File R6847

City of Yorkton

Hopkins Lake Revitalization Study
Yorkton, SK

Clifton

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10 February 2026 **File R6847**

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Yorkton, SK

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1.0 Introduction

1.1 Study Scope

Clifton Engineering Group Inc. (Clifton) was commissioned by the City of Yorkton (the City) to assess potential revitalization feasibility for Hopkins Lake (the Lake). The purpose of this report is to present the available information, to collect new information as directed by the City, to identify revitalization options, and to provide a roadmap for next steps.

The work included hydrological characterization, environmental and heritage screening, permitting considerations, brainstorming of revitalization options, and recommended next steps. The scope of work for the Hopkins Lake Revitalization Study, as defined by the City, included:

- Bathymetric assessment.
- Terrain assessment (drainage area, water balance, nutrient balance).
- Historical review.
- Ecological review.
- Potential revitalization options.
- Report and presentation.

The scope was expanded at the project kickoff meeting in Yorkton on 01 October 2025. The additional work consisted of a lake sediment survey by Clifton to determine the relative thickness of soft sediments, and to include lake water quality sampling and testing by the City.

The ecological review or environmental review was a desktop assessment to identify potential environmental sensitivities that may inform development decisions. The environmental review was based on a selected study area that includes Hopkins Lake plus a 100 m to 1000 m buffer (depending on the environmental factors being investigated).

The work was managed at the City by Connor Hunt (Director of Environmental Services) and Clifton was represented by Kevin Olson with support from the Clifton Regina and Calgary offices.

1.2 Location

Hopkins Lake is in the north-west corner of the City of Yorkton south of Highway 16, within the northeast quarter of Section 03, Township 26, Range 04, West of the 2nd Meridian in southeastern Saskatchewan. The area surrounding Yorkton is the Rural Municipality (RM) of Orkney.

Hopkins Lake is bounded by:

- Highway 16 (York Road) on the north side.
- Park Road and the Yorkton City Campground on the west side.

- Jacee Beach Ball Diamonds and Wiggley Field Dog Park on the east side.
- A wooded area on the southeast side, including a former fire water access and walking trails.

1.3 Available Information

This report is based on the following available information:

- Satellite imagery from Google Earth Pro and ESRI World Imagery.
- Field observations by Clifton staff from 01 October 2025 and 13 November 2025.
- Historical accounts of the City of Yorkton, compiled by Terri Lefebvre Prince for www.sasktoday.ca on 09 July 2015.
- High resolution digital elevation data from the Government of Canada's CanElevation HRDEM (2023).
- Hydrography based on the Government of Canada National Hydro Network (7 November 2022).
- Climate data from the Government of Canada Yorkton climate station (Climate ID: 4019073).
- Hydrometric data from the Government of Canada Smith Creek near Marchwell hydrometric station (Station number 05ME007).
- Lake evaporation data published in the Hydrological Atlas of Canada (den Hartog & Ferguson, 1978).
- Groundwater investigation by Beckie Hydrogeologists Ltd. (2025).
- Water quality laboratory analysis reports provided by the Saskatchewan Research Council to Beckie Hydrogeologists Ltd.
- Water quality Certificate of Analysis provided by ALS Canada Ltd. To the City of Yorkton.
- Nutrient and sediment loading coefficients from Water Matters Society of Alberta (Donahue, 2013).
- Landcover data from Agriculture and Agri-Food Canada's 2024 annual crop inventory data.
- The Ecological Framework of Canada – Natural ecozones and ecoregions (CCEA 2014).
- Saskatchewan Ministry of Parks, Culture and Sports – Provincial and regional parks and protected areas datasets (GOS 2023).
- Saskatchewan Ministry of Parks, Culture and Sports, Heritage Conservation Branch – Heritage Screening Tool (GOS 2025a).
- Saskatchewan Ministry of Agriculture – Agricultural Crown Land Map Viewer (GOS 2025b).
- Saskatchewan Ministry of Energy and Resources – GeoPlanner (GOS 2025c).
- Saskatchewan Conservation Data Centre – provincial species listings and various datasets via HABISask (SKCDC 2025).
- Federal Species at Risk Public Registry (GOC 2025).
- National Wildlife Areas and Migratory Bird Sanctuaries (ECCC 2025b).
- Important Bird and Biodiversity Areas in Canada (IBA) (Nature Canada 2025).
- City of Yorkton Land Use and Zoning Bylaw No. 14/2003 (City of Yorkton 2003).

New data collection to support this study was also completed, including:

- Hopkins Lake shoreline and bathymetry survey on 01 October 2025 by Clifton.
- Hopkins Lake sediment thickness measurements on 13 November 2025 by Clifton.
- Hopkins Lake water quality sampling on 05 November 2025 by the City.

2.0 Hopkins Lake History

Hopkins Lake has been a gathering place for local residents since the City's founding in 1890, including reference to a picnic for colonists in July 1890 at the Exhibition grounds (Lefebvre Prince, 2015). The Exhibition grounds were in the same location as the current Gallagher Center Grounds, with Exhibition Lake south of the Canadian National Railway and Hopkins Lake north of the railway as shown on Plate 2.1. Interestingly, Hopkins Lake at the time included the present-day Ducks Unlimited Wetland prior to construction of Park Road. The news articles at the time mention boating on the "pretty little lake", referring to Hopkins Lake.

In the 1960's, a picnic area and beach, known as Jaycee Beach, was built (Lefebvre Prince, 2015). The Lake had a concession stand and a lifeguard on duty from the 1970's to the early 1980's. The Lake eventually fell out of use due to water quality concerns (City of Yorkton, n.d.). Beach conditions are illustrated on Figure 1 in Appendix A.

The beach area development was described by local resident Ray Riesz (Lefebvre Prince, 2015):

> *In the early '60's the Jaycee Club wanted to make the area a picnic and swimming spot. Through fundraising and support from city council they dredged the lake bottom, (similar to the work done at Wascana Lake) and hauled in loads of sand for the swimming area and beach. The material that was removed was used to create a bank on the west side and a dike on the north side (where #16 Hwy is now). I think some of the removed material was also hauled to the north side of the CNR tracks to fill in some of the wetlands there. On the west side of the lake was a natural spring which flowed slowly all winter. Here a well was developed, and fresh water was pumped to the lake when needed. The irregular line shown on the map north of the tracks I believe was part of the lake prior to the tracks being built. There was a dugout there close to the CN right of way that was used as a swimming hole in the 40's.*

In subsequent years, the Jaycee Ball Diamonds and the Wiggley Field Dog Park were developed along the east side of the Lake near the former beach area, plus walking paths through the treed area along the southeast shoreline. A fire water supply was also developed in the form of a road connection to a dugout along the southeast shoreline. The dugout is currently fenced, and the dugout is no longer used as a fire water access.

Previous attempts by the City to stock fish were unsuccessful. Floating treatment wetlands were also installed by the City in 2025 and are currently installed.

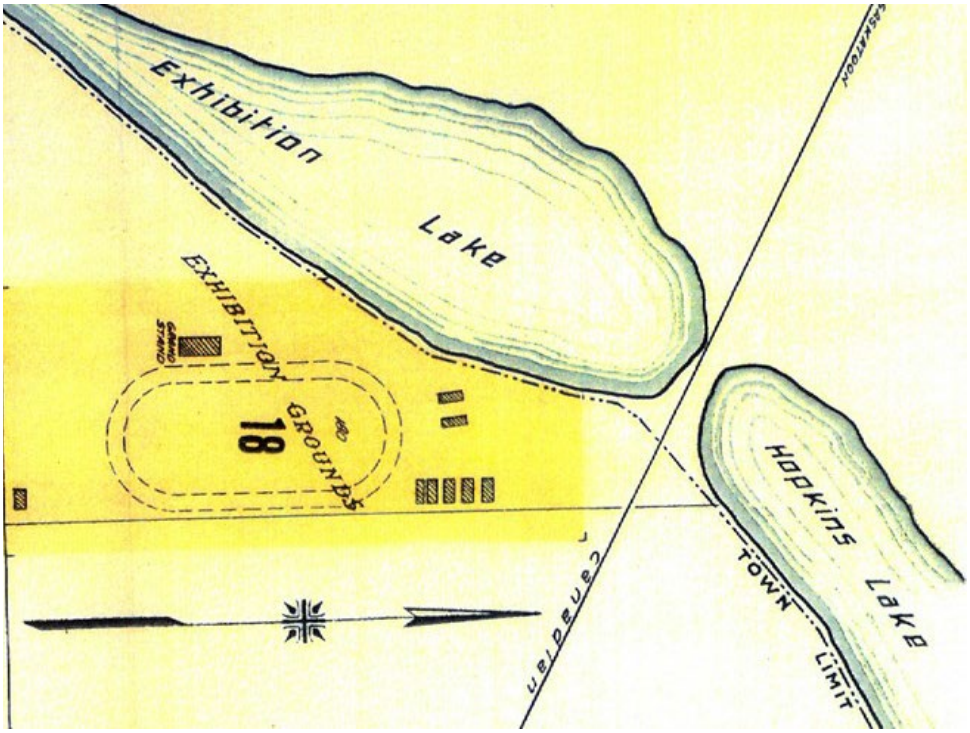

Plate 2.1 – 1923 Map Showing Hopkins Lake (Lefebvre Prince, 2015)

3.0 Hopkins Lake Existing Conditions

3.1 Physical Characteristics

Hopkins Lake has a surface area of about 8.2 ha and is about 500 m long and 100 m to 200 m wide. The Lake is generally about 2 m deep, except for dredged areas near the former fire water access where the Lake is up to 4 m deep. The lake likely has a sand and gravel bottom with variable thickness of soft sediments along the shoreline, with sediment thickness of less than 0.2 m near Jaycee Beach and more than 0.3 m along most of the north and west shoreline. The existing conditions for Hopkins Lake are presented on Figure 2 of Appendix A, including other infrastructure along the shoreline plus the results of new investigations to delineate the lake bathymetry (i.e., water depth) and sediment thickness.

The treed area to the southeast of the Lake is wet and likely drains to the lake. Wiggley Field Dog Park is a very low-lying area that drains to the Lake through a culvert.

3.2 Local Groundwater

Previous hydrogeological reports suggest that Hopkins Lake is connected to groundwater (Lefebvre Prince, 2015; Beckie 2024). An investigation by Beckie Hydrogeologists Ltd. (2024) indicates that the lake is

connected to sub-surface water in the surrounding glacial tills (see Appendix B). This observation is consistent with observed constant lake levels and stable shoreline vegetation. The water balance (in the following section) suggests there is a net groundwater inflow to Hopkins Lake of 1,315 m^3 per year or 2.5 L per minute.

3.3 Water Quality

Lake water quality has been measured both in spring 2024 and fall 2025, indicating that the lake is suitable for recreation but unsuitable for fish. High suitability for recreation is based on low E coli and low nutrients (e.g., nitrate, phosphorus). Poor suitability for fish is based on high dissolved solids, chloride, conductivity and pH. A summary of the water quality results and a comparison to recreational guidelines can be found in Table 3.1. The water quality reports can be found in Appendix C.

Table 3.1 – Hopkins Lake Water Quality

Parameter	Guidelines	Units	Location			Comment
			Lake		Lake Groundwater Well	
			May 2024	Nov 2025		
E. Coli	<235 [A]	MPN/100 mL	N/A	9	N/A	Safe for swimming
Dissolved Oxygen	>6.5 [B]	mg/L	N/A	14.2	N/A	High quality
Total Suspended Solids	N/A	mg/L	N/A	8.2	<1	Clear water
Nitrate	<4 [B]	mg/L	<0.04	<0.1	<0.04	No agricultural or municipal runoff
Phosphorus	<50 [B]	mg/L	N/A	0.05	N/A	No agricultural runoff
Total Dissolved Solids	<500 [B]	mg/L	889	N/A	1050	Poor for fish
Chloride	<100 [B]	mg/L	116	147	21	Poor for fish
Conductivity	0 to 200 [B]	uS/cm	1370	N/A	1470	Poor for fish
pH	6.4 to 8.4 [B]		8.3	8.9	8.1	Poor for fish

Notes:
[A] Health Canada (2023).
[B] DataStream Initiative (2025).

3.4 Environmental Sensitive Areas

There are no provincial parks, regional parks, provincial recreation sites nor are there any national parks, National Wildlife Areas, Migratory Bird Sanctuaries, or Important Bird Areas near the Lake (GOS 2023, ECCC 2025b, Nature Canada 2025).

The Lake is about 0.5 km downstream of the Ravine Ecological Preserve, which is a large naturalized municipal park comprising parkland, wetlands, and naturalized grasslands (City of Yorkton 2025b).

There are two parcels of private conservation lands located about 190 m south and 835 m west of the Lake, respectively (HABISask 2025). There is also one parcel of Crown Agricultural Land located immediately north of Highway 16, in SE-10-26-04-W2. This parcel is downstream of the Lake.

3.5 Vegetation

Vegetation near the Lake comprises a mix of managed recreation facilities including mowed/managed green spaces and park infrastructure, plus natural aspen parkland tree stands, with established riparian and emergent vegetation along the Lake shoreline. Given that the Lake is situated in an active recreational area and public space, the risk of invasive weed species is elevated, especially in areas of transitional or edge habitat. Areas of weed infestations should be avoided.

Five (5) vascular plant species of conservation concern within 100 m of the Lake based on the desktop HABISask review. Species status under provincial and federal regulations are summarized in Table 3.2 and provided in Appendix D.

Table 3.2 – Plant Species of Conservation Concern near the Lake

Species	Scientific Name	Provincial Status [A]	Federal Status [B]
Bushy cinquefoil	*Potentilla supina ssp. paradoxa*	S3	-
Crowfoot violet	*Viola pedatifida*	S3	-
Eastern yellow stargrass	*Hypoxis hirsuta*	S2	-
Mucronate blue-eyed grass	*Sisyrinchium mucronatum*	S3	-
Pallas' bugseed	*Corispermum pallasii*	S2	-

Notes:
[A] SKCDC 2025.
[B] Species at Risk Act (S.C. 2002, c. 29).

3.6 Wildlife

The waterbody and surrounding riparian habitat, along with areas of naturalized aspen parkland within the study area provide high quality habitat for numerous breeding bird and wildlife species including amphibians and/or Species-at-Risk (SAR), while the recreational areas could provide low- to medium-quality edge habitat. The study area is located within nesting zone B4, which has a regional nesting period between mid-April to late-August (ECCC 2025c).

Four (4) wildlife species of conservation concern were identified within 1000 m of the Lake based on the desktop HABISask review. Species status under provincial and federal regulations are summarized in Table 3.3 and provided in Appendix D.

The HABISask screening report also provides a list of “expected species”. This is a list of species that might utilize the Lake area based on predictive modeling regardless of whether they have been recorded in the study area. A summary of species that might utilize habitat near the Lake are listed in Table 3.4.

Table 3.3 – Wildlife Species of Conservation Concern near the Lake

Species	Scientific Name	Provincial Status [A]	Federal Status [B]
Barn swallow	*Hirundo rustica*	S4B	Threatened [C]
Common nighthawk	*Chordeiles minor*	S4B	Special Concern
Peregrine falcon	*Falco peregrinus*	S4B	-
Western grebe	*Aechmophorus accidentalis*	S3B	Special concern

Notes:
[A] SKCDC 2025.
[B] Species at Risk Act (S.C. 2002, c. 29).
[C] Species under consideration for a status change from Threatened to Special Concern.

Table 3.4 – Potential Additional Wildlife Species of Conservation Concern near the Lake

Species	Scientific Name	Provincial Status [A]	Federal Status [B]
Monarch butterfly	*Danaus plexippus plexippus*	S2B, SNRM	Endangered
American badger	*Taxidea taxus taxus*	S3	Special Concern
Baird's sparrow	*Centronyx bairdii*	S4B, N4M	Special Concern
Bank swallow	*Riparia riparia*	S4B, S5M	Threatened
Bobolink	*Dolichonyx oryzivorus*	S5B	Threatened [C]
Common nighthawk	*Chordeiles minor*	S4B	Special Concern
Horned grebe	*Podiceps auritus*	S4B	Special Concern
Northern harrier	*Circus hudsonius*	S4B	-
Sprague's pipit	*Anthus spragueii*	S3B	Threatened

Notes:
[A] SKCDC 2025.
[B] Species at Risk Act (S.C. 2002, c. 29).
[C] Species under consideration for a status change from Threatened to Special Concern.

4.0 Hopkins Lake Watershed

The terrain assessment portion of the work included a lake water balance and a nutrient balance to help characterize Hopkins Lake and the potential influence of Lake conditions by the upstream watershed.

4.1 Watershed Area

The Hopkins Lake watershed drains from south to north from Rousay Lake and York Lake but not including these upstream lakes, which are both part of other watersheds. The upstream watershed drains via road ditches and other intermittent water bodies. Downstream of Hopkins Lake are ditch diversions and a tributary to Yorkton Creek north of the City.

Hopkins Lake is in the Aspen Parkland Ecoregion within the Prairies Ecozone of Canada (CCEA 2014). The natural landscape is dominated by trembling aspen and deciduous wooded areas, mixed tall shrubs and intermittent fescue grasslands. Due to the prevalence of fertile black chernozemic soils and a favorable climate, much of the ecoregion has been developed into highly productive agricultural land (CCEA 2014). There is a large wetland complex (about 7.2 ha) immediately upstream of the Lake on the south side that is managed by Ducks Unlimited Canada (DUC). Further upstream (0.5 km) is the Ravine Ecological Reserve at the Gallagher Center Grounds plus Deer Park Golf Course and other residential and agricultural areas.

The Lake does not appear to be physically connected across Park Road to the DUC wetland. Park Road forms a barrier that isolates Hopkins Lake from the natural creek flow, and a culvert connection was not observed during the site investigations.

The upstream watershed area was subsequently measured as two scenarios:

- 1,786 ha total upstream natural watershed area assuming Hopkins Lake has a culvert connection across Park Road from the DUC wetland.
- 91 ha effective drainage area east of Park Road with no culvert connection across Park Road.

The watershed boundary and effective drainage area was measured using the CanElevation High Resolution Digital Elevation Model, the National Hydrography Network, professional opinion, and field observations by Clifton staff.

4.2 Water Balance

A water balance analysis was completed to help identify limits for lake sustainability, and to support a nutrient water balance analysis of possible impacts due to upstream sources of non-point pollution such as runoff from agricultural areas. As part of the terrain assessment, the watershed boundary and effective drainage area was measured using the CanElevation High Resolution Digital Elevation Model, the National Hydrography Network, professional opinion, and field observations by Clifton staff.

The water balance assumed the following:

- There is no upstream connection to Rousay Lake or York Lake, based on available topography and hydrography.
- 379 mm per year annual average precipitation based on the Yorkton climate station (climate ID: 4019073, elevation: 498.4 m) which is about 5 km north of the Lake. The Yorkton station is operated by the Meteorological Service of Canada. The precipitation data is recorded hourly. The average annual precipitation is based on data from 2005 to 2025.
- 800 mm per year lake evaporation based on published rates (den Hartog & Ferguson, 1978).
- 40 mm per year runoff or about 10% of precipitation, based on the Water Survey of Canada (WSC) flow monitoring station Smith Creek near Marchwell from 2021 to 2025 (Station 05ME007, effective drainage area: 5,780 ha), about 77 km southeast of the Lake.

The water balance results are summarized in Table 4.1 for long-term annual average conditions for both the total upstream watershed area (i.e. assuming a culvert connection to the DUC wetland), and for the effective drainage area east of Park Road. The total watershed area scenario is likely not realistic because there was no observed culvert connection along Park Road between the Ducks Unlimited wetland and Hopkins Lake.

The water balance does not account for groundwater interactions with the lake, as suggested by Beckie (2024). Therefore, the effective drainage area scenario provides a rough estimate for the average groundwater discharge rate from the surficial aquifer to the lake of 1,315 m^3 per year, or about 2.5 L per minute.

Table 4.1 – Hopkins Lake Water Balance

Parameter	Natural Watershed Area	Effective Drainage Area (East of Park Road)
A: Net Evaporation		
Lake surface area (ha)	8	8
Gross Evaporation (mm)	800	800
Precipitation (mm)	379	379
Net Precipitation (mm)	-421	-421
Net Evaporative Loss (m^3)	-34,688 [A]	-34,688 [A]
B: Inflow		
Watershed area (ha)	1,786	91
Runoff (mm)	40	40
Waterbody Inflow (m^3)	713,266 [B]	33,373 [C]
A+B: Water Balance		
Annual average water balance (m^3 per year) [D]	678,578	-1,315

Notes:
[A] Evaporation Loss calculations are for lake surface area of 0.08 km^2.
[B] Runoff Rate calculations are for a watershed area of 17 km^2 to the lake.
[C] Runoff Rate calculations are for a watershed area of 0.9 km^2 to the lake.
[D] (+) inflow exceeds outflow (lake will discharge from outlet).
(-) outflow exceeds inflow (no discharge from outlet).

4.3 Nutrient Balance

A rough nutrient balance was also derived for the natural upstream watershed to illustrate the potential flux or impact of upstream non-point pollution to Hopkins Lake.

The potential nutrient loading rates to Hopkins Lake were estimated from Agriculture and Agri-Food Canada's 2024 annual crop inventory data (Government of Canada, Sept 2025) and nutrient export coefficients for the Parkland Natural Region (Donahue, 2013) using both the natural watershed and effective drainage areas upstream of the lake. The watershed land cover classes and measured portions

are listed in Table 4.2, based on the delineated areas shown on Figure 4 in Appendix A. Three parameters were selected to represent the overall contributions of upstream areas to creek water quality: total nitrogen, total phosphorus, and total suspended solids. A summary of potential nutrient loading to Hopkins Lake can be found in Table 4.3.

Table 4.2 – Nutrient Loading Rates

Class	Land Cover (%)		Export Coefficient (kg/ha/yr)		
	Natural Watershed	Effective Drainage Area	Total Nitrogen	Total Phosphorus	Total Suspended Solids
Cereal Crop	39.82	12.86	6.23	2.01	4.7
Conifer	0.05	0.50	1.88	0.05	380.0
Forage Crop	12.39	0.00	9.35	2.01	4.7
General agriculture	7.37	0.00	5.01	0.43	121.0
Hardwood	4.87	11.51	2.36	0.22	433.0
Native grassland	1.60	0.21	0.19	0.04	32.0
Natural unvegetated	1.86	4.59	2.95	0.22	N/A
Rural non-farmland	0.01	0.00	1.41	0.12	28.0
Shrubland	0.31	0.40	2.07	0.37	336.0
Urban	25.13	50.11	3.48	0.72	156.0
Water [A]	3.43	9.25	0.00	0.00	0.0
Wetland [A]	3.18	9.44	0.00	0.00	0.0

Notes:
[A] Water and wetland landcover classes are assumed to have export coefficients of 0 for all parameters.

Table 4.3 – Potential Nutrient Loading

Parameter	Natural Watershed Area	Effective Drainage Area (East of Park Road)
Area (ha)	1,786	91
Total nitrogen (kg/yr)	9,033	265
Total phosphorus (kg/yr)	2,284	59
Total suspended solids (kg/yr)	130,917	132

5.0 Observations

The available information presented in the preceding sections highlight the following observations related to the potential revitalization of Hopkins Lake:

- The size of Hopkins Lake is significantly smaller compared to 1890 when Yorkton was settled, due to isolation of the lake after development of Park Road.
- Hopkins Lake appears to be isolated from the natural upstream watershed by Park Road because there does not appear to be a culvert connection to the DUC wetland. We assume that any culvert connection was either overgrown or avoided to improve water quality in Hopkins Lake that might otherwise be influenced by a high nutrient loading similar to the DUC wetland.
- A groundwater connection, both natural and managed likely helps to sustain the Lake. Without the groundwater connections, the Lake might be intermittent and exist only in wet years.
- The Lake water quality is good for recreational uses due to low e coli, clear water, and low nutrients that might otherwise result in emergent vegetation similar to the DUC wetland.
- The Lake water quality does not appear to be degraded by runoff from Wiggley Field Dog Park, a potentially significant contributor of e coli that might impact the recreation potential of the Lake.
- The Lake water quality is not suitable for fish, due to high dissolved solids, high chloride, high conductivity, and relatively high pH that is consistent with local groundwater.
- Isolation of the local groundwater to Hopkins Lake may help to improve fish habitat suitability near the downstream Yorkton Creek.
- The Lake shoreline appears unchanged in the past 40 years when air photo records are available.
- The Lake sediment has accumulated a relatively thin (<0.2 m) layer of soft sediment since the Lake was operated as a swimming area about 40 years ago.

It's also possible that the previous beach development resulted in declining use over time due to poor water quality from over-use. The declining water quality may have included contaminants from recreational users, including the accumulation of E-coli. The previous development likely did not include lake circulation or make-up water sufficient to maintain good Lake water quality.

6.0 Revitalization Options

The existing Lake water quality is good for recreational uses, with clear water, adequate dissolved oxygen, low nutrient concentrations, and low E-coli levels. There are no fish present, which has been confirmed through City testing (not documented).

The revitalization of Hopkins Lake as an asset for the City could consider several opportunities to develop the recreation potential of the Lake.

Other opportunities were not considered, such as:

- Re-naturalization of the Lake was not selected as a priority.
- Potential flood control benefits of using the Lake to reduce downstream flooding was also not considered, assuming the DUC wetland and the relatively small culverts near the Yorkton City Campground provide adequate flood protection to downstream areas north of Highway 16.
- Reconnecting Hopkins Lake to the upstream watershed to sustain the Lake was not considered because a connection to the upstream watershed is likely not needed to sustain the Lake due to existing groundwater discharges to the Lake, and a flow connection may degrade the Lake water quality due to nutrient loadings from agricultural and urban areas.

Subsequent sections describe a preliminary list of the potential (recreation) revitalization options. The options are also illustrated on Figure 5 in Appendix A.

6.1 Restore Jaycee Beach

This option involves restoring the beach on the northeast corner of the Lake along 150 m of shoreline.

The work would include removing up to 0.2 m of accumulated organic sediment and vegetation for about 6200 m^2, followed by the placement of about 0.15 m of new sand to replenish and restore the beach area.

6.2 Regrade Dog Park

Wiggley Field Dog Park could be re-graded so that local drainage is directed away from the Lake and toward the treed area along the south side of the dog park where the vegetated area can provide a measure of natural treatment to the runoff. This measure is intended to create a natural treatment buffer between the dog park and the Lake, reducing the risk of E-coli contamination entering the lake near Jaycee Beach.

The earthworks to re-direct drainage to the wooded area are likely 0.5 m x 4800 m^2.

6.3 Groundwater Makeup Water

The existing groundwater well makeup water could be reconnected to increase the amount of groundwater discharge to the Lake, and to withdraw potential surplus water for release to the DUC wetland. The purpose of the enhanced makeup water system is to turn over the Lake water so that the lake water is less stagnant, to avoid the accumulation of E-coli and other pollution due to enhanced recreation use.

The makeup water system would utilize the existing groundwater well but would need to bury the groundwater pipe, and to install an intake and pump house along Park Road near the DUC wetland.

6.4 Lake Water Recirculation

A pumped circulation system could be installed to maintain dissolved oxygen levels and to enhance the natural treatment of lake water. The recirculation system could be installed near the former fire water dugout and discharged to a surface water feature in the treed area that would drain back to the Lake. This new surface water connection would provide natural treatment value for lake water, help to circulate water between the south and north ends of the Lake, and help to drain the treed area which is currently marshy and stagnant.

The recirculation system would involve an intake along the shoreline, a pump house, about 200 m of piping, and about 150 m of natural channel water features flowing back to the Lake.

6.5 Excavate Deep Lake Areas

Additional excavation could be undertaken around the north side of the existing peninsula (near the former fire water dugout) to increase the amount of deep habitat and to provide a borrow source for re-grading the dog park. This borrow source would avoid hauling from offsite locations and potential introduction of weeds to the dog park and other park areas.

The dredging likely involves a 2 m excavation over an area up to 1300 m^2.

6.6 Dredge Creek Along Park Road

This option involves dredging the creek between Park Road and the campground to improve flood conveyance. Importantly, this approach would not disturb the Lake itself, focusing solely on improving flow capacity along the creek corridor without affecting the DUC wetland levels.

The dredging likely involves removal of vegetation and soft sediment along 400 m of channel adjacent to Park Road.

6.7 Other Aesthetic and Recreation Options

A range of aesthetic and recreational enhancements could be implemented alongside physical Lake improvements. These include:

- Enhance the existing trail system by creating a continuous looped walking path to circumnavigate the Lake, including an offshore 200 m long boardwalk for pedestrians to avoid the Highway 16 right-of-way.
- Plant a green belt corridor along Highway 16 to provide both a wind break and noise attenuation from the road.
- Reconfigure the former fire water dugout into a boating club house and dock area.
- Configure a summer boating course for events over a 500 m distance, incorporating a launch area along the boardwalk and a turnaround area at the south end of the Lake.
- Clear a 1 km long winter path for ice skating, including a warm-up area at the clubhouse and dock area.
- Remove the floating wetlands.

7.0 Cost Estimates

A high-level cost estimate was developed assuming the City of Yorkton will proceed with all the options. The range of cost is presented in Table 7.1. Cost assumptions and a breakdown of costs for each option is provided in Appendix F. The range of cost is based on Association for the Advancement of Cost Engineering (AACE) Class 5 estimates, and costs are rounded to the nearest $1,000. Operating costs are not included in the estimate, such as the cost of boats or lifeguards or repairs or electricity or pump replacement.

Note that for a proposed club house the range of cost may be greater than presented, depending on the selected amenities. The cost estimate as presented is a rough cost that is intended to supply a basic level of infrastructure not including power and water supplied by the City.

Table 7.1 – Cost Estimation Summary

Scope	Estimated Cost	Low Range (-30%)	High Range (+50%)
Engineering	$67,000	$47,000	$101,000
Environmental	$23,000	$17,000	$35,000
Construction	$1,755,000	$1,230,000	$2,633,000
Construction support	$62,000	$44,000	$93,000
Total	**$1,907,000**	**$1,338,000**	**$2,862,000**

8.0 Permitting Considerations

There are numerous permits and approvals which may be applicable pending the selection of a conceptual design for a Hopkins Lake revitalization project. Upon selection of the preferred option, a review of which permit applications are required can be narrowed accordingly. Potential permits and approvals for the Hopkins Lake revitalization options are listed in Table 8.1.

All proposed options are limited to work on quarter sections NE-03-26-04-W2 and NW-03-26-04-W2. Both of these quarter sections are NOT Heritage Sensitive, hence any work on these quarter sections have heritage clearance to proceed under *The Heritage Property Act (*Appendix E*).*

Hopkins Lake is currently zoned as PR-1 (ES) which is defined as Parks and Recreation – Environmentally Sensitive by the City of Yorkton (City of Yorkton 2025a). Additional information may be required when preparing and submitting a Development Permit, such as erosion and sediment control measures, including information pertaining to sensitive environmental features, or undertaking and providing the results of any additional environmental studies or mitigation plans as requested by the City (City of Yorkton 2003).

Table 8.1 – Potential Permits and Approvals

Permit/Approval	Legislation	Description
Federal		
Request for Review / Authorization	*Fisheries Act*	A Request for Review (RfR) should be submitted to Fisheries and Oceans Canada (DFO) to determine if an Authorization is required, supported by an aquatic habitat assessment.
Avoid Harm to Migratory Birds and Eggs/Nests.	*Migratory Birds Convention Act*	There is potential for migratory birds to be present. Best practice is to avoid work during nesting season (Nesting Zone B4: April 20 - August 25). If this is not possible, a biologist can be consulted to outline appropriate mitigation measures.
Avoid Harm to Species at Risk	*Species at Risk Act*	Legislation protects species at risk. There are historical occurrences of several federal species at risk in the area. A biologist should be consulted to outline mitigation measures.
Provincial		
Self-Assessment Checklist	*The Environmental Assessment Act*	The self-assessment process can be used to confirm whether a Technical Proposal should be submitted for screening.

Table 8.1 – Potential Permits and Approvals

Permit/Approval	Legislation	Description
Aquatic Habitat Protection Permit	*The Environmental Management and Protection Act, 2010*	Permit is required for any work in the bed, bank, or boundary of a water body or watercourse or any discharge with an adverse effect on water, as per the Act and the Environmental Management and Protection Regulations.
Approval for Drainage Works	*Water Security Agency Act* and Regulations	Approval is required for drainage works.
Permit to Conduct a Groundwater Investigation	*Water Security Agency Act* and Regulations	To drill or improve a groundwater well.
Water Rights Licence (Temporary/Permanent)	*Water Security Agency Act* and Regulations	For use of surface water.
Special Collections Permit	*The Fisheries (Saskatchewan) Act, 2020* and Regulations	For fish collection and/or fish salvage, if the Lake is characterized as potential fish habitat.
Research Permit	*The Wildlife Act, 1998*	To conduct biological surveys.
Activity Restriction Guidelines for Sensitive Species	*The Wildlife Act, 1998* and *The Wild Species at Risk* Regulations	Legislation protects wildlife species and species at risk. There are historical occurrences of several protected species in the area. The Activity Restriction Guidelines provide guidance on setbacks for sensitive species. A biologist should also be consulted to outline mitigation measures to protect species at risk.
Municipal		
Development Permit	*Planning and Development Act, 2007*	In accordance with the City of Yorkton Bylaw No. 14/2003, a development permits is required for excavation, stripping, and levelling of land.

9.0 Recommendations

9.1 Conclusions

This report documents a portfolio of possible revitalization enhancements consistent with the City's priority of revitalizing the Lake for recreational uses. Hopkins Lake should be considered to have good potential for recreational use because of the high quality of the existing lake water, and the presence of groundwater to sustain the lake. Revitalization of the previous beach enhancements, or similar improvements, are possible. Revitalization of the beach may be threatened by E-coli contamination of long-term drainage from the dog park to the lake, and by mixing drainage from the natural upstream watershed. Both threats can be mitigated. The Lake should not be considered for fish stocking due to poor water chemistry for fish, and there do not appear to be any environmental fatal flaws.

9.2 Recommended next steps

The following next steps are recommended:

- City of Yorkton to accept/reject/refine the revitalization study report.
- Monitoring of winter ice thickness and Lake water quality in 2026.
- Phase I Environmental Site Assessment (ESA) to determine the potential for pre-existing soil and ground water contamination. This is typically required to support a municipal Development Permit application.
- Aquatic habitat desktop assessment to determine whether Hopkins Lake should be considered fish habitat, to support an RfR submission to DFO.
- A wetland assessment to classify and delineate any waterbodies or watercourses, to characterize the nature and extend of potential impacts and support permitting requirements.
- A field assessment in spring 2026 of:
  - Wildlife habitat to identify potential sensitive wildlife features (i.e. active burrows, dens, nests etc.).
  - Vascular plant species of conservation concern, and to identify existing patches of invasive weeds.
  - Breeding birds and amphibians following provincial guidelines to inform additional Restricted Activity Periods (RAP) or mitigations.
- Design basis report for lake recirculation, makeup water, and withdrawal of surplus water including reliance on the previous Beckie hydrogeological report to estimate the likely limits to groundwater supply.
- Conceptual design engineering for approval by the City.
- Detailed engineering.
- Regulatory approval applications, and development of an environmental management plan (EMP).
- Operational guidelines for maintaining the Lake revitalization.

Several baseline biophysical assessments should be completed to verify the desktop assessments and to clarify potential required mitigations.

10.0 Limitations

This report is intended as a preliminary study to identify potential revitalization options for Hopkins Lake. The findings are based on publicly available datasets at the time of the review (including current satellite imagery, provincial data sets, and mapping tools), and a limited number of field surveys.

This report was prepared by Clifton Engineering Group Inc. for the use of the City of Yorkton and their agents for specific application to the Hopkins Lake Revitalization Project located at Yorkton, SK. The material in it reflects Clifton Engineering Group Inc.'s best judgment at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Clifton Engineering Group Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

This report has been prepared in accordance with generally accepted standards of water resources engineering common to the local area. No other warranty, expressed or implied, is made.

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Appendix A
Figures

Clifton

LEGEND

EXISTING GROUND (0.5 m CONTOUR)

REFERENCES:

- EODMS IMAGERY: 14 JUNE 1989.
- GOOGLE IMAGERY:11 MAY 2024.
- TOPOGRAPHY FROM GOVERNMENT OF CANADA CANADIAN DIGITAL ELEVATION MODEL, HRDEM MOSAIC.
- BATHYMETRIC SURVEY BY CLIFTON DATED 1 OCTOBER 2025.

Clifton

CLIENT
THE CITY OF YORKTON

PROJECT
HOPKINS LAKE REVITALIZATION STUDY

TITLE
HISTORICAL AERIAL PHOTOS

PROJECT NO.	CHECKED BY	FIG NO.
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FILE NAME	DRAWN BY	
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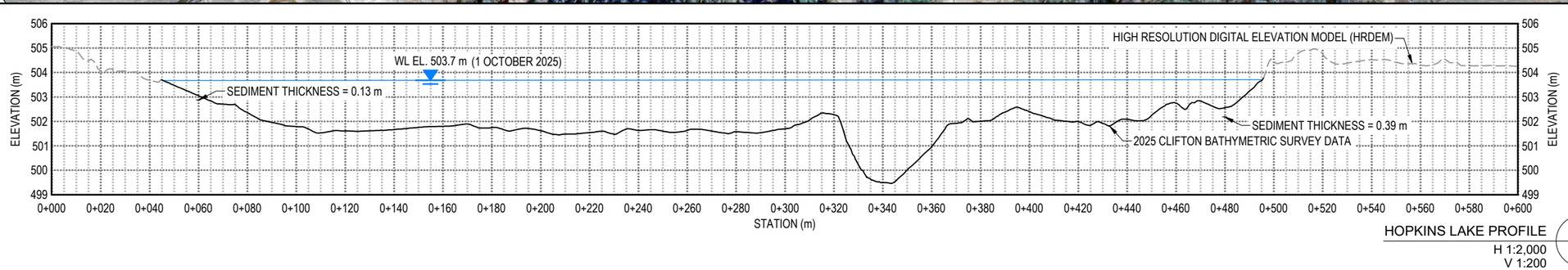
	DATE	
	2026-01-06	



HOPKINS LAKE PROFILE
H 1:2,000
V 1:200
A
--

LEGEND

EXISTING GROUND (0.5 m CONTOUR)

EXISTING FEATURES

OUTFALL

SEDIMENT THICKNESS

- 0 m - 0.1 m
- 0.1 m - 0.2 m
- 0.2 m - 0.3 m
- 0.3 m - 0.4 m
- 0.4 m - 0.5 m
- 0.5 m -0.6 m

HOPKINS LAKE WATER QUALITY	
PARAMETER	**COMMENT**
E COLI	SAFE FOR SWIMMING
DISSOLVED OXYGEN	HIGH QUALITY
TOTAL SUSPENDED SOLIDS	CLEAR WATER
NITRATE	NO AGRICULTURAL OR MUNICIPAL RUNOFF
PHOSPHORUS	NO AGRICULTURAL RUNOFF
TOTAL DISSOLVED SOLIDS	POOR FOR FISH
CHLORIDE	POOR FOR FISH
CONDUCTIVITY	POOR FOR FISH
pH	POOR FOR FISH

REFERENCES:

- GOOGLE IMAGERY:11 MAY 2024.
- TOPOGRAPHY FROM GOVERNMENT OF CANADA CANADIAN DIGITAL ELEVATION MODEL, HRDEM MOSAIC.
- BATHYMETRIC SURVEY BY CLIFTON DATED 1 OCTOBER 2025.

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CLIENT
THE CITY OF YORKTON

PROJECT
HOPKINS LAKE REVITALIZATION STUDY

TITLE
HOPKINS LAKE EXISTING CONDITIONS

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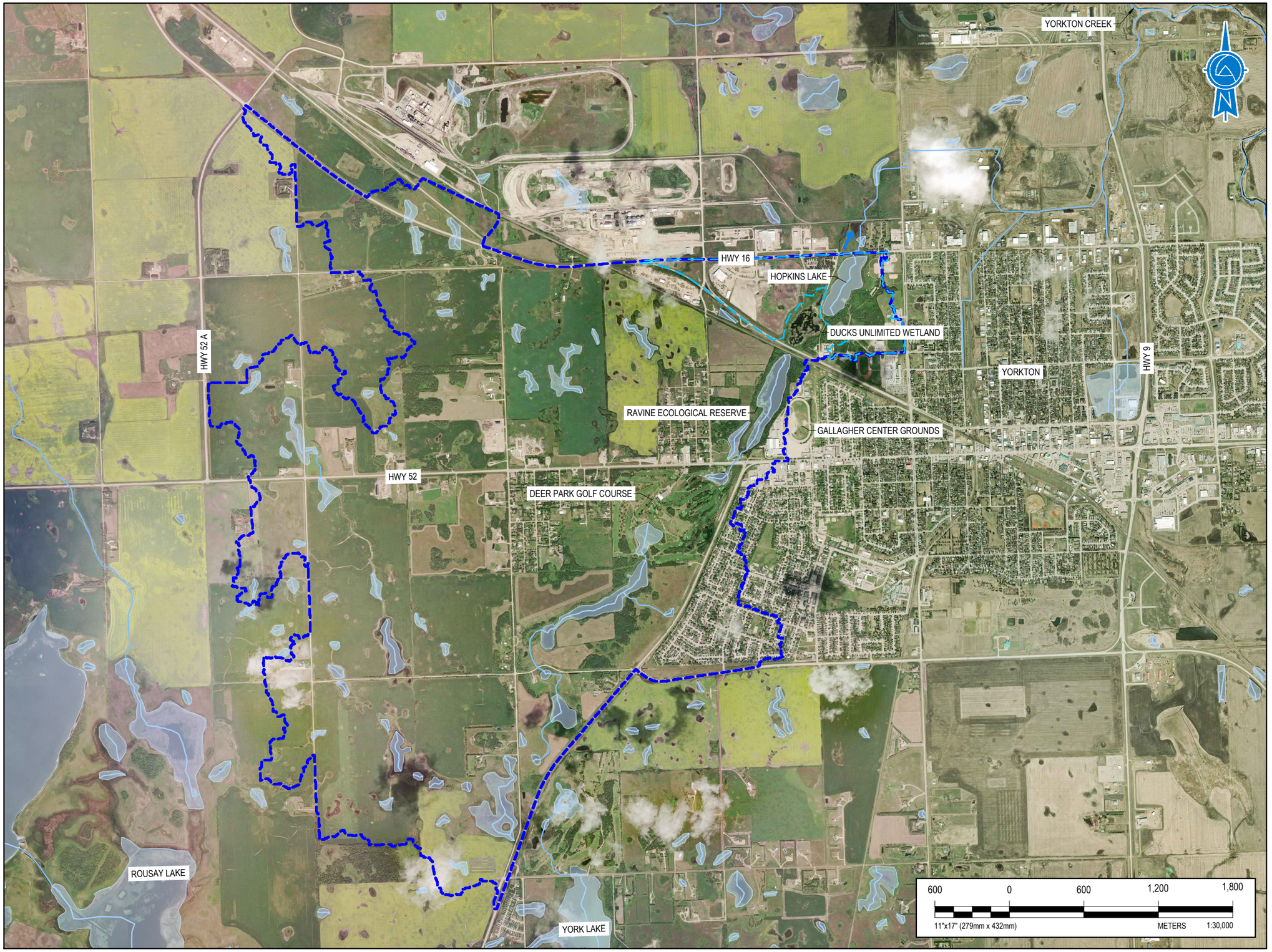
	DATE	
	2026-01-06	



LEGEND

NATURAL WATERSHED AREA

EFFECTIVE DRAINAGE AREA

HYDROGRAPHY

NOTES:

1. DRAINAGE AREA = 17.6 km², FROM HIGH RESOLUTION DIGITAL ELEVATION MODEL (HRDEM) - CANELEVATION SERIES.

REFERENCE(S):

- GOOGLE IMAGERY:11 MAY 2024.
- HYGROGRAPHY FROM THE GOVERNMENT OF CANADA NATIONAL HYDRO NETWORK.

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CLIENT
THE CITY OF YORKTON

PROJECT
HOPKINS LAKE REVITALIZATION STUDY

TITLE
HOPKINS LAKE DRAINAGE AREA

PROJECT NO.	CHECKED BY	FIG NO.
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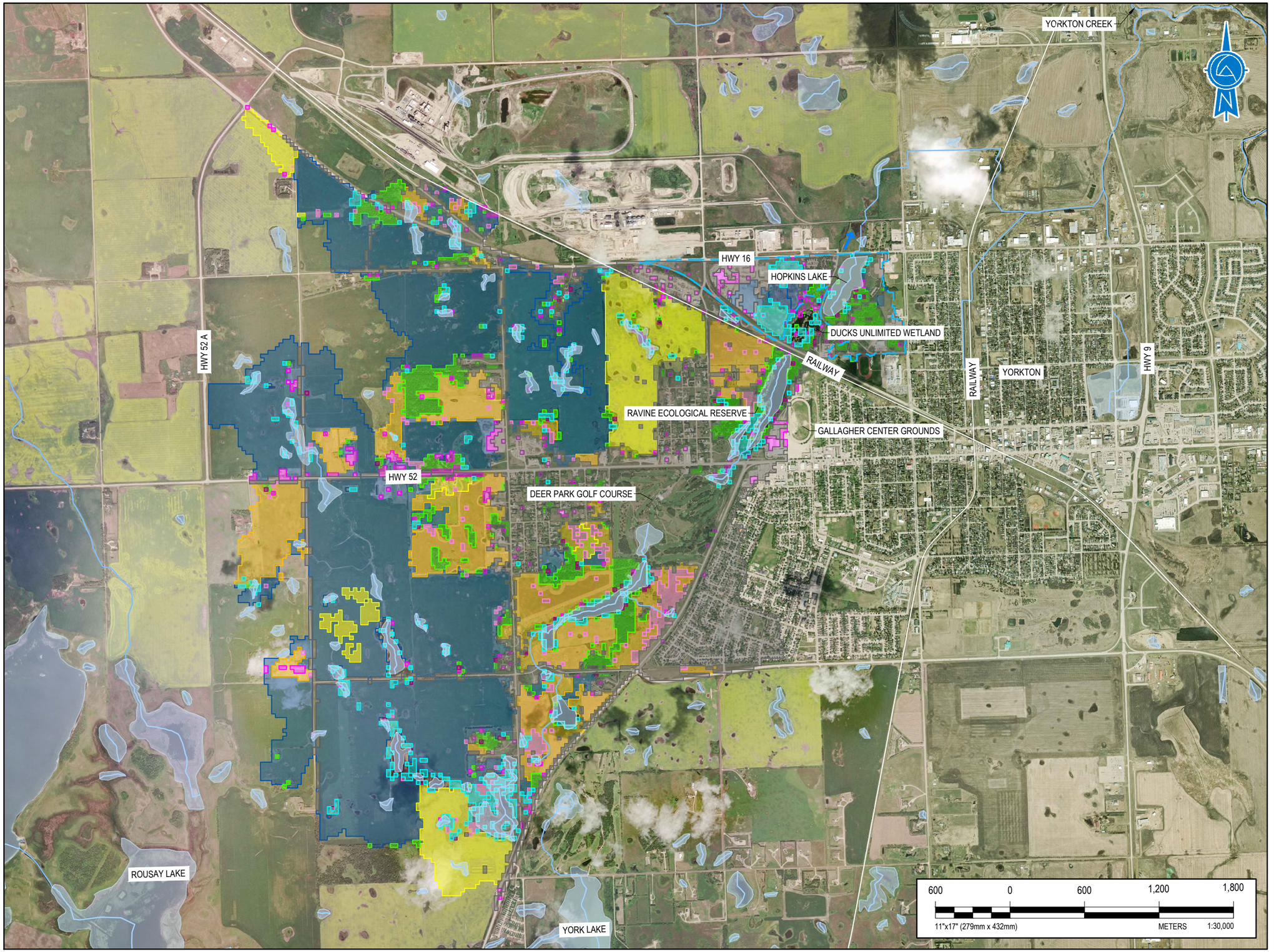

LEGEND

- HYDROGRAPHY
- CEREAL CROP
- CONIFER
- FORAGE
- GENERAL AGRICULTURE
- HARDWOOD
- NATIVE GRASSLAND
- NATURAL UNVEGETATED
- RURAL
- SHRUBLAND
- URBAN
- WETLAND
- EFFECTIVE DRAINAGE AREA
- RAILWAY

REFERENCE(S):

- GOOGLE IMAGERY:11 MAY 2024.
- HYGROGRAPHY FROM THE GOVERNMENT OF CANADA NATIONAL HYDRO NETWORK.
- LAND USE ADAPTED FROM GOVERNMENT OF CANADA ANNUAL CROP INVENTORY 2024.

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THE CITY OF YORKTON

PROJECT
HOPKINS LAKE REVITALIZATION STUDY

TITLE
HOPKINS LAKE WATERSHED LAND USE

PROJECT NO.	CHECKED BY	FIG NO.
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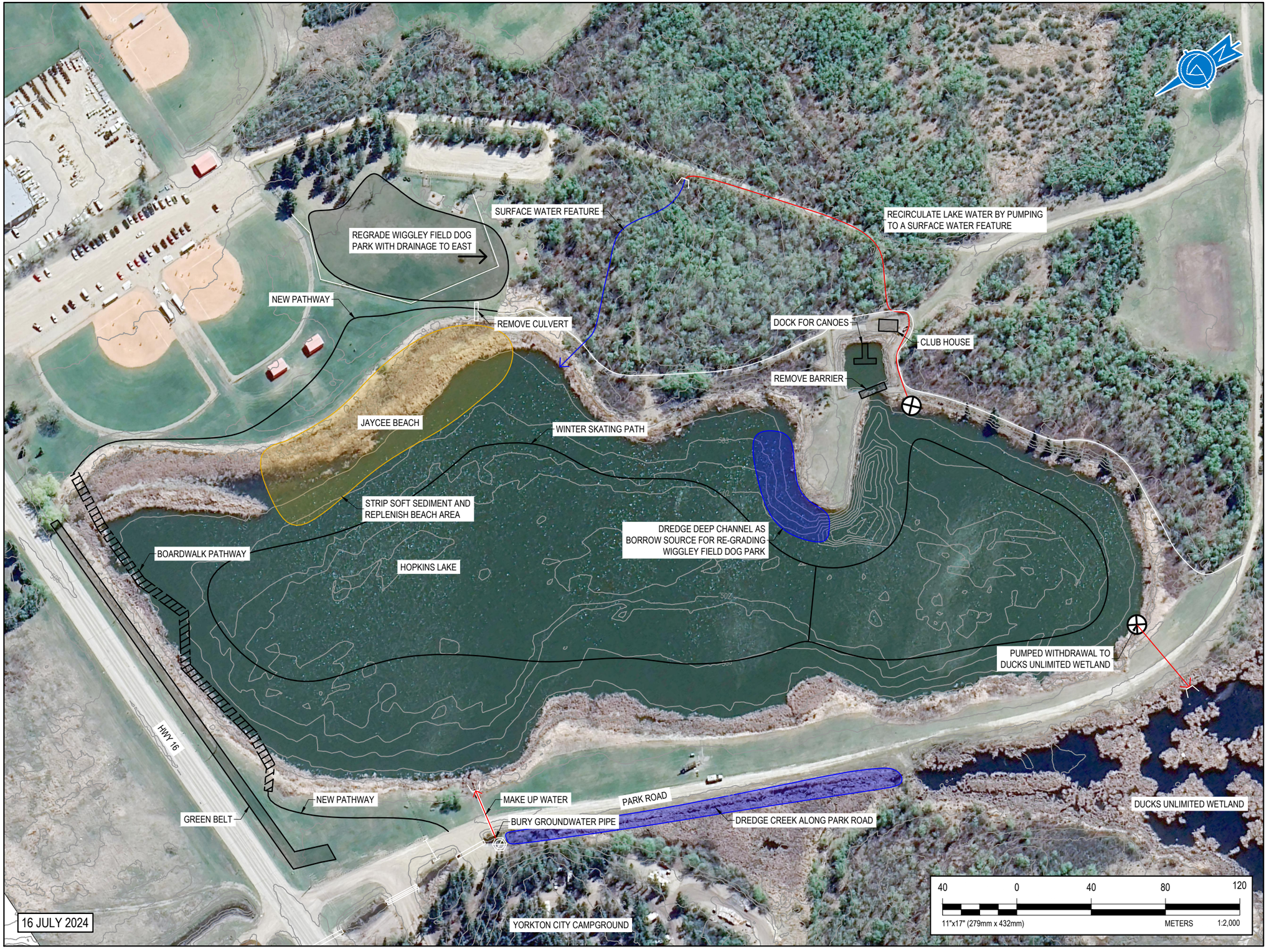


LEGEND

- EXISTING GROUND (0.5 m CONTOUR)
- EXISTING FEATURES
- DESIGN FEATURES
- PUMP
- OUTFALL
- PIPE
- SURFACE WATER

REVITALIZATION OPTIONS:

1. RESTORE JAYCEE BEACH.
2. REDUCE THE POTENTIAL FOR E-COLI CONTAMINATION BY RE-GRADING WIGGLEY FIELD TO DIRECT RUNOFF TOWARDS THE WOODED AREA AND REMOVE THE EXISTING CULVERT OUTLET TO THE LAKE.
3. MAINTAIN THE LAKE LEVEL WITH MAKE UP WATER INFLOW FROM THE EXISTING GROUNDWATER WELL, PLUS PUMPED WITHDRAWAL TO THE DUCKS UNLIMITED WETLAND.
4. RECIRCULATE LAKE WATER BY PUMPING TO A SURFACE WATER FEATURE THAT DRAINS BACK TO THE LAKE.
5. EXCAVATE AN ADDITIONAL DEEP WATER AREA TO INCREASE THE DEEP WATER HABITAT AREA AND SUPPLY A BORROW SOURCE FOR OTHER EARTHWORKS AROUND THE LAKE.
6. DREDGE THE EXISTING CREEK CHANNEL ON THE WEST SIDE OF PARK ROAD TO IMPROVE FLOOD CONVEYANCE.
7. CONSIDER ADDITIONAL AMENITIES SUCH AS A PATHWAY/BOARDWALK TO CIRCUMNAVIGATE THE LAKE, GREEN BELT TO ATTENUATE WIND AND ROAD NOISE, DOCK FOR BOATS AND WINTER SKATING PATH.
8. AVOID RECONNECTING HOPKINS LAKE TO THE DUCKS UNLIMITED WETLAND DUE TO POTENTIAL WATER QUALITY ISSUES FROM THE UPSTREAM WATERSHED.
9. AVOID STOCKING THE LAKE WITH FISH DUE TO POOR WATER CHEMISTRY FOR FISH.

REFERENCES:

- GOOGLE IMAGERY:11 MAY 2024.
- TOPOGRAPHY FROM GOVERNMENT OF CANADA CANADIAN DIGITAL ELEVATION MODEL, HRDEM MOSAIC.
- BATHYMETRIC SURVEY BY CLIFTON DATED 1 OCTOBER 2025.

Clifton

CLIENT
THE CITY OF YORKTON

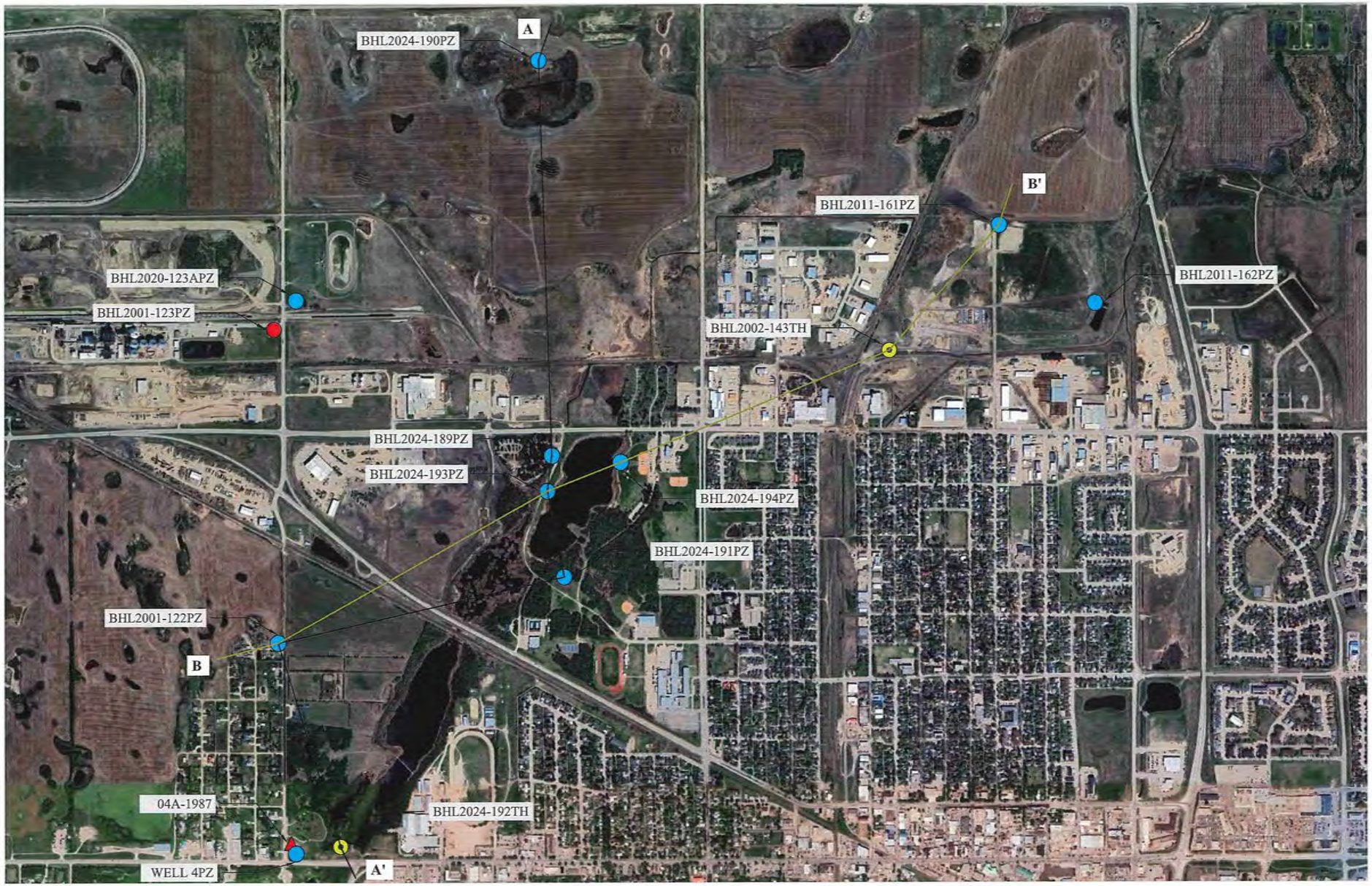
PROJECT
HOPKINS LAKE REVITALIZATION STUDY

TITLE
REVITALIZATION OPTIONS

PROJECT NO.	CHECKED BY	FIG NO.
R6847	MB	5
FILE NAME	DRAWN BY	
S6847-AP	KT	
	DATE	
	2026-01-06	

Appendix B
Groundwater Characterization

Clifton



BECKIE HYDROGEOLOGISTS

ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF SASKATCHEWAN

CERTIFICATE OF AUTHORIZATION

BECKIE HYDROGEOLOGISTS (1990) LTD.

NUMBER 664

PERMISSION TO CONSULT HELD BY:

DISCIPLINE	SASK. REG. No.	SIGNATURE
APPLIED HYDROGEOLOGY	28620	S.M.FAMULAK

PROFESSIONAL ENGINEER
S.M. FAMULAK
MEMBER 28620
2025 YEAR 10 MONTH 31 DAY
SASKATCHEWAN

ACAD FILE: HOPKINSLAKE_XSECTIONS.DWG

DRAWN BY: TYLER SMITH

CHECKED BY: STEVE FAMULAK, P.ENG.

DATE: OCTOBER 31, 2025

SCALE: SEE SCALE BAR

DESCRIPTION:
RECORD DRAWING

DRAWING No.:	REVISION No.:
1	0

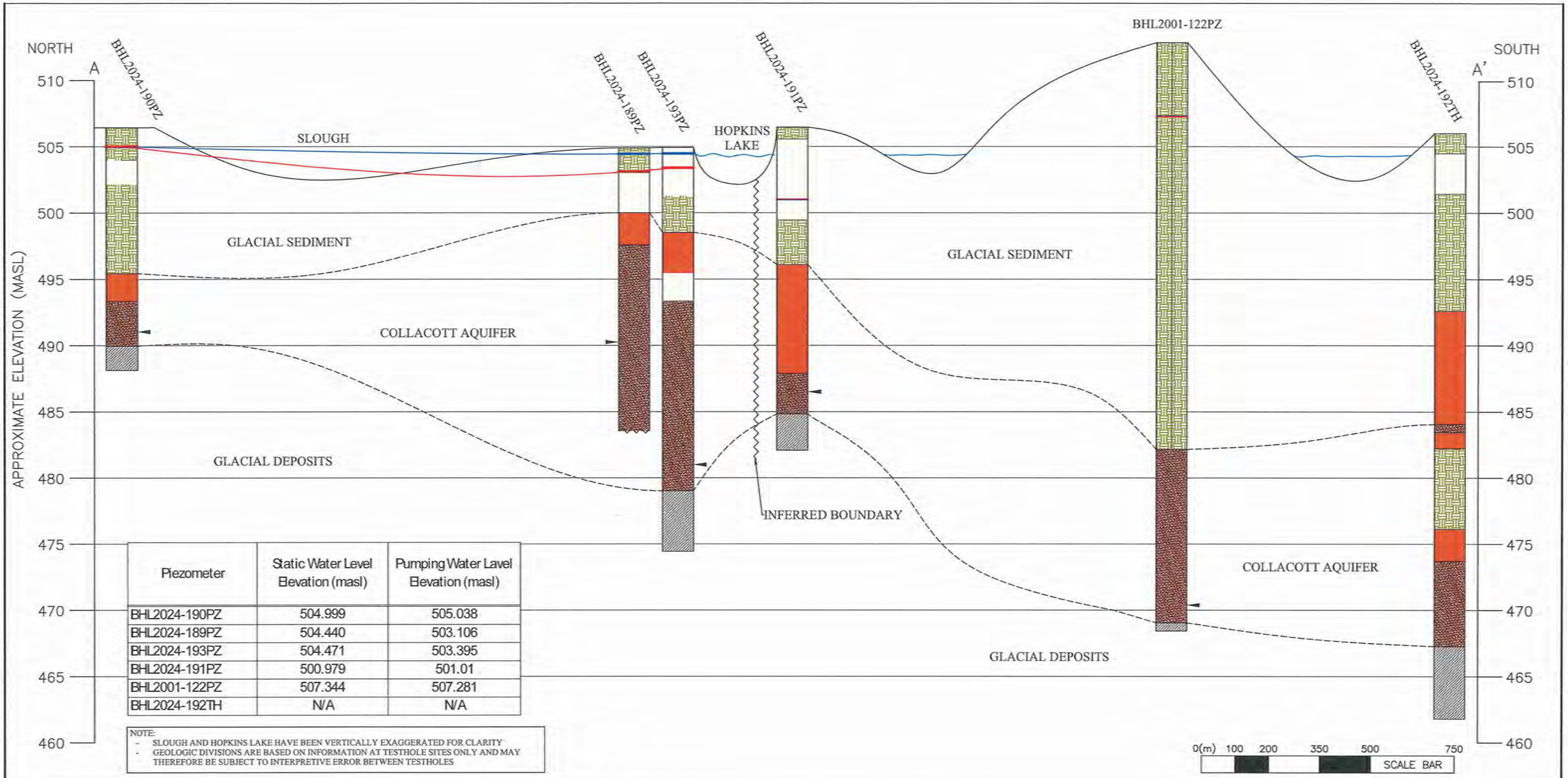
LEGEND:

- WATER SUPPLY WELL
- BHL PIEZOMETER
- SRC PIEZOMETER
- DECOMISSIONED PIEZOMETER
- DECOMMISSIONED WATER SUPPLY WELL
- BHL TESTHOLE
- NORTH - SOUTH CROSS SECTION A - A'
- WEST - EAST CROSS SECTION B - B'

City of Yorkton

GENERAL LOCATION DRAWING

HOPKINS LAKE



Piezometer	Static Water Level Elevation (masl)	Pumping Water Lavel Elevation (masl)
BHL2024-190PZ	504.999	505.038
BHL2024-189PZ	504.440	503.106
BHL2024-193PZ	504.471	503.395
BHL2024-191PZ	500.979	501.01
BHL2001-122PZ	507.344	507.281
BHL2024-192TH	N/A	N/A

NOTE:
- SLOUGH AND HOPKINS LAKE HAVE BEEN VERTICALLY EXAGGERATED FOR CLARITY
- GEOLOGIC DIVISIONS ARE BASED ON INFORMATION AT TESTHOLE SITES ONLY AND MAY THEREFORE BE SUBJECT TO INTERPRETIVE ERROR BETWEEN TESTHOLES

BECKIE HYDROGEOLOGISTS

ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF SASKATCHEWAN
CERTIFICATE OF AUTHORIZATION
BECKIE HYDROGEOLOGISTS (1990) LTD.
NUMBER 664
PERMISSION TO CONSULT HELD BY:

DISCIPLINE	SASK. REG. No.	SIGNATURE
HYDROGEOLOGY	28620	S.M. FAMULAK

PROFESSIONAL ENGINEER
S.M. FAMULAK
MEMBER 28620
2025 YEAR 10 MONTH 31 DAY
SASKATCHEWAN

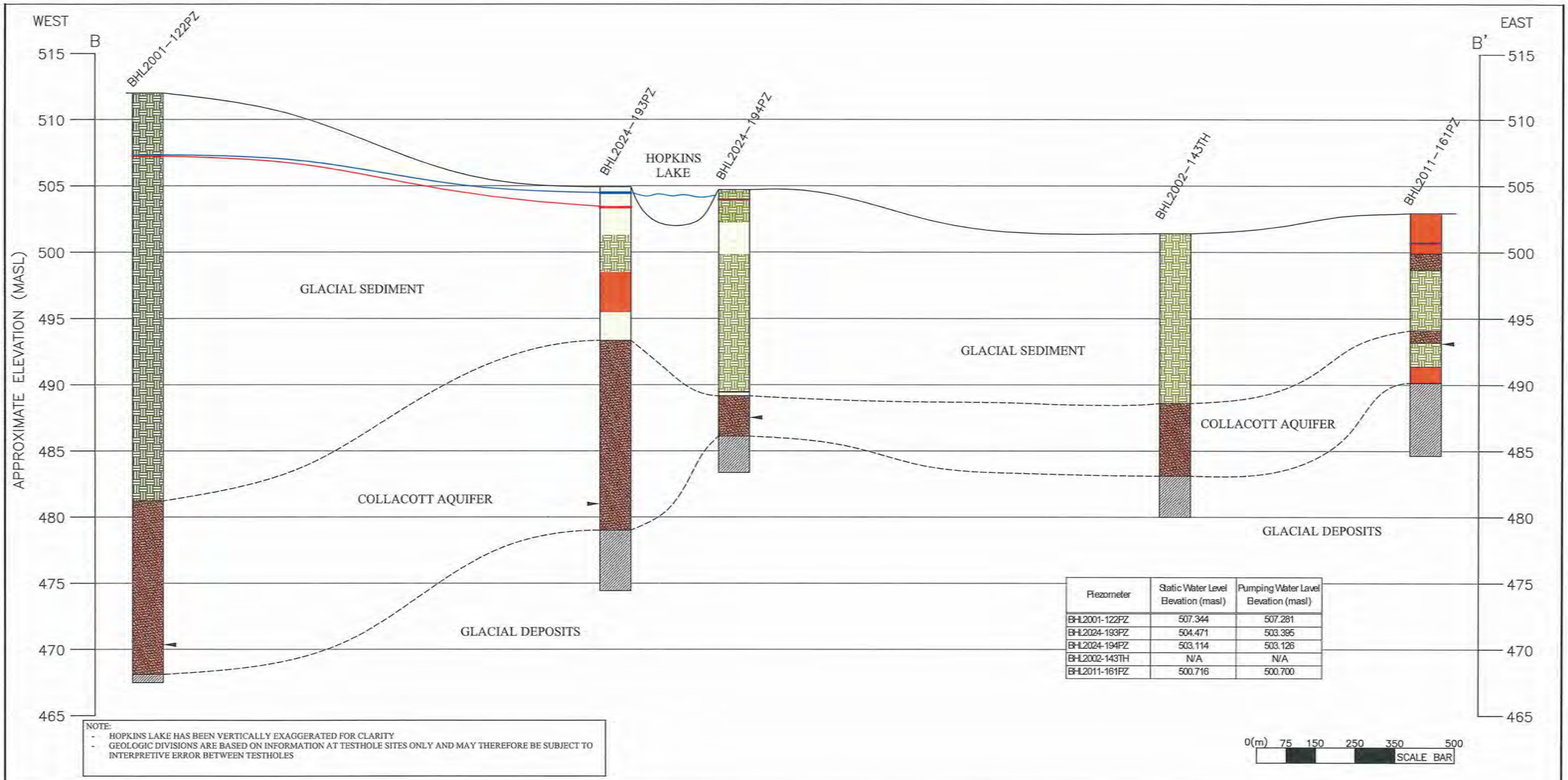
ACAD FILE: HOPKINSLAKE1.DWG
DRAWN BY: TYLER SMITH, G.I.T.
CHECKED BY: STEPHEN FAMULAK, P.ENG.
DATE: OCTOBER 31, 2025
SCALE: AS SHOWN
DESCRIPTION: RECORD DRAWING
DRAWING No.: 2
REVISION No.: 0

LEGEND:
- GLACIAL TILL
- GRAVEL/SAND
- SAND/SILT
- CLAY/TILL
- SAND/GRAVEL TILL
- STATIC WATER LEVEL ON MAY 15, 2024 (12:00)
- PUMPING WATER LEVEL ON MAY 17, 2024 (12:00)
- COMPLETION ZONE

City of Yorkton

SCHEMATIC CROSS SECTION A-A'

HOPKINS LAKE



Piezometer	Static Water Level Elevation (masl)	Pumping Water Level Elevation (masl)
BHL2001-122PZ	507.344	507.281
BHL2024-193PZ	504.471	503.395
BHL2024-194PZ	503.114	503.126
BHL2002-143TH	N/A	N/A
BHL2011-161PZ	500.716	500.700

NOTE:
- HOPKINS LAKE HAS BEEN VERTICALLY EXAGGERATED FOR CLARITY
- GEOLOGIC DIVISIONS ARE BASED ON INFORMATION AT TESTHOLE SITES ONLY AND MAY THEREFORE BE SUBJECT TO INTERPRETIVE ERROR BETWEEN TESTHOLES

BECKIE HYDROGEOLOGISTS

ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF SASKATCHEWAN
CERTIFICATE OF AUTHORIZATION
BECKIE HYDROGEOLOGISTS (1990) LTD.
NUMBER 664
PERMISSION TO CONSULT HELD BY:

DISCIPLINE	SASK. REG. No.	SIGNATURE
HYDROGEOLOGY	28620	S.M. FAMULAK

PROFESSIONAL ENGINEER
S.M. FAMULAK
MEMBER 28620
SASKATCHEWAN
2025 YEAR 10 MONTH 31 DAY

ACAD FILE: HOPKINSLAKE2.DWG
DRAWN BY: TYLER SMITH, G.I.T.
CHECKED BY: STEPHEN FAMULAK, P.ENG.
DATE: OCTOBER 31, 2025
SCALE: AS SHOWN
DESCRIPTION:
RECORD DRAWING
DRAWING No.: 3
REVISION No.: 0

LEGEND:
- GLACIAL TILL
- GRAVEL/SAND
- SAND/SILT
- CLAY/TILL
- SAND/GRAVEL TILL
- STATIC WATER LEVEL ON MAY 15, 2024 (12:00)
- PUMPING WATER LEVEL ON MAY 17, 2024 (12:00)
- COMPLETION ZONE

City of Yorkton

SCHEMATIC CROSS SECTION B-B'

HOPKINS LAKE

Appendix C
Water Quality Data

Clifton

SASKATCHEWAN RESEARCH COUNCIL

Environmental Analytical Laboratories
143-111 Research Drive, Saskatoon, SK Canada S7N 3R2

T: 306-933-6932 **F:** 306-933-7922
Toll-free: 1-800-240-8808
E: analytical@src.sk.ca

www.src.sk.ca/analytical

SRC Group # 2024-3995

Apr 22, 2024

Beckie Hydrogeologists (1990) Ltd.
48-6 Ratner St
Emerald Park, SK S4L 0E3
Attn: Stephen Famulak

Date Samples Received: Apr-09-2024 Client P.O.:

All results have been reviewed and approved by a Qualified Person in accordance with the Saskatchewan Environmental Code, Corrective Action Plan Chapter, for the purposes of certifying a laboratory analysis

Results from Lab Section 1 approved by Hamilton, Ashley
Results from Lab Section 2 approved by Britton, Stephanie

---

* Test methods and data are validated by the laboratory's Quality Assurance Program.

* Routine methods follow recognized procedures from sources such as
    * Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF
    * Environment Canada
    * US EPA
    * CANMET

* The results reported relate only to the test samples as provided by the client. Results apply to the sample as received, unless otherwise indicated.

* Data marked as "by Client" has been provided by the client and may affect the validity of results.

* Samples will be kept for 30 days after the final report is sent. Please contact the lab if you have any special requirements.

* Additional information is available upon request.

* Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

This is a final report.

SASKATCHEWAN RESEARCH COUNCIL

Environmental Analytical Laboratories
143-111 Research Drive, Saskatoon, SK Canada S7N 3R2

T: 306-933-6932 **F:** 306-933-7922
Toll-free: 1-800-240-8808
E: analytical@src.sk.ca

www.src.sk.ca/analytical

SRC Group # 2024-3995

Apr 22, 2024

Beckie Hydrogeologists (1990) Ltd.

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Attn: Stephen Famulak

Date Samples Received: Apr-09-2024 Client P.O.:

11540 03/21/2024 BHL2024-189PZ-C04 *WATER*
11541 03/21/2024 BHL2024-190PZ-C04 *WATER*
11542 03/28/2024 BHL2024-191PZ-C04 *WATER*

Analyte	Units	11540	11541	11542
Lab Section 1				
Bicarbonate	mg/L	590	665	522
Carbonate	mg/L	<1	<1	<1
Chloride	mg/L	21	36	32
Hydroxide	mg/L	<1	<1	<1
P. alkalinity	mg/L	<1	<1	<1
pH	pH units	7.91	8.21	7.94
Specific conductivity	uS/cm	1460	2090	1730
Sum of ions	mg/L	1300	1770	1510
Total alkalinity	mg/L	484	545	428
Total hardness	mg/L	650	470	853
Nitrate	mg/L	0.8	<0.4	<0.4
Organic carbon	mg/L	17	2.8	4.1
Organic carbon, dissolved	mg/L	14	2.8	4.2
Fluoride	mg/L	0.22	0.24	0.18
Total dissolved solids	mg/L	1090	1490	1380
Lab Section 2				
Calcium	mg/L	142	68	179
Magnesium	mg/L	72	73	99
Potassium	mg/L	8.1	5.9	8.2
Sodium	mg/L	84	321	83
Sulfate	mg/L	380	600	590
Iron	mg/L	2.7	4.6	3.1
Manganese	mg/L	0.51	0.59	0.77

Symbol of "<" means "less than". This indicates that it was not detected at level stated above.

The temperature of the cooler was 17.9 °C upon receipt.

Detection limit increased to 0.4 mg/L for Nitrate due to sample matrix interference.

SASKATCHEWAN RESEARCH COUNCIL

Environmental Analytical Laboratories
143-111 Research Drive, Saskatoon, SK Canada S7N 3R2

T: 306-933-6932 **F:** 306-933-7922
Toll-free: 1-800-240-8808
E: analytical@src.sk.ca

www.src.sk.ca/analytical

SRC Group # 2024-3995

Apr 22, 2024

Beckie Hydrogeologists (1990) Ltd.

Analyte Methods

Name	Units	Method
P. alkalinity	mg/L	Chm-211 / Chm-212
Organic carbon, dissolved	mg/L	Chm-380
Organic carbon	mg/L	Chm-380
Chloride	mg/L	Chm-115
Carbonate	mg/L	Chm-211
Fluoride	mg/L	Chm-211 / Chm-212
Bicarbonate	mg/L	Chm-211
Nitrate	mg/L	Chm-124
Hydroxide	mg/L	Chm-211
pH	pH units	Chm-211 / Chm-212
Total dissolved solids	mg/L	Chm-203
Specific conductivity	uS/cm	Chm-211
Sum of ions	mg/L	Calculation
Total hardness	mg/L	Calculation
Total alkalinity	mg/L	Chm-211 / Chm-212
Calcium	mg/L	Chm-508
Iron	mg/L	Chm-522
Potassium	mg/L	Chm-508
Magnesium	mg/L	Chm-508
Manganese	mg/L	Chm-522
Sodium	mg/L	Chm-508
Sulfate	mg/L	Chm-508

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Test Report

SRC Group # 2024-6066

Jun 07, 2024

Beckie Hydrogeologists (1990) Ltd.
48-6 Ratner St
Emerald Park, SK S4L 0E3
Attn: Stephen Famulak

Date Samples Received: May-23-2024 Client P.O.:

All results have been reviewed and approved by a Qualified Person in accordance with the Saskatchewan Environmental Code, Corrective Action Plan Chapter, for the purposes of certifying a laboratory analysis

Results from Lab Section 1 approved by Hamilton, Ashley
Results from Lab Section 2 approved by Britton, Stephanie

Test methods and data are validated by the laboratory's Quality Assurance Program.

Routine methods follow recognized procedures from sources such as
-Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF
-Environment Canada
-US EPA
-CANMET

The results reported relate only to the test samples as provided by the client. Results apply to the sample as received, unless otherwise indicated.

Data marked as "by Client" has been provided by the client and may affect the validity of results.

Samples will be kept for 30 days after the final report is sent. Please contact the lab if you have any special requirements.

Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Analytes denoted with * are accredited by CALA to ISO/IEC 17025:2017.

Additional information is available upon request.

This is a final report.

SASKATCHEWAN RESEARCH COUNCIL

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Test Report

SRC Group # 2024-6066

Jun 07, 2024

Beckie Hydrogeologists (1990) Ltd.

48-6 Ratner St
Emerald Park, SK S4L 0E3
Attn: Stephen Famulak

Date Samples Received: May-23-2024 Client P.O.:

16551 05/13/2024 16:00 COY-2024-193PZ *WATER*
16552 05/15/2024 10:15 COY-2024-194PZ *WATER*
16553 05/17/2024 11:00 HOP LAKE WELL *WATER*

Analyte	Units	16551	16552	16553
Lab Section 1				
Bicarbonate*	mg/L	537	734	555
Carbonate*	mg/L	<1	<1	<1
Chloride*	mg/L	19	207	21
Hydroxide*	mg/L	<1	<1	<1
P. alkalinity*	mg/L	<1	<1	<1
pH*	pH units	8.20	8.21	8.09
Specific conductivity*	uS/cm	1460	3990	1470
Sum of ions	mg/L	1210	2970	1220
Total alkalinity*	mg/L	440	602	455
Total hardness*	mg/L	641	830	638
Ammonia as nitrogen*	mg/L	1.6	1.5	1.4
Nitrate*	mg/L	<0.04	<0.04	<0.04
Organic carbon*	mg/L	3.9	2.1	4.0
Organic carbon, dissolved*	mg/L	4.0	2.2	4.0
Fluoride*	mg/L	0.22	0.24	0.22
Total dissolved solids*	mg/L	1060	2880	1050
Total suspended solids*	mg/L	3	19	<1
Turbidity*	NTU	0.6	9.2	<0.1
Lab Section 2				
Calcium*	mg/L	140	117	139
Magnesium*	mg/L	71	131	71
Potassium*	mg/L	7.7	6.9	7.7
Sodium*	mg/L	77	574	72
Sulfate*	mg/L	360	1200	350
Aluminum*	mg/L	0.0083	0.61	<0.0005
Antimony*	mg/L	<0.0002	0.0002	<0.0002
Arsenic*	ug/L	29	4.9	31
Barium*	mg/L	0.011	0.0092	0.010
Beryllium*	mg/L	<0.0001	<0.0001	<0.0001
Boron*	mg/L	0.20	0.38	0.19
Cadmium*	mg/L	0.00001	0.00003	<0.00001

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Test Report

SRC Group # 2024-6066

Jun 07, 2024

Beckie Hydrogeologists (1990) Ltd.

16551 05/13/2024 16:00 COY-2024-193PZ *WATER*
16552 05/15/2024 10:15 COY-2024-194PZ *WATER*
16553 05/17/2024 11:00 HOP LAKE WELL *WATER*

Analyte	Units	16551	16552	16553
Lab Section 2				
Chromium*	mg/L	<0.0005	0.0010	<0.0005
Cobalt*	mg/L	0.0004	0.0016	0.0003
Copper*	mg/L	<0.0002	<0.001	<0.0002
Iron*	mg/L	2.28	1.2	3.36
Lead*	mg/L	<0.0001	0.0004	<0.0001
Manganese*	mg/L	0.47	0.70	0.46
Molybdenum*	mg/L	0.0090	0.0039	0.0077
Nickel*	mg/L	0.0004	0.0028	0.0004
Selenium*	mg/L	<0.0001	0.0001	<0.0001
Silica, soluble	mg/L	24	16	24
Silicon, soluble	mg/L	11	7.6	11
Silver*	mg/L	<0.00005	<0.00005	<0.00005
Strontium*	mg/L	0.96	2.08	0.93
Thallium*	mg/L	<0.0002	<0.0002	<0.0002
Tin*	mg/L	<0.0001	<0.0001	<0.0001
Titanium*	mg/L	0.0004	0.017	<0.0002
Uranium*	ug/L	5.3	12	4.7
Vanadium*	mg/L	<0.0001	0.0022	<0.0001
Zinc*	mg/L	0.0033	0.012	0.0016

Symbol of "<" means "less than". This indicates that it was not detected at level stated above.

Note for Sample # 16551
Holding time for Turbidity between sampling and receipt in lab exceeds the recommended 48 hours.
Turbidity and Total suspended solids analyzed on nitric acid preserved sample.
This sample was reanalyzed for Total suspended solids. Reanalysis confirms original results are within the expected measurement uncertainty.

Note for Sample # 16552
Holding time for Turbidity between sampling and receipt in lab exceeds the recommended 48 hours.
Turbidity and Total suspended solids analyzed on nitric acid preserved sample.
This sample was reanalyzed for Total suspended solids and Turbidity. Reanalysis confirms original results are within the expected measurement uncertainty.

Note for Sample # 16553
Holding time for Turbidity between sampling and receipt in lab exceeds the recommended 48 hours.

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Test Report

SRC Group # 2024-6066

Jun 07, 2024

Beckie Hydrogeologists (1990) Ltd.

Turbidity and Total suspended solids analyzed on nitric acid preserved sample.

The temperature of the cooler was 18.1 °C upon receipt.

SASKATCHEWAN RESEARCH COUNCIL

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Test Report

SRC Group # 2024-6066

Jun 07, 2024

Beckie Hydrogeologists (1990) Ltd.

16554 05/17/2024 11:15 HOP LAKE SURFACE *WATER*

Analyte	Units	16554
Lab Section 1		
Bicarbonate*	mg/L	389
Carbonate*	mg/L	<1
Chloride*	mg/L	116
Hydroxide*	mg/L	<1
P. alkalinity*	mg/L	<1
pH*	pH units	8.28
Specific conductivity*	uS/cm	1370
Sum of ions	mg/L	1000
Total alkalinity*	mg/L	319
Total hardness*	mg/L	476
Nitrate*	mg/L	<0.04
Fluoride*	mg/L	0.16
Total dissolved solids*	mg/L	889
Lab Section 2		
Calcium*	mg/L	59
Magnesium*	mg/L	80
Potassium*	mg/L	19
Sodium*	mg/L	99
Sulfate*	mg/L	240

Symbol of "<" means "less than". This indicates that it was not detected at level stated above.

The temperature of the cooler was 18.1 °C upon receipt.

SASKATCHEWAN RESEARCH COUNCIL

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Test Report

SRC Group # 2024-6066

Jun 07, 2024

Beckie Hydrogeologists (1990) Ltd.

Analyte Methods

Name	Units	Method
P. alkalinity	mg/L	Chm-211 / Chm-212
Organic carbon, dissolved	mg/L	Chm-380
Organic carbon	mg/L	Chm-380
Chloride	mg/L	Chm-115
Carbonate	mg/L	Chm-211
Fluoride	mg/L	Chm-211 / Chm-212
Bicarbonate	mg/L	Chm-211
Ammonia as nitrogen	mg/L	Chm-123
Nitrate	mg/L	Chm-124
Hydroxide	mg/L	Chm-211
pH	pH units	Chm-211 / Chm-212
Total dissolved solids	mg/L	Chm-203
Total suspended solids	mg/L	Chm-206
Specific conductivity	uS/cm	Chm-211
Sum of ions	mg/L	Calculation
Total hardness	mg/L	Calculation
Total alkalinity	mg/L	Chm-211 / Chm-212
Turbidity	NTU	Chm-316
Silver	mg/L	Chm-522
Aluminum	mg/L	Chm-522
Arsenic	ug/L	Chm-522
Boron	mg/L	Chm-522
Barium	mg/L	Chm-522
Beryllium	mg/L	Chm-522
Calcium	mg/L	Chm-508
Cadmium	mg/L	Chm-522
Cobalt	mg/L	Chm-522
Chromium	mg/L	Chm-522
Copper	mg/L	Chm-522
Iron	mg/L	Chm-522
Potassium	mg/L	Chm-508
Magnesium	mg/L	Chm-508
Manganese	mg/L	Chm-522
Molybdenum	mg/L	Chm-522
Sodium	mg/L	Chm-508
Nickel	mg/L	Chm-522
Lead	mg/L	Chm-522
Antimony	mg/L	Chm-522

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Test Report

SRC Group # 2024-6066

Jun 07, 2024

Beckie Hydrogeologists (1990) Ltd.

Name	Units	Method
Selenium	mg/L	Chm-522
Silicon, soluble	mg/L	Chm-522
Silica, soluble	mg/L	Calculation
Tin	mg/L	Chm-522
Sulfate	mg/L	Chm-508
Strontium	mg/L	Chm-522
Titanium	mg/L	Chm-522
Thallium	mg/L	Chm-522
Uranium	ug/L	Chm-522
Vanadium	mg/L	Chm-522
Zinc	mg/L	Chm-522

CERTIFICATE OF ANALYSIS

Work Order	:	**SK2506999**		
Client	:	**City of Yorkton**	Laboratory	: ALS Environmental - Saskatoon
Contact	:	Conor Hunt	Account Manager	: Kimberley Head
Address	:	Box 400 37 - 3rd Avenue North Yorkton Saskatchewan Canada S3N 2W3	Address	: 819 58 Street East Saskatoon SK Canada S7K 6X5
Telephone	:	----	E-mail	: kimberley.head@alsglobal.com
Project	:	Hopkins Lake	Telephone	: +1 306 668 8370
PO	:	----	Date Samples Received	: 05-Nov-2025 09:40
C-O-C number	:	----	Date Analysis Commenced	: 05-Nov-2025
Sampler	:	client	Issue Date	: 12-Nov-2025 20:13
Site	:	----		
Quote number	:	Wasterwater Treatment		
No. of samples received	:	1		
No. of samples analysed	:	1		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Colby Bingham	Laboratory Supervisor	Inorganics, Saskatoon, Saskatchewan
Femy Gigi	Laboratory Assistant	Administration, Saskatoon, Saskatchewan
Hannah Phung	Lab Assistant	Inorganics, Calgary, Alberta
Harpreet Chawla	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Hedy Lai	Team Leader - Inorganics	Microbiology, Saskatoon, Saskatchewan
Shirley Li	Team Leader - Inorganics	Inorganics, Calgary, Alberta

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
°C	degrees celsius
mg/L	milligrams per litre
MPN/100mL	most probable number per hundred millilitres
pH units	pH units

<: less than.
>: greater than.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Accreditation

Accreditation	*Description*	*Laboratory*	*Address*
A	CALA ISO/IEC 17025:2017	SK ALS Environmental - Saskatoon	819 58 Street East, Saskatoon, SK
B	CALA ISO/IEC 17025:2017	CG ALS Environmental - Calgary	2559 29th Street NE, Calgary, AB

Applicable accreditations are indicated in the Method/Lab column.

Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab		LOR	Unit	Client sample ID: Hopkins Lake ----	----	----	----	----
						Client sampling date / time: 04-Nov-2025 12:00	----	----	----	----
						SK2506999-001	----	----	----	----
						Result	----	----	----	----
Field Tests										
Oxygen, dissolved, field	----	EF001/SK		0.01	mg/L	14.25	----	----	----	----
pH, field	----	EF001/SK		0.10	pH units	8.72	----	----	----	----
Temperature, field	----	EF001/SK		0.10	°C	2.20	----	----	----	----
Physical Tests										
Solids, fixed suspended [FSS]	----	E170/SK	A	3.0	mg/L	4.5	----	----	----	----
Solids, total suspended [TSS]	----	E160/SK	A	3.0	mg/L	8.2	----	----	----	----
Solids, volatile suspended [VSS]	----	EC167/SK		3.0	mg/L	3.7	----	----	----	----
pH @ 15°C (WSER)	----	E108A/CG	B	0.10	pH units	8.90	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/CG	B	0.0050	mg/L	0.0928	----	----	----	----
Ammonia, un-ionized (as N), 15°C (WSER)	7664-41-7	EC298/CG		0.0010	mg/L	0.0165	----	----	----	----
Chloride	16887-00-6	E235.Cl/SK	A	0.50	mg/L	147	----	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/CG	B	0.050	mg/L	2.43	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/SK	A	0.020	mg/L	<0.100 DLDS	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/SK	A	0.010	mg/L	<0.050 DLDS	----	----	----	----
Nitrogen, total	7727-37-9	EC368/SK		0.050	mg/L	2.43	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/CG	B	0.0020	mg/L	0.0533	----	----	----	----
Microbiological Tests										
Coliforms, total	----	E010.EP/SK	A	1	MPN/100 mL	126	----	----	----	----
Coliforms, Escherichia coli [E. coli]	----	E010.EP/SK	A	1	MPN/100 mL	9	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	Hopkins Lake ----	----	----	----	----
					Client sampling date / time	04-Nov-2025 12:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		SK2506999-001	----	----	----	----
						Result	----	----	----	----
Aggregate Organics										
Carbonaceous biochemical oxygen demand [CBOD]	----	E555/CG B	2.0	mg/L		5.3	----	----	----	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

ALS Canada Ltd.

right solutions.
right partner.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **SK2506999**	Page	: 1 of 8
Client	: **City of Yorkton**	Laboratory	: ALS Environmental - Saskatoon
Contact	: Conor Hunt	Account Manager	: Kimberley Head
Address	: Box 400 37 - 3rd Avenue North Yorkton SK Canada S3N 2W3	Address	: 819 58 Street East Saskatoon, Saskatchewan Canada S7K 6X5
Telephone	: ----	Telephone	: +1 306 668 8370
Project	: Hopkins Lake	Date Samples Received	: 05-Nov-2025 09:40
PO	: ----	Issue Date	: 12-Nov-2025 20:13
C-O-C number	: ----		
Sampler	: client		
Site	: ----		
Quote number	: Wasterwater Treatment		
No. of samples received	: 1		
No. of samples analysed	: 1		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
Aggregate Organics : Biochemical Oxygen Demand (Carbonaceous) - 5 day										
HDPE [BOD HT 3d] Hopkins Lake	E555	04-Nov-2025	----	----	----		07-Nov-2025	3 days	3 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) Hopkins Lake	E298	04-Nov-2025	06-Nov-2025	28 days	2 days	✓	06-Nov-2025	28 days	2 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE Hopkins Lake	E235.Cl	04-Nov-2025	05-Nov-2025	28 days	1 days	✓	05-Nov-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE Hopkins Lake	E235.NO3	04-Nov-2025	05-Nov-2025	3 days	1 days	✓	05-Nov-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC										
HDPE Hopkins Lake	E235.NO2	04-Nov-2025	05-Nov-2025	3 days	1 days	✓	05-Nov-2025	3 days	1 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid) Hopkins Lake	E318	04-Nov-2025	06-Nov-2025	28 days	2 days	✓	06-Nov-2025	28 days	2 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) Hopkins Lake	E372-U	04-Nov-2025	09-Nov-2025	28 days	5 days	✓	12-Nov-2025	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
HDPE										
Hopkins Lake	EF001	04-Nov-2025	----	----	----		06-Nov-2025	----	----	
Microbiological Tests : Total Coliforms and E. coli (Enzyme Substrate) End Point										
Sterile HDPE (sodium thiosulfate)										
Hopkins Lake	E010.EP	04-Nov-2025	----	----	----		05-Nov-2025	30 hrs	25 hrs	✓
Physical Tests : FSS by Gravimetry										
HDPE										
Hopkins Lake	E170	04-Nov-2025	----	----	----		07-Nov-2025	7 days	3 days	✓
Physical Tests : pH by Meter at 15C (WSER)										
HDPE										
Hopkins Lake	E108A	04-Nov-2025	----	----	----		07-Nov-2025	5 days	3 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
Hopkins Lake	E160	04-Nov-2025	----	----	----		06-Nov-2025	7 days	2 days	✓

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Total Coliforms and E. coli (Enzyme Substrate) End Point	E010.EP	2320720	1	5	20.0	5.0	✓
pH by Meter at 15C (WSER)	E108A	2326119	1	10	10.0	5.0	✓
TSS by Gravimetry	E160	2321933	1	20	5.0	5.0	✓
FSS by Gravimetry	E170	2324563	1	5	20.0	5.0	✓
Chloride in Water by IC	E235.Cl	2320750	1	19	5.2	5.0	✓
Nitrite in Water by IC	E235.NO2	2320751	1	11	9.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2320748	1	11	9.0	5.0	✓
Ammonia by Fluorescence	E298	2322971	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2322483	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2327507	1	6	16.6	5.0	✓
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555	2326172	1	6	16.6	5.0	✓
Laboratory Control Samples (LCS)							
pH by Meter at 15C (WSER)	E108A	2326119	1	10	10.0	5.0	✓
TSS by Gravimetry	E160	2321933	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	2320750	1	19	5.2	5.0	✓
Nitrite in Water by IC	E235.NO2	2320751	1	11	9.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2320748	1	11	9.0	5.0	✓
Ammonia by Fluorescence	E298	2322971	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2322483	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2327507	1	6	16.6	5.0	✓
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555	2326172	1	6	16.6	5.0	✓
Method Blanks (MB)							
Total Coliforms and E. coli (Enzyme Substrate) End Point	E010.EP	2320720	1	5	20.0	5.0	✓
TSS by Gravimetry	E160	2321933	1	20	5.0	5.0	✓
FSS by Gravimetry	E170	2324563	1	5	20.0	5.0	✓
Chloride in Water by IC	E235.Cl	2320750	1	19	5.2	5.0	✓
Nitrite in Water by IC	E235.NO2	2320751	1	11	9.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2320748	1	11	9.0	5.0	✓
Ammonia by Fluorescence	E298	2322971	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2322483	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2327507	1	6	16.6	5.0	✓
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555	2326172	1	6	16.6	5.0	✓
Matrix Spikes (MS)							
Chloride in Water by IC	E235.Cl	2320750	1	19	5.2	5.0	✓
Nitrite in Water by IC	E235.NO2	2320751	1	11	9.0	5.0	✓

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Nitrate in Water by IC	E235.NO3	2320748	1	11	9.0	5.0	✓
Ammonia by Fluorescence	E298	2322971	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2322483	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2327507	1	6	16.6	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Total Coliforms and E. coli (Enzyme Substrate) End Point	E010.EP ALS Environmental - Saskatoon	Water	APHA 9223 (mod)	The enzyme substrate test simultaneously detects Total Coliforms and E. coli in a 100 mL sample after incubation at 35.0 ±0.5°C for either 18 or 24 hours (dependent on reagent used). Serial dilutions were analyzed to extend the upper quantitative range of the test.
pH by Meter at 15C (WSER)	E108A ALS Environmental - Calgary	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at 15 ± 1°C, and is used to calculate Un-Ionized Ammonia for the federal Wastewater Systems Effluent Regulation.
TSS by Gravimetry	E160 ALS Environmental - Saskatoon	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
FSS by Gravimetry	E170 ALS Environmental - Saskatoon	Water	APHA 2540 E (mod)	Fixed Suspended Solids (FSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. This residue is ignited to constant weight at 550°C. The remaining solids represent the Fixed Suspended Solids (FSS), while the weight lost on ignition represents the Volatile Suspended Solids (VSS). Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
Chloride in Water by IC	E235.Cl ALS Environmental - Saskatoon	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC	E235.NO2 ALS Environmental - Saskatoon	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC	E235.NO3 ALS Environmental - Saskatoon	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Ammonia by Fluorescence	E298 ALS Environmental - Calgary	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Calgary	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Calgary	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Biochemical Oxygen Demand (Carbonaceous) - 5 day	E555 ALS Environmental - Calgary	Water	APHA 5210 B (mod)	Samples are diluted and incubated for a specified time period, after which the oxygen depletion is measured using a dissolved oxygen meter. Nitrification inhibitor is added to samples to prevent nitrogenous compounds from consuming oxygen resulting in only carbonaceous oxygen demand being reported by this method. Free chlorine is a negative interference in the BOD method; please advise ALS when free chlorine is present in samples.
VSS by Gravimetry	EC167 ALS Environmental - Saskatoon	Water	APHA 2540 E (mod)	Volatile Suspended Solids (VSS) are determined by filtering a well-mixed sample through a weighed standard glass-fiber filter and the residue retained on the filter is dried to a constant weight at 104 ± 1°C. This residue is ignited to constant weight at 550°C. The remaining solids represent the fixed suspended solids while the weight lost on ignition is the volatile suspended solids.
Un-ionized Ammonia at 15°C, WSER	EC298 ALS Environmental - Calgary	Water	WSER 29June2012	Un-ionized Ammonia at 15C is calculated from test results for Total Ammonia and for pH at 15C, as per the federal Wastewater Systems Effluent Regulation, and is expressed in units of mg/L "as N".
Total Nitrogen (calculation)	EC368 ALS Environmental - Saskatoon	Water	BC MOE LABORATORY MANUAL (2005)	Total Nitrogen is a calculated parameter. Total Nitrogen = Total Kjeldahl Nitrogen + [Nitrate and Nitrite (as N)].
Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine	EF001 ALS Environmental - Saskatoon	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3 or Chloramine measurements provided by client and recorded on ALS report may affect the validity of results.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Calgary	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 ALS Environmental - Calgary	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Calgary	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here
(lab use only)

COC Nu

Environmental Division
Saskatoon
Work Order Reference
SK2506999

Telephone : +1 306 668 8370

Report To	Contact and company name below will appear on the final report
Company:	City of Yorkton
Contact:	Connor Hunt
Phone:	306 786 1774
	Company address below will appear on the final report
Street:	PO Box 400
City/Province:	Yorkton, SK
Postal Code:	S3N 2W3
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☐ EXCEL ☐ EDD (DIGITAL)
Quality Control (QC) Report with Report ☐ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax chunt@yorkton.ca
Email 2 [redacted]
Email 3 jkarakochuk@yorkton.ca

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax chunt@yorkton.ca
Email 2

Select Service Level Below - Contact yo

Regular [R] ☑ Standard TAT if receive

PRIORITY (Business Days): 4 day [P4-20%] ☐ | 3 day [P3-25%] ☐ | 2 day [P2-50%] ☐
EMERGENCY: 1 E | Sar | (La

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the serv

Project Information

ALS Account # / Quote #: [redacted]
Job #:
PO / AFE:
LSD: [redacted]

Oil and Gas Required Fields (client use)

AFE/Cost Center: | PO#
Major/Minor Code: | Routing Code:
Requisitioner:
Location:

ALS Lab Work Order # (lab use only): | **ALS Contact:** | **Sampler:**

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	BOD-CBOD-SK	TSS-SK	SOLIDS-VOLSUS-SK	NH4-SK / NH3-UNION-CALC-SK	N-T-CALC-SK	TKN-F-CL	ROU-SK	TC,EC-QT97-ENDPT-SK	P-T-COL-SK	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	[redacted] Hopkins Lake	04-Nov-25	12:00	Water	6	R	R	R	R	R	R	R	R	R		
	(field test pH 8.72)															
	(field test DO 14.25 mg/L)															
	(field test Temp C 2.2°C)															

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?
☐ YES ☐ NO
Are samples for human consumption/ use?
☐ YES ☐ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐
Ice Packs ☑ Ice Cubes ☐ | Custody seal intact Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
4C				4.0			

SHIPMENT RELEASE (client use)

Released by: Jake Perepluk | Date: Nov 4, 2025 | Time: 12pm

INITIAL SHIPMENT RECEPTION (lab use only)

Received by: [signature] | Date: 5/11/25 | Time: 9:45

FINAL SHIPMENT RECEPTION (lab use only)

Received by: [signature] | Date: NOV 05 2025 | Time: 0940

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCT 2018 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

Appendix D
HABISask Screening

Clifton

Project Screening Report

Notes: 100m buffer around lake perimter

Report Generated
10/27/2025

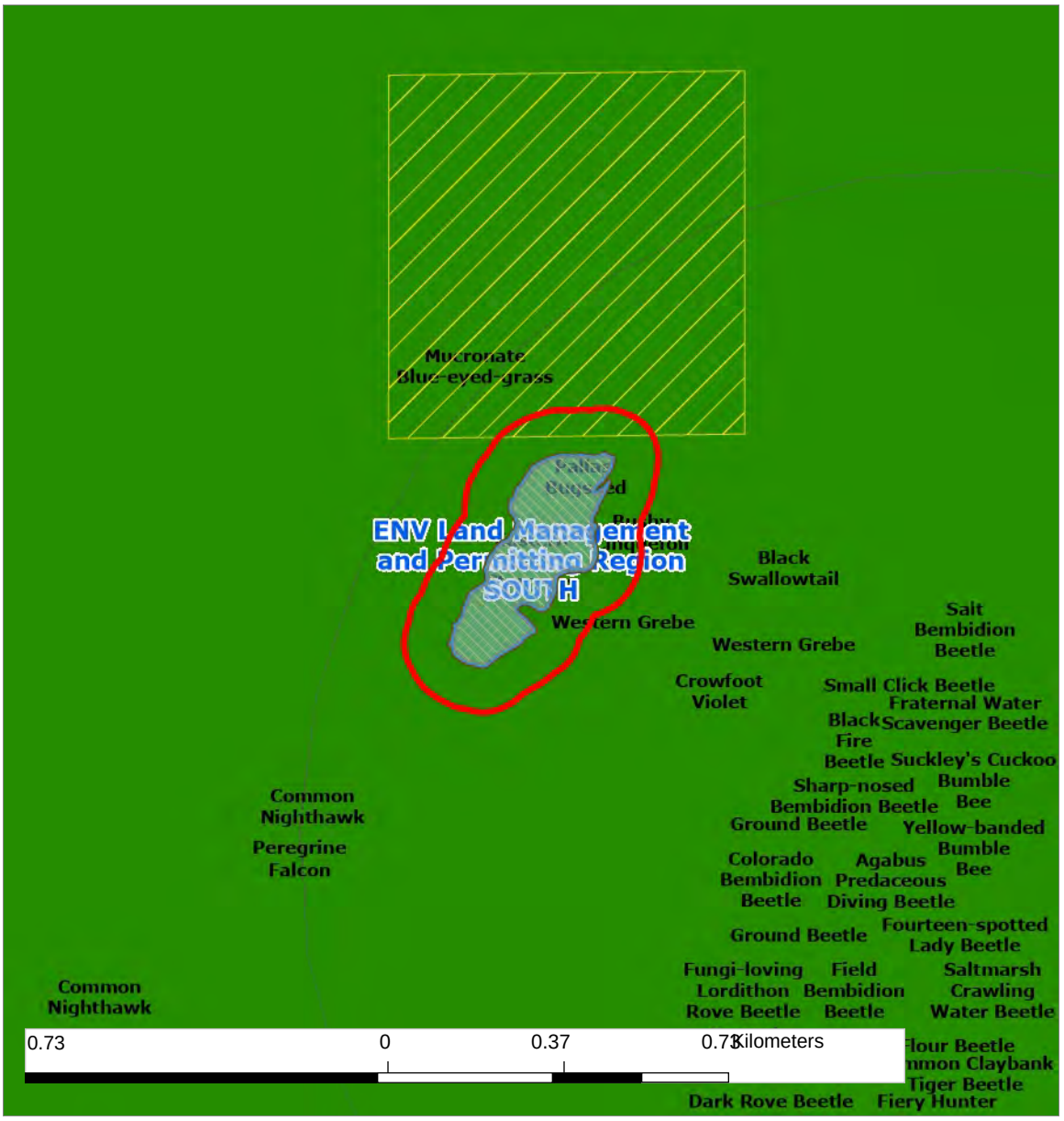
Map Information

Buffer Size:

100 Meters

Feature Selection
Uploaded Layer

Area of Interest



Screened Areas:

- ENV Land Management and Permitting Region
- Compliance & Field Service (CFS) Area
- Compliance & Field Service (CFS) Region
- Area Fisheries Ecologists Area(s)
- Area Wildlife Ecologist(s)
- Rural Municipality
- First Nation Reserve
- AG Crown Land Management Specialist Districts
- Rare and Endangered Species
- Fish Species
- Woodland Caribou Range
- Species Predictive Models
- Whooping Crane Corridor
- Barren-ground Caribou
- Federal Critical Habitat
- Wind Energy Avoidance Zones
- Important Natural Areas
- Provincial Parks
- Recreation Sites
- Game Preserves
- RC Game Preserve
- National Wildlife Areas
- Federal Pastures
- Wildlife Habitat Protection Act Lands
- Wildlife Habitat Protection Act Lands within Project Area
- Fish & Wildlife Development Fund Lands
- Migratory Bird Sanctuary
- Wildlife Refuge
- Conservation Easements
- Crown Conservation Easements
- Ecological Reserves
- Ramsar Wetlands
- Reservoir Development Areas
- Representative Areas
- Special Management Areas

Project Screening Report

Species Likely to be Present

Known Species

"Known" species are species that have known occurrences in the area from the Saskatchewan Conservation Data Centre's Rare and Endangered Species map layer. However, absence of species observation records does not preclude the existence of species in the area of interest. Observations may simply not have been recorded for the given area or may not have yet been entered into the ministry data holdings – new observation records are continuously being discovered. Information accessible through HABISask is not intended to be a definitive statement on the presence, absence or status of a species within a given area, nor as a substitute for onsite surveys.

Rare and Endangered Species

Category: Vascular Plant

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
Bushy Cinquefoil	*Potentilla supina ssp. paradoxa*	G5T5	N4	S3			
Crowfoot Violet	*Viola pedatifida*	G5	N4	S3			
Eastern Yellow Stargrass	*Hypoxis hirsuta*	G5	N3N4	S2			
Mucronate Blue-eyed-grass	*Sisyrinchium mucronatum*	G5	N4	S3			
Pallas' Bugseed	*Corispermum pallasii*	G4?	NU	S2			

Category: Vertebrate Animal

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
Common Nighthawk	*Chordeiles minor*	G5	N4N5B, N5M	S4B	Special Concern	Special Concern	
Peregrine Falcon	*Falco peregrinus*	G4	N3N4B, N2N, N3N4M	S4B	Not at Risk		
Western Grebe	*Aechmophorus occidentalis*	G5	N3N4B, N2N	S3B	Special Concern	Special Concern	

Expected Species

"Expected" is based on a modelled prediction if a species might occur in areas based upon developed statistical relationships between local and landscape characteristics and species presence. Models utilized by this report have only been created in the prairie ecozone for a selection of species. The boreal plain, boreal shield and taiga shield will not return any expected species results. Models are not a substitute for on the ground surveys to determine species presence.

Species Predictive Models

Category: Invertebrate Animal

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
Monarch	*Danaus plexippus plexippus*	G4T3	N3B,NUM	S2B,SNRM	Endangered	Endangered	

Category: Vertebrate Animal

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
Bank Swallow	*Riparia riparia*	G5	N4B,N5M	S4B,S5M	Threatened	Threatened	
Bobolink	*Dolichonyx oryzivorus*	G5	N5B, N4N5M	S5B	Special Concern	Threatened	
Common Nighthawk	*Chordeiles minor*	G5	N4N5B, N5M	S4B	Special Concern	Special Concern	
Horned Grebe	*Podiceps auritus*	G5	N5B, N4N5N	S4B	Special Concern	Special Concern	
Northern Harrier	*Circus hudsonius*	G5	N5B,N4N	S4B	Not at Risk		

Whooping Crane Corridor No

Fish Species by Watershed

All fish species expected to be in any watershed that intersects the area searched are provided and their presence in the direct project area will depend on habitat.

Watershed: Assiniboine River

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
Blacknose Dace	*Rhinichthys obtusus*	G5	N5	S3			
Blacknose Shiner	*Notropis heterolepis*	G5	N5	S4			
Blackside Darter	*Percina maculata*	G5	N5	S3			
Brook Stickleback	*Culaea inconstans*	G5	N5	S5			
Brook Trout	*Salvelinus fontinalis*	G5	N5B,N5N	SNA			
Brown Bullhead	*Ameiurus nebulosus*	G5	N5	S3			
Brown Trout	*Salmo trutta*	G5	NNA	SNA			
Burbot	*Lota lota*	G5	N5	S5			
Chestnut Lamprey	*Ichthyomyzon castaneus*	G4	NU	SU	Data Deficient		
Common Carp	*Cyprinus carpio*	G5	NNA	SNA			
Common Shiner	*Luxilus cornutus*	G5	N5	S3			
Emerald Shiner	*Notropis atherinoides*	G5	N5	S5			
Fathead Minnow	*Pimephales promelas*	G5	N5	S5			
Iowa Darter	*Etheostoma exile*	G5	N5	S5			
Johnny Darter	*Etheostoma nigrum*	G5	N5	S5			
Lake Chub	*Couesius plumbeus*	G5	N5	S5			
Mooneye	*Hiodon tergisus*	G5	N5	S3			
Ninespine Stickleback	*Pungitius pungitius*	G5	N5B,N5N	S5			
Northern Pike	*Esox lucius*	G5	N5	S5			
Pearl Dace	*Margariscus nachtriebi*	G5	N5	S5			
Rainbow Trout	*Oncorhynchus mykiss*	G5	N5B,N5N	SNA			
Rock Bass	*Ambloplites rupestris*	G5	N5	S2			
Shorthead Redhorse	*Moxostoma macrolepidotum*	G5	N5	S4			
Silver Redhorse	*Moxostoma anisurum*	G5	N5	S4			
Slimy Sculpin	*Cottus cognatus*	G5	N5	S4			
Spottail Shiner	*Notropis hudsonius*	G5	N5	S5			
Tiger Trout	*Salmo trutta x Salvelinus fontinalis*	GNA	NNA	SNA			
Trout-perch	*Percopsis omiscomaycus*	G5	N5	S5			
Walleye	*Sander vitreus*	G5	N5	S5			
White Sucker	*Catostomus commersonii*	G5	N5	S4			
Yellow Perch	*Perca flavescens*	G5	N5	S5			

Species with Critical Habitat Present

This dataset displays the geographic areas within which federal Critical Habitat for species at risk listed on Schedule 1 of the federal Species at Risk Act (SARA) occurs in Saskatchewan. Please be aware that not all of the area within these boundaries is necessarily Critical Habitat. To determine if a specific area is Critical Habitat and if your activity might be considered “destruction” of Critical Habitat, other information available in each individual species’ Recovery documents (http://www.sararegistry.gc.ca) need to be considered, including biophysical attributes and activities likely to result in destruction of Critical Habitat.

Note that recovery documents (and therefore Critical Habitat) may be amended from time to time. Species are added as the data becomes ready, which may occur after the recovery document has been posted on the SAR Public Registry. Although HABISask will try to provide the latest data, the SAR Public Registry should always be considered as the official source for Critical Habitat information.

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
No Critical Habitat found							

Managed Areas

Managed areas are a diverse collection of lands and waters on which the conservation of biodiversity and ecosystem function are among the goals of the land management programs. Each of the unique or sensitive landscapes, within the network of managed areas, have some level of protection or activity restrictions placed on them by legislation, agreement or policy. These lands include provincial and national parks, ecological reserves, wildlife lands, game preserves, conservation easements and other privately held stewardship lands.

Managed areas are listed below if they are found within the complete project area including the buffer, unless otherwise specified.

Provincial Park

Nothing Found

Recreation Site

Nothing Found

Game Preserve

Nothing Found

Road Corridor Game Preserve

Nothing Found

National Wildlife Area

Nothing Found

Pasture Boundary

Nothing Found

Wildlife Habitat Protection Act (WHPA)

Nothing Found

Wildlife Habitat Protection Act (WHPA) within Project Area

Nothing Found

Fish & Wildlife Development Fund (FWDF)

Nothing Found

Migratory Bird Sanctuary

Nothing Found

Wildlife Refuge

Nothing Found

Conservation Easement

Nothing Found

Crown Conservation Easement

Nothing Found

Ecological Reserve

Nothing Found

Ramsar Wetland

Nothing Found

Reservoir Development Area

Nothing Found

Representative Area Ecological Reserve

Nothing Found

Special Management Area

Nothing Found

Project Screening Report

Rare and Endangered Species Occurrences

The absence of information provided by the Saskatchewan Conservation Data Centre (SKCDC) does not categorically mean the absence of sensitive species or features. The quantity and quality for data collected by the SKCDC are dependent on the research and observations of many individuals and organizations. SKCDC reports summarize the existing natural heritage information, known to the SKCDC, at the time of the request.

SKCDC data should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The user therefore acknowledges that the absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources.

Occurrence ID: 9999119466 **First Observation:** 2009-08-03
Occurrence Class: Vertebrate Animal **Last Observation:** 2009-08-03
Scientific Name: Chordeiles minor
Common Name: Common Nighthawk
Occurrence Rank:
General Description: Species detected (2009)
Occurrence Data:
Directions: Yorkton--Ravine Ecological Preserve

Occurrence ID: 9999122890 **First Observation:** 1947-06-10
Occurrence Class: Vertebrate Animal **Last Observation:** 1947-06-10
Scientific Name: Aechmophorus occidentalis
Common Name: Western Grebe
Occurrence Rank:
General Description: 2 Unknown Sex/Age; (1947)
Occurrence Data:
Directions: Muskeg - Yorkton District

Occurrence ID: 9999122889 **First Observation:** 1944-09-05
Occurrence Class: Vertebrate Animal **Last Observation:** 1944-09-05
Scientific Name: Aechmophorus occidentalis
Common Name: Western Grebe
Occurrence Rank:
General Description: 1 Unknown Sex/Age; (1944)
Occurrence Data:
Directions: Yorkton District

Occurrence ID: 9999119467 **First Observation:** 2012-05-10
Occurrence Class: Vertebrate Animal **Last Observation:** 2012-05-10
Scientific Name: Falco peregrinus
Common Name: Peregrine Falcon
Occurrence Rank:
General Description: Species detected (2012)
Occurrence Data:
Directions: Yorkton--Ravine Ecological Preserve

Occurrence ID: 7028 **First Observation:**
Occurrence Class: Vascular Plant **Last Observation:**
Scientific Name: Hypoxis hirsuta
Common Name: Eastern Yellow Stargrass
Occurrence Rank: U - Unrankable
General Description:
Occurrence Data: no data
Directions: Yorkton

Occurrence ID: 16963 **First Observation:** 1945-07-21
Occurrence Class: Vascular Plant **Last Observation:** 1945-07-21
Scientific Name: Potentilla supina ssp. paradoxa
Common Name: Bushy Cinquefoil
Occurrence Rank: H - Historical
General Description:
Occurrence Data: 1945 - species collected
Directions: Yorkton

Occurrence ID: 16747 **First Observation:** 1947-07-04
Occurrence Class: Vascular Plant **Last Observation:** 1947-07-04
Scientific Name: Sisyrinchium mucronatum
Common Name: Mucronate Blue-eyed-grass
Occurrence Rank: H - Historical
General Description:
Occurrence Data: 1947 - species observed in 1 site
Directions: Yorkton

Occurrence ID: 16089 **First Observation:** unknown
Occurrence Class: Vascular Plant **Last Observation:** Unknown
Scientific Name: Corispermum pallasii
Common Name: Pallas' Bugseed
Occurrence Rank: H - Historical
General Description:
Occurrence Data: unknown year (prior to 1959) - species observed in 1 site
Directions: Yorkton

Occurrence ID: 5381 **First Observation:** 1947-06-07
Occurrence Class: Vascular Plant **Last Observation:** 1947-06-07
Scientific Name: Viola pedatifida
Common Name: Crowfoot Violet
Occurrence Rank: H - Historical
General Description:
Occurrence Data:
Directions: Yorkton

Project Screening Report

Wild Species Research Permitting

A Research Permit is required to detect or observe plants or wildlife for commercial purposes, such as pre-screening surveys to collect baseline data or other activities, or to conduct academic research. Research Permits are not required if you are doing surveys for personal, recreational, educational or other non-commercial purposes. Revisions were made to Section 21 of The Wildlife Act in 2015 and to Section 6.2 of The Wildlife Regulations in 2016.

See the Government of Saskatchewan Wild Species Research Permitting page for more information.

All forms and related information pertaining to Research Permits can be found in the Publications Centre. Be sure to check out the Conservation Standards Terms and Conditions for Research Permits for general, wildlife and research-specific and information submission conditions that pertain to all research permits.

Subscribe to our Mail-out List Subscriptions for updates regarding Species Detection Permits, SKCDC Lists and Ranks, Legislation and Policy and HABISask.

Species Detection Survey Protocols

The Species Detection Survey Protocols are used to detect rare and sensitive species so Activity Restriction Guidelines can be applied. Their use is required by industry/ environmental consultants for proposed or existing commercial activities.

Activity Restriction Guidelines for Sensitive Species

The Activity Restriction Guidelines for Sensitive Species outline restricted activity periods and distance setbacks for rare and sensitive species to assist proponents in minimizing impacts to rare and sensitive species and habitats.

Administrative Areas

Region South	ENV Land Management and Permitting Region(s)
Yorkton	Compliance and Field Services Area(s)
Yorkton	Compliance and Field Services Region(s)
South East	Area Fisheries Ecologist Area(s)
PARKLAND REGION	Area Wildlife Ecologist(s)
244 - ORKNEY	Rural Municipality
Nothing Found	First Nation Reserve
District 11	AG Crown Land Management Specialist District

Contact Us

For more information, please contact our Client Service Office:
Email: centre.inquiry@gov.sk.ca
Tel (toll free in North America): 1-800-567-4224
Tel (Regina): 306-787-2584

Project Screening Report

Notes: 1km buffer

Report Generated
10/27/2025

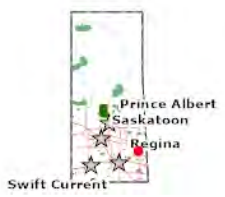
Map Information

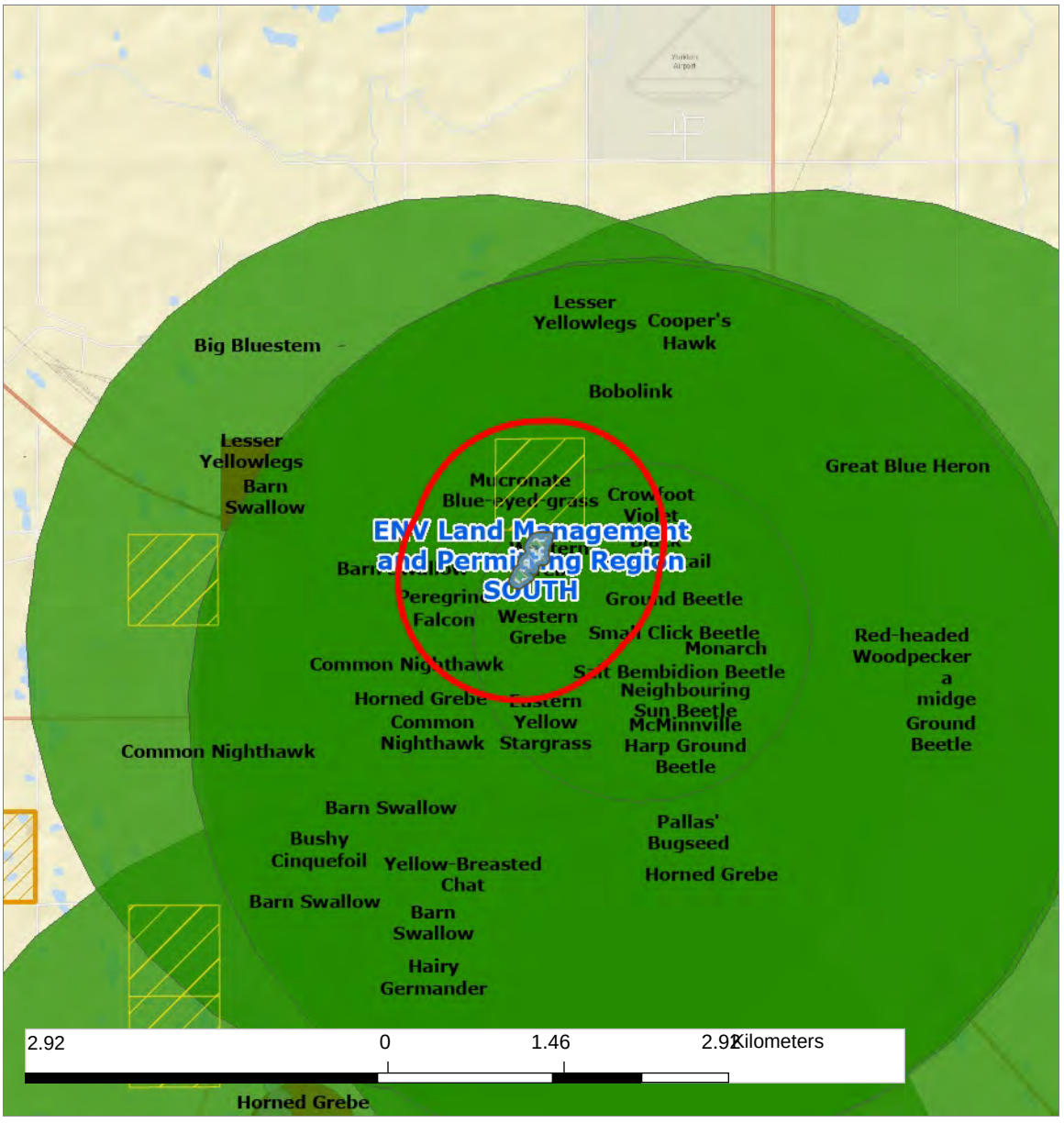
Buffer Size:

1 Kilometers

Feature Selection
Uploaded Layer

Area of Interest





Screened Areas:

- ENV Land Management and Permitting Region
- Compliance & Field Service (CFS) Area
- Compliance & Field Service (CFS) Region
- Area Fisheries Ecologists Area(s)
- Area Wildlife Ecologist(s)
- Rural Municipality
- First Nation Reserve
- AG Crown Land Management Specialist Districts
- Rare and Endangered Species Fish Species
- Woodland Caribou Range
- Species Predictive Models
- Whooping Crane Corridor
- Barren-ground Caribou
- Federal Critical Habitat
- Wind Energy Avoidance Zones
- Important Natural Areas
- Provincial Parks
- Recreation Sites
- Game Preserves
- RC Game Preserve
- National Wildlife Areas
- Federal Pastures
- Wildlife Habitat Protection Act Lands
- Wildlife Habitat Protection Act Lands within Project Area
- Fish & Wildlife Development Fund Lands
- Migratory Bird Sanctuary
- Wildlife Refuge
- Conservation Easements
- Crown Conservation Easements
- Ecological Reserves
- Ramsar Wetlands
- Reservoir Development Areas
- Representative Areas
- Special Management Areas

Species Likely to be Present

Known Species

"Known" species are species that have known occurrences in the area from the Saskatchewan Conservation Data Centre's Rare and Endangered Species map layer. However, absence of species observation records does not preclude the existence of species in the area of interest. Observations may simply not have been recorded for the given area or may not have yet been entered into the ministry data holdings – new observation records are continuously being discovered. Information accessible through HABISask is not intended to be a definitive statement on the presence, absence or status of a species within a given area, nor as a substitute for onsite surveys.

Rare and Endangered Species

Category: Invertebrate Animal

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
Abnormal Clown Beetle	*Psiloscelis abnormalis*	GNR	N3N4	S3			
Agabus Predaceous Diving Beetle	*Agabus amnicola*	GNR	N3	S1			
Banded Soft-winged Flower Beetle	*Collops vittatus*	GNR	N4N5	S3			
Black Fire Beetle	*Melanophila acuminata*	G5	N5	S3			
Black Swallowtail	*Papilio polyxenes asterius*	G5T5	N5	S1			
Canadian Bembidion Beetle	*Bembidion canadianum*	GNR	N4N5	S2			
Close Ground Beetle	*Agonum propinquum*	G5	N5	S3			
Colorado Bembidion Beetle	*Bembidion coloradense*	G5	N4N5	S3			
Columbian Lake Scavenger	*Helophorus columbianus*	GNR	N4N5	S3			
Common Claybank Tiger Beetle	*Cicindela limbalis*	G5	N5	S3			
Confused Flour Beetle	*Tribolium confusum*	GNR	NU	S3			
Cousin's Whirligig Beetle	*Gyrinus confinis*	G5	N5	S1			
Dark Rove Beetle	*Heterothops fusculus*	G5	N4N5	S3			
Elegant Purple-green Agonum Beetle	*Agonum cupripenne*	G5	N5	S3			
Elliptical Harp Ground Beetle	*Harpalus ellipsis*	GNR	N3N4	S3			
Field Bembidion Beetle	*Bembidion rupicola*	G5	N4N5	S3			
Fierce Brook Scavenger	*Helophorus furius*	GNR	NU	S3			
Fiery Hunter	*Calosoma calidum*	G5	N5	S2			
Fourteen-spotted Lady Beetle	*Calvia quatuordecimguttata*	G5	N5	S2			
Fraternal Water Scavenger Beetle	*Berosus fraternus*	GNR	NU	S3			
Fungi-loving Lordithon Rove Beetle	*Lordithon fungicola*	G5	N5	S3			
Gold-collared Riverbank Ground Beetle	*Bembidion aeneicolle*	G5	N4N5	S3			
Ground Beetle	*Anisodactylus harrisii*	G5	N5	S3			
Ground Beetle	*Stenolophus comma*	G5	N5	S3			
Ground Beetle	*Acupalpus canadensis*	G5	N5	S3			
Ground Beetle	*Amara convexa*	G5	N5	S3			
Ground Beetle	*Synuchus impunctatus*	G5	N5	S3			
Ground Beetle	*Platynus decentis*	G5	N5	S3			
Ground Beetle	*Agonum placidum*	G5	N5	S3			
Intermediate Riverbank Ground Beetle	*Bembidion intermedium*	GNR	N4N5	S3			
Lake Superior Water Scavenger Beetle	*Helophorus nitidulus*	G5	N4N5	S3			

Category: Invertebrate Animal

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
Lake-loving Sun Beetle	*Amara lacustris*	G5	N4N5	S3			
Manitoba Clown Beetle	*Hypocaccus iris*	GNR	N3N4	S2			
Marsh Lady Beetle	*Anisosticta bitriangularis*	G5	N5	S2			
McMinnville Harp Ground Beetle	*Diplocheila oregona*	GNR	N4N5	S3			
Metallic Darkling Beetle	*Blapstinus metallicus*	G5	N5	S3			
Neighbouring Sun Beetle	*Amara patruelis*	G5	N5	S2			
Nuttall's Blister Beetle	*Lytta nuttallii*	GNR	N4	S3			
Oregon Clown Beetle	*Saprinus oregonensis*	G5	N5	S3			
Our Lord Leaf Beetle	*Coleothorpa dominicana*	GNR	NU	S3			
Prairie Long-lipped Tiger Beetle	*Cicindela nebraskana*	G5	N5	S3			
Salt Bembidion Beetle	*Bembidion insulatum*	GNR	NU	S3			
Saltmarsh Crawling Water Beetle	*Haliplus apicalis*	GNR	N3N5	SU			
Serrated Ground Beetle	*Carabus serratus*	G5	N5	S3			
Sharp-nosed Bembidion Beetle	*Bembidion acutifrons*	GNR	NU	S3			
Shining Harp Ground Beetle	*Amara cupreolata*	G5	N5	S3			
Siegwald's Philonthine Beetle	*Bisnius siegwaldii*	G5	N5	S3			
Small Click Beetle	*Dalopius parvulus*	GNR	N3N4	S3			
Suckley's Cuckoo Bumble Bee	*Bombus suckleyi*	G2G3	N3N4	S1	Threatened		
Surrounded Riverbank Ground Beetle	*Bembidion praecinctum*	GNR	N3N4	S3			
Viridicolle Bembidion Beetle	*Bembidion viridicolle*	GNR	NU	S3			
Western Cross-toothed Rove Beetle	*Oxyporus occipitalis*	GNR	N4	S4			
Yellow-banded Bumble Bee	*Bombus terricola*	G3G4	N4?	S4	Special Concern	Special Concern	

Category: Vascular Plant

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
Bushy Cinquefoil	*Potentilla supina ssp. paradoxa*	G5T5	N4	S3			
Crowfoot Violet	*Viola pedatifida*	G5	N4	S3			
Eastern Yellow Stargrass	*Hypoxis hirsuta*	G5	N3N4	S2			
Mucronate Blue-eyed-grass	*Sisyrinchium mucronatum*	G5	N4	S3			
Pallas' Bugseed	*Corispermum pallasii*	G4?	NU	S2			

Category: Vertebrate Animal

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
Barn Swallow	*Hirundo rustica*	G5	N4N5B	S4B	Special Concern	Threatened	
Common Nighthawk	*Chordeiles minor*	G5	N4N5B, N5M	S4B	Special Concern	Special Concern	
Peregrine Falcon	*Falco peregrinus*	G4	N3N4B, N2N, N3N4M	S4B	Not at Risk		
Western Grebe	*Aechmophorus occidentalis*	G5	N3N4B, N2N	S3B	Special Concern	Special Concern	

Expected Species

"Expected" is based on a modelled prediction if a species might occur in areas based upon developed statistical relationships between local and landscape characteristics and species presence. Models utilized by this report have only been created in the prairie ecozone for a selection of species. The boreal plain, boreal shield and taiga shield will not return any expected species results. Models are not a substitute for on the ground surveys to determine species presence.

Species Predictive Models

Category: Invertebrate Animal

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
Monarch	*Danaus plexippus plexippus*	G4T3	N3B,NUM	S2B,SNRM	Endangered	Endangered	

Category: Vertebrate Animal

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
American Badger	*Taxidea taxus taxus*	G5T5	N4	S3	Special Concern	Special Concern	
Baird's Sparrow	*Centronyx bairdii*	G4	N4B,N4M	S4B	Special Concern	Special Concern	
Bank Swallow	*Riparia riparia*	G5	N4B,N5M	S4B,S5M	Threatened	Threatened	
Bobolink	*Dolichonyx oryzivorus*	G5	N5B, N4N5M	S5B	Special Concern	Threatened	
Common Nighthawk	*Chordeiles minor*	G5	N4N5B, N5M	S4B	Special Concern	Special Concern	
Horned Grebe	*Podiceps auritus*	G5	N5B, N4N5N	S4B	Special Concern	Special Concern	
Northern Harrier	*Circus hudsonius*	G5	N5B,N4N	S4B	Not at Risk		
Sprague's Pipit	*Anthus spragueii*	G3G4	N3N4B	S3B	Threatened	Threatened	

Whooping Crane Corridor No

Fish Species by Watershed

All fish species expected to be in any watershed that intersects the area searched are provided and their presence in the direct project area will depend on habitat.

Watershed: Assiniboine River

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
Blacknose Dace	*Rhinichthys obtusus*	G5	N5	S3			
Blacknose Shiner	*Notropis heterolepis*	G5	N5	S4			
Blackside Darter	*Percina maculata*	G5	N5	S3			
Brook Stickleback	*Culaea inconstans*	G5	N5	S5			
Brook Trout	*Salvelinus fontinalis*	G5	N5B,N5N	SNA			
Brown Bullhead	*Ameiurus nebulosus*	G5	N5	S3			
Brown Trout	*Salmo trutta*	G5	NNA	SNA			
Burbot	*Lota lota*	G5	N5	S5			
Chestnut Lamprey	*Ichthyomyzon castaneus*	G4	NU	SU	Data Deficient		
Common Carp	*Cyprinus carpio*	G5	NNA	SNA			
Common Shiner	*Luxilus cornutus*	G5	N5	S3			
Emerald Shiner	*Notropis atherinoides*	G5	N5	S5			
Fathead Minnow	*Pimephales promelas*	G5	N5	S5			
Iowa Darter	*Etheostoma exile*	G5	N5	S5			
Johnny Darter	*Etheostoma nigrum*	G5	N5	S5			
Lake Chub	*Couesius plumbeus*	G5	N5	S5			
Mooneye	*Hiodon tergisus*	G5	N5	S3			
Ninespine Stickleback	*Pungitius pungitius*	G5	N5B,N5N	S5			
Northern Pike	*Esox lucius*	G5	N5	S5			
Pearl Dace	*Margariscus nachtriebi*	G5	N5	S5			

Watershed: Assiniboine River

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
Rainbow Trout	*Oncorhynchus mykiss*	G5	N5B,N5N	SNA			
Rock Bass	*Ambloplites rupestris*	G5	N5	S2			
Shorthead Redhorse	*Moxostoma macrolepidotum*	G5	N5	S4			
Silver Redhorse	*Moxostoma anisurum*	G5	N5	S4			
Slimy Sculpin	*Cottus cognatus*	G5	N5	S4			
Spottail Shiner	*Notropis hudsonius*	G5	N5	S5			
Tiger Trout	*Salmo trutta x Salvelinus fontinalis*	GNA	NNA	SNA			
Trout-perch	*Percopsis omiscomaycus*	G5	N5	S5			
Walleye	*Sander vitreus*	G5	N5	S5			
White Sucker	*Catostomus commersonii*	G5	N5	S4			
Yellow Perch	*Perca flavescens*	G5	N5	S5			

Species with Critical Habitat Present

This dataset displays the geographic areas within which federal Critical Habitat for species at risk listed on Schedule 1 of the federal Species at Risk Act (SARA) occurs in Saskatchewan. Please be aware that not all of the area within these boundaries is necessarily Critical Habitat. To determine if a specific area is Critical Habitat and if your activity might be considered “destruction” of Critical Habitat, other information available in each individual species’ Recovery documents (http://www.sararegistry.gc.ca) need to be considered, including biophysical attributes and activities likely to result in destruction of Critical Habitat.

Note that recovery documents (and therefore Critical Habitat) may be amended from time to time. Species are added as the data becomes ready, which may occur after the recovery document has been posted on the SAR Public Registry. Although HABISask will try to provide the latest data, the SAR Public Registry should always be considered as the official source for Critical Habitat information.

Common Name	Scientific Name:	G Rank	N Rank	S Rank	COSEWIC	SARA Status	Wild Species at Risk Regulations
No Critical Habitat found							

Managed Areas

Managed areas are a diverse collection of lands and waters on which the conservation of biodiversity and ecosystem function are among the goals of the land management programs. Each of the unique or sensitive landscapes, within the network of managed areas, have some level of protection or activity restrictions placed on them by legislation, agreement or policy. These lands include provincial and national parks, ecological reserves, wildlife lands, game preserves, conservation easements and other privately held stewardship lands.

Managed areas are listed below if they are found within the complete project area including the buffer, unless otherwise specified.

Provincial Park

Nothing Found

Recreation Site

Nothing Found

Game Preserve

Nothing Found

Road Corridor Game Preserve

Nothing Found

National Wildlife Area

Nothing Found

Pasture Boundary

Nothing Found

Wildlife Habitat Protection Act (WHPA)

Nothing Found

Wildlife Habitat Protection Act (WHPA) within Project Area

Nothing Found

Fish & Wildlife Development Fund (FWDF)

Nothing Found

Migratory Bird Sanctuary

Nothing Found

Wildlife Refuge

Nothing Found

Conservation Easement

Nothing Found

Crown Conservation Easement

Nothing Found

Ecological Reserve

Nothing Found

Ramsar Wetland

Nothing Found

Reservoir Development Area

Nothing Found

Representative Area Ecological Reserve

Nothing Found

Special Management Area

Nothing Found

Project Screening Report

Rare and Endangered Species Occurrences

The absence of information provided by the Saskatchewan Conservation Data Centre (SKCDC) does not categorically mean the absence of sensitive species or features. The quantity and quality for data collected by the SKCDC are dependent on the research and observations of many individuals and organizations. SKCDC reports summarize the existing natural heritage information, known to the SKCDC, at the time of the request.

SKCDC data should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The user therefore acknowledges that the absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources.

Occurrence ID: 9999119466 **First Observation:** 2009-08-03
Occurrence Class: Vertebrate Animal **Last Observation:** 2009-08-03
Scientific Name: Chordeiles minor
Common Name: Common Nighthawk
Occurrence Rank:
General Description: Species detected (2009)
Occurrence Data:
Directions: Yorkton--Ravine Ecological Preserve

Occurrence ID: 9999122890 **First Observation:** 1947-06-10
Occurrence Class: Vertebrate Animal **Last Observation:** 1947-06-10
Scientific Name: Aechmophorus occidentalis
Common Name: Western Grebe
Occurrence Rank:
General Description: 2 Unknown Sex/Age; (1947)
Occurrence Data:
Directions: Muskeg - Yorkton District

Occurrence ID: 9999122889 **First Observation:** 1944-09-05
Occurrence Class: Vertebrate Animal **Last Observation:** 1944-09-05
Scientific Name: Aechmophorus occidentalis
Common Name: Western Grebe
Occurrence Rank:
General Description: 1 Unknown Sex/Age; (1944)
Occurrence Data:
Directions: Yorkton District

Occurrence ID: 9999162815 **First Observation:** 2024-05-23
Occurrence Class: Vertebrate Animal **Last Observation:** 2024-05-23
Scientific Name: Chordeiles minor
Common Name: Common Nighthawk
Occurrence Rank:
General Description: 1 Adult(s) Unknown Sex; Breeding Bird Status: H; (2024)
Occurrence Data:
Directions:

Occurrence ID: 9999162813 **First Observation:** 2024-05-08
Occurrence Class: Vertebrate Animal **Last Observation:** 2024-05-08
Scientific Name: Hirundo rustica
Common Name: Barn Swallow
Occurrence Rank:
General Description: 1 Adult Male(s); (2024)
Occurrence Data:
Directions:

Occurrence ID: 9999119467 **First Observation:** 2012-05-10
Occurrence Class: Vertebrate Animal **Last Observation:** 2012-05-10
Scientific Name: Falco peregrinus
Common Name: Peregrine Falcon
Occurrence Rank:
General Description: Species detected (2012)
Occurrence Data:
Directions: Yorkton--Ravine Ecological Preserve

Occurrence ID: 17517 **First Observation:** 1954-05-31
Occurrence Class: Invertebrate Animal **Last Observation:** 1954-05-31
Scientific Name: Bombus terricola
Common Name: Yellow-banded Bumble Bee
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen collected (1954)
Directions: Yorkton, SK.

Occurrence ID: 22284 **First Observation:** 1954-06-16
Occurrence Class: Invertebrate Animal **Last Observation:** 1954-06-16
Scientific Name: Bombus suckleyi
Common Name: Suckley's Cuckoo Bumble Bee
Occurrence Rank: H - Historical
General Description:
Occurrence Data: 2 Specimens collected (1954)
Directions: Yorkton

Occurrence ID: 34664 **First Observation:** 1945-06-08
Occurrence Class: Invertebrate Animal **Last Observation:** 1945-06-08
Scientific Name: Bembidion insulatum
Common Name: Salt Bembidion Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945)
Directions: Yorkton

Occurrence ID: 36270 **First Observation:** 1947-07-19
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-07-19
Scientific Name: Bembidion coloradense
Common Name: Colorado Bembidion Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947)
Directions: Yorkton

Occurrence ID: 37949 **First Observation:** 1947-07-19
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-07-19
Scientific Name: Bembidion acutifrons
Common Name: Sharp-nosed Bembidion Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947)
Directions: Yorkton

Occurrence ID: 36456 **First Observation:** 1945-06-08
Occurrence Class: Invertebrate Animal **Last Observation:** 1945-06-08
Scientific Name: Bembidion praecinctum
Common Name: Surrounded Riverbank Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945)
Directions: Yorkton

Occurrence ID: 38045 **First Observation:** 1949-06-05
Occurrence Class: Invertebrate Animal **Last Observation:** 1949-06-05
Scientific Name: Cicindela limbalis
Common Name: Common Claybank Tiger Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1949)
Directions: Yorkton

Occurrence ID: 35214 **First Observation:** 1946-05-12
Occurrence Class: Invertebrate Animal **Last Observation:** 1946-08-02
Scientific Name: Tribolium confusum
Common Name: Confused Flour Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1946)
Directions: Yorkton

Occurrence ID: 37289 **First Observation:** 1945-06-08
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-07-19
Scientific Name: Bembidion canadianum
Common Name: Canadian Bembidion Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945, 1947)
Directions: Yorkton

Occurrence ID: 34534 **First Observation:** 1969-05-01
Occurrence Class: Invertebrate Animal **Last Observation:** 1969-05-01
Scientific Name: Anisodactylus harrisii
Common Name: Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1969)
Directions: Yorkton

Occurrence ID: 34375 **First Observation:** 1945-05-24
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-06-13
Scientific Name: Berosus fraternus
Common Name: Fraternal Water Scavenger Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945, 1947)
Directions: Yorkton

Occurrence ID: 35033 **First Observation:** 1948-04-05
Occurrence Class: Invertebrate Animal **Last Observation:** 1948-04-05
Scientific Name: Lordithon fungicola
Common Name: Fungi-loving Lordithon Rove Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1948)
Directions: Yorkton

Occurrence ID: 38895 **First Observation:** 1947-06-13
Occurrence Class: Invertebrate Animal **Last Observation:** 1949-04-09
Scientific Name: Amara patruelis
Common Name: Neighbouring Sun Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947, 1949)
Directions: Yorkton

Occurrence ID: 37859 **First Observation:** 1945-06-08
Occurrence Class: Invertebrate Animal **Last Observation:** 1945-06-08
Scientific Name: Dalopius parvulus
Common Name: Small Click Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945)
Directions: Yorkton

Occurrence ID: 35471 **First Observation:** 1947-06-05
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-06-05
Scientific Name: Psiloscelis abnormalis
Common Name: Abnormal Clown Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947)
Directions: Yorkton

Occurrence ID: 36071 **First Observation:** 1947-07-19
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-07-19
Scientific Name: Diplocheila oregona
Common Name: McMinnville Harp Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947)
Directions: Yorkton

Occurrence ID: 36126 **First Observation:** 1945-06-08
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-06-13
Scientific Name: Haliplus apicalis
Common Name: Saltmarsh Crawling Water Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945, 1947)
Directions: Yorkton

Occurrence ID: 36760 **First Observation:** 1945-06-03
Occurrence Class: Invertebrate Animal **Last Observation:** 1945-06-08
Scientific Name: Bembidion rupicola
Common Name: Field Bembidion Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945)
Directions: Yorkton

Occurrence ID: 38822 **First Observation:** 1948-10-22
Occurrence Class: Invertebrate Animal **Last Observation:** 1948-10-22
Scientific Name: Calvia quatuordecimguttata
Common Name: Fourteen-spotted Lady Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1948)
Directions: Yorkton

Occurrence ID: 37848 **First Observation:** 1945-07-02
Occurrence Class: Invertebrate Animal **Last Observation:** 1948-06-06
Scientific Name: Agabus amnicola
Common Name: Agabus Predaceous Diving Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945, 1948)
Directions: Yorkton

Occurrence ID: 36254 **First Observation:** 1946-04-25
Occurrence Class: Invertebrate Animal **Last Observation:** 1950-06-23
Scientific Name: Blapstinus metallicus
Common Name: Metallic Darkling Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1946, 1950)
Directions: Yorkton

Occurrence ID: 35191 **First Observation:** 1945-06-15
Occurrence Class: Invertebrate Animal **Last Observation:** 1949-07-05
Scientific Name: Melanophila acuminata
Common Name: Black Fire Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945, 1949)
Directions: Yorkton

Occurrence ID: 37065 **First Observation:** 1947-08-06
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-08-06
Scientific Name: Heterothops fusculus
Common Name: Dark Rove Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947)
Directions: Yorkton

Occurrence ID: 38197 **First Observation:** 1947-08-20
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-08-20
Scientific Name: Harpalus ellipsis
Common Name: Elliptical Harp Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947)
Directions: Yorkton

Occurrence ID: 36355 **First Observation:** 1947-05-26
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-05-26
Scientific Name: Amara cupreolata
Common Name: Shining Harp Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947)
Directions: Yorkton

Occurrence ID: 38926 **First Observation:** 1946-07-05
Occurrence Class: Invertebrate Animal **Last Observation:** 1946-07-05
Scientific Name: Saprinus oregonensis
Common Name: Oregon Clown Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1946)
Directions: Yorkton

Occurrence ID: 36434 **First Observation:** 1948-06-13
Occurrence Class: Invertebrate Animal **Last Observation:** 1948-06-13
Scientific Name: Coleothorpa dominicana
Common Name: Our Lord Leaf Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1948)
Directions: Yorkton

Occurrence ID: 34238 **First Observation:** 1948-09-25
Occurrence Class: Invertebrate Animal **Last Observation:** 1948-09-25
Scientific Name: Amara lacustris
Common Name: Lake-loving Sun Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1948)
Directions: Yorkton

Occurrence ID: 34331 **First Observation:** 1948-07-08
Occurrence Class: Invertebrate Animal **Last Observation:** 1948-07-08
Scientific Name: Hypocaccus iris
Common Name: Manitoba Clown Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1948)
Directions: Yorkton

Occurrence ID: 35549 **First Observation:** 1946-06-16
Occurrence Class: Invertebrate Animal **Last Observation:** 1961-05-16
Scientific Name: Calosoma calidum
Common Name: Fiery Hunter
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1946, 1961)
Directions: Yorkton

Occurrence ID: 36780 **First Observation:** 1948-09-25
Occurrence Class: Invertebrate Animal **Last Observation:** 1949-06-05
Scientific Name: Oxyporus occipitalis
Common Name: Western Cross-toothed Rove Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1948, 1949)
Directions: Yorkton

Occurrence ID: 35379 **First Observation:** 1946-06-19
Occurrence Class: Invertebrate Animal **Last Observation:** 1950-06-29
Scientific Name: Stenolophus comma
Common Name: Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1946, 1950)
Directions: Yorkton

Occurrence ID: 34916 **First Observation:** 1945-06-08
Occurrence Class: Invertebrate Animal **Last Observation:** 1945-06-08
Scientific Name: Acupalpus canadensis
Common Name: Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945)
Directions: Yorkton

Occurrence ID: 35933 **First Observation:** 1947-07-20
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-07-20
Scientific Name: Bembidion viridicolle
Common Name: Viridicolle Bembidion Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947)
Directions: Yorkton

Occurrence ID: 34403 **First Observation:** 1946-04-14
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-05-28
Scientific Name: Agonum propinquum
Common Name: Close Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1946, 1947)
Directions: Yorkton

Occurrence ID: 37078 **First Observation:** 1950-06-29
Occurrence Class: Invertebrate Animal **Last Observation:** 1950-06-29
Scientific Name: Bembidion intermedium
Common Name: Intermediate Riverbank Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1950)
Directions: Yorkton

Occurrence ID: 37997 **First Observation:** 1945-06-08
Occurrence Class: Invertebrate Animal **Last Observation:** 1979-04-09
Scientific Name: Amara convexa
Common Name: Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945, 1979)
Directions: Yorkton

Occurrence ID: 37925 **First Observation:** 1949-06-25
Occurrence Class: Invertebrate Animal **Last Observation:** 1949-06-25
Scientific Name: Agonum cupripenne
Common Name: Elegant Purple-green Agonum Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1949)
Directions: Yorkton

Occurrence ID: 38165 **First Observation:** 1945-06-08
Occurrence Class: Invertebrate Animal **Last Observation:** 1948-06-06
Scientific Name: Gyrinus confinis
Common Name: Cousin's Whirligig Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945, 1948)
Directions: Yorkton

Occurrence ID: 37670 **First Observation:** 1948-07-18
Occurrence Class: Invertebrate Animal **Last Observation:** 1948-07-18
Scientific Name: Synuchus impunctatus
Common Name: Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1948)
Directions: Yorkton

Occurrence ID: 34535 **First Observation:** 1947-07-19
Occurrence Class: Invertebrate Animal **Last Observation:** 1950-05-28
Scientific Name: Anisosticta bitriangularis
Common Name: Marsh Lady Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947, 1950)
Directions: Yorkton

Occurrence ID: 35246 **First Observation:** 1950-06-13
Occurrence Class: Invertebrate Animal **Last Observation:** 1950-06-13
Scientific Name: Bisnius siegwaldii
Common Name: Siegwald's Philonthine Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1950)
Directions: Yorkton

Occurrence ID: 34334 **First Observation:** 1947-08-10
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-08-10
Scientific Name: Platynus decentis
Common Name: Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947)
Directions: Yorkton

Occurrence ID: 36165 **First Observation:** 1946-06-06
Occurrence Class: Invertebrate Animal **Last Observation:** 1946-06-06
Scientific Name: Carabus serratus
Common Name: Serrated Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1946)
Directions: Yorkton

Occurrence ID: 36559 **First Observation:** 1945-04-29
Occurrence Class: Invertebrate Animal **Last Observation:** 1945-04-29
Scientific Name: Helophorus nitidulus
Common Name: Lake Superior Water Scavenger Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945)
Directions: Yorkton

Occurrence ID: 35007 **First Observation:** 1947-06-19
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-06-19
Scientific Name: Lytta nuttallii
Common Name: Nuttall's Blister Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947)
Directions: Yorkton

Occurrence ID: 35055 **First Observation:** 1947-06-05
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-06-05
Scientific Name: Cicindela nebraskana
Common Name: Prairie Long-lipped Tiger Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947)
Directions: Yorkton

Occurrence ID: 37444 **First Observation:** 1946-04-14
Occurrence Class: Invertebrate Animal **Last Observation:** 1949-07-16
Scientific Name: Agonum placidum
Common Name: Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1946, 1949)
Directions: Yorkton

Occurrence ID: 36319 **First Observation:** 1947-06-19
Occurrence Class: Invertebrate Animal **Last Observation:** 1949-08-03
Scientific Name: Collops vittatus
Common Name: Banded Soft-winged Flower Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947, 1949)
Directions: Yorkton

Occurrence ID: 38754 **First Observation:** 1947-06-13
Occurrence Class: Invertebrate Animal **Last Observation:** 1947-06-13
Scientific Name: Helophorus furius
Common Name: Fierce Brook Scavenger
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947)
Directions: Yorkton

Occurrence ID: 36007 **First Observation:** 1947-07-25
Occurrence Class: Invertebrate Animal **Last Observation:** 1948-07-01
Scientific Name: Helophorus columbianus
Common Name: Columbian Lake Scavenger
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1947, 1948)
Directions: Yorkton

Occurrence ID: 37846 **First Observation:** 1945-06-08
Occurrence Class: Invertebrate Animal **Last Observation:** 1950-05-29
Scientific Name: Bembidion aeneicolle
Common Name: Gold-collared Riverbank Ground Beetle
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1945, 1950)
Directions: Yorkton

Occurrence ID: 37743 **First Observation:** 1979-07-24
Occurrence Class: Invertebrate Animal **Last Observation:** 1979-07-24
Scientific Name: Papilio polyxenes asterius
Common Name: Black Swallowtail
Occurrence Rank: H - Historical
General Description:
Occurrence Data: Specimen(s) collected (1979)
Directions: Yorkton

Occurrence ID: 7028
Occurrence Class: Vascular Plant
Scientific Name: Hypoxis hirsuta
Common Name: Eastern Yellow Stargrass
Occurrence Rank: U - Unrankable
General Description:
Occurrence Data: no data
Directions: Yorkton
First Observation:
Last Observation:

Occurrence ID: 16963
Occurrence Class: Vascular Plant
Scientific Name: Potentilla supina ssp. paradoxa
Common Name: Bushy Cinquefoil
Occurrence Rank: H - Historical
General Description:
Occurrence Data: 1945 - species collected
Directions: Yorkton
First Observation: 1945-07-21
Last Observation: 1945-07-21

Occurrence ID: 16747
Occurrence Class: Vascular Plant
Scientific Name: Sisyrinchium mucronatum
Common Name: Mucronate Blue-eyed-grass
Occurrence Rank: H - Historical
General Description:
Occurrence Data: 1947 - species observed in 1 site
Directions: Yorkton
First Observation: 1947-07-04
Last Observation: 1947-07-04

Occurrence ID: 16089
Occurrence Class: Vascular Plant
Scientific Name: Corispermum pallasii
Common Name: Pallas' Bugseed
Occurrence Rank: H - Historical
General Description:
Occurrence Data: unknown year (prior to 1959) - species observed in 1 site
Directions: Yorkton
First Observation: unknown
Last Observation: Unknown

Occurrence ID: 5381
Occurrence Class: Vascular Plant
Scientific Name: Viola pedatifida
Common Name: Crowfoot Violet
Occurrence Rank: H - Historical
General Description:
Occurrence Data:
Directions: Yorkton
First Observation: 1947-06-07
Last Observation: 1947-06-07

Project Screening Report

Wild Species Research Permitting

A Research Permit is required to detect or observe plants or wildlife for commercial purposes, such as pre-screening surveys to collect baseline data or other activities, or to conduct academic research. Research Permits are not required if you are doing surveys for personal, recreational, educational or other non-commercial purposes. Revisions were made to Section 21 of The Wildlife Act in 2015 and to Section 6.2 of The Wildlife Regulations in 2016.

See the Government of Saskatchewan Wild Species Research Permitting page for more information.

All forms and related information pertaining to Research Permits can be found in the Publications Centre. Be sure to check out the Conservation Standards Terms and Conditions for Research Permits for general, wildlife and research-specific and information submission conditions that pertain to all research permits.

Subscribe to our Mail-out List Subscriptions for updates regarding Species Detection Permits, SKCDC Lists and Ranks, Legislation and Policy and HABISask.

Species Detection Survey Protocols

The Species Detection Survey Protocols are used to detect rare and sensitive species so Activity Restriction Guidelines can be applied. Their use is required by industry/ environmental consultants for proposed or existing commercial activities.

Activity Restriction Guidelines for Sensitive Species

The Activity Restriction Guidelines for Sensitive Species outline restricted activity periods and distance setbacks for rare and sensitive species to assist proponents in minimizing impacts to rare and sensitive species and habitats.

Administrative Areas

Region South	ENV Land Management and Permitting Region(s)
Yorkton	Compliance and Field Services Area(s)
Yorkton	Compliance and Field Services Region(s)
South East	Area Fisheries Ecologist Area(s)
PARKLAND REGION	Area Wildlife Ecologist(s)
244 - ORKNEY	Rural Municipality
Nothing Found	First Nation Reserve
District 11	AG Crown Land Management Specialist District

Contact Us

For more information, please contact our Client Service Office:
Email: centre.inquiry@gov.sk.ca
Tel (toll free in North America): 1-800-567-4224
Tel (Regina): 306-787-2584

Appendix E
Heritage Screening

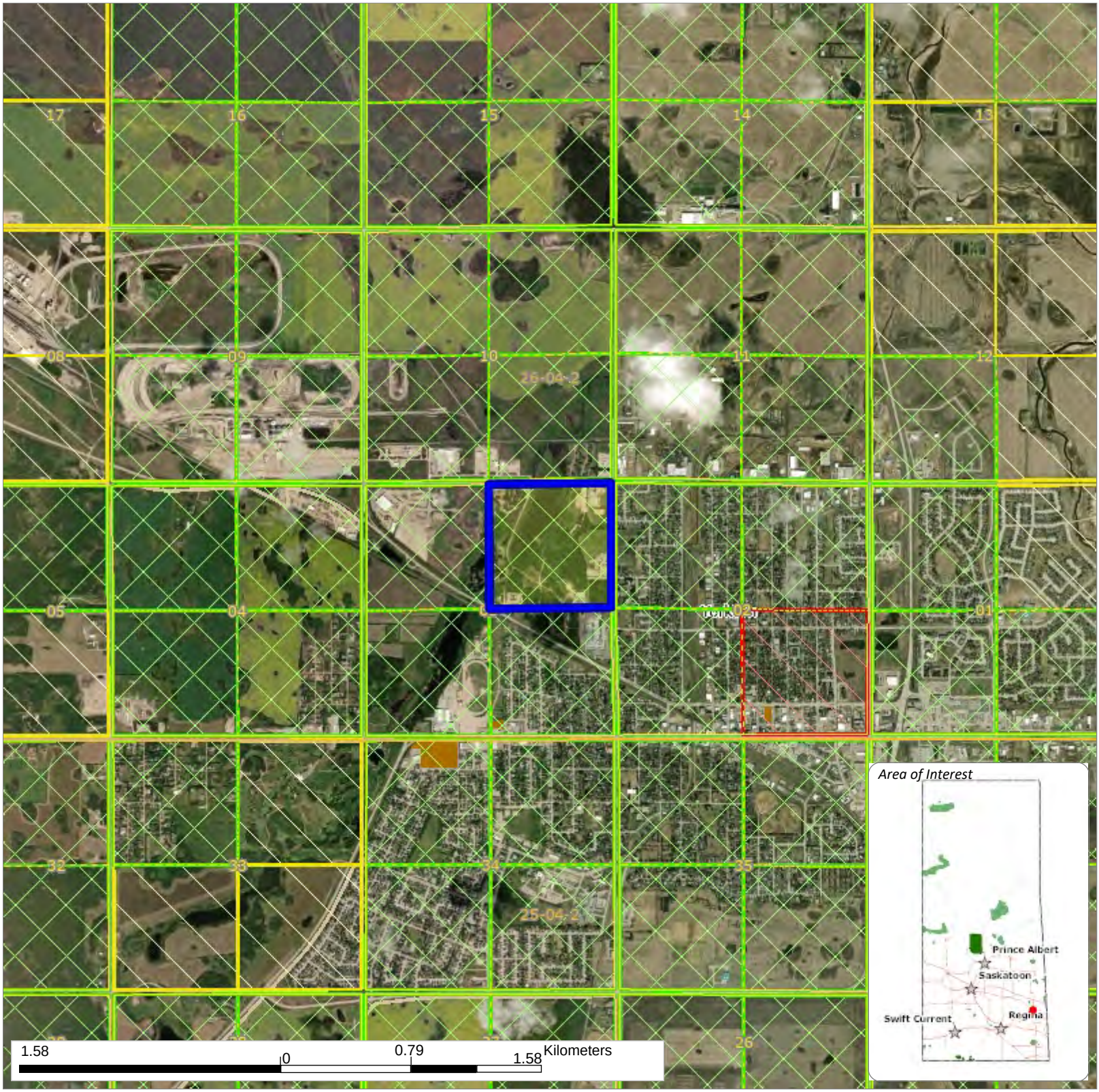
Clifton

Heritage Sensitivity Screening Report

Sensitivity: This selection is Not Heritage Sensitive.

This development has heritage clearance to proceed. Do not submit this project to the Heritage Conservation Branch. Keep this report for your records.

Report Generated
Sep/23/2025 1:20 PM



Heritage Sensitivity Screening Report

Parcel Description	Sensitivity	Parcel Description	Sensitivity
NE-03-26-04-2	N		

Sensitivity Legend:

Y = Heritage Sensitive, C = Conditionally Heritage Sensitive, N = Not Heritage Sensitive, Blank = Heritage Sensitive.

When the parcel description and sensitivity listing is blank, the project is outside of the quarter sections screened for sensitivity. All projects within these areas are automatically heritage sensitive and require review.

If needed, please complete the appropriate referral form and submit the project to the Heritage Conservation Branch for further screening. Project referrals must be accompanied by survey plans. The Screening Report can be saved and/or printed for your records, but does not need to be submitted as part of the referral. https://www.saskatchewan.ca/residents/parks-culture-heritage-and-sport/heritage-conservation-and-commemoration/archaeology/submit-your-land-and-resource-proposal-for-a-heritage-review

Disclaimer:

Attention landowners: The majority of small scale activities that involve improvements to, or maintenance of, private property usually have little or no impact on archaeological heritage resources. Access the Exempt Activities Checklist for Private Landowners to determine if your proposed activity is exempt from archaeological heritage screening using the Developers' Online Screening Tool. If the activity is exempt, please retain a copy (paper or electronic) of the completed Exempt Activities Checklist for Private Landowners for your records. Include the completed checklist with any applications for regulatory approvals or permits that may be required for the proposed activity to confirm that heritage concerns have been addressed.

Exempt Activities Checklist: https://applications.saskatchewan.ca/eachecklist

Contact us:

For more information, please contact the Heritage Conservation Branch:

Email: arms@gov.sk.ca

Tel 306-787-2817.

Heritage Sensitivity Screening Report

Sensitivity: This selection is Not Heritage Sensitive.

This development has heritage clearance to proceed. Do not submit this project to the Heritage Conservation Branch. Keep this report for your records.

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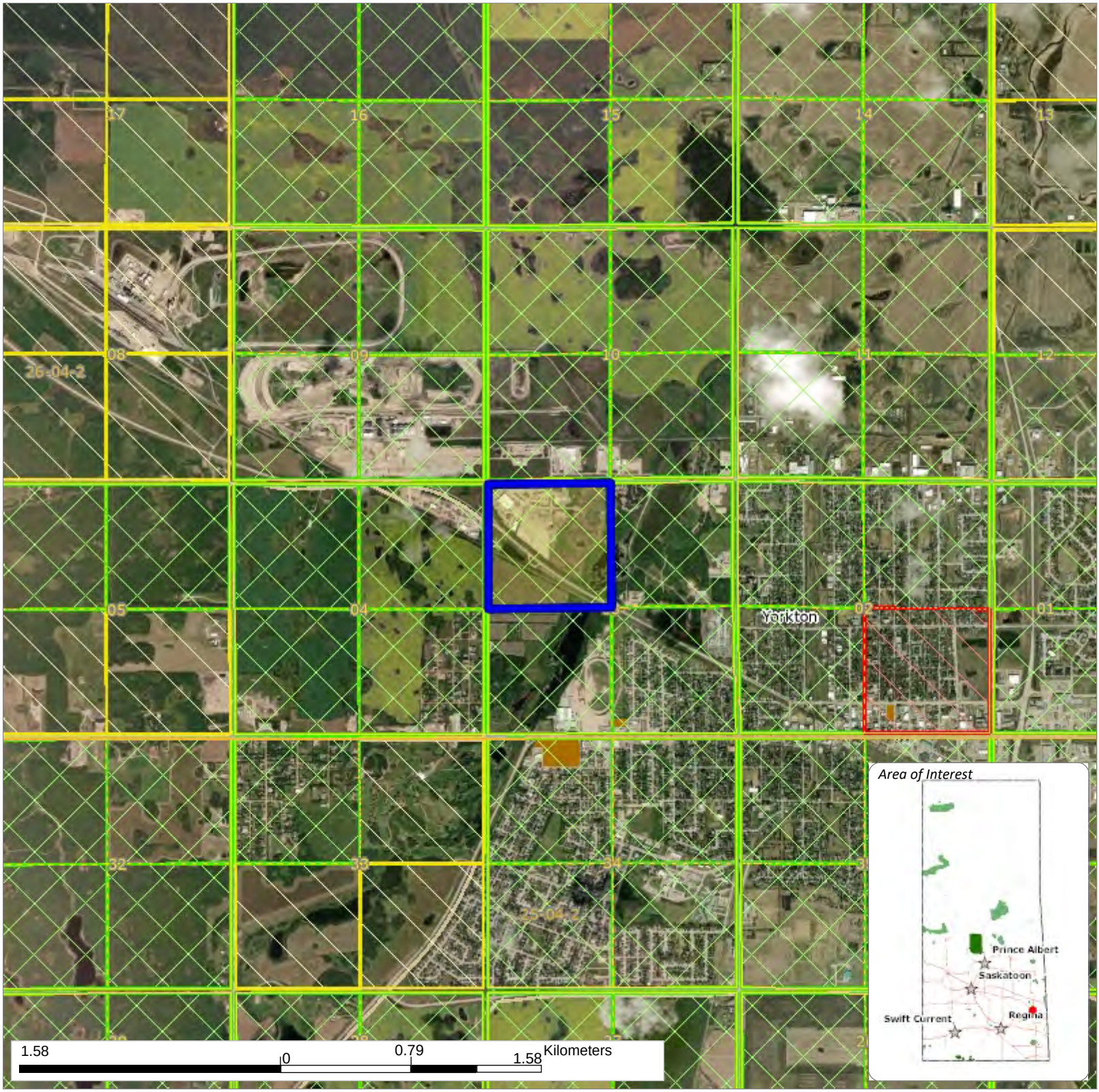
Dec/1/2025 3:22 PM



Heritage Sensitivity Screening Report

Parcel Description	Sensitivity	Parcel Description	Sensitivity
NW-03-26-04-2	N		

Sensitivity Legend:

Y = Heritage Sensitive, C = Conditionally Heritage Sensitive, N = Not Heritage Sensitive, Blank = Heritage Sensitive.

When the parcel description and sensitivity listing is blank, the project is outside of the quarter sections screened for sensitivity. All projects within these areas are automatically heritage sensitive and require review.

If needed, please complete the appropriate referral form and submit the project to the Heritage Conservation Branch for further screening. Project referrals must be accompanied by survey plans. The Screening Report can be saved and/or printed for your records, but does not need to be submitted as part of the referral. https://www.saskatchewan.ca/residents/parks-culture-heritage-and-sport/heritage-conservation-and-commemoration/archaeology/submit-your-land-and-resource-proposal-for-a-heritage-review

Disclaimer:

Attention landowners: The majority of small scale activities that involve improvements to, or maintenance of, private property usually have little or no impact on archaeological heritage resources. Access the Exempt Activities Checklist for Private Landowners to determine if your proposed activity is exempt from archaeological heritage screening using the Developers' Online Screening Tool. If the activity is exempt, please retain a copy (paper or electronic) of the completed Exempt Activities Checklist for Private Landowners for your records. Include the completed checklist with any applications for regulatory approvals or permits that may be required for the proposed activity to confirm that heritage concerns have been addressed.

Exempt Activities Checklist: https://applications.saskatchewan.ca/eachecklist

Contact us:

For more information, please contact the Heritage Conservation Branch:

Email: arms@gov.sk.ca

Tel 306-787-2817.

Appendix F
Detailed Cost Estimate

Clifton

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Table F1 – Cost Estimate Unit Rates			
Item	**Unit Cost**	**Unit**	**Notes**
Earthworks	$8	m^3	Based on Alberta Transportation 2026 unit price averages for common excavation.
Channel Excavation	$1,000	m	Based on Alberta Transportation 2026 unit price averages for channel excavation.
Sand Supply	$37	tonne	Based on Alberta Transportation 2026 unit price averages for granular fill.
Sand Install	$1	m^2	Based on Alberta Transportation 2026 unit price averages for topsoil placement.
Pipe supply and install	$198	m	Based on Alberta Transportation 2026 unit price averages for perforated pipe supply and install.
Intake install	$100,000	each	Unit cost is variable. Assumed.
Pumphouse install	$400,000	each	Based on Rail Shop services Inc quotation.
Dredging	$15	m^3	Based on Alberta Transportation 2026 unit price averages for Type 2 Wet Excavation.
Mobilization / Demobilization	$5,000	each	Unit cost is variable. Assumed.
Topsoil placement	$1	m^2	Based on Alberta Transportation 2026 unit price averages for topsoil placement.
Hauling	$2,000	day	Based on $1000 per truck per day, for two trucks. 200 cubic meters per day assumed.
Stripping	$4	m^3	Based on ATEC 2025 unit cost of $4.47 and a soil depth of 100 mm.
Fence remove and replace	$36	m	Based on Alberta Transportation 2026 unit price averages for fence removal and reinstall.

Table F1 – Cost Estimate Unit Rates			
Item	**Unit Cost**	**Unit**	**Notes**
Trail system and boardwalk	$75,000	each	Unit cost is variable. Assumed.
Green belt planting	$50,000	each	Unit cost is variable. Assumed.
Boathouse and dock	$500,000	each	Unit cost is variable. Assumed.
Boating course install	$20,000	each	Unit cost is variable. Assumed.
Remove floating wetlands	$5,000	each	Unit cost is variable. Assumed.

Table F2 – Revitalization Construction Cost Estimate			
Option	**Estimated Cost**	**Low Range (-30%)**	**High Range (+50%)**
Mobilization / Demobilization	$5,000	$3,500	$7,500
Restore Jaycee Beach	$91,000	$64,000	$136,000
Regrade Dog Park	$59,000	$42,000	$89,000
Groundwater Makeup Water	$210,000	$147,000	$315,000
Lake Water Recirculation	$690,000	$483,000	$1,035,000
Excavate Deep Lake Areas	$39,000	$27,000	$58,000
Dredge Creek Along Park Road	$11,000	$8,000	$17,000
Trail system and boardwalk	$75,000	$52,500.0	$112,500
Green belt planting	$50,000	$35,000	$75,000
Boathouse and dock	$500,000	$350,000	$750,000
Boating course install	$20,000	$14,000	$30,000
Remove floating wetlands	$5,000	$3,500	$7,500
Total	**$1,755,000**	**$1,230,000**	**$2,633,000**

Clifton

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