

DATE: June 17, 2021

TO: Kylie McLean - RM of Corman Park No. 344

CC: Bryan Gray, Community Planner – Urban Systems Ltd.

FROM: Terri Duret, Environmental Consultant - Urban Systems Ltd.
Glenn Harasym, Environmental Consultant – Urban Systems Ltd.

FILE: 3909.0003.01

SUBJECT: South East Concept Plan - Desktop Environmental Natural Area Screening

EXECUTIVE SUMMARY

The RM of Corman Park (RM) and City of Saskatoon (City) are planning for the future development of rural lands to urban lands for the South East Concept Plan Area (Project Area). A Desktop Natural Area Screening (NAS) for potential environmental features was conducted to provide guidance for the planning and regulatory processes applicable to the Project Area. A summary of the methods, databases and resources referenced are detailed in **Section 3.0**.

Land classification for the Project Area was assessed and mapped to assist planning of industrial zones, residential zones, Environmental Reserves (ER) and Municipal Reserves (MR). One potential area of connected native pasture was identified for the west Project Area (**Section 3.1**).

The Project Area was found to have a relatively high density of wetlands. Wetlands in the Project Area were delineated in accordance with the Stewart and Katrud system and using HABISask's waterbodies/watercourses layers and Google Earth Imagery from 2002 – 2020. Potential classifications for major waterbodies from Class III to Class V, were identified and mapped (**Section 3.2**).

Three plant species at risk were identified within the Project Area. Habitats for all three of these species are recorded as moist wetland or stream riparian areas with varying vegetative cover. No invasive species were identified within the Project Area; however, four species have been recorded in proximity (**Section 3.3**).

The regional migratory nesting period for the Project is April 15 to August 25. A compilation of wildlife databases showed 123 bird species that have been historically recorded near the Project, 11 of which are federally and/or provincially listed. These species included barn swallow, which has the potential to nest on human structures, and whooping crane, and is listed federally as Endangered. The potential native pasture on the west Project Area may provide habitat for a higher density of species at risk and create a potential wildlife corridor (**Section 3.4**).

Soils throughout the Project Area are mainly loam or a mix of sand and loam. Some clay loams are present in the eastern and north central portions of the Project Area. Soil capabilities for the Project Area were identified as having moderately severe to severe limitations in the range of crops appropriate for the land. Clubroot symptoms have been historically detected in one to nine fields within the RM of Corman Park. Clubroot was declared a pest under Saskatchewan's Pest Control Act in June of 2009 (**Section 3.5**).

A search of the Developers Online Heritage Screening Tool showed eight quarter sections with heritage sensitivities, which may require a Heritage Resource Impact Assessment (HRIA). A total of 17 homesteads were identified within the Project Area (**Section 3.6**).

One historical contaminated site was identified within the Project Area, which had a "Closed" status and a note indicating "Historical review completed. No further action required". Six other potential contaminated sites were identified through aerial imagery review (**Section 3.7**).

Based on the results of **Section 3.0** a compilation of anticipated applicable regulations and their triggers have been compiled and outlined in **Section 4.0** and recommendations have been provided in **Section 5.0**.

1.0 PURPOSE

Urban Systems Ltd. (USL) was commissioned by the RM and the City to conduct a Desktop Natural Area Screening (NAS) for potential environmental features associated with the South East Concept Plan Area (the Project). The Project Area will involve the planning and future development of rural lands to urban lands.

2.0 METHODS

A desktop NAS was conducted for the Project Area, for a high-level assessment of existing environmental features, to provide guidance for environmental regulatory triggers and to provide recommendations for environmental protection. The following database searches and resources were used for this NAS:

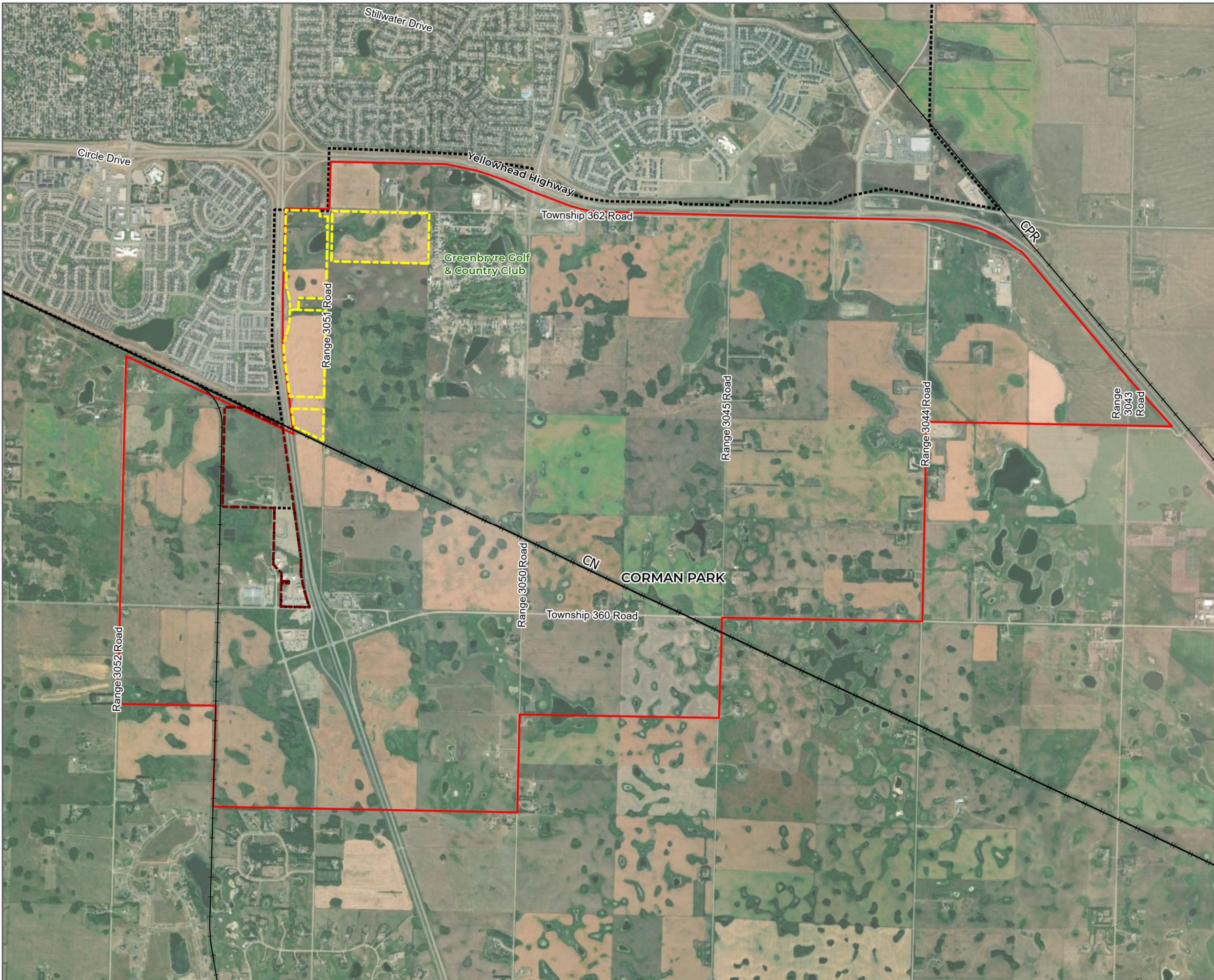
- Google Imagery;
- Developers Online Heritage Screening Tool;
- Saskatchewan Register of Heritage Property;
- RM of Corman Park Land Ownership Map;
- Southern Digital Land Cover;
- Government of Canada's Geoviewer for Aboriginal Peoples and Lands;
- Saskatchewan Homestead Index;
- The Canada Land Inventory (CLI) Land Capability for Agriculture Map;
- 2020 Saskatchewan Clubroot Map;
- Federal Contaminated Sites Inventory website;
- Important Bird Areas of Canada;
- Federal Species at Risk / Critical Habitat;
- HABISask;
- iNaturalist;
- eBird; and
- iMapInvasives Saskatchewan.

3.0 RESULTS

The 2,776 ha Project Area is located in the RM of Corman Park, Saskatchewan. The City of Saskatoons city limits border the Project Areas to the north. English River First Nation and Cowessess First Nation lands are located along the westside of Project Area (Government of Canada, 2020)

Figure **3-1**).

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South-East Concept Plan

Desktop Environmental Natural Area Screening

Project Location

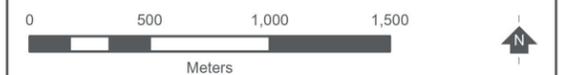
Legend

-  R.M. of Corman Park
-  Project Area
-  English River First Nation
-  Cowessess First Nation



Location within SK
 0 200 400 800 1,200 Km

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Coordinate System: NAD 1983 UTM Zone 13N
Scale: 1:30,000 (When plotted at 11"x17")

- Data Sources:**
- Data provided by Corman Park.
 - ATS provided by Altalis
 - Imagery provided by ESRI
 - Railroad Tracks, Reserve boundary provided by NRCAN

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U:\Projects_Sask\3909\0003\01\Design\GIS\Projects\Pro_Projects\SE Concept Plan - Environmental\GIS\Projects\SE Concept Plan - Environmental.aprx\Figure 3-1 Project Location

3.1 LAND CLASSIFICATION

Lands for the Project Area were characterized into nine different categories of land classification. These land classifications and their definitions are shown in **Table 3.1**.

Table 3.1: Land Classification

Landcover	Definition
Potential Wetlands/ Waterbodies	Lower lying areas which are permanently or seasonally saturated with water and provide habitat for terrestrial and aquatic wildlife.
Native Tree Cover	Areas with native tree and shrub cover which offer high quality wildlife habitat.
Planted Trees	Areas with trees that may be non-native but offer some high-quality wildlife habitat.
Golf Course	Lands maintained for golf courses, which offer some habitat in treed or wetland areas, but typically have high levels of human activity and turf grasses.
Anthropogenic	Properties where homes, farmyards or businesses appear to be in operation. Lands are often heavily disturbed and contain high levels of human activity.
Cropland	Lands used for agricultural purposes, which typically have been greatly altered from native conditions and offer little wildlife habitat.
Tame Forage	Areas where non-native grasses dominate, and wildlife habitat is present. Tame forage lands may be seasonally mowed for hay crops.
Native Pasture	Lands which are dominated by native grass, forb and low shrub species. High quality wildlife habitat is present and there is a higher likelihood for species at risk.
Verge	Areas where turf grasses border major road or utility infrastructure, which offer little to no wildlife habitat.

Most of the Project Area is dominated by cropland with occasional quarter sections of tame pasture throughout. There is a high abundance of wetlands and are relatively dense in the central portion of the Project Area. The west Project Area appears to have portions of relatively connected native pasture running north/south.

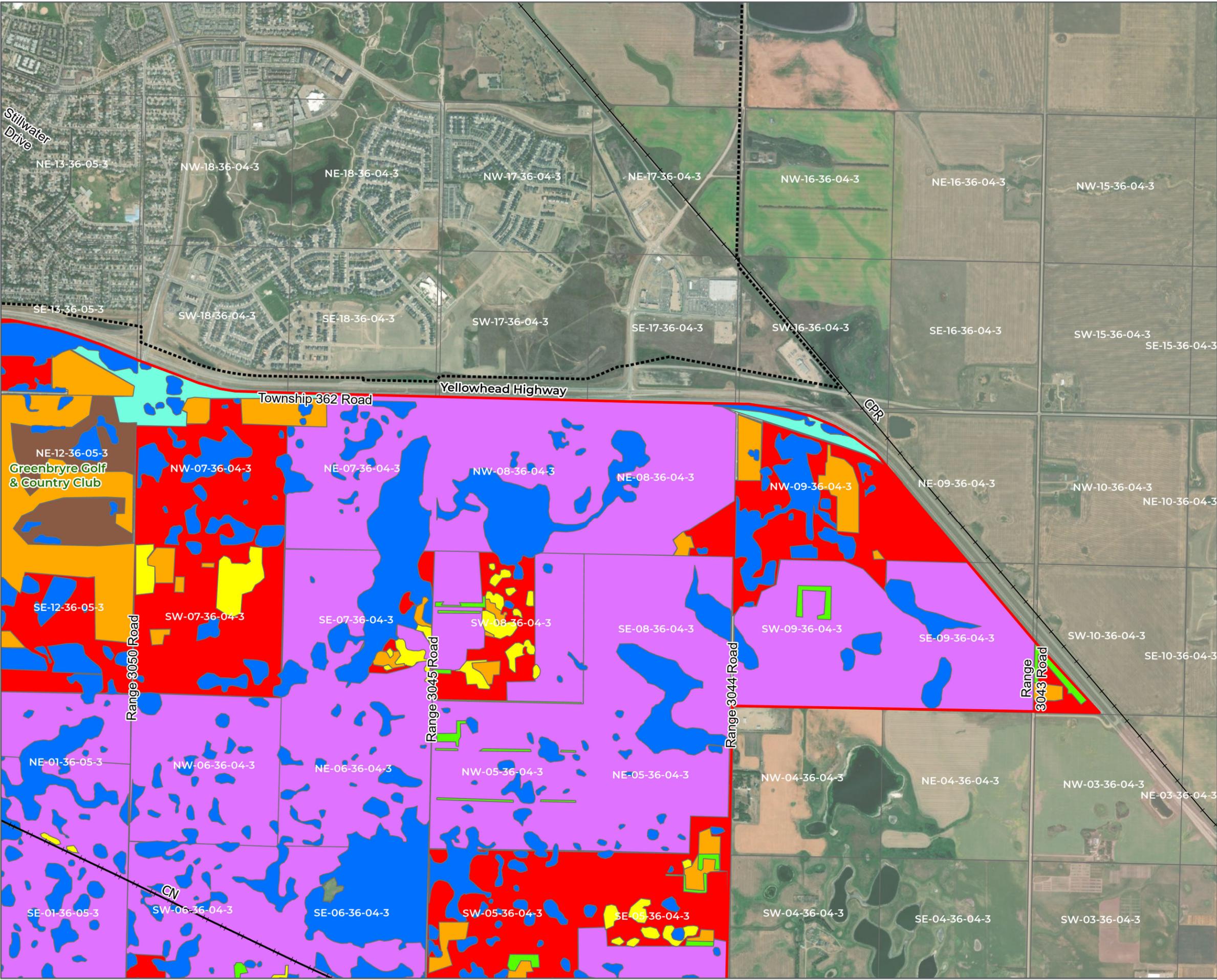
Farmyards are present throughout the Project Area, while businesses, churches and communities primarily occur near Saskatoon's city limits.

The relatively high density of potential wetlands/waterbodies in the Project Area create the potential for large densities of species at risk. Additionally, wetlands and waterbodies offer significant benefits to humans as recreation areas, carbon sinks, flood mitigation, ground water recharge areas and water purification zones. Where possible, planning for the maintained connectivity and protection of these features is recommended.

The west Project Area appears to contain a relatively connected north/south area of native pasture. It is estimated that up to 75% of Canada's natural grasslands have been lost to development and agriculture. Furthermore, native grasslands are the primary habitat for some of Canada's fastest declining species with grassland birds seeing an approximate 87% decline in population since the 1970's (NABCI Canada, 2019). Assessment of this area and consideration for its conservation is recommended (**Figures 3-2 A-D**).

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South-East Concept Plan
Desktop Environmental Natural Area Screening
Land Classification



Legend

- R.M. of Corman Park
- Project Area

Land Classification

- Wetlands/Watercourses
- Native Tree Cover
- Planted Trees
- Golf Course
- Anthropogenic
- Cropland
- Tame Forage
- Verge

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Coordinate System: NAD 1983 UTM Zone 13N
Scale: 1:20,000 (When plotted at 11"x17")

Data Sources:

- Data provided by Corman Park.
- ATS provided by Altalis
- Imagery provided by ESRI
- Railroad Tracks, Reserve boundary provided by NRCAN
- Wetlands and Watercourses provided by Google Imagery and HabiSask

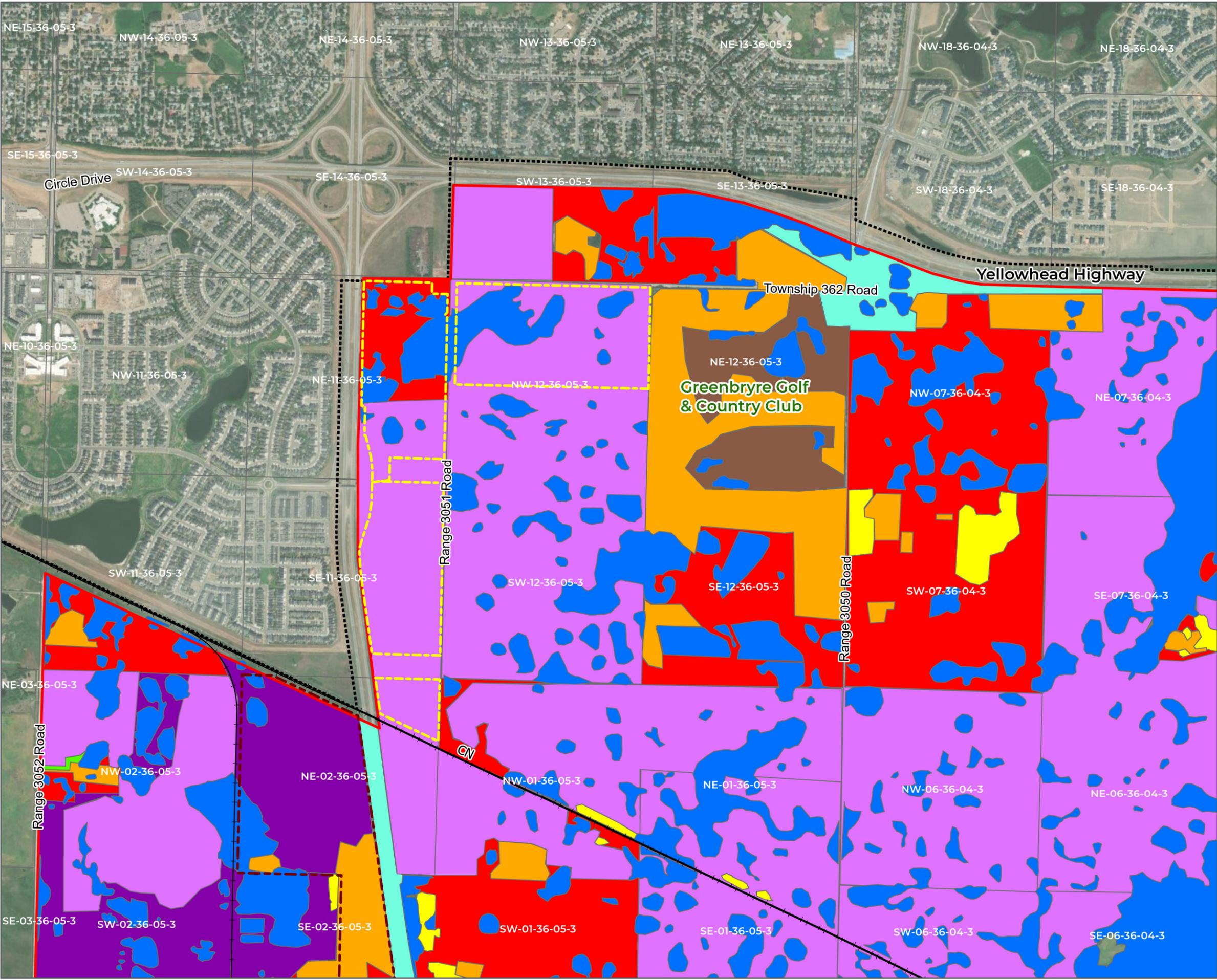
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Author:	WS
Checked:	GH
Status:	Review
Revision:	A
Date:	2021 / 6 / 17

URBAN SYSTEMS

Figure 3-2 A

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South-East Concept Plan

Desktop Environmental Natural Area Screening

Land Classification

Legend

-  R.M. of Corman Park
-  English River First Nation
-  Cowessess First Nation
-  Project Area

Land Classification

-  Wetlands/Watercourses
-  Native Tree Cover
-  Planted Trees
-  Golf Course
-  Anthropogenic
-  Cropland
-  Tame Forage
-  Native Pasture
-  Verge

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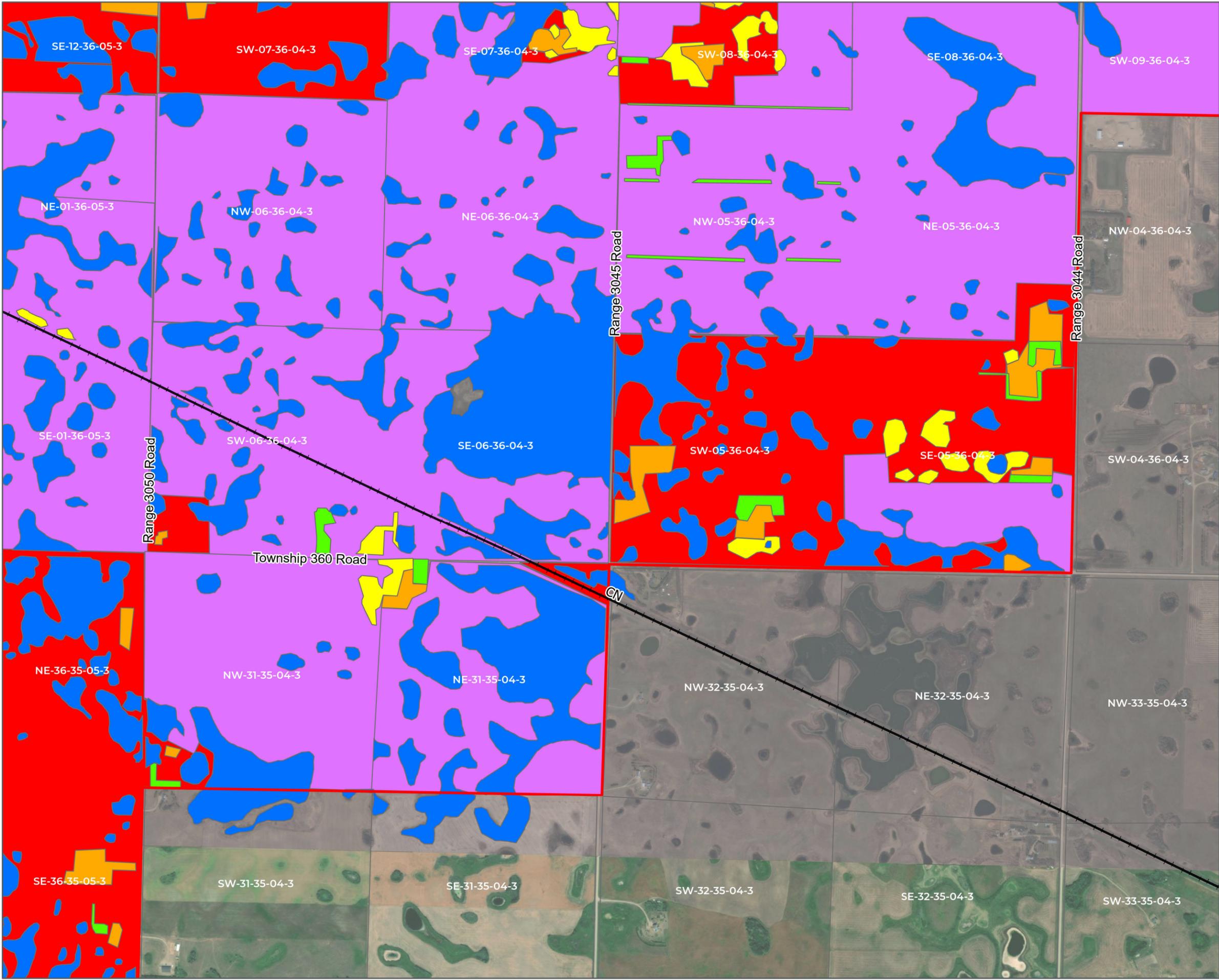
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 Author: WS
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Figure 3-2 B

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South-East Concept Plan
Desktop Environmental Natural Area Screening
Land Classification

- Legend**
- R.M. of Corman Park
 - Project Area
 - Land Classification**
 - Wetlands/Watercourses
 - Native Tree Cover
 - Planted Trees
 - Anthropogenic
 - Cropland
 - Tame Forage

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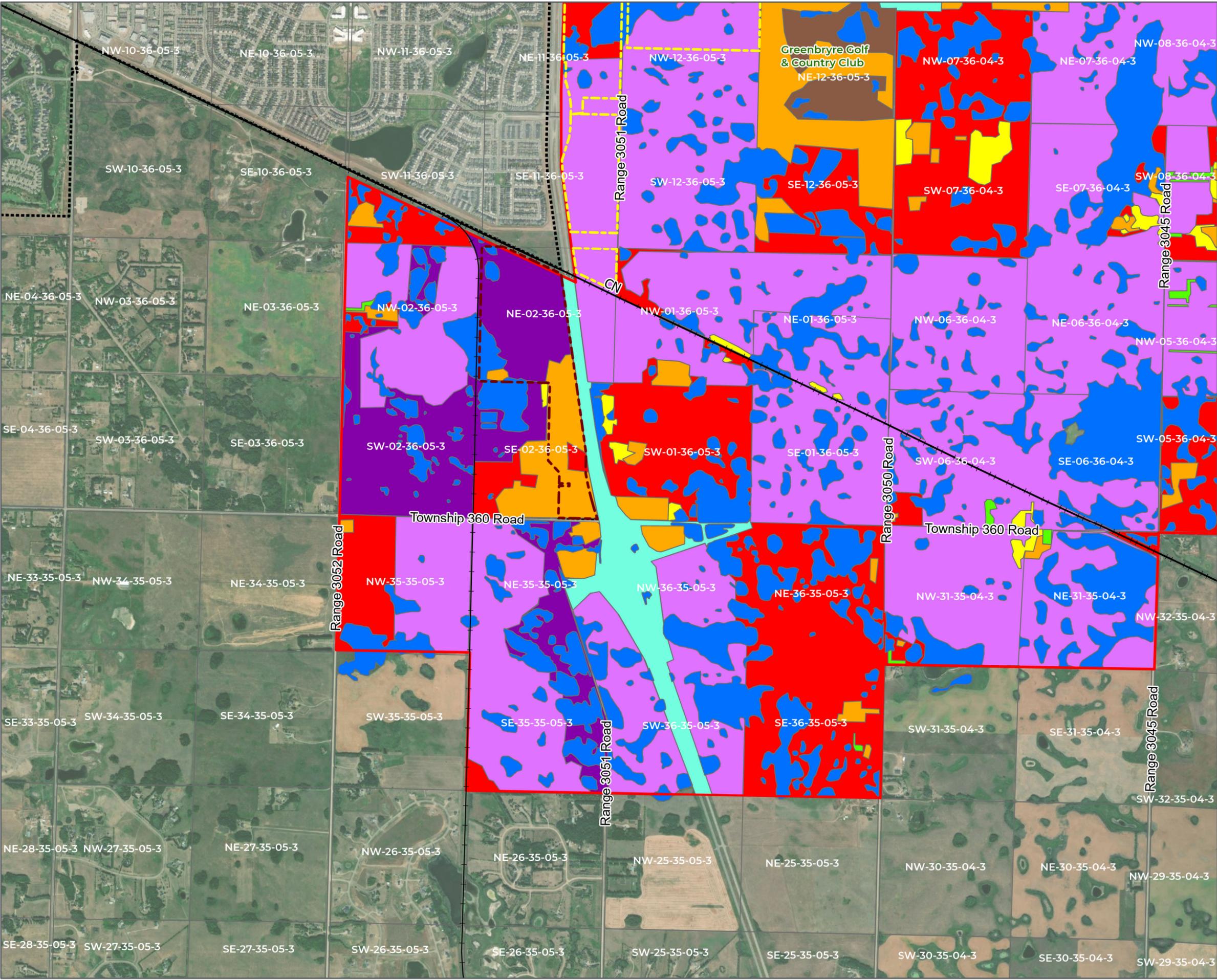
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Figure 3-2 C

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South-East Concept Plan
Desktop Environmental Natural
Area Screening
Land Classification

- Legend**
-  R.M. of Corman Park
 -  English River First Nation
 -  Cowessess First Nation
 -  Project Area

- Land Classification**
-  Wetlands/Watercourses
 -  Native Tree Cover
 -  Planted Trees
 -  Golf Course
 -  Anthropogenic
 -  Cropland
 -  Tame Forage
 -  Native Pasture
 -  Verge

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 - ATS provided by Altalis
 - Imagery provided by ESRI
 - Railroad Tracks, Reserve boundary provided by NRCAN
 - Wetlands and Watercourses provided by Google Imagery and HabiSask

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 Revision: A
 Date: 2021 / 6 / 16



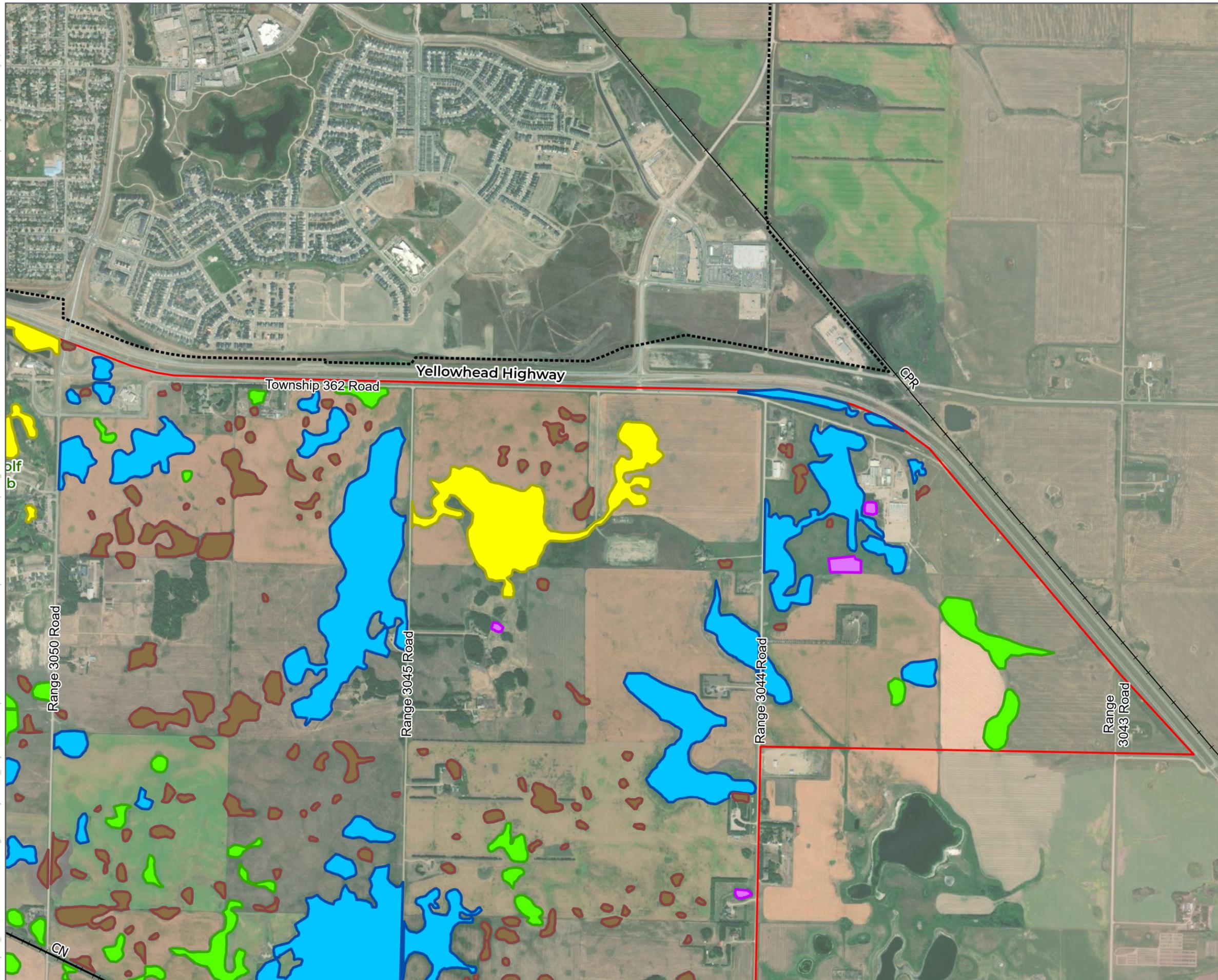
U:\Projects_Sask\3909\0003\01\Design\GIS\Projects\SE Concept Plan - Environmental\SE Concept Plan - Environmental.aprx\Figure 3-2

3.2 SURFACE WATER

The Project Area was found to have a relatively high density of wetlands. Wetlands in the Project Area were delineated using HABISask's waterbodies and watercourses layers (Government of Saskatchewan, 2021) and Google Earth Imagery from 2002 – 2020 (Google Earth Imagery, 2021). The Stewart and Kantrud System was used for both delineations of boundaries and a preliminary classification of higher-class larger wetlands (**Figure 3-3 A-D**). Only large higher-class wetlands (i.e. Class III, Class IV and Class V) were classified for the purposes of municipal planning as lower class wetlands can be difficult to differentiate or delineate based on desktop resources. All potential wetlands, delineations and classifications should be field verified for accuracy prior to development.

For this region of the province, the Classification of Natural Ponds and Lakes in the Glaciated Prairie Region (Stewart, 1971) can be used to confirm and classify wetlands. This classification system identifies seven wetland classes that are based on zones of vegetation and drawdown phases. The seven wetland classes are:

- Class I – Ephemeral -Dominated by the low prairie zone and typically have surface water for only a short period of time after snow melt or storm events in early spring.
- Class II – Temporary – Wet meadow zone dominates the deepest part and are periodically covered with ponded water for only a few weeks of the season or after major precipitation events.
- Class III – Seasonal – shallow marsh zone with grasses, sedges and rushes dominates the deepest part of the wetland and are generally dry by mid-summer
- Class IV – Semi-permanent – maintain surface water throughout the growing season and into the early fall. Dominated by a deep marsh zone.
- Class V – Permanent – have a permanent open water zone, submergent vegetation in the deepest zone and emergent vegetation lining the shoreline.
- Class VI – Alkali – Characterized by a higher pH, salt crustations and generally dominated by salt tolerant species.
- Class VII – Fen – vegetation dominates the deepest part of the wetland and soils are generally saturated with groundwater. Floating mats of vegetation include sedges, grasses and other herbaceous plants



South-East Concept Plan
Desktop Environmental Natural
Area Screening
Potential Wetlands / Watercourses

Legend

-  R.M. of Corman Park
-  Cowessess First Nation
-  Project Area
- Wetland Class**
-  Class III
-  Class IV
-  Class V
-  Dugout
-  Potential Wetland

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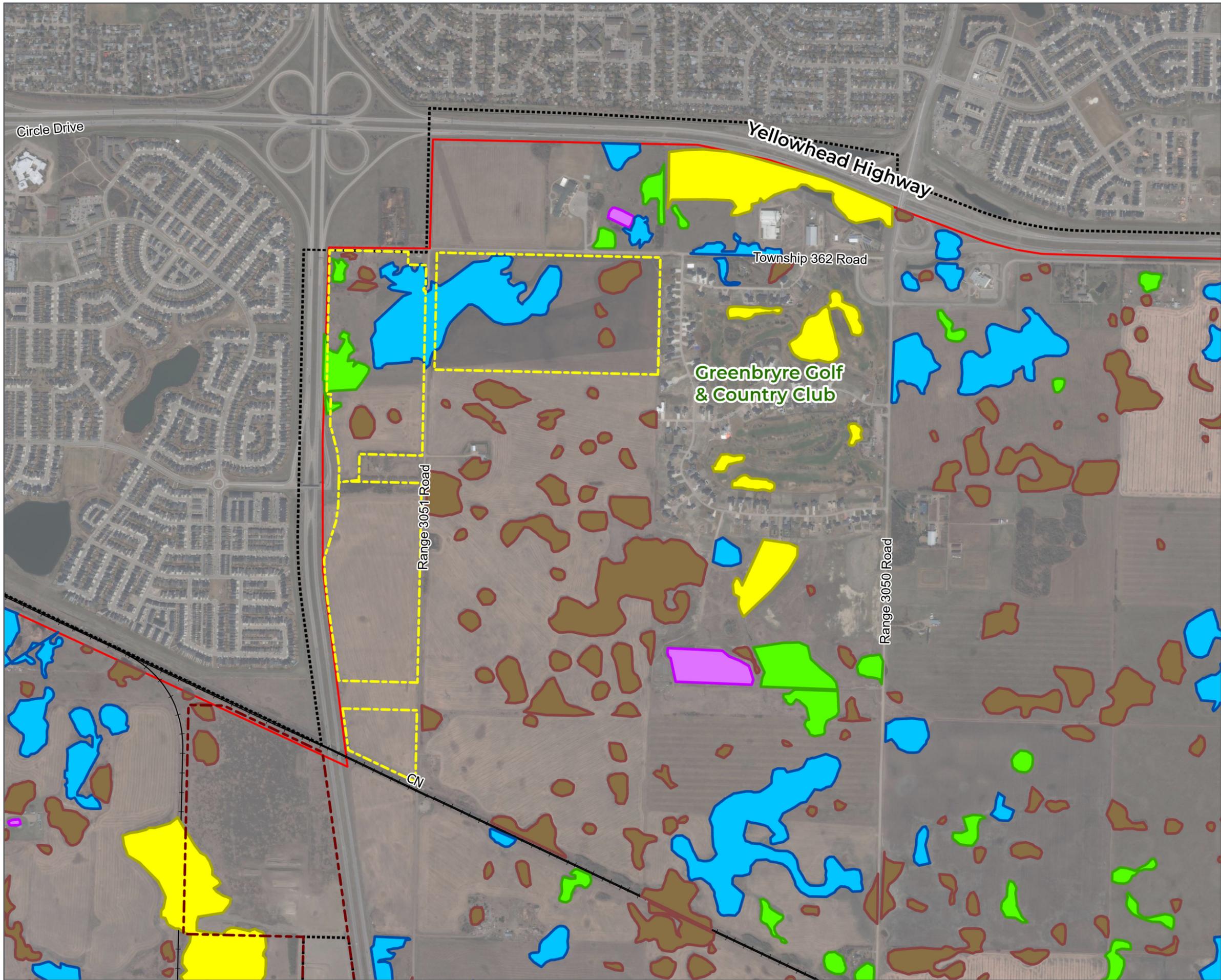
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 - Imagery provided by ESRI
 - Railroad Tracks, Reserve boundary provided by NRCAN
 - Wetlands and Watercourses provided by Google Imagery and HabiSask

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Figure 3-3 A



South-East Concept Plan
Desktop Environmental Natural
Area Screening
Potential Wetlands / Watercourses

- Legend**
-  R.M. of Corman Park
 -  Cowessess First Nation
 -  English River First Nation
 -  Project Area
- Wetland Class**
-  Class III
 -  Class IV
 -  Class V
 -  Dugout
 -  Potential Wetland

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Scale: 1:13,000
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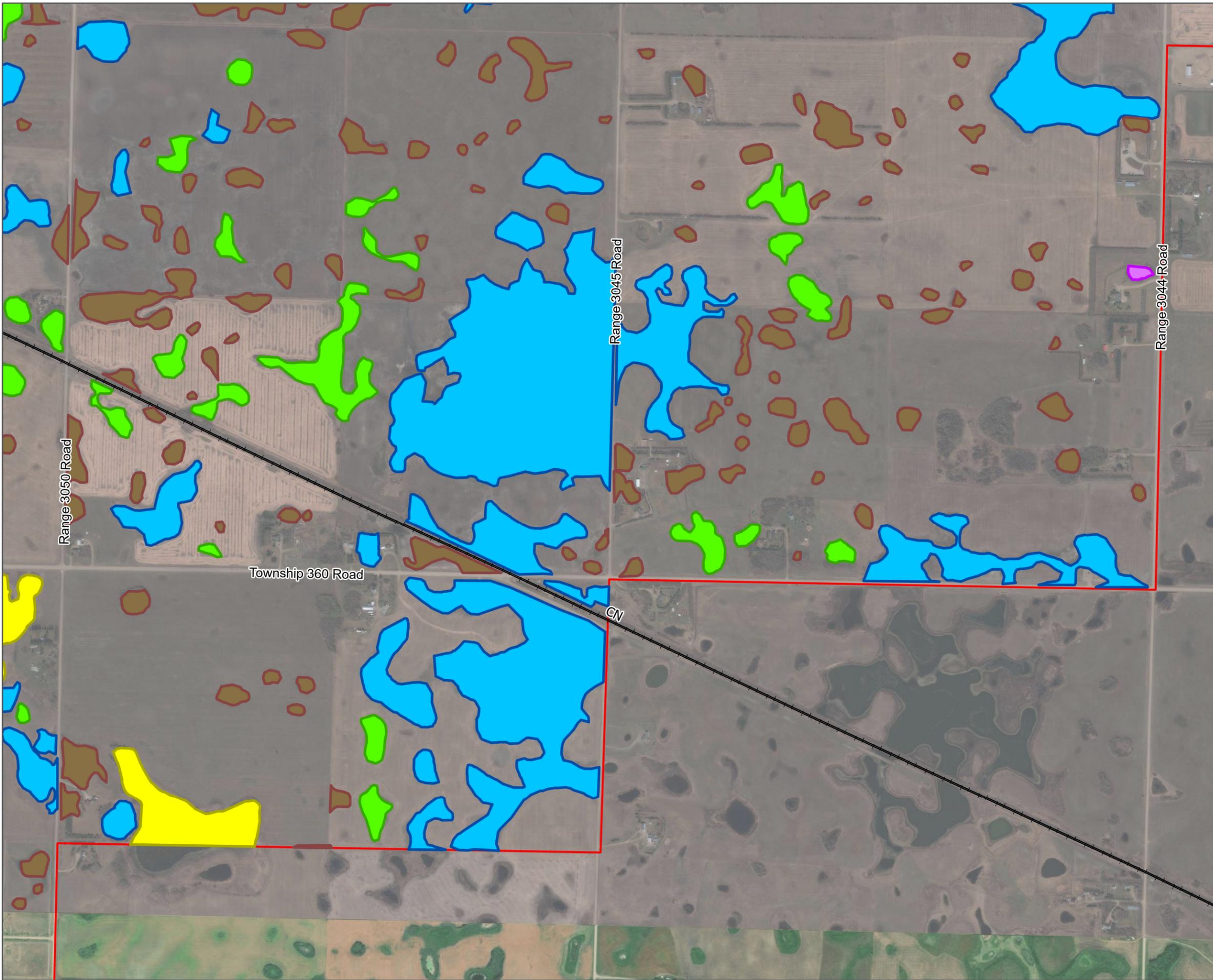
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Figure 3-3 B

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South-East Concept Plan
Desktop Environmental Natural
Area Screening
Potential Wetlands / Watercourses

Legend

-  R.M. of Corman Park
-  Project Area
- Wetland Class**
-  Class III
-  Class IV
-  Class V
-  Dugout
-  Potential Wetland

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Coordinate System: NAD 1983 UTM Zone 13N
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 - Imagery provided by ESRI
 - Railroad Tracks, Reserve boundary provided by NRCAN
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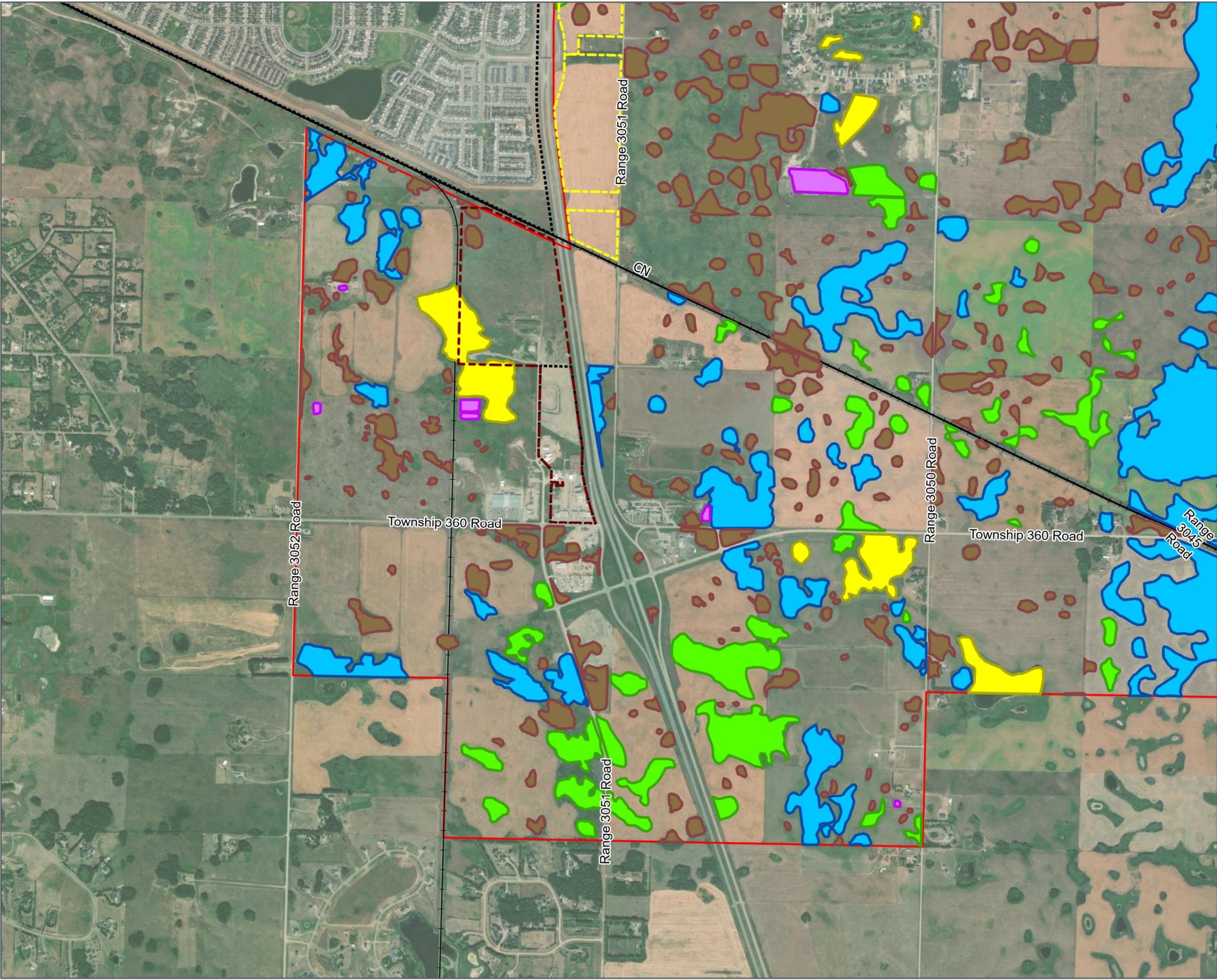
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Figure 3-3 C

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South-East Concept Plan
Desktop Environmental Natural
Area Screening
Potential Wetlands / Watercourses

Legend

-  R.M. of Corman Park
-  Cowessess First Nation
-  English River First Nation
-  Project Area
- Wetland Class**
-  Class III
-  Class IV
-  Class V
-  Dugout
-  Potential Wetland

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Coordinate System: NAD 1983 UTM Zone 13N
Scale: 1:19,000 (When plotted at 11"x17")

Data Sources:
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 - ATS provided by Altalis
 - Imagery provided by ESRI
 - Railroad Tracks, Reserve boundary provided by NRCAN
 - Wetlands and Watercourses provided by Google Imagery and HabiSask

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Figure 3-3 D

3.3 VEGETATION

The Project Area is located within the Moist Mixed Grassland Ecoregion. This ecoregion is known to have semi-arid moisture conditions, numerous wetlands, and non-arable pasture lands. Native terrestrial vegetative cover typically consists of speargrasses and wheatgrasses with deciduous shrubs, or small aspen groves surrounding wetlands (SKCDC, 2014).

A search of HABISask for rare and endangered plants was conducted on April 11, 2021. Three species at risk were identified (**Figure 3-4**)(**Table 3.2**).

Table 3.2: Rare and Endangered Plant Species

Common Name	Scientific Name	Quarter Section	Provincial Rank ¹	National Rank ¹
bristle-leaved sedge	<i>Carex eburnea</i>	NE 1-36-5 W3	S3	N5
		SE 12-36-5 W3	(Vulnerable/Rare to Uncommon)	(Secure)
bristly gooseberry	<i>Ribes</i>	SW 13-36-5 W3	S2	N2
	<i>oxyacanthoides</i> <i>var. setosum</i>		(Imperiled/Very Rare)	(Imperiled)
northern blue-eyed-grass	<i>Sisyrinchium septentrionale</i>	SE 9-36-4 W3	S3	N4
		SW 10-36-4 W3	(Vulnerable/Rare to Uncommon)	(Apparently Secure)

Habitats for all three of these species at risk are recorded as moist wetland or stream riparian areas with varying vegetative cover (University of Saskatchewan, n.d.) (eFlora, n.d.) (NatureServe Explore, 2021).

No invasive species were shown within the Project Area by iMapInvasives, however the following species have been recorded in proximity: Himalayan balsam (*Impatiens glandulifera*), purple loosestrife (*Lythrum salicaria*), buckthorn (*Rhamnus cathartica*), and tansy (*Tanacetum vulgare*) (iMapInvasives, 2021).

3.4 WILDLIFE

A search of HABISask indicated siting’s for rare and endangered vertebrates within the Project Area (Government of Saskatchewan, 2021) (**Figure 3-4**). A search of eBird identified 4 hotspots (Hyde Park, Lakeview Park, James Anderson and Kistakin Parks and Peter Zakreski Park) within 2 km of the Project Area (Cornell Lab of Ornithology, 2021). A compilation of these databases showed 123 bird species that have been historically recorded near the Project, 11 of which are federally and/or provincially listed (**Table 3.3**).

¹ Saskatchewan Conservation Data Centre (Government of Saskatchewan, 2021)

Table 3.3: Species at Risk

Species	PROVINCIAL STATUS ¹	SARA ²	COSEWIC ³
bank swallow	S4B: (Apparently Secure – Breeding) / S5M: (Secure – Migrating)	Threatened	Threatened
barn swallow	S4B: (Apparently Secure – Breeding) S4M: (Apparently Secure – Migrating)	Threatened	Threatened
bobolink	S4B: (Apparently Secure – Breeding) S4M: (Apparently Secure – Migration)	Threatened	Threatened
Cooper's hawk	S4B: (Apparently Secure – Breeding) S2N: (Imperiled – non-breeding) S2M: (Imperiled – Migrating)	-	Not at Risk
horned grebe	S5B: (Secure – Breeding) S5M: (Secure – Migrating)	Special Concern	Special Concern
red-tailed hawk	S5B: (Secure – Breeding) S1N: (Critically Imperiled – non-breeding) S5M: (Secure – Migrating)	-	Not at Risk

¹ Saskatchewan Conservation Data Centre (Government of Saskatchewan, 2021)

² Federal Species at Risk (Government of Canada, 2020)

³ COSEWIC Species at Risk Public Registry (Government of Canada, 2019)

Species	PROVINCIAL STATUS ¹	SARA ²	COSEWIC ³
sharp-shinned hawk	S4B: Apparently Secure - Breeding		
	S2N: Imperiled – Non-breeding	-	Not at Risk
	S4M: Apparently Secure - Migrating		
Sprague's Pipit	S3B: Vulnerable - Breeding	Threatened	Threatened
	S3M: Vulnerable - Migrating		
Townsend's solitaire	S3N: Vulnerable – Non-breeding	-	-
	S3M: Vulnerable - Migrating		
white-winged crossbill	S4B: Apparently Secure - Breeding	-	-
	S3N: Vulnerable – Non-breeding		
whooping Crane	SXB: Believed Extinct - Breeding	Endangered	Endangered
	SI: Critically Imperiled - Migrating		

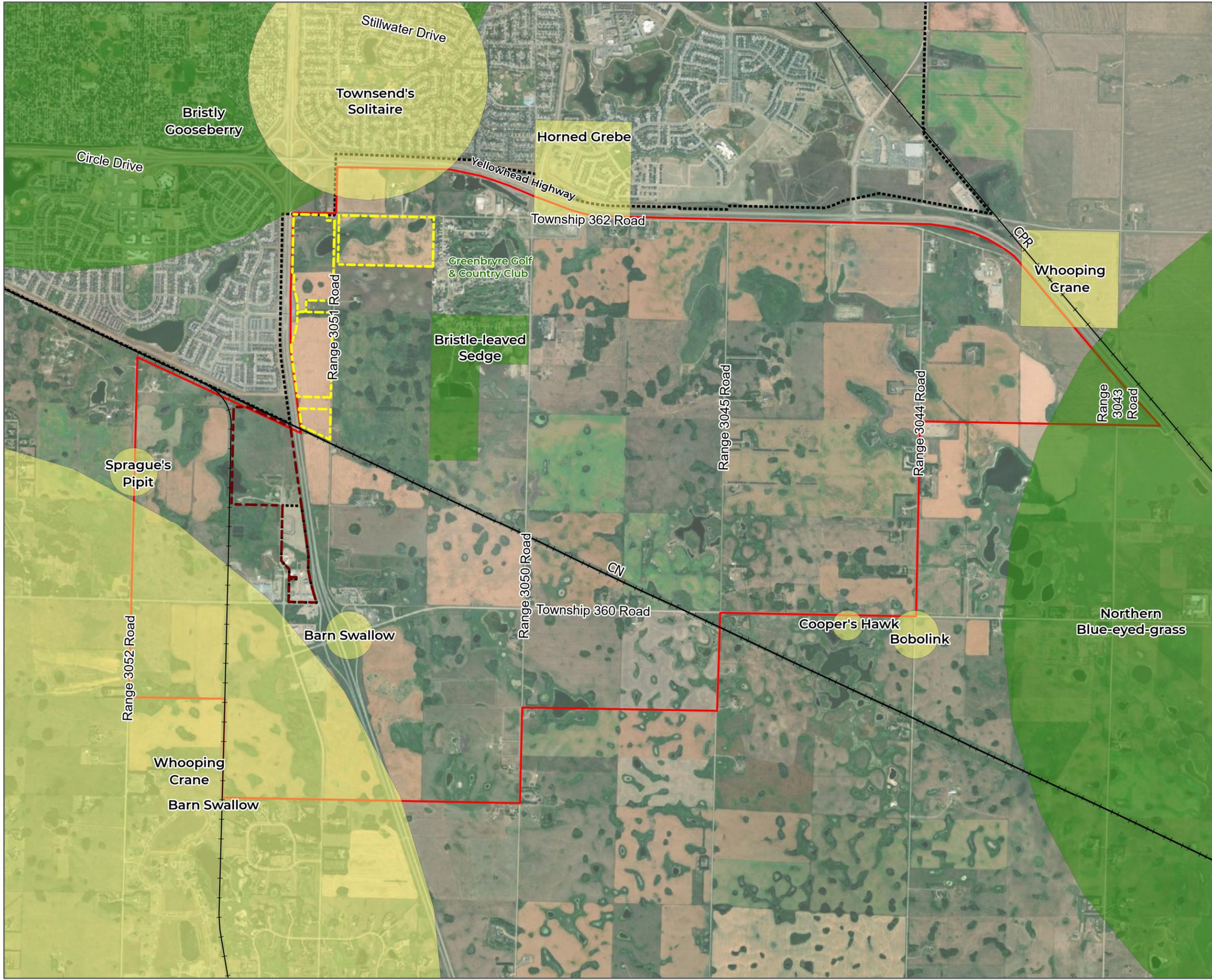
It should be noted that these database searches are limited to recorded public and professional assessments that have been historically conducted in the area and, therefore, may not offer a full or accurate representation of the species utilizing site specific habitat.

Incidental take (i.e., the disturbance/death of migratory birds, their eggs, or nests) is a federal offence (See **Section 4.0**). The Project Area is located in the B4 nesting zone, with a regional migratory nesting period of April 15 to August 25 (Government of Canada, 2018). Based on an aerial imagery review of habitat and the species historically observed, the Project Area does contain various habitats suitable for migratory birds. Habitats with greater likelihoods of attracting migratory birds and species of risk are wetlands, native pasture, native tree cover, planted trees, and tame forage (**Section 3.1**). It is worth noting that barn swallow has been observed in multiple locations throughout the Project Area (**Figure 3-4**). Barn swallow colonies are typically associated to old houses and barns

and therefore these structures should be checked prior to removal. In addition, whooping crane has been historically observed near the Project Area, which is within the primary migratory route for this species (Government of Saskatchewan, 2021). Croplands and various wetlands serve a variety of uses to this Endangered species during migration (COSEWIC, 2010).

Canada's largest decline in bird abundance occurs in grasslands with a loss of approximately 87% population sizes since 1970 (NABCI Canada, 2019). Only 17% to 21% of original native pasture within Saskatchewan was estimated as intact in 2001 (Hammermeister, 2001). Therefore, all connected north/south native pasture in the western Project Area (**Figures 3-2**) not only provides important habitat for species at risk, but also may serve as a quality wildlife corridor due to its connectivity with surrounding native pasture.

The density and quality of wetlands throughout the Project Area create a high degree of quality wildlife habitat and potential migratory corridors for species. This includes species at risk, such as the whooping crane, which have been historically recorded west of the Project Area (**Figure 3-4 & Table 3.3**).



South-East Concept Plan
Desktop Environmental Natural
Area Screening
Species at Risk

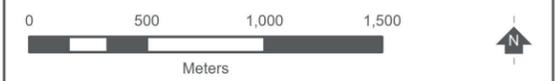
Legend

-  R.M. of Corman Park
-  English River First Nation
-  Cowessess First Nation
-  Project Area

Rare and Endangered Species

-  Vascular Plant
-  Wildlife

The accuracy & completeness of information shown on this drawing is not guaranteed. It will be the responsibility of the user of the information shown on this drawing to locate & establish the precise location of all existing information whether shown or not.



Coordinate System: NAD 1983 UTM Zone 13N
Scale: 1:30,622 (When plotted at 11"x17")

Data Sources:
 - Data provided by Corman Park.
 - ATS provided by Altalis
 - Imagery provided by ESRI
 - Railroad Tracks, Reserve boundary provided by NRCAN
 - Rare and Endangered Species provided by SaskGeoHub

Project #: 3909.0003.01
 Author: WS
 Checked: GH
 Status: **Review**
 Revision: A
 Date: 2021 / 6 / 17



FIGURE 3-4

3.5 SOILS

Soils throughout the Project Area are mainly loam or a mix of sand and loam. Some clay loams are present in the eastern and north central portions of the Project Area (**Figure 3-5**).

Soil capabilities for the Project Area were identified as having moderately severe to severe limitations in the range of crops appropriate for the land. An increase in efforts and practices for the successful harvest of certain crops was shown (Government of Canada, 2013).

Clubroot symptoms have been historically detected in one to nine fields within the RM of Corman Park (Government of Saskatchewan, 2021). Clubroot was declared a pest under Saskatchewan’s Pest Control Act in June of 2009 (Government of Saskatchewan, 2020).

3.6 HISTORIC RESOURCES

A search of the Developers Online Heritage Screening Tool showed eight quarter sections with heritage sensitivities, which may require a Heritage Resource Impact Assessment (HRIA). **Figure 3-5** shows these quarters:

- NE 11-36-5 W3M
- SE 11-36-5 W3M
- SW 11-36-5 W3M
- SW 12-36-5 W3M
- NE 12-36-5 W3M
- NW 36-35-5 W3M
- SW 36-35-5 W3M
- SE 35-35-5 W3M

A search of the Saskatchewan Homestead Index identified 17 homesteads within the Project Area. Their associated quarter sections, owner names and homestead file numbers are outlined in **Table 3.4**.

Table 3.4: Homesteads

LEGAL LAND DESCRIPTION	NAME	HOMESTEAD FILE #
SW -6 -36 -4 -W3	Clark, J. Wesley	944623
SW -6 -36 -4 -W3	Clark, John Thomas	944623
NE -6 -36 -4 -W3	Richardson, George	037408A
NW -6 -36 -4 -W3	Tulloch, Charles H.	569600
SE -6 -36 -4 -W3	Tupper, George Viker	841629
NW -6 -36 -4 -W3	Tupper, Haynes Alvin	569600

LEGAL LAND DESCRIPTION	NAME	HOMESTEAD FILE #
NE -36 -35 -5 -W3	Barton, Hubert Ernest	1249993
SE -36 -35 -5 -W3	Maule, Richard Lawrence	1249999
SE -36 -35 -5 -W3	Vandal, Frederic	631212
NE -2 -36 -5 -W3	Temperance Colonization Society	685484
NE -2 -36 -5 -W3	Robinson, William	894053
NE -2 -36 -5 -W3	Robinson, William	685484
NE -2 -36 -5 -W3	Goodwin, Charles A.	685484
NE -2 -36 -5 -W3	Goodwin, Charles A.	127712
NW -12 -36 -5 -W3	Clark, James Wesley	485490
NE -12 -36 -5 -W3	Clark, James Wesley	566007
SW -12 -36 -5 -W3	Hailey, William	362848

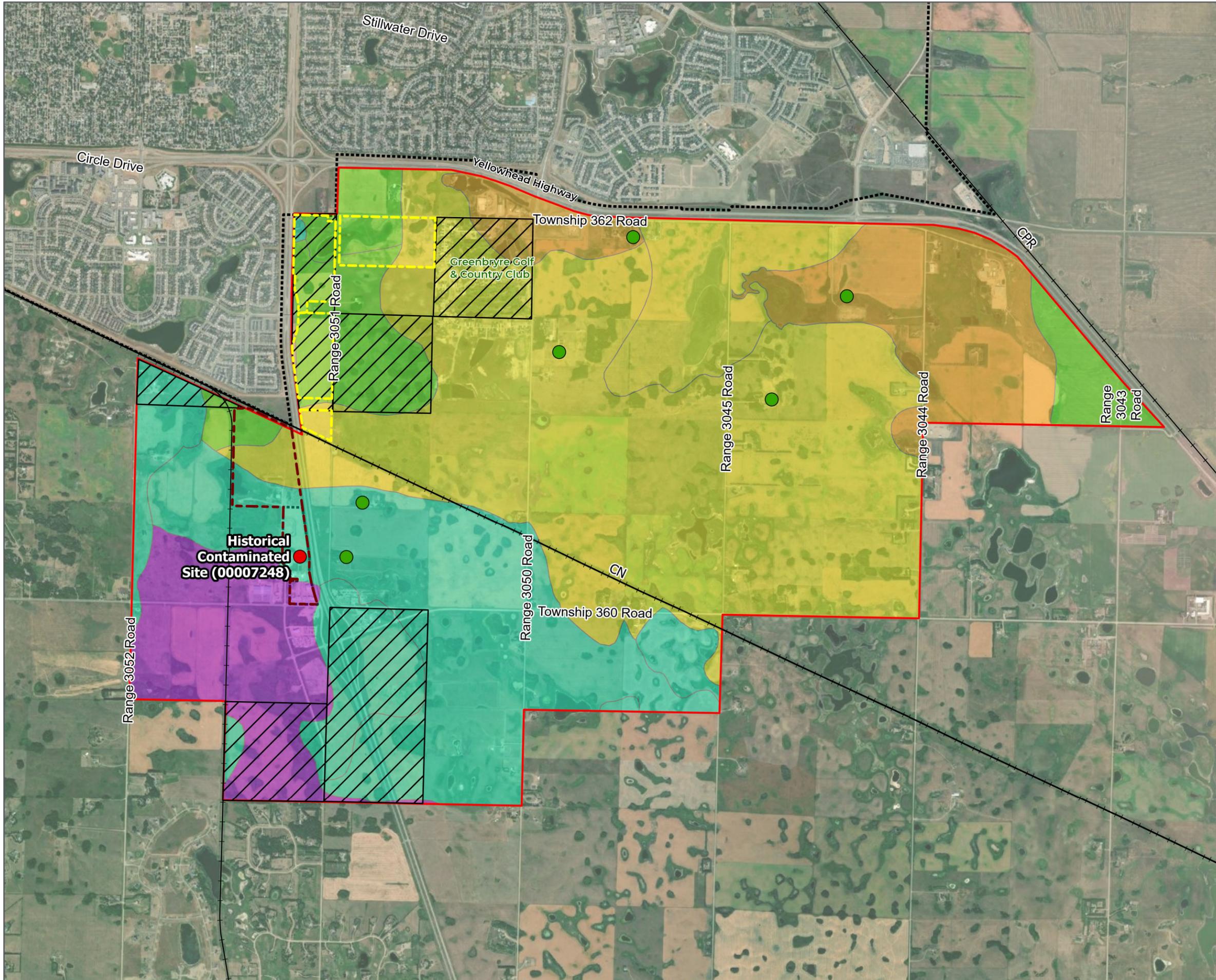
No historic resources were identified by any other databases outlined in **Section 2.0**.

3.7 POTENTIAL CONTAMINATED SITES

A search of the Treasury Board of Canada's Contaminated Site Registry was conducted on April 12, 2021. One contaminated site (Site Number: 00007248) was identified within the Project Area which had a "Closed" status and a note indicating "Historical review completed. No further action required" (Government of Canada, 2021).

Six other potential contaminated sites were identified through aerial imagery. These sites were identified as potential illegal dump sites, vehicle/chemical storage sites, or feedlots. The locations for potential contaminated sites are shown in **Figure 3-5**.

In addition, the existing CN rail line may have historically contaminated areas and railroad ties present potential sources of creosote contamination.



South-East Concept Plan
Desktop Environmental Natural
Area Screening
Soil Types

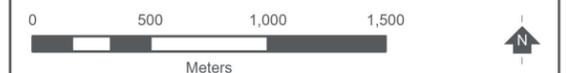
Legend

-  R.M. of Corman Park
-  English River First Nation
-  Cowessess First Nation
-  Project Area

Subsurface Environment

-  Clay loam
-  Fine sandy loam
-  Loam
-  Loamy sand
-  Sandy loam
-  Potential Historic Resource
-  Historical Contaminated Site
-  Potential Contaminated Site

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Coordinate System: NAD 1983 UTM Zone 13N
Scale: 1:30,622
 (When plotted at 11"x17")

- Data Sources:**
- Data provided by Corman Park.
 - ATS provided by Altalis
 - Imagery provided by ESRI
 - Railroad Tracks, Reserve boundary provided by NRCAN
 - Wetlands and Watercourses provided by Google Imagery and HabiSask
 - Rare and Endangered Species provided by SaskGeoHub

Project #: 3909.0003.01
 Author: WS
 Checked: GH
 Status: **Review**
 Revision: A
 Date: 2021 / 6 / 17



FIGURE 3-5

4.0 REGULATORY

Regulatory considerations for development depend on existing environmental conditions, the proposed development, the jurisdiction of lands, and the nature and magnitude of potential impacts. A range of potential municipal, provincial, and federal acts, policies and regulations have been identified that may be applicable at the proposed development stage. It is important to note that First Nations Lands are only required to comply with federal legislation due to their designation as federal lands. Any Project Areas that are not First Nations Lands will be required to comply with relevant municipal, provincial and federal regulations. Based on the results of **Section 3.0** a compilation of anticipated applicable regulations and their triggers are shown in **Table 4.1**.

Table 4.1: Anticipated Applicable Regulations

Legislation	Description	Trigger
MUNICIPAL LEGISLATION		
<i>City of Saskatoon Wetland Policy</i>	Saskatoons guidance document for integration of wetlands in accordance with mandates set out in their Official Community Plan.	Saskatoons future annexation of communities that will be developed near existing wetlands.
<i>Corman Park – Saskatoon Planning District Official Community Plan</i>	<p>This document states that all industrial and residential development must assess potential environmental and heritage resources, so impacts can be avoided or mitigated in a means that is satisfactory to the RM. This includes alterations to drainages, which may create impacts to lands outside of approved areas.</p> <p>This document states that planning should consider existing natural resources (e.g. wildlife corridors, habitat, surface and ground water, etc.) to incorporate as recreational</p>	Development of a Project Area with lands that could be considered significant natural areas, or with the potential to create impacts to human health, historical resources, and the environment.

Legislation	Description	Trigger
	spaces or conservation and management.	
<i>Saskatoon North Partnership for Growth (P4G) Official Community Plan (OCP)</i>	A partnership between the regions five municipalities to plan developments in a means that considers the sustained benefits of economic, social and environmental features.	Development in areas with potential to impact, water resources, wetlands, heritage resources and natural areas.
PROVINCIAL LEGISLATION		
<i>Pest Control Act</i>	Regulations that declare the animals, insects or diseases designated as pests, and the responsibilities for their prevention, control, or destruction.	Historical records for clubroot within the RM of Corman Park.
<i>The Weed Control Act</i>	Regulations surrounding the designation, responsibilities and control of plant species listed as prohibited, noxious or nuisance weeds.	Works, activities, or travel with the potential to interact with and spread prohibited, noxious or nuisance weeds.

Legislation	Description	Trigger
The Water Security Act	Provides the provinces mandate to manage and protect surface water and groundwater resources, features and related lands.	Works around watercourses, waterbodies, and areas where groundwater could be affected.
The Environmental Assessment Act	Outlines the responsibilities of proponents of a development to conduct and submit Environmental Impact Assessments (EIAs) and Environmental Impact Statements (EISs) to the Minister of Environment.	The development of natural lands.
<i>Environmental Management and Protection Act, 2010</i>	Provides for the protection of air, land and water against potentially harmful substances or activities.	The presence of wildlife habitat, wetlands, natural drainages, watercourses, soils and native vegetation.
Wildlife Act and Regulations	Provides for the protection of wildlife and provincially listed species at risk.	The presence of wildlife and species at risk in proximity to the Project Area.

Legislation	Description	Trigger
The Heritage Property Act	Provides for the preservation and development of heritage properties.	The potential presence of historic resources within the Project Area.
Wetland Policy	Policy for the protection of wetlands.	The presence of wetlands within the Project Area.
<i>The Planning and Development Act, 2007</i>	Provincial legislation that allows Corman Park to receive lands as Environmental Reserve (ER) or Municipal Reserve (MR).	The presence of wildlife habitat, wetlands, natural drainages, watercourses, and historical features.
FEDERAL LEGISLATION		
<i>Species at Risk Act (SARA)</i>	Provides for the protection and conservation of species at risk in Canada.	Disturbance or destruction of a species at risk, its active residence, or its critical habitat.

Legislation	Description	Trigger
<i>Migratory Birds Convention Act</i>	Provides for the protection of migratory birds, their nests or their habitats.	Development within areas of suitable nesting habitat during the regional migratory bird nesting period (i.e. April 15 to August 25).
Fisheries and Oceans Canada (FOC)	The Federal Fisheries Act provides for the management of fisheries and protection of fish and fish habitat, including pollution prevention and fish passage protection.	The potential for fish in wetlands and watercourses.

5.0 RECOMMENDATIONS

The following is a list of recommendations based on the above environmental regulations and limitations of a NAS:

- To confirm environmental features and delineations outlined in this NAS, a Field Screening in accordance with the City of Saskatoons Natural Area Screening Guide is recommended. Wetland assessments should be conducted using the Classification of Natural Ponds and Lakes in the Glaciated Prairie Region (Stewart and Kantrud 1971) in conjunction with the Wetland Minnesota Routine Assessment Method for consistency. Considerations for the avoidance, mitigation or future designations (i.e. ER, MR, etc.) of wetlands watercourses, drainages, native vegetated areas, sensitive wildlife habitat and historical resources is recommended in accordance with regulations outlined in **Section 4.0**.
- The high density of wetlands in the Project Area provides quality wildlife habitat and potential wildlife corridors. Wetlands contain large densities of species at risk and offer significant benefits to humans as recreation areas, carbon sinks, flood control, ground water recharge areas and water purification zones. Where possible, planning for the maintained connectivity and protection of these features is recommended.
- The west Project Area appears to contain a relatively connected north/south series of native pasture. It is estimated that up to 75% of Canada's natural grasslands have been lost to development and agriculture. Furthermore, native grasslands are the primary habitat for some of Canada's fastest declining species with grassland birds seeing an approximate 87% decline in population since the 1970's. Assessment of this area and consideration for its conservation is recommended.
- The RM of Corman Park has historical evidence of clubroot. It is recommended that mitigations be identified and implemented if travel or work in croplands is to occur.
- A Phase 1 Environmental Site Assessment (ESA) is recommended for potential/historical contaminated areas. Results of a Phase 1 ESA may provide recommendations for further investigation if contamination is suspected through the investigation (i.e. Phase 2 & Phase 3).
- An HRIA is recommended due to the identification of potential historical resources within the Project Area.
- Pre-development surveys for species at risk (i.e. wildlife and vegetation) are recommended for identification of important habitats.

Please note that this NAS is limited to available data and is based on information that has been provided through desktop database searches, previous surveys, and imagery.

6.0 CLOSURE

Sincerely,

URBAN SYSTEMS LTD.

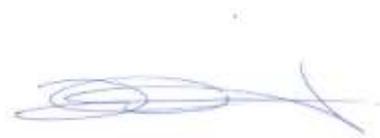
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Senior Review



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