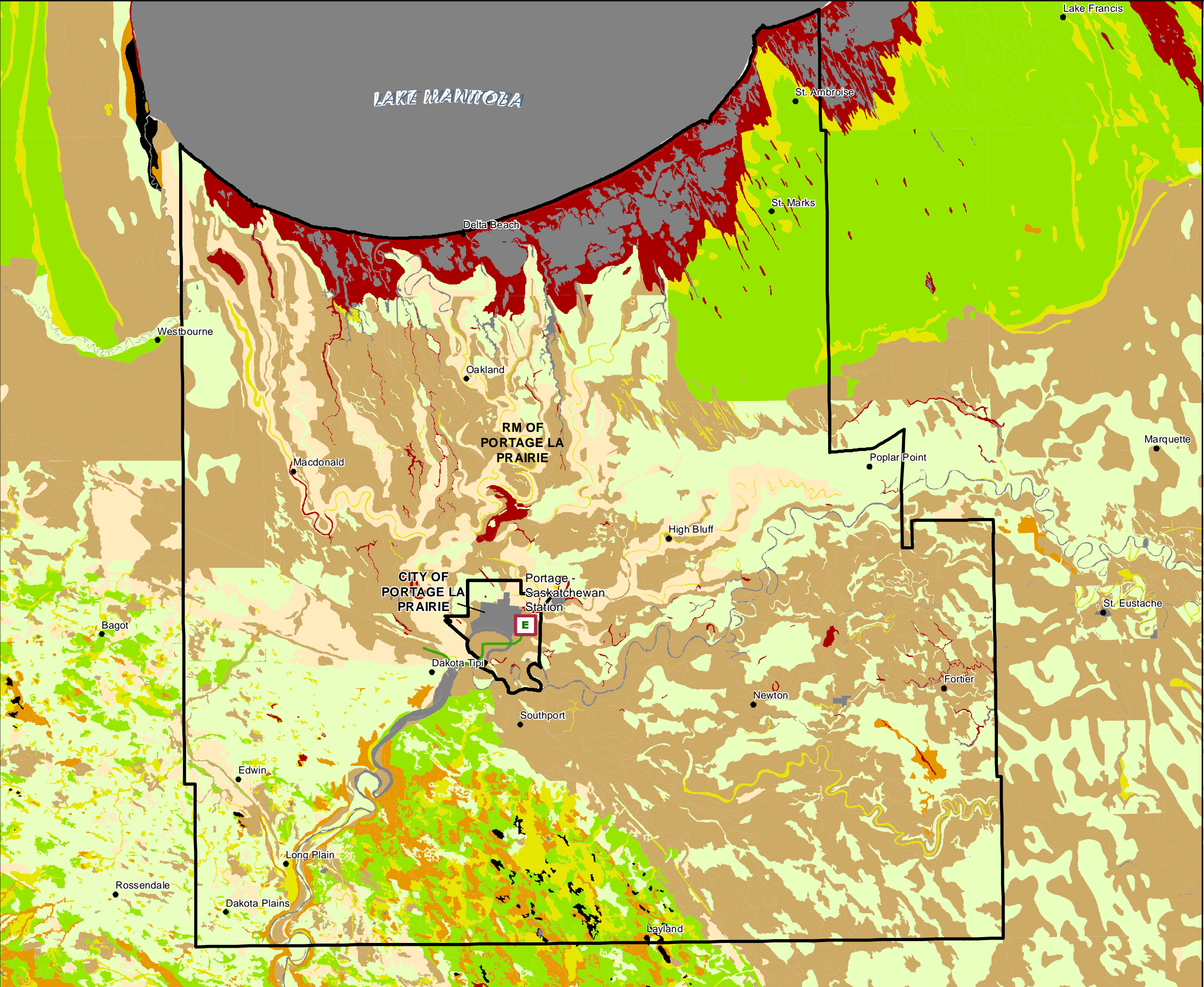
-  RM of Portage la Prairie

Entire map area falls within Metis Natural Resource
Harvesting Zone

Coordinate System: UTM Zone 14N NAD83
Data Source: MBHydro, ProvMB, NRCAN
Date Created: April 13, 2021



Land Use Capability



8.0 Environmental assessment

8.1 Fish and fish habitat

Generally, transmission line development has limited potential to affect aquatic habitat. This valued component is included to address the crossing of Crescent Lake and riparian habitat adjacent to the Assiniboine River. Aquatic resources could also be negatively affected by spills, accidents or herbicide application for vegetation control.

Dakota Tipi First Nation has shared that the community has a long history of harvesting fish from the Portage diversion spillway. The MMF has identified the Assiniboine River as an area used by Métis citizens for fishing for walleye, pike, carp, mariah, sturgeon and catfish (Appendix C).

This assessment of fish and fish habitat focuses on surface-water quality and fish and fish habitat with attention given to species of conservation concern.

8.1.1 Significance thresholds

8.1.1.1 Fisheries Act (1985)

The federal *Fisheries Act (1985)* provides the basis for the protection of fish habitat. This is done through Fisheries and Oceans Canada's Fisheries Protection Policy Statement (Fisheries and Oceans Canada 2019), which explains the fish and fish habitat protection provisions of the Act and outlines how the department will implement these provisions.

The Act prohibits the harmful alteration, disruption or destruction of fish habitat and the deposit of deleterious substances.

8.1.1.2 Species at Risk Act (2002)

The federal *Species at Risk Act (2002)* provides the basis for the protection of species at risk. 'Endangered,' 'Threatened,' and 'Species of Special Concern' fish species protected federally by the Act are listed in Schedule 1. The purpose of the Act is to protect wildlife species at risk and their critical habitat.

8.1.1.3 Endangered Species Act (1998)

Endangered species are protected provincially under the *Endangered Species Act (1998)*. The purposes of this Act are: