RIVER VALLEY PLANNING MODERNIZATION

Ribbon of Green & River Valley ARP

Ecology, Celebration, and Wellness Reach Report

November 2021

Edmonton

OVERVIEW

The River Valley is a vital and highly valued ecological, recreational, and active transportation corridor. It is a place of incredible cultural significance and a draw for visitors throughout the region. Effective preservation and use of the valley over the long term requires an adequate understanding of the valued and sensitive features it contains, and of how people use the area.

Drawing from the Breathe open space network framework, this document provides an overview of the Ecology, Celebration, and Wellness functions provided across the River Valley. This initial assessment will inform and guide further management decisions to ensure wise stewardship of this irreplaceable natural treasure.

EDMONTON'S RIVER VALLEY AND RAVINE SYSTEM

The North Saskatchewan River Valley is incredibly important for the region, acting as a irreplaceable wildlife corridor and network of open spaces. This area has a long history of use that has seen extensive development during the growth of the city. Its southwest and northeast portions have been recently planned in the Ribbon of Green SW + NE project. This project will review and update the the remainder of the system, including those areas last planned for in the Ribbon of Green Master Plan of 1992. As well, the project will include other lands that have not previously been planned, including the newly annexed southern lands that form part of the River Valley and Ravine System.

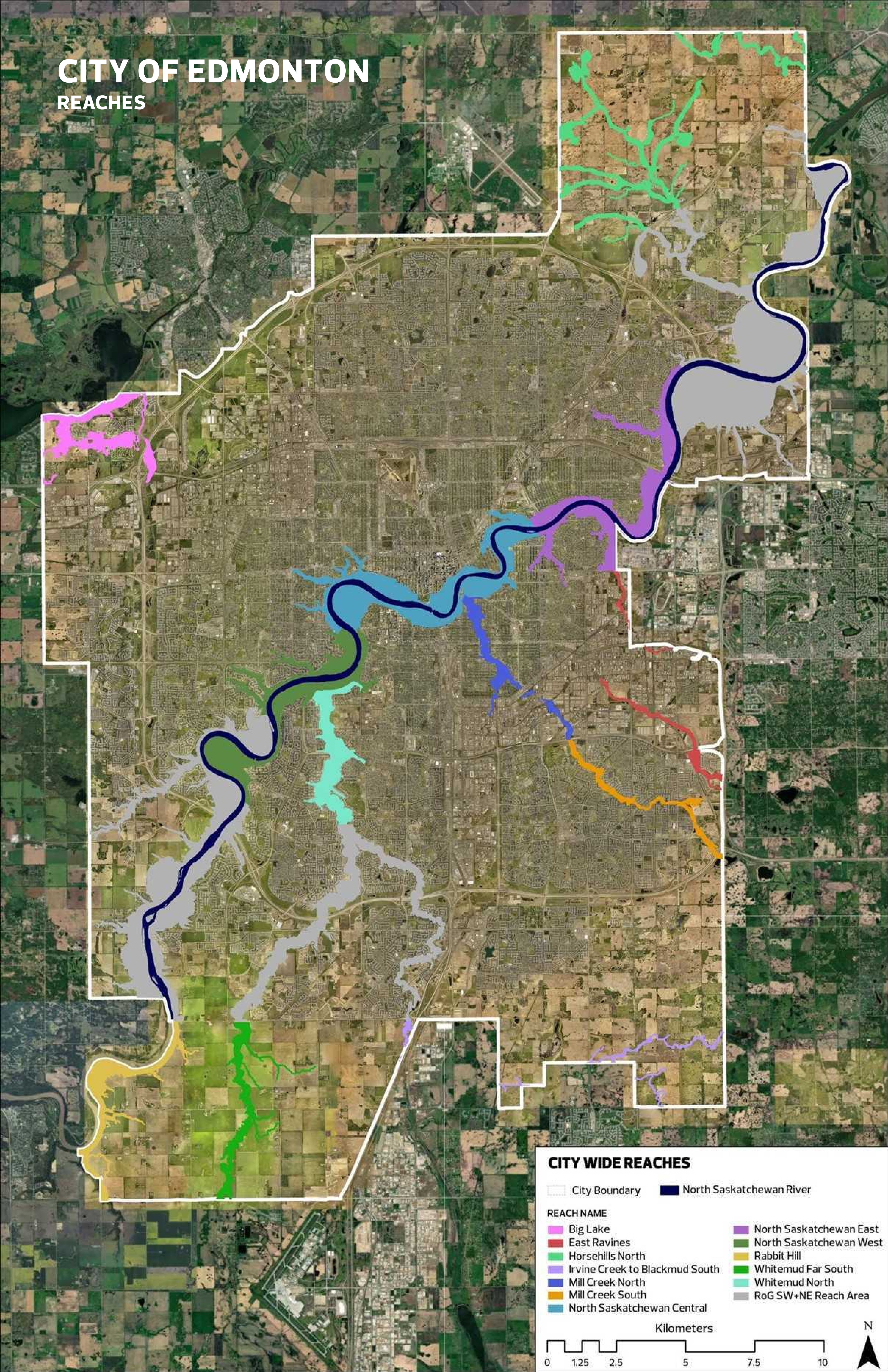
The Ravine System consists of a variety of important larger ravines, and numerous additional smaller ravines, each with a different degree of development and disturbance. The Whitemud and Blackmud Ravines are cherished destinations, providing easy access to natural spaces and unique amenities for the surrounding community. Irvine Creek flows across the Highway 2 and into Blackmud Ravine. Mill Creek Ravine has been impacted by residential and industrial development, with portions of its flow lying underground. This disconnect has impacted its ecological function, but it is still an important component of habitat connectivity in the city, and a beloved recreation area.The East Ravines of Gold Bar and Fulton Creek are more heavily impacted and disconnected by urban and industrial development, though still an important recreation destination for those living in the eastern neighbourhoods. Gold Bar park includes an extensive trail network and pavilion and is home to the Edmonton Nordic Ski Club. Big Lake is an Important Bird Area, and a wonderful natural space, with ongoing residential development in surrounding areas. Water from Big Lake flows through the Sturgeon River, emptying into the North Saskatchewan via Horsehills Creek, presently an agricultural landscape but one slated for residential and LRT development.

REACHES OF THE RIVER VALLEY

The River Valley varies considerably across its span, from its natural habitats, to the degree of historical use and present day development. To reflect this, the River Valley and Ravine System has been split into distinct **Reaches**, each with its own character and composition. Reach boundaries were selected using well-known landmarks and natural features to create logical and mappable planning units. Some reaches are included within the Ribbon of Green SW+NE Plan, and are excluded from this work. The remaining reaches represent the focus of the project, and are mapped on the subsequent page. These reaches include:

- North Saskatchewan Central
- North Saskatchewan West
- North Saskatchewan East
- Whitemud Ravine North
- Mill Creek Ravine North
- Mill Creek Ravine South
- East Ravines (Fulton + Gold Bar)
- North Saskatchewan Rabbit Hill
- Big Lake
- Horsehills Creek North
- Irving Creek to Blackmud Ravine South
- Whitemud Ravine Far South

For more information about the areas covered by the Ribbon of Green SW + NE, please visit *https://www.edmonton.ca/city_government/initiatives_innovation/ribbon-of-green-sw-ne.aspx*


CITY OF EDMONTON
REACHES
CITY WIDE REACHES
City Boundary
North Saskatchewan River
REACH NAME
Big Lake
East Ravines
Horsehills North
Irvine Creek to Blackmud South
Mill Creek North
Mill Creek South
North Saskatchewan Central
North Saskatchewan East
North Saskatchewan West
Rabbit Hill
Whitemud Far South
Whitemud North
RoG SW+NE Reach Area
Kilometers
0
1.25
2.5
5
7.5
10
N

CITY-WIDE MAPPING

Although the subsequent sections focus on reach-level mapping, it is important to consider the broader city-wide context as well. An initial overview across the city provides the perspective needed to compare each reach.

RELATIVE VISITATION DENSITY

The following city-wide map shows the relative visitation density throughout the study area (assessed using cellular location services). While such an assessment will overlook visits by people who do not use cellular location services, this approach helps to highlight hotspots throughout the River Valley and Ravine System, including throughout the Central, West, East, and Whitemud North reaches, with highest densities in Hawrelak Park,Terwillegar Park, Kinsmen Park, and Victoria Golf Course. However, this should be seen as a snapshot in time, and visitation will undoubtedly change over time as new communities are built out, new amenities are put in place, and recreational trends shift over time.

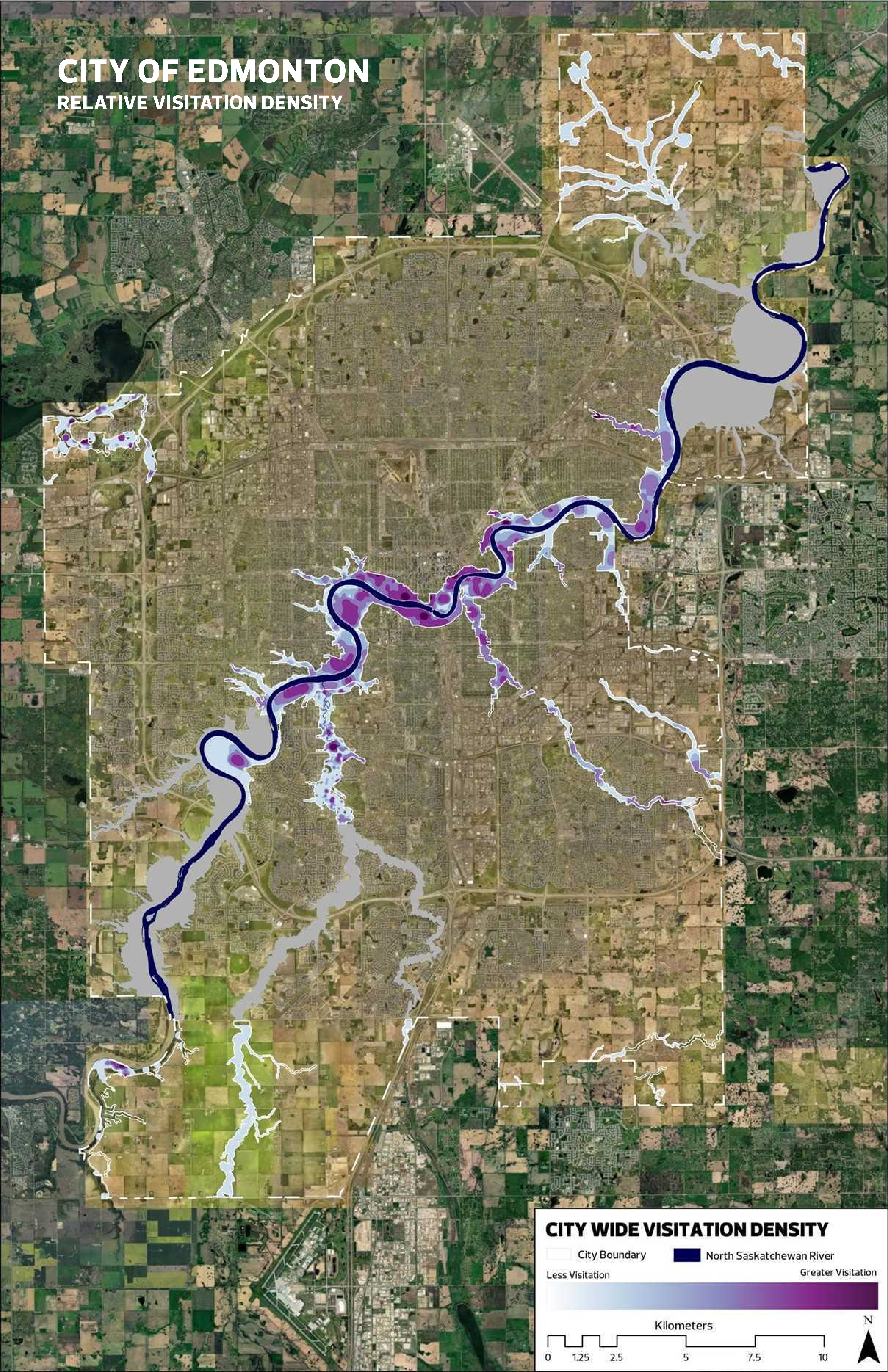
Assessing where and how people use the River Valley and Ravine System helps us to plan infrastructure development and access management in high-use areas, consider where use might be causing impact, iand dentify opportunities to increase opportunities to improve visitation in areas that currently see little use.

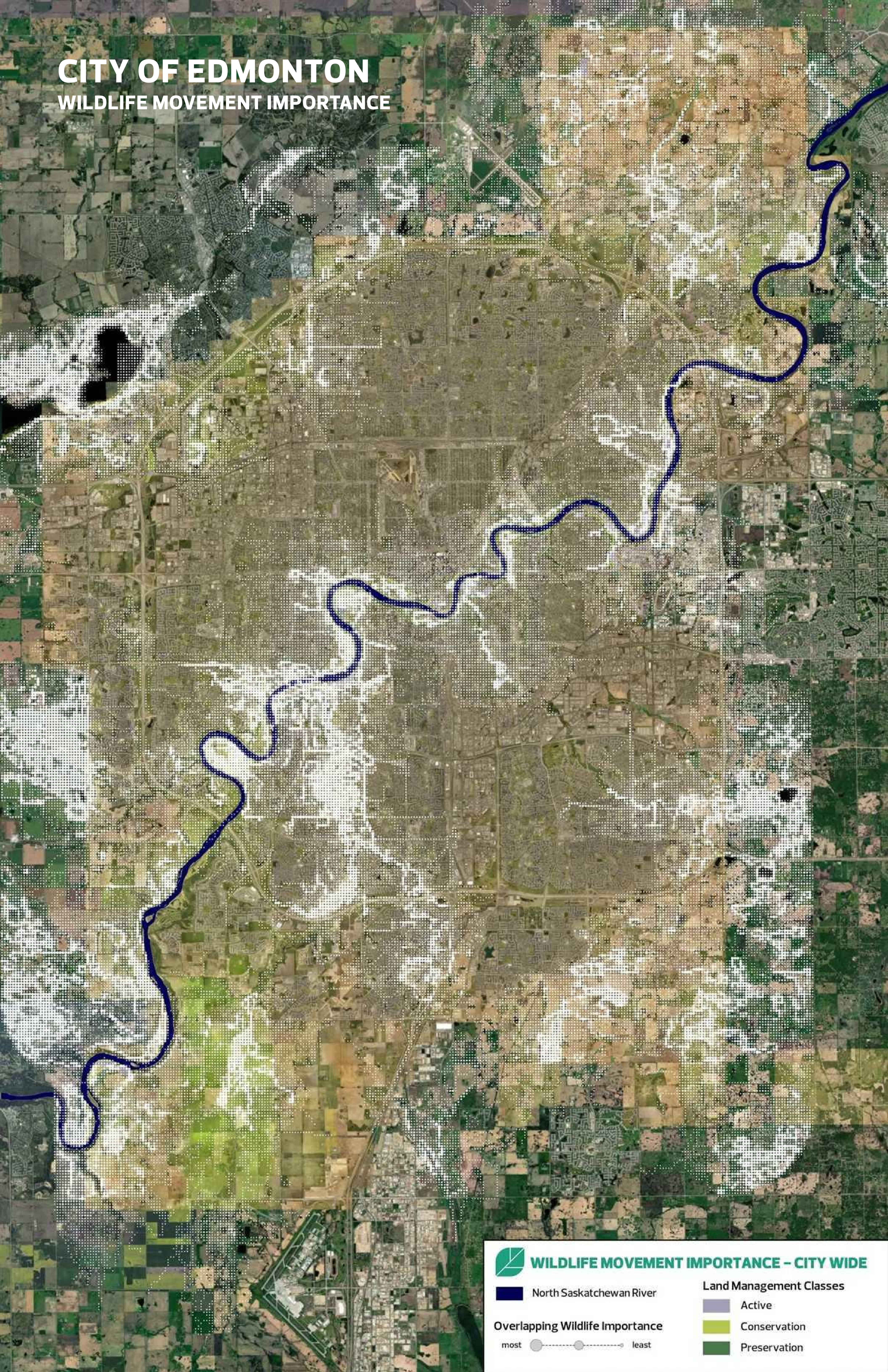
WILDLIFE MOVEMENT IMPORTANCE

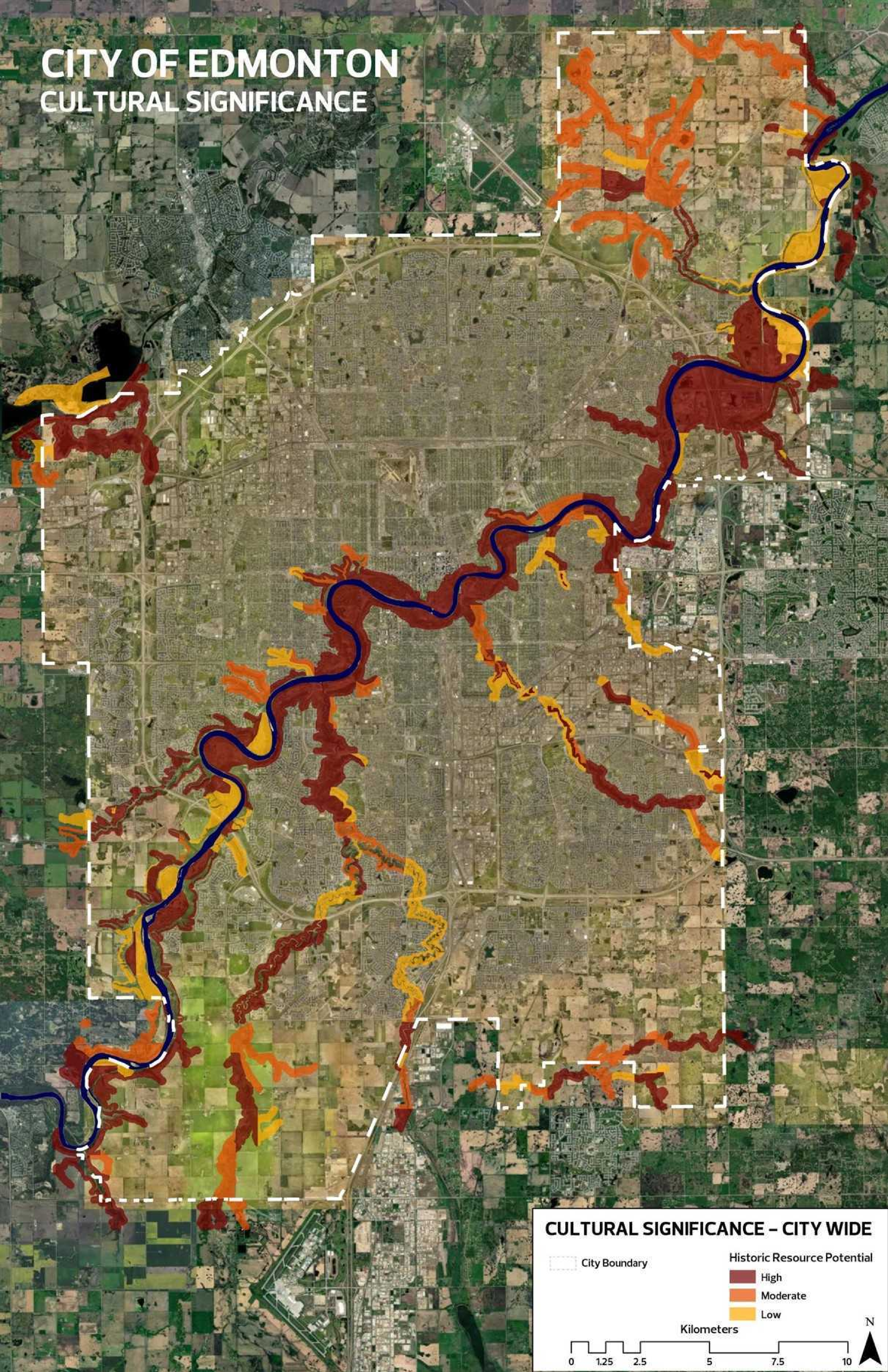
An assessment of potential wildlife movement between core habitats (based on the City's existing models of connectivity) reveals the relative importance of areas throughout the city and its periphery. Mapping uses white dots of varying size to indicate the relative importance of each area to providing connectivity between core habitat patches identified throughout the city. This city-wide mapping highlights the importance of the River Valley and Ravine System, providing an irreplaceable corridor allowing the city's wildlife to continue to sustain itself. In more developed residential and industrial lands, movement is more restricted, but movement out of the ravine systems is commonplace, especially in areas around Whitemud and Mill Creek Ravines. Key challenges to connectivity exist in the Central Reach, where extensive infrastructure development, high density recreational use, and steep valley slopes combine to limit the ability of wildlife to travel. Relatively undeveloped lands in the periphery of the city are also highly important, and maintaining connectivity through these lands to natural areas is an important aspect of the sustainable development of these communities.

CULTURAL SIGNIFICANCE

The Cultural Resources Overview document provides a desktop-based assessment of the historic resources within the River Valley and Ravine System. This highlights how much of this area has high cultural significance. The Overview document provides detailed evaluations of historic resource potential, interpretive value, and recommendations regarding acceptable possible future impacts. Assessments of the potential cultural significance of the Ribbon of Green area (with respect to its potential for as-yet-undiscovered paleontological, archaeological, and historical finds) stress the need to ensure that the long history of human use is recognized and preserved.


CITY OF EDMONTON
RELATIVE VISITATION DENSITY
CITY WIDE VISITATION DENSITY
City Boundary
North Saskatchewan River
Less Visitation
Greater Visitation
Kilometers
N
0
1.25
2.5
5
7.5
10


CITY OF EDMONTON
WILDLIFE MOVEMENT IMPORTANCE
WILDLIFE MOVEMENT IMPORTANCE – CITY WIDE
North Saskatchewan River
Overlapping Wildlife Importance
most
least
Land Management Classes
Active
Conservation
Preservation


CITY OF EDMONTON
CULTURAL SIGNIFICANCE
CULTURAL SIGNIFICANCE – CITY WIDE
City Boundary
Historic Resource Potential
High
Moderate
Low
Kilometers
0
1.25
2.5
5
7.5
10
N

NORTH SASKATCHEWAN CENTRAL

North Saskatchewan Central Reach Overview

The North Saskatchewan Central Reach lies at the heart of Edmonton, along its urban core. The reach extends from Hawrelak Park in the west to Wayne Gretzky Drive in the east. This section of the Ribbon of Green includes the two primarily residential communities of Rossdale, Cloverdale, and Riverdale. The reach provides river access to the growing Downtown and The Quarters District as well as the soon to be redeveloped Exhibition Lands.

This reach has been an important area for Indigenous Nations/ Communities, as the River Crossing lands served as an important gathering place and trading centre. The area has extensive known archaeological and historic sites of note, as well as high potential for additional as-yet undiscoverd cultural sites.

Given its location in the centre of Edmonton, the Central Reach is a key hub for vehicle bridges providing access for traffic between the north and south of the city. These include the High Level Bridge (slated for upgrades in 2023), the Walterdale Bridge (completed in 2017), the James MacDonald Bridge, the Low Level Bridge, and the Dawson Bridge. The Buena Vista / Hawrelak Park Footbridge provides an additional pedestrian connection. Construction of these bridges, particularly the recent construction of the Walterdale Bridge has impacted the river flow through the area and creates navigational obstacles for those traveling along the water.

As well, the numerous bridges and heavy use of the area mean that ecological connectivity is a significant challenge to the sustainability of the valley. Wildlife movement through this area is heavily restricted, and improving the flow of biodiversity through the Central Reach remains an important challenge to address.

With its proximity to the most densely populated neighbourhoods in the city, this Central Reach sees the heaviest visitation within the Ribbon of Green. The reach provides significant wellness and celebration functions for adjacent neighbourhoods as well as city-wide amenities. This draws visitors from around the city and serves as an important draw for tourism. The reach contains the Muttart Conservatory, the John Walter Museum, and the Kinsmen Sports Centre. It also includes three golf courses: Victoria Golf Course, Royal Mayfair Golf Course, and Riverside Golf Course. The reach is connected to several major event sites, including those in downtown, Gallagher Park, the Edmonton Convention Centre, and the EXPO Centre.

The reach contains many other significant and beloved parks, including:

- Allan Stein Park
- Bennett Centre
- Capital City Park
- Constable Ezio Faraone Park
- Dawson Park
- Diamond Park
- Emily Murphy Park
- Forest Heights Park
- Gallagher Park
- Government House Park
- Grant Notley Park
- Groat Ravine
- Henrietta Muir Edwards Park
- Irene Parlby Park
- Jane Salisbury Park
- Kinnaird Park
- Kinsmen Park
- Louise McKinney Riverfront Park
- Mackenzie + MacKinnon Ravine
- MacKinnon Ravine Park
- Muttart Conservatory Park
- Nellie McClung Park
- Queen Elizabeth Park
- Ramsay Ravine Park
- Riverdale Park
- Rossdale Park
- Sheriff Robertson Park
- Strathearn Park
- Remax Field
- William Hawrelak Park
- Victoria Park

The steep banks of the river close to Downtown makes accessing this part of the River Valley more challenging. To provide an accessible connection, the 100 Street Funicular was built, providing access from downtown to the River Valley through a moving mechanical platform. Additional improvements to provide increased access for bikes and other active modes of travel while creating viewpoints along the slope. The Downtown Public Places Plan outlines several other potential connections from the Downtown into the River Valley in the future.

The City is currently undertaking the Touch the Water Promenade Project, which will see improvements to the waterfront along Rossdale and north along River Valley Road. These improvements will include various amenity nodes and water access points as well as view points and trail improvements to create a more continuous experience.

In 2020, the Pekiwewin homeless camp helped highlight the ongoing challenges of homelessness in the city, working to raise awareness of the ongoing need for harm reduction and community support for the city's homeless population. Many of the River Valley parks in the Central Reach are used by people experiencing homelessness. Providing care and adequate oversight to these populations remains a challenge.

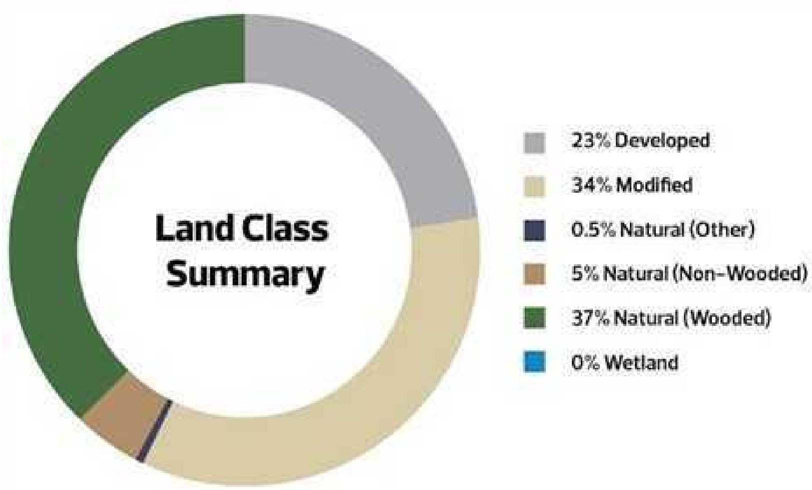
REACH	CELEBRATION	WELLNESS	ECOLOGY
North Saskatchewan Central	**3** Unique Attractions **4** Restaurants **4** Community Buildings **3** Community Leagues **14** Event Spaces **6** Gazebos/Shelters **16** Bookable Picnic Sites **1** Pool Building	**9** Sports Diamonds **10** Playgrounds **4** Handboat Launches **3** Golf Course Clubhouses **5** Outdoor Skating Surfaces **1** Indoor Pool **1** Outdoor Pool **14** Sports Courts **10** Sports Fields **1** Public School **1** Recreation Facility **3** Tobogganing Areas **7** Washrooms **1** Skateboard Park **2** Spray Decks **1** Spray Park **1** Skateboard Park **1** Pitch and Putt **TRAILS** **30 km** Formal (Seasonal) **31 km** Formal (Year-Round) **22 km** Cross-Country Ski **45 km** Informal Trails	**Total Area:** 928.9 ha (100%) **Developed and Modified Land Use:** 532.3 ha (57%) **Wetlands:** 0.0 (0%) **Tree Canopy:** 451 ha (49%) **Unique Vegetation:** 177 ha (19%) **Connectivity Pinchpoints:** 146.5 ha (16%) **Wildlife Corridor:** 759 ha (82%) **Naturalized Spaces:** 30.69 ha (3%) **Natural Areas:** 396.6 ha (43% of reach) **City-Owned Parks:** 361 ha (covers 91% of natural areas)
North Saskatchewan Central (nearby)	**10** Bookable Picnic Sites	**1** School	

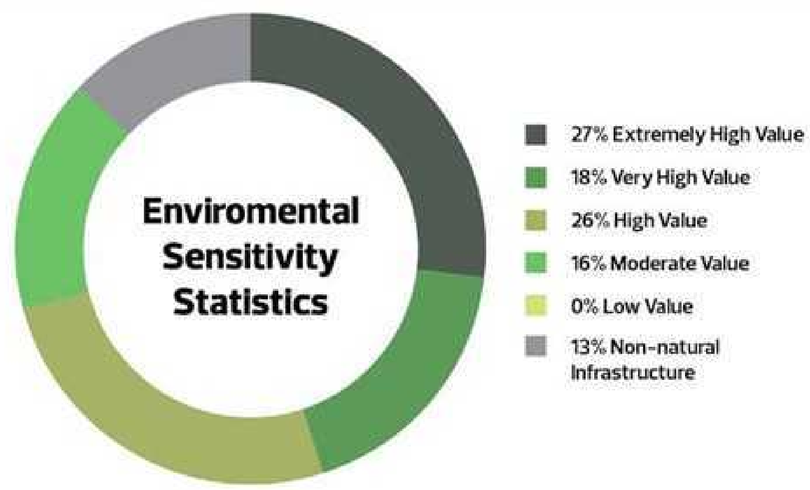
ECOLOGY

This reach has a long history of human use, development, and disturbance. However, it remains an important natural component of the River Valley and Ravine System. Large stretches of natural cover on the western side of the reach connect Ramsay, MacKinnon, and MacKenzie Ravines, with key core habitat patches found within them. Similarly the eastern side of the reach contains important core habitat in Nellie McClung Park, Forest Heights Park, and portions of Dawson Park. Smaller core habitats exist in Hawrelak Park west of the lake, and in the Royal Mayfair golf course. Unique vegetation is found throughout the reach, with larger patches in MacKinnon, MacKenzie, Ramsay, and Rat Creek Ravines, as well as Kinsmen and Forest Heights Park and the ridge above Victoria Golf Course.

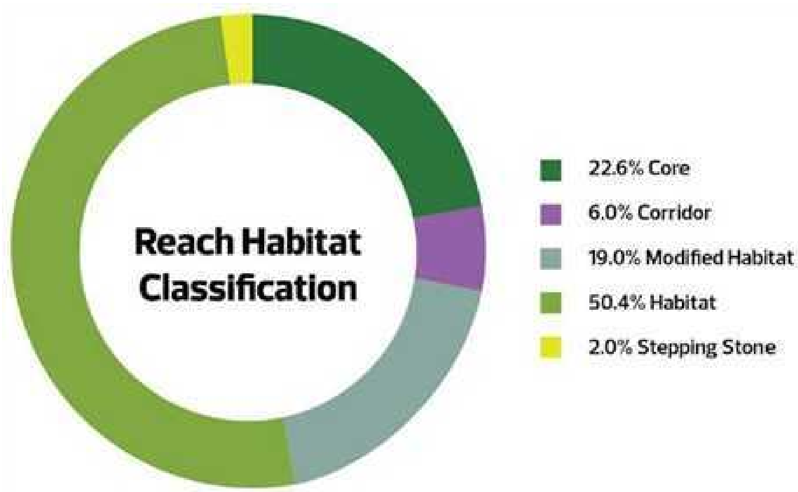
While important habitat is found throughout these areas, the central downtown area of this reach is highly fragmented by event spaces, golf courses, residential areas, bridges and other infrastructure. Improving and preserving wildlife connectivity remains a key concern in this reach. Riparian areas around Hawrelak, Emily Murphy, and Kinsmen Parks act as important corridors for wildlife movement, as do the riparian areas bordering Rossdale, Riverdale, and Cloverdale neighbourhoods. Key pinchpoints include north of Buena Vista Park towards the MacKenzie Ravine, the forested stretch west of Hawrelak to Kinsmen Park, through the southern portion of Victoria Golf Course, the entrance to Mill Creek Ravine, the stretch of narrow riparian area from the Walterdale Bridge in Rossdale to Louise McKinney Riverfront Park, and along the river's edge through Riverdale to the end of Dawson Park. Concerns have been raised about the ecological condition, tree health, and erosion along the riverbank and riparian edge along the eastern boundary of Rossdale next to the river at Irene Parlby Park and 98 Ave/James MacDonald Bridge. Further development or disturbance in these areas will have a disproportionate impact on wildlife connectivity and natural functioning of this important area.

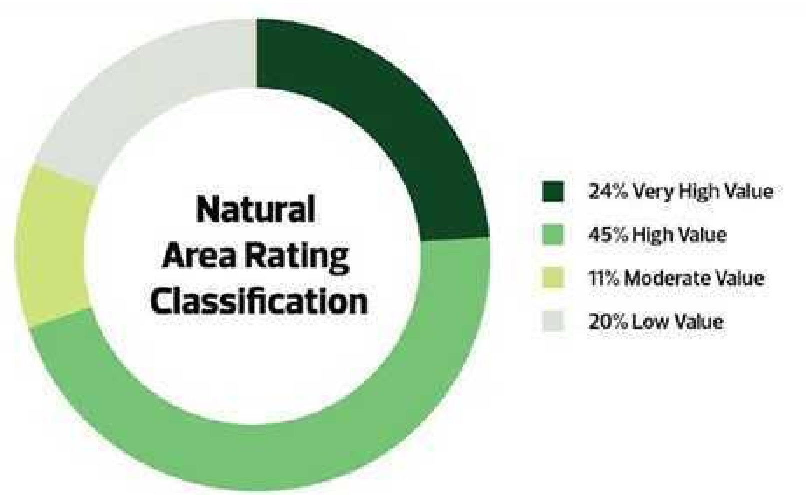
North Saskatchewan Central – Land Class and Environmental Sensitivity Summary





North Saskatchewan Central – Reach Habitat and Natural Area Rating Classification





NORTH SASKATCHEWAN CENTRAL

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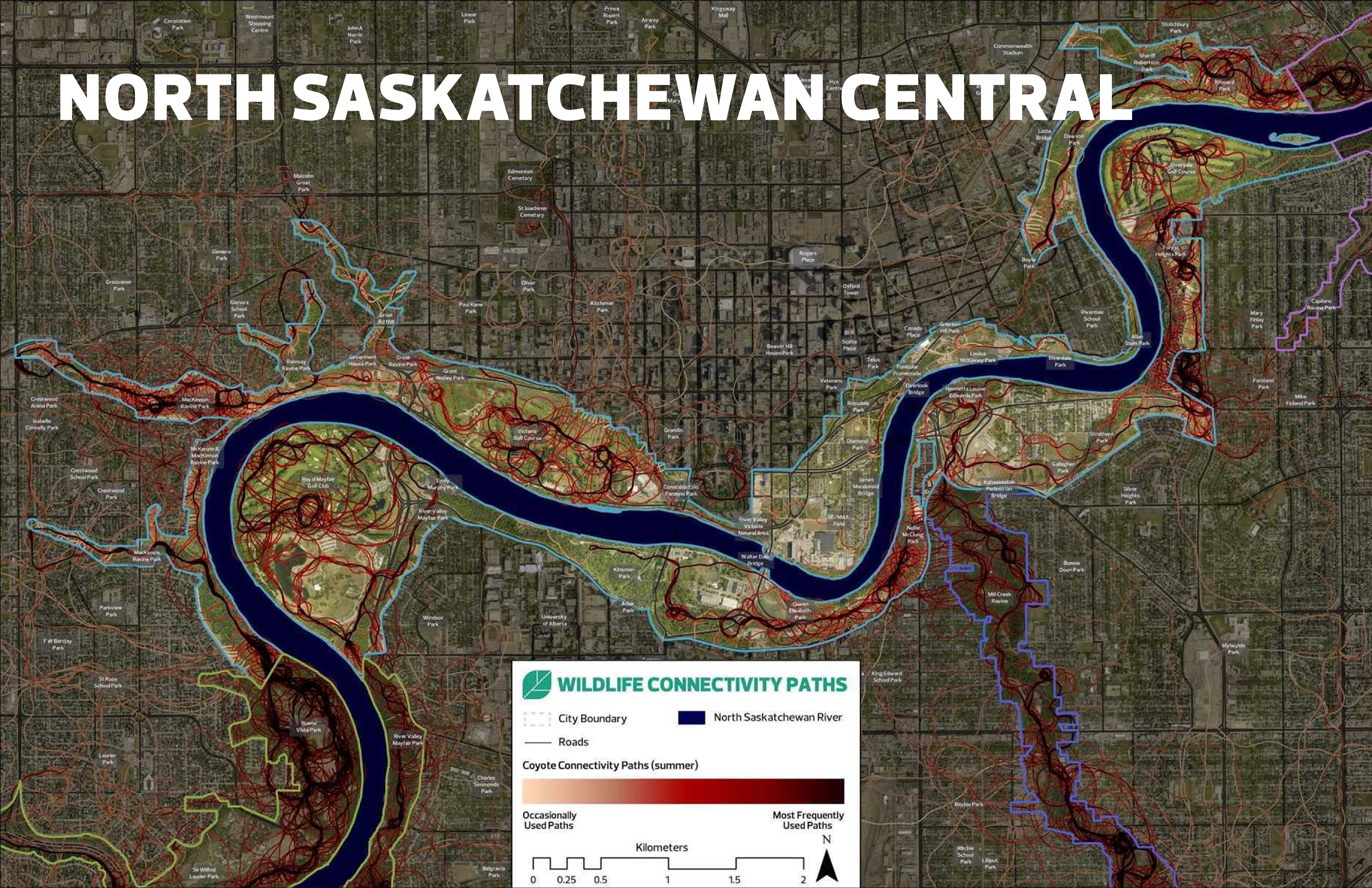
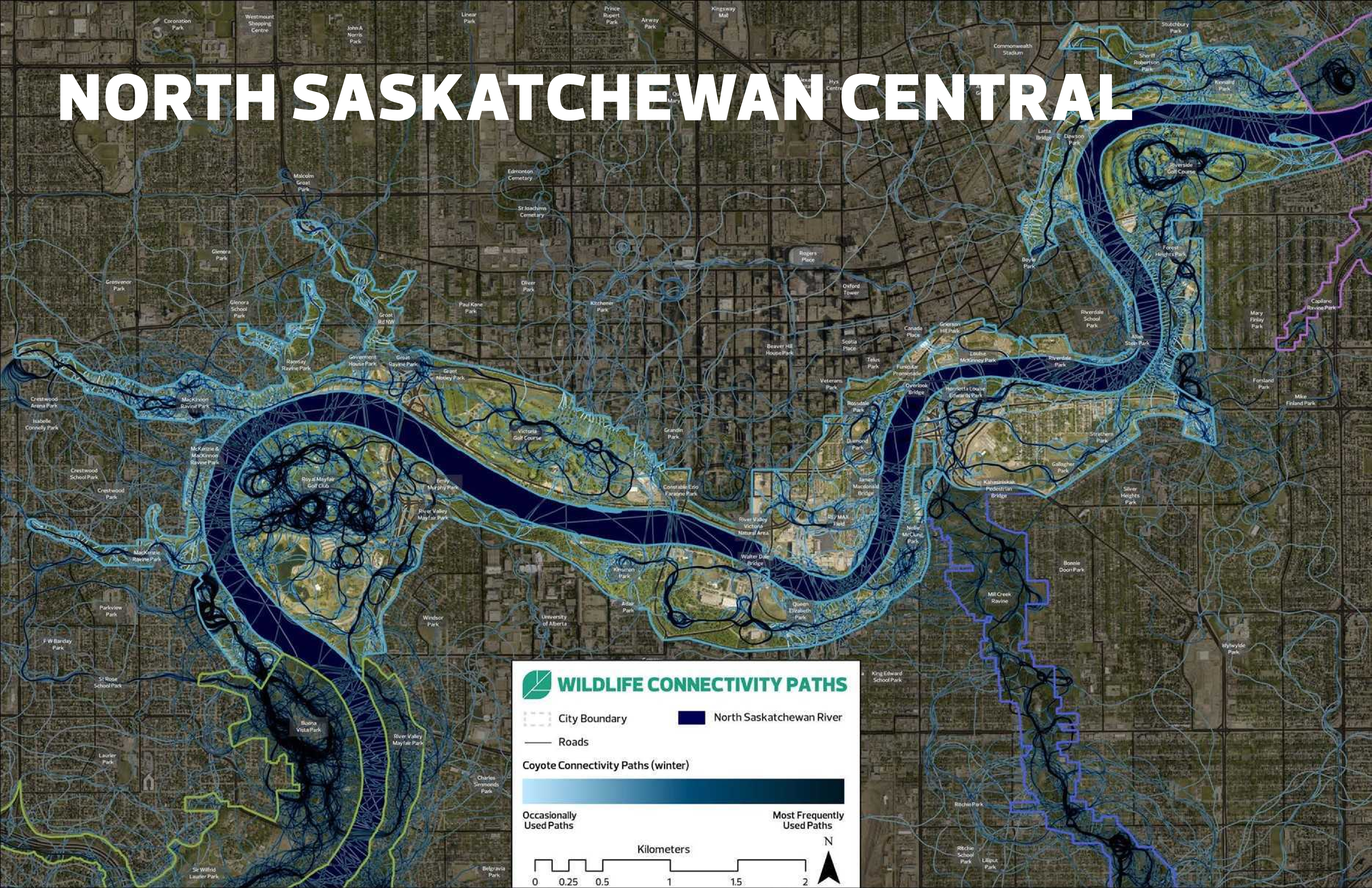
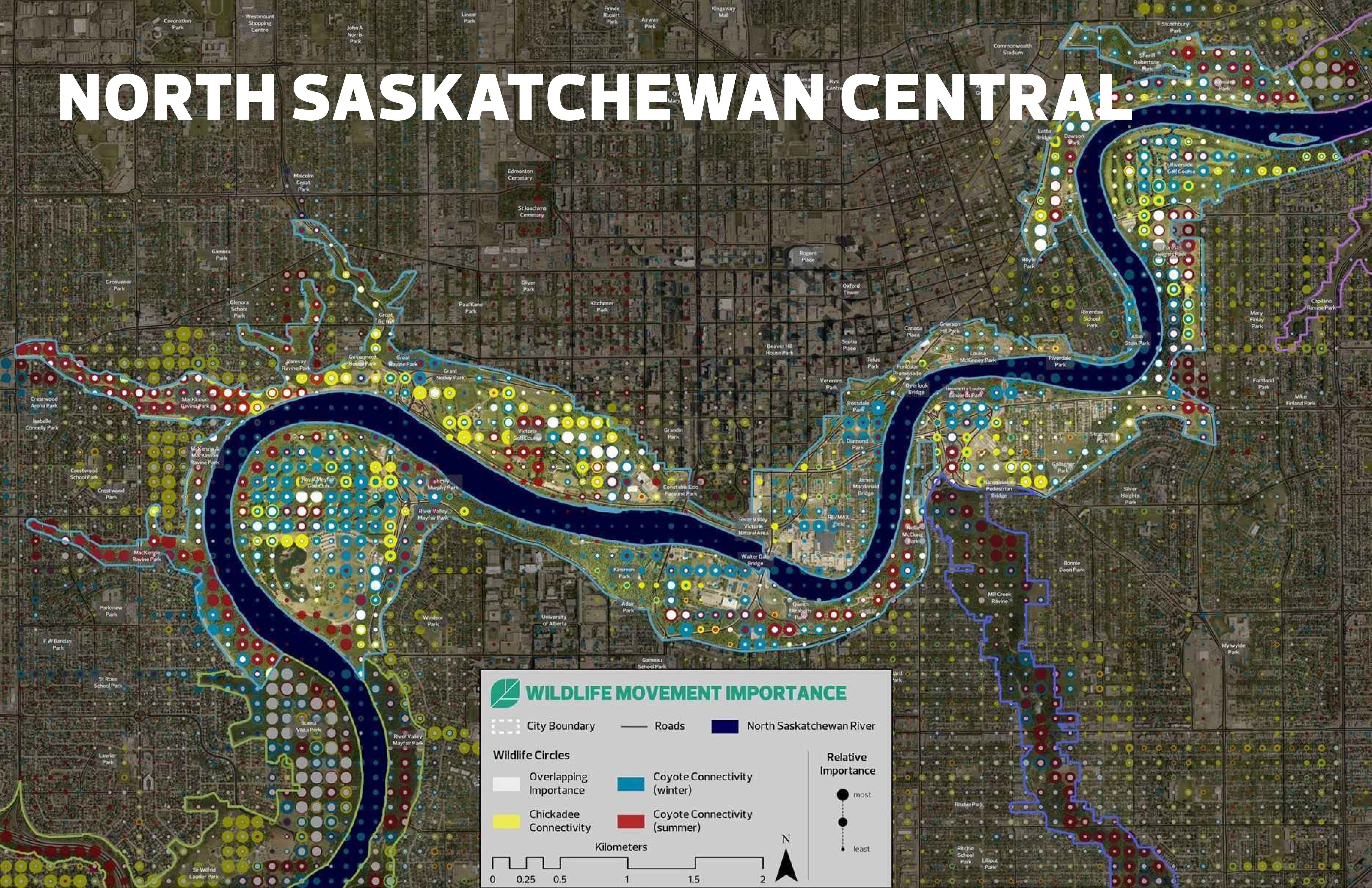



NORTH SASKATCHEWAN CENTRAL
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Coyote Connectivity Paths (winter)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.25
0.5
1
1.5
2
N


NORTH SASKATCHEWAN CENTRAL
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Chickadee Connectivity Paths
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0 0.25 0.5 1 1.5 2
N

NORTH SASKATCHEWAN CENTRAL



NORTH SASKATCHEWAN CENTRAL

CELEBRATION

The Central Reach remains one of the most cherished and actively used set of open spaces in the city. Numerous unique attractions have been developed over the years, including the Muttart Conservatory, John Walter Museum, and ᐄᓃᐤ (ÎNÎW) River Lot 11∞ Indigenous Art Park, providing a diverse range of art and culture for the people of Edmonton. Large, unique events and gatherings occur frequently in Hawrelak, Kinsmen, and Gallagher Parks, drawing great numbers of people into the area, and requiring greater infrastructure and amenities to support them.

These events include music and performance festivals, sports competitions, and community gatherings, each with different resource requirements for parking, washrooms, and electrical power. Riverside trails accommodate numerous running events that bring thousands of people into the river valley. These running events make use of the pathways and some roadways, creating periodic impacts on access and flow through these areas. Parking lots are a key component of event space use, supplemented by transit access and active transportation amenities. The large numbers of people drawn to these events require infrastructure and staff capacity to provide emergency access and ensure public safety.

At the same time, the area is an important draw for myriad smaller family and community gatherings, with numerous well-used picnic sites, gazebos, and park pavilions. The opportunity for people to come together in these areas is an important aspect of community life in the neighbourhoods surrounding the Central Reach, and improved access should be a priority to support this continued use.

NORTH SASKATCHEWAN CENTRAL

WELLNESS

The Central Reach contains a wide number of attractions for recreation and personal wellbeing. An extensive system of paved pathways and seasonally maintained trails make this an important destination and conduit for active transportation. Cross-country ski trails have seen growing use in recent years and may require greater maintenance efforts to account for the greater density of use and ensure the ski tracks are in good condition. Informal natural-tread trails are well used by cyclists and foot traffic, and require mapping and formalization to ensure sustainable, low-impact use. Highly valued mountain biking trail networks are found in the ravines along the west side of the reach, to the east of Hawrelak Park, between Queen Elizabeth Park and Nellie McClung Park, through Forest Heights Park, above Riverside Golf Course, and in Dawson Park. Pathway and trail connectivity through the central portion of this reach is limited and should be rationalized to provide better signage, more flexible routing, and better connections into Mill Creek and eastward along the river.

Extensive sports courts and other facilities provide an important attraction into many parts of the reach, including Victoria Golf Course, the Kinsmen Sports Centre, Gallagher Park, and Forest Heights Park. The western stretch from Sir Wilfrid Laurier Park through Ramsay Ravine provides more natural settings, and more isolated forested experiences. River access through boat launches are located in Hawrelak Park, Emily Murphy Park, Henrietta Muir Edwards Park, Louise McKinney Riverfront Park, and Dawson Park.

Formal trails through this reach are evenly split between year-round and seasonally maintained. Informal trails are found throughout the reach, predominantly on the south side of the river on the east side of the reach, but also through numerous ravines.

NORTH SASKATCHEWAN CENTRAL


NORTH SASKATCHEWAN CENTRAL
TRAILS
City Boundary
Roads
North Saskatchewan River
Formal City Maintained Trails
Informal Trails
Kilometers
0
0.25
0.5
1
1.5
2
N
Royal Mayfair Golf Club
Victoria Golf Course
Riverside Golf Course
Mill Creek Ravine
University of Alberta
Rogers Place
Walterdale Bridge
Queen Elizabeth Park

CULTURE

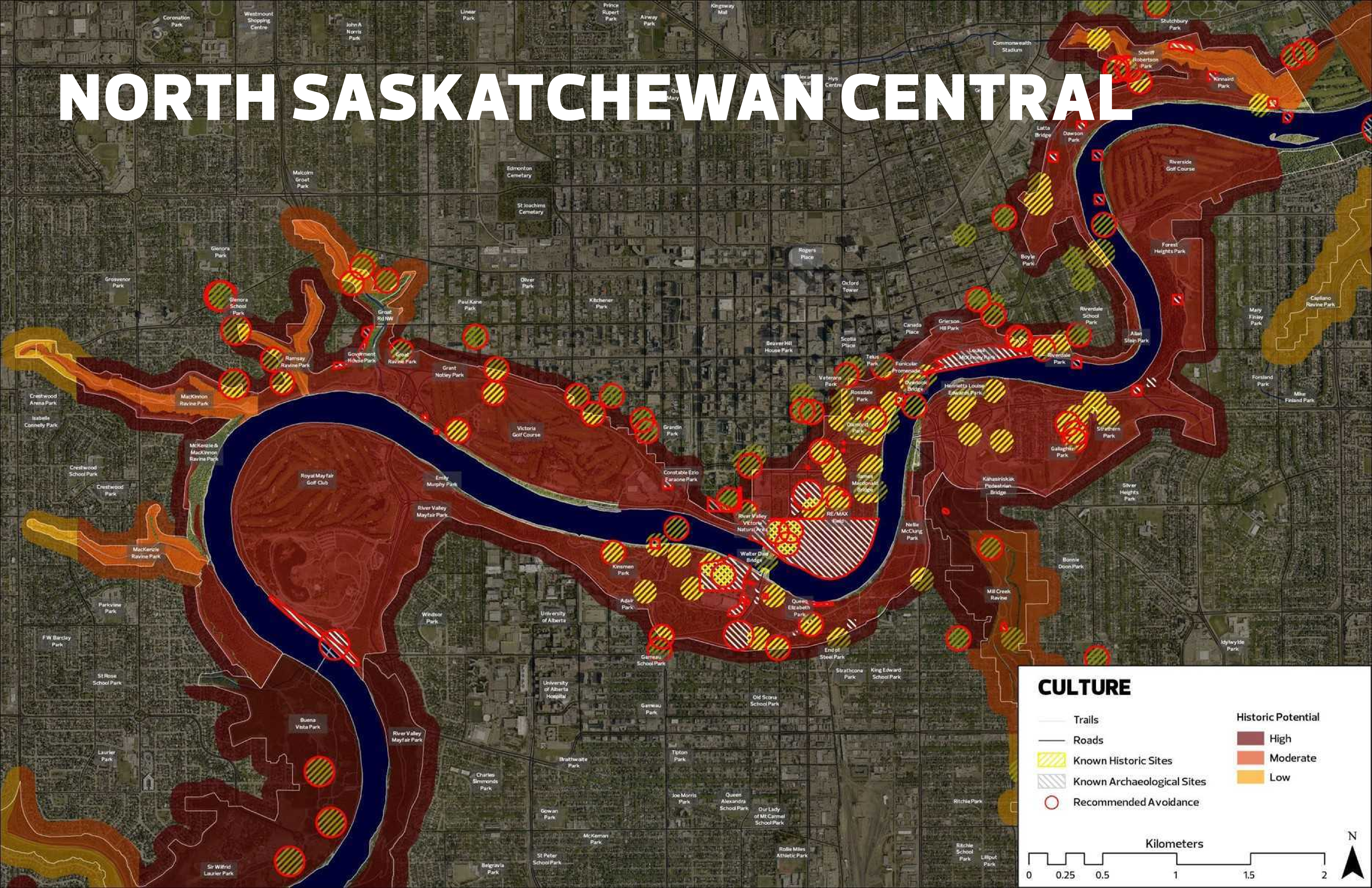
The Central Reach is an incredibly important area for culture, with evidence of its use for as long as humanity has dwelt in the region. Known historic and archaeological sites are found throughout the area, concentrated around the Rossdale neighbourhood on both sides of the river. Burial grounds near the Walterdale Bridge are but one example of the rich archaeological history contained in these lands. Other notable historic and archaeological sites include the southwest riverbank in Hawrelak Park, Louise McKinney Park, and areas of Kinsmen Park and Queen Elizabeth Park.

Archaeological sites covering large extents denote the far-reaching chronological history of the Central Reach. The reach contains myriad prehistoric-aged occupations, fur-trading forts, fire rings, and other remnants provide ample evidence of the long history of human use of these lands.

More recent historical sites include Pressed Brick's Limited, Canada's first sand-lime brick-making industry. The Low Level Bridge, Edmonton's first bridge spanning the North Saskatchewan River, is still in use today. The entrance to Mill Creek is the site of a former shanty town of temporary shelters and cabins to support workers who laboured in Mill Creek area industries, like the Vogel Meat Plant. It was described as a bustling, somewhat disorderly development 100 years ago that ran along the river. A large variety of detritus remains from these camps. Beyond this, numerous residences and commercial buildings serve as lasting reminders of Edmonton's development.

In addition to known sites, all the lands within the North Saskatchewan River Valley have high potential to contain other important but presently unknown historic sites, and all potential developments should be preceded by exploratory assessment to ensure that these sites are identified and mitigated to prevent impact. The top-of-bank lands around the ravines also contain high potential for unknown sites, as well as numerous known historic sites.

NORTH SASKATCHEWAN CENTRAL



VISITATION AND POTENTIAL CONFLICTS

This reach sees the highest visitation density across the entire River Valley and Ravine System. The peak visitation occurs during April through June, and lowest visitation during October through December. Key areas include lands around the east of the legislature, Grant Notley Park, around the Victoria Park public parking lot and the Royal Glenora Club, Louise McKinney Park, Kinsmen Park, Dawson Park around the mouth of Rat Creek, and the central open spaces of Hawrelak Park.

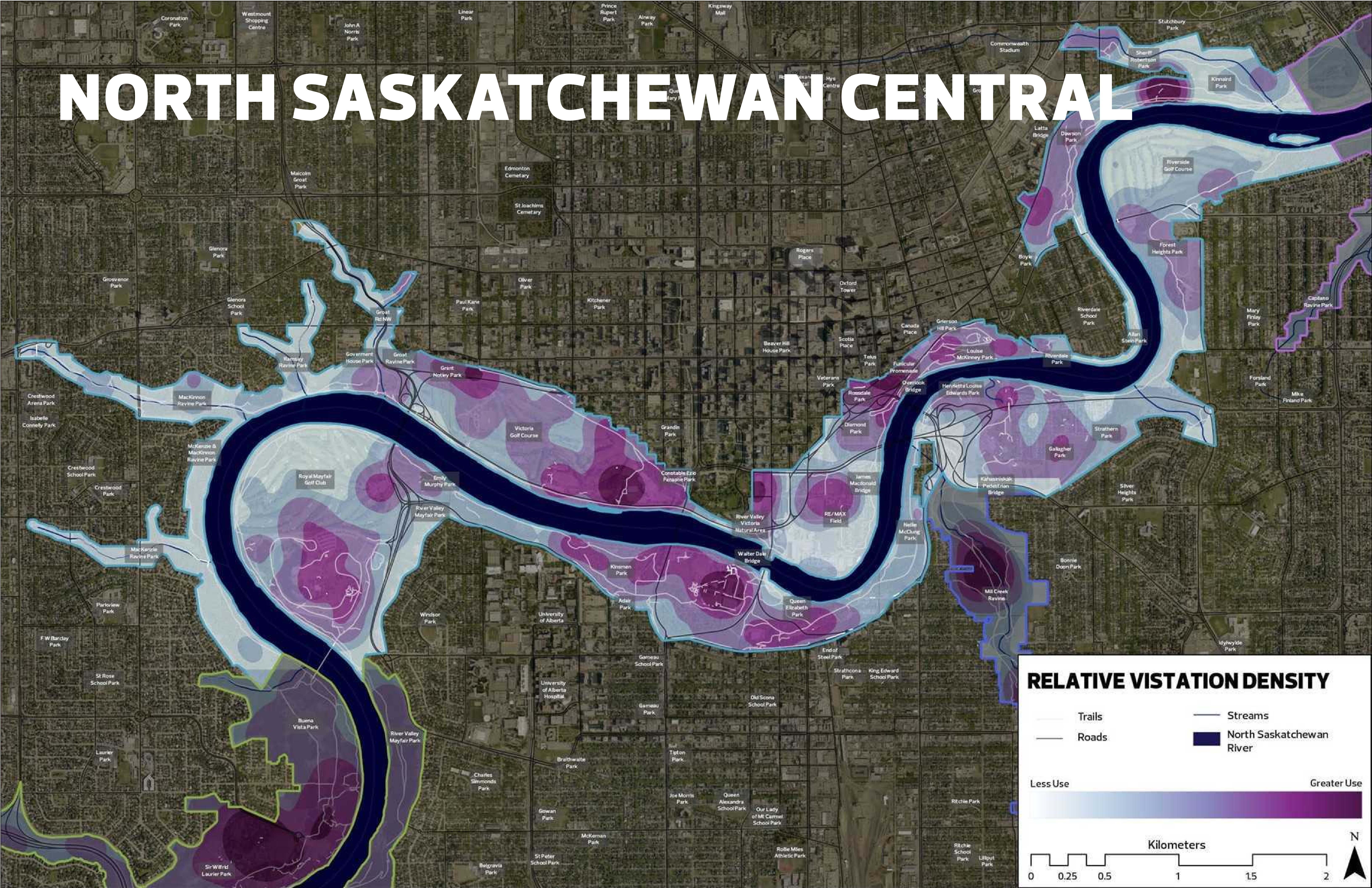
Key hotspots of visitation in ecologically important areas include MacKenzie Ravine Park, the stretch of close, steep, forested areas from Emily Murphy Park to Kinsmen Park, and Dawson Park. All these areas provide important natural functions and are key connectivity pinch points for movement through the River Valley. Other conflict areas include the forested stretch to the east of Hawrelak Park and the natural forest stands in the southern portions of Victoria Golf Course, portions of Forest Heights Park, Riverside Golf Course, and Rat Creek Ravine.

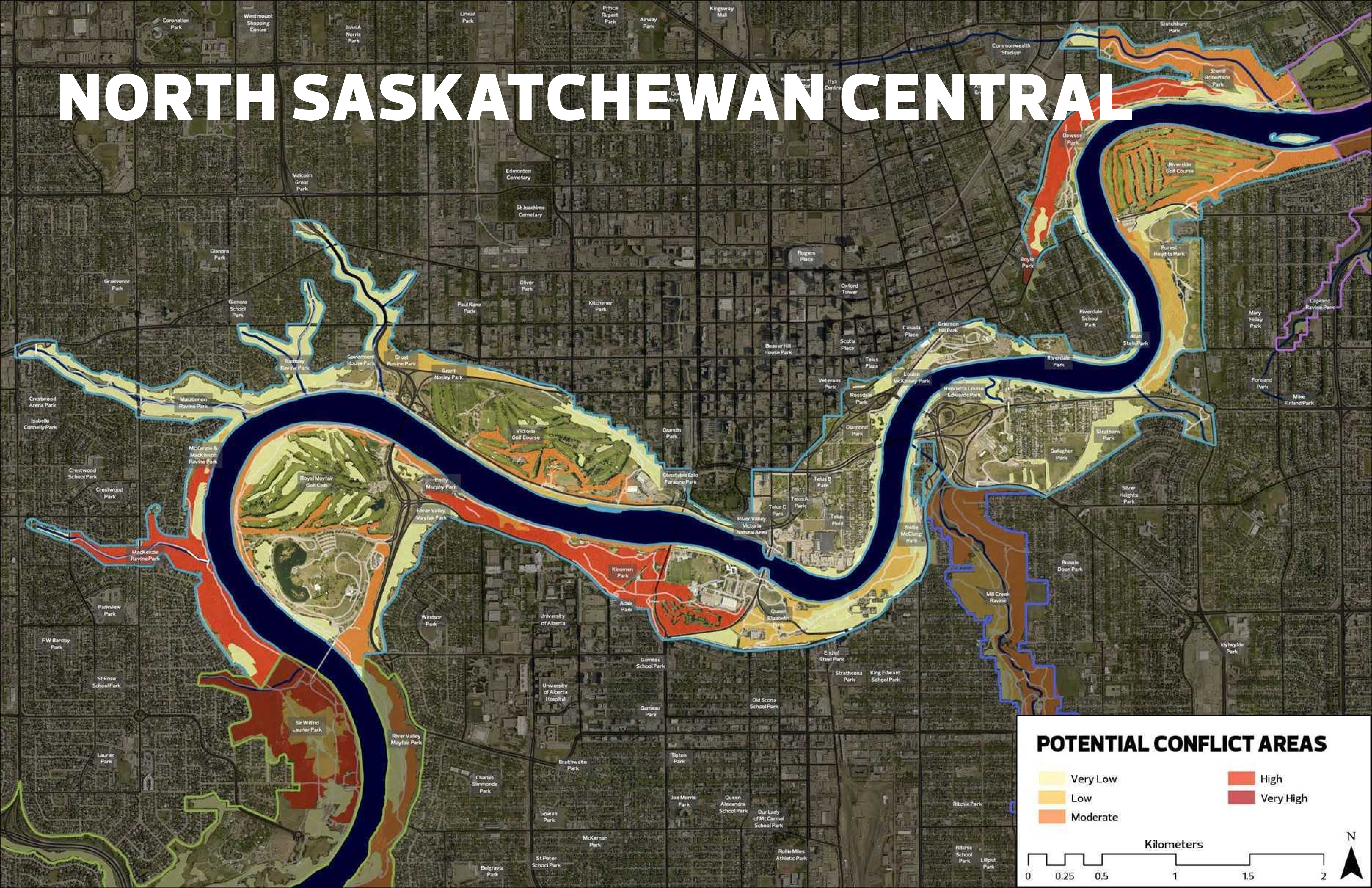
Recommendations:

+ Continue to monitor and mitigate impacts of public use throughout this reach, especially in narrow areas of the river valley where use is concentrated by the terrain of the landscape.
+ Identify informal trails in this area, prioritizing high conflict areas where access and use may lead to erosion and public safety concerns, or impact natural functioning and impede wildlife connectivity.
+ Focus maintenance efforts in areas of highest visitation.

NORTH SASKATCHEWAN CENTRAL – FRACTION OF TOTAL RIBBON OF GREEN VISITATION

Q1 (JANUARY–MARCH)	Q2 (APRIL–JUNE)	Q3 (JULY–SEPTEMBER)	Q4 (OCTOBER–DECEMBER)
45%	49%	45.4%	35.7%


NORTH SASKATCHEWAN CENTRAL
RELATIVE VISTATION DENSITY
Trails
Roads
Streams
North Saskatchewan River
Less Use
Greater Use
Kilometers
0
0.25
0.5
1
1.5
2
N
Coronation Park
Westmount Shopping Centre
John A Norris Park
Linear Park
Prince Rupert Park
Airway Park
Kingsway Mall
Stutchbury Park
Commonwealth Stadium
Sheriff Robertson Park
Kinnaird Park
Latta Bridge
Dawson Park
Riverside Golf Course
Edmonton Cemetery
Malcolm Groat Park
St Joachims Cemetery
Glenora Park
Rogers Place
Oxford Tower
Boyle Park
Forest Heights Park
Grosvenor Park
Oliver Park
Glenora School Park
Paul Kane Park
Kitchener Park
Riverdale School Park
Mary Finlay Park
Capilano Ravine Park
Groat Rd NW
Canada Place
Grierson Hill Park
Beaver Hill House Park
Scotia Place
Allan Stein Park
Goverment House Park
Groat Ravine Park
Ramsay Ravine Park
Grant Notley Park
Telus Park
Funicular Promenade
Louise McKinney Park
Riverdale Park
Forsland Park
Mike Finland Park
Crestwood Arena Park
MacKinnon Ravine Park
Veterans Park
Rossdale Park
Overlook Bridge
Henrietta Louise Edwards Park
Isabelle Connelly Park
Victoria Golf Course
Grandin Park
Diamond Park
Strathern Park
McKenzie & MacKinnon Ravine Park
Gallagher Park
Crestwood School Park
Royal Mayfair Golf Club
Emily Murphy Park
Constable Ezio Faraone Park
James Macdonald Bridge
Kaskitayo Pedestrian Bridge
Crestwood Park
River Valley Mayfair Park
Silver Heights Park
RE/MAX Field
River Valley Victoria Natural Area
Nellie McClung Park
MacKenzie Ravine Park
Walter Dale Bridge
Kinsmen Park
Bonnie Doon Park
Mill Creek Ravine
Parkview Park
Adair Park
Queen Elizabeth Park
Windsor Park
University of Alberta
F W Barclay Park
End of Steel Park
Idylwylde Park
Gameau School Park
St Rose School Park
Strathcona Park
King Edward School Park
University of Alberta Hospital
Old Scona School Park
Buena Vista Park
Gameau Park
River Valley Mayfair Park
Laurier Park
Braithwaite Park
Tipton Park
Charles Simmonds Park
Joe Morris Park
Queen Alexandra School Park
Our Lady of Mt Carmel School Park
Ritchie Park
Gowan Park
McKernan Park
Rollie Miles Athletic Park
Ritchie School Park
Lillput Park
St Peter School Park
Belgravia Park
Sir Wilfrid Laurier Park


NORTH SASKATCHEWAN CENTRAL
POTENTIAL CONFLICT AREAS
Very Low
Low
Moderate
High
Very High
Kilometers
0
0.25
0.5
1
1.5
2
N

NORTH SASKATCHEWAN WEST

North Saskatchewan West Reach Overview

The North Saskatchewan West Reach extends from the southern edge of Hawrelak Park west to Terwillegar Park. The reach includes the mounth of Whitemud Creek as it flows into the North Saskatchewan River. Unstable slopes in this reach have resulted in the most prominent landslides that have occured in Edmonton (along Keillor and Whitemud Roads).

The Fort Edmonton Footbridge provides an active connection across the North Saskatchewan River, connecting Oleskiw to Brander Gardens. The Buena Vista Footbridge connecting to Hawrelak Park is an important connector for users of the River Valley.

Notable destinations within the reach are Fort Edmonton, the Edmonton Valley Zoo, the John Janzen Nature Centre, and the Whitemud Equestrian Centre. 2 of the largest off leash areas in the City are found in this reach. Other notable parks in the area include Buena Vista Park, Rio Park, Sir Wilfrid Laurier Park, Terwillegar Park, and Wolf Willow Ravine.

REACH	CELEBRATION	WELLNESS	ECOLOGY
North Saskatchewan West	**3** Unique Attractions **2** Community Buildings **4** Event Spaces **10** Bookable Picnic Sites **2** Restaurants	**2** Sports Diamonds **2** Handboat Launches **4** Playgrounds **2** Recreation Facilities **1** Sports Court **1** Sports Field **1** Tobogganing Area **6** Washrooms **1** Power Boat Launch **1** Bike Bump **TRAILS** **33 km** Formal (Seasonal) **12 km** Formal (Year-Round) **41 km** Informal Trails	**Total Area:** 682.4 ha (100%) **Developed and Modified Land Use:** 215.3 ha (32%) **Wetlands:** 0.8 (<1%) **Tree Canopy Area:** 398 ha (58%) **Unique Vegetation Area:** 300 ha (44%) **Connectivity Pinchpoints Area:** 117.5 ha (17%) **Wildlife Corridor Area:** 574.2 ha (84%) **Naturalized Spaces:** 81.1 ha (12%) **Natural Area:** 467.1 ha (68% of reach) **City-Owned Parks:** 435.7 ha (covers 93% of natural area)
North Saskatchewan West (nearby)		**1** Sports Diamond **4** Sports Fields	

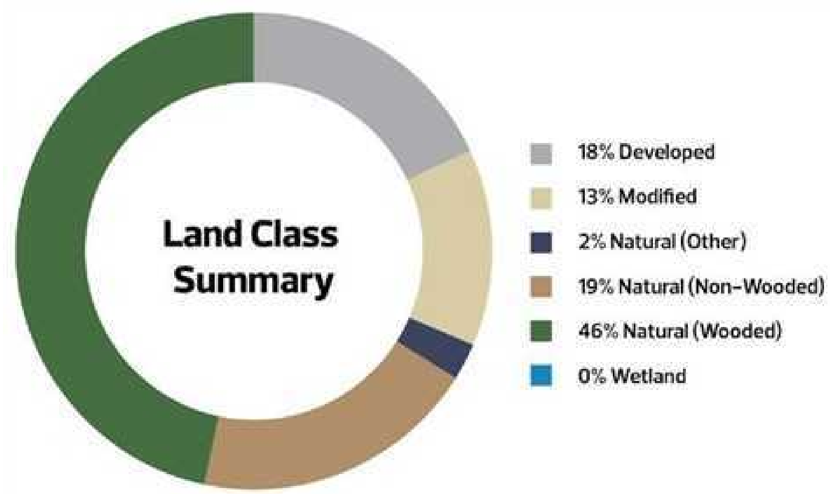
ECOLOGY

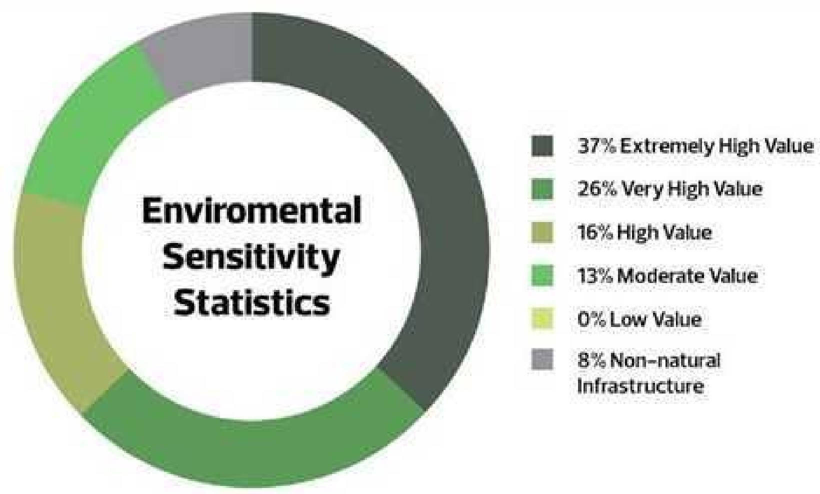
The West Reach is an incredibly important region dominated by high-quality natural areas, linking the less developed southwest reaches with the central core of the city. To the south, Terwillegar Park serves as an important core natural area, containing a wide variety of unique forested and non-forested natural land cover. Much of the park is comprised of highly-rated natural area in good condition. Its importance as an off-leash area and recreation destination make the ongoing management of these uses a top-priority in order to maintain Terwillegar's core habitat and natural functions. The park's location in a bend in the North Saskatchewan River makes much of the area subject to flood hazards, necessitating effective ongoing maintenance to reduce safety concerns.

Further north of Oleskiw Park (a part of the Southwest Ribbon of Green) are the Wolf Willow and Patricia Ravines: Core, highly-rated, naturally-vegetated areas with little human impact. Further east, on the north side of the river is the core, high-quality Rio Park, and the Quesnell Ravine. Although Quesnell Ravine is heavily disturbed by the routing of Whitemud Drive, the southern side of the ravine contains unique forested vegetation and is moderately-rated. Along the north side of the river is Sir Wilfrid Laurier Park, providing a mix of modified lands and core habitats, containing the heavily disturbed Edmonton Valley Zoo. However the riparian lands along the river are in better condition. Further north is Buena Vista Park, containing highly-rated and unique core non-wooded habitats, and moderately-rated wooded areas. On the south side of the river, the steeply sloped bank connects Terwillegar Park to Glamorgan Heights Park, and then on to the heavily developed Fort Edmonton Park, and the John Janzen Nature Centre. Whitemud Drive splits this area from the Whitemud North reach, and the Whitemud Equine Learning Centre. Steeply-sloped core habitat further north connects to Hawrelak Park.

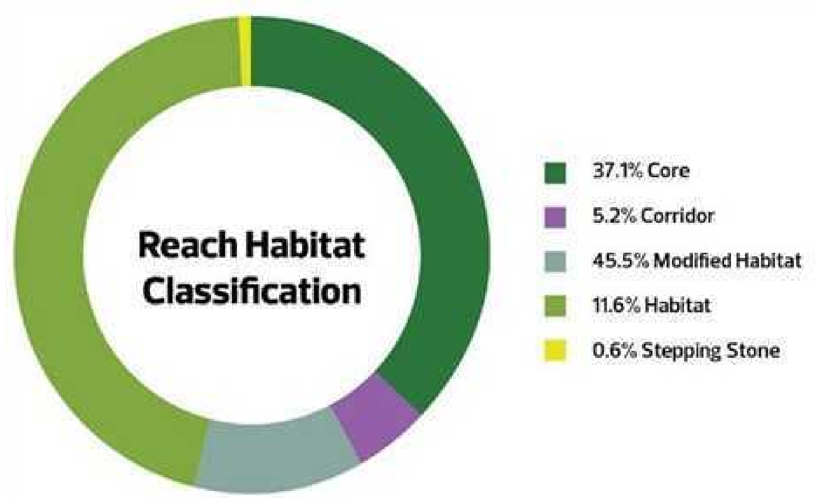
All of these lands act as important connectivity corridors, connecting the southwest reaches of the North Saskatchewan to Whitemud North, the Central Reach, and the ravines that provide connections into the tablelands. Development associated with Fort Edmonton, Whitemud Drive, the Edmonton Valley Zoo, and the Whitemud Equine Centre result in pinch points along the water's edge and the steeper banks, as wildlife are forced to take narrow paths to move around human-dominated areas. Trail usage along the valley poses challenges for human-wildlife conflicts. Connecting core habitat by restoring disturbed areas and buffering human disturbances is a high priority.

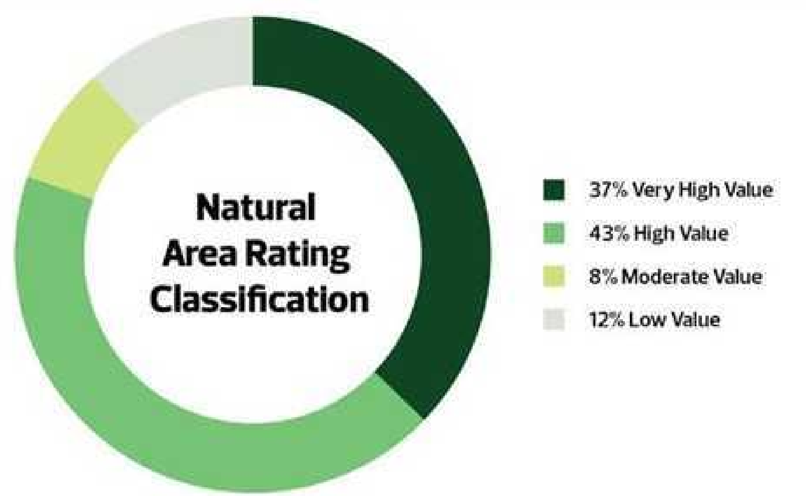
North Saskatchewan West – Land Class and Environmental Sensitivity Summary





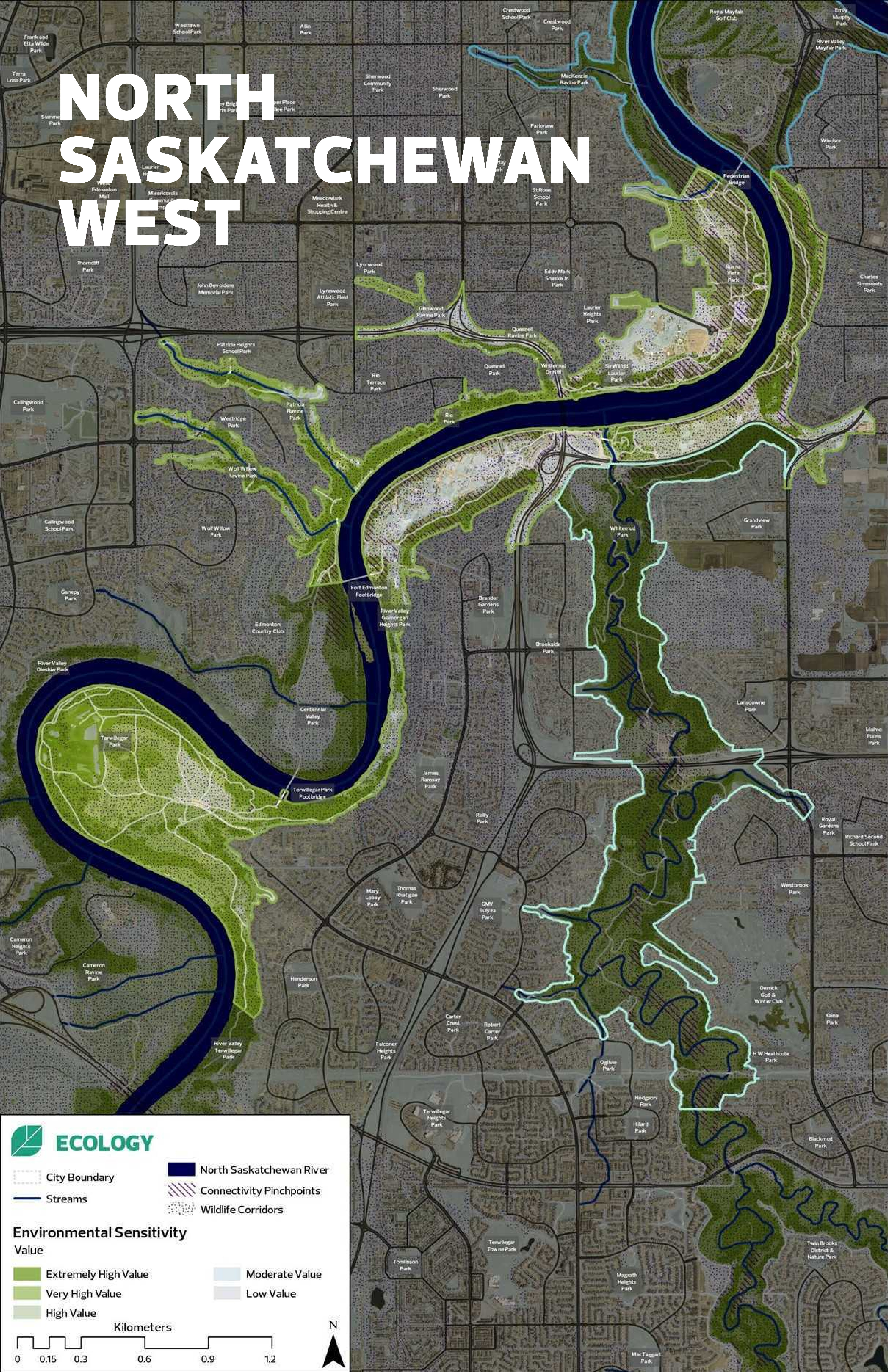
North Saskatchewan West – Reach Habitat and Natural Area Rating Classification





NORTH SASKATCHEWAN WEST

NORTH SASKATCHEWAN WEST



NORTH SASKATCHEWAN WEST


NORTH SASKATCHEWAN WEST
ECOLOGY
Habitat Type
Core
Corridor
Modified Habitat
Habitat
Stepping Stone
Kilometers
0
0.28
0.55
1.1
1.65
2.2
N
Sir Wilfrid Laurier Park
MacKenzie Ravine Park
Patricia Heights School Park
Patricia Ravine Park
Westridge Park
Wolf Willow Ravine Park
Wolf Willow Park
Rio Terrace Park
Rio Park
Quesnell Ravine Park
Quesnell Park
Glenwood Ravine Park
Lynnwood Park
Lynnwood Athletic Field Park
Laurier Park
Laurier Heights Park
St Rose School Park
Parkview Park
Sherwood Park
Sherwood Community Park
Crestwood School Park
Crestwood Park
Royal Mayfair Golf Club
River Valley Mayfair Park
Emily Murphy Park
Windsor Park
Charles Simmonds Park
Whitemud Park
Grandview Park
River Valley Glamorgan Heights Park
Brander Gardens Park
Brookside Park
Lansdowne Park
Malmo Plains Park
Edmonton Country Club
Centennial Valley Park
River Valley Oleskiw Park
Callingwood Park
Callingwood School Park
Gariepy Park
James Ramsay Park
Reilly Park
Royal Gardens Park
Richard Second School Park
Westbrook Park
Mary Lobay Park
Thomas Rhatigan Park
GMV Bulyea Park
Cameron Heights Park
Cameron Ravine Park
Henderson Park
Carter Crest Park
Robert Carter Park
Falconer Heights Park
River Valley Terwillegar Park
Derrick Golf & Winter Club
Kainai Park
HW Heathcote Park
Ogilvie Park
Hodgson Park
Hillard Park
Blackmud Park
Terwillegar Heights Park
River Valley Windermere Park
Terwillegar Towne Park
Tomlinson Park
Magrath Heights Park
Twin Brooks District & Nature Park
MacTaggart Park
Thorncliff Park
John Devoldere Memorial Park
Meadowlark Health & Shopping Centre
West Edmonton Mall
Westlawn School Park
Allin Park
Frank and Etta Wilde Park
Terra Losa Park


NORTH SASKATCHEWAN WEST
ECOLOGY
Major Landslide Areas
Kilometers
0 0.28 0.55 1.1 1.65 2.2
N
Frank and Etta Wilde Park
Terra Losa Park
Summerlea Park
Westlawn School Park
Allin Park
Sherwood Community Park
Sherwood Park
Crestwood School Park
Crestwood Park
Royal Mayfair Golf Club
Emily Murphy Park
River Valley Mayfair Park
MacKenzie Ravine Park
Parkview Park
Windsor Park
West Edmonton Mall
Meadowlark Health & Shopping Centre
St Rose School Park
Sir Wilfrid Laurier Park
Thorncliff Park
Lynnwood Park
Laurier Park
Charles Simmonds Park
John Devoldere Memorial Park
Lynnwood Athletic Field Park
Laurier Heights Park
Glenwood Ravine Park
Quesnell Ravine Park
Patricia Heights School Park
Rio Terrace Park
Quesnell Park
Callingwood Park
Patricia Ravine Park
Westridge Park
Rio Park
Wolf Willow Ravine Park
Whitemud Park
Grandview Park
Callingwood School Park
Wolf Willow Park
Garvey Park
Brander Gardens Park
Edmonton Country Club
River Valley Glamorgan Heights Park
Brookside Park
River Valley Oleskiw Park
Centennial Valley Park
Lansdowne Park
Malmo Plains Park
James Ramsay Park
Reilly Park
Royal Gardens Park
Richard Second School Park
Mary Lobay Park
Thomas Rhatigan Park
GMV Bulyea Park
Westbrook Park
Cameron Heights Park
Cameron Ravine Park
Henderson Park
Derrick Golf & Winter Club
Carter Crest Park
Robert Carter Park
Kainai Park
Falconer Heights Park
River Valley Terwillegar Park
H W Heathcote Park
Ogilvie Park
Hodgson Park
Terwillegar Heights Park
Hillard Park
Blackmud Park
River Valley Windermere Park
Haddow Park
Terwillegar Towne Park
Twin Brooks District & Nature Park
Tomlinson Park
Magrath Heights Park
MacTaggart Park


NORTH SASKATCHEWAN WEST
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Coyote Connectivity Paths (summer)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.28
0.55
1.1
1.65
2.2
N


NORTH SASKATCHEWAN WEST
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Coyote Connectivity Paths (winter)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0 0.28 0.55 1.1 1.65 2.2
N


NORTH SASKATCHEWAN WEST
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Chickadee Connectivity Paths
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0 0.28 0.55 1.1 1.65 2.2
N


NORTH SASKATCHEWAN WEST
WILDLIFE MOVEMENT IMPORTANCE
City Boundary
Roads
North Saskatchewan River
Wildlife Circles
Overlapping Importance
Coyote Connectivity (winter)
Chickadee Connectivity
Coyote Connectivity (summer)
Relative Importance
most
least
Kilometers
0
0.28
0.55
1.1
1.65
2.2
N

NORTH SASKATCHEWAN WEST

CELEBRATION

The West Reach is a highly-valued destination area for the city. Terwillegar Park hosts various events, and serves as an important area for pathway-based events as well. Fort Edmonton Park is a unique heritage area, providing an educational attractive draw that experiences a high number of daily visitors and annual events. Visitor parking capacity poses challenges to support these uses. Similarly the Edmonton Valley Zoo provides a singular attraction for the area, and Sir Wilfrid Laurier provides more natural lands towards the river's edge, hosting numerous picnic facilities. Further north, an event space accommodates larger numbers of visitors, and the Yorath House affords another unique rental space for events.

WELLNESS

Terwillegar Park remains a highly-important park for the city, serving as an important destination citywide as well as nearby neighbourhoods. The recent construction of the bridge connection across to Oleskiw Park has increased visitation from northern neighbourhoods as well. The dog off-leash area in Terwillegar is highly valued, but may be at odds with the ecological value of the habitat found in the park. Cycling is a commonplace activity drawing people into the area from around the city, as an active transportation and commuter route on the pathways, and mountain biking opportunities on the trail system. This has the potential to lead to user conflicts if not well-managed and well-signed to indicate appropriate uses.

Educational opportunities abound in the area, with guided tours and instructional courses in Terwillegar Park, cultural and historical activities and programs available at Fort Edmonton, and nature-based opportunities at the Edmonton Valley Zoo. The Whitemud Equine Centre is located in this reach. Playgrounds and sports fields are for the most part found on the north side of the river around Rio Park, Edmonton Valley Zoo, and Glenwood Ravine Park. River access is available in three put-in locations, hand launches at Terwillegar and near the mouth of Whitemud North, and a vehicle-access launch at Sir Wilfrid Laurier. Buena Vista Park is home to the Edmonton Rowing Club, White Water Paddlers and Edmonton Paddling Association.

Only a quarter of formal trails in this reach are maintained year round, with the remainder only seasonally accessible. Numerous informal trails are found throughout the reach, concentrated in Terwillegar Park.

NORTH SASKATCHEWAN WEST

NORTH SASKATCHEWAN WEST
Edmonton Rowing Clubhouse
Whitemud Equine Centre
Fort Edmonton Footbridge
Terwillegar Park Footbridge
Pedestrian Bridge
Terwillegar Park
Centennial Valley Park
Whitemud Park
Edmonton Country Club
Royal Mayfair Golf Club
Derrick Golf & Winter Club
Wolf Willow Ravine Park
Patricia Ravine Park
WELLNESS
Stairs / Trails / Bridges
Roads
XC Ski Trails
Trails
(no Snow Clearing)
Parks and
Open Spaces
Recreation
Centres
Sports Fields
Sports Courts
Sports Diamond
Playgrounds
Ski Hills
Hand Boat
Launch
Tobogganing
Washrooms
Power Boat
Launch
Kilometers
0
0.28
0.55
1.1
1.65
2.2
N

NORTH SASKATCHEWAN WEST

CULTURE

The West Reach contains numerous examples of historic and archaeological sites. Historic sites concentrated in Buena Vista and Sir Wilfrid Laurier Parks, and archaeological sites found around Fort Edmonton, southern portions of Terwillegar, and near the start of Fox Drive. The entirety of the River Valley has high potential to contain additional unknown historic sites. All potential developments should be preceded by exploratory assessment to ensure that these sites are identified and mitigated to prevent impact.

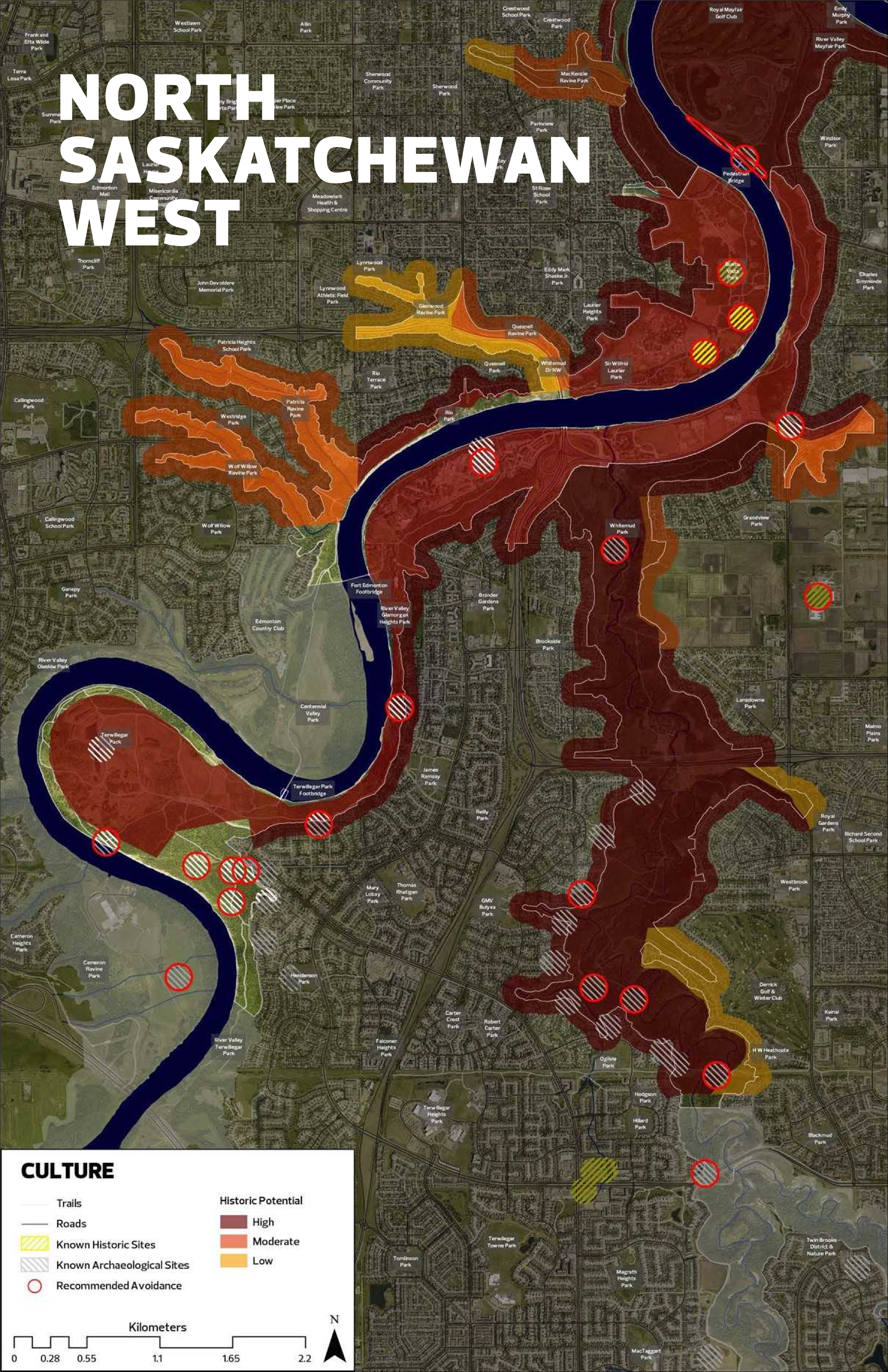
VISITATION AND POTENTIAL CONFLICTS

Key higher density areas of this Reach include Terwillegar, the mouth of Wolf Willow Ravine, Fort Edmonton, Whitemud Park, Whitemud Equine Centre, the Edmonton Valley Zoo, and the lands around the Yorath House in Buena Vista Park. Visitation in Terwillegar is concentrated around the parking lot and lands to the north.

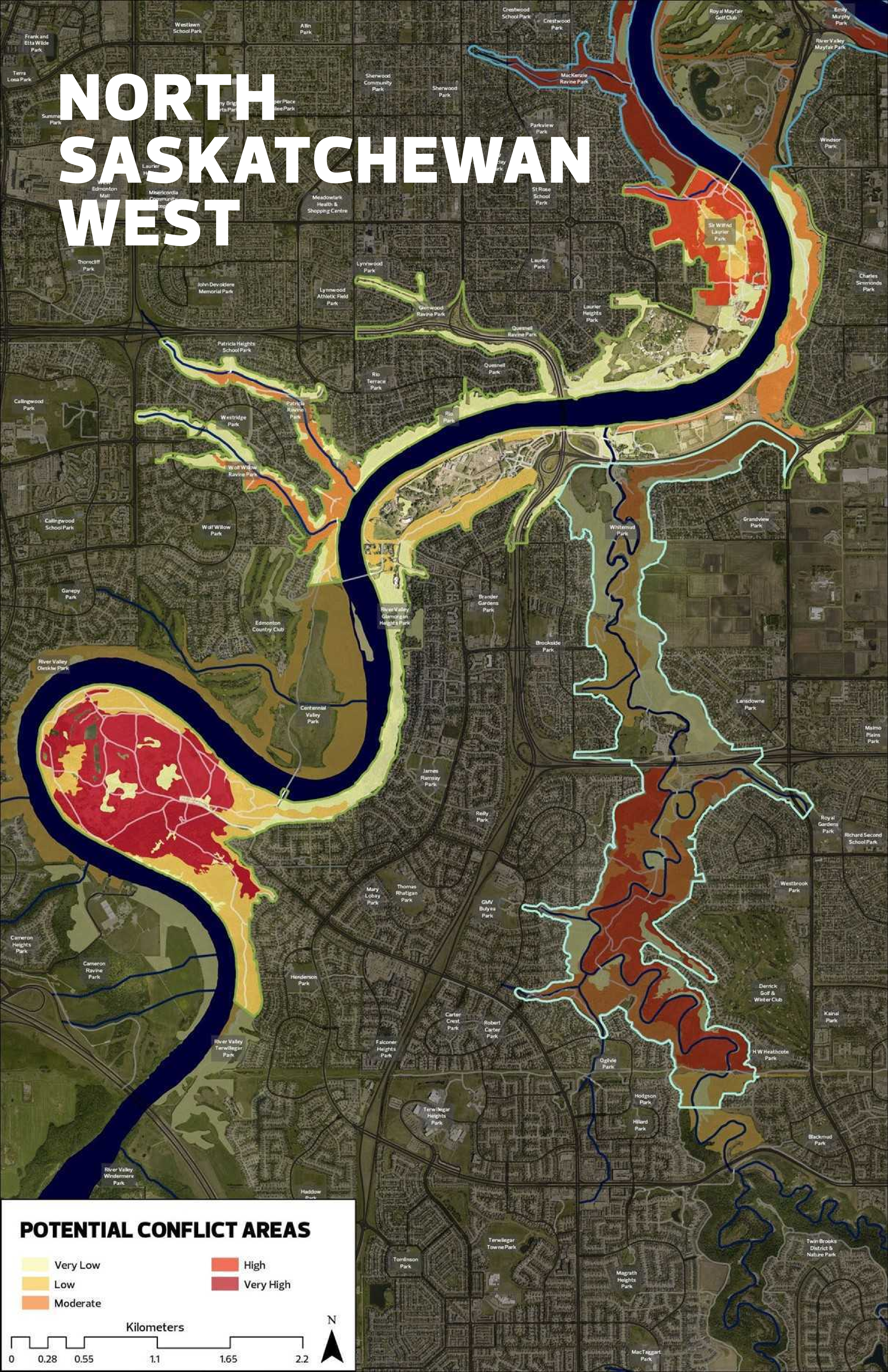
Potential conflict areas are found throughout much of Terwillegar Park, where high visitation and high ecological ratings coincide. Other key lands to focus on include the northern portions of Buena Vista Park. Wolf Willow and Patricia Ravine are also notable. These areas have ecological values that may be compromised over time as they experience relatively high visitation.

NORTH SASKATCHEWAN WEST – FRACTION OF TOTAL RIBBON OF GREEN VISITATION

Q1 (JANUARY–MARCH)	Q2 (APRIL–JUNE)	Q3 (JULY–SEPTEMBER)	Q4 (OCTOBER–DECEMBER)
8.5%	9.8%	8.7%	6.8%


NORTH SASKATCHEWAN WEST
CULTURE
Trails
Roads
Known Historic Sites
Known Archaeological Sites
Recommended Avoidance
Historic Potential
High
Moderate
Low
Kilometers
0
0.28
0.55
1.1
1.65
2.2
N
Westlawn School Park
Allin Park
Crestwood School Park
Crestwood Park
Royal Mayfair Golf Club
River Valley Mayfair Park
MacKenzie Ravine Park
Sherwood Community Park
Sherwood Park
Parkview Park
Windsor Park
Pedestrian Bridge
St Rose School Park
Meadowlark Health & Shopping Centre
Edmonton Mall
Thorncliff Park
John Devoldere Memorial Park
Lynnwood Park
Lynnwood Athletic Field Park
Glenwood Ravine Park
Quesnell Ravine Park
Eddy Mark Shaske Jr. Park
Laurier Heights Park
Charles Simmonds Park
Patricia Heights School Park
Rio Terrace Park
Quesnell Park
Whitemud Dr NW
Sir Wilfrid Laurier Park
Callingwood Park
Westridge Park
Patricia Ravine Park
Rio Park
Wolf Willow Ravine Park
Callingwood School Park
Wolf Willow Park
Whitemud Park
Grandview Park
Ganepy Park
Fort Edmonton Footbridge
Brander Gardens Park
River Valley Glamorgan Heights Park
Edmonton Country Club
Brookside Park
River Valley Oleskiw Park
Centennial Valley Park
Lansdowne Park
Malmo Plains Park
Terwillegar Park
Terwillegar Park Footbridge
James Ramsay Park
Reilly Park
Royal Gardens Park
Richard Second School Park
Westbrook Park
Mary Lobay Park
Thomas Rhatigan Park
GMV Bulyea Park
Cameron Heights Park
Cameron Ravine Park
Henderson Park
Derrick Golf & Winter Club
Kainai Park
Carter Crest Park
Robert Carter Park
River Valley Terwillegar Park
Falconer Heights Park
H W Heathcote Park
Ogilvie Park
Hodgson Park
Terwillegar Heights Park
Hillard Park
Blackmud Park
Terwillegar Towne Park
Tomlinson Park
Twin Brooks District & Nature Park
Magrath Heights Park
MacTaggart Park

NORTH SASKATCHEWAN WEST


NORTH SASKATCHEWAN WEST
POTENTIAL CONFLICT AREAS
Very Low
Low
Moderate
High
Very High
Kilometers
0
0.28
0.55
1.1
1.65
2.2
N

NORTH SASKATCHEWAN EAST

North Saskatchewan East Reach Overview

The North Saskatchewan East reach lies downstream of the Central Reach, extending from Wayne Gretzky Drive to Hermitage Park. This reach is bordered by the Northeast Reach of the Ribbon of Green and connects to the Goldbar Ravine.

On April 26, 1974, Premier Peter Lougheed announced the approval of the "Capital City Recreation Park" for the City of Edmonton. This unique urban park plan, estimated to cost in excess of 35 million dollars, was initiated and developed by the Government of Alberta with input from the City of Edmonton. This initiative led to the development of numerous parks, footbridges, and trails in this area.

The reach contains numerous popular parks, including Rundle Park, Capilano Park, Ploden Park, Hermitage Park, Gold Bar Park, and Gold Stick Park and several recreational areas, including the Rundle and Highlands Golf Courses. On the east side of the river, opposite Rundle Park lies the Strathcona Science Provincial Park and the Sunridge Ski Area. There are several footbridges that connect across the river, including the Capilano Food Bridge #153, Strathcona Science Park Pedestrian Bridge, and Ainsworth Dyer Memorial Pedestrian Bridge.

The area provides a wide range of recreational amenities, including the 50th street vehicle boat launch, disc golf courses, popular cross country ski trails, and an extensive constructed pond system in Rundle Park that is home to many paddling activities. The ACT Aquatic and Recreation Centre provides specialized programming for people with disabilities. Hermitage Park provide s a major off leash area, as well as the City's only stocked fish pond.

Most of the surrounding land uses to the northwest are residential, including the communities of Highlands, Beverly Heights, Capilano, and Rundle Heights. In the southeast of the reach, across the river from Rundle Heights, is the Northeast Edmonton Industrial Area which includes the Strathcona Refinery.

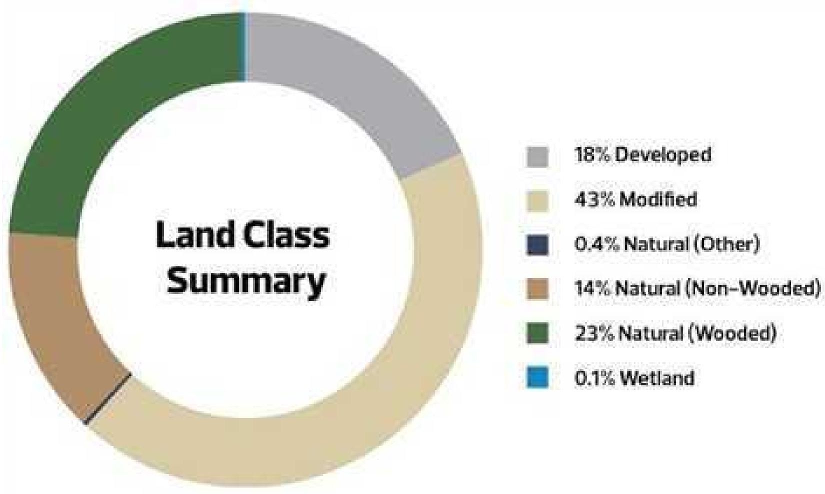
REACH	CELEBRATION	WELLNESS	ECOLOGY
North Saskatchewan East	**2** Unique Attractions **2** Community Buildings **5** Event Spaces **12** Bookable Picnic Sites **1** Restaurant **1** Community League	**12** Sports Diamonds **1** Powerboat Launch **1** Handboat Launch **5** Playgrounds **1** Recreation Facility **4** Sports Courts **6** Sports Fields **1** Tobogganing Area **7** Washrooms **1** FIshing Area **2** Golf Course Clubhouses **3** Outdoor Skating Surfaces **1** Indoor Pool **2** Paddling Areas **TRAILS** **19 km** Formal (Seasonal) **14 km** Formal (Year-Round) **15 km** Informal Trails	**Total Area:** 623 ha (100%) **Developed and Modified Land Use:** 384.9 ha (62%) **Wetlands:** 0.0 (0%) **Tree Canopy:** 272.08 ha (44%) **Unique Vegetation:** 105.5 ha (17%) **Connectivity Pinchpoints:** 89.3 ha (14%) **Wildlife Corridor:** 487.2 ha (78%) **Naturalized Spaces:** 56.1 ha (9%) **Natural Area:** 238.1 (38% of reach) **Park Area:** 233.7 ha (covers 94% of natural area)

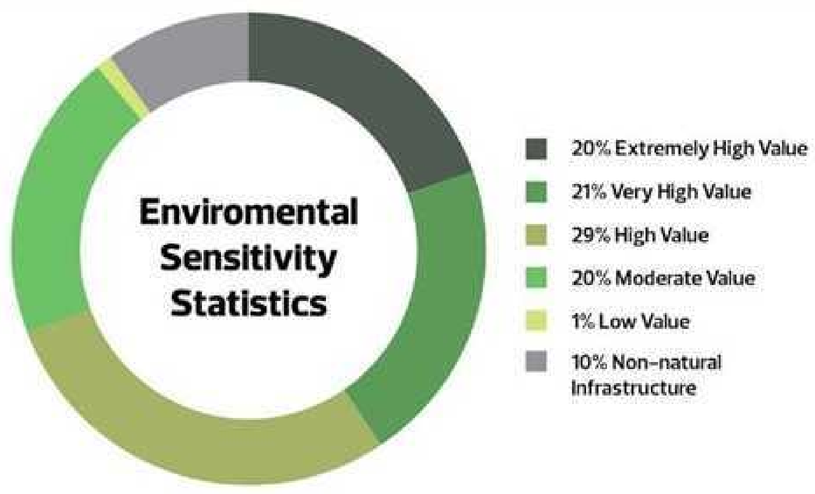
ECOLOGY

The East Reach is heavily modified, with golf courses, artificial lakes, road infrastructure, and maintained grass dominating the area. The large footprint of the Gold Bar Wastewater Treatment Plant occupies much of the south side of the river east of Capilano Park. While Fulton and Goldbar Ravines are also heavily modified, they also contain patches of forest cover and other unique vegetation, as does Capilano Park. Kennedale and Kernohan Ravine are more intact and more sensitive, providing a westward connection into residential areas. Stretches of Gold Bar and Rundle Park are within the flood hazard area, as are the artificial lakes in Hermitage Park. Small core habitat patches are found in Goldbar and Kennedale Ravines, and east and north of Rundle Park Golf Course.

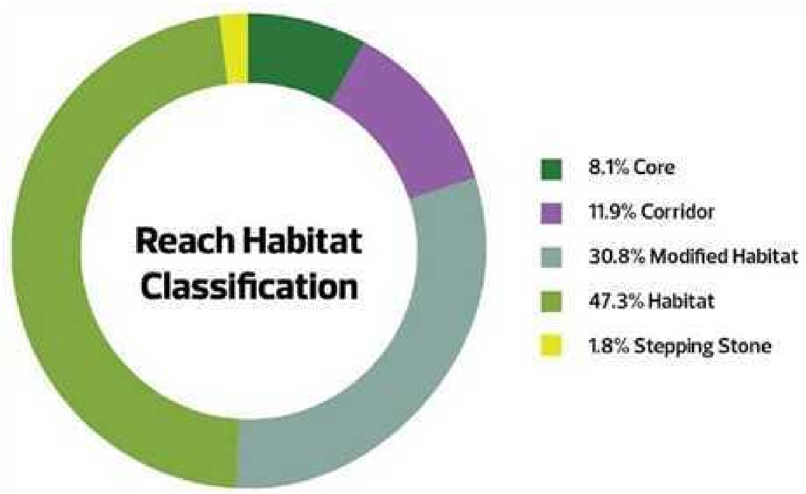
The area remains an important connectivity corridor for wildlife movement on both sides of the river, with key pinch points in sections of Highlands Golf Club, Rundle Park, Gold Bar Park, under the Yellowhead Highway bridge, and northward from Hermitage Park.

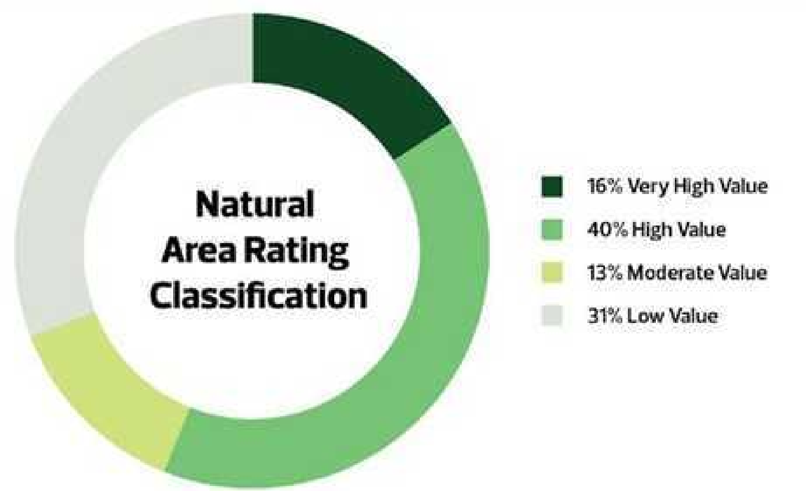
North Saskatchewan East – Land Class and Environmental Sensitivity Summary



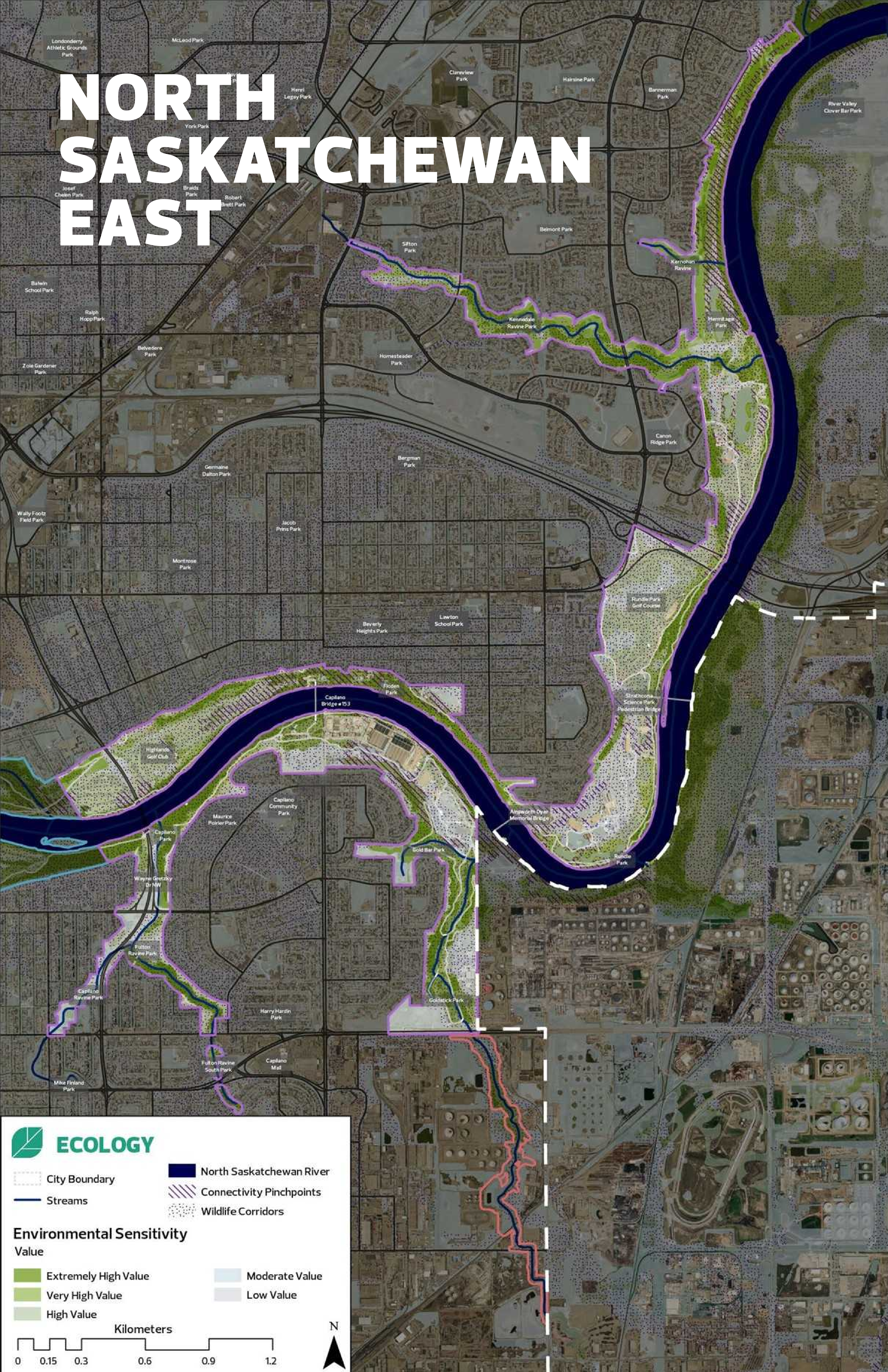


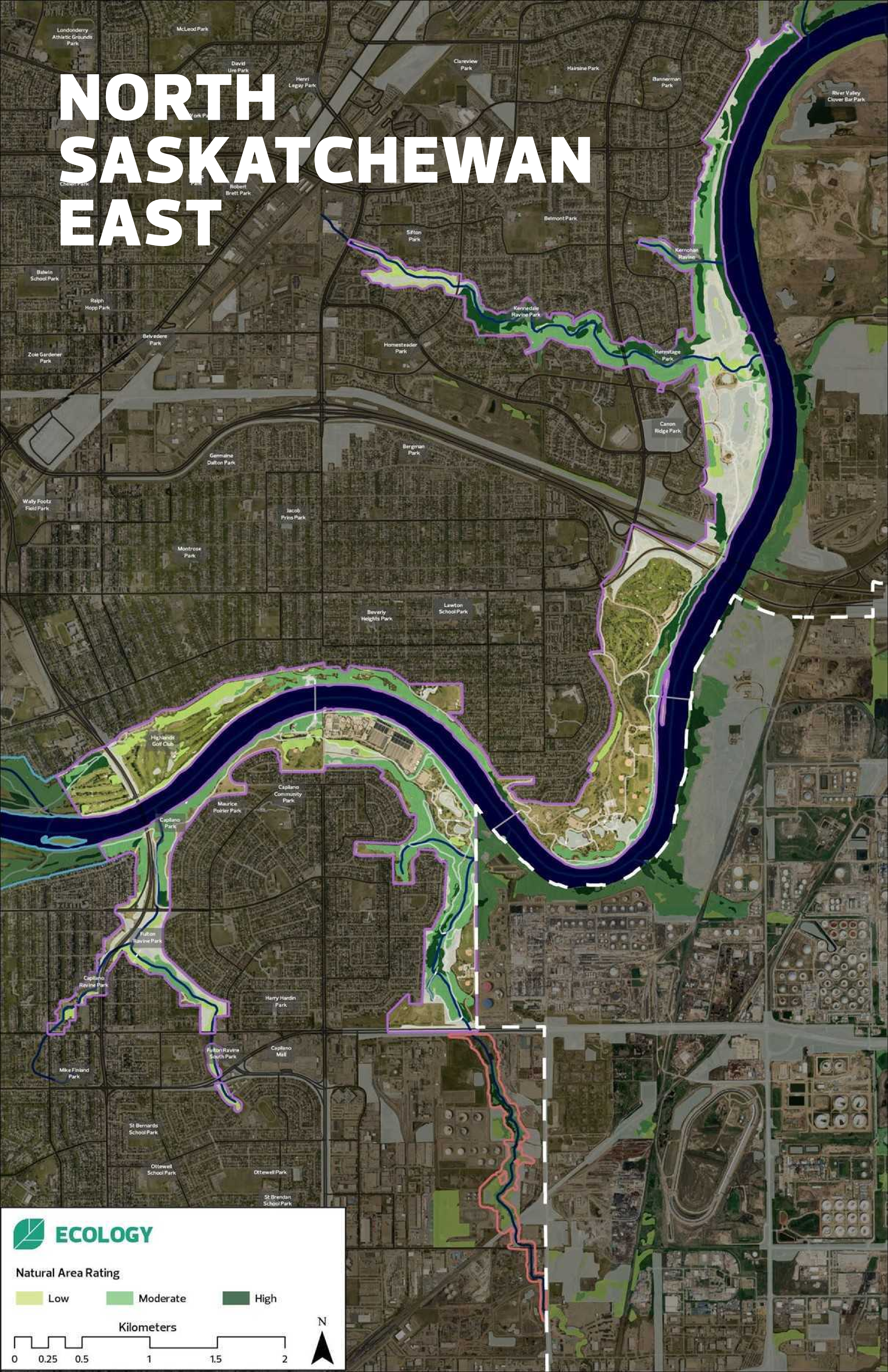
North Saskatchewan East – Reach Habitat and Natural Area Rating Classification



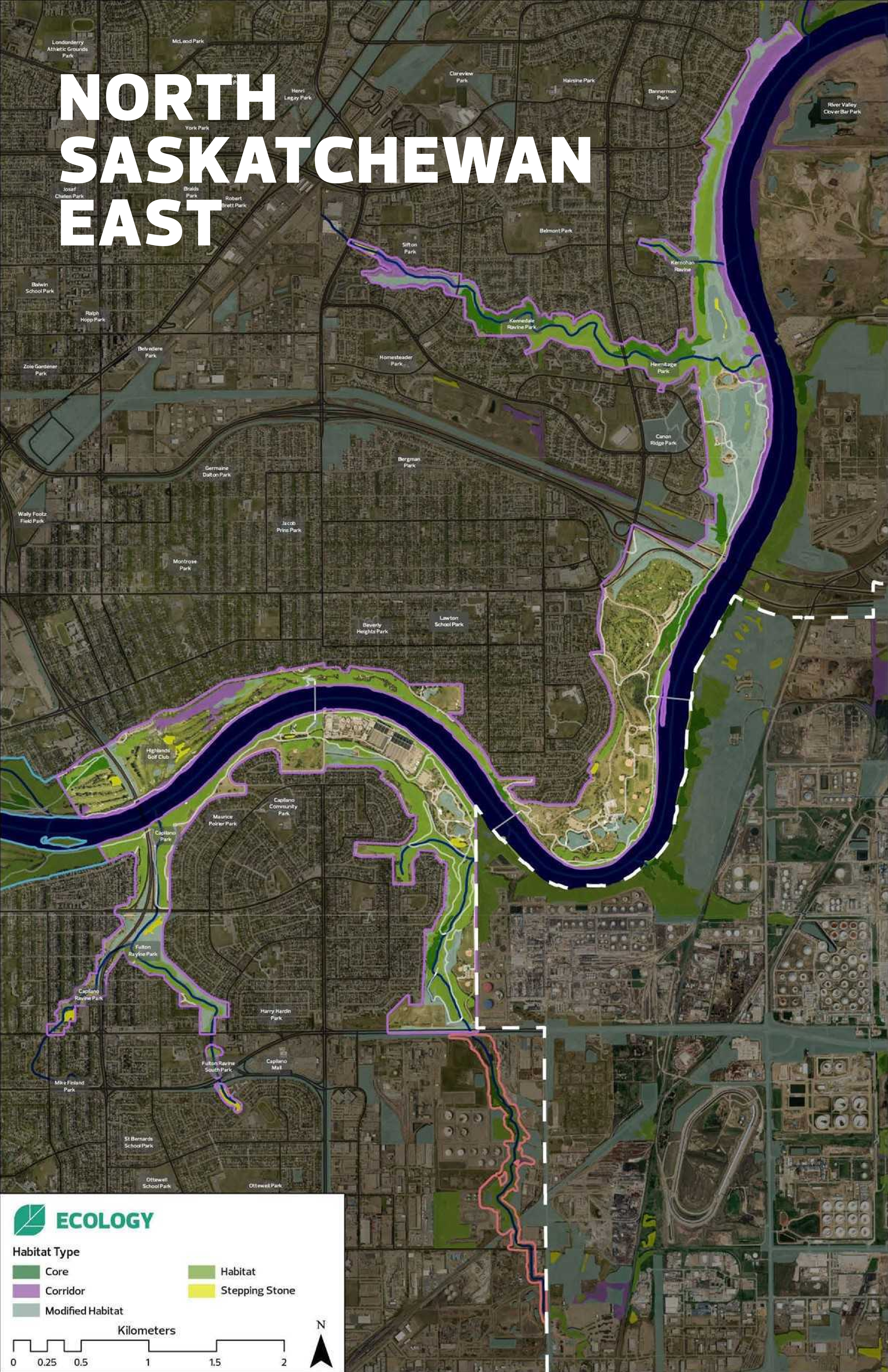


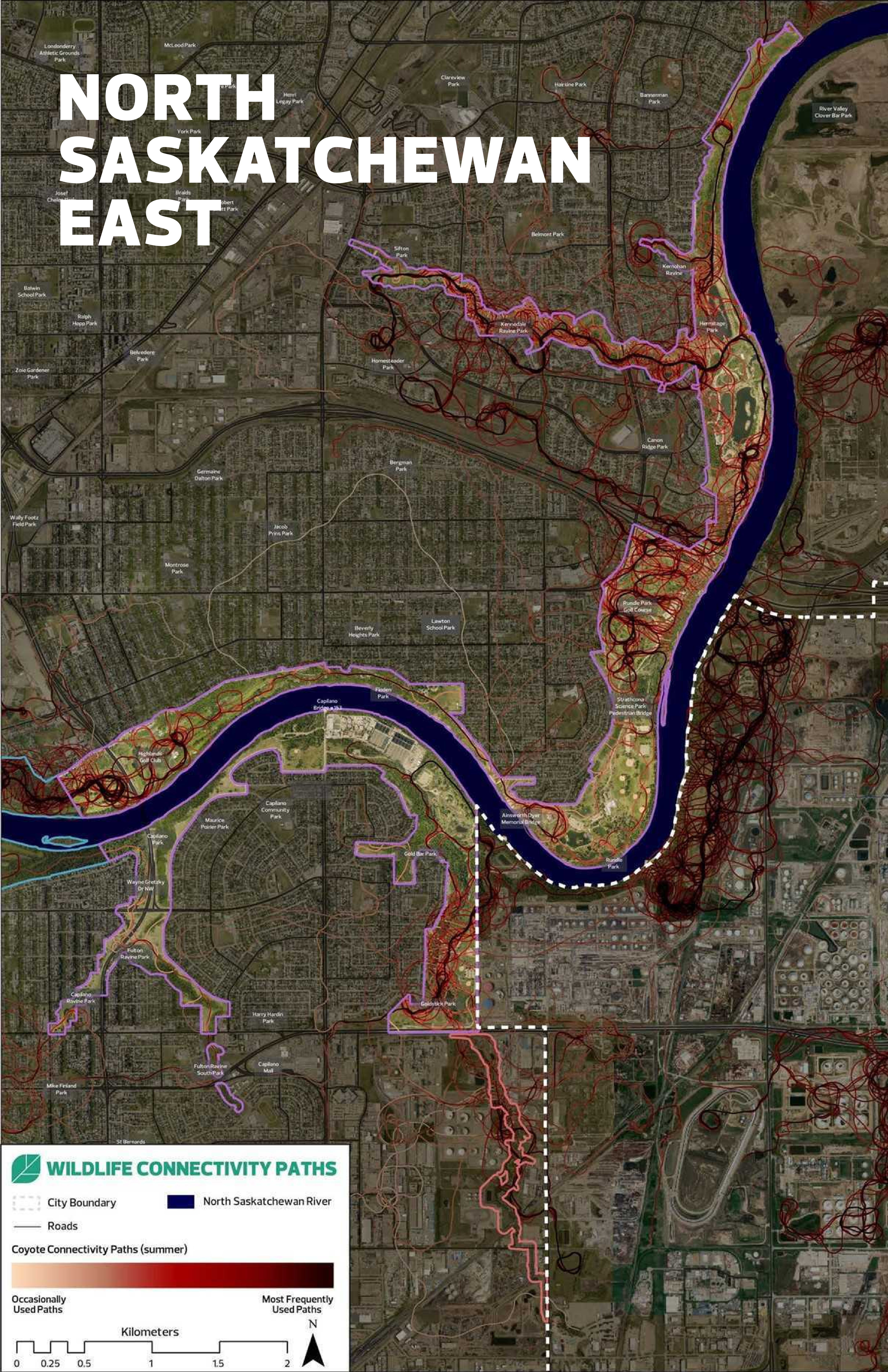
NORTH SASKATCHEWAN EAST


NORTH SASKATCHEWAN EAST
Londonderry Athletic Grounds Park
McLeod Park
Henri Legay Park
Clareview Park
Hairsine Park
Bannerman Park
River Valley Clover Bar Park
York Park
Josef Cheken Park
Braids Park
Robert Brett Park
Belmont Park
Sifton Park
Kernohan Ravine
Balwin School Park
Ralph Hopp Park
Kennedale Ravine Park
Hermitage Park
Belvedere Park
Homesteader Park
Zoie Gardener Park
Canon Ridge Park
Bergman Park
Germaine Dalton Park
Wally Footz Field Park
Jacob Prins Park
Montrose Park
Rundle Park Golf Course
Lawton School Park
Beverly Heights Park
Floden Park
Capilano Bridge #153
Strathcona Science Park Pedestrian Bridge
Highlands Golf Club
Capilano Community Park
Maurice Poirier Park
Ainsworth Dyer Memorial Bridge
Capilano Park
Gold Bar Park
Rundle Park
Wayne Gretzky Dr NW
Fulton Ravine Park
Capilano Ravine Park
Goldstick Park
Harry Hardin Park
Fulton Ravine South Park
Capilano Mall
Mike Finland Park
ECOLOGY
City Boundary
Streams
North Saskatchewan River
Connectivity Pinchpoints
Wildlife Corridors
Environmental Sensitivity Value
Extremely High Value
Very High Value
High Value
Moderate Value
Low Value
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N

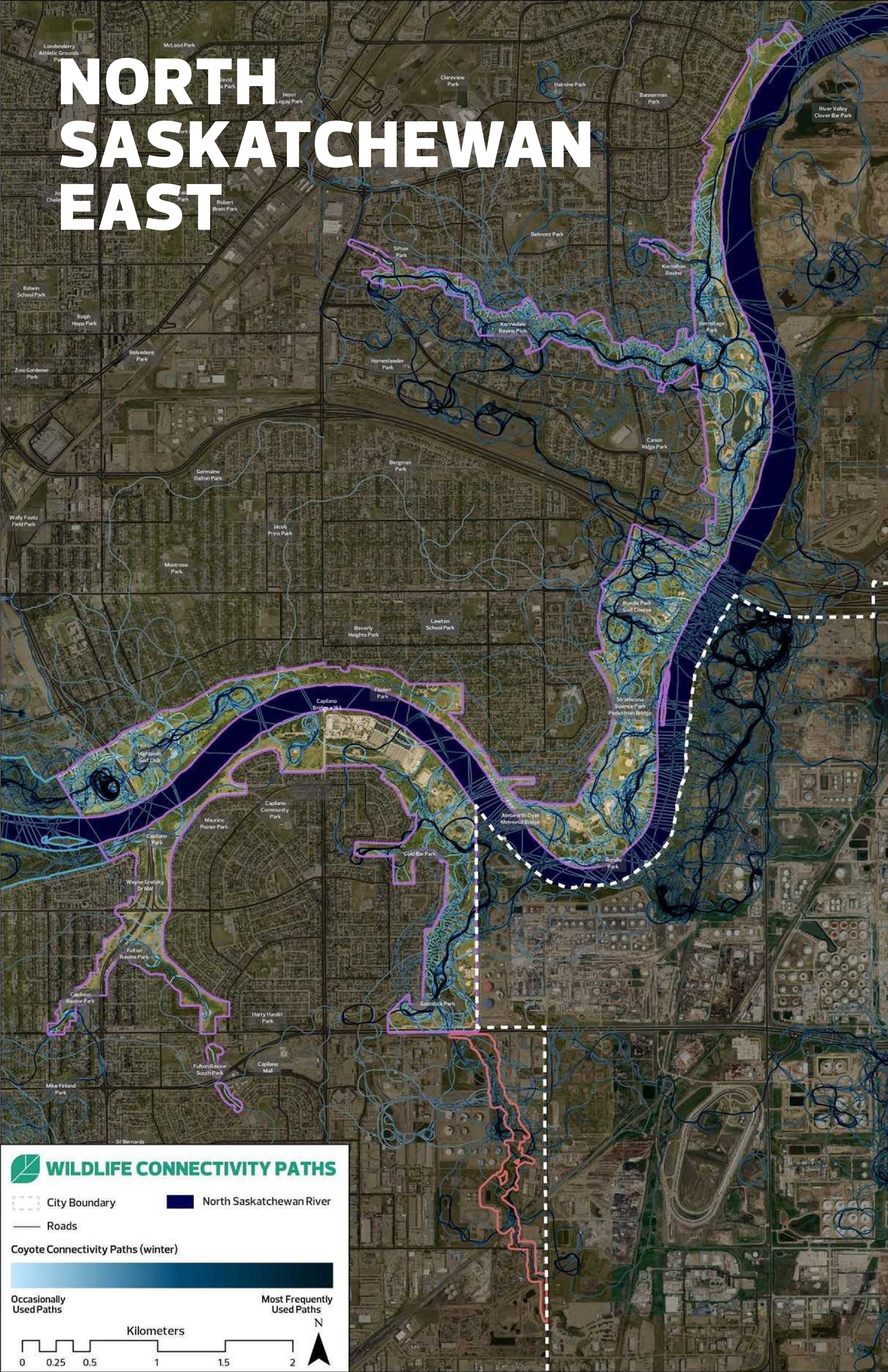

NORTH SASKATCHEWAN EAST
Londonderry Athletic Grounds Park
McLeod Park
David Ure Park
Henri Legay Park
Clareview Park
Hairsine Park
Bannerman Park
River Valley Clover Bar Park
Robert Brett Park
Belmont Park
Sifton Park
Kernohan Ravine
Balwin School Park
Ralph Hopp Park
Kennedale Ravine Park
Belvedere Park
Homesteader Park
Hermitage Park
Zoie Gardner Park
Canon Ridge Park
Germaine Dalton Park
Bergman Park
Wally Footz Field Park
Jacob Prins Park
Montrose Park
Lawton School Park
Beverly Heights Park
Highlands Golf Club
Capilano Community Park
Maurice Poirier Park
Capilano Park
Fulton Ravine Park
Capilano Ravine Park
Harry Hardin Park
Fulton Ravine South Park
Capilano Mall
Mike Finland Park
St Bernards School Park
Ottewell School Park
Ottewell Park
St Brendan School Park
ECOLOGY
Natural Area Rating
Low
Moderate
High
Kilometers
0
0.25
0.5
1
1.5
2
N

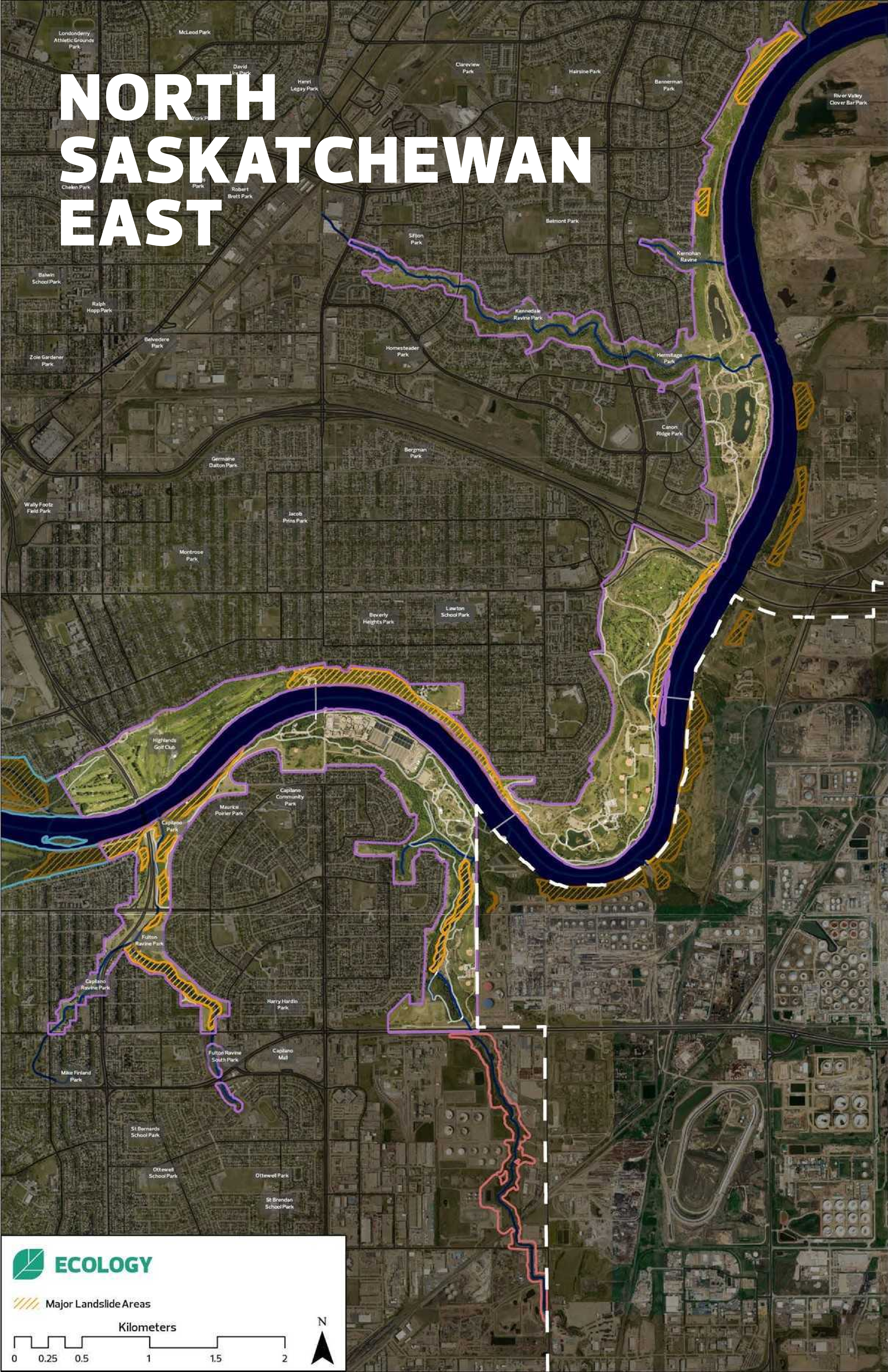
NORTH SASKATCHEWAN EAST



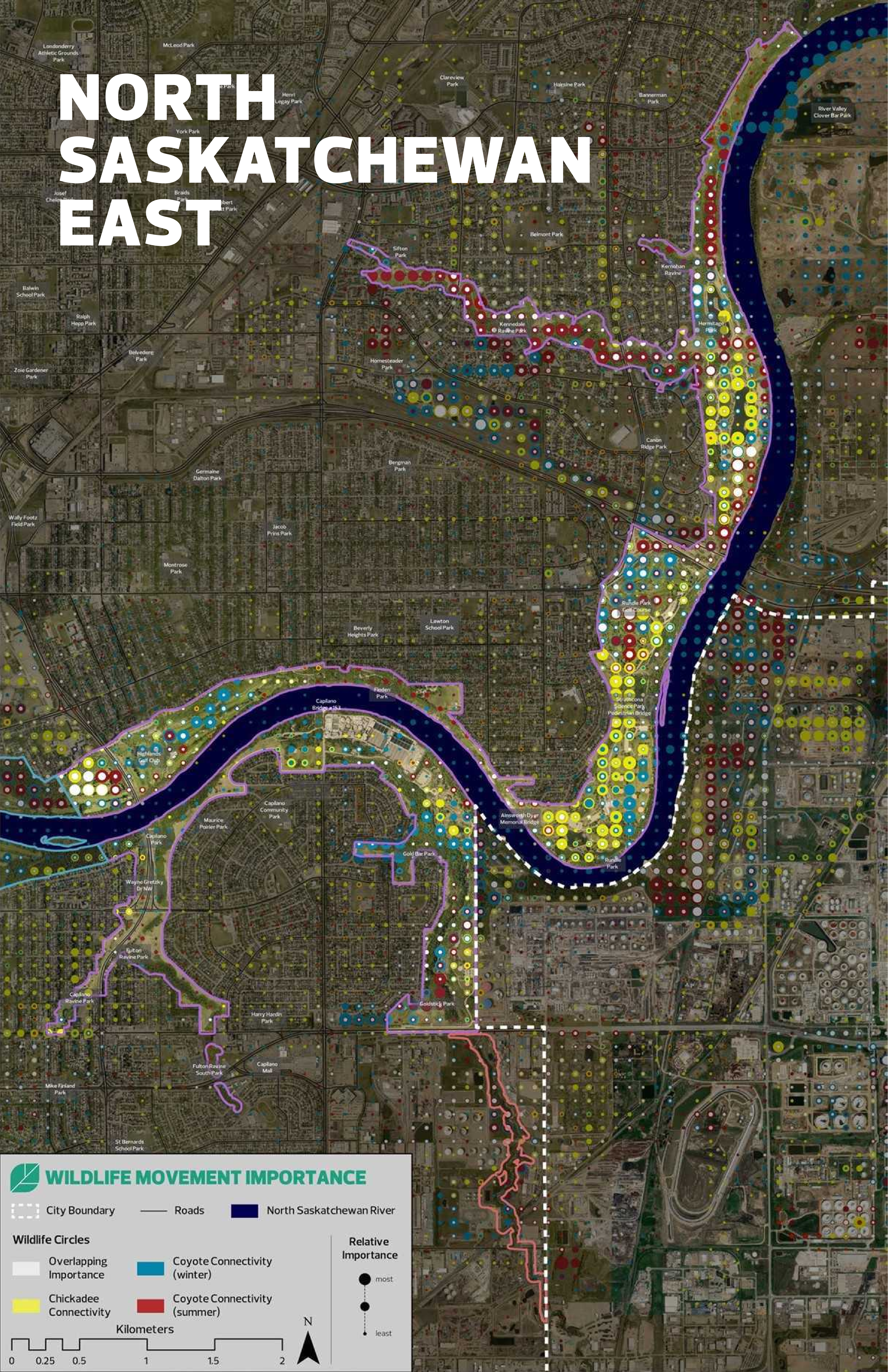

NORTH SASKATCHEWAN EAST
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Coyote Connectivity Paths (summer)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.25
0.5
1
1.5
2
N

NORTH SASKATCHEWAN EAST

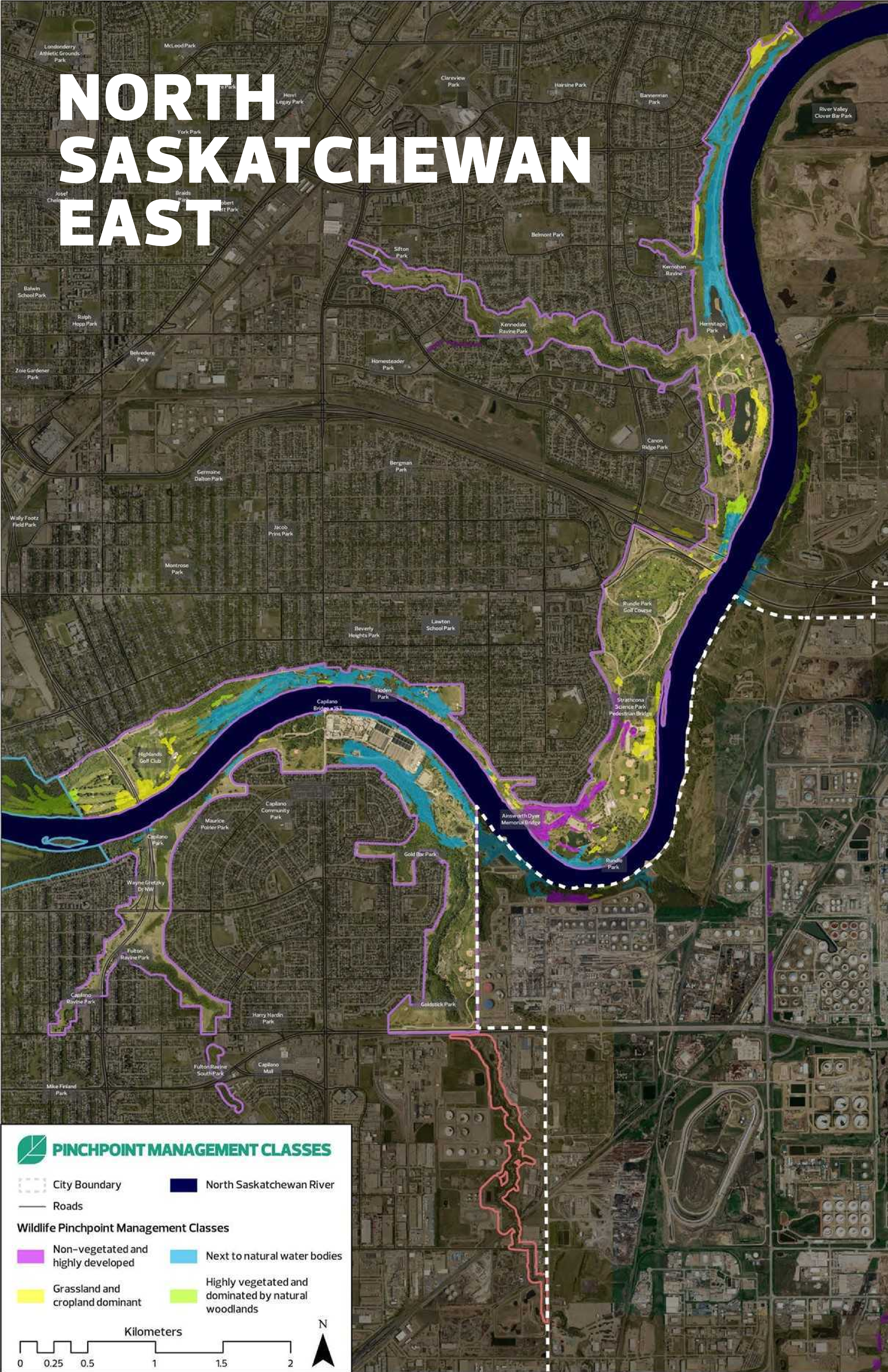



NORTH SASKATCHEWAN EAST
Londonderry Athletic Grounds Park
McLeod Park
David Lua Park
Henri Legay Park
Clareview Park
Hairsine Park
Bannerman Park
River Valley Clover Bar Park
York Park
Cheken Park
Robert Brett Park
Belmont Park
Sifton Park
Kernohan Ravine
Balwin School Park
Ralph Hopp Park
Kennedale Ravine Park
Belvedere Park
Homesteader Park
Hermitage Park
Zoie Gardener Park
Canon Ridge Park
Bergman Park
Germaine Dalton Park
Wally Footz Field Park
Jacob Prins Park
Montrose Park
Beverly Heights Park
Lawton School Park
Highlands Golf Club
Capilano Community Park
Maurice Poirier Park
Capilano Park
Fulton Ravine Park
Capilano Ravine Park
Harry Hardin Park
Fulton Ravine South Park
Capilano Mall
Mike Finland Park
St Bernards School Park
Ottewell School Park
Ottewell Park
St Brendan School Park
ECOLOGY
Major Landslide Areas
Kilometers
0
0.25
0.5
1
1.5
2
N

NORTH SASKATCHEWAN EAST



NORTH SASKATCHEWAN EAST



CELEBRATION

Numerous event spaces are located in Rundle Park, Capilano Park, and Gold Bar Park. The Gold Bar Park Pavilion and Goldstick Park Pavilion also provide event spaces. Upkeep and long-term maintenance will help improve the appeal of these areas.

WELLNESS

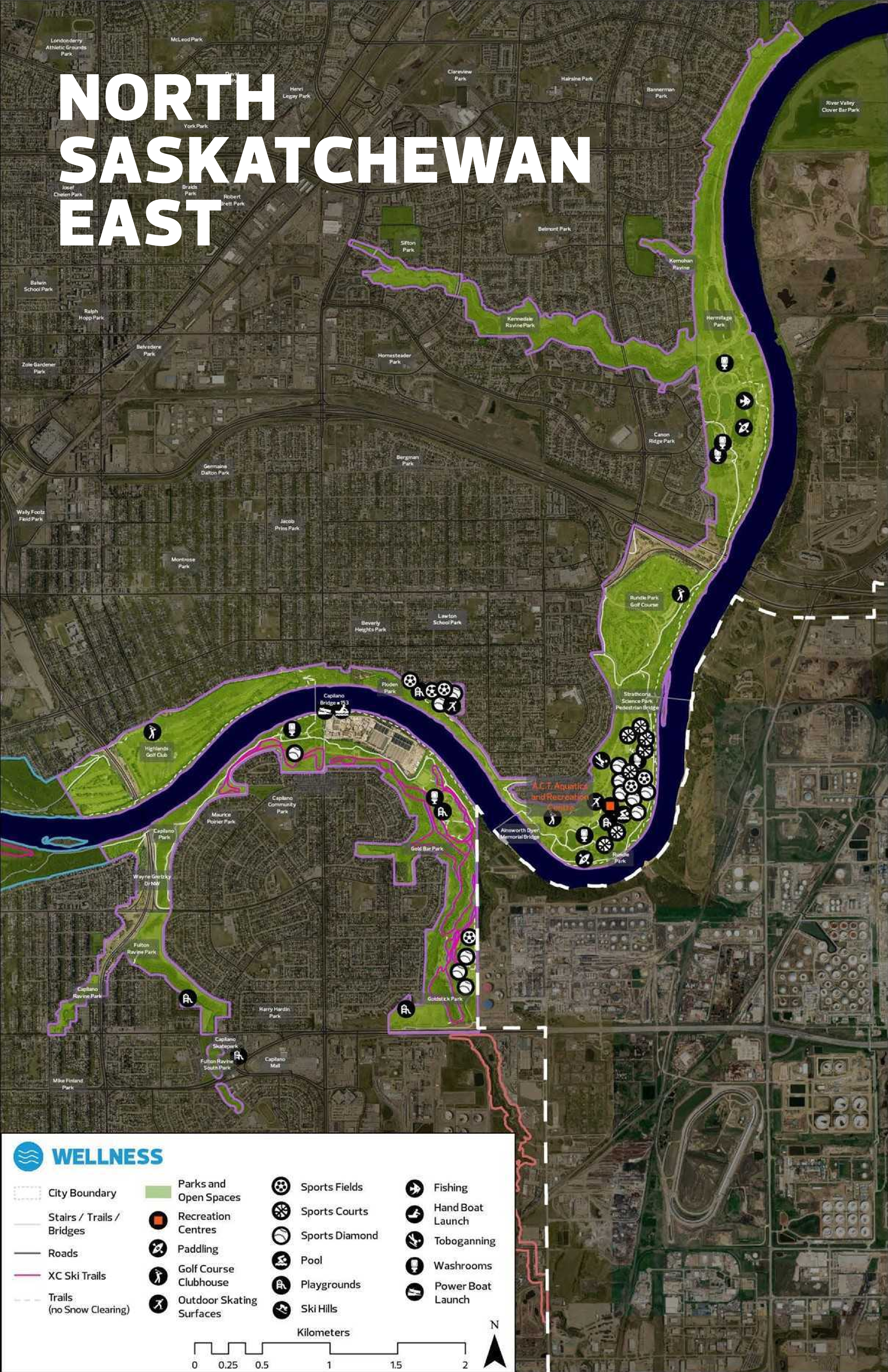
The Rundle and Highlands Golf Courses and the Sunridge Ski Area provide an attractive draw into the area. Playgrounds are fond in Fulton Ravine Park, Goldstick Park, and Rundle Park. The nearby Capilano Skatepark is also a popular area for the nearby communities. Numerous sports fields, courts, and diamonds in Floden and Rundle Park are also highly valued. Rundle Park also provides paddling opportunities, and is home to the A.C.T. Aquatics and Recreation Centre. In the winter, Rundle Park provides skating and tobogganing, and extensive cross-country ski trails are maintained in Capilano, Gold Bar, and Goldstick Parks. The Rundle Park Mini Golf course is in poor repair, but appreciated by residents. The proposed disc golf course in Hermitage would be a valuable attraction.

Trails along the Highland river's edge are in poor condition and not maintained in the winter, posing connectivity challenges. Signage and wayfinding is also problematic, especially around the Capilano Footbridge #153 and Ainsworth Dyer Memorial pedestrian bridges. Better trail connections through the ravines would make this area more accessible. The slopes of Goldbar Park are a popular mountain biking destination. River access is located at Rundle Park and the Capilano Footbridge #153.

Formal trails in this reach are evenly split between seasonally-maintained and year-round trails. Informal trails exist in this reach, concentrated in Gold Bar Park.


NORTH SASKATCHEWAN EAST
Londonderry Athletic Grounds Park
McLeod Park
Henri Legay Park
Clareview Park
Hairsine Park
Bannerman Park
River Valley Clover Bar Park
York Park
Josef Chelen Park
Braids Park
Robert Brett Park
Belmont Park
Sifton Park
Kernohan Ravine
Balwin School Park
Ralph Hopp Park
Kennedale Ravine Park
Hermitage Park
Belvedere Park
Homesteader Park
Zoie Gardener Park
Canon Ridge Park
Germaine Dalton Park
Bergman Park
Wally Footz Field Park
Jacob Prins Park
Montrose Park
Rundle Park Golf Course
Beverly Heights Park
Lawton School Park
Floden Park
Capilano Bridge #153
Strathcona Science Park Pedestrian Bridge
Highlands Golf Club
Gold Bar Park Pavilion
Rundle Park Paddle Boat House
Capilano Community Park
Maurice Poirier Park
Ainsworth Dyer Memorial Bridge
Capilano Park
Gold Bar Park
Rundle Park
Rundle Park Mini Golf
Wayne Gretzky Dr NW
Goldstick Park Pavilion
Fulton Ravine Park
Goldstick Park
Capilano Ravine Park
Harry Hardin Park
Fulton Ravine South Park
Capilano Mall
Mike Finland Park
CELEBRATION
City Boundary
Parks / Bridges / Trails
Event Trails
Roads
North Saskatchewan River
Attractions
Community Buildings
Bookable Picnic Sites
Community Leagues
Event Spaces
Restaurants
Kilometers
0
0.25
0.5
1
1.5
2
N

NORTH SASKATCHEWAN EAST



NORTH SASKATCHEWAN EAST

CULTURE

Known archaeological sites are found throughout this reach, including a high density in Kennedale Ravine, Capilano Park, and scattered through Floden, Rundle, and Gold Bar Parks. Lands east of the Highlands Golf Club have high potential for additional unknown historic resources, including Goldbar Ravine, Kennedale Ravine, Kernohan Ravine, and the southern portions of Fulton Ravine. All potential developments should be preceded by exploratory assessment to ensure that these sites are identified and mitigated to prevent impact.

VISITATION AND POTENTIAL CONFLICTS

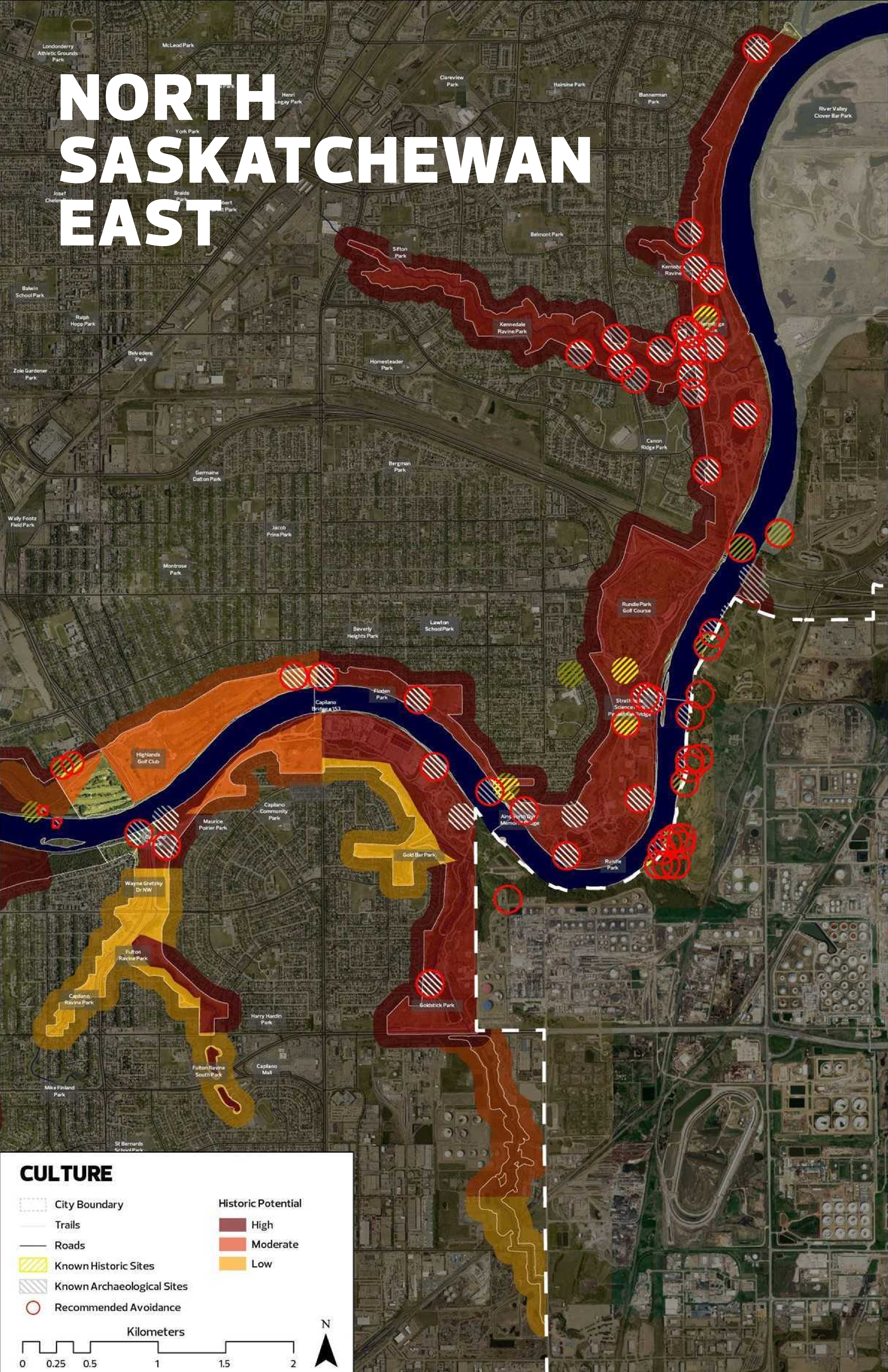
Visitation in the East Reach is lower and more distributed than that seen in the Central and West Reaches. Hotspots of visitation are seen in the headwaters of Kennedale Ravine near Sifton Park, the Highlands Golf Club, the Gold Bar parking lot, and much of Rundle Park away from the river's edge.

The key conflict area is found in Goldbar Ravine, where the heavily forested slopes provide important habitat, while also serving as an important recreational area containing numerous informal singletrack trails.

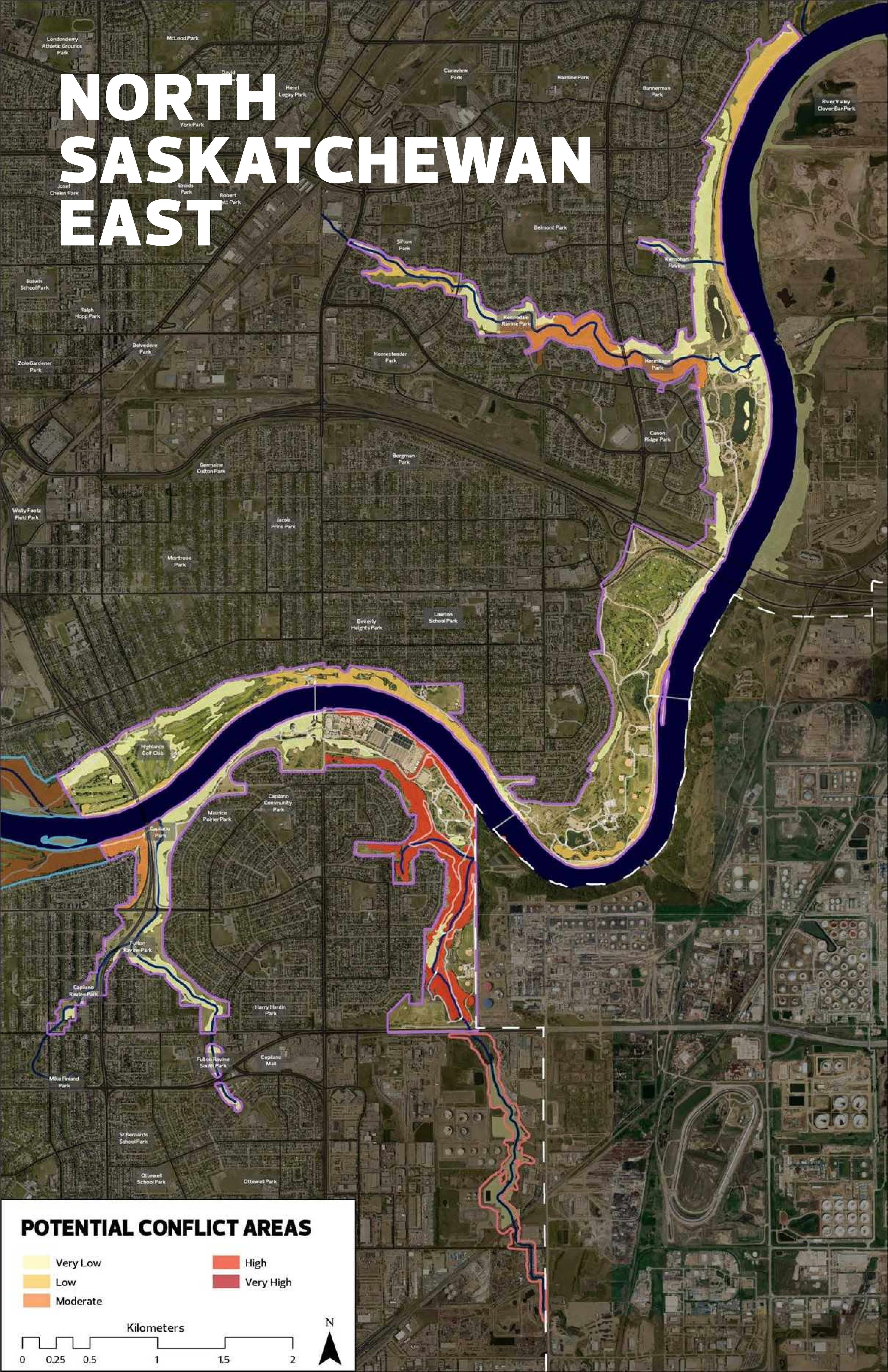
NORTH SASKATCHEWAN EAST – FRACTION OF TOTAL RIBBON OF GREEN VISITATION

Q1 (JANUARY-MARCH)	Q2 (APRIL-JUNE)	Q3 (JULY-SEPTEMBER)	Q4 (OCTOBER-DECEMBER)
10.5%	10.2%	8.8%	7.1%

NORTH SASKATCHEWAN EAST



NORTH SASKATCHEWAN EAST


NORTH SASKATCHEWAN EAST
POTENTIAL CONFLICT AREAS
Very Low
Low
Moderate
High
Very High
Kilometers
0
0.25
0.5
1
1.5
2
N
Londonderry Athletic Grounds Park
McLeod Park
Henri Legay Park
York Park
Clareview Park
Hairsine Park
Bannerman Park
River Valley Clover Bar Park
Josef Chelen Park
Braids Park
Belmont Park
Sifton Park
Kernohan Ravine
Balwin School Park
Ralph Hopp Park
Kennedale Ravine Park
Belvedere Park
Homesteader Park
Hermitage Park
Zoie Gardener Park
Canon Ridge Park
Germaine Dalton Park
Bergman Park
Wally Footz Field Park
Jacob Prins Park
Montrose Park
Beverly Heights Park
Lawton School Park
Highlands Golf Club
Capilano Community Park
Maurice Poirier Park
Capilano Park
Fulton Ravine Park
Capilano Ravine Park
Harry Hardin Park
Fulton Ravine South Park
Capilano Mall
Mike Finland Park
St Bernards School Park
Ottewell School Park
Ottewell Park

WHITEMUD RAVINE NORTH

Whitemud Ravine North Reach Overview

The Whitemud North Reach contains the Whitemud Creek and Ravine from the Alfred Savage Centre in the north, to the confluence area (planned in the Ribbon of Green SW + NE). This segment of the Ribbon of Green connects the SW Ravine Study Area to the North Saskatchewan River West Reach. The Whitemud North Reach is primarily surrounded by low density residential neighbourhoods, including Brookside, Lansdowne, Aspen Gardens, Falconer Heights, and Blue Quill Estates. The northern part of the reach is adjacent to the University of Alberta Farm.

This area is an essential ecological component of the River Valley and ravine system, providing an important connectivity corridor for wildlife movement into the North Saskatchewan River Valley. This sensitive natural refuge faces growing public use from surrounding neighbourhoods, posing a challenge for its long-term sustainability. The area also contains tufa springs, a unique geological feature that is susceptible to erosion. These tufa springs are an important and unrecognized natural feature that are not found anywhere else in the region. Careful management will be needed to ensure that its inherent natural value is not degraded over time, while recognizing that its central location means it will likely continue to see active use.The Whitemud Nature Reserve is a unique area managed to protect key natural habitat, supporting the City's wildlife population. Twenty six bridges provide access across the creek within the ravine itself, helping to protect the creek's sensitive riparian vegetation and minimize erosion. Cycling is not permitted in this area due to its inherent sensitivity. There is a desire to provide increased management in this area to prevent its natural features from being impacted or lost.

The proposed Kihciy Askiy (Sacred Earth) cultural site provides a natural setting for the Indigenous community to host spiritual ceremonies, sweat lodges, cultural camps and talking circles; grow medicinal herbs, and facilitate intergenerational learning in an appropriately designed outdoor learning space. Phase 1 of the Kihciy Askiy design is complete and awaiting funding approval to proceed to construction.

Notable recreation amenities in the area include the Snow Valley Ski Club, the Whitemud Equine Centre, Rainbow Valley Park and Campground, and the toboggan hill at the Alfred Savage Centre. These provide unique attractive draws into the area requiring an effective balance between its use and preservation.

REACH	CELEBRATION	WELLNESS	ECOLOGY
WHITEMUD RAVINE NORTH	**2** Unique Attractions **1** Community Buildings **1** Event Space **1** Restaurant	**1** Playground **2** Washrooms **1** Ski Hill **TRAILS** **15 km** Formal (Seasonal) **2.5 km** Formal (Year-Round) **13 km** Informal Trails	**Total Area:** 352.8 ha (100%) **Developed and Modified Land Use:** 70.9 ha (20%) **Wetlands:** 19.9 (6%) **Tree Canopy:** 249.5 ha (71%) **Unique Vegetation:** 123.6 ha (35%) **Connectivity Pinchpoints:** 53.6 ha (15%) **Wildlife Corridor:** 315.1 ha (89%) **Naturalized Spaces:** 8.1 ha (2%) **Natural Area:** 281.8 ha (80% of reach) **City-Owned Parks:** 276.8 ha (covers 98% of natural areas)

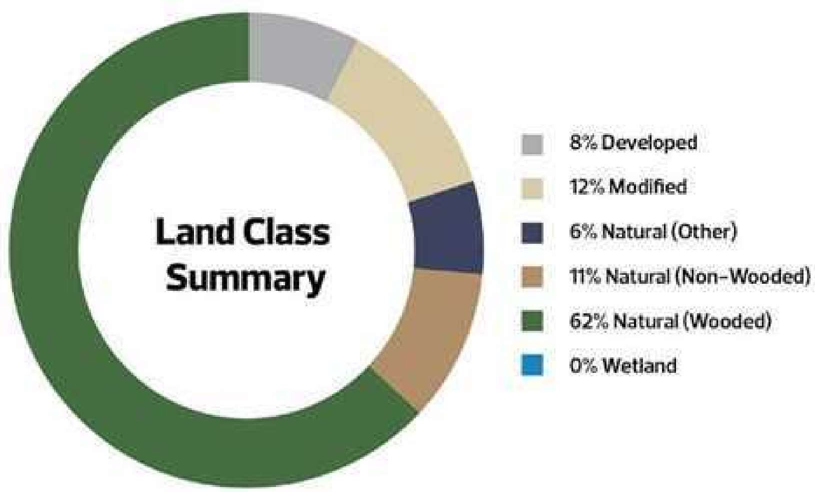
ECOLOGY

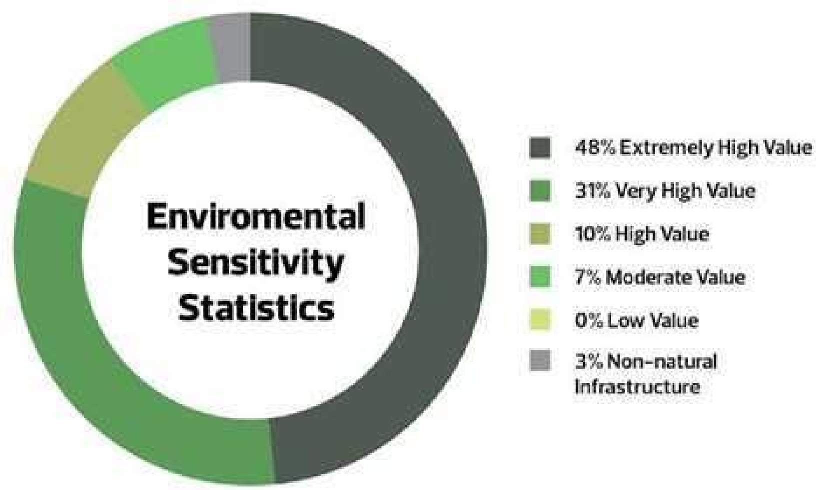
Whitemud Ravine North is an irreplaceable natural area that requires dedicated, ongoing management effort to preserve. Its close proximity to the highest use areas of the River Valley and Ravine System, easily accessible from the surrounding neighbourhoods, means that the area will continue to see ongoing pressure for greater use, and the sensitive nature of the area means this use is likely to cause permanent impacts. The irreplaceable tufa springs in this area are a unique geological feature for the entire region, fed by groundwater springs and highly sensitive to impact. They must be actively monitored and preserved: formal trails should avoid this area, and informal public access should be actively prevented.

The bulk of the area is dominated by natural cover, with modified lands found to the northwest of the Alfred H. Savage Centre, and along Whitemud Drive, where the Snow Valley Ski Club and Rainbow Valley Campground are located. Beyond these areas, unique forested patches of extremely high sensitivity form long stretches of core habitat. The meandering creek poses challenges to trail connectivity, and stream crossings must be carefully planned to prevent damage to the banks.

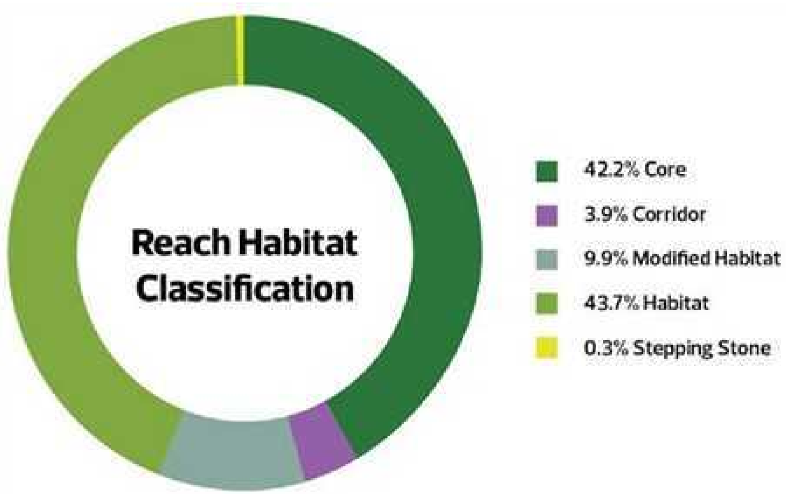
To the east of the Alfred H. Savage Centre, along Fox Drive, steeply sloped core habitat creates an extensive connectivity pinch point. Existing trails in this area pose erosion risks, as well as potentially impacting wildlife movement along the slope. On the west side, core habitat abuts residential lands. Further south and east, core habitat is interspersed with more open areas and steep slopes, while key pinch points to wildlife movement follow the stream towards the campground. South of Whitemud Drive, large stretches of core habitat follow the stream and the steeply sloped sides of the ravine. Trail use in this area passes through core habitat and pinch points due south of Whitemud Drive, posing potential challenges. The unbroken nature of forest cover through this area makes it one of the largest continuous core habitats in the city.

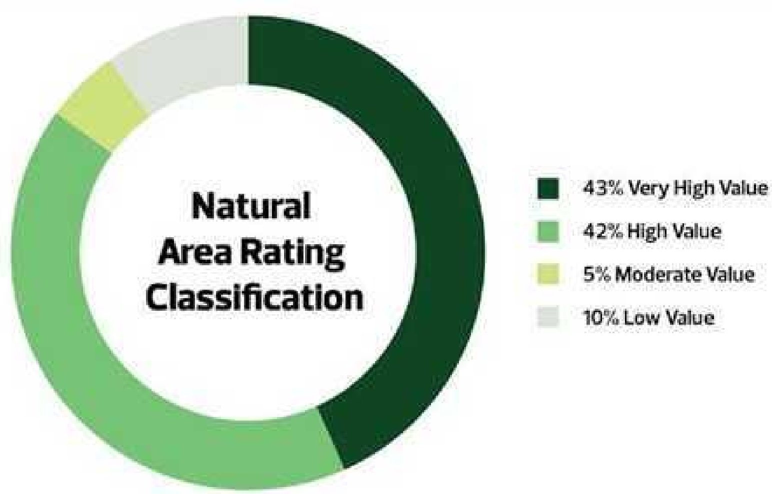
Whitemud Ravine North – Land Class and Environmental Sensitivity Summary



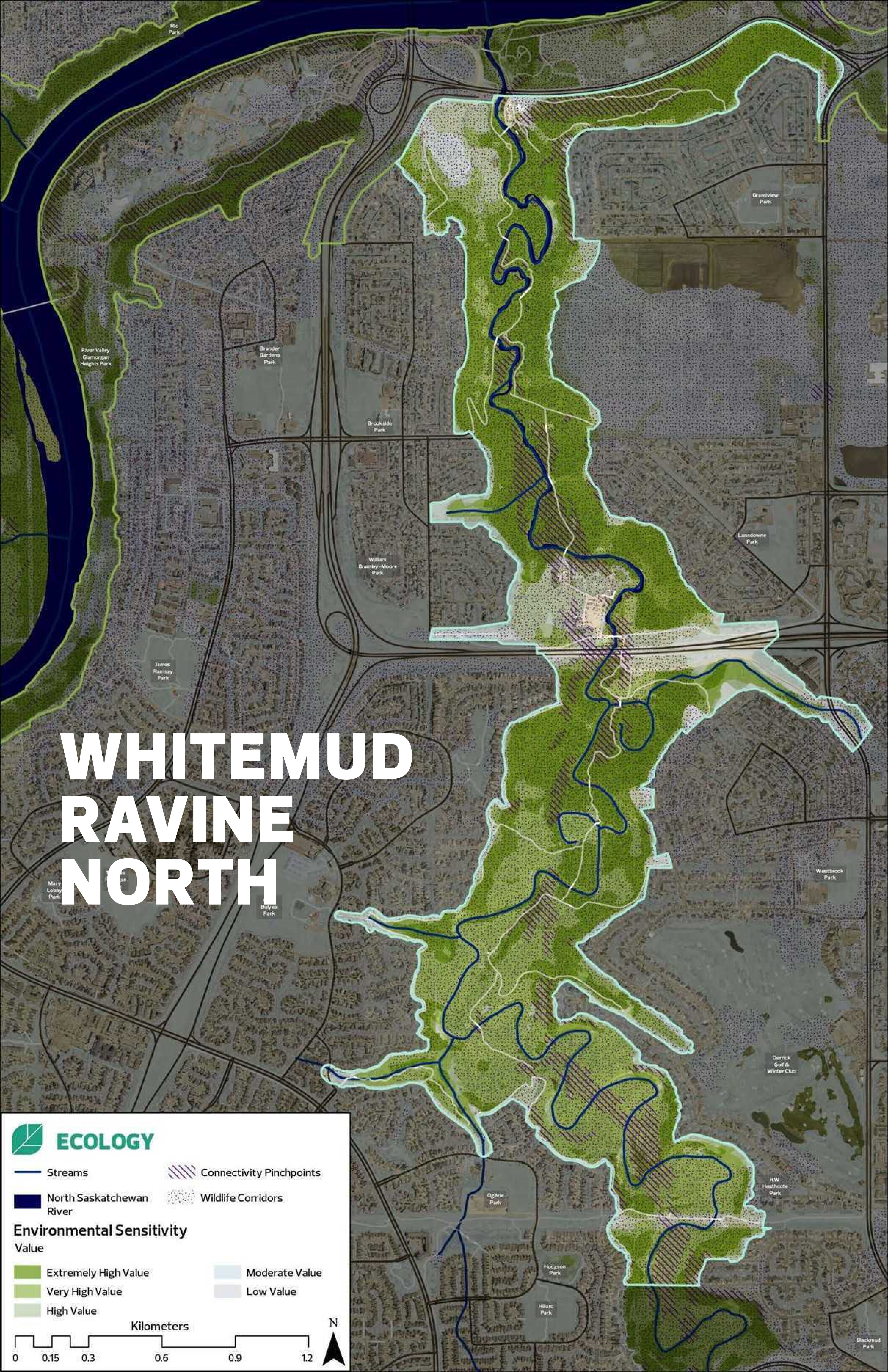


Whitemud Ravine North – Reach Habitat and Natural Area Rating Classification





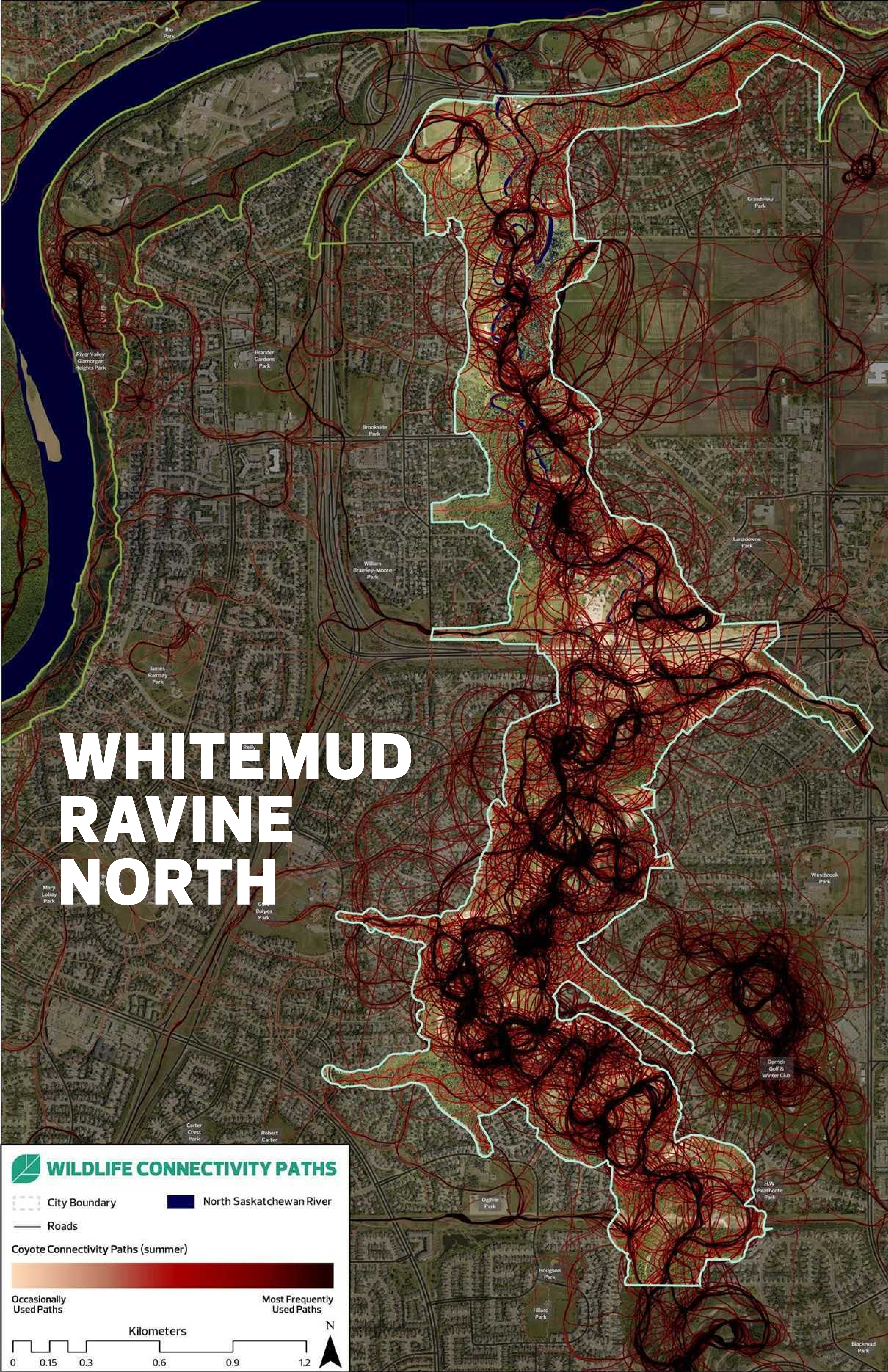

WHITEMUD RAVINE NORTH
ECOLOGY
UPLVI Land Classes
Developed
Modified
Natural (Other)
Natural (Wooded)
Natural (Non-Wooded)
Wetland
Trails
Roads
Streams
North Saskatchewan River
Flood Hazard
Unique Vegetation
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N

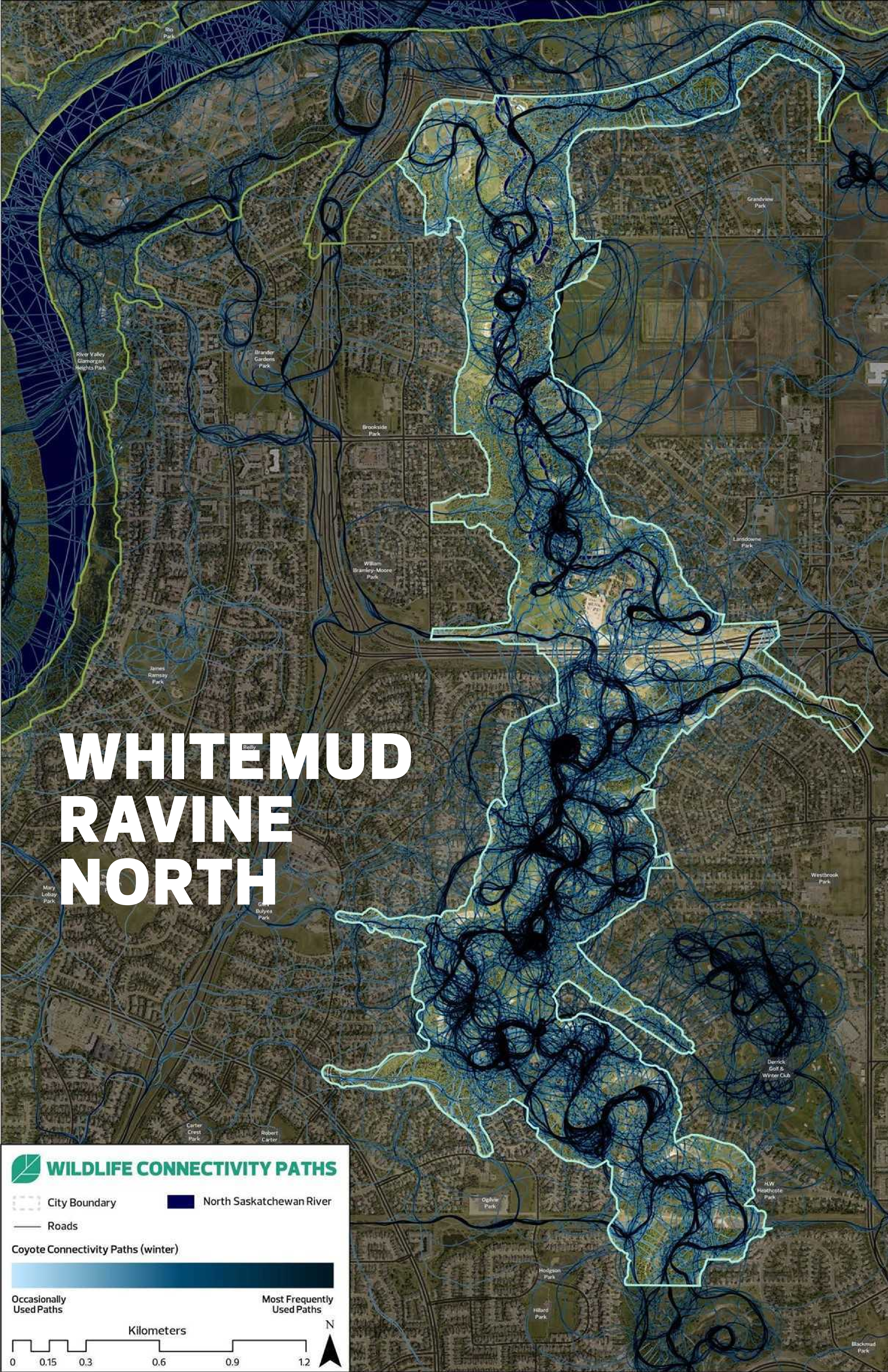

WHITEMUD
RAVINE
NORTH
ECOLOGY
Streams
North Saskatchewan River
Connectivity Pinchpoints
Wildlife Corridors
Environmental Sensitivity
Value
Extremely High Value
Very High Value
High Value
Moderate Value
Low Value
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N
Rio Park
River Valley Glamorgan Heights Park
Brander Gardens Park
Brookside Park
William Bramley-Moore Park
James Ramsay Park
Grandview Park
Lansdowne Park
Westbrook Park
Derrick Golf & Winter Club
H.W. Heathcote Park
Ogilvie Park
Hodgson Park
Hillard Park
Blackmud Park
Bulyea Park
Mary Lobay Park

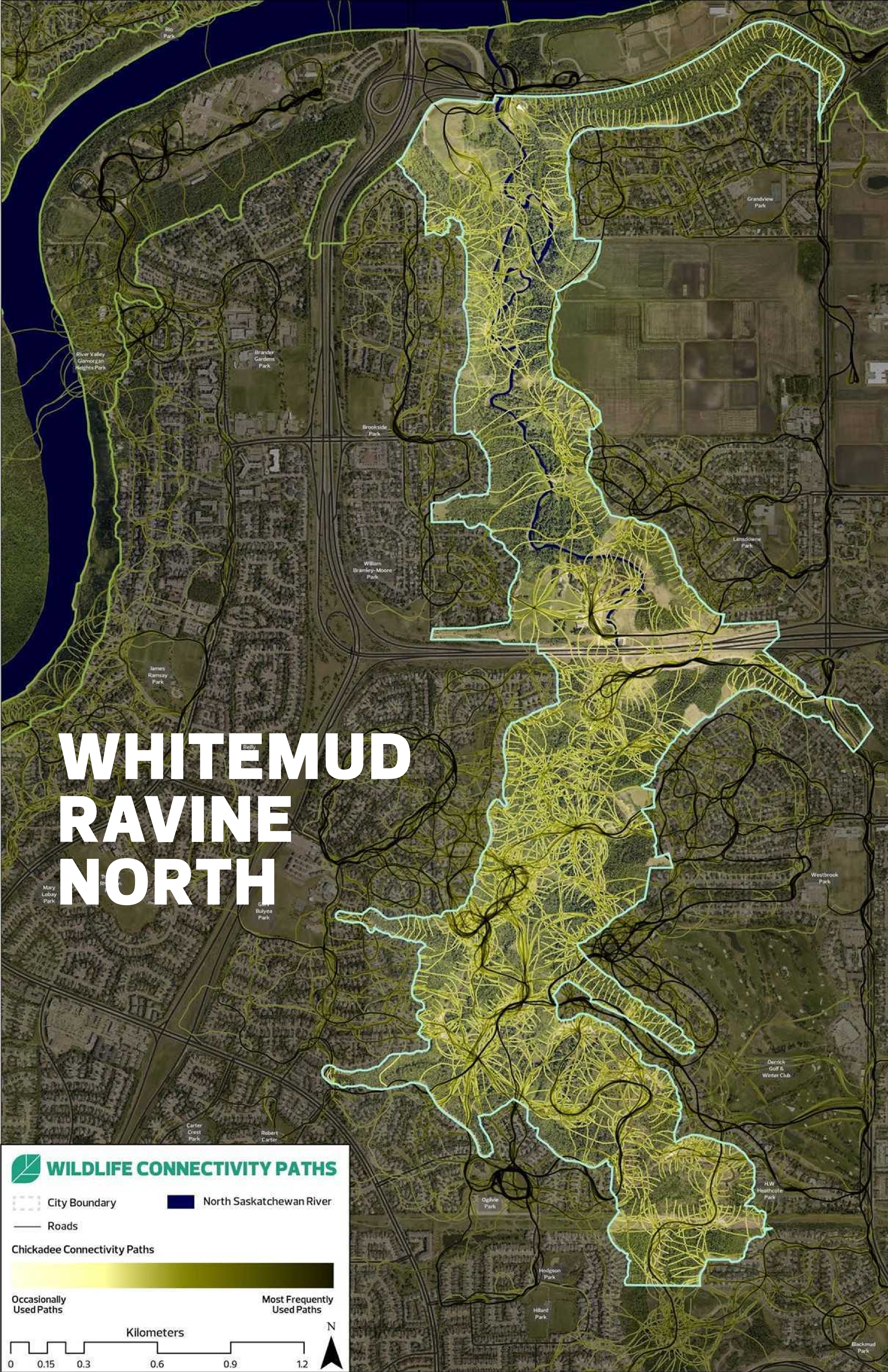

WHITEMUD RAVINE NORTH
Rio Park
Grandview Park
River Valley Glamorgan Heights Park
Brander Gardens Park
Brookside Park
William Bramley-Moore Park
Lansdowne Park
James Ramsay Park
Westbrook Park
GMV Bulyea Park
Mary Lobay Park
Derrick Golf & Winter Club
Carter Crest Park
Robert Carter Park
Falconer Heights Park
H.W Heathcote Park
Ogilvie Park
Hodgson Park
Hillard Park
Blackmud Park
ECOLOGY
Natural Area Rating
Very High
High
Moderate
Low
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N

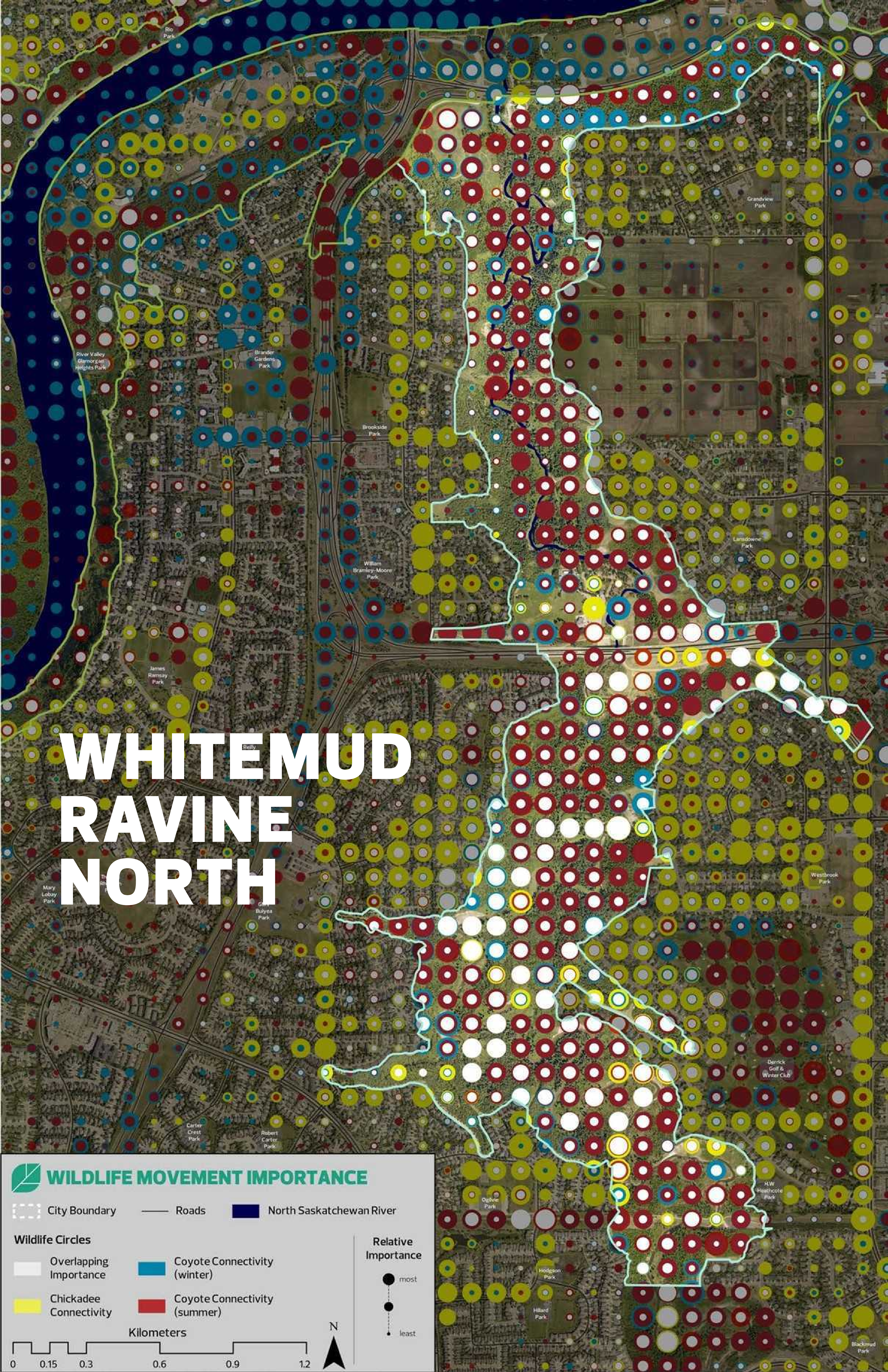

WHITEMUD
RAVINE
NORTH
Rio Park
Grandview Park
River Valley Glamorgan Heights Park
Brander Gardens Park
Brookside Park
Lansdowne Park
William Bramley-Moore Park
James Ramsay Park
Westbrook Park
GMV Bulyea Park
Mary Lobay Park
Derrick Golf & Winter Club
Carter Crest Park
Robert Carter Park
Ogilvie Park
H.W. Heathcote Park
Hodgson Park
Hillard Park
Blackmud Park
ECOLOGY
Habitat Type
Core
Corridor
Modified Habitat
Habitat
Stepping Stone
Kilometers
0 0.15 0.3 0.6 0.9 1.2
N

WHITEMUD
RAVINE
NORTH
ECOLOGY
Major Landslide Areas
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N
Rio Park
Grandview Park
River Valley Glamorgan Heights Park
Brander Gardens Park
Brookside Park
Lansdowne Park
William Bramley-Moore Park
James Ramsay Park
Westbrook Park
Mary Lobay Park
GMV Bulyea Park
Derrick Golf & Winter Club
Carter Crest Park
Robert Carter Park
Falconer Heights Park
Ogilvie Park
H.W Heathcote Park
Hodgson Park
Hillard Park
Blackmud Park


WHITEMUD
RAVINE
NORTH
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Coyote Connectivity Paths (summer)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N


WHITEMUD RAVINE NORTH
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Coyote Connectivity Paths (winter)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N
Grandview Park
River Valley Glamorgan Heights Park
Brander Gardens Park
Brookside Park
Lansdowne Park
William Bramley-Moore Park
James Ramsay Park
Westbrook Park
Mary Lobay Park
Bulyea Park
Derrick Golf & Winter Club
Carter Crest Park
Robert Carter
Ogilvie Park
H.W. Heathcote Park
Hodgson Park
Hillard Park
Blackmud Park


WHITEMUD RAVINE NORTH
Rio Park
River Valley Glamorgan Heights Park
Brander Gardens Park
Brookside Park
William Bramley-Moore Park
James Ramsay Park
Grandview Park
Lansdowne Park
Westbrook Park
Mary Lobay Park
Gary Bulyea Park
Derrick Golf & Winter Club
H.W Heathcote Park
Carter Crest Park
Robert Carter
Ogilvie Park
Hodgson Park
Hillard Park
Blackmud Park
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Chickadee Connectivity Paths
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0 0.15 0.3 0.6 0.9 1.2
N



WHITEMUD
RAVINE
NORTH
WILDLIFE MOVEMENT IMPORTANCE
City Boundary
Roads
North Saskatchewan River
Wildlife Circles
Overlapping Importance
Coyote Connectivity (winter)
Chickadee Connectivity
Coyote Connectivity (summer)
Relative Importance
most
least
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N

WHITEMUD RAVINE NORTH
PINCHPOINT MANAGEMENT CLASSES
City Boundary
Roads
North Saskatchewan River
Wildlife Pinchpoint Management Classes
Non-vegetated and highly developed
Next to natural water bodies
Grassland and cropland dominant
Highly vegetated and dominated by natural woodlands
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N
Rio Park
River Valley Glamorgan Heights Park
Brander Gardens Park
Brookside Park
Grandview Park
William Bramley-Moore Park
Lansdowne Park
James Ramsay Park
Westbrook Park
Derrick Golf & Winter Club
H.W Heathcote Park
Ogilvie Park
Hodgson Park
Hillard Park
Blackmud Park

CELEBRATION

The existing Alfred H. Savage Centre and Rainbow Valley Campground provide excellent opportunities for visitors and residents alike to experience this area. These staging areas are the key entry points into the area for most city residents, and should be well-signed to help visitors understand their responsibilities in the area. The Alfred H. Savage Centre also serves as an event space, providing a bookable indoor area for workshops, educational programs, and community events.

The planned Kihciy Askiy cultural site will provide a one-of-a-kind opportunity for First Nations people to come together, take part in important ceremonies, and further re-establish ways of life that have been disrupted by historical and present day inequity. This will also provide a remarkable opportunity for all to learn about the rich heritage of the First Nations people, their perspectives, and ways of interpreting that natural world. The proposed infrastructure improvements will allow a larger number of visitors to the site while reducing their impact.

WELLNESS

These lands provide a unique, sheltered refuge from busier and more intensively used stretches of the River Valley and Ravine System. Aside from the ski hill to the north of Whitemud Drive, the playground and washroom at the campground, and washroom facilities at the Alfred H. Savage Centre, the area has no recreational amenities. It's value is in the natural experience provided by the land itself. Visitors to the area can experience a sense of quiet serenity, a rare opportunity in an otherwise busy urban centre such as Edmonton.

The trail system has inherent constraints of steep slopes and sensitive banks, and should be managed to minimize and mitigate impacts. Human access into the area requires care, and adequate monitoring and enforcement to ensure that users of the trail system understand their responsibilities.

The area also has an important value as an educational resource. The unique tufa springs are a regionally rare geological feature that has been recognized by the University of Alberta's geological program. The intact natural landscape also provides excellent learning opportunities for ecology and natural history programs that can be appreciated by students of all ages. Expanded parking infrastructure developed for the Kihciy Askiy cultural site will provide space for tours and field trips.

Most formal trails in this reach are seasonal, and restricted to foot-based traffic. Informal trails have been developed throughout the reach, predominantly on the east slopes.


WHITEMUD RAVINE NORTH
Fort Edmonton Park
John Janzen Nature Centre
Whitemud Equine Learning Centre
Alfred H. Savage Centre
Grandview Park
River Valley Glenorgan Heights Park
Brander Gardens Park
Brookside Park
Lansdowne Park
William Bramley-Moore Park
Rainbow Valley Campground
Snow Valley Aerial Park
James Ramsay Park
Westbrook Park
Derrick Golf & Winter Club
Carter Crest Park
Robert Carter Park
Ogilvie Park
H.W. Heathcote Park
Hodgson Park
CELEBRATION
Parks - Bridges
Trails
Event Trails
Roads
North Saskatchewan River
Attractions
Community Buildings
Bookable Picnic Sites
Event Spaces
Restaurants
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N

WHITEMUD RAVINE NORTH
WELLNESS
Stairs / Trails / Bridges
Roads
Trails (no Snow Clearing)
Parks and Open Spaces
Sports Fields
Playgrounds
Ski Hills
Hand Boat Launch
Tobogganing
Washrooms
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N
Rio Park
River Valley Glamorgan Heights Park
Brander Gardens Park
Brookside Park
William Bramley-Moore Park
James Ramsay Park
Grandview Park
Lansdowne Park
Westbrook Park
Derrick Golf & Winter Club
Carter Crest Park
Robert Carter Park
Ogilvie Park
H.W. Heathcote Park
Hodgson Park
Hillard Park
Blackmud Park
Bulyea Park


WHITEMUD
RAVINE
NORTH
TRAILS
City Boundary
Roads
North Saskatchewan River
Formal City Maintained Trails
Informal Trails
Kilometers
0 0.15 0.3 0.6 0.9 1.2
N
Rio Park
Grandview Park
Brander Gardens Park
River Valley Glamorgan Heights Park
Brookside Park
Lansdowne Park
William Bramley-Moore Park
James Ramsay Park
Mary Lobay Park
Westbrook Park
Derrick Golf & Winter Club
Carter Crest Park
Robert Carter Park
Falconer Heights Park
Ogilvie Park
H.W Heathcote Park
Hodgson Park
Hillard Park
Blackmud Park

CULTURE

Numerous known archaeological sites are found throughout this area, predominantly on the southwest slopes and top-of-bank. The entire reach has high potential to contain other unknown historic sites. . All potential developments should be preceded by exploratory assessment to ensure that these sites are identified and mitigated to prevent impact.

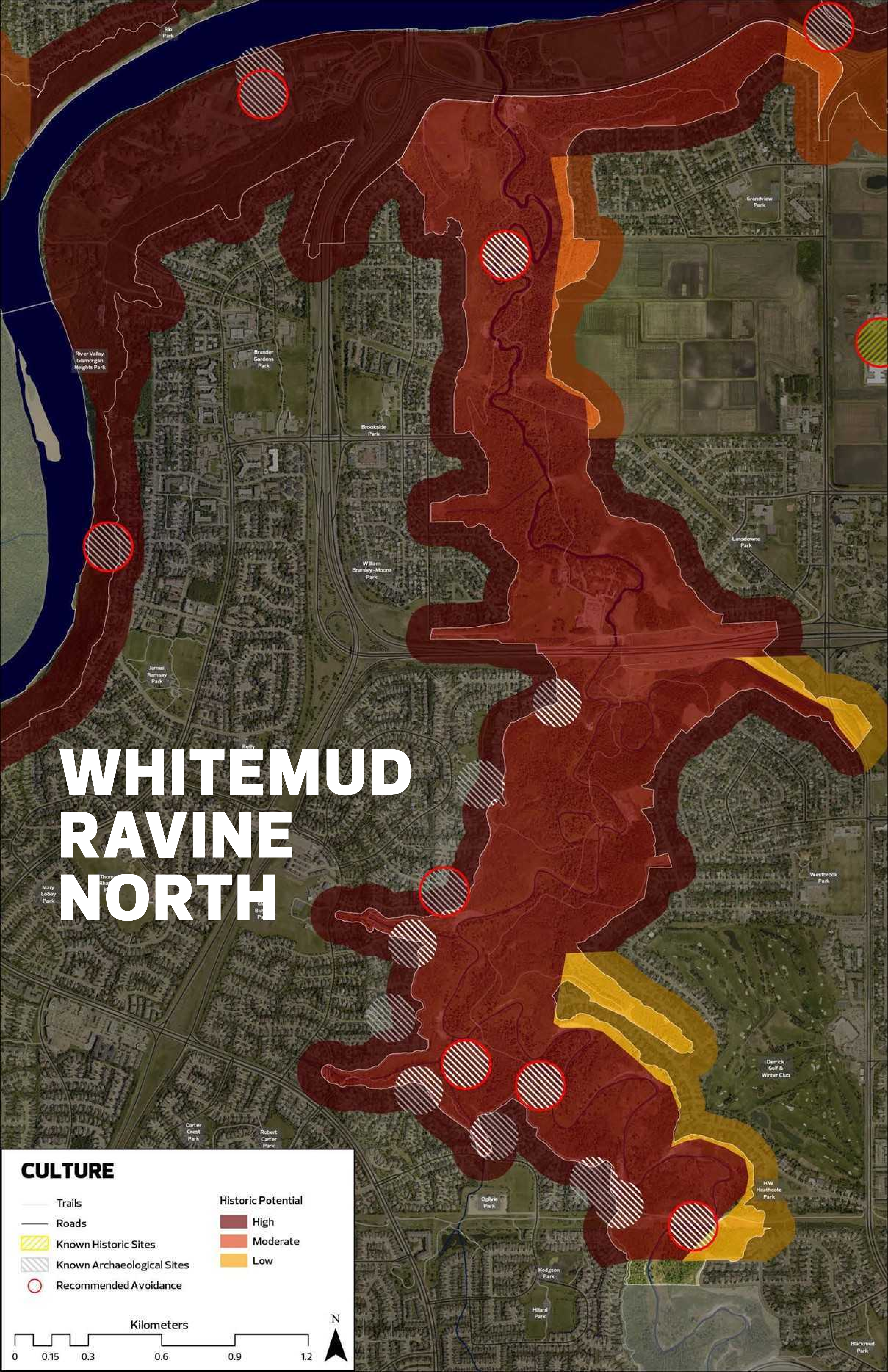
VISITATION AND POTENTIAL CONFLICTS

Total visitation to this reach is comparably low and of low density, with use spread throughout the area. The greatest density of visitation is found at the ski hill and campground area, making interpretive signage in that area a high priority. Other hotspots of use include the lands south of Whitemud Drive, where the trail network connects to the nearby neighbourhood of Aspen Gardens, and several areas where the trail system travels close to the creek. Monitoring of the creek banks is important to ensure that over-use does not lead to erosion and loss of riparian vegetation.

Key conflict areas include the large, connected stretch of core habitat south of Whitemud Drive, and the stretch of steep, forested core habitat east of the Alfred H. Savage Centre. However, the highly sensitive nature of all the natural cover in this reach mean that monitoring, maintenance, and enforcement is a high priority throughout the area.

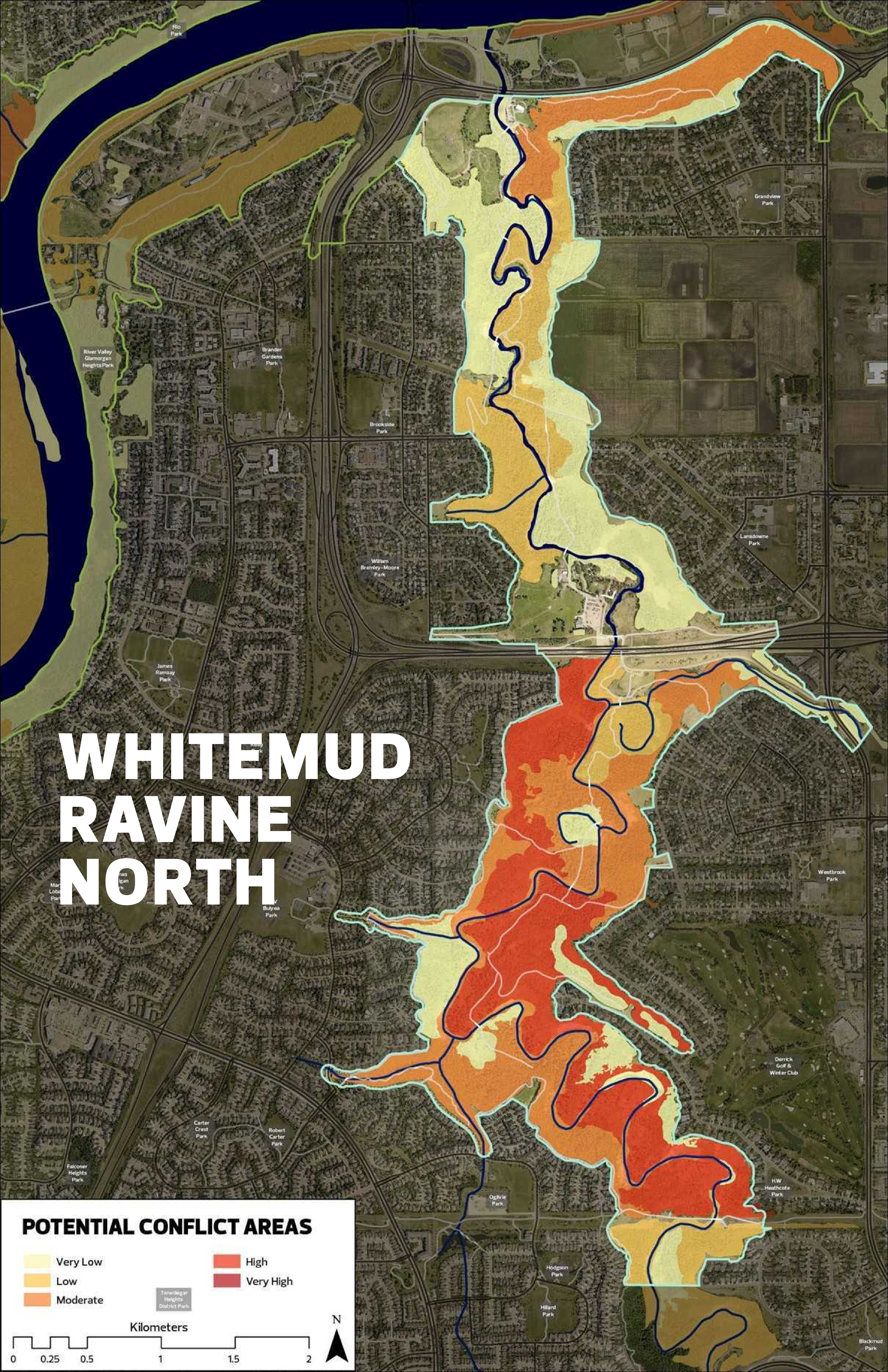
WHITEMUD RAVINE NORTH – FRACTION OF TOTAL RIBBON OF GREEN VISITATION

Q1 (JANUARY-MARCH)	Q2 (APRIL-JUNE)	Q3 (JULY-SEPTEMBER)	Q4 (OCTOBER-DECEMBER)
6.4%	5.5%	3.2%	2.8%



WHITEMUD
RAVINE
NORTH
Rio Park
Grandview Park
River Valley Glamorgan Heights Park
Brander Gardens Park
Brookside Park
Lansdowne Park
William Bramley-Moore Park
James Ramsay Park
Westbrook Park
Mary Lobay Park
Derrick Golf & Winter Club
H.W Heathcote Park
Carter Crest Park
Robert Carter Park
Ogilvie Park
Hodgson Park
Hillard Park
Blackmud Park
CULTURE
Trails
Roads
Known Historic Sites
Known Archaeological Sites
Recommended Avoidance
Historic Potential
High
Moderate
Low
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N

WHITEMUD RAVINE NORTH
RELATIVE VISTATION DENSITY
Trails
Roads
Streams
North Saskatchewan River
Less Use
Greater Use
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N
Rio Park
River Valley Glamorgan Heights Park
Brander Gardens Park
Brookside Park
Grandview Park
William Bramley-Moore Park
Lansdowne Park
James Ramsay Park
Westbrook Park
Mary Lobay Park
GMV Bulyea Park
Derrick Golf & Winter Club
Carter Crest Park
Robert Carter
Ogilvie Park
H.W Heathcote Park
Hodgson Park
Hillard Park
Blackmud Park


WHITEMUD RAVINE NORTH
Rio Park
Grandview Park
River Valley Glamorgan Heights Park
Brander Gardens Park
Brookside Park
Lansdowne Park
William Bramley-Moore Park
James Ramsay Park
Westbrook Park
Bulyea Park
Derrick Golf & Winter Club
Carter Crest Park
Robert Carter Park
Falconer Heights Park
Ogilvie Park
H.W Heathcote Park
Hodgson Park
Hillard Park
Blackmud Park
POTENTIAL CONFLICT AREAS
Very Low
Low
Moderate
High
Very High
Terwillegar Heights District Park
Kilometers
0
0.25
0.5
1
1.5
2
N

MILL CREEK RAVINE NORTH

Mill Creek Ravine North Reach Overview

The Mill Creek Ravine North Reach flows into the North Saskatchewan River Central Reach and connects to the Mill Creek Ravine South Reach at Whitemud Drive NW.

Mill Creek is heavily disturbed from past industry and other developments. The creek no longer has a surface flow into the North Saskatchewan River, as it was routed through a tunnel and culvert to develop North Connors Road. The City of Edmonton undertook the Mill Creek Daylighting Feasibility Study in 2017 to determine the feasibility of restoring the creek outfall to a more natural state. The study recommends improving the overall connectivity through daylighting the Mill Creek. Council approved the findings of the feasibility study and have directed City to initiate further design works, which will be informed by the principles of the Ribbon of Green.

A large portion of the creek is also buried under the Davies Industrial Area. The Creek often receives a great deal of stormwater outfall from surrounding communities and industrial areas, which has compounded erosion and pollution challenges. Recent higher than normal flows and frequent plugging of diversion tunnel inlets with trees and other debris have exacerbated the erosion risk. Additional daylighting efforts have been proposed to re-expose the buried / developed creek currently passing under the Davies Industrial lands. In addition, the new LRT construction includes an important wildlife underpass. These improvements will increase the natural functions of this important ravine area.

The main recreation facilities in the reach are Argyll Velodrome Association, Donnan Park and Shamrock Curling Club, and the Mill Creek Outdoor Pool. Numerous sports fields and diamonds provide important recreational opportunities in the area. Trails throughout the area are heavily used. The École Maurice-Lavallée, a francophone high school, backs onto the reach. Mill Creek is also an important active transportation corridor to downtown from many neighbourhoods to the south. Historic trestle bridges in the area provide interpretive opportunities and unique scenic vistas. Argyll Park is also home to the Edmonton Japanese Community Association.

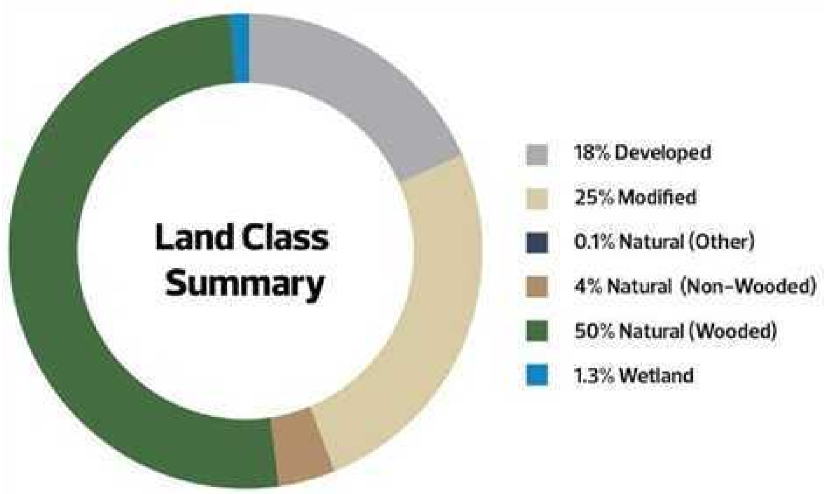
REACH	CELEBRATION	WELLNESS	ECOLOGY
Mill Creek Ravine North	**1** Community League **1** Bookable Picnic Site **1** Pool Building	**2** Playgrounds **8** Sports Diamonds **2** Sports Fields **1** Outdoor Pool **2** Recreation Facilities **1** Sports Court **TRAILS** **10 km** Formal (Seasonal) **6.3 km** Formal Year-Round) **2.3 km** Cross-Country Ski **11 km** Informal	**Total Area:** 194.6 ha (100%) **Developed and Modified Land Use:** 86.1 ha (44%) **Wetlands:** 0.0 (0%) **Tree Canopy:** 109.9 ha (56%) **Unique Vegetation:** 52.8 ha (27%) **Connectivity Pinchpoints:** 1.9 ha (1%) **Wildlife Corridor:** 160.5 ha (82%) **Naturalized Spaces:** 6.3 ha (3%) **Natural Area:** 106.5 ha (56% of reach) **City-Owned Parks:** 102.1 ha (covers 94% of natural areas)
Mill Creek Ravine North (nearby)		**2** Playgrounds **1** Sports Diamond **7** Sports Fields	

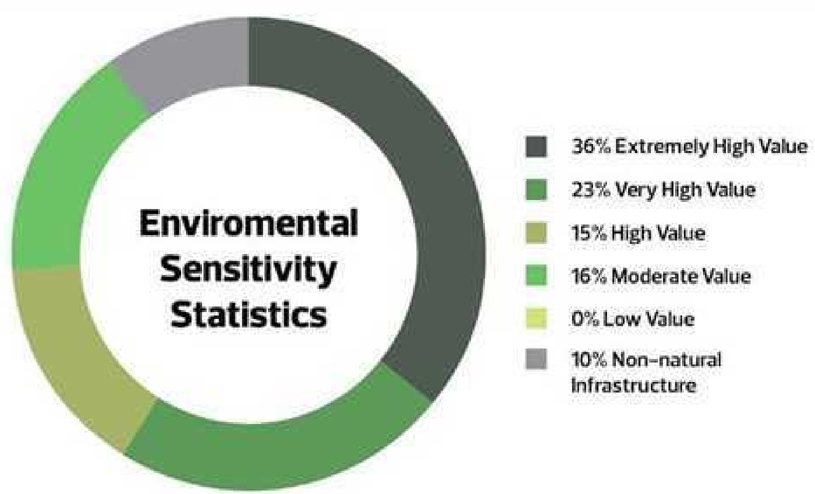
ECOLOGY

The Mill Creek Ravine North Reach is well forested, with more than half its area covered by tree canopy. The largest intact natural cover is found in the north of the reach, with larger modified landscapes in the south, where the creek's flow is diverted under the train line into WP Wagner Park, and interrupted again by industrial lands before flowing into Roper Park and Natural Area. The creek is frequently crossed by the formal pathway network, leading to fragmentation and impacts. The riparian areas along the streambanks are frequently in poor condition, with trees leaning over or fallen into the water. Despite these impacts, core habitat is found sporadically throughout the reach, with the largest patches near 76 Ave NW, west of Donnan Arean and southeast of Allen Grey Park.

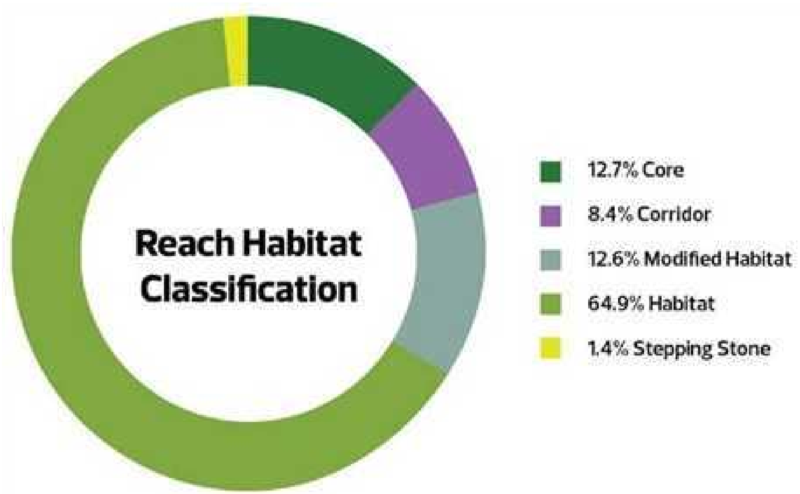
The steep, sensitive slopes of the ravine in this area are susceptible to landslide risks, with the only developable land found north of WP Wagner Park around the Argyll Velodrome. While the majority of the reach is considered a connectivity corridor, few identified pinch points exist, although the extensive trail system throughout Mill Creek undoubtedly pose potential conflicts between trail users and wildlife. Informal singletrack trails are found throughout this reach, which are maintained and well used by the mountain biking community. Private lands in this reach also pose management challenges.

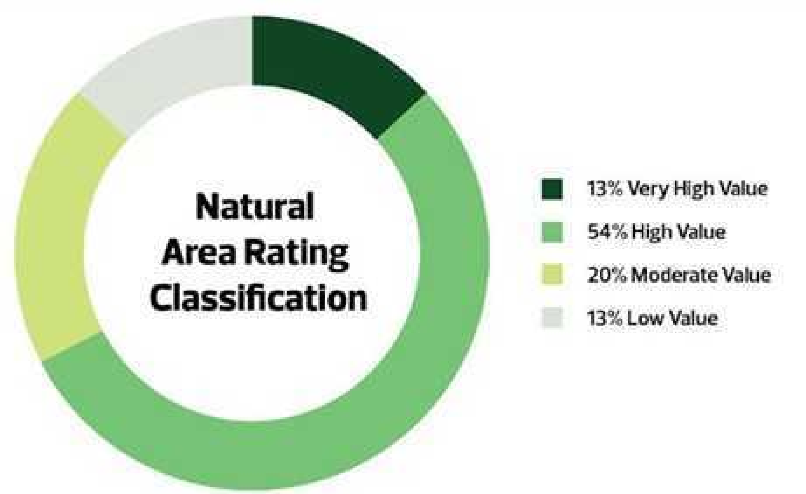
Mill Creek Ravine North – Land Class and Environmental Sensitivity Summary



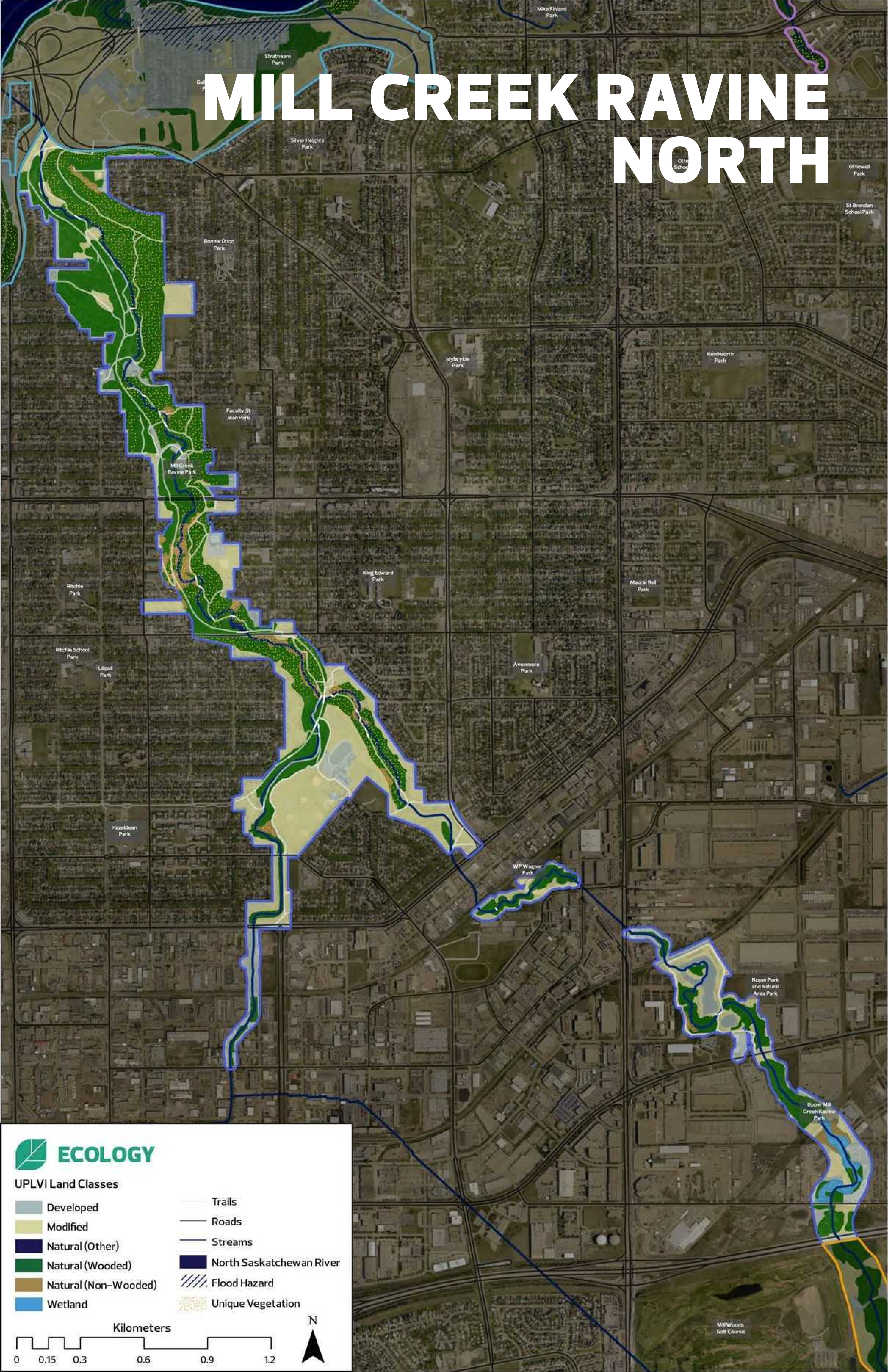


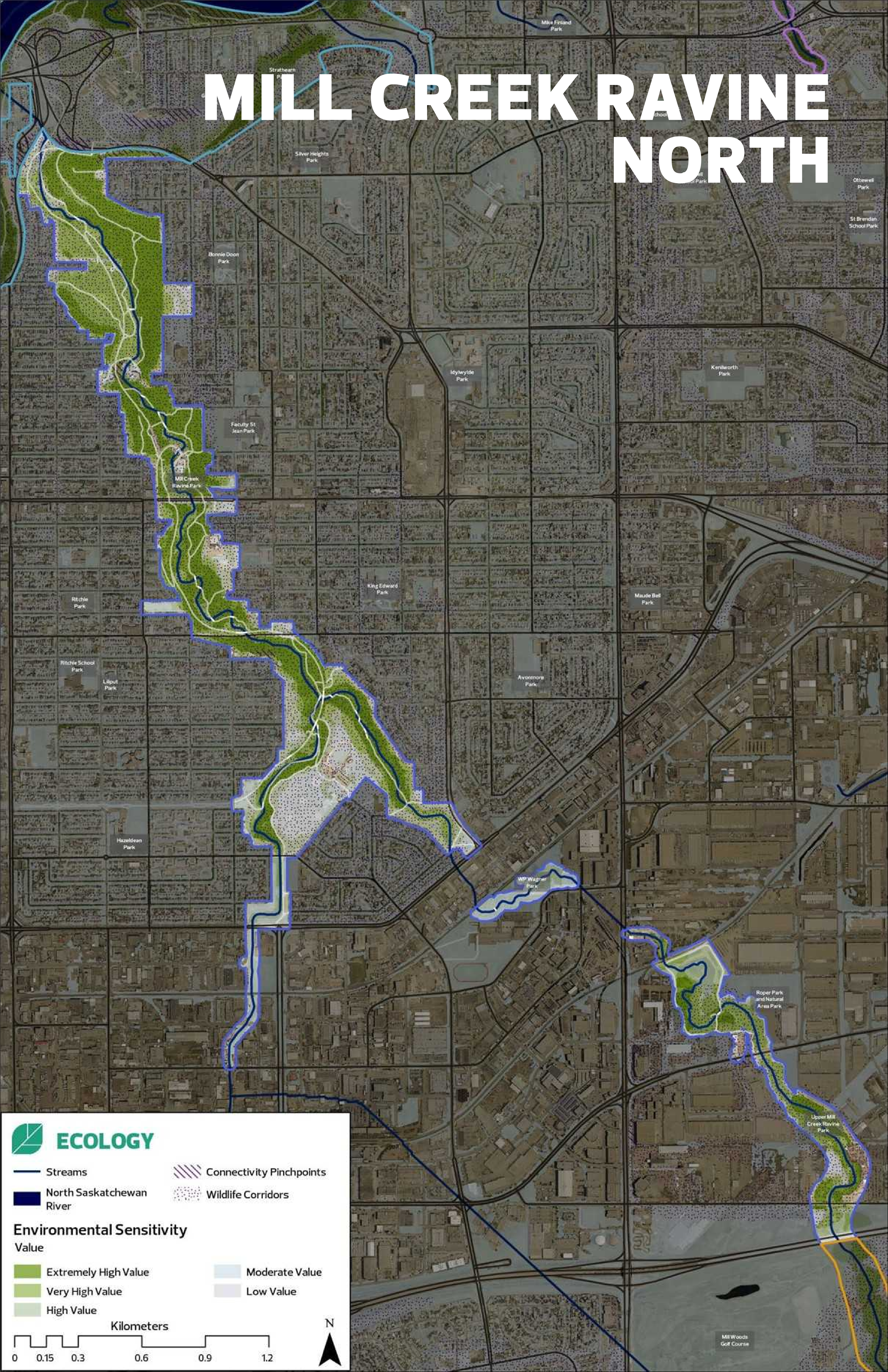
Mill Creek Ravine North – Reach Habitat and Natural Area Rating Classification



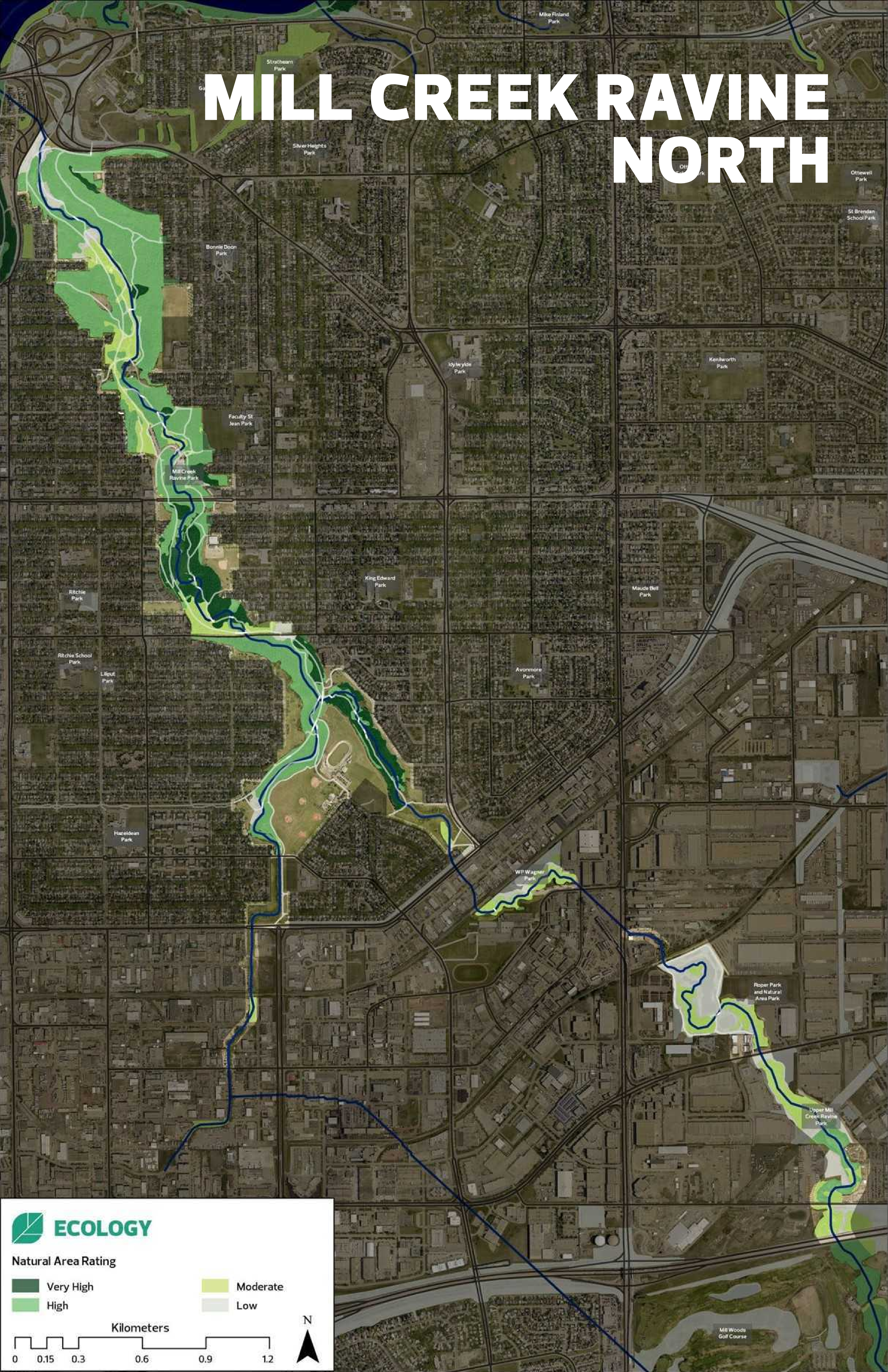


MILL CREEK RAVINE NORTH

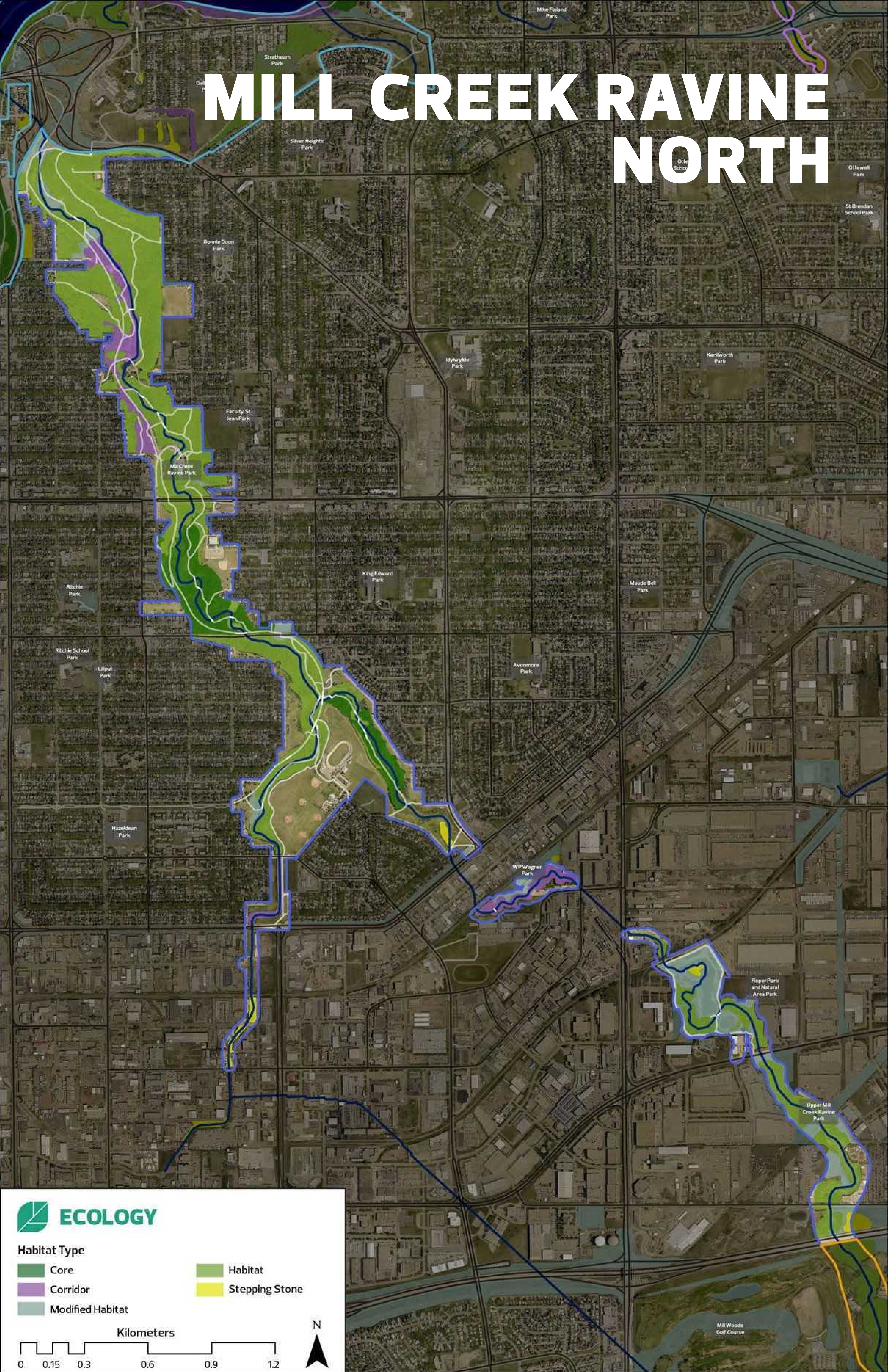



MILL CREEK RAVINE NORTH
Mike Finland Park
Strathearn Park
Silver Heights Park
Bonnie Doon Park
Ottewell Park
St Brendan School Park
Idylwylde Park
Kenilworth Park
Faculty St Jean Park
Mill Creek Ravine Park
King Edward Park
Maude Bell Park
Ritchie Park
Ritchie School Park
Lilliput Park
Avonmore Park
Hazeldean Park
WP Wagner Park
Roper Park and Natural Area Park
Upper Mill Creek Ravine Park
Mill Woods Golf Course
ECOLOGY
Streams
North Saskatchewan River
Connectivity Pinchpoints
Wildlife Corridors
Environmental Sensitivity
Value
Extremely High Value
Very High Value
High Value
Moderate Value
Low Value
Kilometers
0 0.15 0.3 0.6 0.9 1.2
N

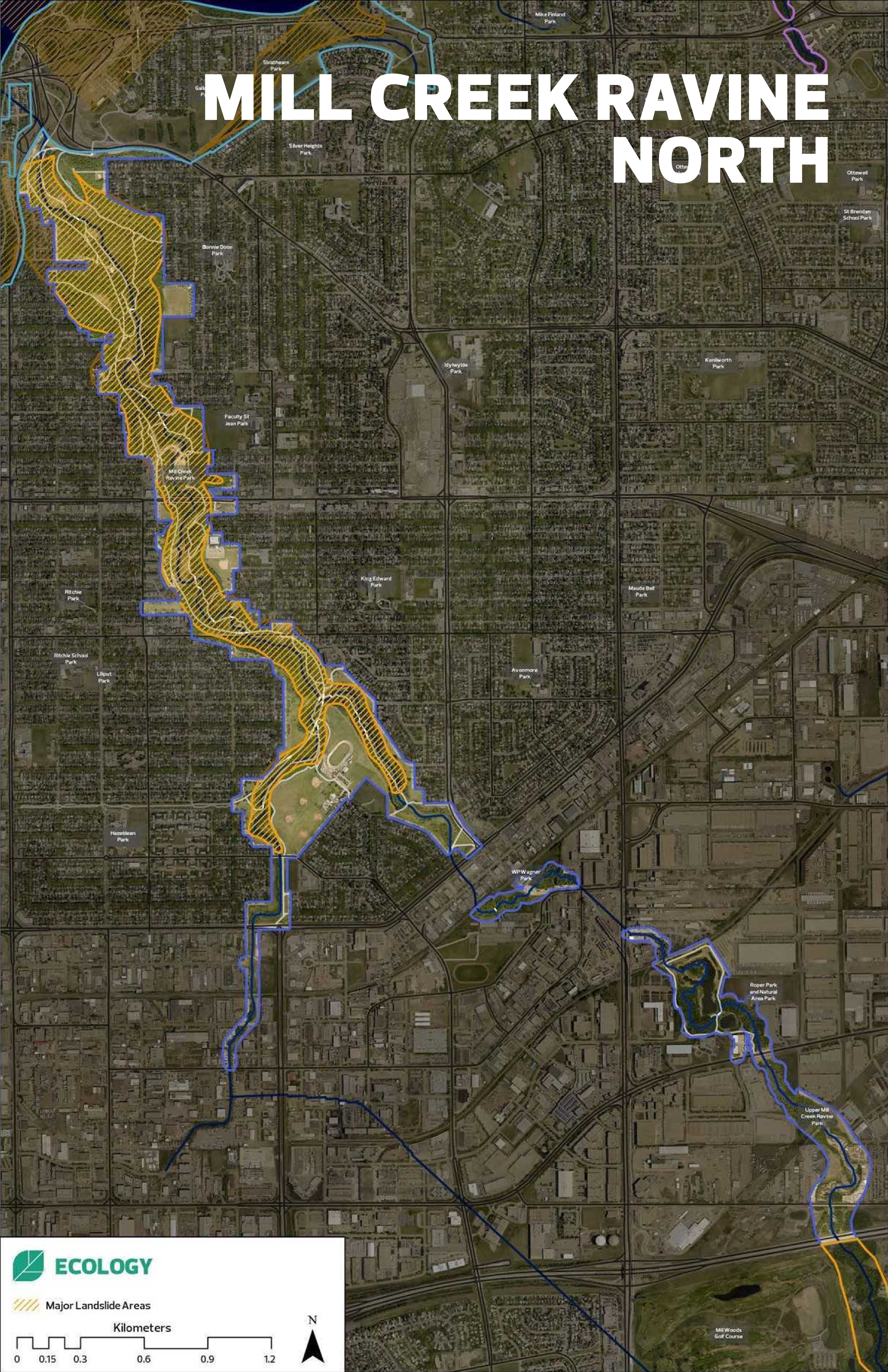
MILL CREEK RAVINE NORTH



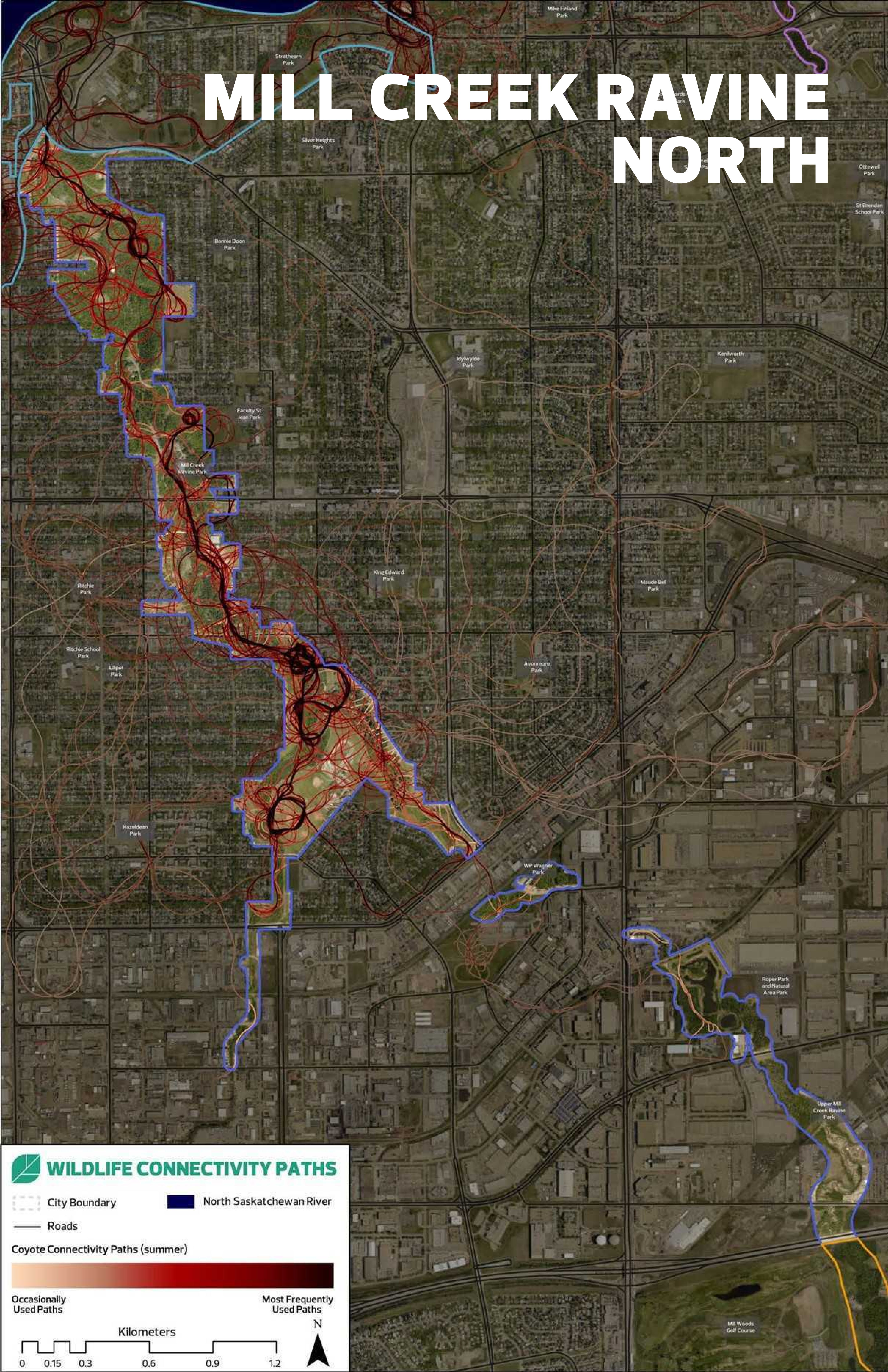
MILL CREEK RAVINE NORTH

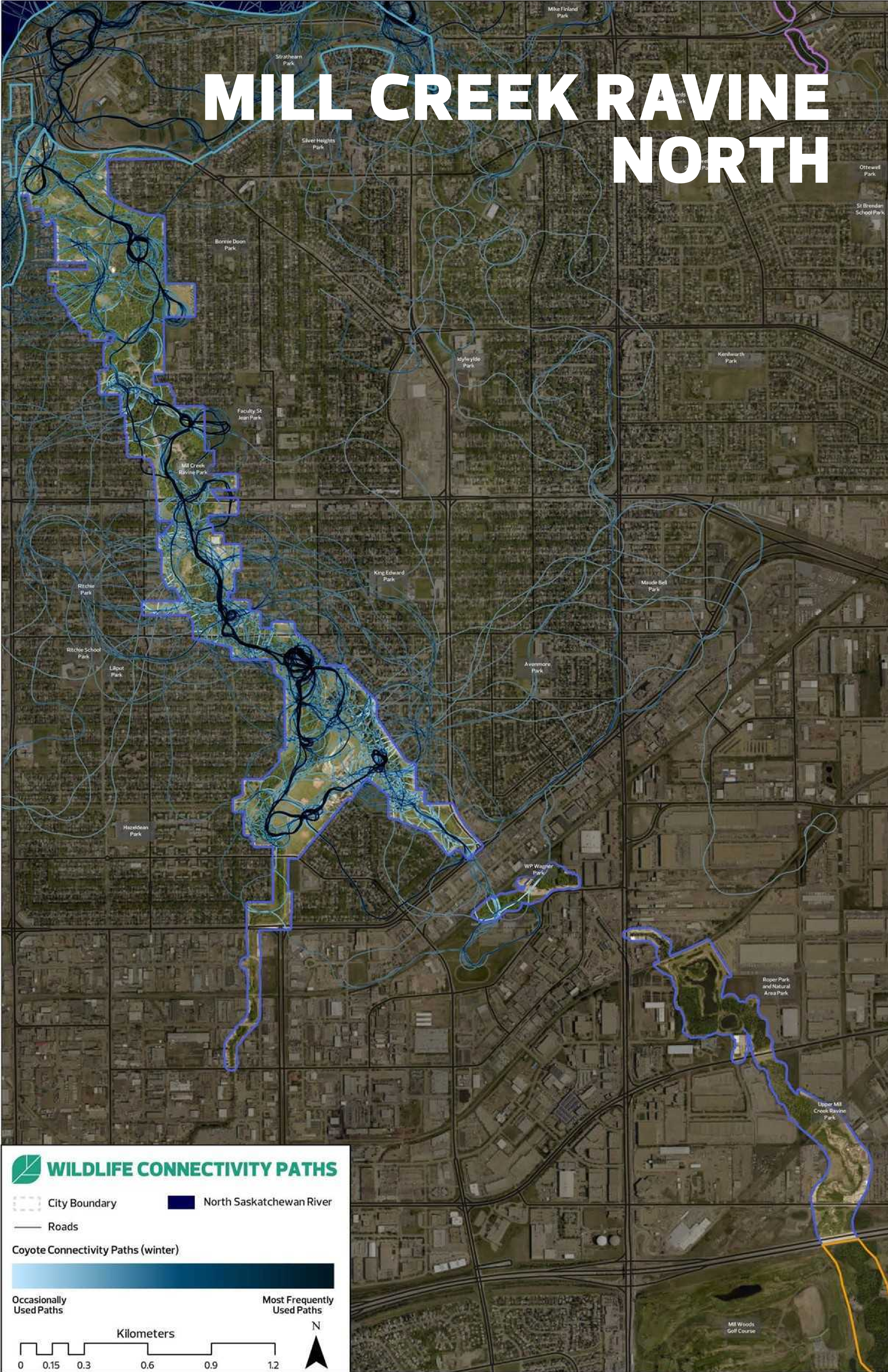


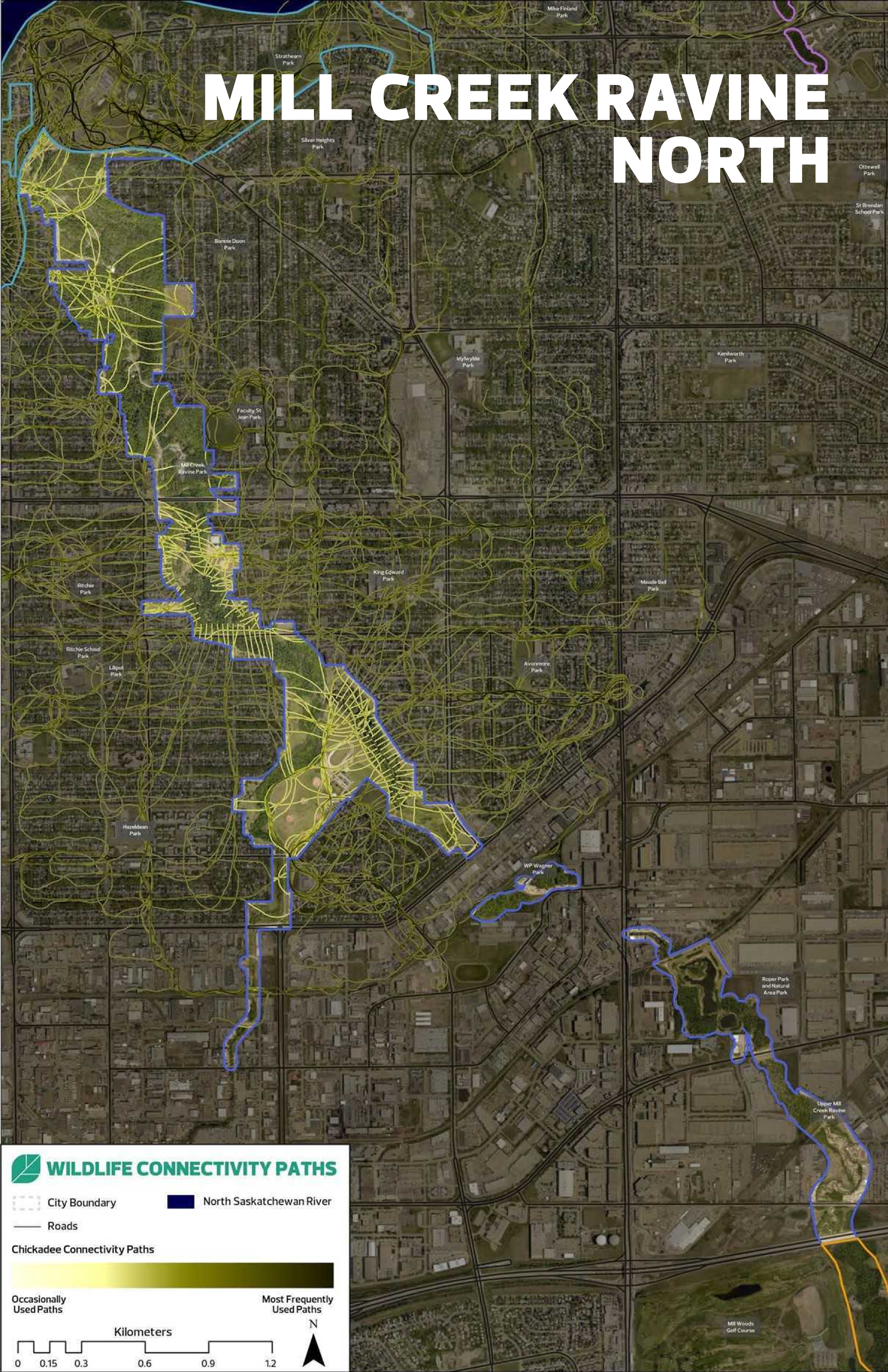
MILL CREEK RAVINE NORTH



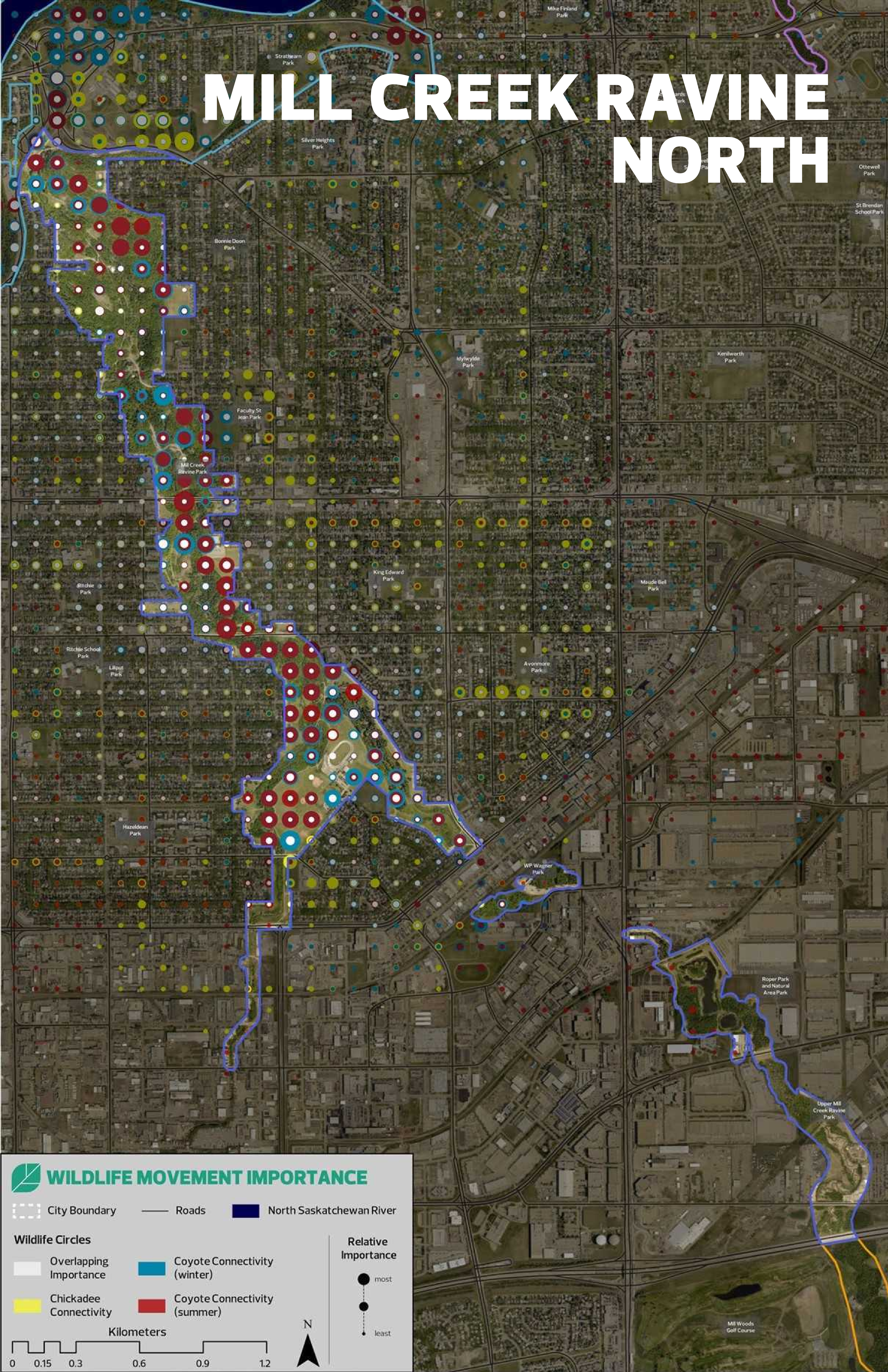
MILL CREEK RAVINE NORTH

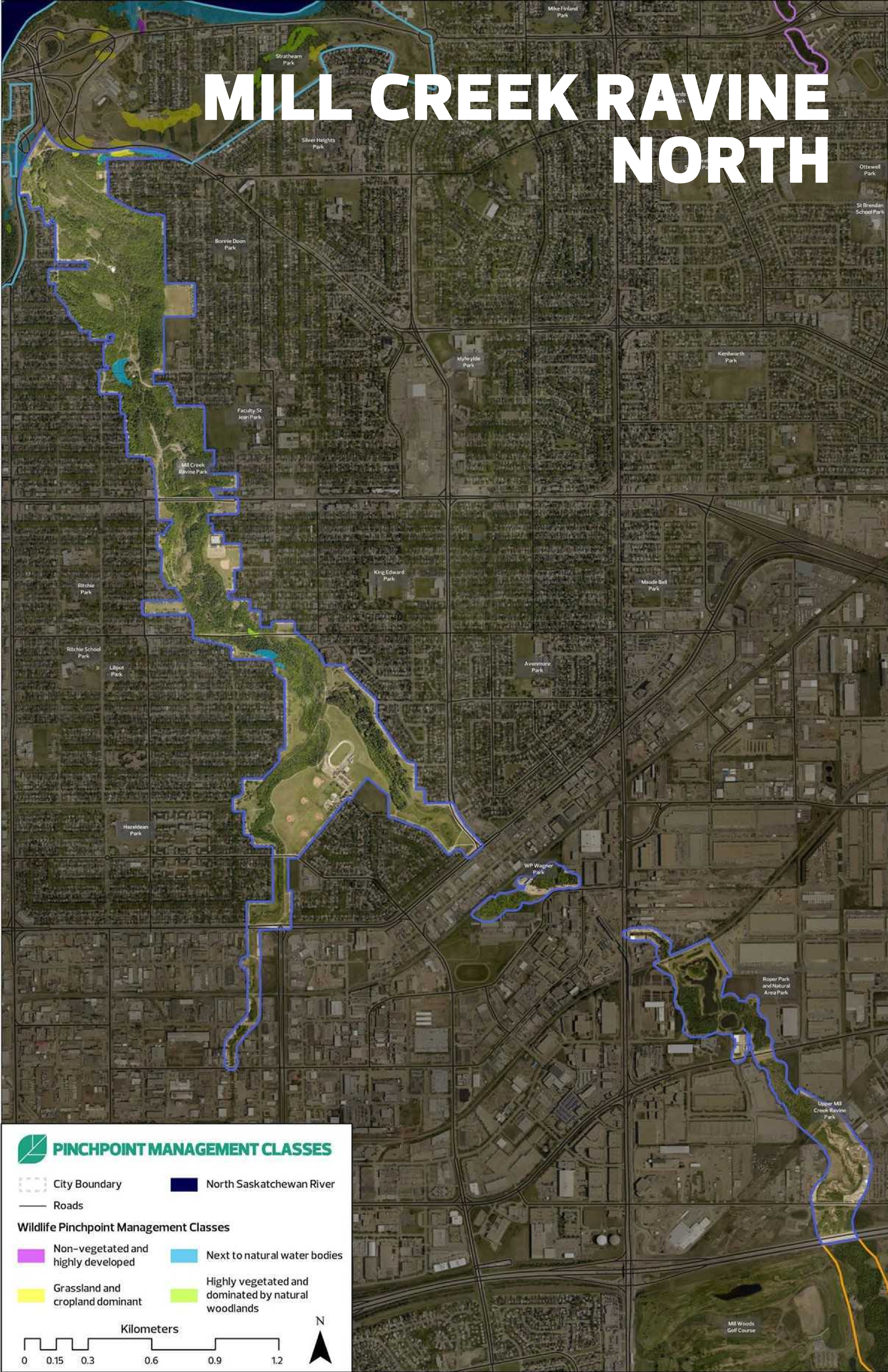



MILL CREEK RAVINE NORTH
Mike Finland Park
Strathearn Park
Silver Heights Park
Ottewell Park
St Brendan School Park
Bonnie Doon Park
Idylwylde Park
Kenilworth Park
Faculty St Jean Park
Mill Creek Ravine Park
King Edward Park
Maude Bell Park
Ritchie Park
Ritchie School Park
Lilypot Park
Avonmore Park
Hazeldean Park
WP Wagner Park
Roper Park and Natural Area Park
Upper Mill Creek Ravine Park
Mill Woods Golf Course
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Coyote Connectivity Paths (winter)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N



MILL CREEK RAVINE NORTH
Mike Finland Park
Strathearn Park
Silver Heights Park
Bonnie Doon Park
Ottewell Park
St Brendan School Park
Idylwylde Park
Kenilworth Park
Faculty St Jean Park
Mill Creek Ravine Park
King Edward Park
Ritchie Park
Maude Bell Park
Ritchie School Park
Avonmore Park
Hazeldean Park
WP Wagner Park
Roper Park and Natural Area Park
Upper Mill Creek Ravine Park
Mill Woods Golf Course
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Chickadee Connectivity Paths
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0 0.15 0.3 0.6 0.9 1.2
N


MILL CREEK RAVINE NORTH
Mike Finland Park
Strathearn Park
Silver Heights Park
Ottewell Park
St Brendan School Park
Bonnie Doon Park
Idylwylde Park
Kenilworth Park
Faculty St Jean Park
Mill Creek Ravine Park
King Edward Park
Maude Bell Park
Ritchie Park
Ritchie School Park
Avonmore Park
Hazeldean Park
WP Wagner Park
Roper Park and Natural Area Park
Upper Mill Creek Ravine Park
Mill Woods Golf Course
WILDLIFE MOVEMENT IMPORTANCE
City Boundary
Roads
North Saskatchewan River
Wildlife Circles
Overlapping Importance
Coyote Connectivity (winter)
Chickadee Connectivity
Coyote Connectivity (summer)
Relative Importance
most
least
Kilometers
0 0.15 0.3 0.6 0.9 1.2
N


MILL CREEK RAVINE NORTH
Mike Finland Park
Strathearn Park
Silver Heights Park
Ottewell Park
St Brendan School Park
Bonnie Doon Park
Idylwylde Park
Kenilworth Park
Faculty St Jean Park
Mill Creek Ravine Park
King Edward Park
Maude Bell Park
Ritchie Park
Ritchie School Park
Lilliput Park
Avonmore Park
Hazeldean Park
WP Wagner Park
Roper Park and Natural Area Park
Upper Mill Creek Ravine Park
Mill Woods Golf Course
PINCHPOINT MANAGEMENT CLASSES
City Boundary
North Saskatchewan River
Roads
Wildlife Pinchpoint Management Classes
Non-vegetated and highly developed
Next to natural water bodies
Grassland and cropland dominant
Highly vegetated and dominated by natural woodlands
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N

CELEBRATION

This reach contains few amenities which support Celebration functions. The Edmonton Japanese Community Association, located near the Argyll Velodrome in the south, provides a unique attraction. There is the opportunity to develop additional picnic structures in the area north of the Velodrome.

WELLNESS

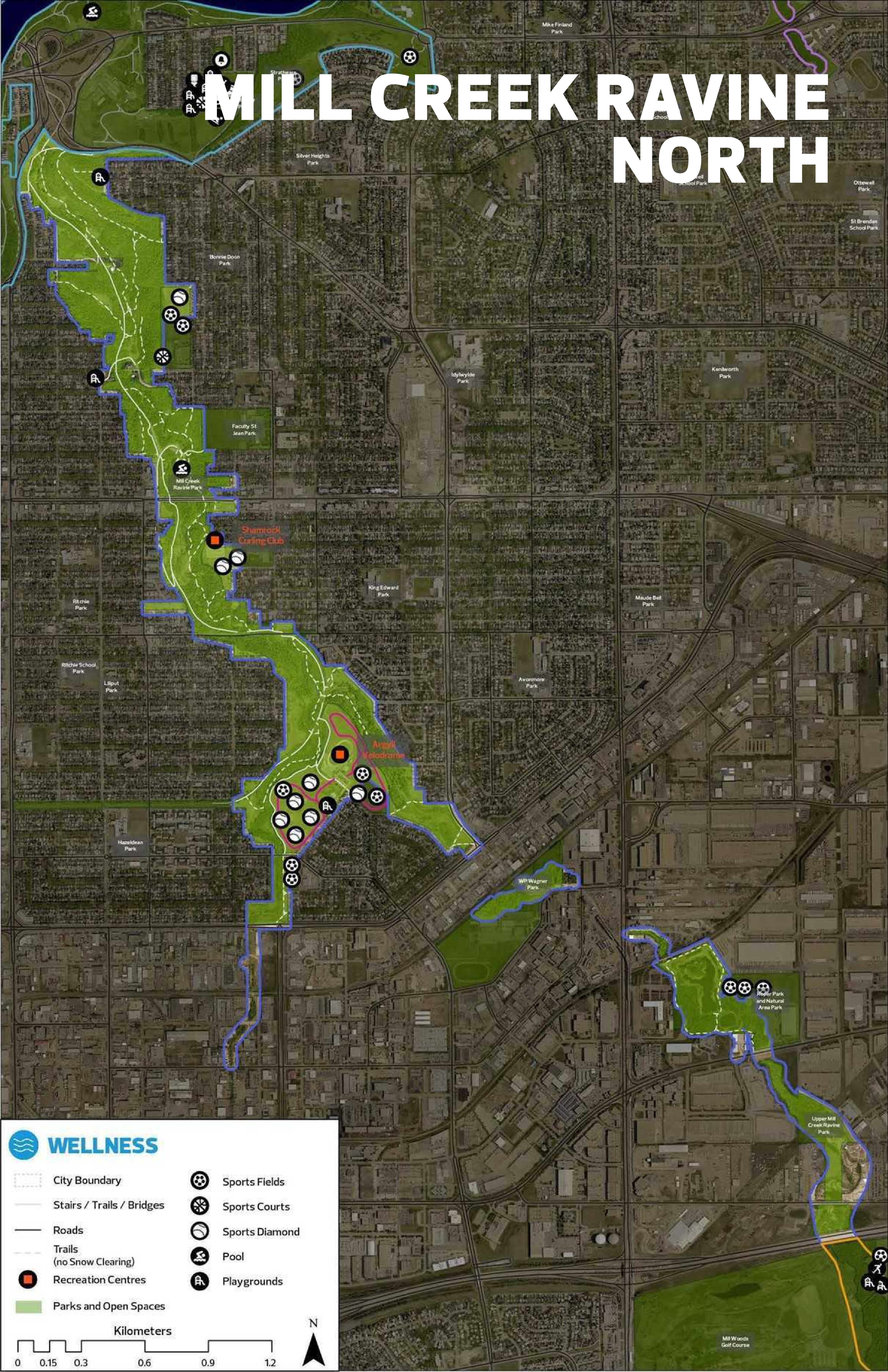
The extensive formal and informal pathway system in Mill Creek Ravine North provides a highly-valued recreational resource, but one that requires rationalization and formalization, with better wayfinding and interpretive signage. Ongoing construction and repair in and around this Reach has impacted the connectivity of the trail system, causing problems for those using the pathways for commuter purposes into the River Valley and northwards into the downtown. Better signage to indicate construction and clearly communicate detour routes would help to mitigate the impacts of necessary construction. The informal singletrack trails in the area require dedicated attention from the city, in coordination with user groups such as EMBA, to identify an agreed-upon formal trail network.

The lands around the ravine itself have a variety of sporting and athletic amenities, including the Shamrock Curling Club and a variety of sports fields, courts, and diamonds. The greatest density of such amenities is found in Argyll Park south of the Argyll Velodrome. This park also includes a cross-country ski trail loop in the winter. Roper Park also includes a number of sports fields. The Mill Creek Outdoor Pool, north of 82 Ave NW, provides an additional unique attraction for the area.

Formal trails in this reach include 10km of seasonal trails, and 6km of year-round trails. 11km of Informal trails are found throughout the reach, predominantly in the northern portion.

MILL CREEK RAVINE NORTH

MILL CREEK RAVINE NORTH



MILL CREEK RAVINE NORTH

CULTURE

A handful of historic sites are found within the northern portion of this reach. Lands to the far north near the River Valley, top-of-bank areas in the centre of the reach, and the streambank natural areas in the south of the reach all have high potential to contain unknown historic resources.

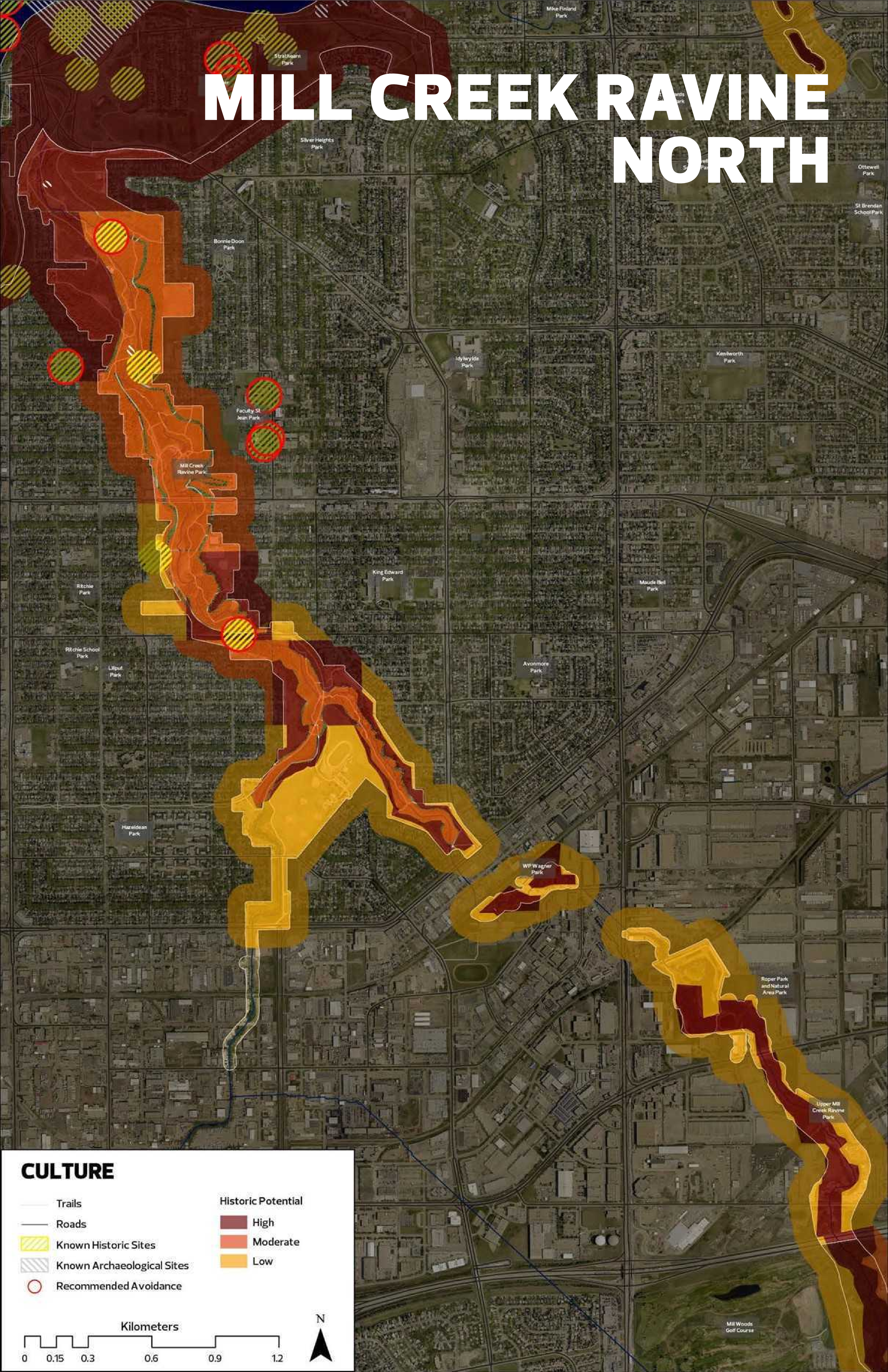
VISITATION AND POTENTIAL CONFLICTS

The greatest visitation densities in the reach are seen around the Mill Creek Outdoor Pool, the Argyll Park sports complexes, and a large area in the north of the reach. This last area contains no amenities or other obvious attractions, and likely indicates a concentration of informal trail use by those seeking time in a natural setting.

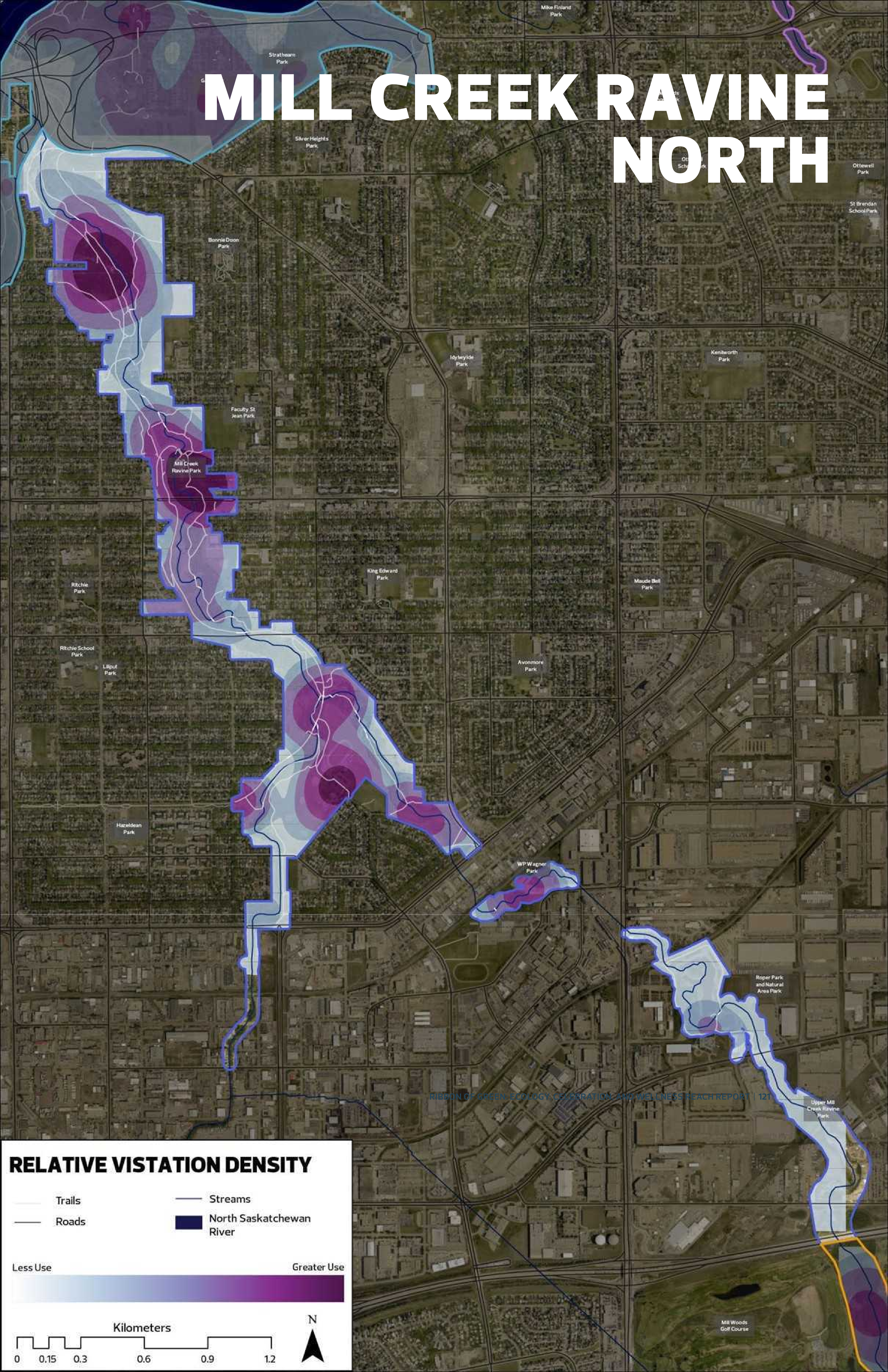
Conflicts between use and ecological value are relatively low in this area, concentrated in the north along the east slopes of the ravine. Both visitation density and ecological value decline to the far south of the reach.

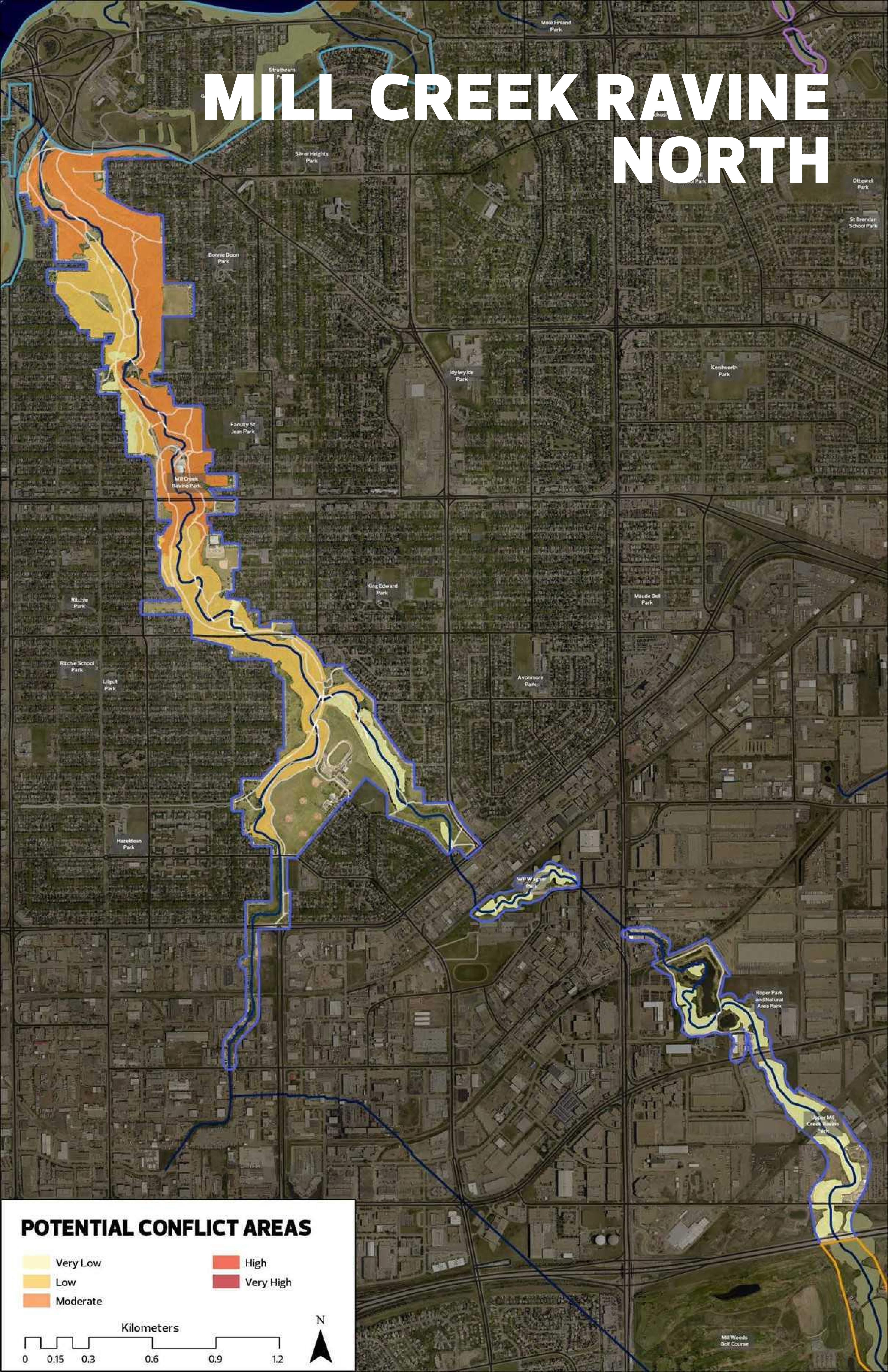
MILL CREEK RAVINE NORTH – FRACTION OF TOTAL RIBBON OF GREEN VISITATION

Q1 (JANUARY-MARCH)	Q2 (APRIL-JUNE)	Q3 (JULY-SEPTEMBER)	Q4 (OCTOBER-DECEMBER)
5.2%	4.9%	3.2%	2.7%


MILL CREEK RAVINE NORTH
CULTURE
Trails
Roads
Known Historic Sites
Known Archaeological Sites
Recommended Avoidance
Historic Potential
High
Moderate
Low
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N
Mike Finland Park
Strathearn Park
Silver Heights Park
Ottewell Park
St Brendan School Park
Bonnie Doon Park
Idylwylde Park
Kenilworth Park
Faculty St Jean Park
Mill Creek Ravine Park
King Edward Park
Maude Bell Park
Ritchie Park
Ritchie School Park
Lilliput Park
Avonmore Park
Hazeldean Park
WP Wagner Park
Roper Park and Natural Area Park
Upper Mill Creek Ravine Park
Mill Woods Golf Course

MILL CREEK RAVINE NORTH




MILL CREEK RAVINE
NORTH
Mill Creek Ravine Park
Bonnie Doon Park
Faculty St Jean Park
Idylwylde Park
Kenilworth Park
King Edward Park
Maude Bell Park
Ritchie Park
Ritchie School Park
Lilliput Park
Avonmore Park
Hazeldean Park
WP Wagner Park
Roper Park and Natural Area Park
Upper Mill Creek Ravine Park
Mill Woods Golf Course
Silver Heights Park
Ottewell Park
St Brendan School Park
Mike Finland Park
POTENTIAL CONFLICT AREAS
Very Low
Low
Moderate
High
Very High
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N

MILL CREEK RAVINE SOUTH

Mill Creek Ravine South Reach Overview

The Mill Creek Ravine South Reach extends from the North Mill Creek Ravine Reach at Whitemud Drive NW to the city boundary. This reach provides important open space for residential areas and industrial areas in Edmonton's southeast, including the Greenview, Kiniski Gardens, Minchau, Bisset, Wildrose, Silverberry, and Meadows communities. Trail connectivity through this area is an important linkage for nearby communities, and will be an increasingly important connection as the Decoteau area is developed. The reach borders Jackie Parker Park (which includes a Rink, and Off-Leash Dog Area), the Mill Woods Golf Course, and other amenities such as the Ridgewood Private Skating Rink.

Mill Creek flows northward, with its headwaters beyond the city boundaries in the surrounding agricultural areas of Strathcona County. Wildlife movement through this reach provides an important connection to habitats outside the city.

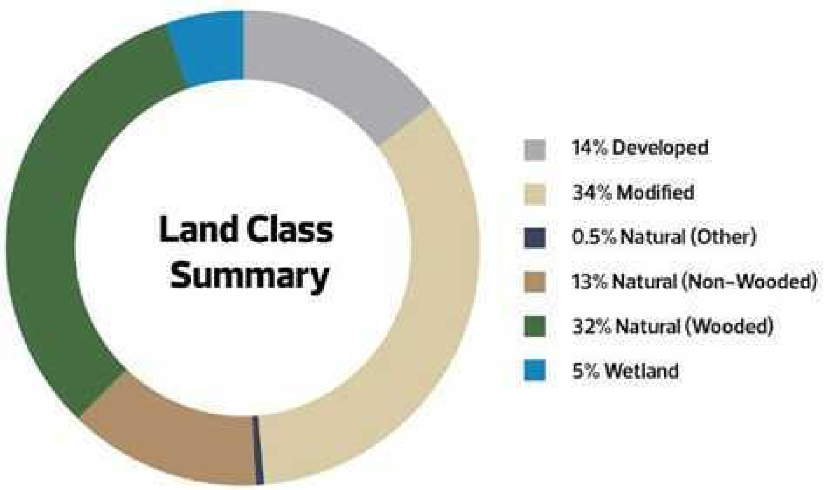
REACH	CELEBRATION	WELLNESS	ECOLOGY
Mill Creek Ravine South		**1** Playground **TRAILS** **7.8 km** Formal (Seasonal) **1.1 km** Formal (Year-Round) **14 km** Informal Trails	**Total Area:** 157.8 ha (100%) **Developed and Modified Land Use:** 76.9 ha (49%) **Wetlands:** 0.8 ha (1%) **Tree Canopy:** 72 ha (46%) **Unique Vegetation:** 24.2 ha (15%) **Connectivity Pinchpoints:** 0.0 ha (0%) **Wildlife Corridor:** 74 ha (47%) **Naturalized Spaces:** 1.8 ha (1%) **Natural Area:** 80.9 ha (51%) **Park:** 64.9 ha (covers 80% of natural areas)
Mill Creek Ravine South (nearby)	**12** Bookable Picnic Sites	**2** Playgrounds	

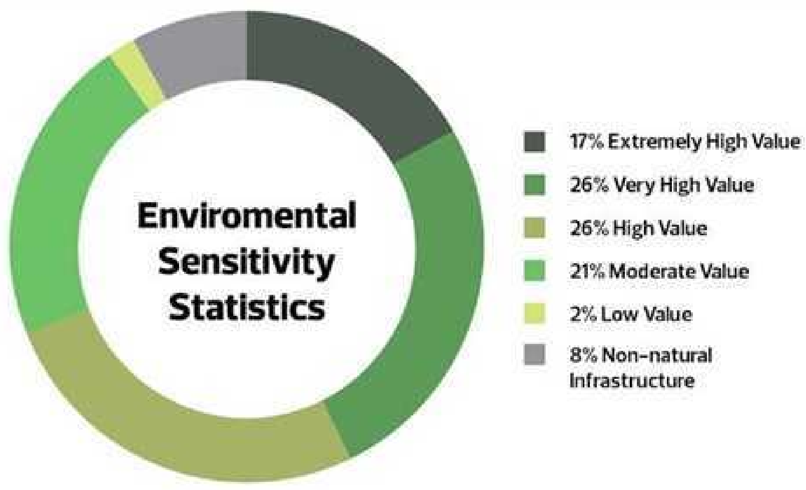
ECOLOGY

Beginning at the City boundary, crossing the Anthony Henday Drive, the Mill Creek Ravine South Reach flows northwest to Whitemud drive. The southern portion is more open and modified until it reaches the residential areas, where a large wetland provide important core habitat. The northern half of the reach is heavily forested until reaching Jackie Parker Park, where maintained grass begins to dominate. Portions of the ravine are identified as part of likely corridors of wildlife movement, facilitating movement in and out of the surrounding neighbourhoods. Numerous trails cross the stream in the central portion of the reach. As this reach of the Mill Creek Ravine has no significantly steep slopes, landslide risks are negligible. The southern portion of this reach is not designated as formal parkland, including the important wetland.

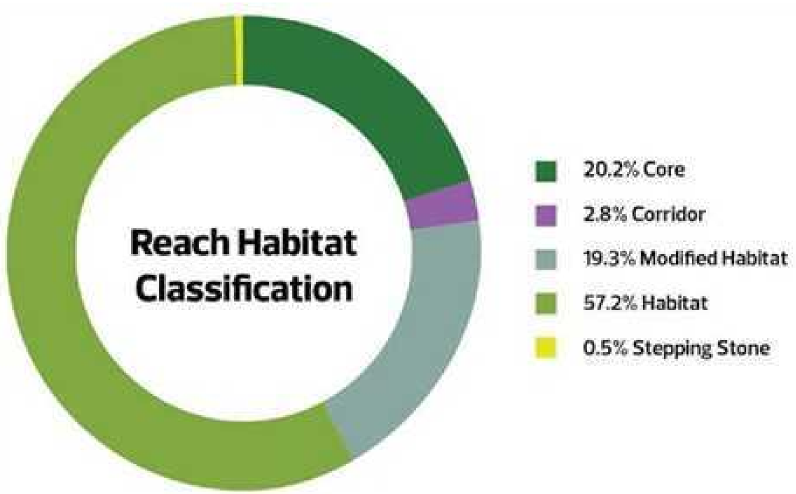
Image: Kurayba from Flickr

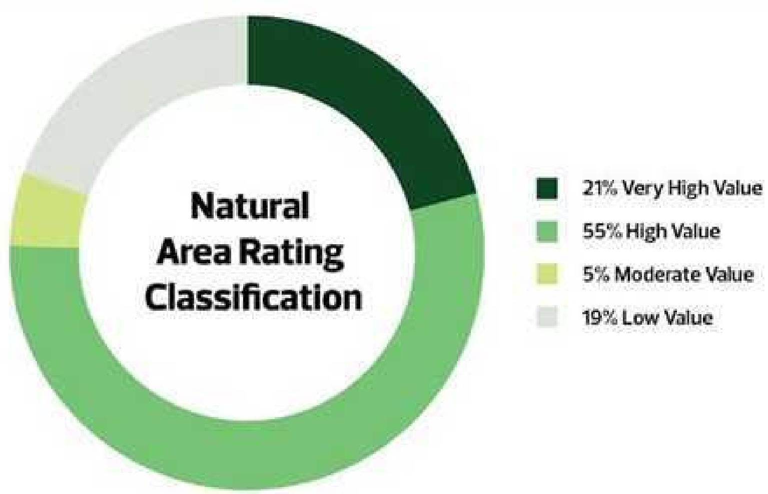
Mill Creek Ravine South – Land Class and Environmental Sensitivity Summary

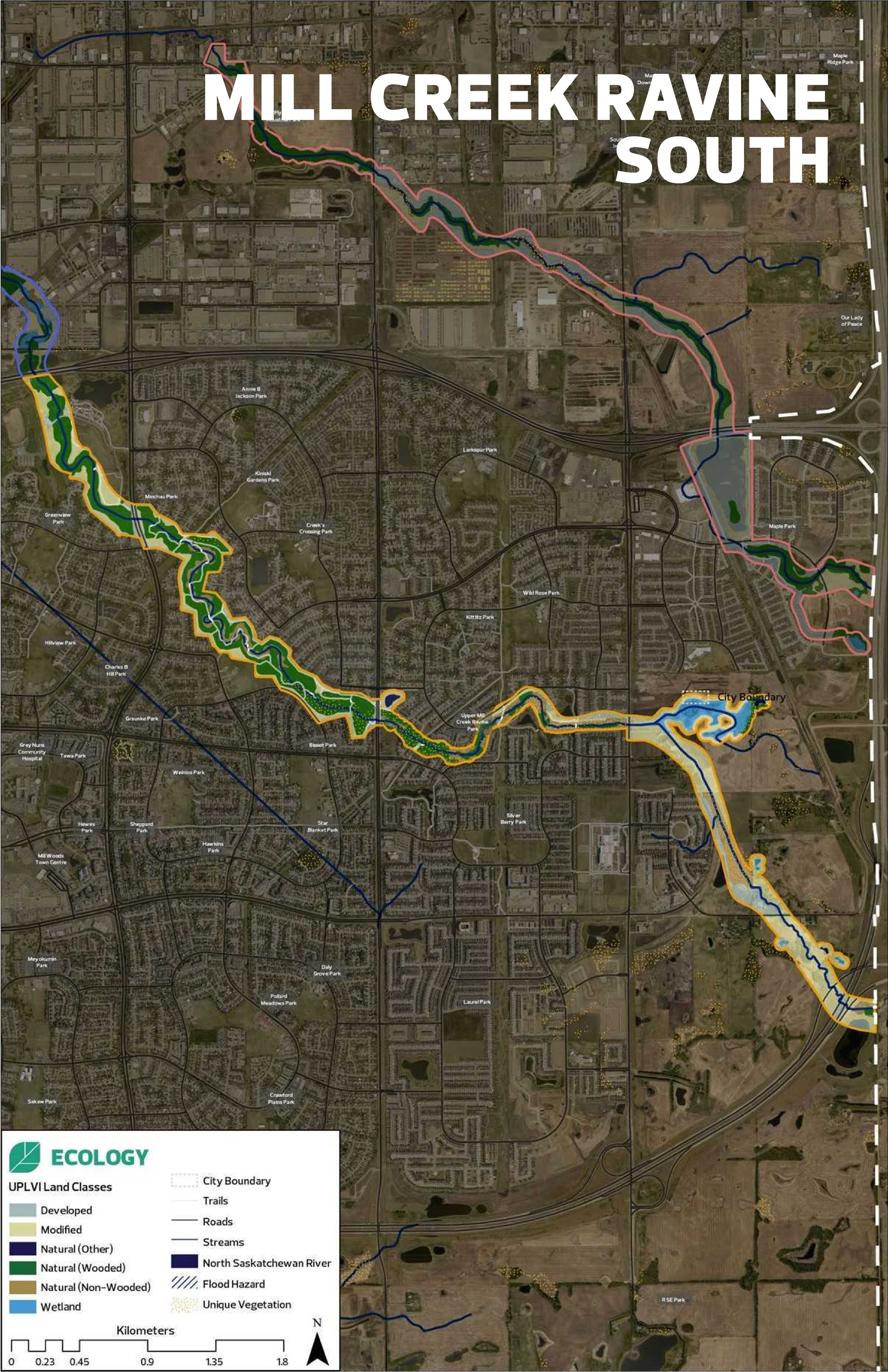




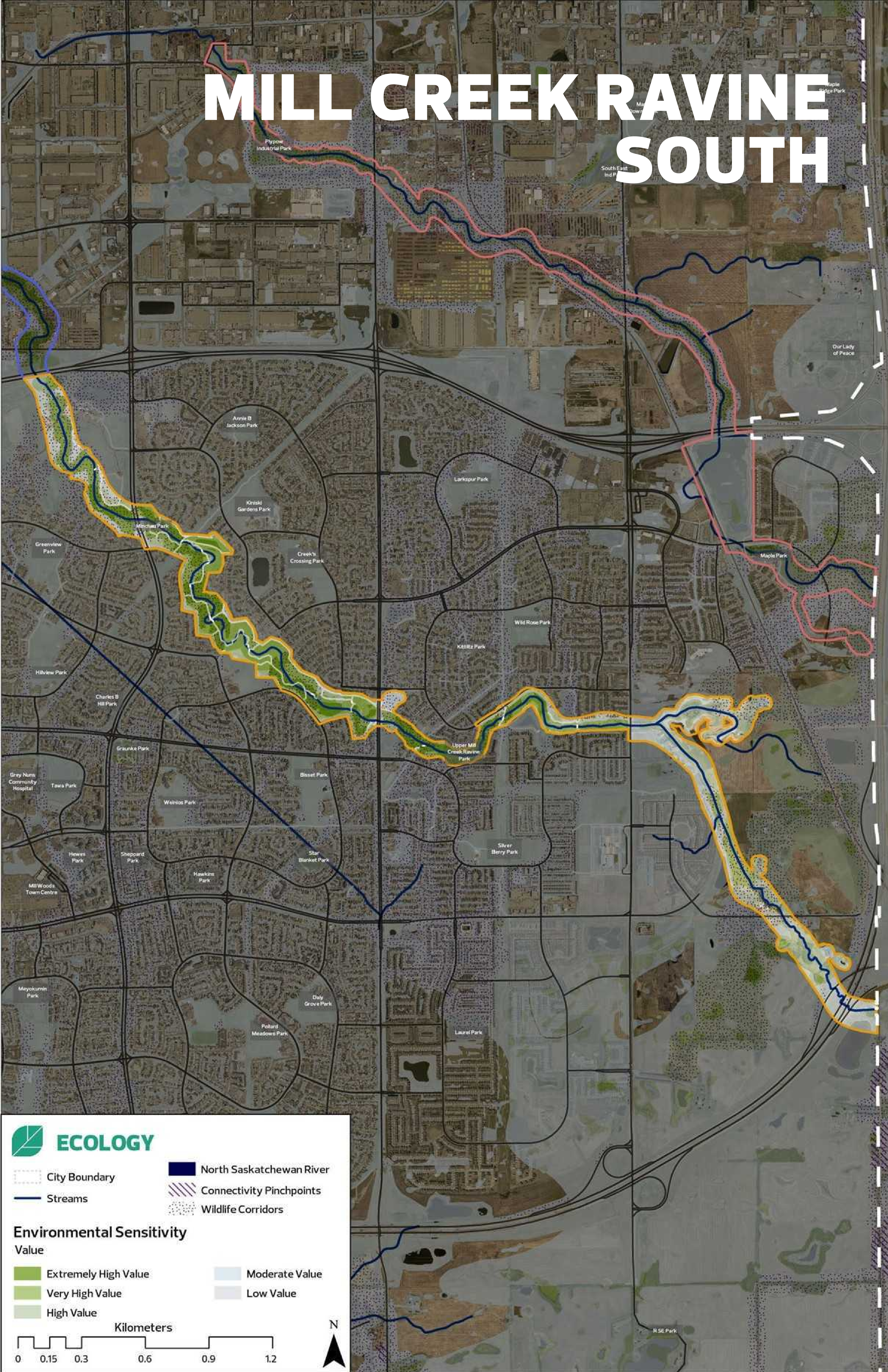
Mill Creek Ravine South – Reach Habitat and Natural Area Rating Classification

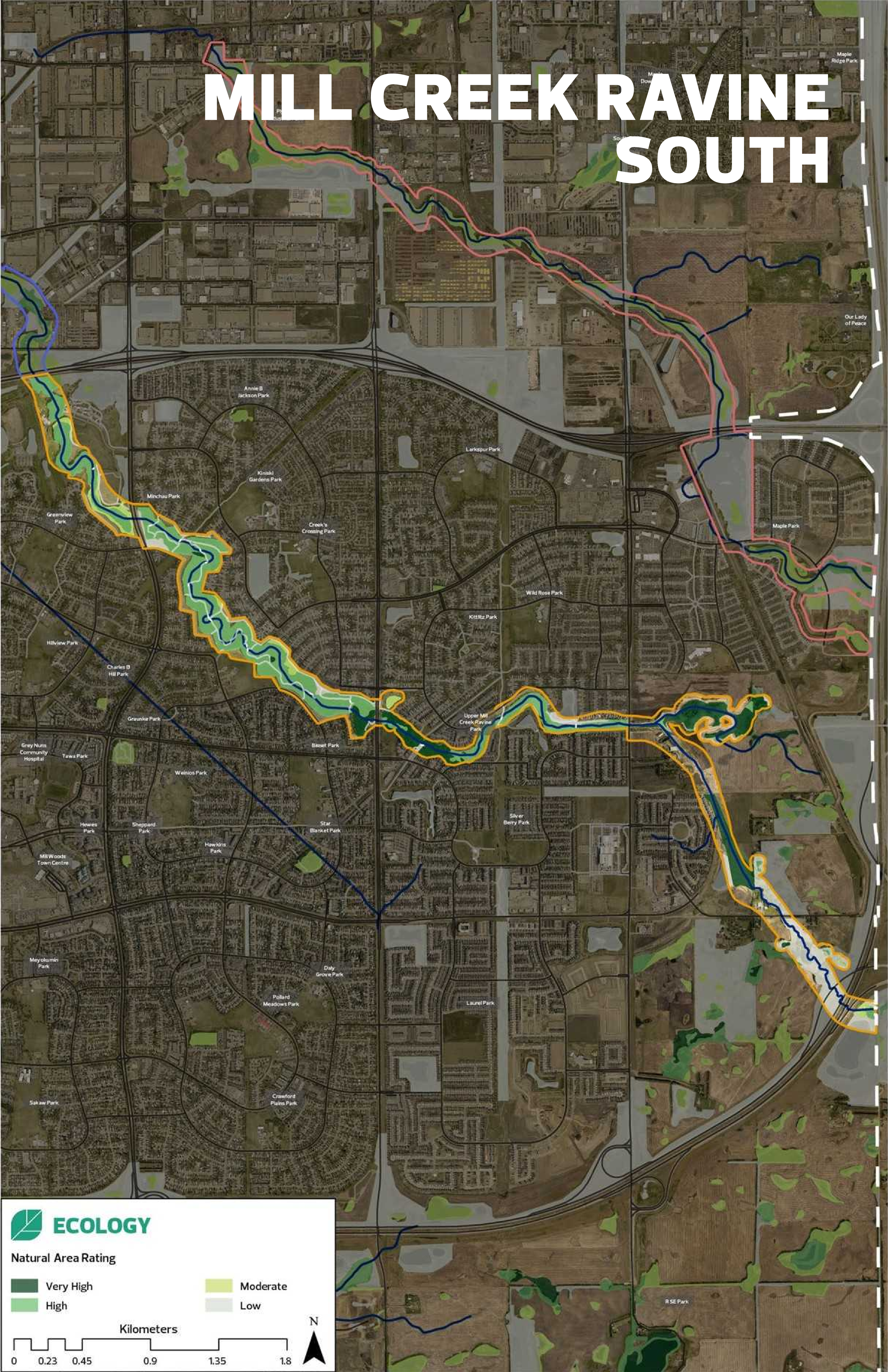




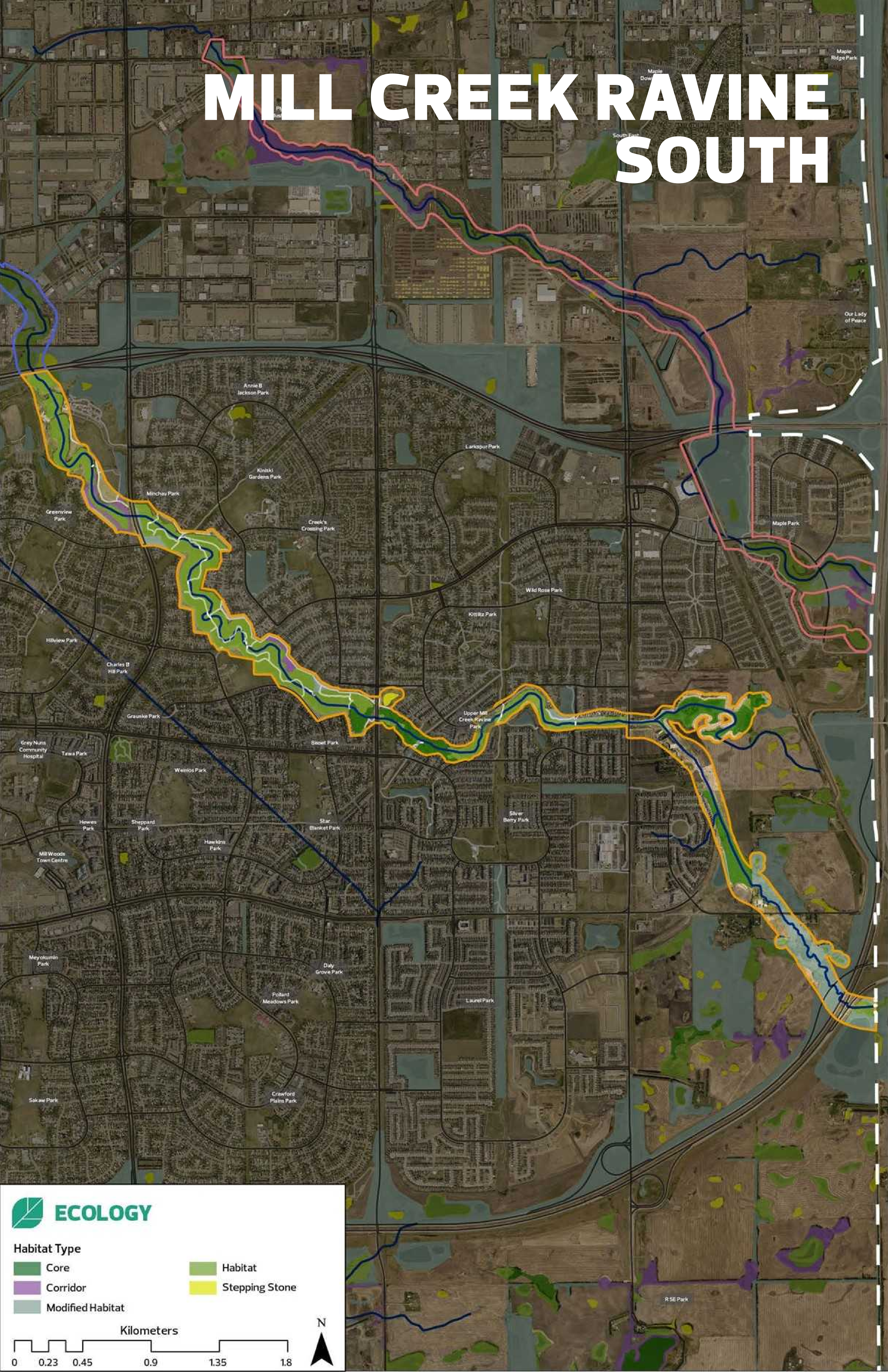

MILL CREEK RAVINE SOUTH
Maple Ridge Park
Our Lady of Peace
Annie B Jackson Park
Larkspur Park
Kiniski Gardens Park
Minchau Park
Greenview Park
Creek's Crossing Park
Maple Park
Wild Rose Park
Kittlitz Park
Hillview Park
Charles B Hill Park
Graunke Park
Upper Mill Creek Ravine Park
Bisset Park
City Boundary
Grey Nuns Community Hospital
Tawa Park
Weinlos Park
Hewes Park
Sheppard Park
Star Blanket Park
Silver Berry Park
Hawkins Park
Mill Woods Town Centre
Meyokumin Park
Daly Grove Park
Pollard Meadows Park
Laurel Park
Crawford Plains Park
Sakaw Park
RSE Park
ECOLOGY
UPLVI Land Classes
Developed
Modified
Natural (Other)
Natural (Wooded)
Natural (Non-Wooded)
Wetland
City Boundary
Trails
Roads
Streams
North Saskatchewan River
Flood Hazard
Unique Vegetation
Kilometers
0
0.23
0.45
0.9
1.35
1.8
N

MILL CREEK RAVINE SOUTH





MILL CREEK RAVINE SOUTH
Maple Ridge Park
Our Lady of Peace
Annie B Jackson Park
Larkspur Park
Kiniski Gardens Park
Minchau Park
Greenview Park
Creek's Crossing Park
Maple Park
Wild Rose Park
Kittlitz Park
Hillview Park
Charles B Hill Park
Upper Mill Creek Ravine Park
Graunke Park
Bisset Park
Grey Nuns Community Hospital
Tawa Park
Weinlos Park
Silver Berry Park
Hewes Park
Sheppard Park
Star Blanket Park
Hawkins Park
Mill Woods Town Centre
Meyokumin Park
Daly Grove Park
Pollard Meadows Park
Laurel Park
Sakaw Park
Crawford Plains Park
R SE Park
ECOLOGY
Natural Area Rating
Very High
High
Moderate
Low
Kilometers
0
0.23
0.45
0.9
1.35
1.8
N

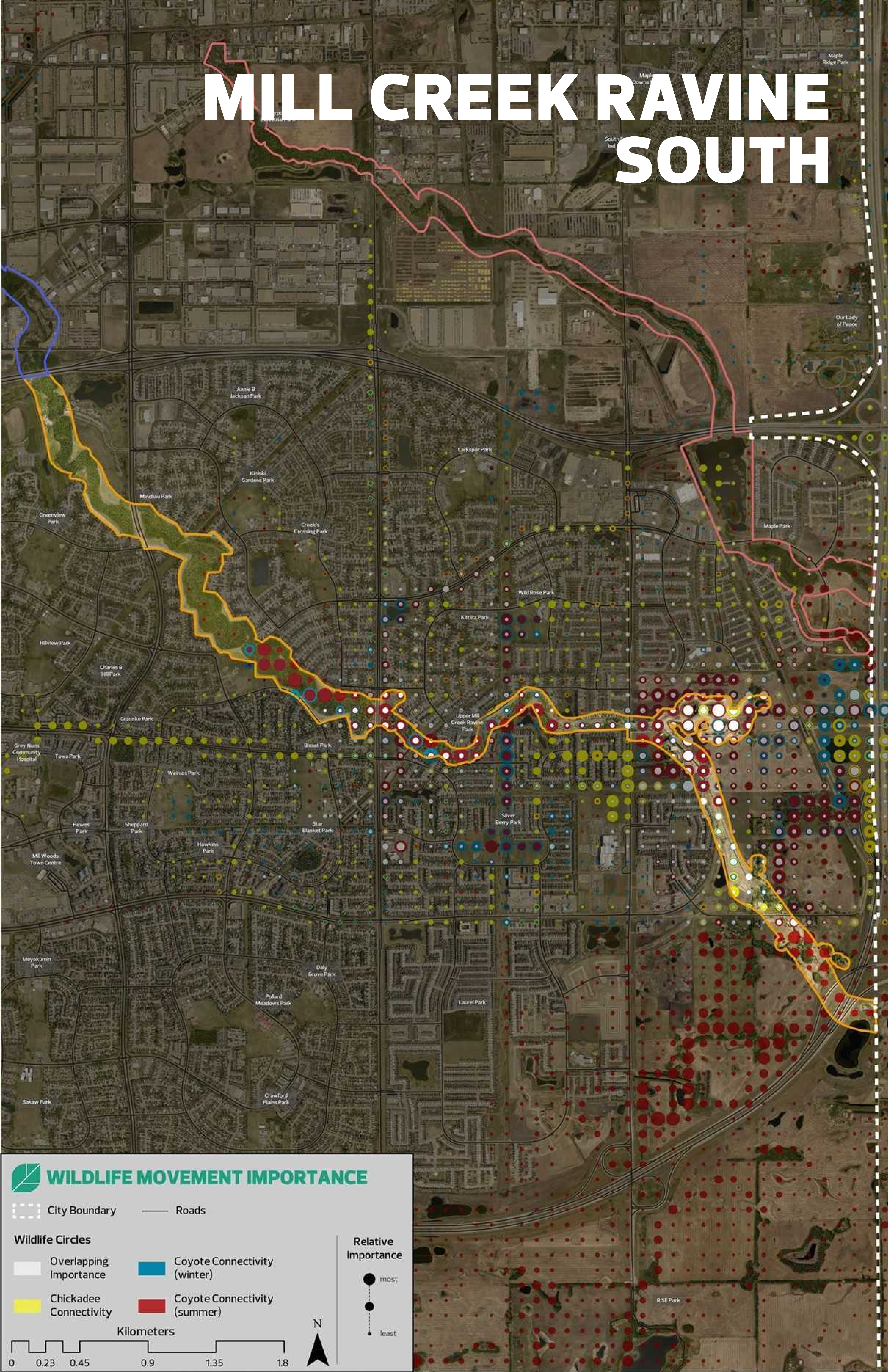


MILL CREEK RAVINE SOUTH
Annie B Jackson Park
Larkspur Park
Kiniski Gardens Park
Minchau Park
Greenview Park
Creek's Crossing Park
Maple Park
Wild Rose Park
Kittlitz Park
Hillview Park
Charles B Hill Park
Graunke Park
Upper Mill Creek Ravine Park
Bisset Park
Grey Nuns Community Hospital
Tawa Park
Weinlos Park
Hewes Park
Sheppard Park
Star Blanket Park
Silver Berry Park
Hawkins Park
Mill Woods Town Centre
Meyokumin Park
Daly Grove Park
Pollard Meadows Park
Laurel Park
Crawford Plains Park
Sakaw Park
Maple Ridge Park
Our Lady of Peace
R 5E Park
ECOLOGY
Habitat Type
Core
Corridor
Modified Habitat
Habitat
Stepping Stone
Kilometers
0
0.23
0.45
0.9
1.35
1.8
N

MILL CREEK RAVINE SOUTH


MILL CREEK RAVINE SOUTH
WILDLIFE CONNECTIVITY PATHS
City Boundary
Roads
Coyote Connectivity Paths (winter)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.23
0.45
0.9
1.35
1.8
N
Maple Ridge Park
Our Lady of Peace
Annie B Jackson Park
Larkspur Park
Kiniski Gardens Park
Minchau Park
Greenview Park
Creek's Crossing Park
Maple Park
Wild Rose Park
Kittlitz Park
Hillview Park
Charles B Hill Park
Graunke Park
Upper Mill Creek Ravine Park
Bisset Park
Grey Nuns Community Hospital
Tawa Park
Weinlos Park
Hewes Park
Sheppard Park
Star Blanket Park
Silver Berry Park
Hawkins Park
Mill Woods Town Centre
Meyokumin Park
Daly Grove Park
Pollard Meadows Park
Laurel Park
Sakaw Park
Crawford Plains Park


MILL CREEK RAVINE SOUTH
Maple Ridge Park
Our Lady of Peace
Annie B Jackson Park
Larkspur Park
Kiniski Gardens Park
Minchau Park
Greenview Park
Creek's Crossing Park
Maple Park
Wild Rose Park
Kittlitz Park
Hillview Park
Charles B Hill Park
Graunke Park
Upper Mill Creek Ravine Park
Bisset Park
Grey Nuns Community Hospital
Tawa Park
Weinlos Park
Silver Berry Park
Hewes Park
Sheppard Park
Star Blanket Park
Hawkins Park
Mill Woods Town Centre
Meyokumin Park
Daly Grove Park
Pollard Meadows Park
Laurel Park
Sakaw Park
Crawford Plains Park
R SE Park
WILDLIFE CONNECTIVITY PATHS
City Boundary
Roads
Chickadee Connectivity Paths
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.23
0.45
0.9
1.35
1.8
N


MILL CREEK RAVINE SOUTH
WILDLIFE MOVEMENT IMPORTANCE
City Boundary
Roads
Wildlife Circles
Overlapping Importance
Chickadee Connectivity
Coyote Connectivity (winter)
Coyote Connectivity (summer)
Relative Importance
most
least
Kilometers
0
0.23
0.45
0.9
1.35
1.8
N
Annie B Jackson Park
Larkspur Park
Minchau Park
Greenview Park
Creek's Crossing Park
Wild Rose Park
Kittlitz Park
Hillview Park
Charles B Hill Park
Upper Mill Creek Ravine Park
Bisset Park
Grey Nuns Community Hospital
Tawa Park
Weinlos Park
Hewes Park
Sheppard Park
Hawkins Park
Star Blanket Park
Silver Berry Park
Mill Woods Town Centre
Daly Grove Park
Pollard Meadows Park
Laurel Park
Crawford Plains Park
Sakaw Park
Maple Park
Maple Ridge Park
Our Lady of Peace

CELEBRATION

This reach contains few amenities which directly support Celebration functions. The wide open space provided by Jackie Parker Park can accommodate larger gatherings and events.

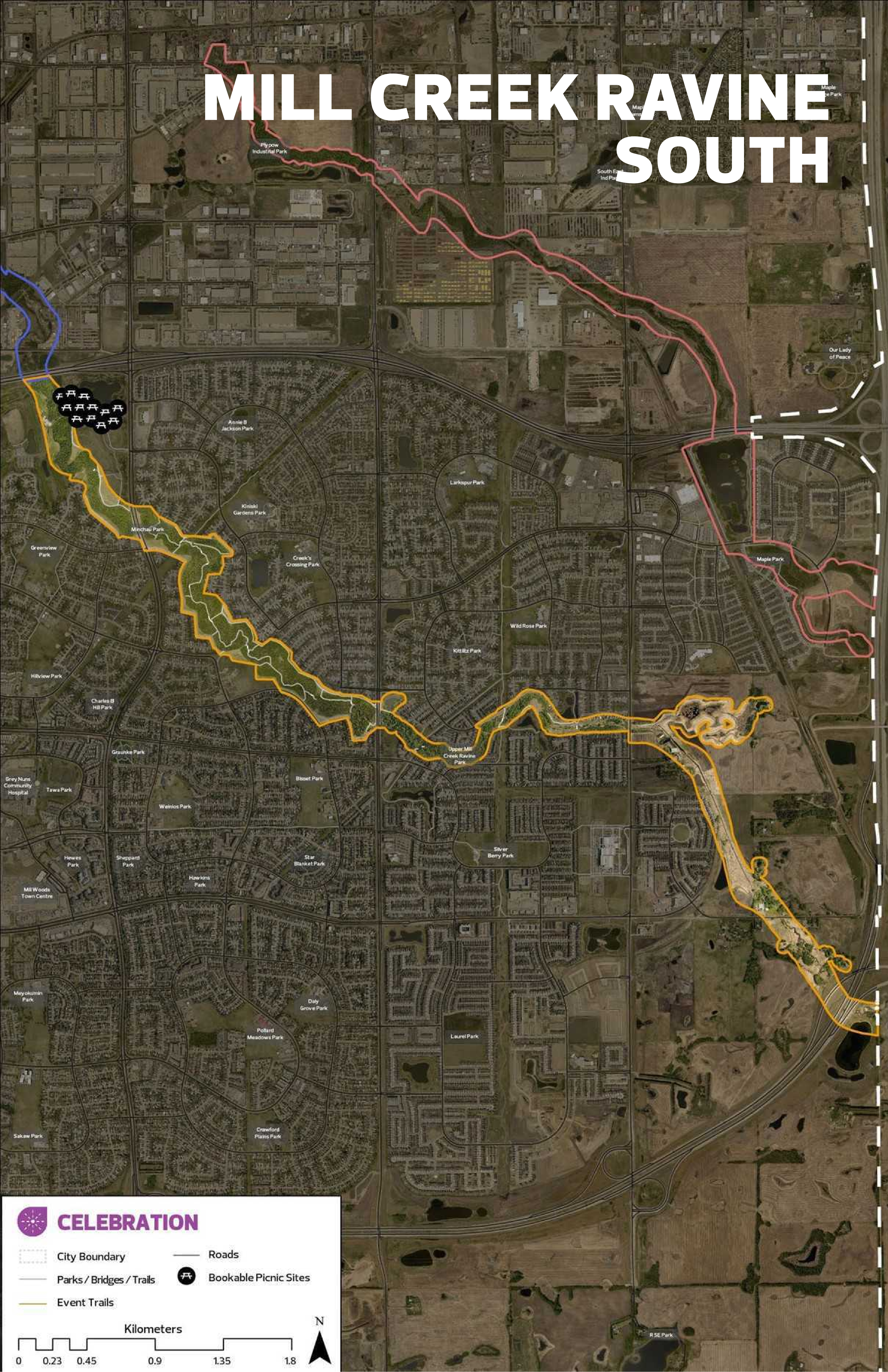
The Ridgewood Community League is located nearby to the reach.

WELLNESS

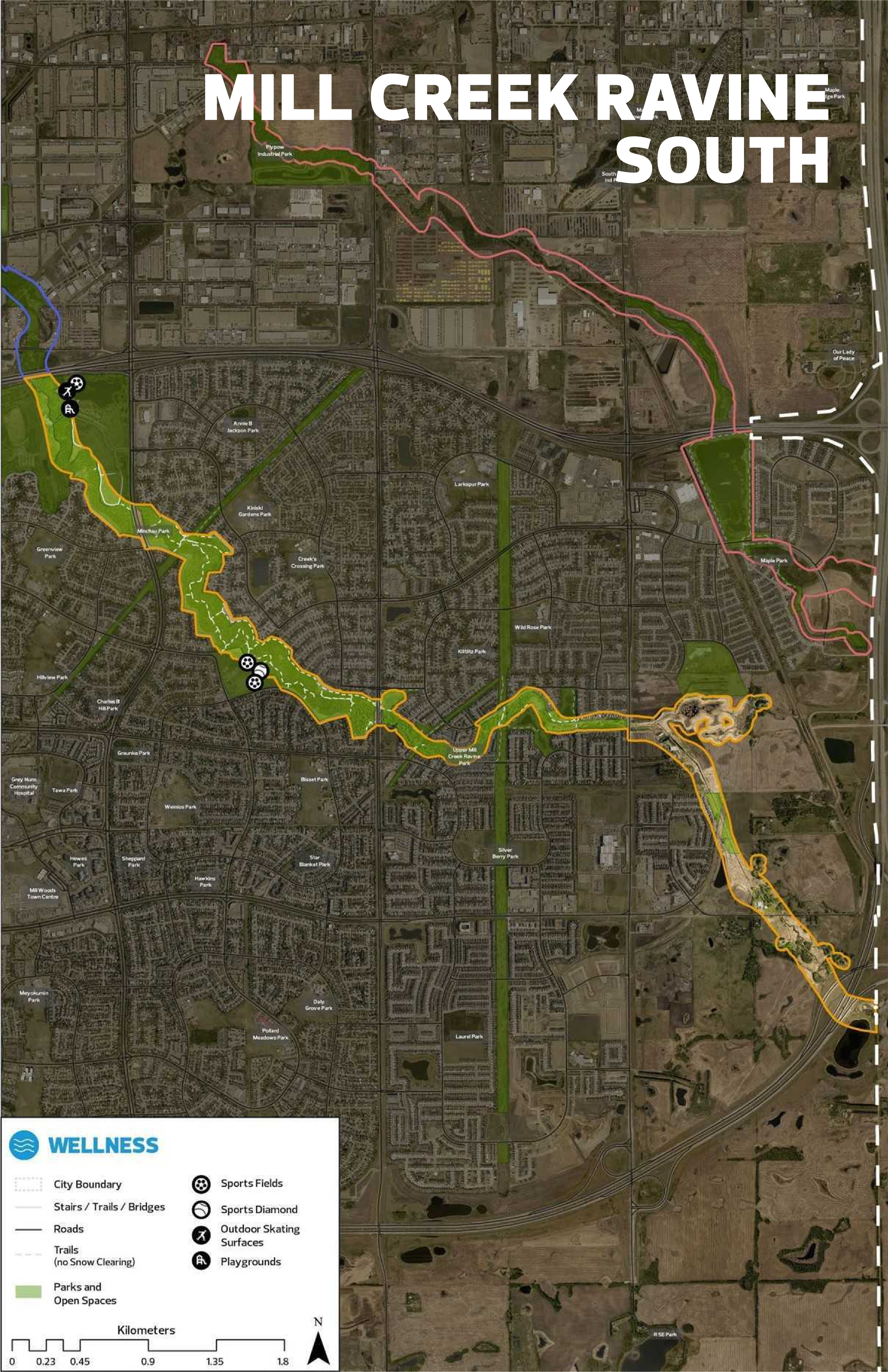
Play structures and skating are available at Jackie Parker Park, and sports fields at the nearby Ridgewood Community League. The wetland complex provides opportunities for educational activities.

The majority of formal trails in this reach are seasonally maintained. Extensive informal trails exist throughout the reach, with the greatest density found in the central portion.

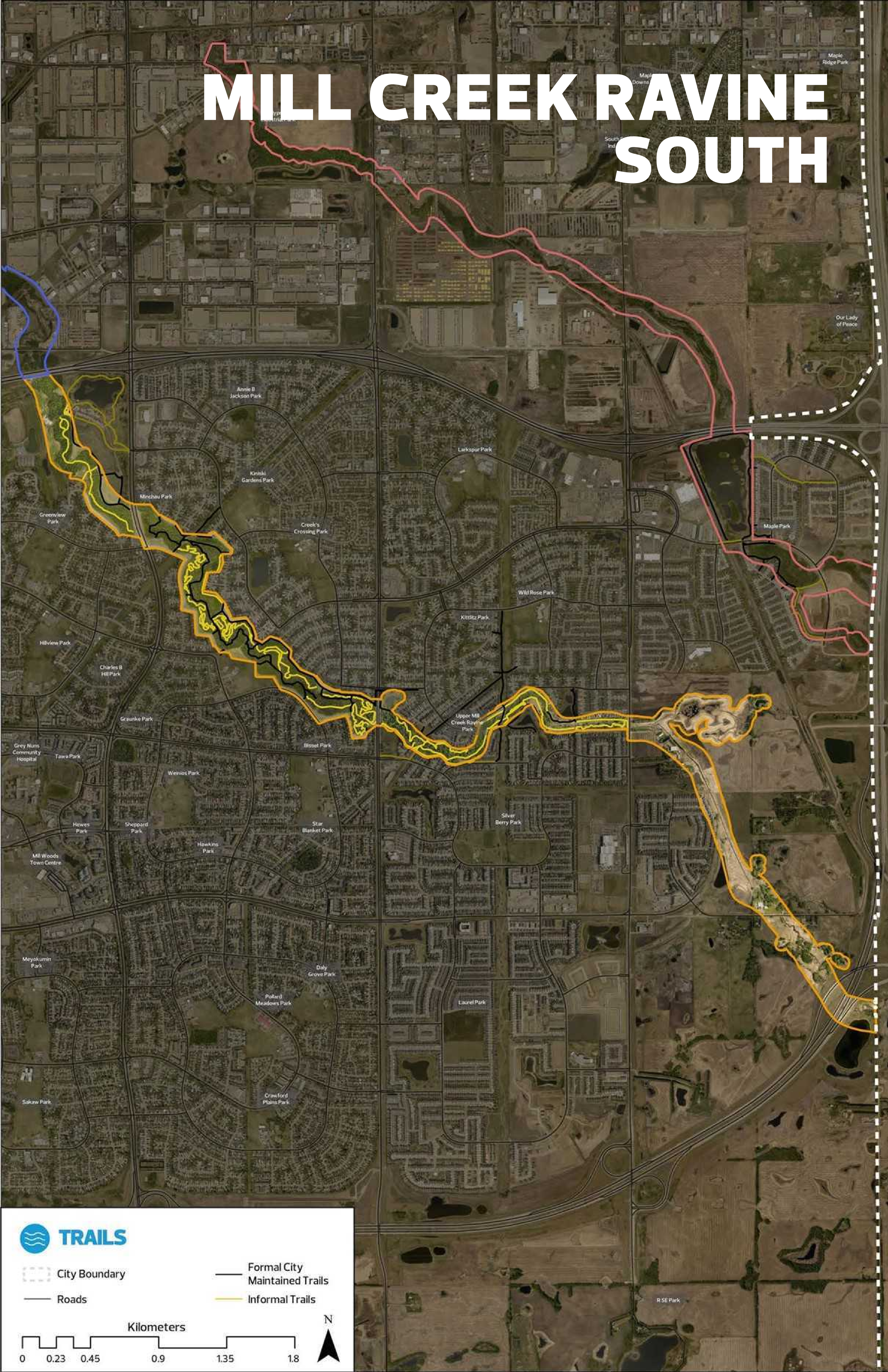
MILL CREEK RAVINE SOUTH



MILL CREEK RAVINE SOUTH



MILL CREEK RAVINE SOUTH



CULTURE

A high density of archaeological sites are found within the central portion of this reach. All of the lands within the ravine itself (with the exception of modified lands near Anthony Henday Drive), and much of the top-of-bank lands in the central portion of the reach have high potential to contain unknown historic resources.

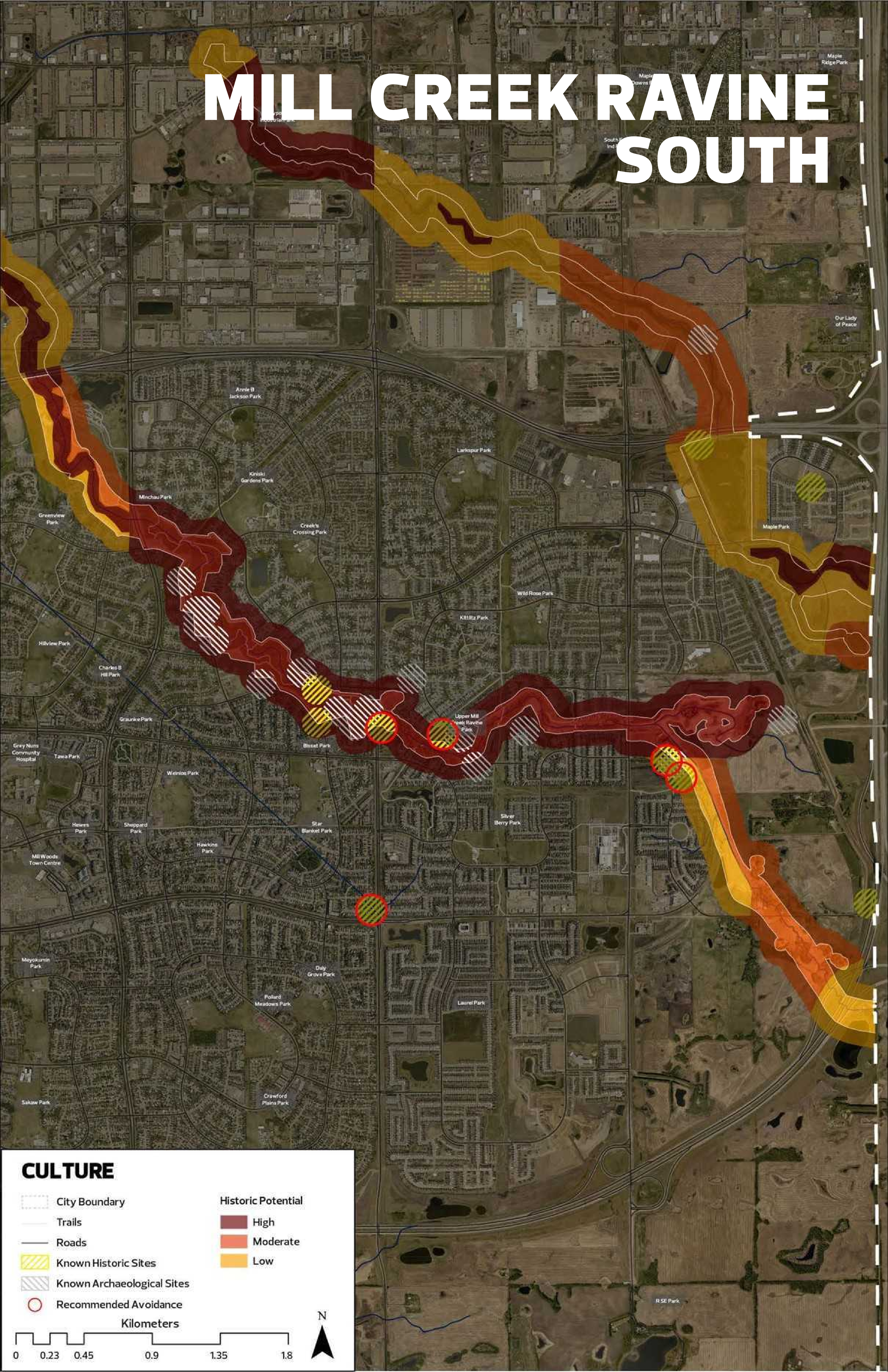
VISITATION AND POTENTIAL CONFLICTS

The highest density of visitation is found around trailheads in the central portion of the reach, where residents from the surrounding neighbourhoods access the ravine. As these lands are also more ecologically valuable, there is the potential for use of these areas to impact natural functioning. Jackie Parker Park also sees a concentration of use, but the likelihood of conflict between ecological values and human use are lower. Poor access means that few people spend time around the wetland, as the surrounding lands develop further, there is the potential for this wetland to be impacted.

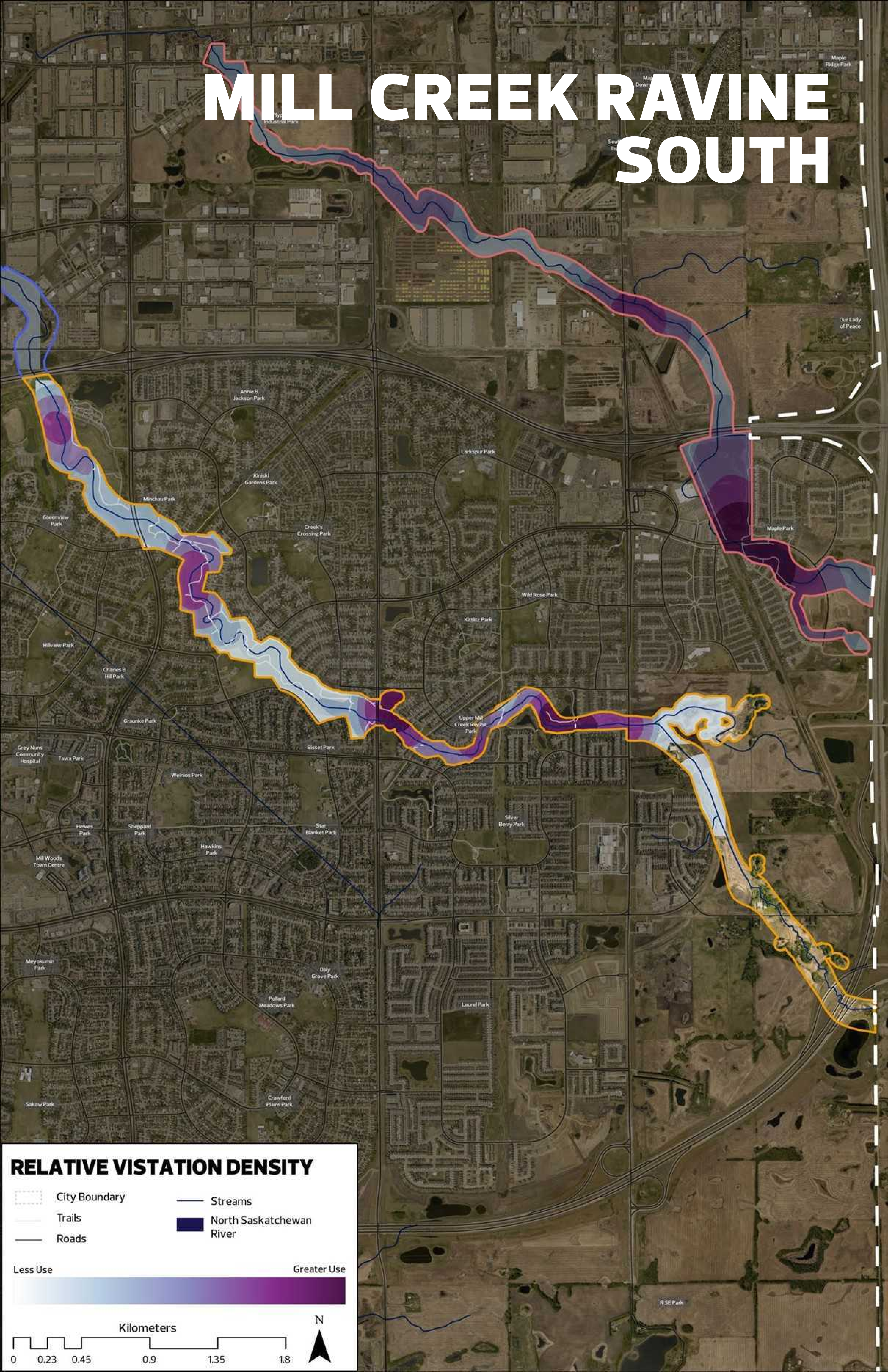
MILL CREEK RAVINE SOUTH – FRACTION OF TOTAL RIBBON OF GREEN VISITATION

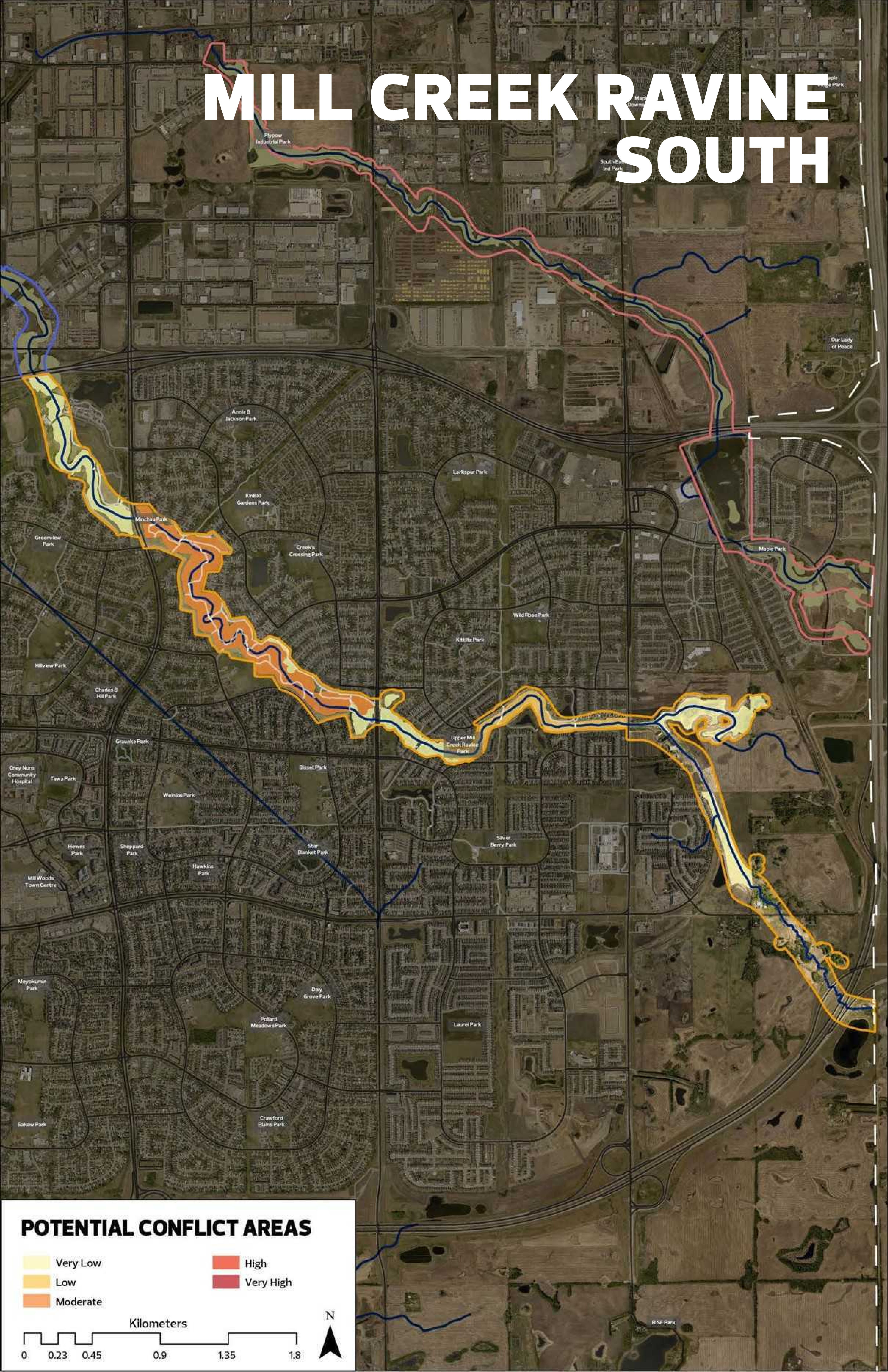
Q1 (JANUARY-MARCH)	Q2 (APRIL-JUNE)	Q3 (JULY-SEPTEMBER)	Q4 (OCTOBER-DECEMBER)
10.3%	8.3%	12.9%	18.9%

MILL CREEK RAVINE SOUTH



MILL CREEK RAVINE SOUTH




MILL CREEK RAVINE SOUTH
POTENTIAL CONFLICT AREAS
Very Low
Low
Moderate
High
Very High
Kilometers
0
0.23
0.45
0.9
1.35
1.8
N
Plypow Industrial Park
South East Ind Park
Our Lady of Peace
Annie B Jackson Park
Larkspur Park
Kiniski Gardens Park
Minchau Park
Greenview Park
Creek's Crossing Park
Maple Park
Wild Rose Park
Kittlitz Park
Hillview Park
Charles B Hill Park
Upper Mill Creek Ravine Park
Grawnke Park
Grey Nuns Community Hospital
Tawa Park
Bisset Park
Weinlos Park
Silver Berry Park
Hewes Park
Sheppard Park
Star Blanket Park
Hawkins Park
Mill Woods Town Centre
Meyokumin Park
Daly Grove Park
Pollard Meadows Park
Laurel Park
Sakaw Park
Crawford Plains Park
RSE Park

EAST RAVINES

East Ravines Reach Overview

The East Ravines Reach contains the Fulton and Goldbar ravines. Goldbar Creek flows into the North Saskatchewan River, meeting the East Reach at Gold Bar Park. This connection has been impacted by the longstanding surrounding industrial and residential development. This reach provides access to parkland for industrial employees and the surrounding communities, but poor ecological connectivity impacts wildlife access to the River Valley system.

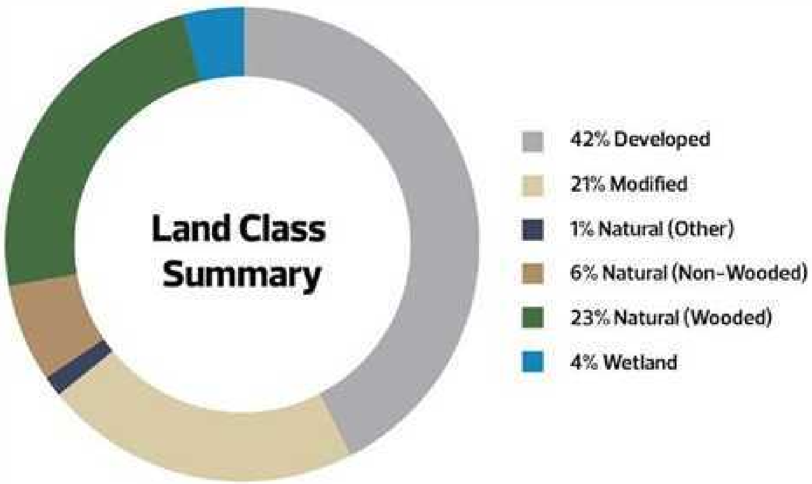
This reach includes the lower portion of Fulton Ravine, which is disconnected from the downstream portion that drains into the North Saskatchewan River Valley. This lower stretch of the ravine connects to the outskirts of the city to the east. Few recreational amenities are found in this area beyond the pathway system.

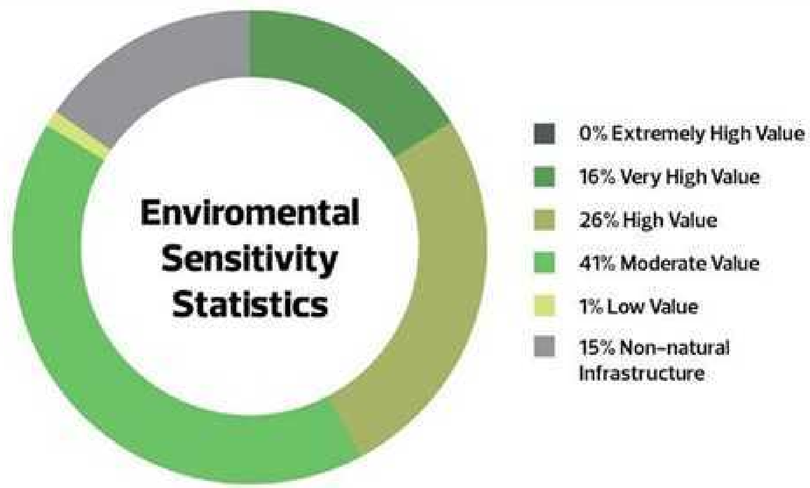
REACH	CELEBRATION	WELLNESS	ECOLOGY
East Ravines			**Total Area:** 141.9 ha (100%) **Developed and Modified Land Use:** 91.4 ha (64%) **Wetlands:** 1.8 ha (1%) **Tree Canopy:** 47.3 ha (33%) **Unique Vegetation:** 13.2 ha (9%) **Connectivity Pinchpoints:** 0.6 ha (<1%) **Wildlife Corridor:** 86 ha (61%) **Naturalized Spaces:** 3.2 ha (2%) **Natural Area:** 50.5 ha (36% of reach) **City-Owned Parks:** 20.7 ha (covers 41% of natural areas)

ECOLOGY

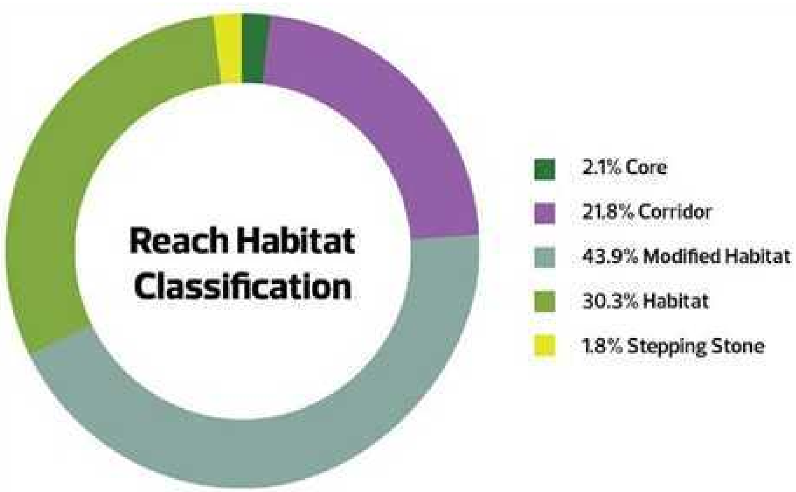
Despite their disconnection from their natural hydrologic regime, both Fulton and Goldbar Ravines provide ecological value to the surrounding area. Fulton Ravine is more heavily modified, with industrial development encroaching within the reach. Patches of forest cover are found in the northern portion of this ravine. While it generally has a low natural rating, it does act as a corridor for wildlife movement through the area. Goldbar Ravine contains natural wetlands and unique vegetation, and the northern portion contains core habitat and acts as a corridor for wildlife movement.

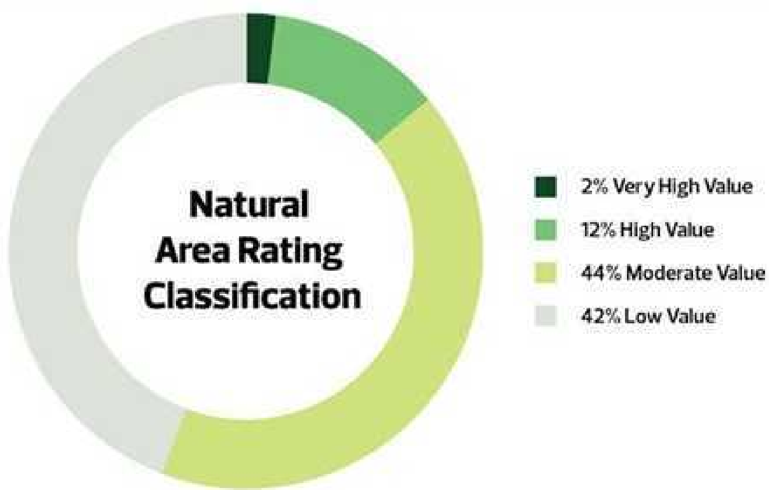
East Ravines – Land Class and Environmental Sensitivity Summary

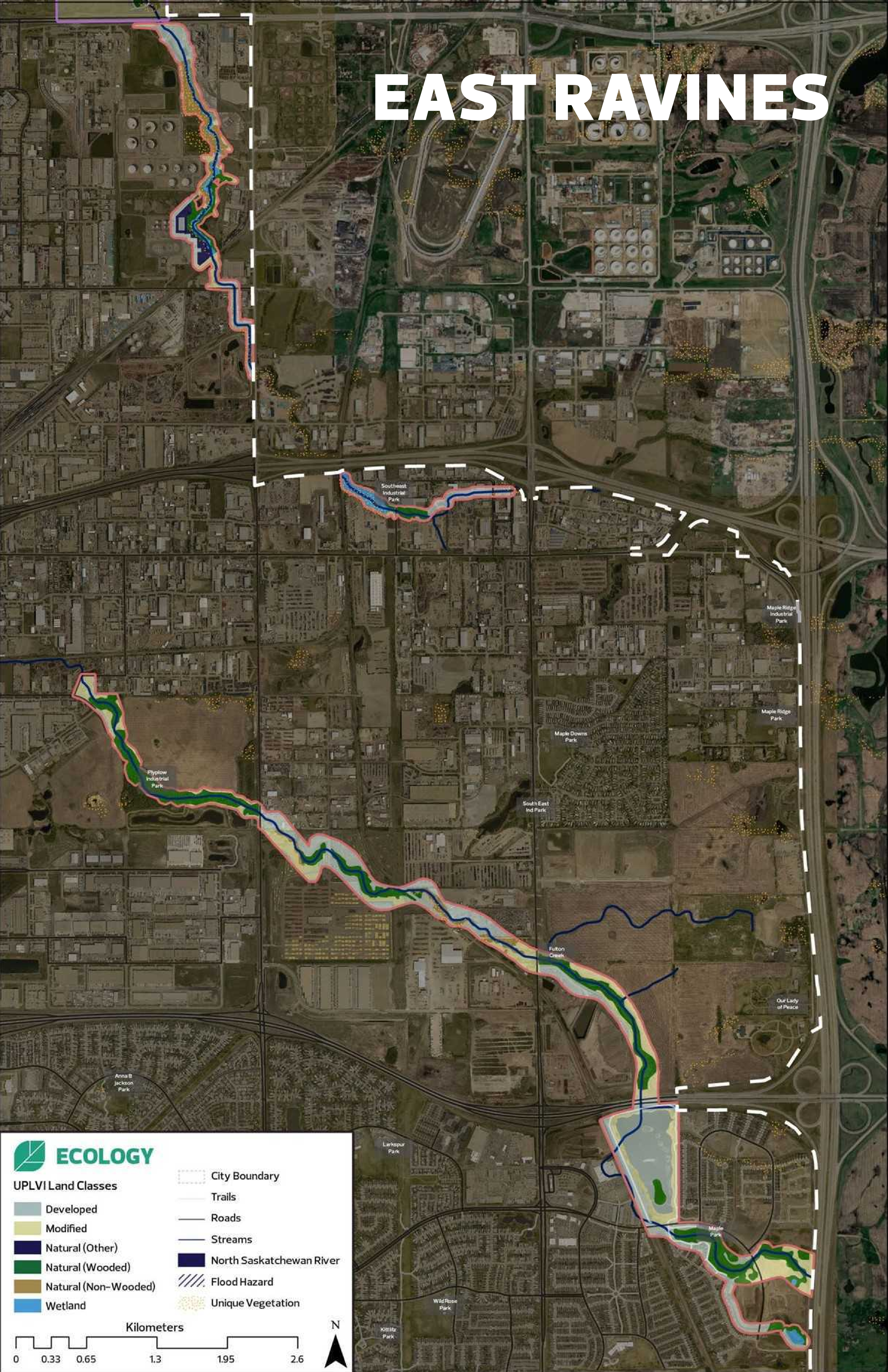


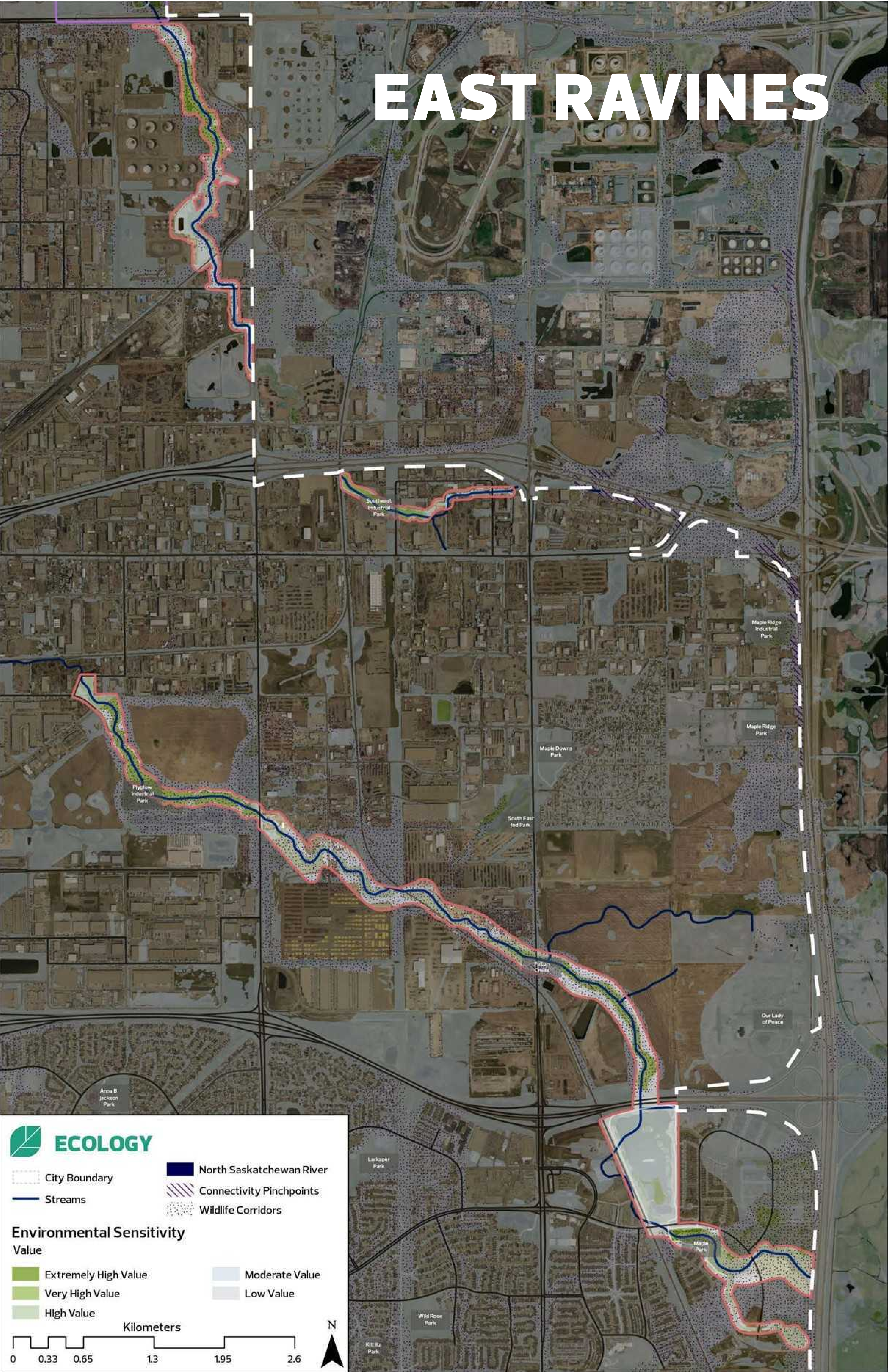


East Ravines – Reach Habitat and Natural Area Rating Classifcation






EAST RAVINES
Southeast Industrial Park
Maple Ridge Industrial Park
Maple Ridge Park
Maple Downs Park
South East Ind Park
Fulton Creek
Our Lady of Peace
Anna B Jackson Park
Larkspur Park
Maple Park
Wild Rose Park
ECOLOGY
UPLVI Land Classes
Developed
Modified
Natural (Other)
Natural (Wooded)
Natural (Non-Wooded)
Wetland
City Boundary
Trails
Roads
Streams
North Saskatchewan River
Flood Hazard
Unique Vegetation
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N



EAST RAVINES
Southeast Industrial Park
Maple Ridge Industrial Park
Maple Ridge Park
Maple Downs Park
South East Ind Park
Plyplow Industrial Park
Fulton Creek
Our Lady of Peace
Anna B Jackson Park
Larkspur Park
Maple Park
Wild Rose Park
Kittiltz Park
ECOLOGY
City Boundary
Streams
North Saskatchewan River
Connectivity Pinchpoints
Wildlife Corridors
Environmental Sensitivity
Value
Extremely High Value
Very High Value
High Value
Moderate Value
Low Value
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N


EAST RAVINES
Southeast Industrial Park
Maple Ridge Industrial Park
Maple Ridge Park
Maple Downs Park
Plyplow Industrial Park
South East Ind Park
Fulton Creek
Our Lady of Peace
Anna B Jackson Park
Larkspur Park
Maple Park
Wild Rose Park
Park
ECOLOGY
Natural Area Rating
Very High
High
Moderate
Low
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N


EAST RAVINES
Southeast Industrial Park
Maple Ridge Industrial Park
Maple Ridge Park
Maple Downs Park
South East Ind Park
Plyplow Industrial Park
Fulton Creek
Our Lady of Peace
Anna B Jackson Park
Larkspur Park
Maple Park
Wild Rose Park
ECOLOGY
Habitat Type
Core
Corridor
Modified Habitat
Habitat
Stepping Stone
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N


EAST RAVINES
Southeast Industrial Park
Maple Ridge Industrial Park
Maple Ridge Park
Maple Downs Park
South East Ind Park
Plyplow Industrial Park
Fulton Creek
Our Lady of Peace
Anna B Jackson Park
Larkspur Park
Maple Park
Wild Rose Park
WILDLIFE CONNECTIVITY PATHS
City Boundary
Roads
Coyote Connectivity Paths (summer)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N


EAST RAVINES
Southeast Industrial Park
Maple Ridge Industrial Park
Maple Ridge Park
Maple Downs Park
South East Ind Park
Fulton Creek
Our Lady of Peace
Anna B Jackson Park
Larkspur Park
Maple Park
Wild Rose Park
WILDLIFE CONNECTIVITY PATHS
City Boundary
Roads
Coyote Connectivity Paths (winter)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N

EAST RAVINES
Southeast Industrial Park
Maple Ridge Industrial Park
Maple Ridge Park
Maple Downs Park
South East Ind Park
Plyplow Industrial Park
Fulton Creek
Our Lady of Peace
Anna B Jackson Park
Larkspur Park
Maple Park
Wild Rose Park
WILDLIFE CONNECTIVITY PATHS
City Boundary
Roads
Chickadee Connectivity Paths
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N

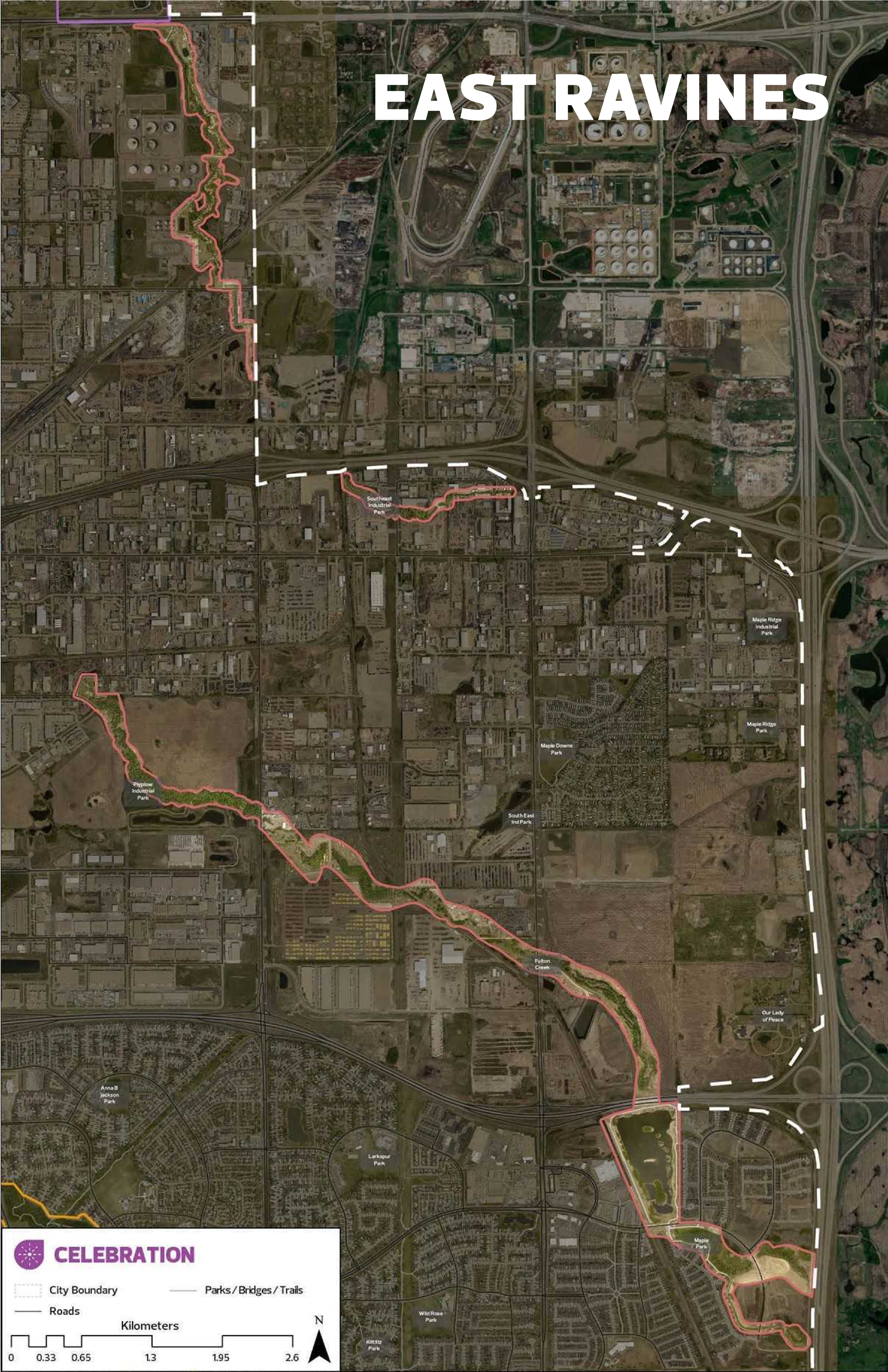

EAST RAVINES
Southeast Industrial Park
Maple Ridge Industrial Park
Maple Ridge Park
Maple Downs Park
South East Ind Park
Plyplow Industrial Park
Fulton Creek
Our Lady of Peace
Anna B Jackson Park
Larkspur Park
Maple Park
Wild Rose Park
WILDLIFE MOVEMENT IMPORTANCE
City Boundary
Roads
North Saskatchewan River
Wildlife Circles
Overlapping Importance
Coyote Connectivity (winter)
Chickadee Connectivity
Coyote Connectivity (summer)
Relative Importance
most
least
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N

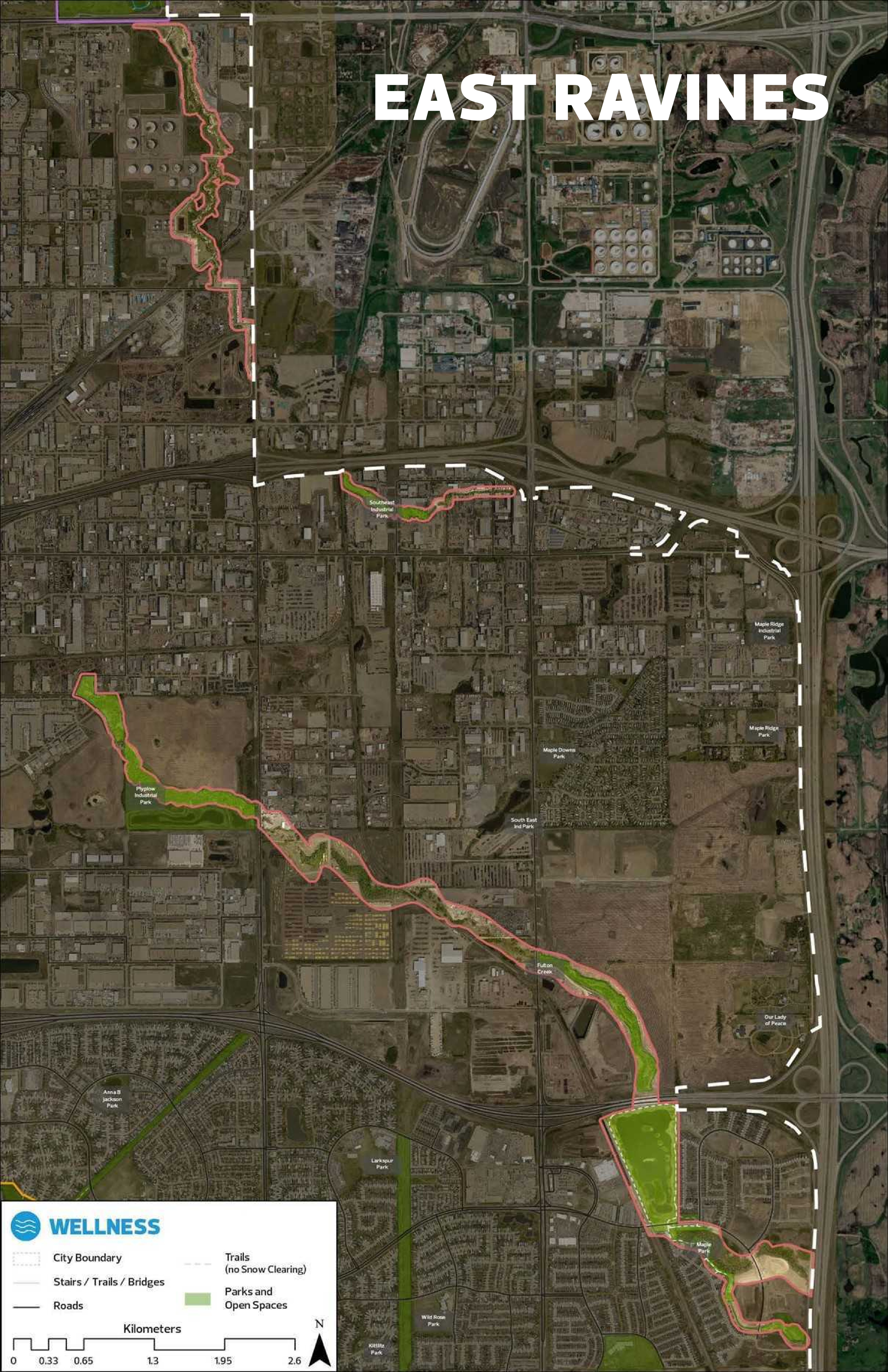
CELEBRATION

This reach contains no amenities that support Celebration functions, and few areas that would serve as effective gathering spaces.

WELLNESS

While these areas do not contain developed trails or other recreational amenities, they do provide local greenspace to the surrounding industrial areas. They can serve as nearby destinations for employees to spend time in more natural settings. The southern portion of Fulton Ravine is also accessible from residential neighbourhoods to the south and west.


EAST RAVINES
Southeast Industrial Park
Maple Ridge Industrial Park
Maple Ridge Park
Maple Downs Park
South East Ind Park
Plyplow Industrial Park
Fulton Creek
Our Lady of Peace
Anna B Jackson Park
Larkspur Park
Maple Park
Wild Rose Park
Kittlitz Park
CELEBRATION
City Boundary
Parks / Bridges / Trails
Roads
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N



EAST RAVINES
Southeast Industrial Park
Maple Ridge Industrial Park
Maple Ridge Park
Maple Downs Park
South East Ind Park
Fulton Creek
Our Lady of Peace
Anna B Jackson Park
Larkspur Park
Maple Park
Wild Rose Park
Kittlitz Park
WELLNESS
City Boundary
Trails (no Snow Clearing)
Stairs / Trails / Bridges
Parks and Open Spaces
Roads
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N

EAST RAVINES

CULTURE

A handful of known archaeological and historic sites exist in the southern portion of Fulton Ravine. Lands around Plyplow Industrial Park and Maple Park have high potential for unknown historic resources, as does the northern portion of Goldbar Ravine.

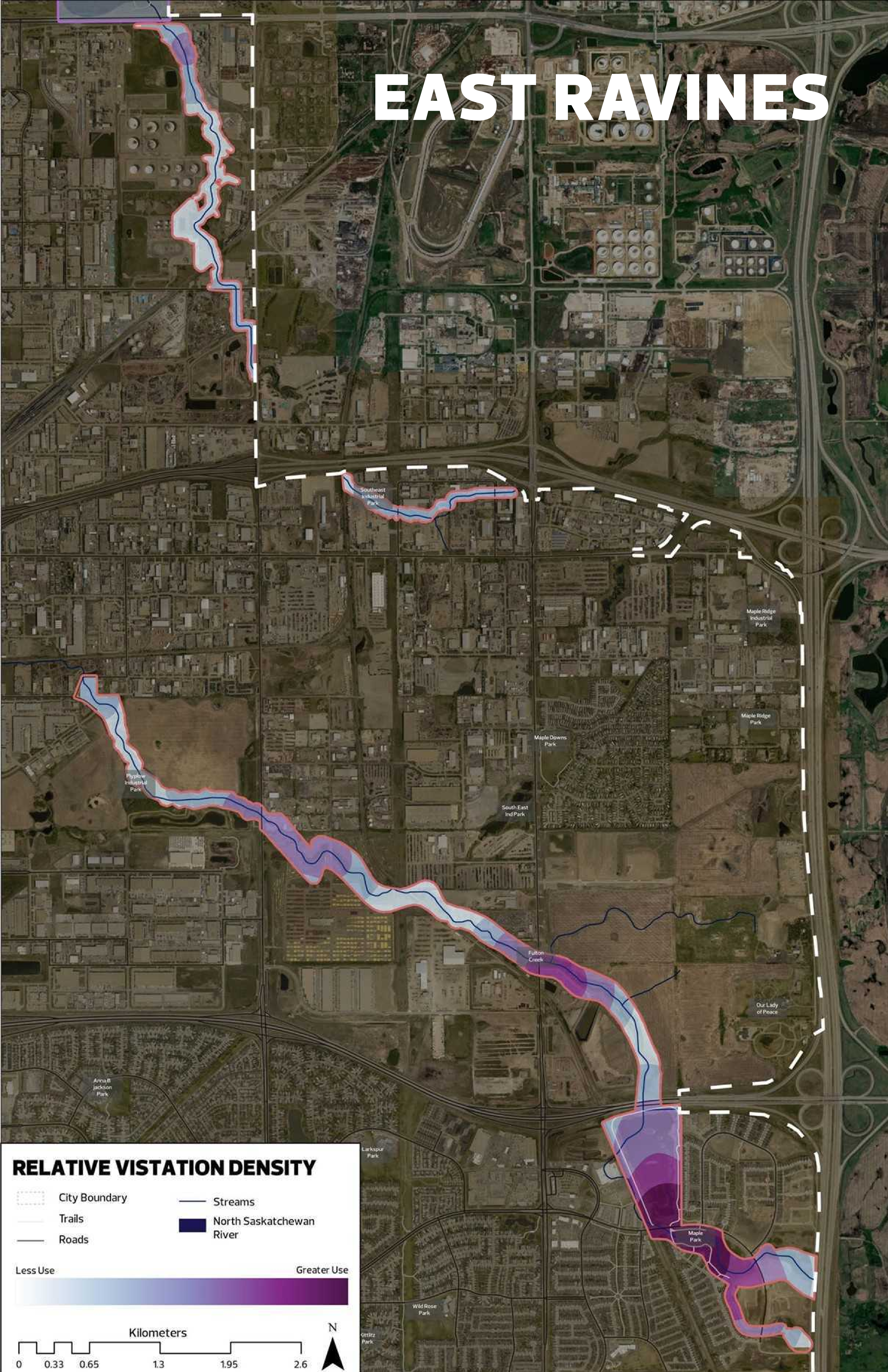
VISITATION AND POTENTIAL CONFLICTS

As these lands are not particularly accessible, lacking trails and connections to regional pathways, visitation in this area is low, and concentrated around Maple Park. As the natural rating of these lands is also low, few conflicts are likely.

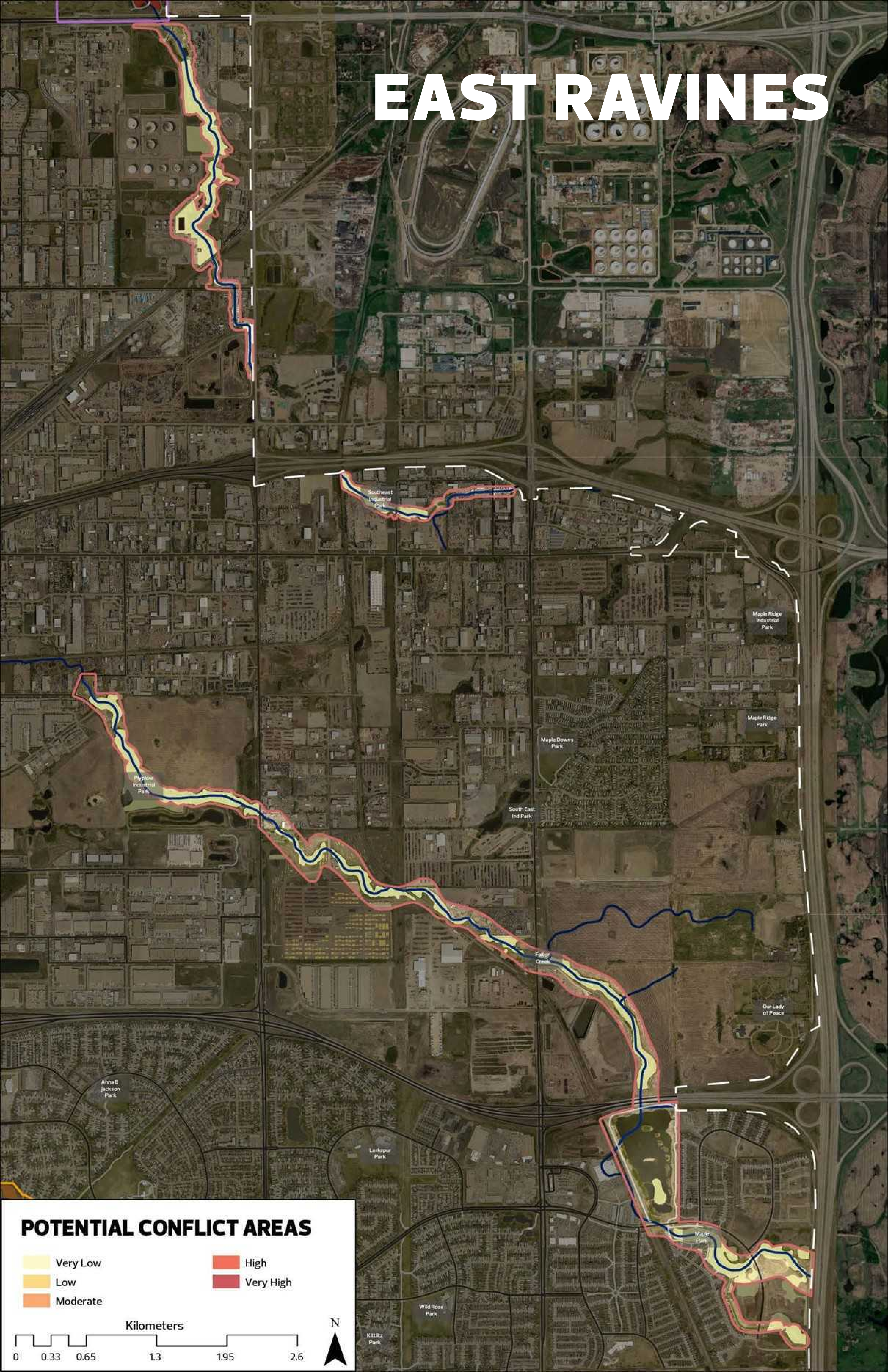
EAST RAVINES – FRACTION OF TOTAL RIBBON OF GREEN VISITATION

Q1 (JANUARY–MARCH)	Q2 (APRIL–JUNE)	Q3 (JULY–SEPTEMBER)	Q4 (OCTOBER–DECEMBER)
3.9%	3.7%	5.4%	8.0%

EAST RAVINES
Southeast Industrial Park
Maple Ridge Industrial Park
Maple Ridge Park
Maple Downs Park
Pylypow Industrial Park
South East Ind Park
Fulton Creek
Our Lady of Peace
Anna B Jackson Park
Larkspur Park
Maple Park
Wild Rose Park
Kiniski Park
CULTURE
City Boundary
Trails
Roads
Known Historic Sites
Known Archaeological Sites
Recommended Avoidance
Historic Potential
High
Moderate
Low
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N


EAST RAVINES
Southeast Industrial Park
Maple Ridge Industrial Park
Maple Ridge Park
Maple Downs Park
South East Ind Park
Fulton Creek
Our Lady of Peace
Anna B Jackson Park
Larkspur Park
Maple Park
Wild Rose Park
RELATIVE VISTATION DENSITY
City Boundary
Trails
Roads
Streams
North Saskatchewan River
Less Use
Greater Use
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N

EAST RAVINES



NORTH SASKATCHEWAN RABBIT HILL

North Saskatchewan Rabbit Hill Reach Overview

The Rabbit Hill Reach connects from the North Saskatchewan Southwest Reach to Devon through the recently annexed lands beyond Windermere. Much of the area is surrounded by agricultural fields to the south and east. Most of the table lands are privately owned throughout the reach.

Much of the area is sparsely developed, and there are several intact natural areas of high ecological value within this reach. Some of these areas contain steep slopes, particularly on the south side of the river. To the northwest there is natural forest cover as well as dunes. Much of the area is forested, and the area is of importance as a connectivity corridor into the North Saskatchewan River Valley.

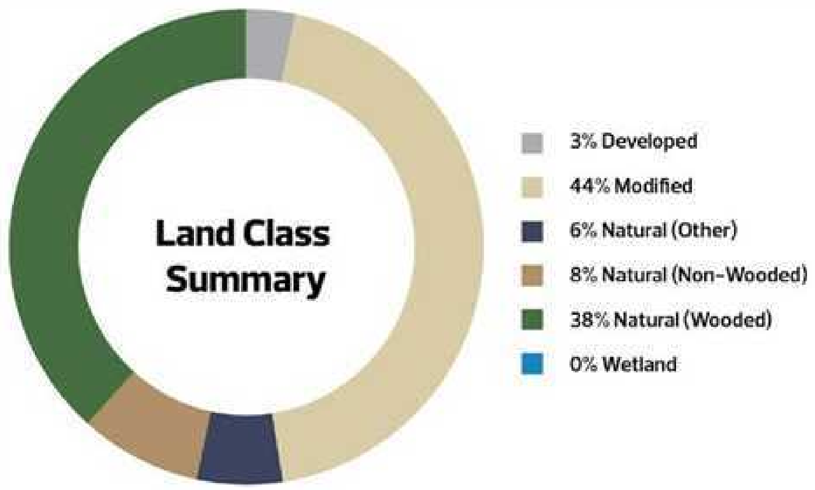
In terms of recreation, the reach includes the Shalom Park Water Ski site, and Rabbit Hill Snow Resort, both of which are private facilities. The City does not currently operate public recreation amenities within the reach.

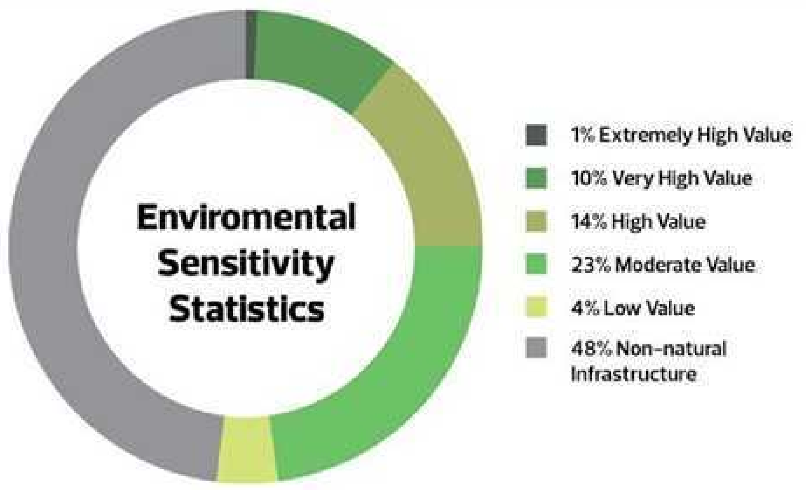
REACH	CELEBRATION	WELLNESS	ECOLOGY
North Saskatchewan Rabbit Hill	**1** Restaurant	**1** Ski Hill	**Total Area:** 330.6 ha (100%) **Developed and Modified Land Use:** 157.1 ha (48%) **Wetlands:** 0.0 (0%) **Tree Canopy:** 148.7 ha (45%) **Unique Vegetation:** 44.7 ha (14%) **Connectivity Pinchpoints:** 0.0 ha (0%) **Wildlife Corridor:** 79.5 ha (24%) **Naturalized Spaces:** 0.0 ha (0%) **Natural Area:** 173.5 (52%) **City-Owned Parks:** 0.0 ha (0%)

ECOLOGY

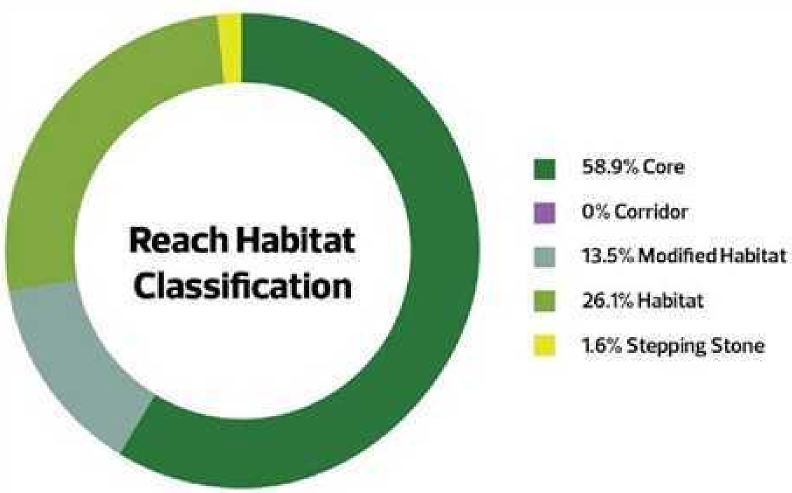
Much of the reach is steeply sloped and forested, with associated landslide risks. Unique forested vegetation is found in the northern slopes and ravines of the reach, while unique non-forested cover surrounds the more open lands in the centre of the reach, to the west of Shalom Park. The top-of-bank lands are dominated by agricultural practices. The lands adjacent to the river and south of Shalom Park act as an important wildlife corridor providing access further north. Most of the lands south of Shalom Park are considered core habitat.

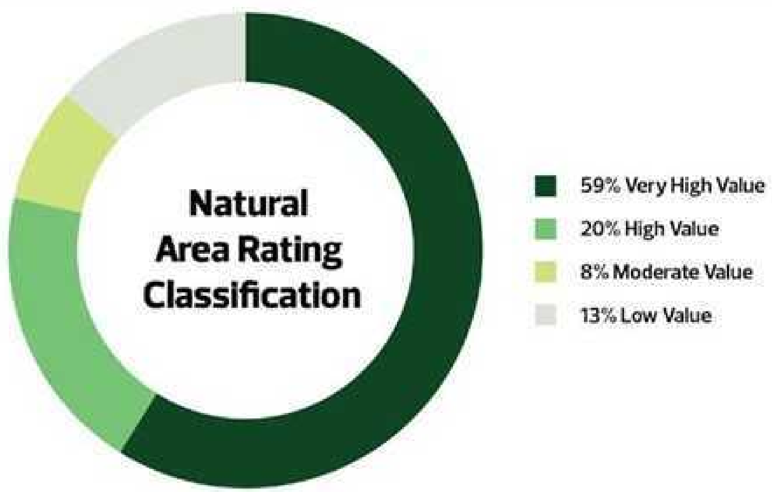
North Saskatchewan Rabbit Hill – Land Class and Environmental Sensitivity Summary



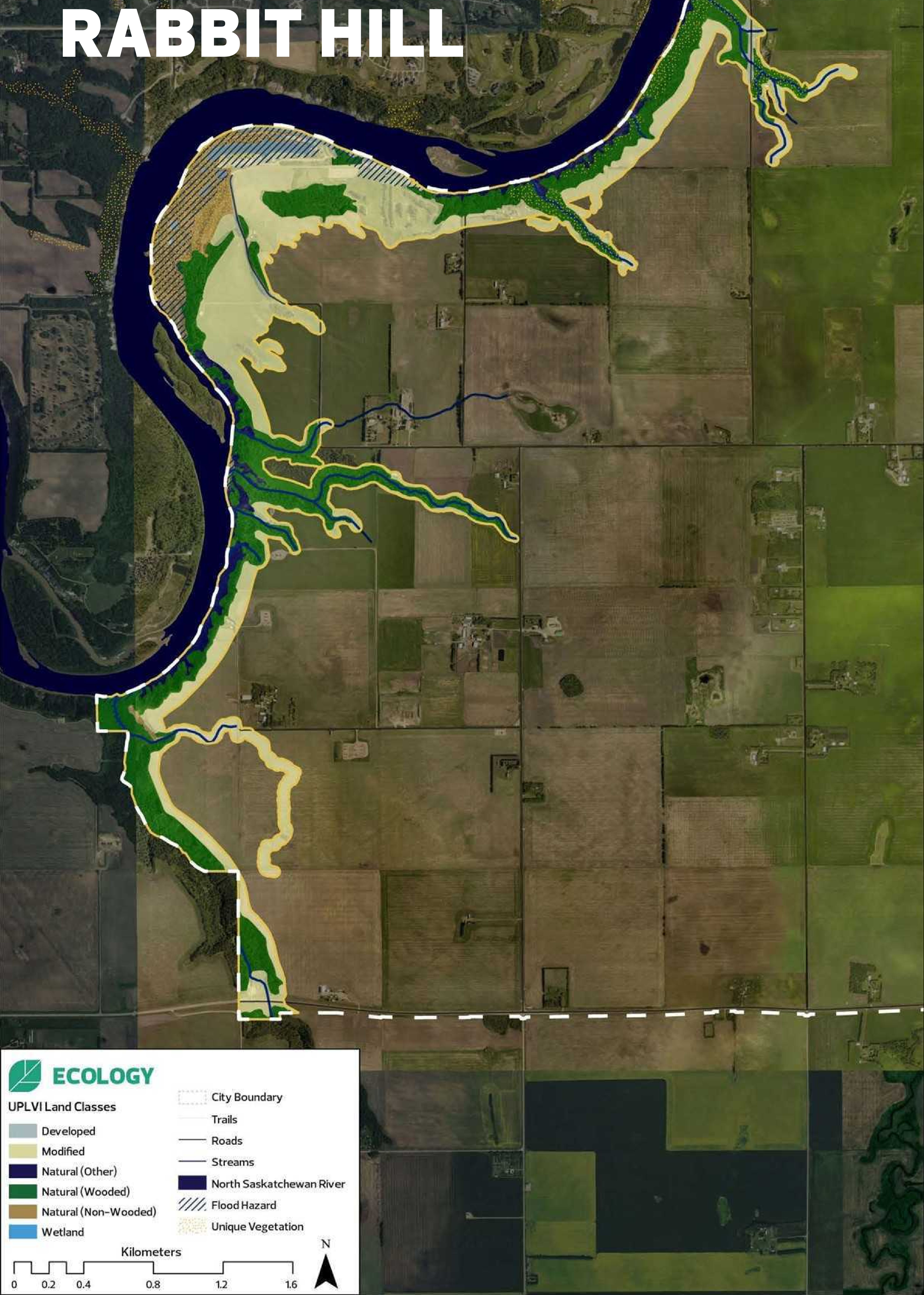


North Saskatchewan Rabbit Hill – Reach Habitat and Natural Area Rating Classiifcation





NORTH SASKATCHEWAN RABBIT HILL



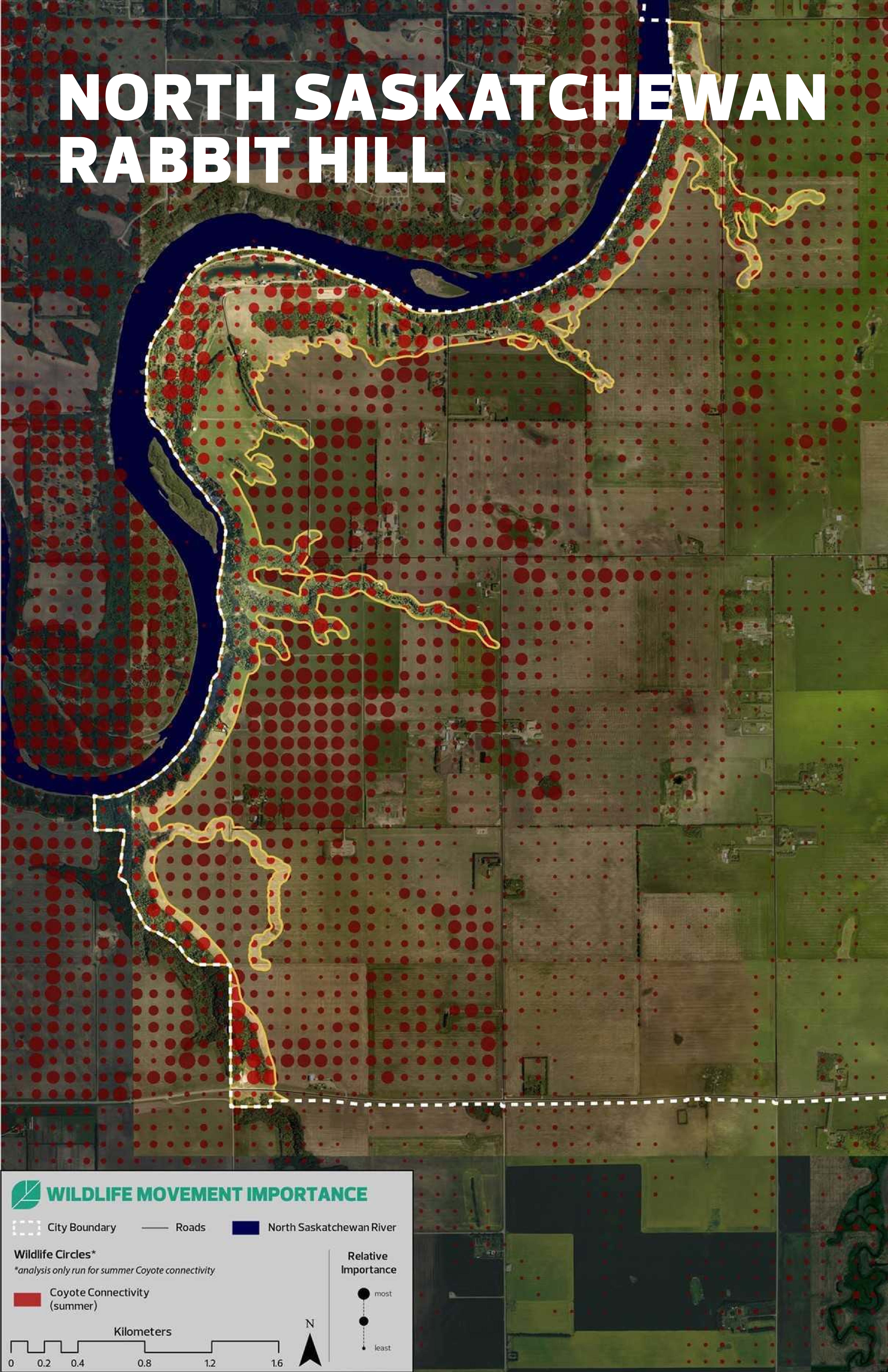
NORTH SASKATCHEWAN RABBIT HILL

NORTH SASKATCHEWAN
RABBIT HILL
ECOLOGY
Natural Area Rating
Very High
High
Moderate
Low
Kilometers
0
0.2
0.4
0.8
1.2
1.6
N

NORTH SASKATCHEWAN RABBIT HILL


NORTH SASKATCHEWAN
RABBIT HILL
ECOLOGY
Major Landslide Areas
Kilometers
0
0.2
0.4
0.8
1.2
1.6
N


NORTH SASKATCHEWAN
RABBIT HILL
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Coyote Connectivity Paths (summer)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.2
0.4
0.8
1.2
1.6
N


NORTH SASKATCHEWAN
RABBIT HILL
WILDLIFE MOVEMENT IMPORTANCE
City Boundary
Roads
North Saskatchewan River
Wildlife Circles*
*analysis only run for summer Coyote connectivity
Coyote Connectivity
(summer)
Relative
Importance
most
least
Kilometers
0
0.2
0.4
0.8
1.2
1.6
N

CELEBRATION

A restaurant at the Rabbit Hill Snow Resort provides a space to host smaller events, and the open flat agricultural lands above this area could accommodate other developments or gathering spaces. The Shalom Park Water Ski site, and Rabbit Hill Snow Resort are important draws of people into the area.

WELLNESS

nds are newly annexed into the city, and have not be subdivided, parklands have not been established in this reach. Trail development in appropriate areas could create an attractive draw for mountain bikers and other trail users, but care must be taken to ensure that such activities do not damage slopes or impact wildlife connectivity. In steeply sloped areas only top-of-bank trails would be appropriate.


NORTH SASKATCHEWAN
RABBIT HILL
CELEBRATION
City Boundary
North Saskatchewan River
Parks / Bridges / Trails
Restaurants
Roads
Kilometers
0 0.2 0.4 0.8 1.2 1.6
N


NORTH SASKATCHEWAN
RABBIT HILL
WELLNESS
City Boundary
Stairs / Trails / Bridges
Roads
Trails
(no Snow Clearing)
Parks and
Open Spaces
Ski Hills
Kilometers
0
0.2
0.4
0.8
1.2
1.6
N

CULTURE

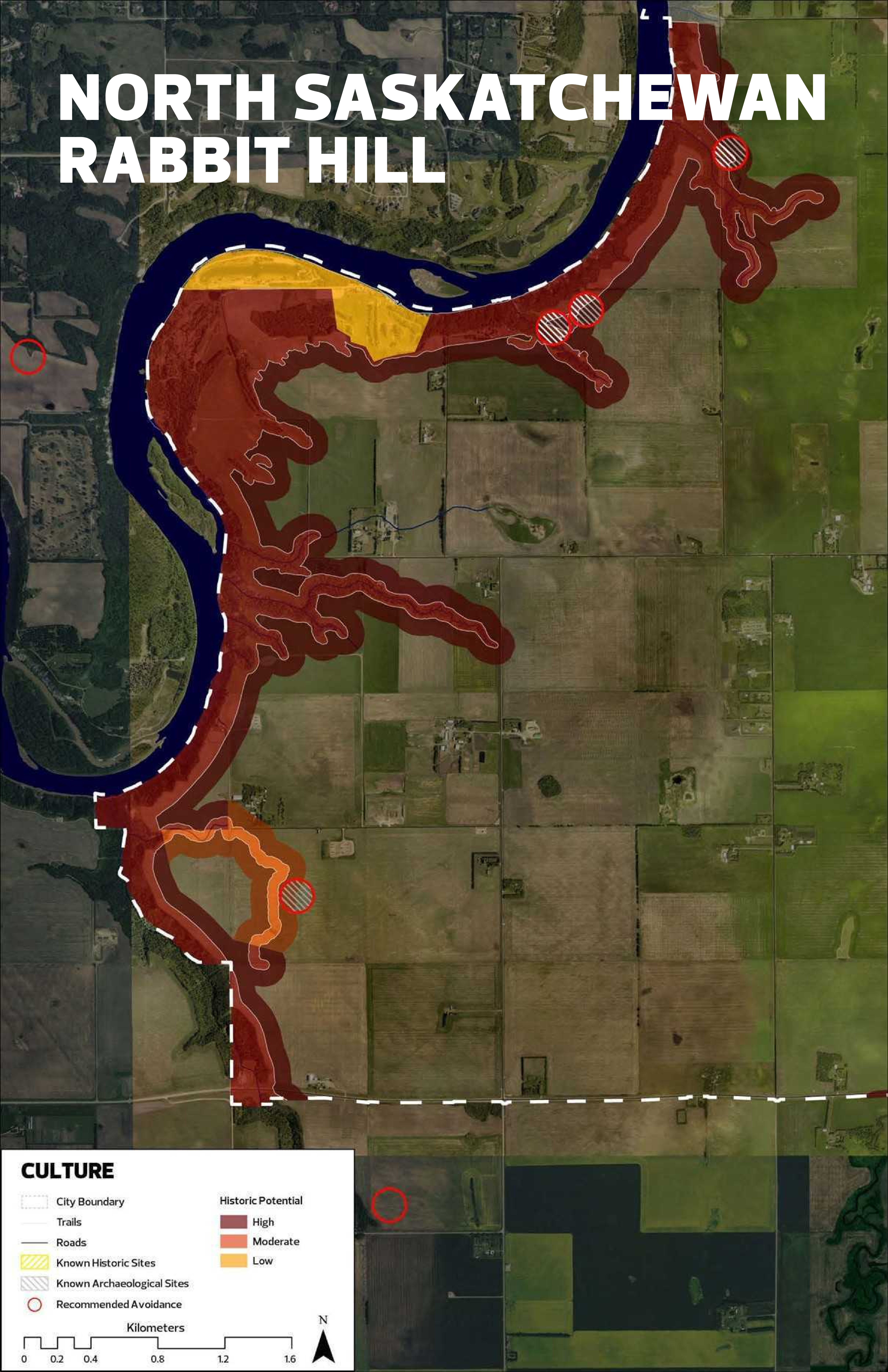
A handful of archaeological sites have been identified on the top-of-bank near the ravines. Most the slopes and top-of-bank areas have high potential to contain unknown historic sites, with the exception of more disturbed argricultural land and the Shalom Park Water Ski site, and Rabbit Hill Snow Resort area.

VISITATION AND POTENTIAL CONFLICTS

As much of the site is presently not publicly accessible, and steep valley slopes prevent easy access in any case, the highest visitation density in this area is restricted to the lands around the Shalom Park Water Ski site, and Rabbit Hill Snow Resort. Other pockets of visitation are sporadic and likely reflect use by nearby residents. The highly rated natural lands south of Shalom Park have potential to be in conflict with growing use of the area, and should be carefully monitored should the area be more broadly developed.

NORTH SASKATCHEWAN RABBIT HILL - FRACTION OF TOTAL RIBBON OF GREEN VISITATION

Q1 (JANUARY-MARCH)	Q2 (APRIL-JUNE)	Q3 (JULY-SEPTEMBER)	Q4 (OCTOBER-DECEMBER)
1.4%	0.6%	0.6%	1.4%


NORTH SASKATCHEWAN
RABBIT HILL
CULTURE
City Boundary
Trails
Roads
Known Historic Sites
Known Archaeological Sites
Recommended Avoidance
Historic Potential
High
Moderate
Low
Kilometers
0
0.2
0.4
0.8
1.2
1.6
N

NORTH SASKATCHEWAN
RABBIT HILL
RELATIVE VISTATION DENSITY
City Boundary
Trails
Roads
Streams
North Saskatchewan River
Less Use
Greater Use
Kilometers
0
0.2
0.4
0.8
1.2
1.6
N

NORTH SASKATCHEWAN
RABBIT HILL
POTENTIAL CONFLICT AREAS
Very Low
Low
Moderate
High
Very High
Kilometers
0
0.2
0.4
0.8
1.2
1.6
N

BIG LAKE

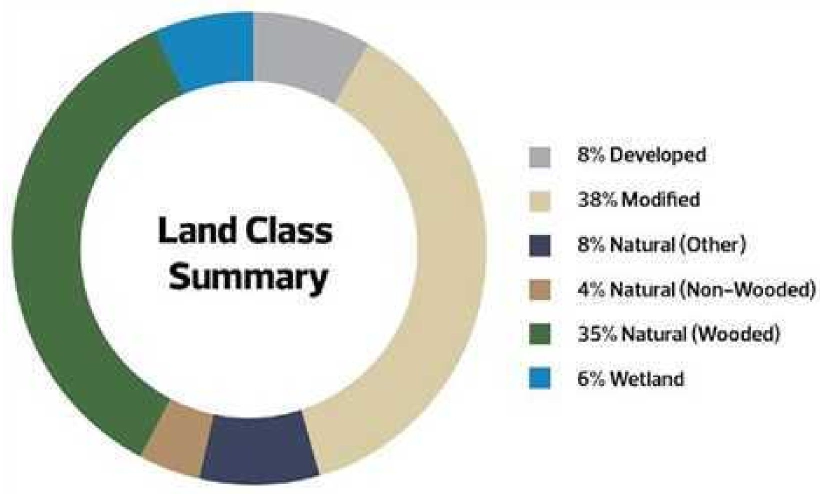
Big Lake Reach Overview

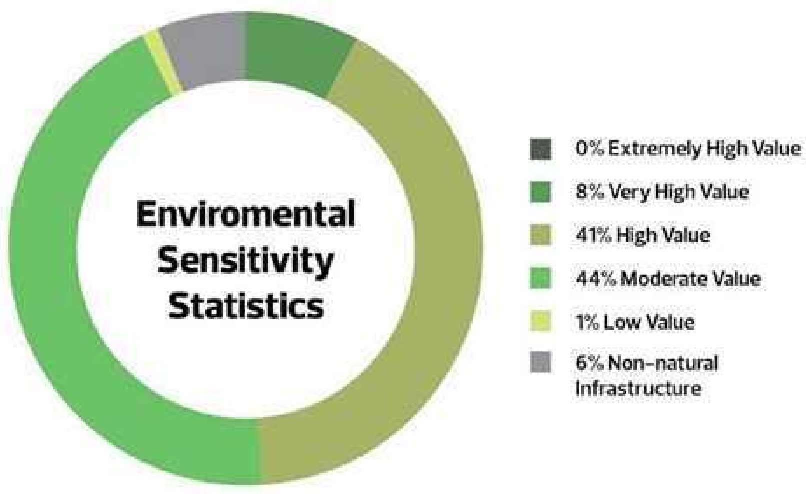
The Big Lake Reach is located in the northwest of Edmonton. Outside of the city border lies the Lois Hole Centennial Provincial Park, formerly the Big Lake Natural Area, a provincially recognized Important Bird Area. Big Lake extends over 8km long, and is 3km wide at its widest. Extensive high quality wetlands surrounding the lake itself provide ample habitat for a wide diversity of species, making this area regionally important. The City of St. Albert lies eastwards, built around the Sturgeon River which flows northeast, eventually draining into the North Saskatchewan through the Horsehills North reach.

This area is a regionally important natural destination, providing recreation and educational opportunities through its intact ecosystem. In the Big Lake Reach area, few amenities or recreational assets exist. Growing residential development to the south and potential recreational linkages to Edmonton's active transportation network will likely put pressure on this area in the years to come.

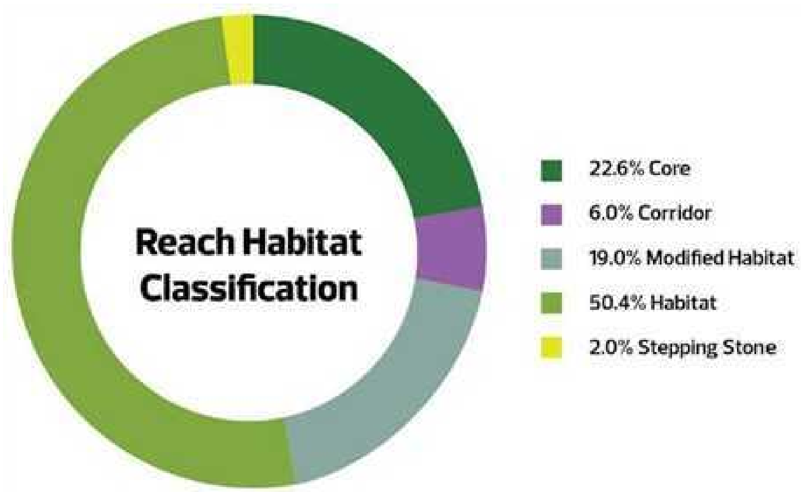
REACH	CELEBRATION	WELLNESS	ECOLOGY
Big Lake		**1** Golf Course Clubhouse **TRAILS** 30 km Seasonal 31 km Year-Round 22 km Cross-Country	**Total Area:** 330.6 ha (100%) **Developed and Modified Land Use:** 157.1 ha (48%) **Wetlands:** 0.0 (0%) **Tree Canopy:** 148.7 ha (45%) **Unique Vegetation:** 44.7 ha (14%) **Connectivity Pinchpoints:** 0.0 ha (0%) **Wildlife Corridor:** 79.5 ha (24%) **Naturalized Spaces:** 0.0 ha (0%) **Natural Area:** 173.5 (52%) **City-Owned Parks:** 0.0 ha (0%)

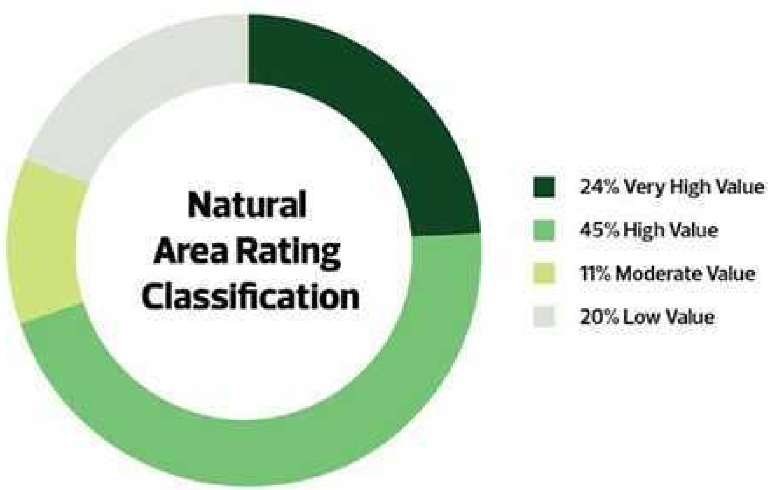
Big Lake – Land Class and Environmental Sensitivity Summary





Big Lake – Reach Habitat and Natural Area Rating Classifcation

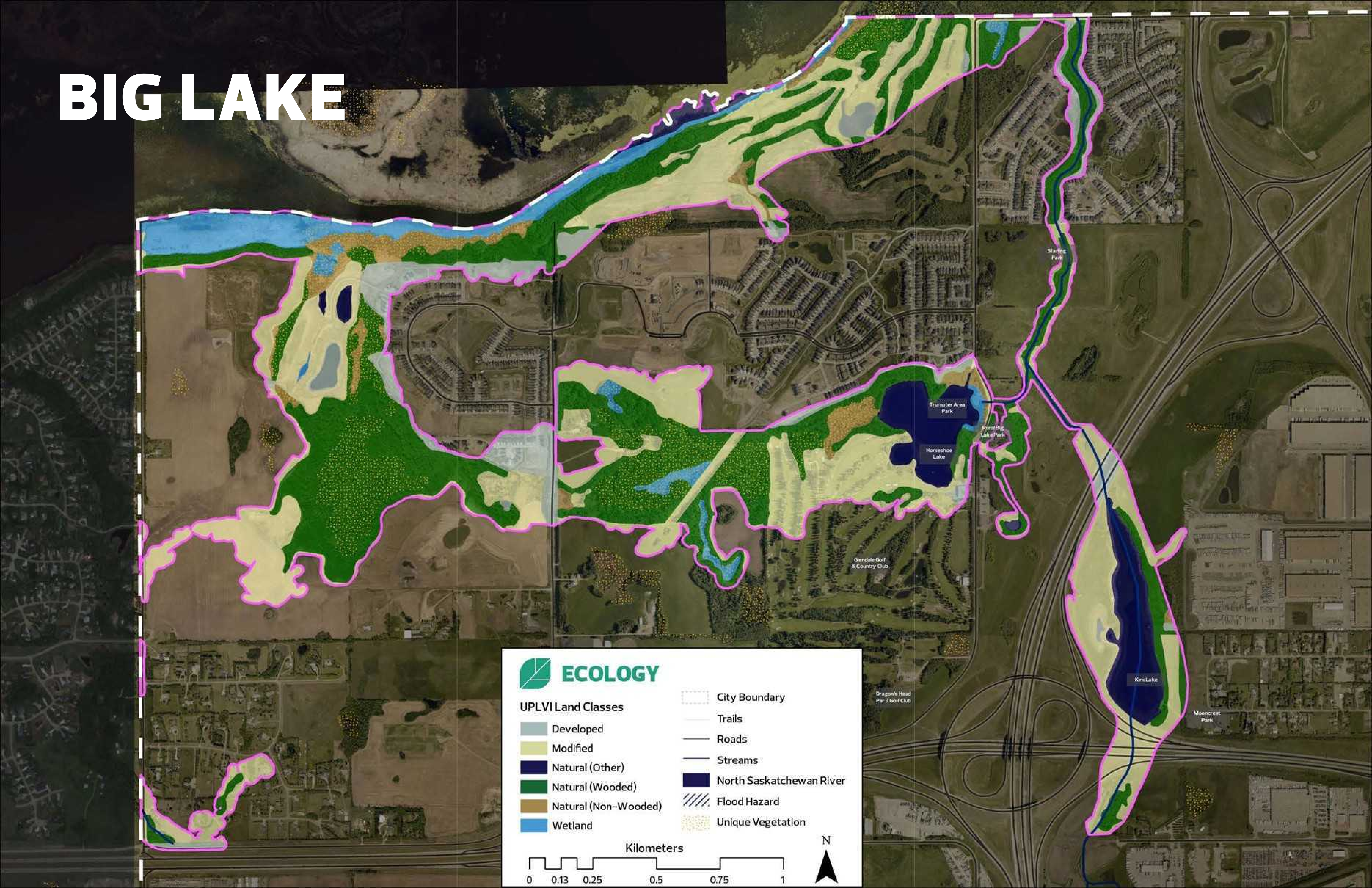


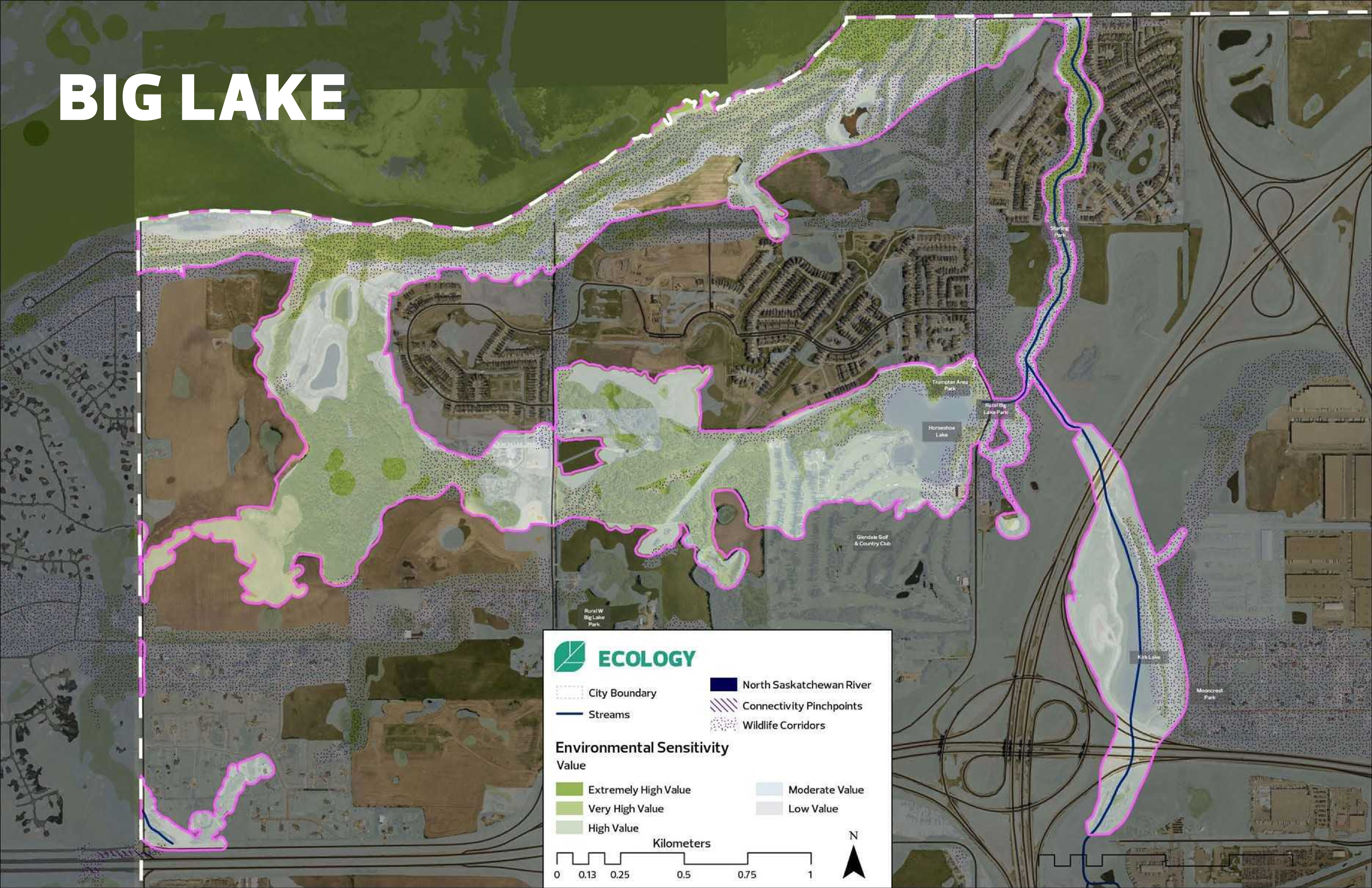


ECOLOGY

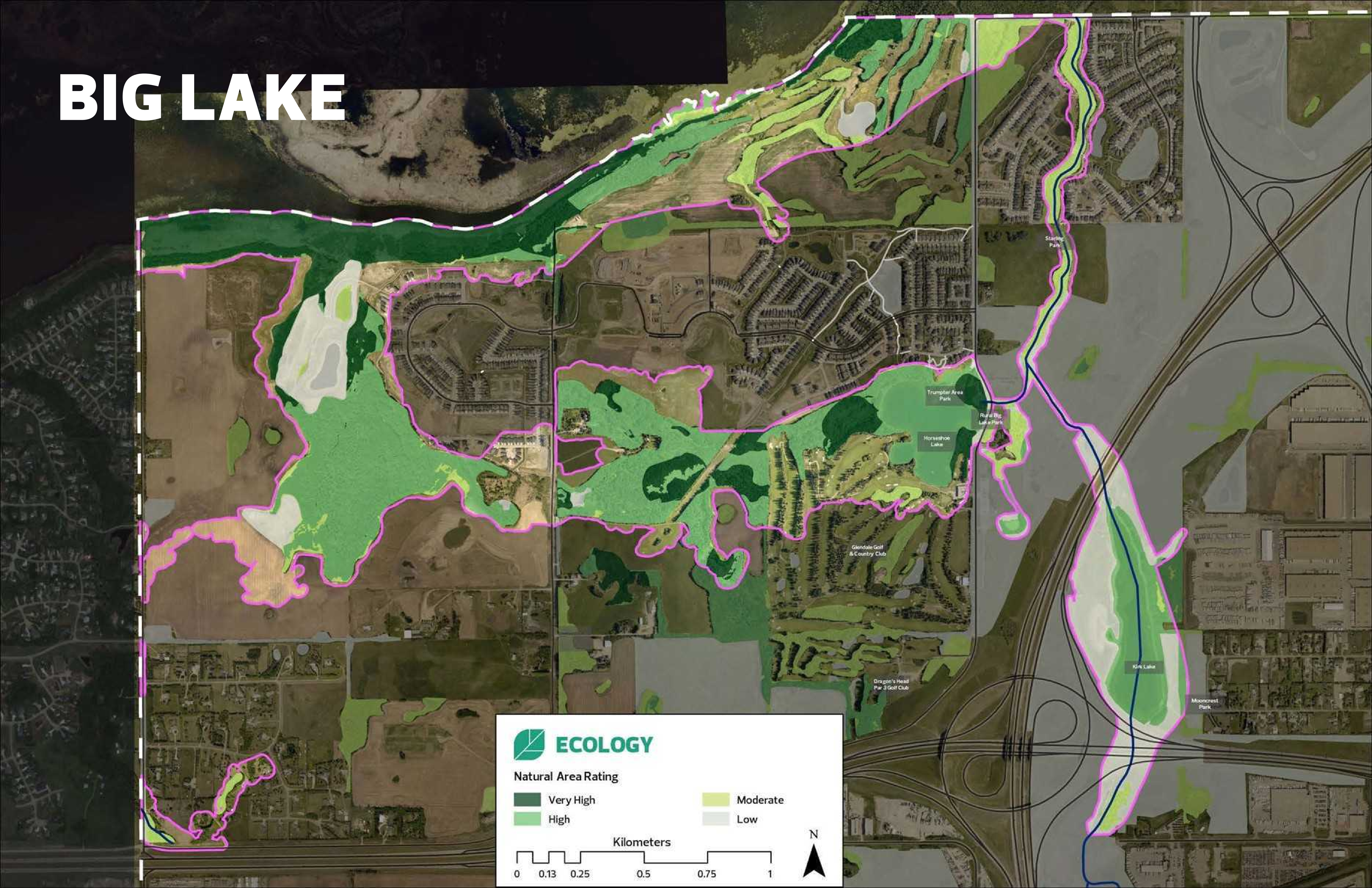
The Big Lake area is a regionally important natural area, serving as an important migratory destination, while providing habitat year round to a host of native species. The wetlands in the northern portion of the reach is an irreplaceable resource for the region, and the preservation of these lands is highly important. Active development in the lands surrounding this area make effective and timely preservation of the natural functioning of this area a high priority. While portions of this area are already protected as parkland, large forested areas in the centre of the reach remain without formal protection. As development in the surrounding lands pose the risk of disruption to the natural hydrologic regime of the area, a clear understanding of the these impacts must be established to ensure that the wetlands are not compromised. With increasing residential population in the area, over-use impacts are likely without a formal trail network. Agricultural lands in the centre and northeast, and the Glendale Golf and Country Club in the southeast of the reach pose challenges to connectivity and pose runoff concerns into the surrounding area. Modified habitat in the centre of the reach should be naturalized to increase the connectivity of this landscape. The lands to the north, adjacent to the wetlands, are a critical wildlife corridor that must be maintained.

BIG LAKE


ECOLOGY
UPLVI Land Classes
Developed
Modified
Natural (Other)
Natural (Wooded)
Natural (Non-Wooded)
Wetland
City Boundary
Trails
Roads
Streams
North Saskatchewan River
Flood Hazard
Unique Vegetation
Kilometers
0 0.13 0.25 0.5 0.75 1
N
Trumpter Area Park
Horseshoe Lake
Kirk Lake
Glendale Golf & Country Club
Dragon's Head Par 3 Golf Club
Mooncrest Park

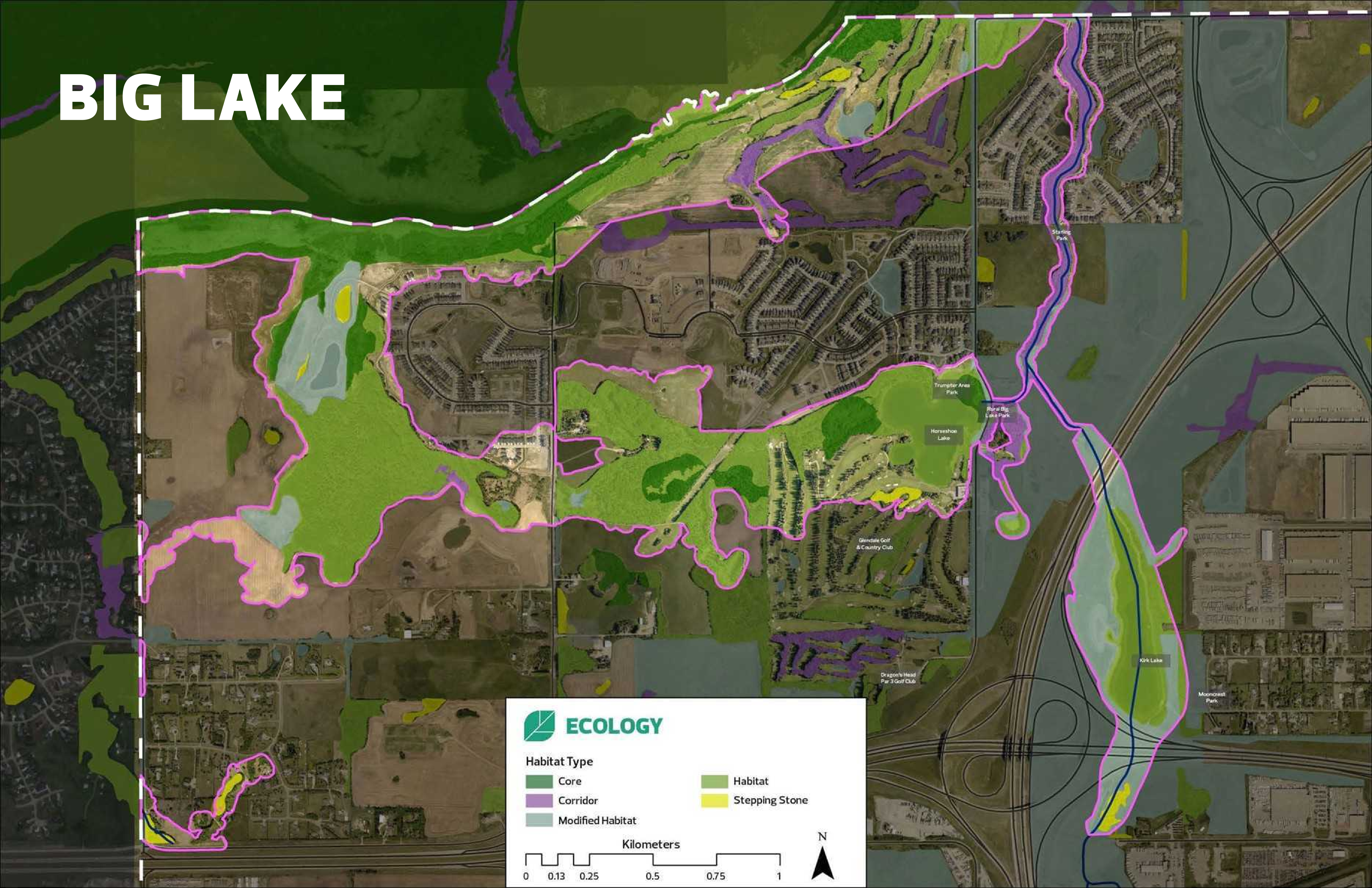

BIG LAKE
Starling Park
Trumpeter Area Park
Rural Big Lake Park
Horseshoe Lake
Glendale Golf & Country Club
Rural W Big Lake Park
Kirk Lake
Mooncrest Park
ECOLOGY
City Boundary
Streams
North Saskatchewan River
Connectivity Pinchpoints
Wildlife Corridors
Environmental Sensitivity
Value
Extremely High Value
Very High Value
High Value
Moderate Value
Low Value
Kilometers
0
0.13
0.25
0.5
0.75
1
N

BIG LAKE



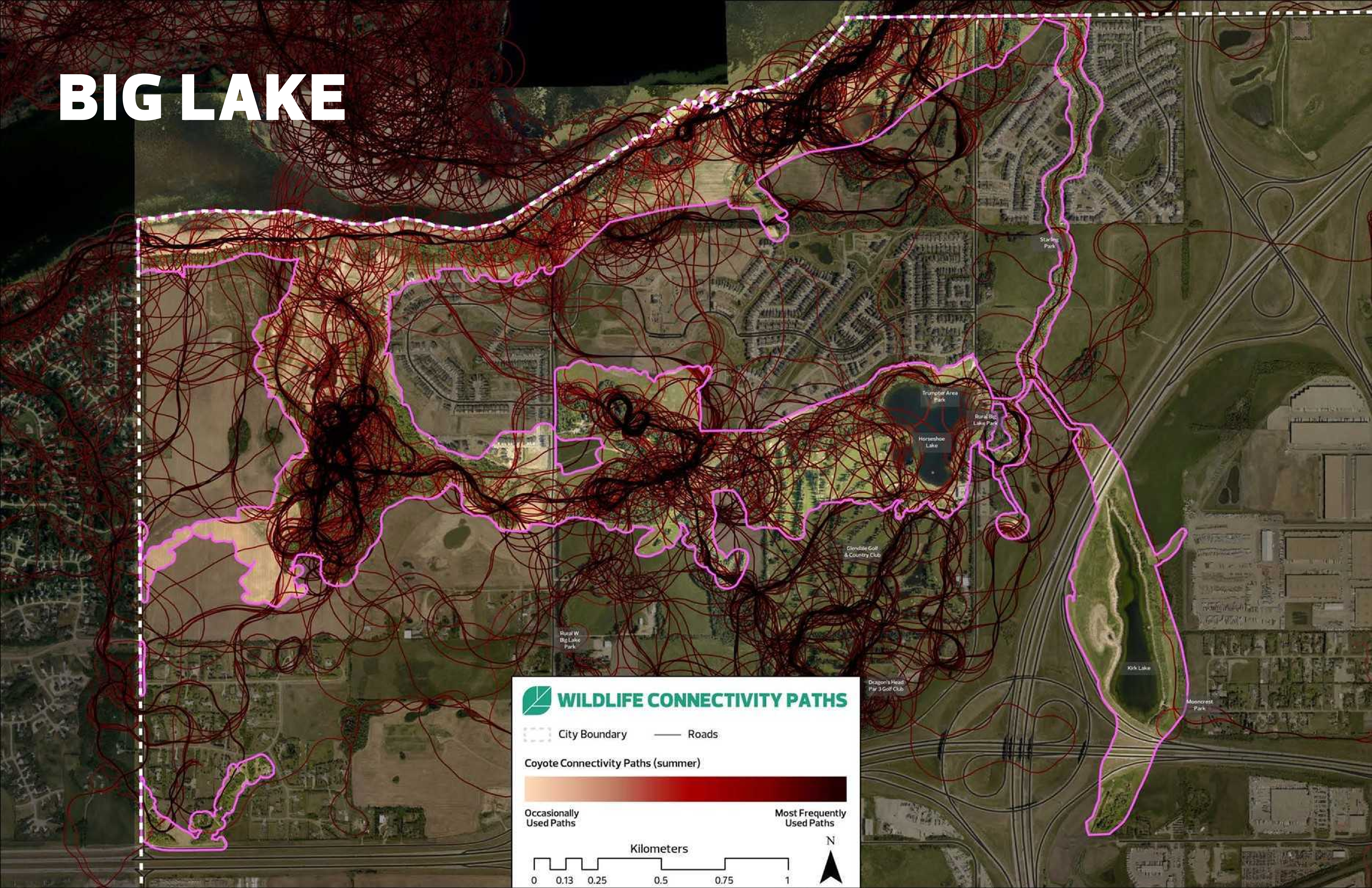
Starling Park
Trumpeter Area Park
Rural Big Lake Park
Horseshoe Lake
Glendale Golf & Country Club
Dragon's Head Par 3 Golf Club
Kirk Lake
Mooncrest Park
ECOLOGY
Natural Area Rating
Very High
High
Moderate
Low
Kilometers
0
0.13
0.25
0.5
0.75
1
N

BIG LAKE

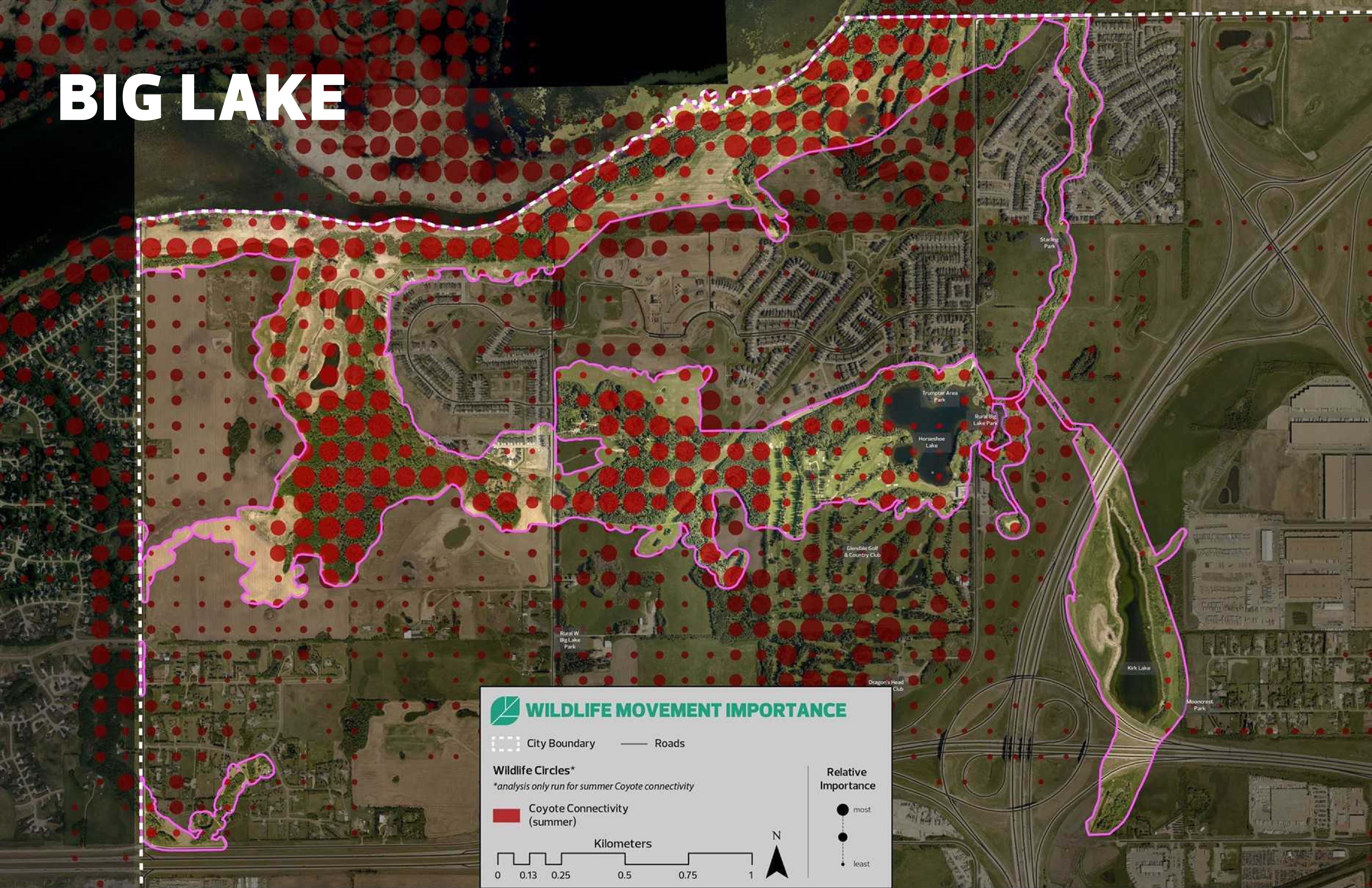


Starling Park
Trumpeter Area Park
Rural Big Lake Park
Horseshoe Lake
Glendale Golf & Country Club
Dragon's Head Par 3 Golf Club
Kirk Lake
Mooncrest Park
ECOLOGY
Habitat Type
Core
Corridor
Modified Habitat
Habitat
Stepping Stone
Kilometers
0
0.13
0.25
0.5
0.75
1
N


BIG LAKE
Starling Park
Trumpter Area Park
Rural Big Lake Park
Horseshoe Lake
Glendale Golf & Country Club
Dragon's Head Par 3 Golf Club
Kirk Lake
Mooncrest Park
ECOLOGY
Major Landslide Areas
Kilometers
0 0.13 0.25 0.5 0.75 1
N



BIG LAKE
Starling Park
Trumpeter Area Park
Rural Big Lake Park
Horseshoe Lake
Glendale Golf & Country Club
Rural W Big Lake Park
Dragon's Head Par 3 Golf Club
Kirk Lake
Mooncrest Park
WILDLIFE CONNECTIVITY PATHS
City Boundary
Roads
Coyote Connectivity Paths (summer)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.13
0.25
0.5
0.75
1
N



BIG LAKE
Starling Park
Trumpter Area Park
Rural Big Lake Park
Horseshoe Lake
Glendale Golf & Country Club
Rural W Big Lake Park
Dragon's Head Club
Kirk Lake
Mooncrest Park
WILDLIFE MOVEMENT IMPORTANCE
City Boundary
Roads
Wildlife Circles*
*analysis only run for summer Coyote connectivity
Coyote Connectivity (summer)
Relative Importance
most
least
Kilometers
0
0.13
0.25
0.5
0.75
1
N

CELEBRATION

As this area has only recently seen development, amenities that support celebration functions have not been well-established. The Glendale Golf and Country Club is the sole formal gathering space, but is not publicly-accessible.

Modified vegetation in the west, and agricultural lands in the west and north of the reach provide the potential to be developed into event spaces, provided such uses do not compromise the natural function of the area.

WELLNESS

As the area has only recent seen development, the area lacks a formal trail system, or any other recreational amenities. The inherent natural character of the landscape provides an irreplaceable attraction for the city. This reach could provide a gateway into the broader natural area beyond. As use of this area is expected to greatly increase following subsequent residential development, care must be taken to ensure that development and use of these natural spaces is sustainable and well-managed.


BIG LAKE
Starling Park
Trumpeter Area Park
Rural Big Lake Park
Horseshoe Lake
Glendale Golf & Country Club
Rural W Big Lake Park
Dragon's Head Par 3 Golf Club
Kirk Lake
Mooncrest Park
CELEBRATION
City Boundary
Parks / Bridges / Trails
Roads
Kilometers
0
0.13
0.25
0.5
0.75
1
N

BIG LAKE

Starling Park
Trumpeter Area Park
Rural Big Lake Park
Horseshoe Lake
Glendale Golf & Country Club
Rural W Big Lake Park
Dragon's Head Par 3 Golf Club
Kirk Lake
Mooncrest Park
WELLNESS
City Boundary
Stairs / Trails / Bridges
Roads
Trails
(no Snow Clearing)
Parks and Open Spaces
Golf Course Clubhouse
Kilometers
0
0.13
0.25
0.5
0.75
1
N

BIG LAKE
Starling Park
Trumpter Area Park
Rural Big Lake Park
Horseshoe Lake
Glendale Golf & Country Club
Rural W Big Lake Park
Dragon's Head Par 3 Golf Club
Kirk Lake
Mooncrest Park
TRAILS
City Boundary
Roads
Formal City Maintained Trails
Kilometers
0
0.13
0.25
0.5
0.75
1
N

CULTURE

Significant archaeological sites have been identified throughout the reach, along the stream, and at the edge of the natural/agricultural interface. With the exception of modified landscapes in the southwest of the reach, the entire area has high potential to contain other unknown historic sites

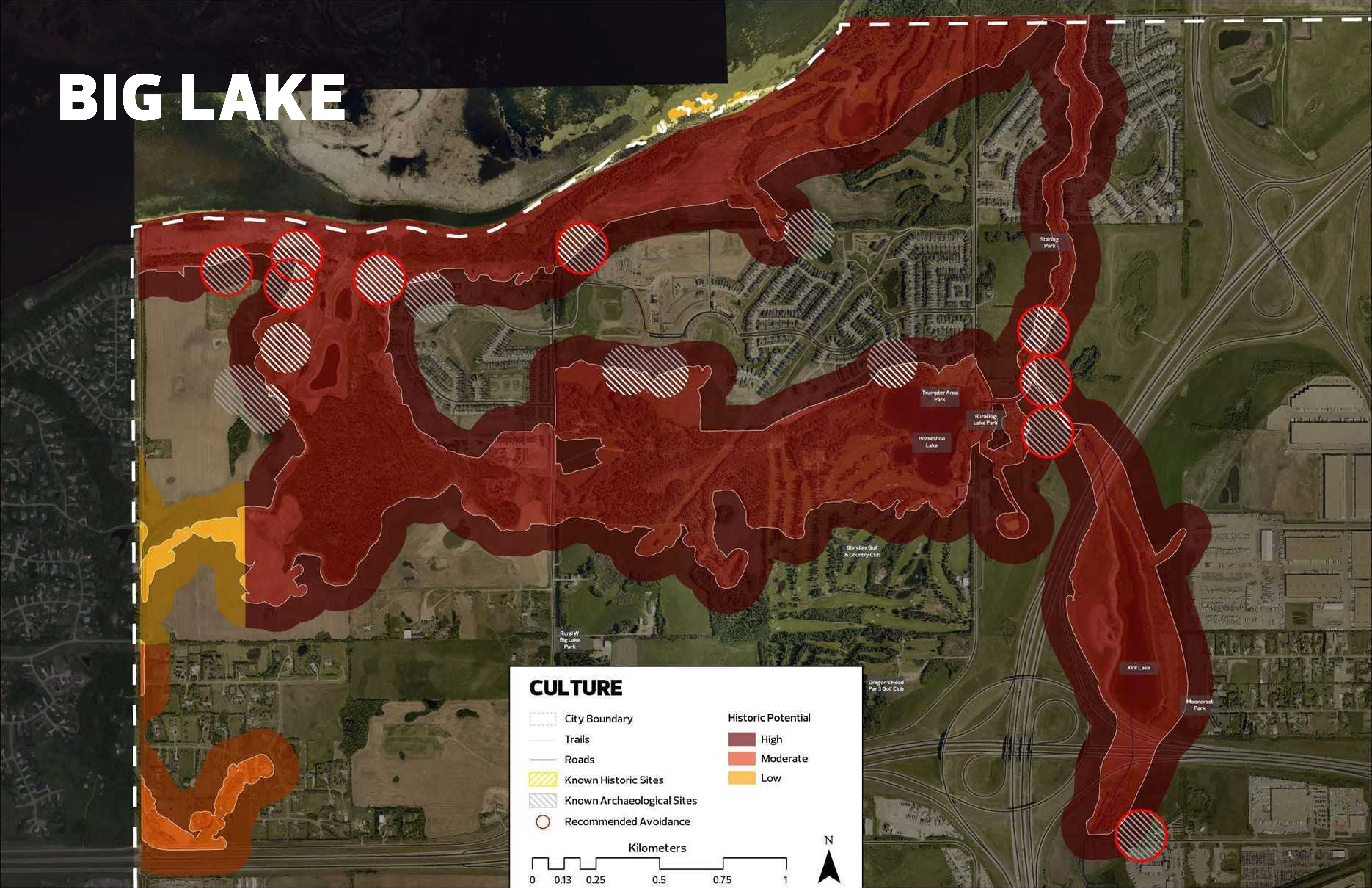
VISITATION AND POTENTIAL CONFLICTS

Visitation to this reach is currently very low, with hotspots at the edge of the residential areas. The high ecological value of the wetland and forest areas of this reach mean that there is very high potential for conflict as usage of these lands increases following residential development. Careful monitoring and management will be needed.

BIG LAKE – FRACTION OF TOTAL RIBBON OF GREEN VISITATION

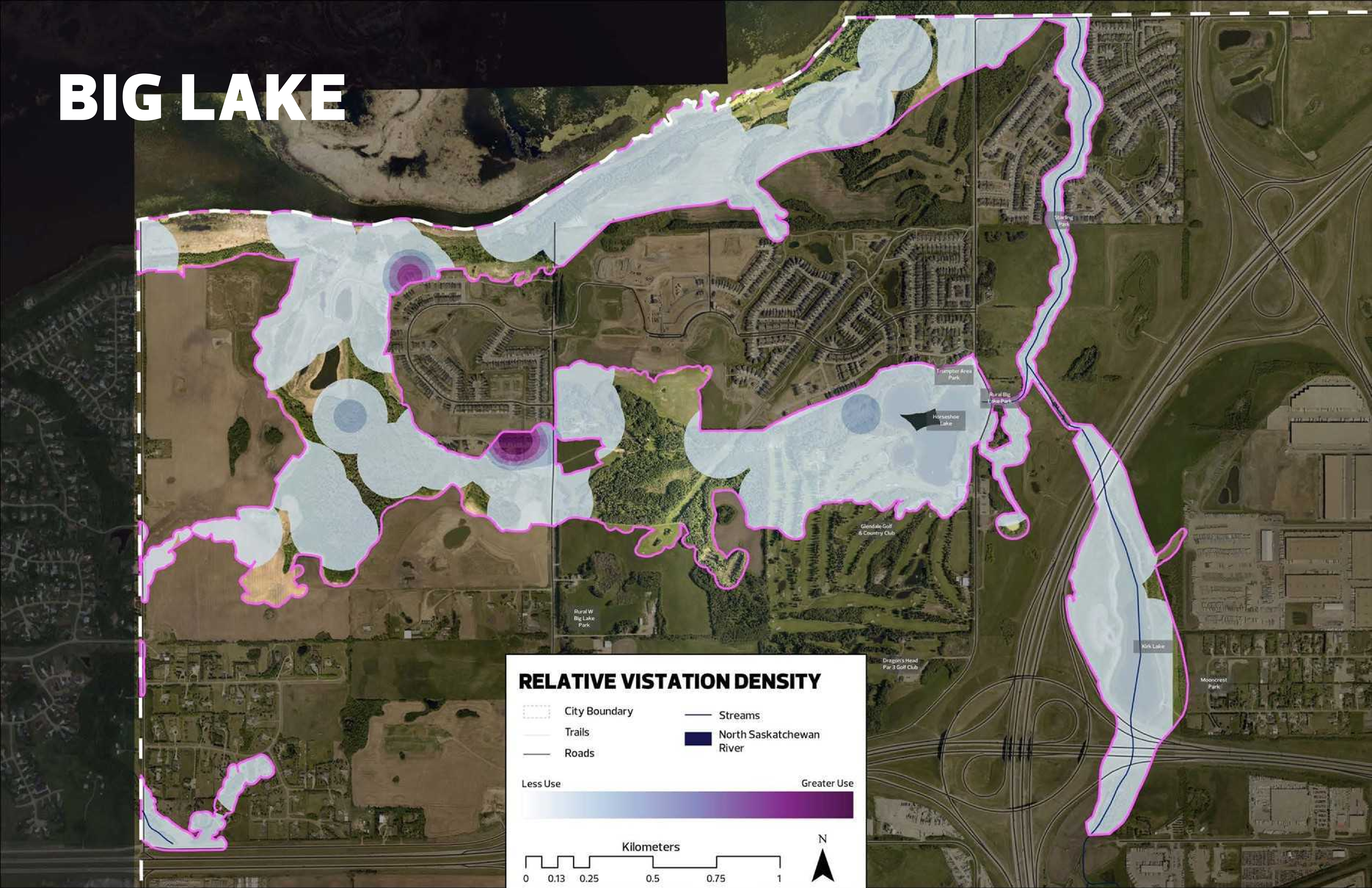
Q1 (JANUARY–MARCH)	Q2 (APRIL–JUNE)	Q3 (JULY–SEPTEMBER)	Q4 (OCTOBER–DECEMBER)
5.9%	5.1%	8.2%	11.5%

BIG LAKE

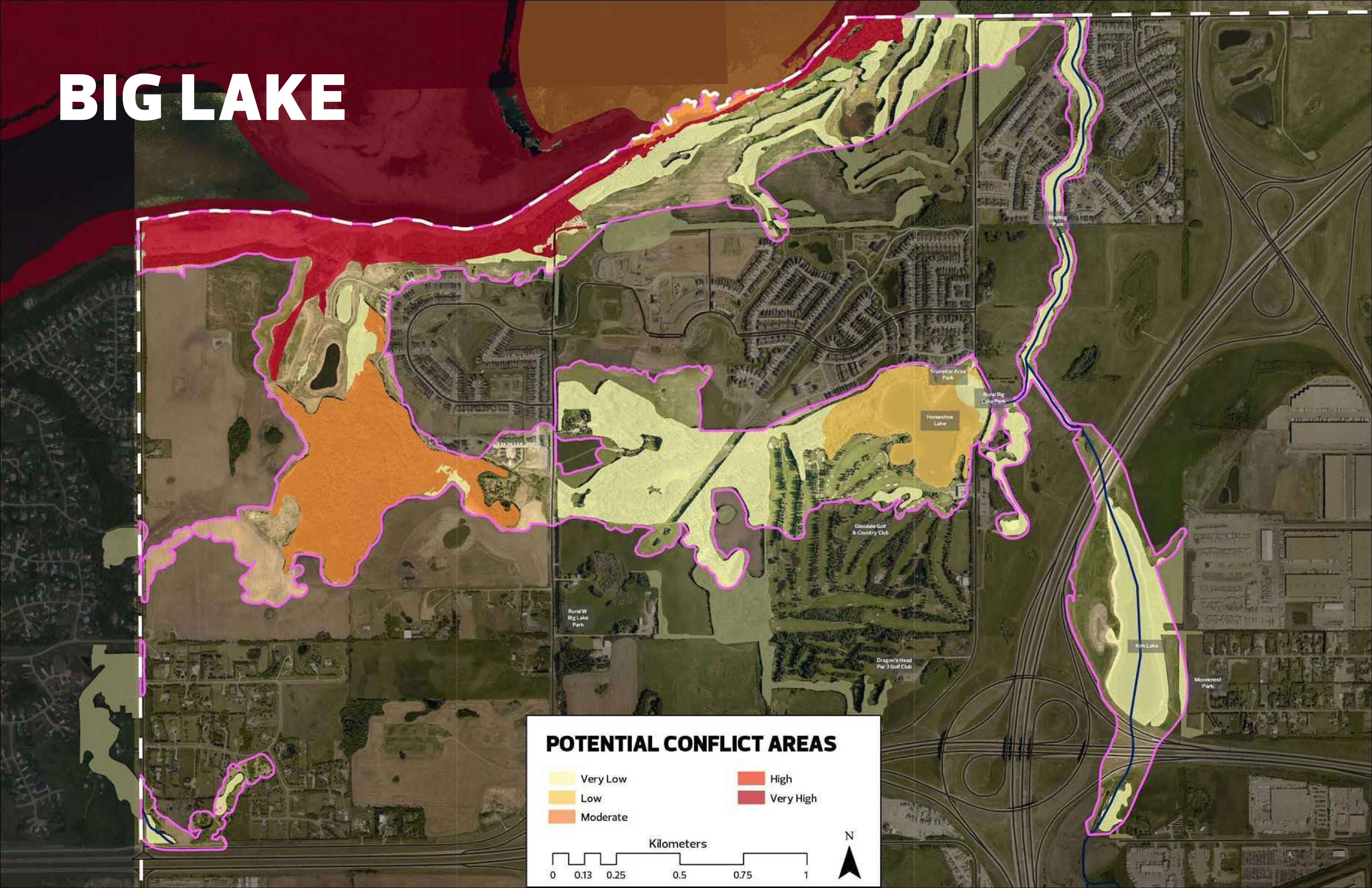


Starling Park
Trumpter Area Park
Rural Big Lake Park
Horseshoe Lake
Glendale Golf & Country Club
Rural W Big Lake Park
Dragon's Head Par 3 Golf Club
Kirk Lake
Mooncrest Park
CULTURE
City Boundary
Trails
Roads
Known Historic Sites
Known Archaeological Sites
Recommended Avoidance
Historic Potential
High
Moderate
Low
Kilometers
0
0.13
0.25
0.5
0.75
1
N

BIG LAKE



RELATIVE VISTATION DENSITY
City Boundary
Trails
Roads
Streams
North Saskatchewan River
Less Use
Greater Use
Kilometers
0
0.13
0.25
0.5
0.75
1
N
Starling Park
Trumpeter Area Park
Rural Big Lake Park
Horseshoe Lake
Glendale Golf & Country Club
Rural W Big Lake Park
Dragon's Head Par 3 Golf Club
Kirk Lake
Mooncrest Park


BIG LAKE
Starling Park
Trumpter Area Park
Rural Big Lake Park
Horseshoe Lake
Glendale Golf & Country Club
Rural W Big Lake Park
Dragon's Head Par 3 Golf Club
Kirk Lake
Mooncrest Park
POTENTIAL CONFLICT AREAS
Very Low
Low
Moderate
High
Very High
Kilometers
0
0.13
0.25
0.5
0.75
1
N

HORSEHILLS CREEK NORTH

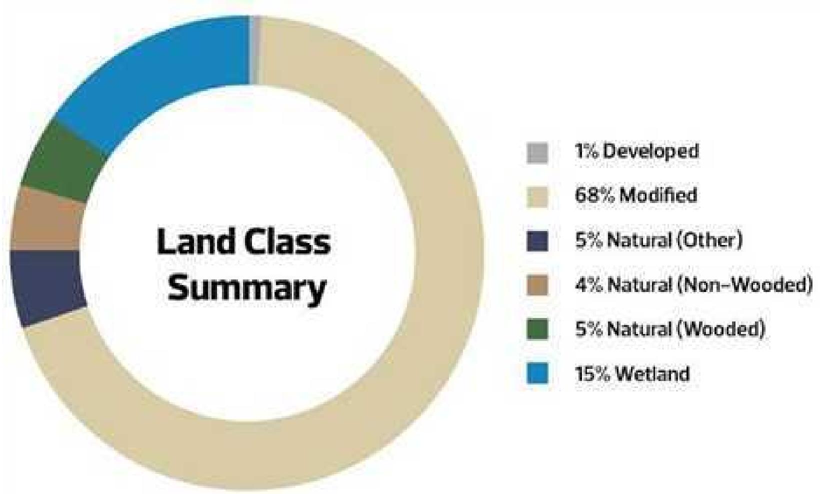
Horsehills Creek North Reach Overview

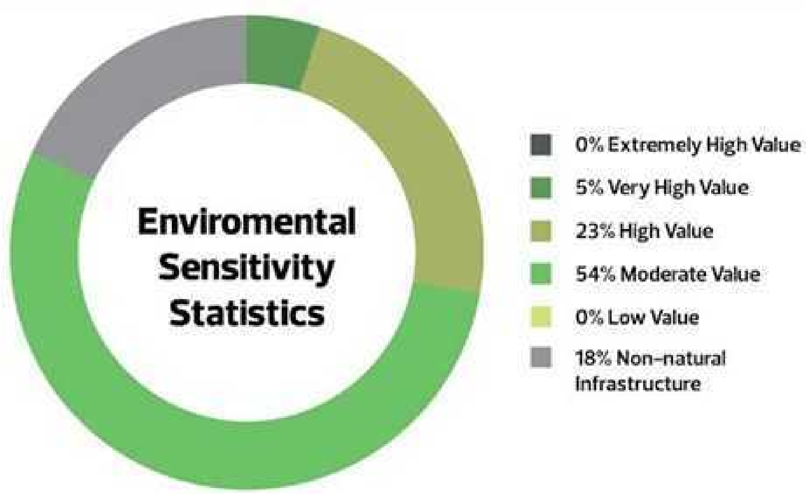
Horsehills North Reach covers the branching upstream areas of Horsehills creek, extending past the Horsehills South Reach, a part of the Ribbon of Green NE study. These lands connect the outflow of the Big Lake watershed into the North Saskatchewan River. Predominantly agricultural fields, the surrounding lands are slated for residential development in the years to come, making the preservation of water quality and natural connectivity into the River Valley a priority.

Nearly a third of the reach is considered to be natural area, however only 9% falls within City-owned parks and open space. No naturalization work has been conducted to date in disturbed areas. Formal protection of the riparian areas and waterways in this reach will help ensure they are not impacted by development.

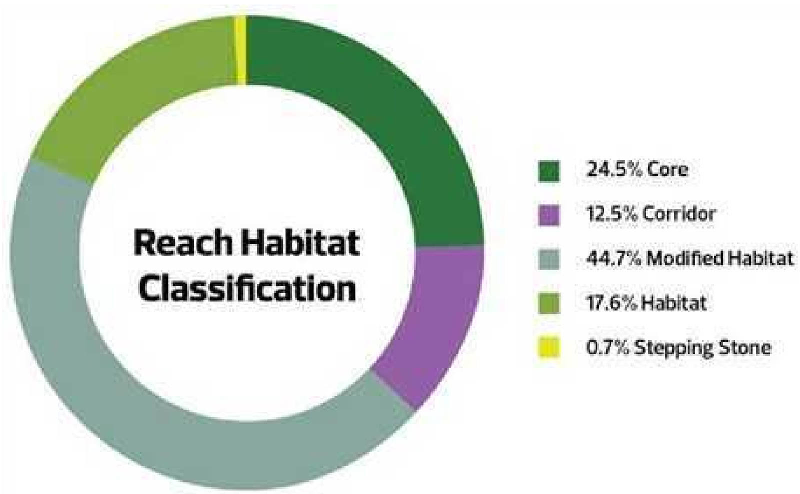
REACH	CELEBRATION	WELLNESS	ECOLOGY
Horsehills Creek North			**Total Area:** 656.6 ha (100%) **Developed and Modified Land Use:** 458.1 ha (70%) **Wetlands:** 35.8 (5%) **Tree Canopy:** 69.7 ha (11%) **Unique Vegetation:** 102.1 ha (16%) **Connectivity Pinchpoints:** 1.4 ha (<1%) **Wildlife Corridor:** 89.3 ha (14%) **Naturalized Spaces:** 0.0 ha (0%) **Natural Area:** 198.4 (30%) **City-Owned Parks:** 18.4 ha (9%)

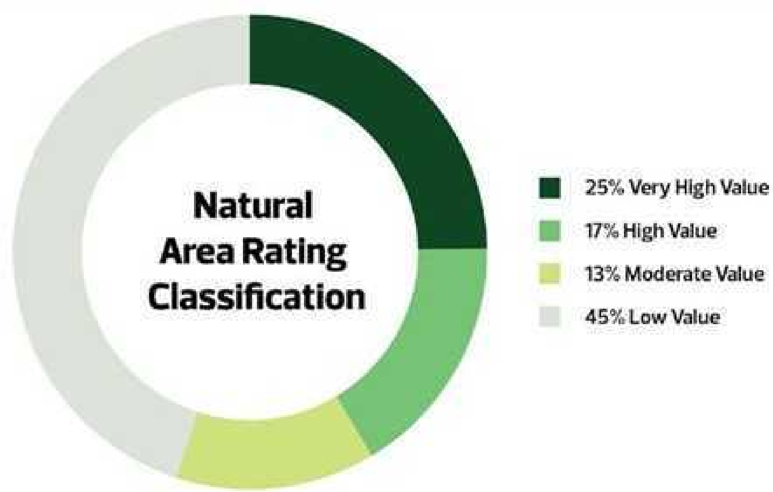
Horsehills Creek North – Land Class and Environmental Sensitivity Summary





Horsehills Creek North – Reach Habitat and Natural Area Rating Classification

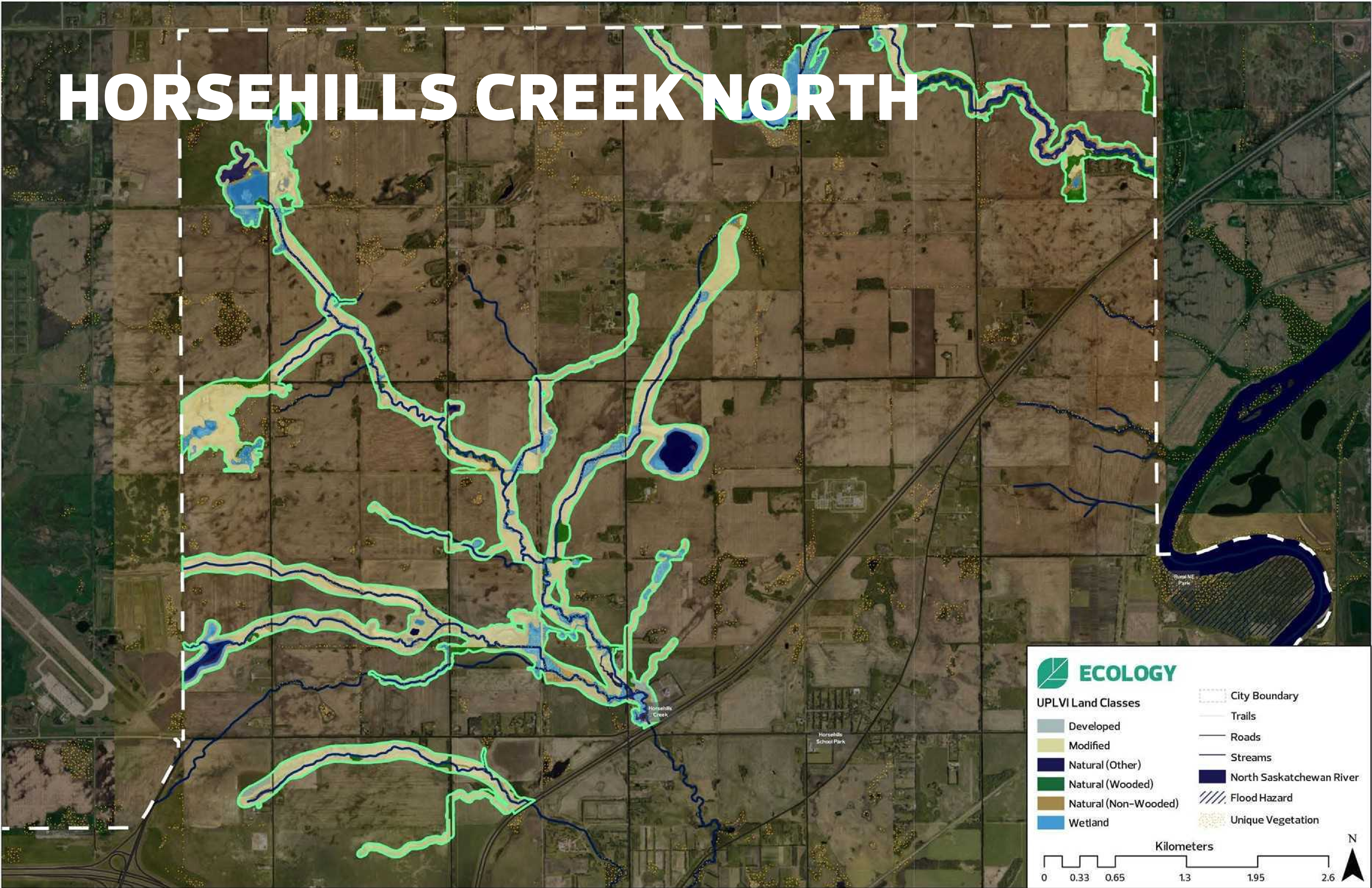




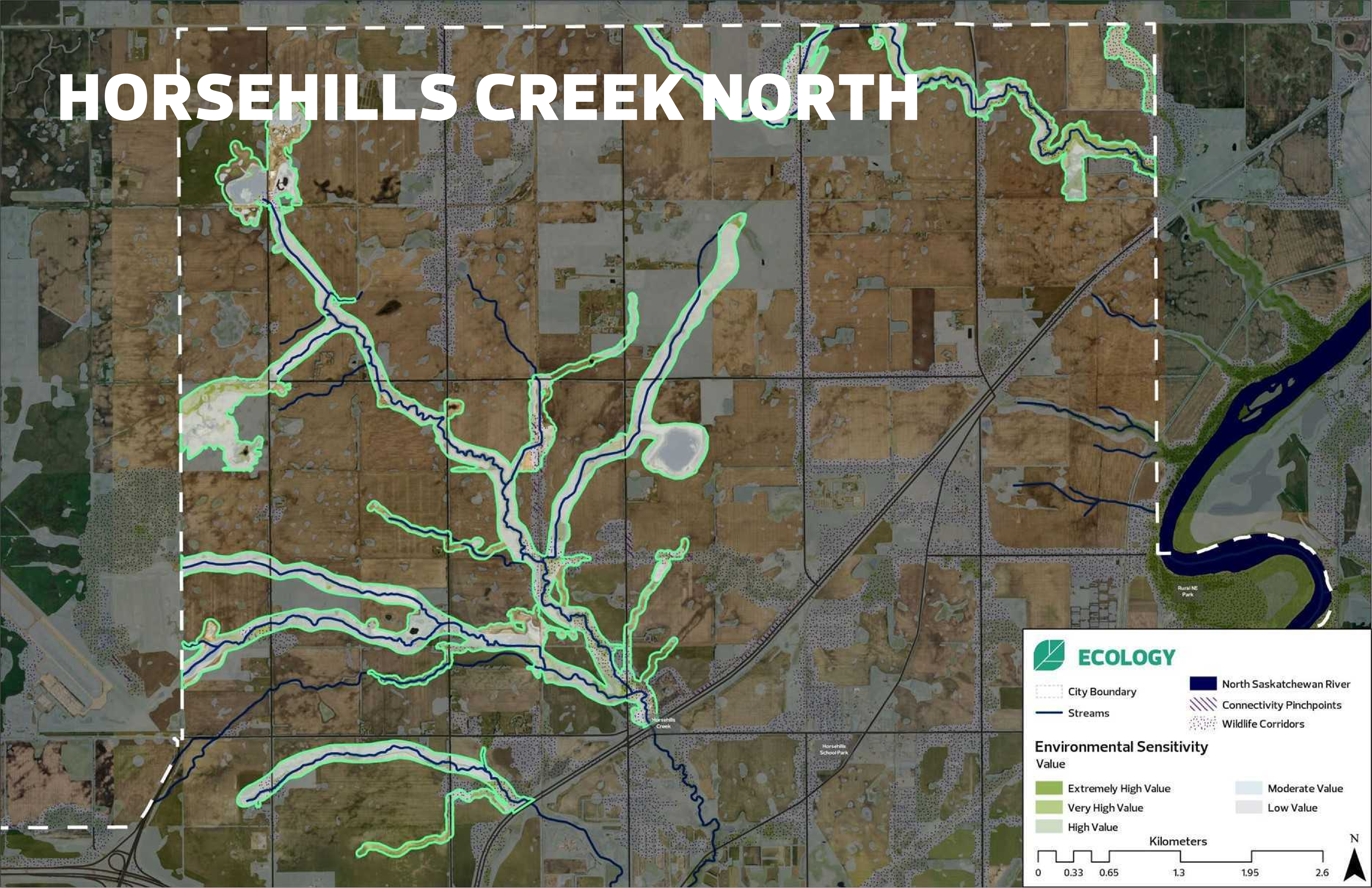
ECOLOGY

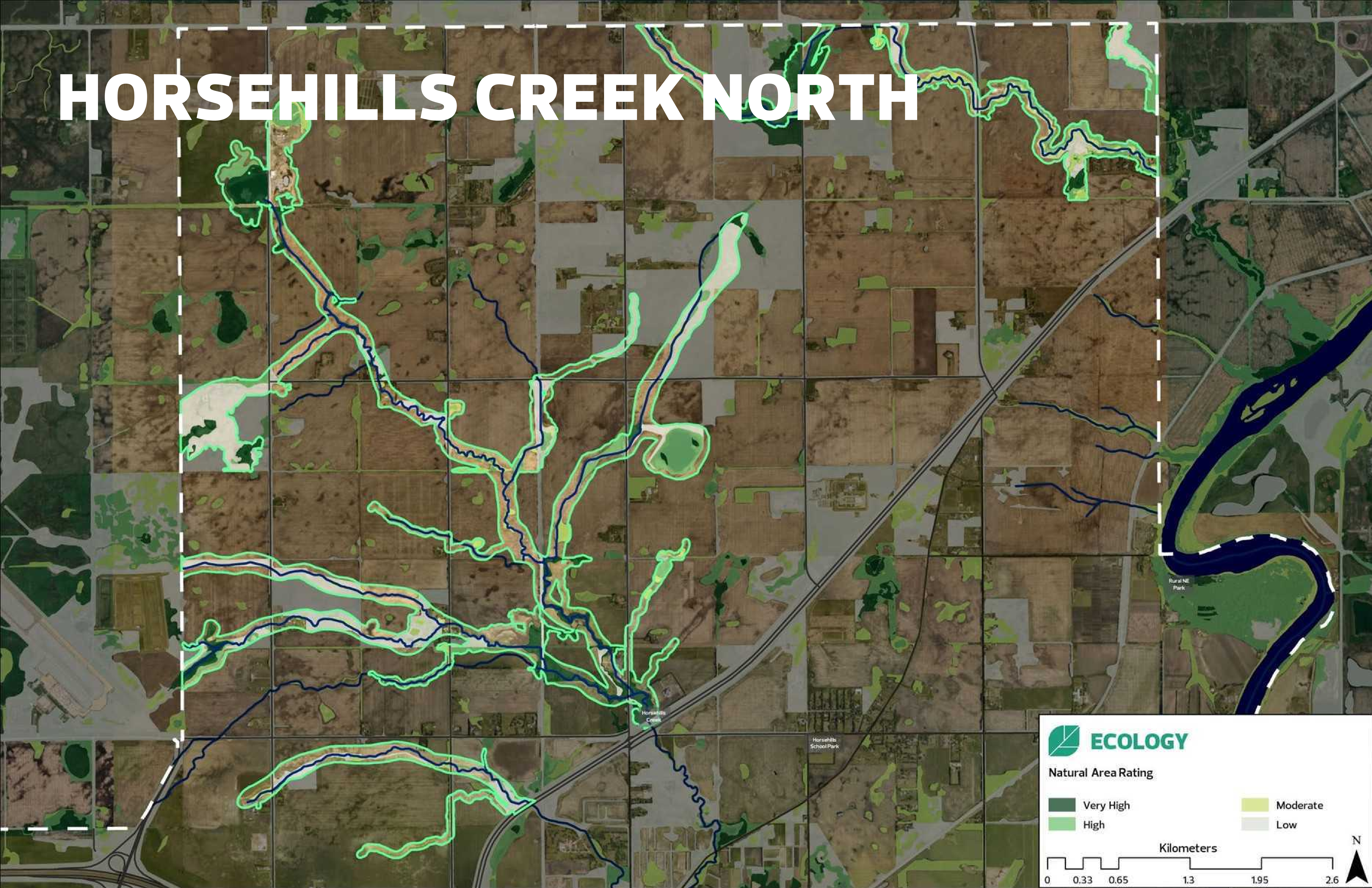
The Horsehills Creek North Reach consists of small, meandering streams fed from water flowing from the Big Lake area. Presently dominated by agricultural fields, the area contains a large number of important wetlands that pose management challenges given their proximity to the armed forces base to the west. As the area is slated for residential development, there is a pressing need to establish effective setback from the stream channels to ensure that their hydrological regime is not compromised and the remaining natural areas lost. As these streams are shallow, with minimal banks, the City's existing top-of-bank policy is insufficient to ensure their protection. An assessment of the catchment areas of these streams will help better delimit appropriate development in the surrounding areas, and help preserve these riparian areas to ensure they act as core habitat. Complementary permeable open space uses in the surrounding lands should be sought out to ensure waterbodies and wetlands receive sufficient groundwater flow.

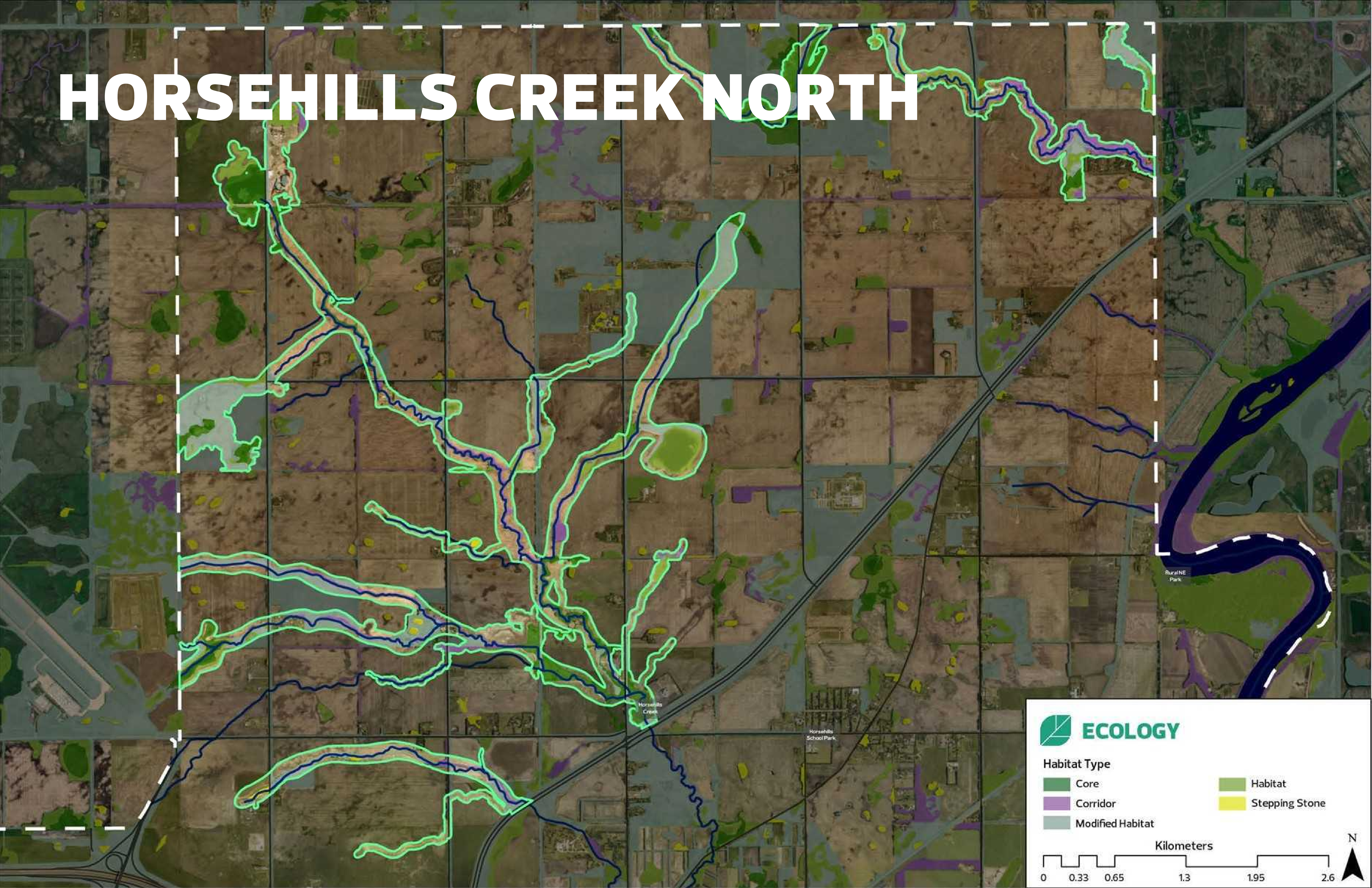
As the surrounding lands are currently agricultural, the streams themselves do not serve as wildlife corridors. However, as surrounding lands are developed this will place increasing pressure on wildlife as their traditional routes are disrupted by development roads, and human use. Retaining a connected network of well-vegetated riparian areas will be essential. Naturalization of agricultural lands along banks will create more continuous natural cover, and buffer existing core habitat from disturbance.

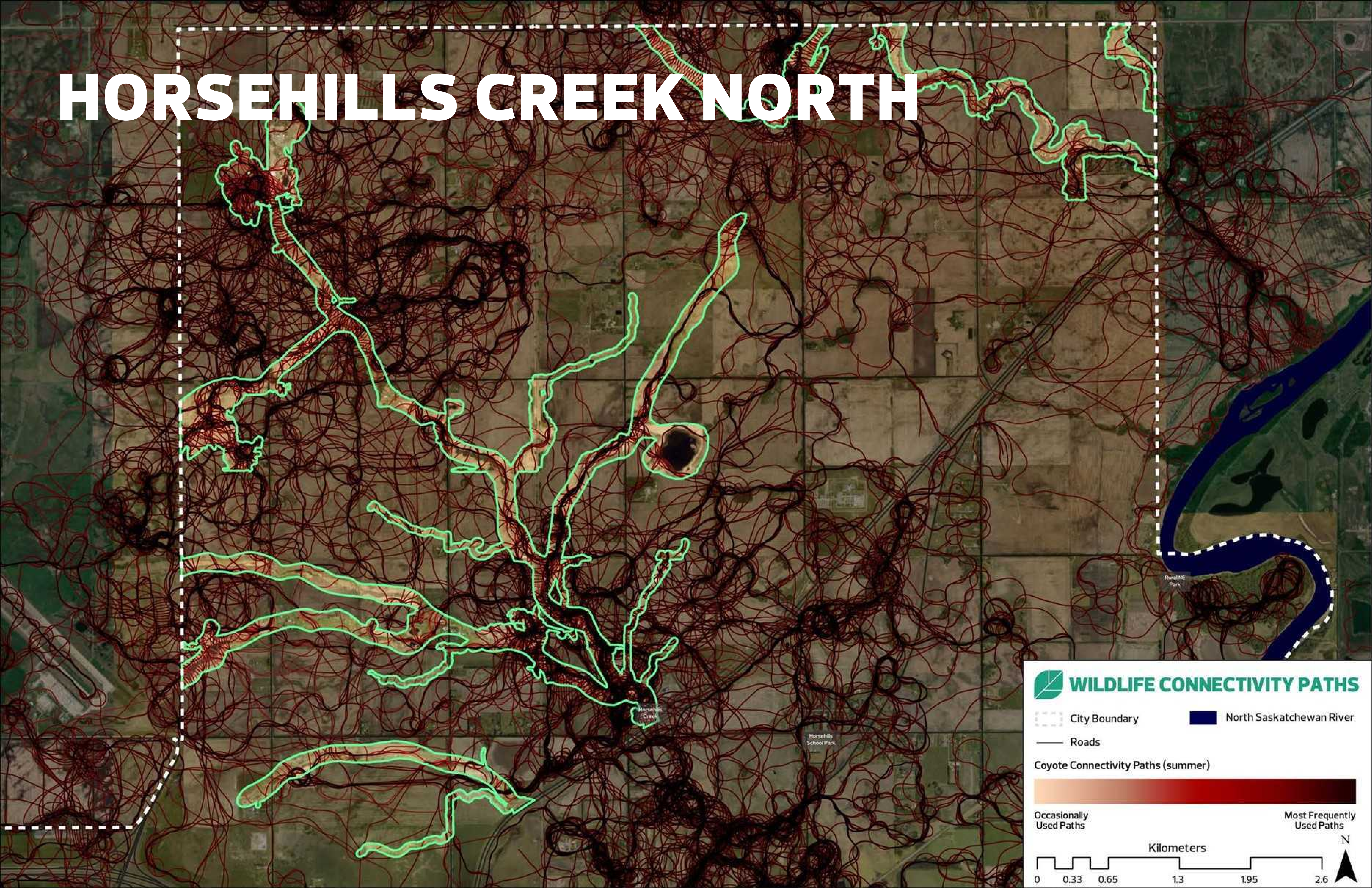

HORSEHILLS CREEK NORTH
Horsehills Creek
Horsehills School Park
ECOLOGY
UPLVI Land Classes
Developed
Modified
Natural (Other)
Natural (Wooded)
Natural (Non-Wooded)
Wetland
City Boundary
Trails
Roads
Streams
North Saskatchewan River
Flood Hazard
Unique Vegetation
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N

HORSEHILLS CREEK NORTH

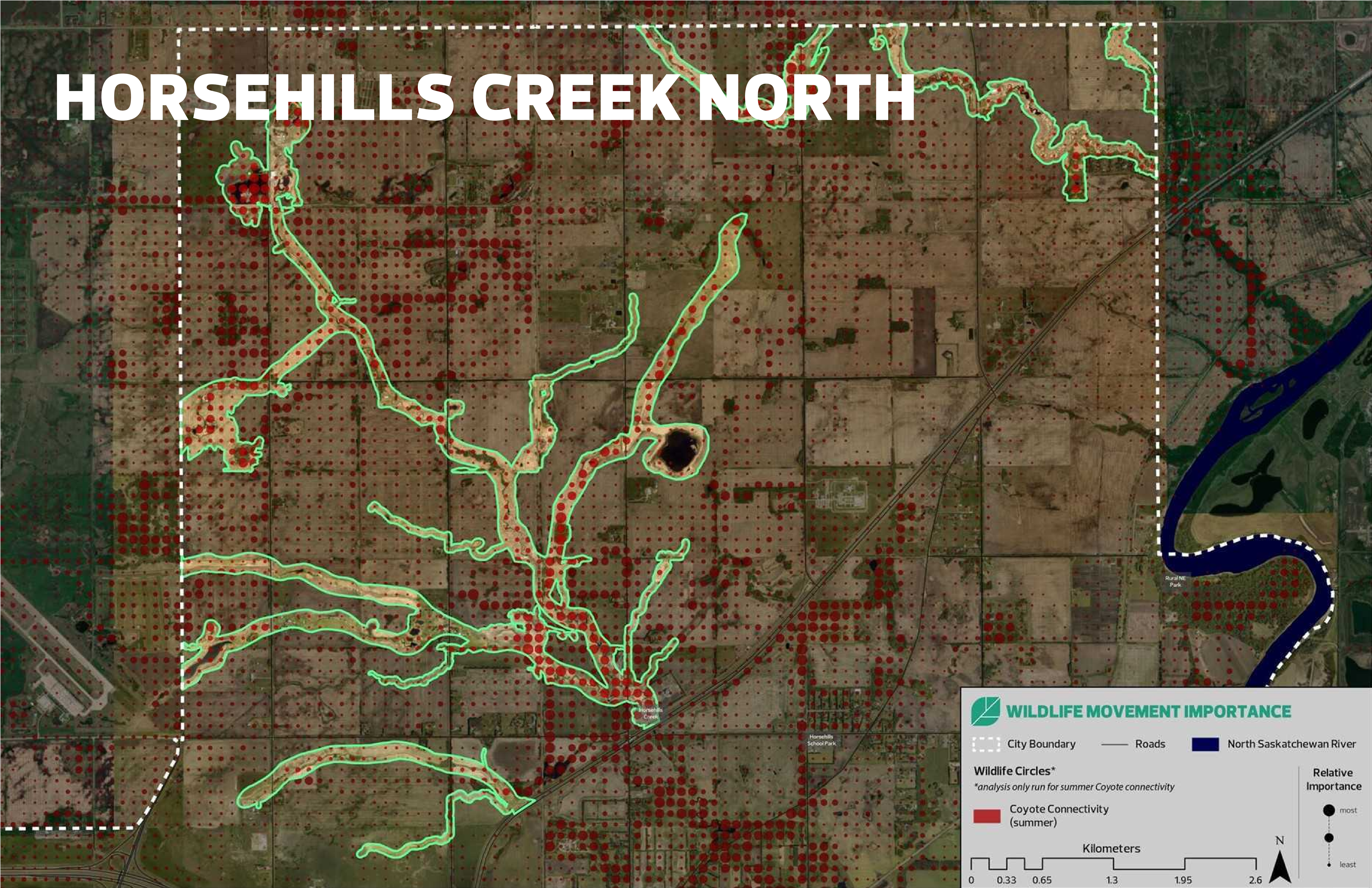



HORSEHILLS CREEK NORTH
Horsehills Creek
Horsehills School Park
Rural NE Park
ECOLOGY
Natural Area Rating
Very High
High
Moderate
Low
Kilometers
0 0.33 0.65 1.3 1.95 2.6
N


HORSEHILLS CREEK NORTH
Horsehills Creek
Horsehills School Park
Rural NE Park
ECOLOGY
Habitat Type
Core
Corridor
Modified Habitat
Habitat
Stepping Stone
Kilometers
0 0.33 0.65 1.3 1.95 2.6
N


HORSEHILLS CREEK NORTH
Horsehills Creek
Horsehills School Park
Rural NE Park
WILDLIFE CONNECTIVITY PATHS
City Boundary
North Saskatchewan River
Roads
Coyote Connectivity Paths (summer)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N

HORSEHILLS CREEK NORTH

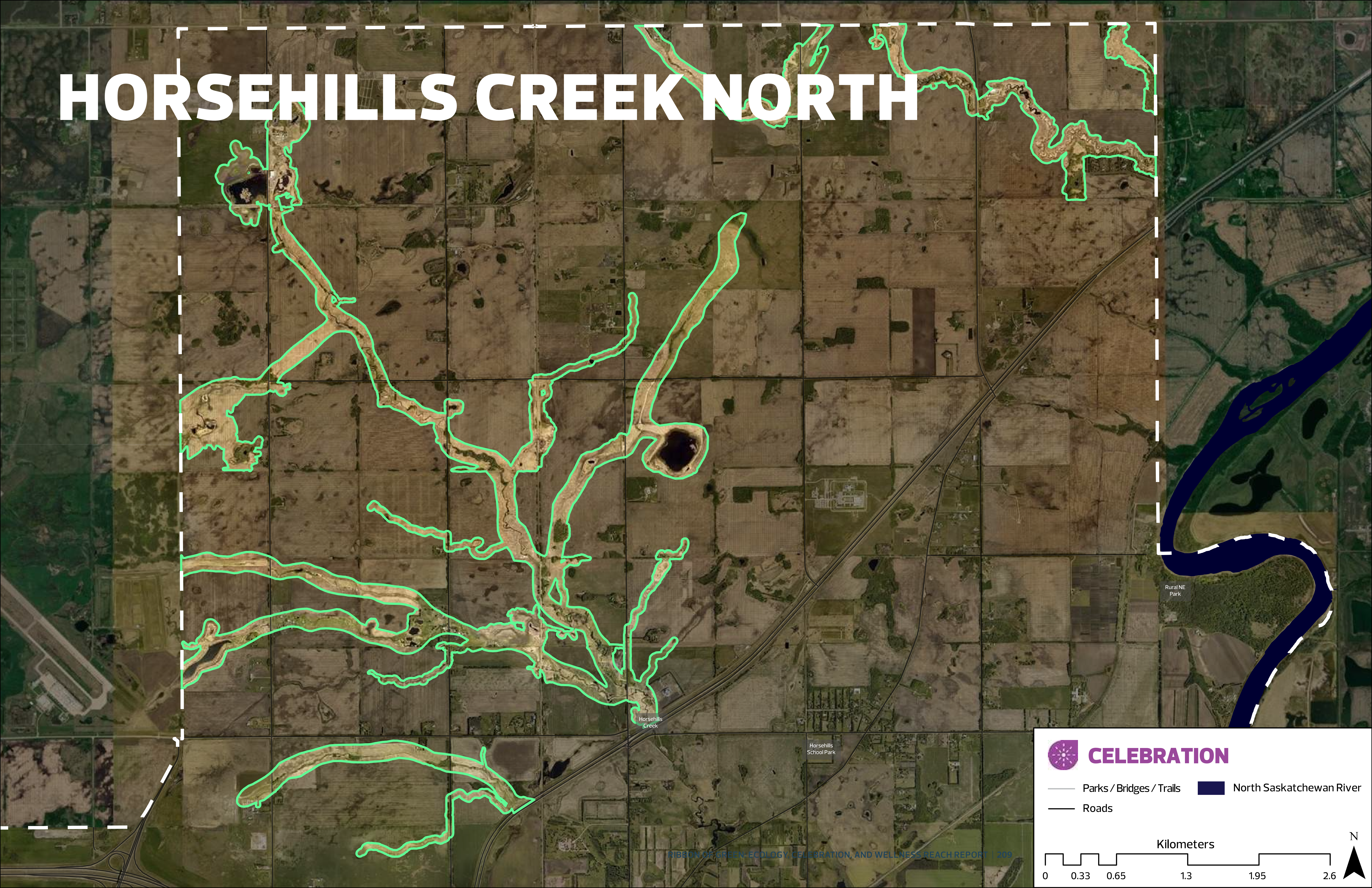


CELEBRATION

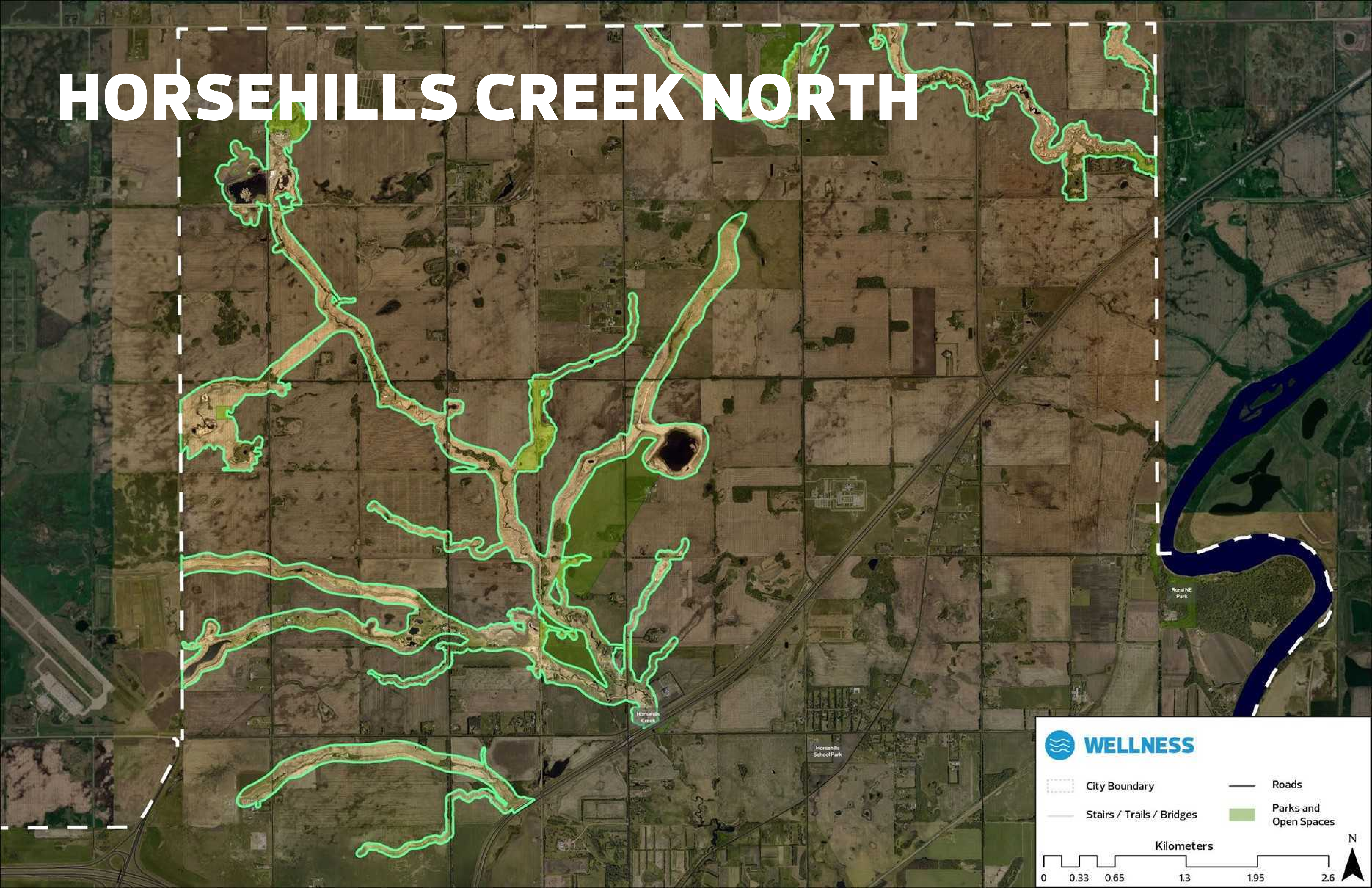
This reach currently contains no amenities providing celebration functionality.

WELLNESS

This reach currently contains no amenities providing wellness functionality. Recreation amenities may be appropriate in surrounding parkland. A trail network should minimize stream crossings and ensure that riparian areas are not compromised.



HORSEHILLS CREEK NORTH
Horsehills Creek
Horsehills School Park
Rural NE Park
CELEBRATION
Parks / Bridges / Trails
Roads
North Saskatchewan River
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N


HORSEHILLS CREEK NORTH
Horsehills Creek
Horsehills School Park
Rural NE Park
WELLNESS
City Boundary
Roads
Stairs / Trails / Bridges
Parks and Open Spaces
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N

CULTURE

No known archaeological or historic sites exist in this reach. Much of the area has moderate potential for unknown historic sites, with the exception of a portion of the creek in the southwest, and the ravines leading off from the River Valley, which have high potential.

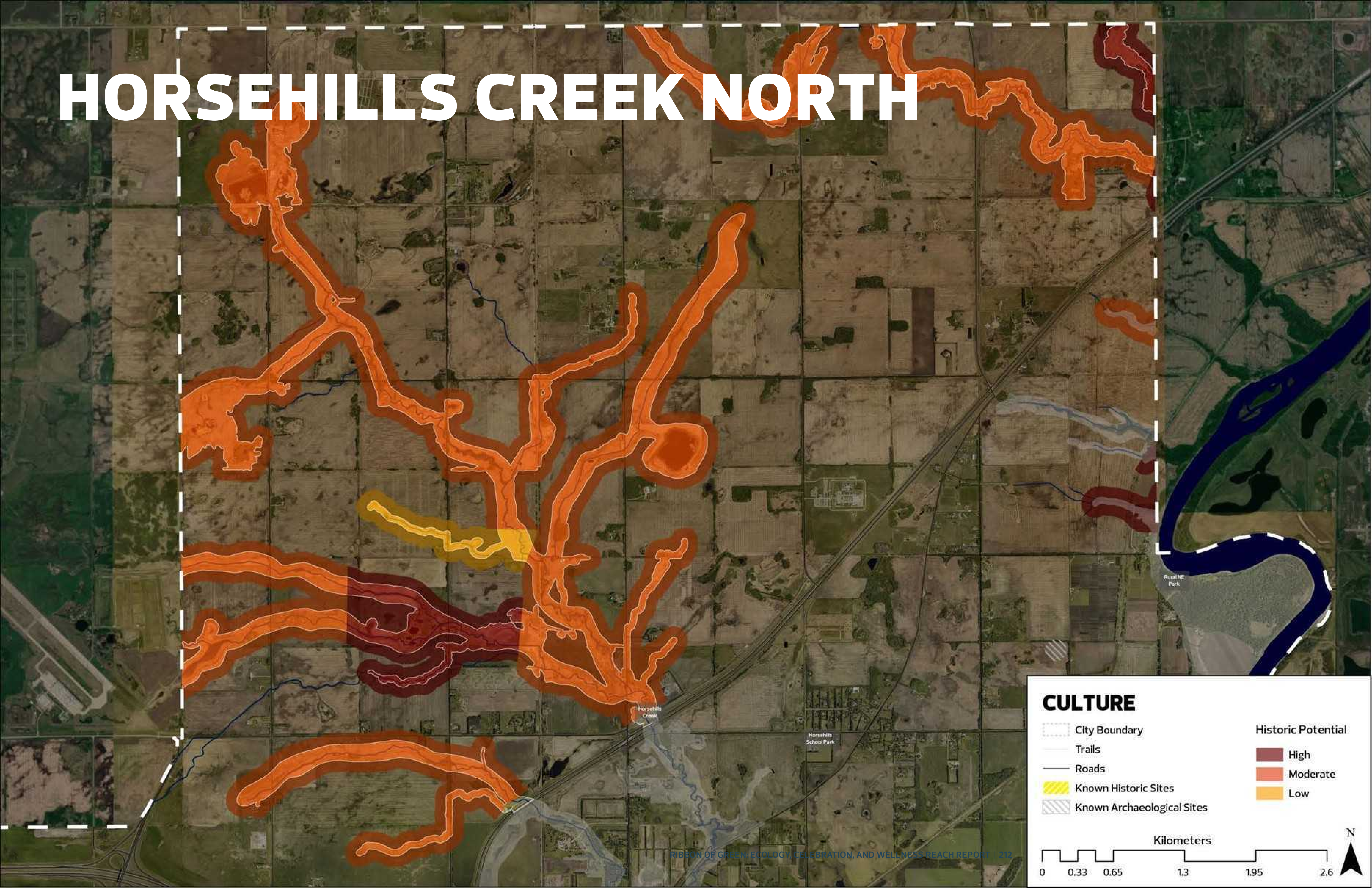
VISITATION AND POTENTIAL CONFLICTS

Visitation to this area is currently low and likely from nearby landowners. Hotspots are found near Manning Drive. After residential development, the nature and amount of visitation is likely to increase drastically. However, the relatively low natural rating of these lands means that potential conflicts are low, and can be well-managed with an effective trail system.

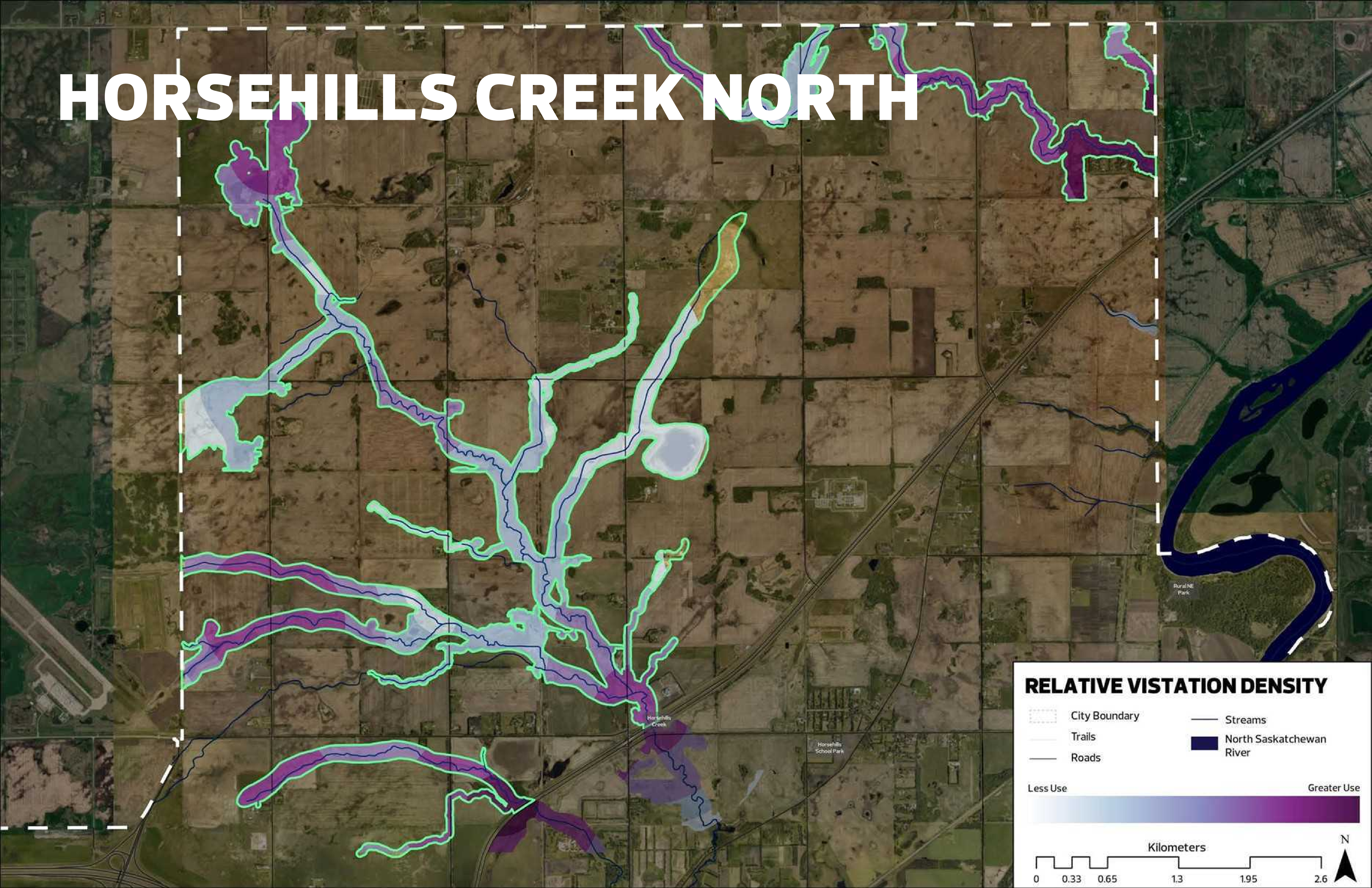
HORSEHILLS CREEK NORTH – FRACTION OF TOTAL RIBBON OF GREEN VISITATION

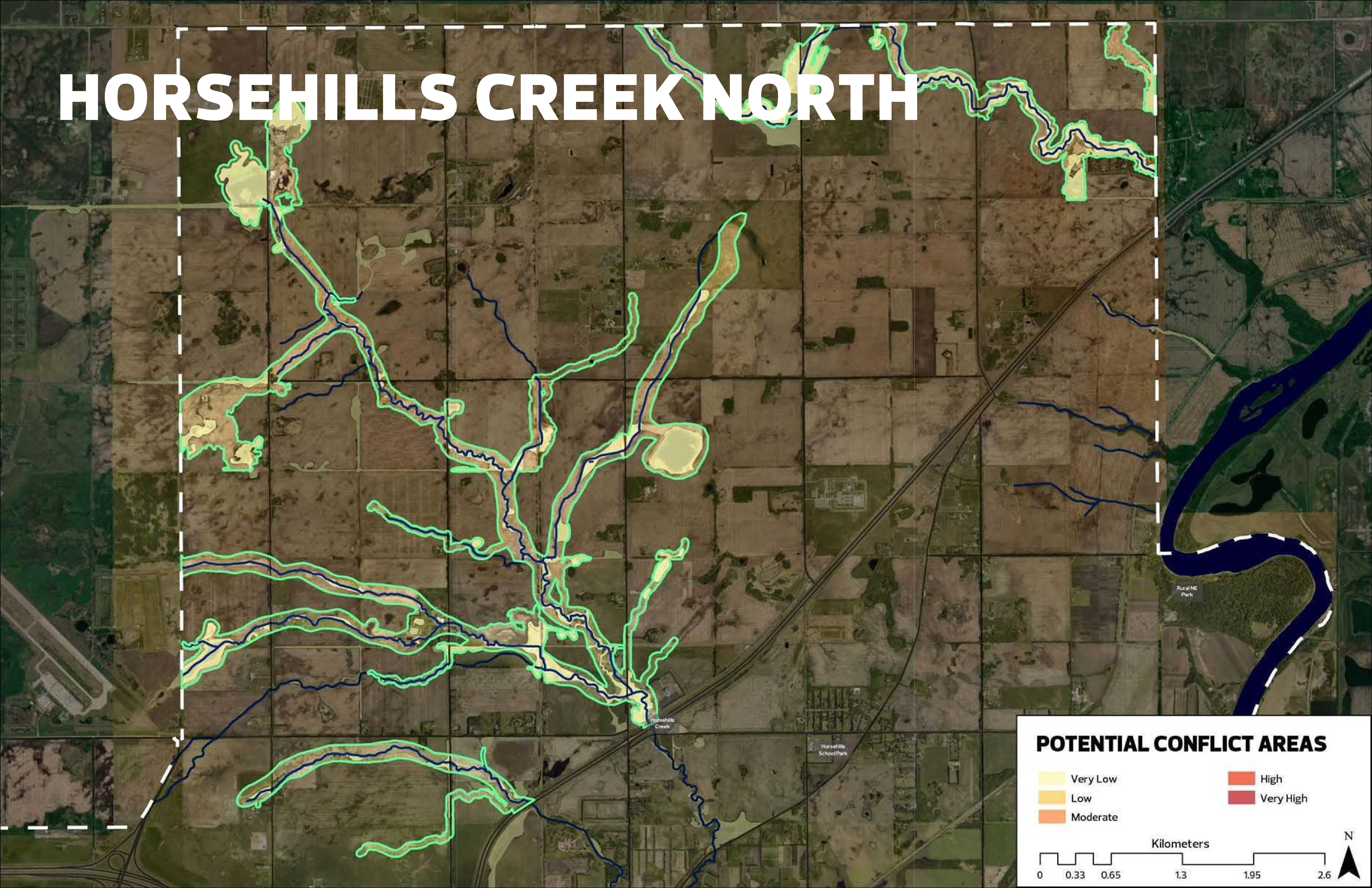
Q1 (JANUARY-MARCH)	Q2 (APRIL-JUNE)	Q3 (JULY-SEPTEMBER)	Q4 (OCTOBER-DECEMBER)
1.1%	1.2%	1.5%	2.0%

HORSEHILLS CREEK NORTH



HORSEHILLS CREEK NORTH




HORSEHILLS CREEK NORTH
Horsehills Creek
Horsehills School Park
Rural NE Park
POTENTIAL CONFLICT AREAS
Very Low
Low
Moderate
High
Very High
Kilometers
0
0.33
0.65
1.3
1.95
2.6
N

IRVINE CREEK TO BLACKMUD RAVINE SOUTH

Irvine Creek to Blackmud Ravine South Reach Overview

Beginning to the southeast of the city, Irvine Creek flows into Blackmud ravine across the Highway 2. Surrounding lands are predominantly agricultural lands at the moment, but ongoing residential development of the Decoteau area will lead to greater public access within the Irvine creek area. The drainage area is already impacted by Nisku industrial lands, and the Highway 2 serves as an significant roadblock to wildlife movement.

A significant portion of the reach contains unique vegetation cover, and a third of the reach is considered to be natural area. However, no formal protection exists through designated parkland. The bulk of the landscape is agricultural or other developed and modified land uses, while only 4% of the area has been naturalized.

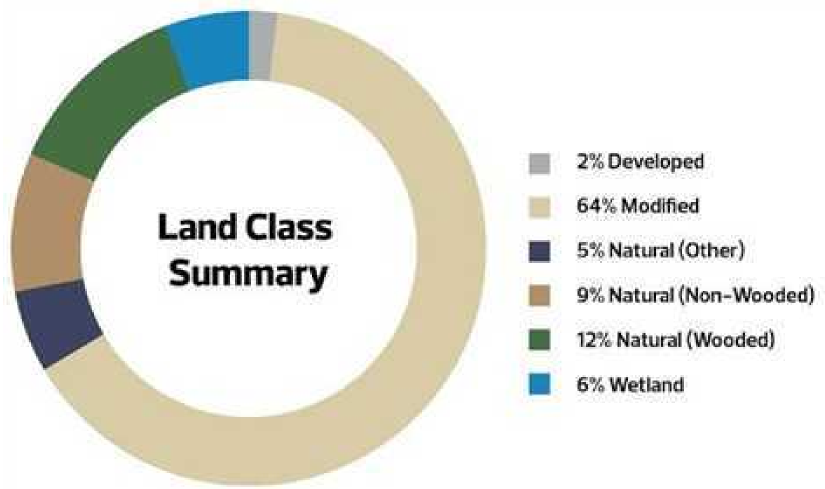
REACH	CELEBRATION	WELLNESS	ECOLOGY
Irvine Creek to Blackmud Ravine South			**Total Area:** 117.5 ha (100%) **Developed and Modified Land Use:** 78.2 ha (67%) **Wetlands:** 6.7 (6%) **Tree Canopy:** 16.9 ha (14%) **Unique Vegetation:** 20.6 ha (18%) **Connectivity Pinchpoints:** 0.0 ha (0%) **Wildlife Corridor:** 16.4 ha (14%) **Naturalized Spaces:** 4.5 ha (4%) **Natural Area:** 39.3 ha (33% of reach) **City-Owned Parks:** 0.0 ha (covers 0% of natural areas)

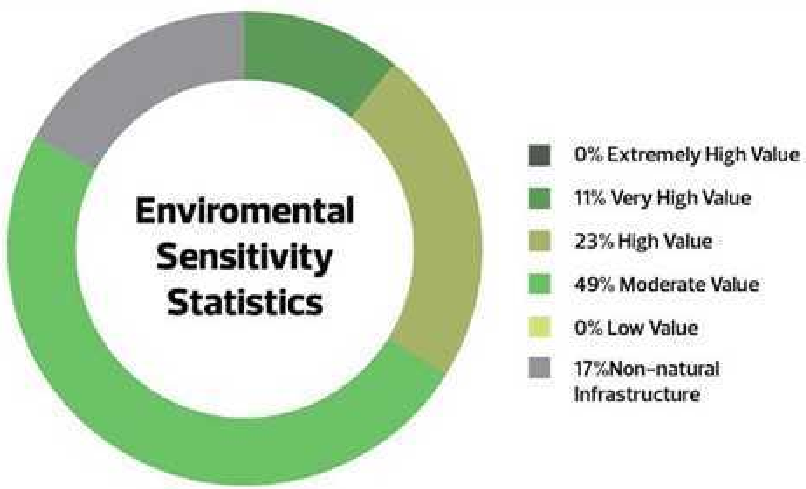
ECOLOGY

The meandering Irvine Creek is heavily modified by historic and ongoing agricultural practices. Much of the eastern portion remains forested with riparian vegetation, but this is lost to the south, and agricultural vegetation extends to the banks. Cawes Lake is an important wetland which feeds into the creek at the edge of the city. The creek flows westward and out of the city, where it passes through the developed commercial and industrial lands to the east of the Queen Elizabeth II Highway, and into Blackmud Ravine. Naturalization of the streambanks will be an important first step in improving the natural function of this area. As further residential development extends into this area, it is essential that the natural hydrologic regime of the landscape is preserved. The City's existing top-of-bank policy is insufficient to ensure this however. An assessment of the catchment areas of the streams will help better delimit appropriate development in the surrounding areas, and help preserve these riparian areas to ensure they act as core habitat. Complementary permeable open space uses in the surrounding lands should be sought out to ensure waterbodies and wetlands receive sufficient groundwater flow.

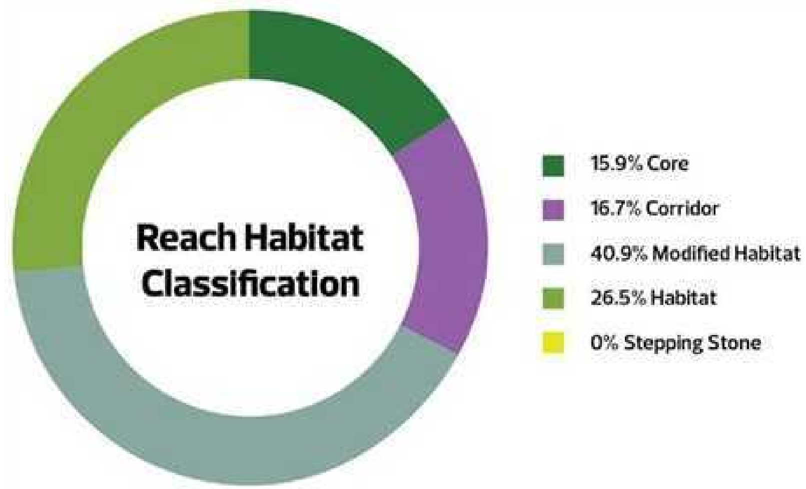
As the surrounding lands are currently agricultural, the streams themselves do not serve as wildlife corridors. However, as surrounding lands are developed this will place increasing pressure on wildlife as their traditional routes are disrupted by development roads, and human use. Retaining a connected network of well-vegetated riparian areas will be essential. Naturalization of agricultural lands along banks will create more continuous natural cover, and buffer existing core habitat from disturbance.

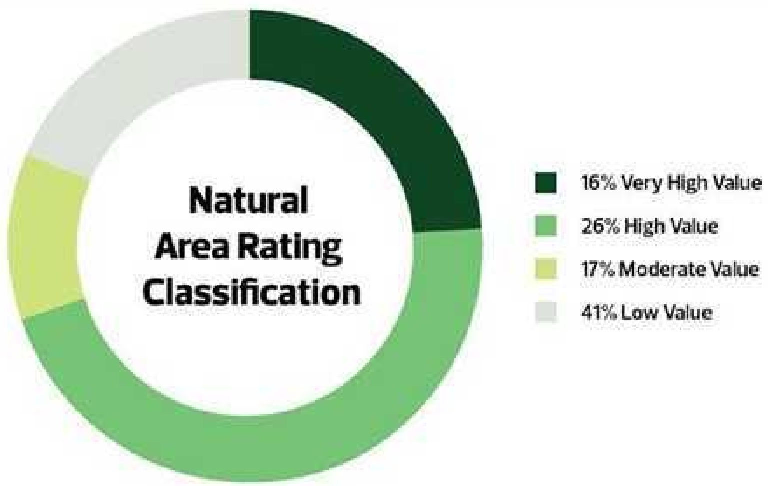
Irvine Creek to Blackmud Ravine South – Land Class and Environmental Sensitivity Summary



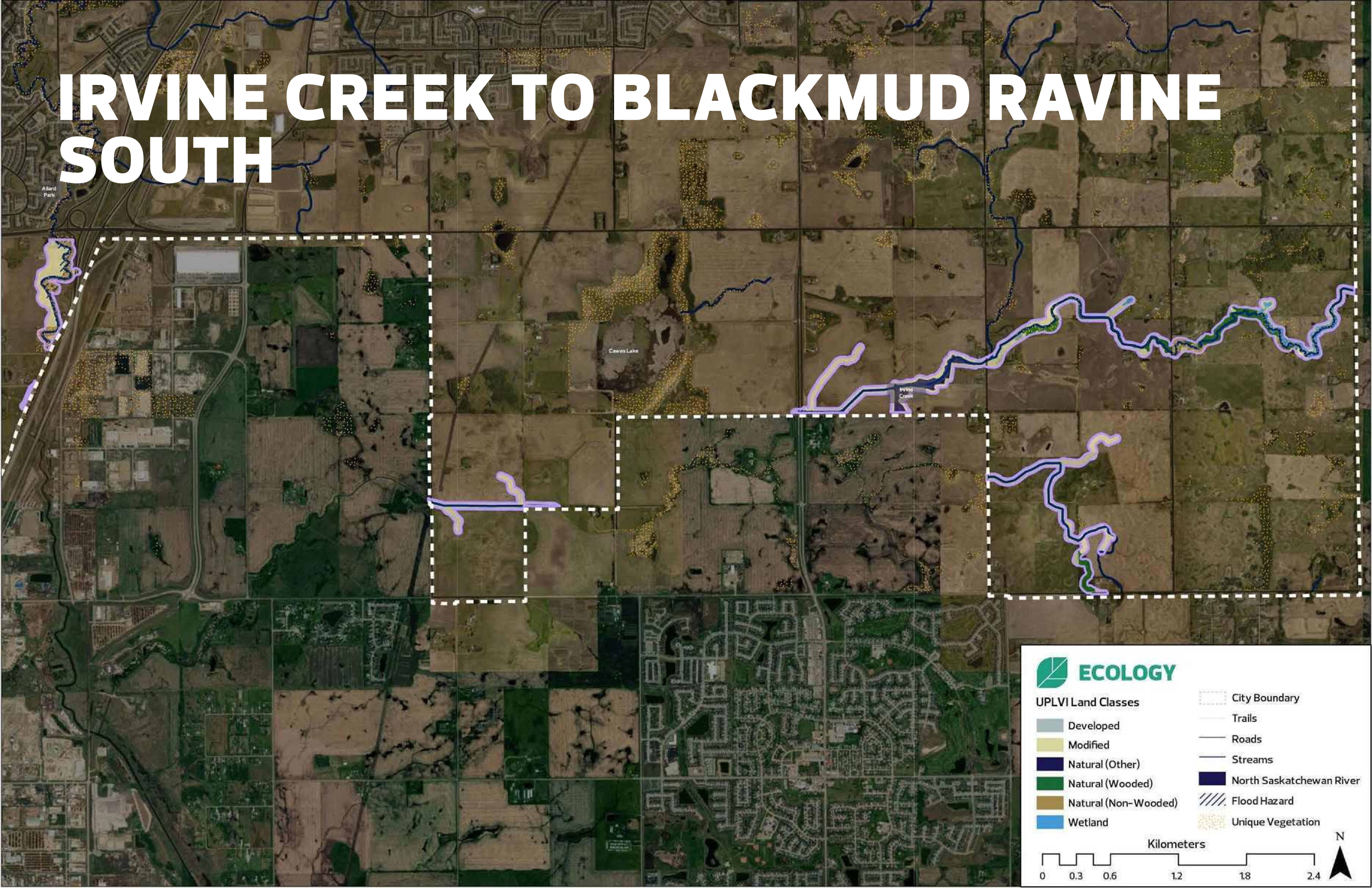


Irvine Creek to Blackmud Ravine South – Reach Habitat and Natural Area Rating Classification

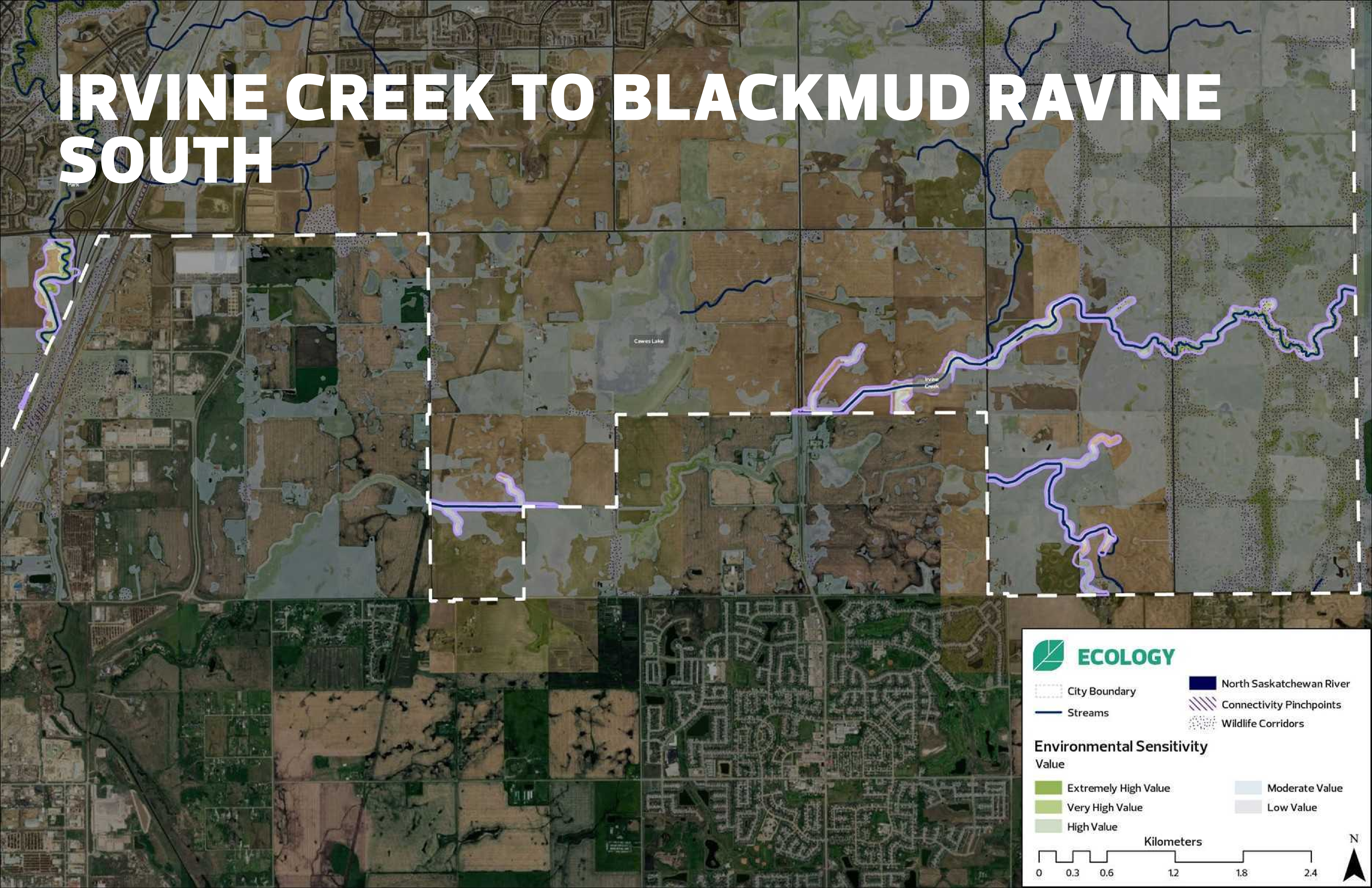




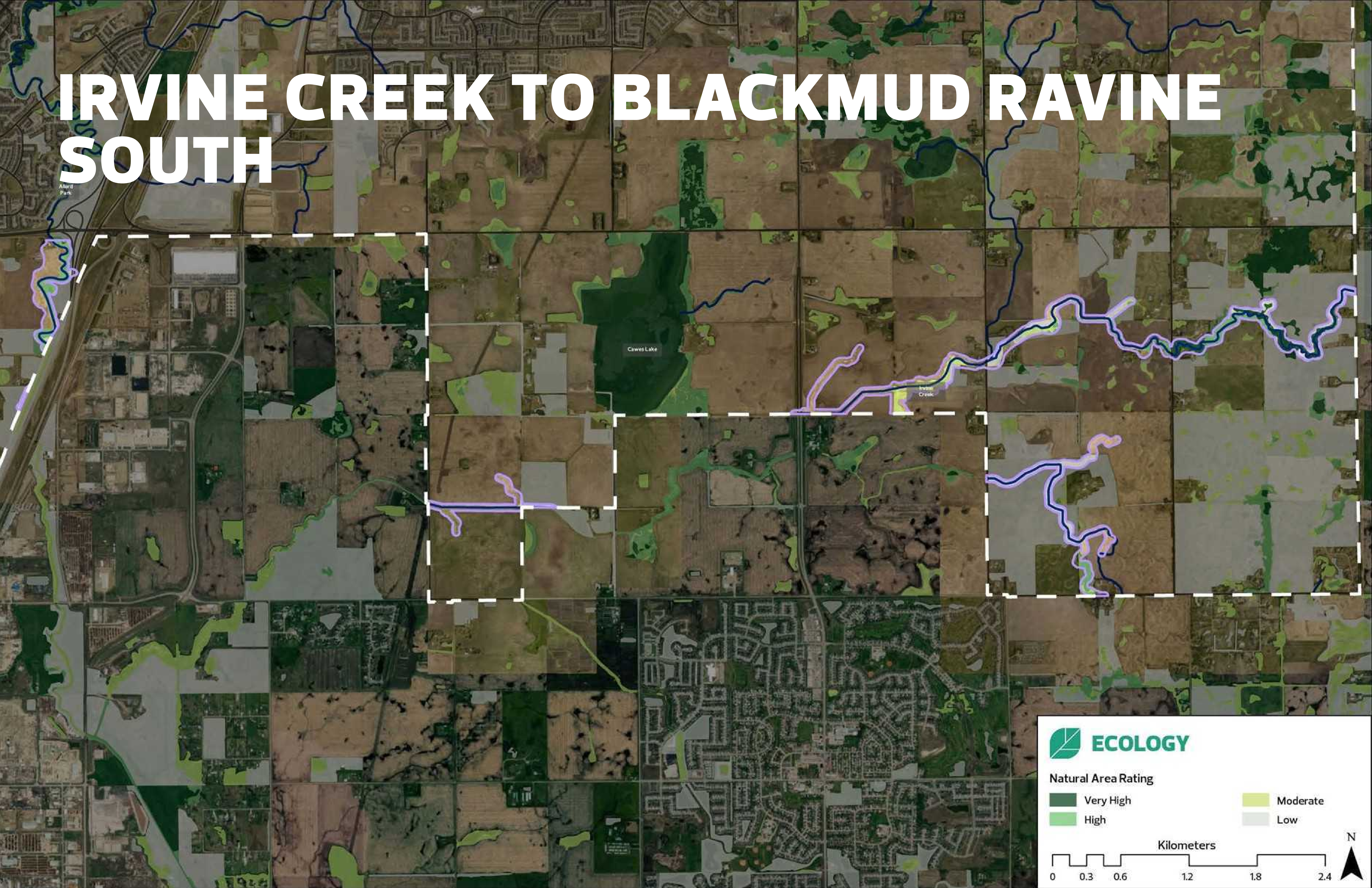
IRVINE CREEK TO BLACKMUD RAVINE SOUTH



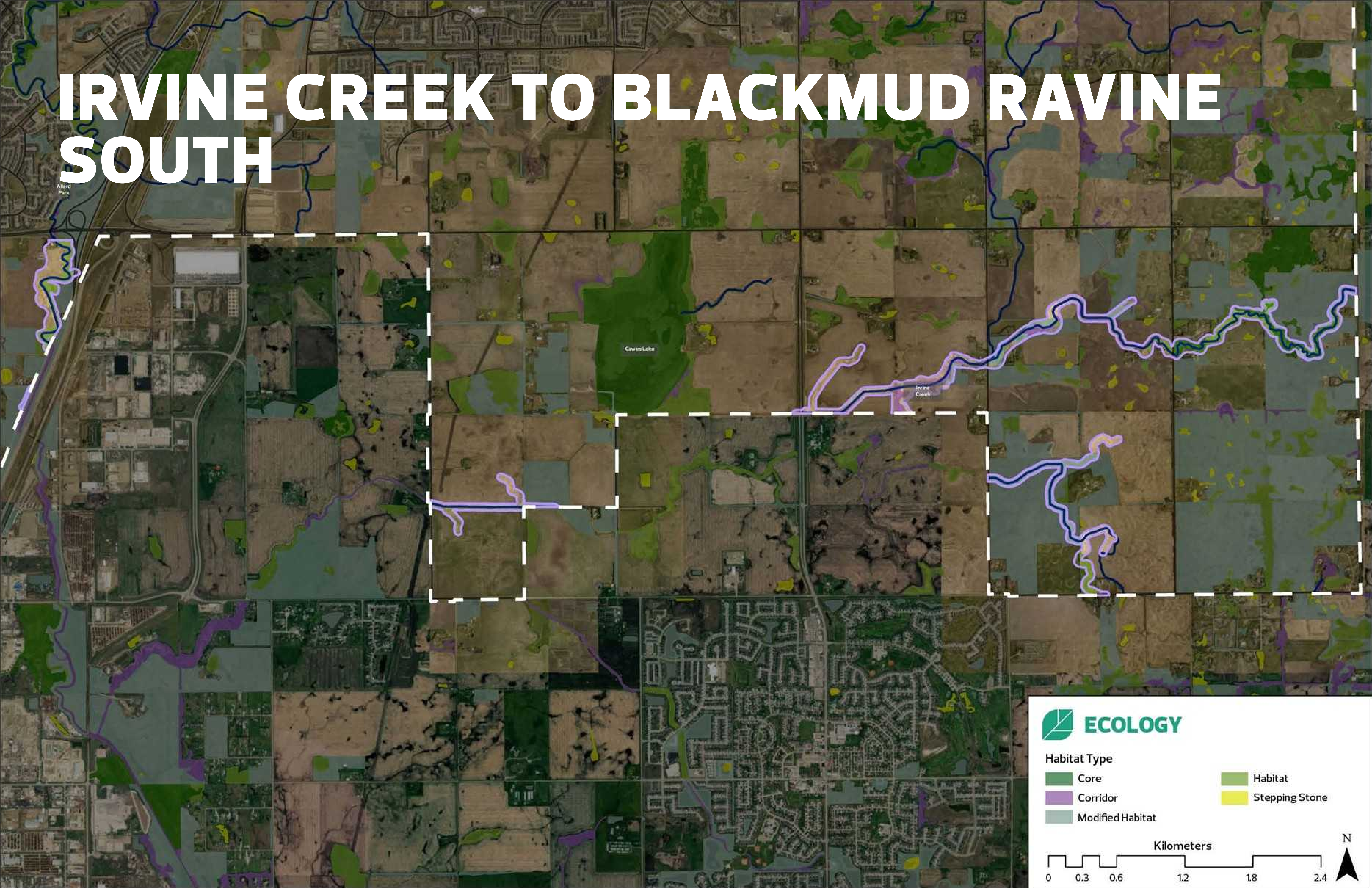
IRVINE CREEK TO BLACKMUD RAVINE SOUTH



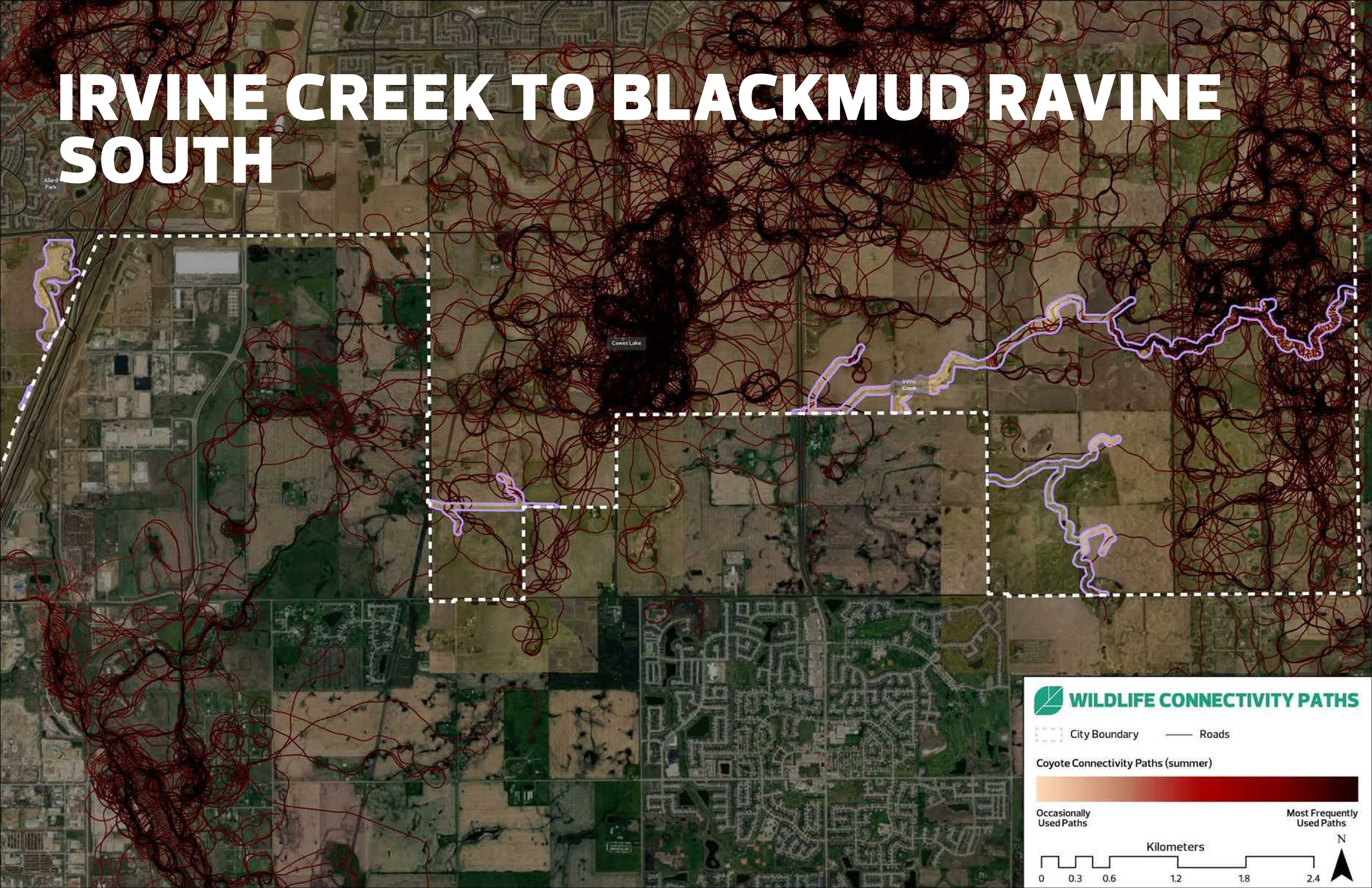
IRVINE CREEK TO BLACKMUD RAVINE SOUTH



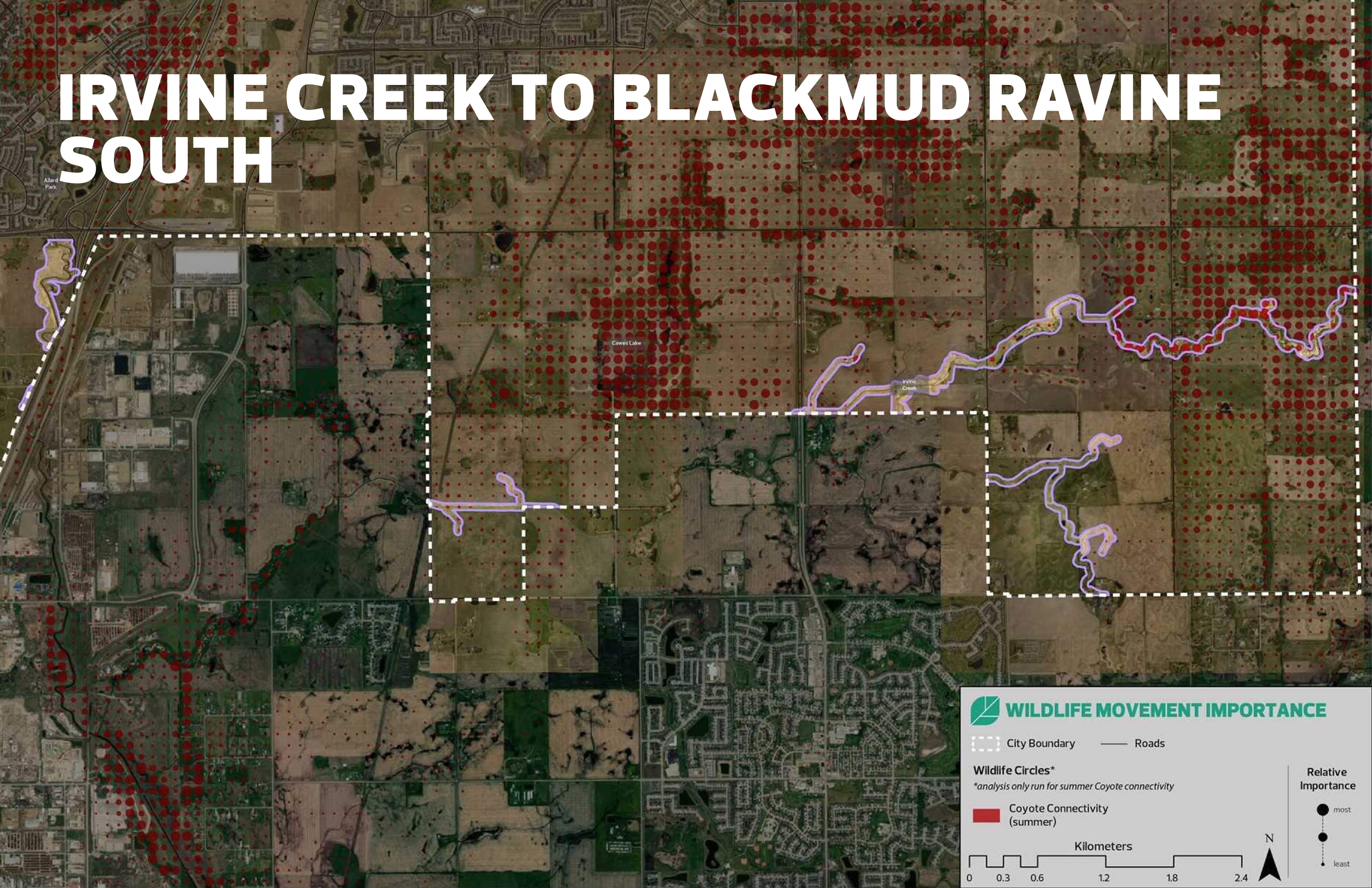
IRVINE CREEK TO BLACKMUD RAVINE SOUTH



IRVINE CREEK TO BLACKMUD RAVINE SOUTH



IRVINE CREEK TO BLACKMUD RAVINE SOUTH



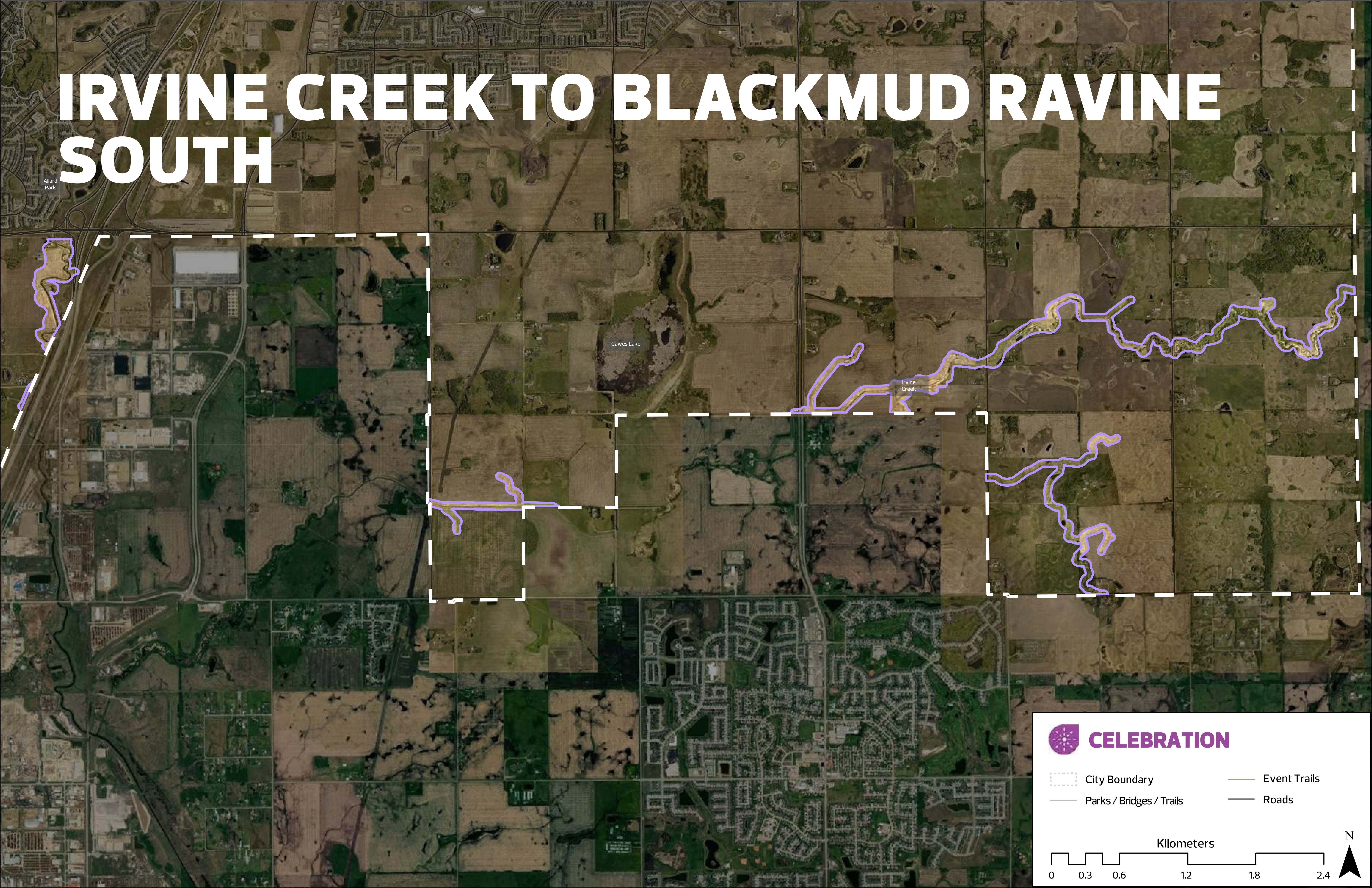
CELEBRATION

This reach currently contains no amenities providing celebration functionality.

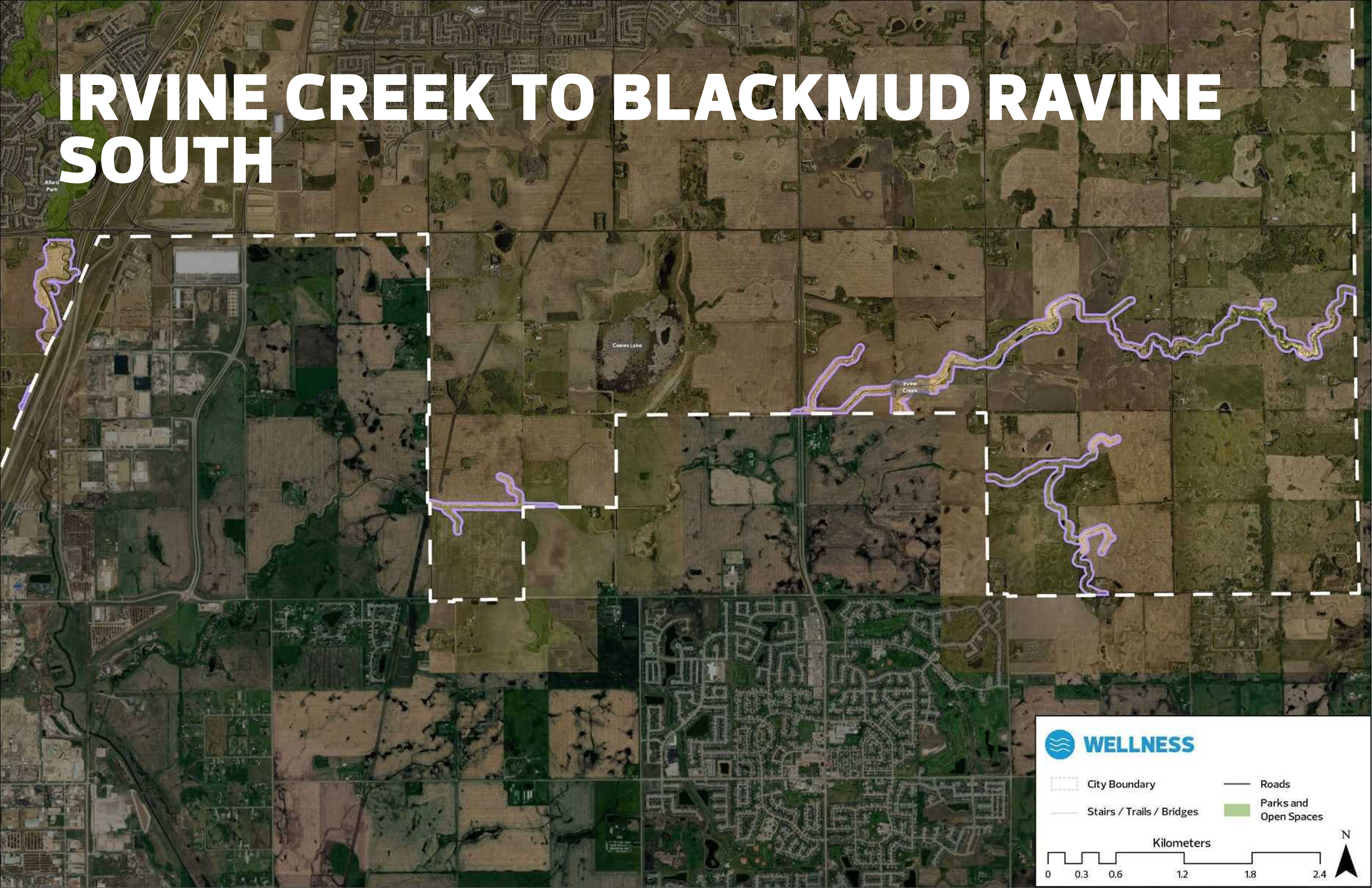
WELLNESS

This reach currently contains no amenities providing wellness functionality. Recreation amenities may be appropriate in surrounding parkland. A trail network should minimize stream crossings and ensure that riparian areas are not compromised.

IRVINE CREEK TO BLACKMUD RAVINE SOUTH



IRVINE CREEK TO BLACKMUD RAVINE SOUTH



CULTURE

No known archaeological or historic sites exist in this reach. There is high potential for unknown historic sites in the lands around Blackmud Ravine, and lands to the east and south.

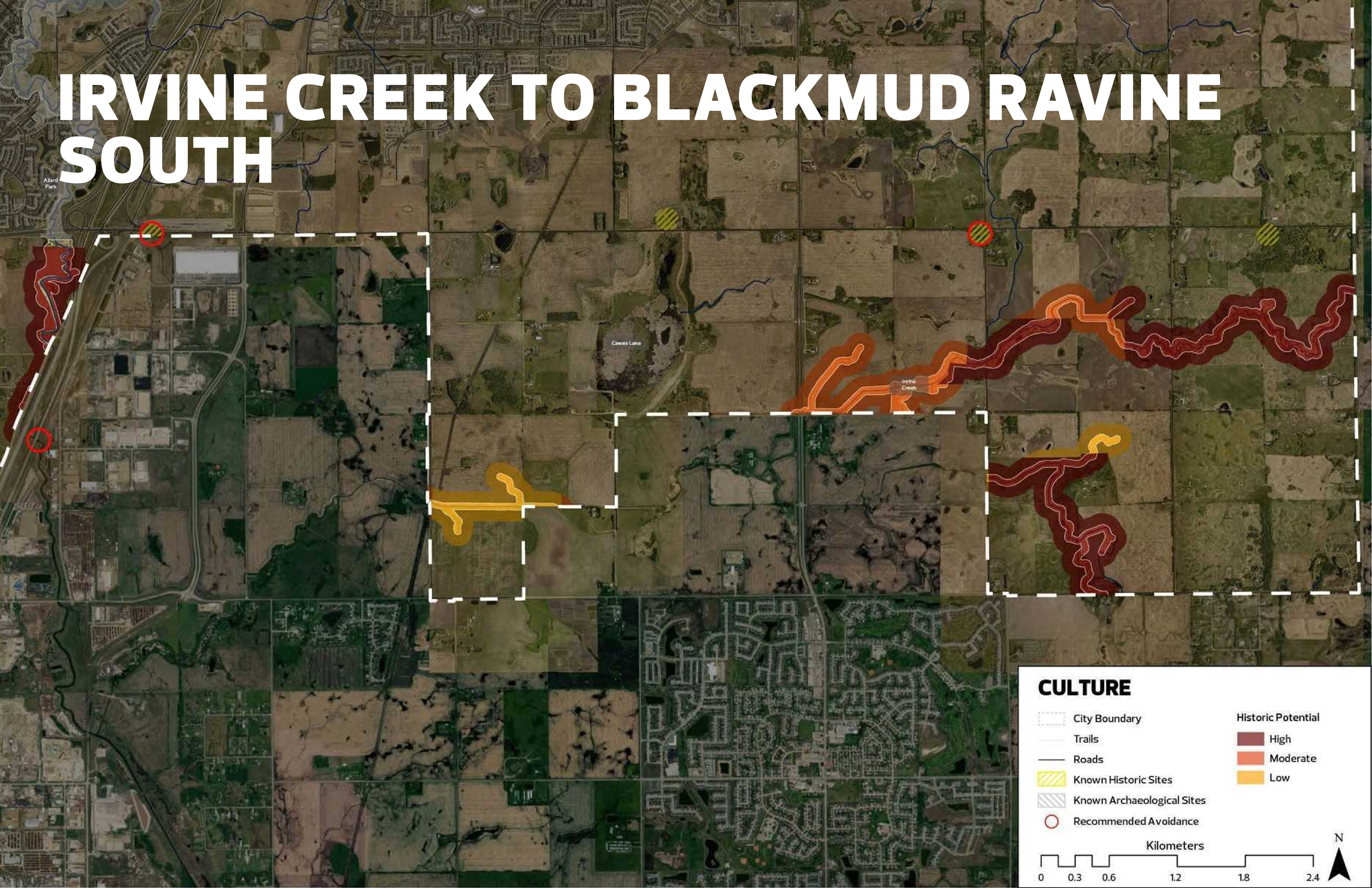
VISITATION AND POTENTIAL CONFLICTS

Visitation to this area is currently very low in Irvine Creek, with a hotspot in the Blackmud Ravine portion, likely from nearby residents. After residential development, the nature and amount of visitation around Irvine Creek is likely to increase drastically. However, the relatively low natural rating of these lands means that potential conflicts are low, and can be well-managed with an effective trail system.

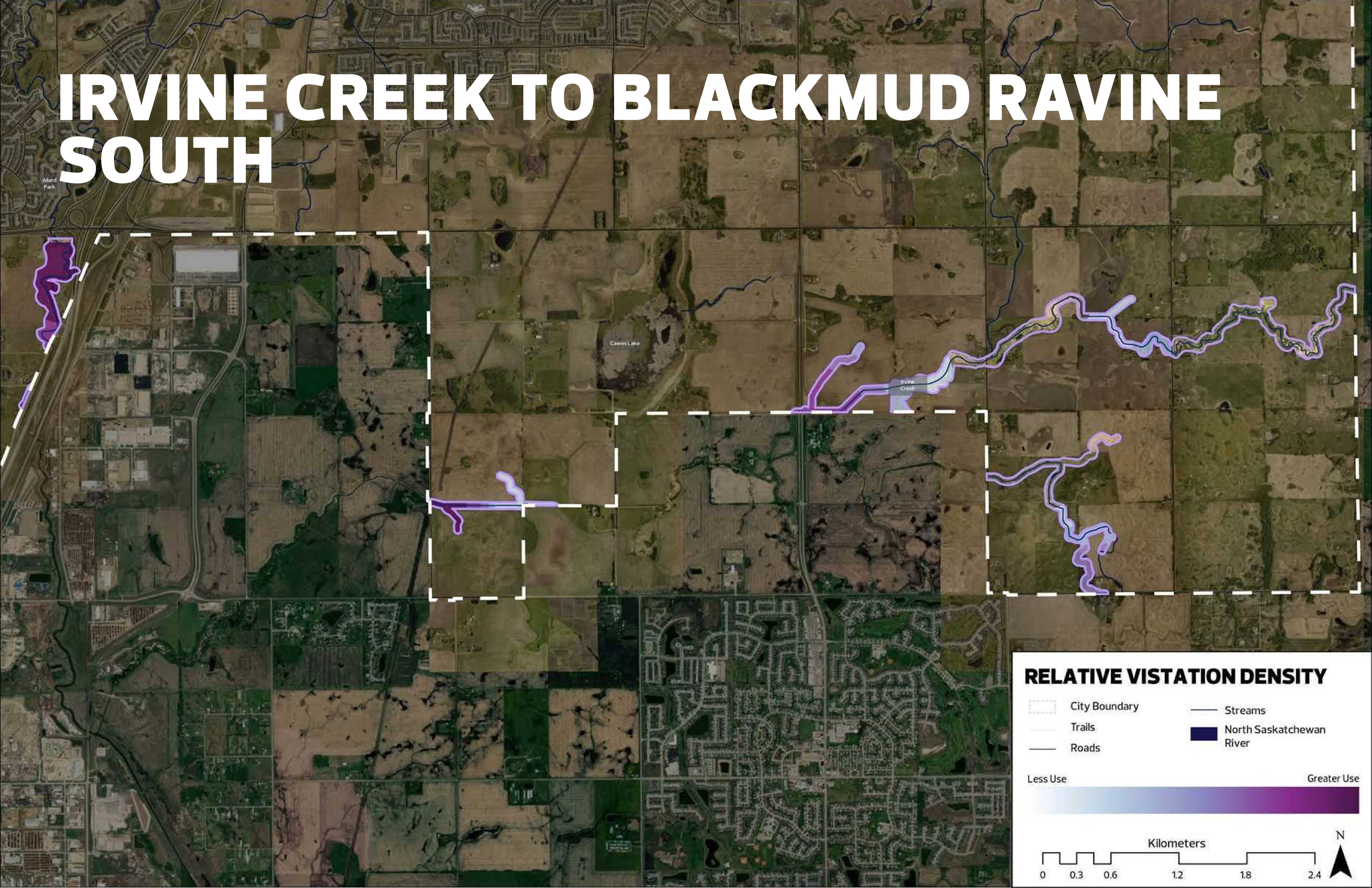
IRVINE CREEK TO BLACKMUD RAVINE SOUTH – FRACTION OF TOTAL RIBBON OF GREEN VISITATION

Q1 (JANUARY-MARCH)	Q2 (APRIL-JUNE)	Q3 (JULY-SEPTEMBER)	Q4 (OCTOBER-DECEMBER)
1.5%	1.1%	1.2%	1.8%

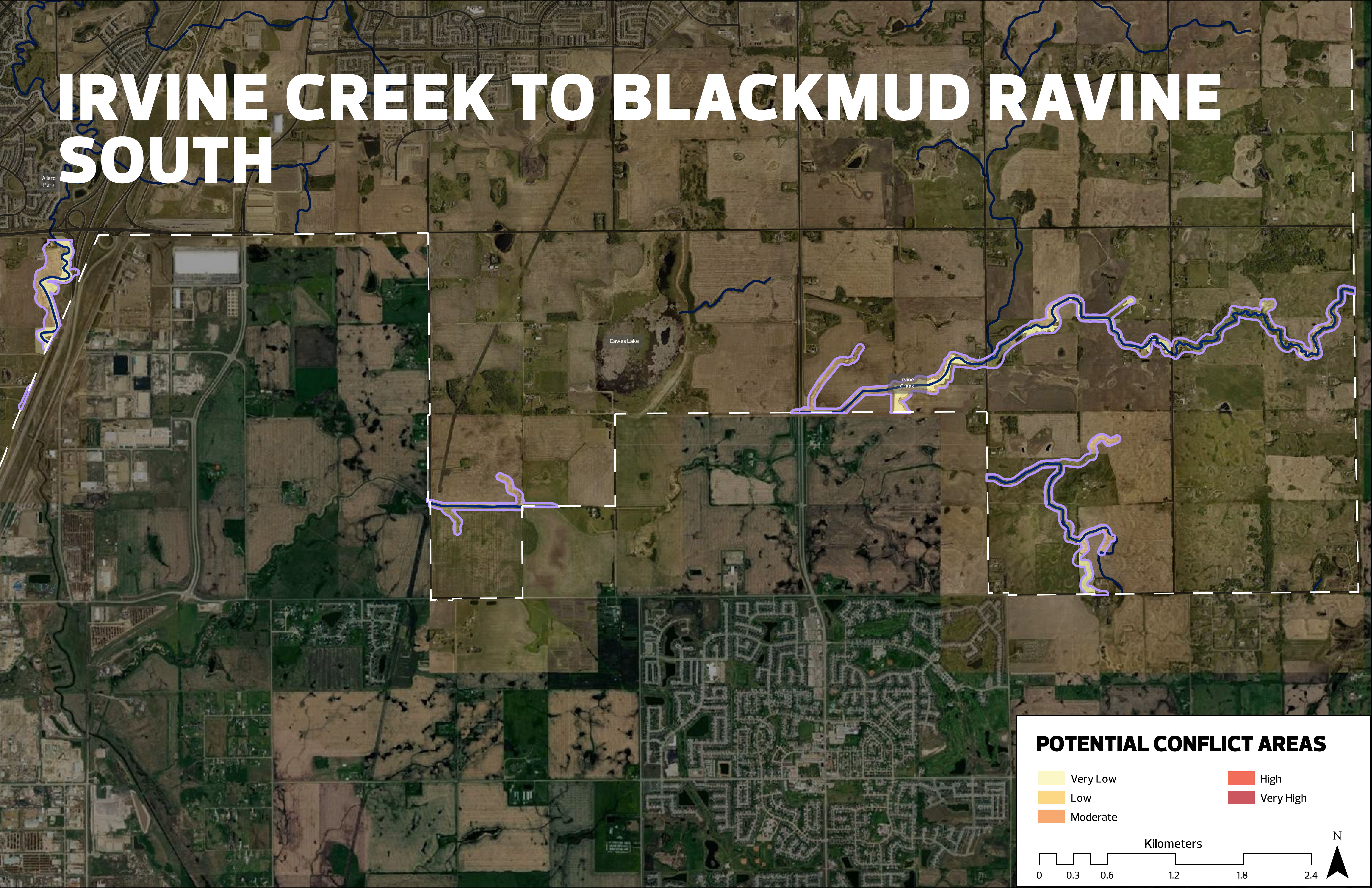
IRVINE CREEK TO BLACKMUD RAVINE SOUTH



IRVINE CREEK TO BLACKMUD RAVINE SOUTH



IRVINE CREEK TO BLACKMUD RAVINE SOUTH



WHITEMUD RAVINE FAR SOUTH

Whitemud Ravine Far South Reach Overview

Whitemud South Reach is dominated by private agricultural lands and a scattering of residences. The lands have recently been added to Edmonton's jurisdiction. Subsequent development or subdivision within these lands will require more detailed assessment of environmental value, and the delimiting of environmental reserve lands. As these lands drain northward into the Whitemud Ravine disturbances and impacts must be carefully monitored.

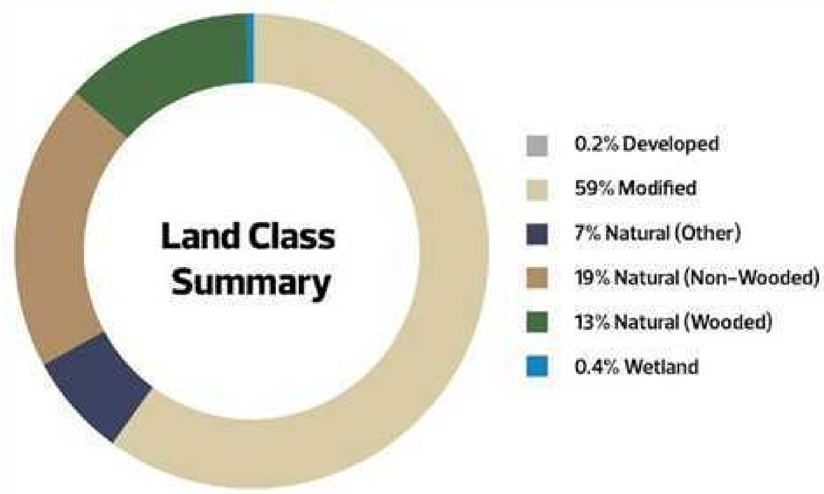
REACH	CELEBRATION	WELLNESS	ECOLOGY
Whitemud Ravine Far South			**Total Area:** 286.4 ha (100%) **Developed and Modified Land Use:** 172 ha (60%) **Wetlands:** 20.3 (7%) **Tree Canopy:** 47.3 ha (17% of reach) **Unique Vegetation:** 43.9 ha (15%) **Connectivity Pinchpoints:** 60.1 ha (21%) **Wildlife Corridor:** 107.6 ha (38%) **Naturalized Spaces:** 0.0 ha (0%) **Natural Area:** 114.4 ha (40% of reach) **City-Owned Parks:** 0.0 ha (covers 0% of natural spaces)

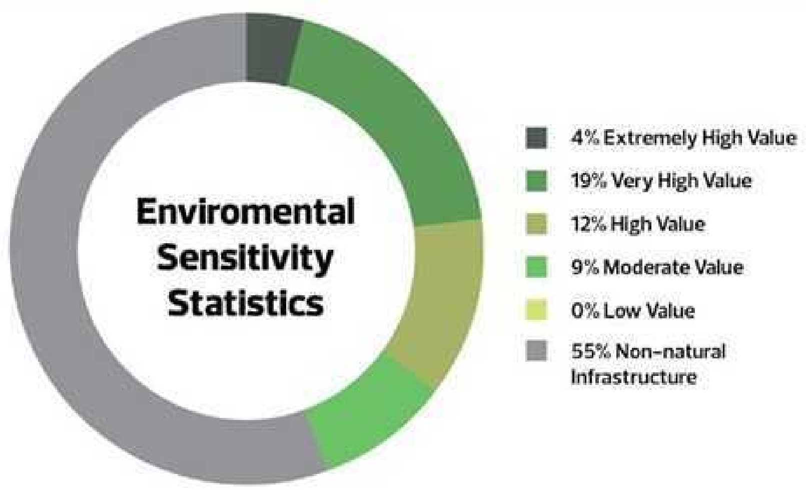
ECOLOGY

The Whitemud Ravine Far South Reach is an important ecological corridor into the city that must be preserved as the surrounding lands are developed. The meandering creek provides important habitat for a wide variety of native species, and is an important resting place for migratory birds. Portions of the riparian area are forested, but a large patch of unique, non-forested vegetation is found in the north of the reach. Much of the northern portion of the reach has a very high natural area rating, providing important core habitat in an otherwise agricultural landscape. The area is an important pinch point in the movement of wildlife through the area, and any disturbance to these lands would be detrimental to the biodiversity of the downstream portions of Whitemud Ravine.

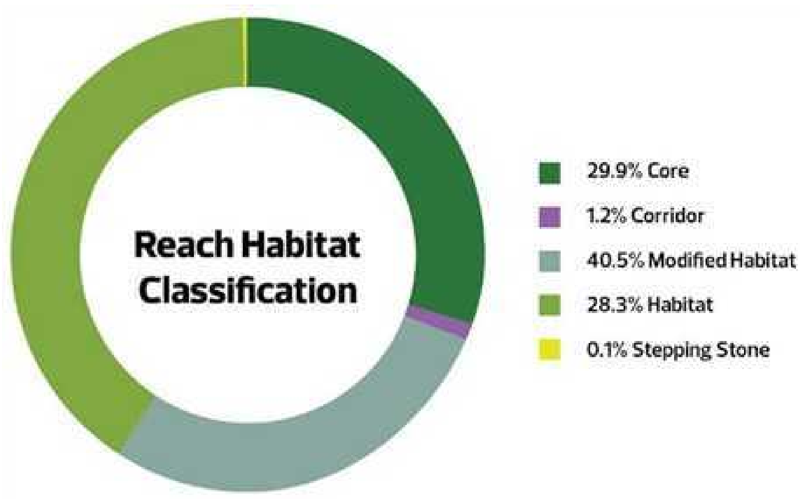
Naturalization of the streambanks will be an important first step in improving the natural function of this area. As further residential development extends into this area, it is essential that the natural hydrologic regime of the landscape is preserved. The City's existing top-of-bank policy is insufficient to ensure this however. An assessment of the catchment areas of the streams will help better delimit appropriate development in the surrounding areas, and help preserve these riparian areas to ensure they act as core habitat. Complementary permeable open space uses in the surrounding lands should be sought out to ensure waterbodies and wetlands receive sufficient groundwater flow.

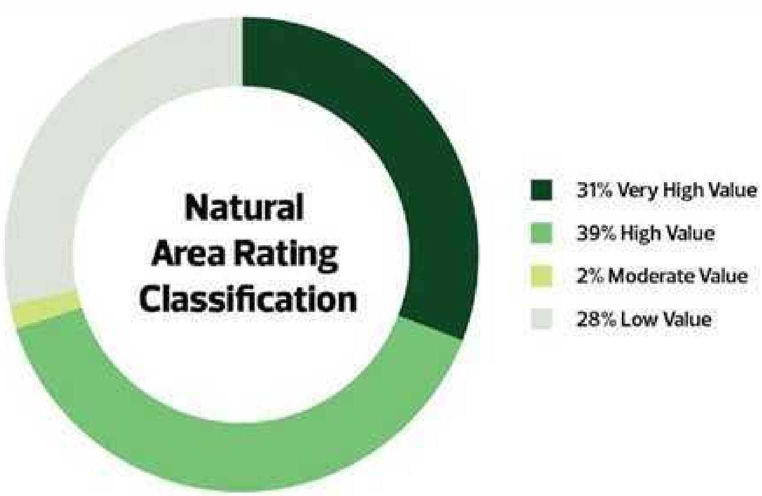
Whitemud Ravine Far South – Land Class and Environmental Sensitivity Summary

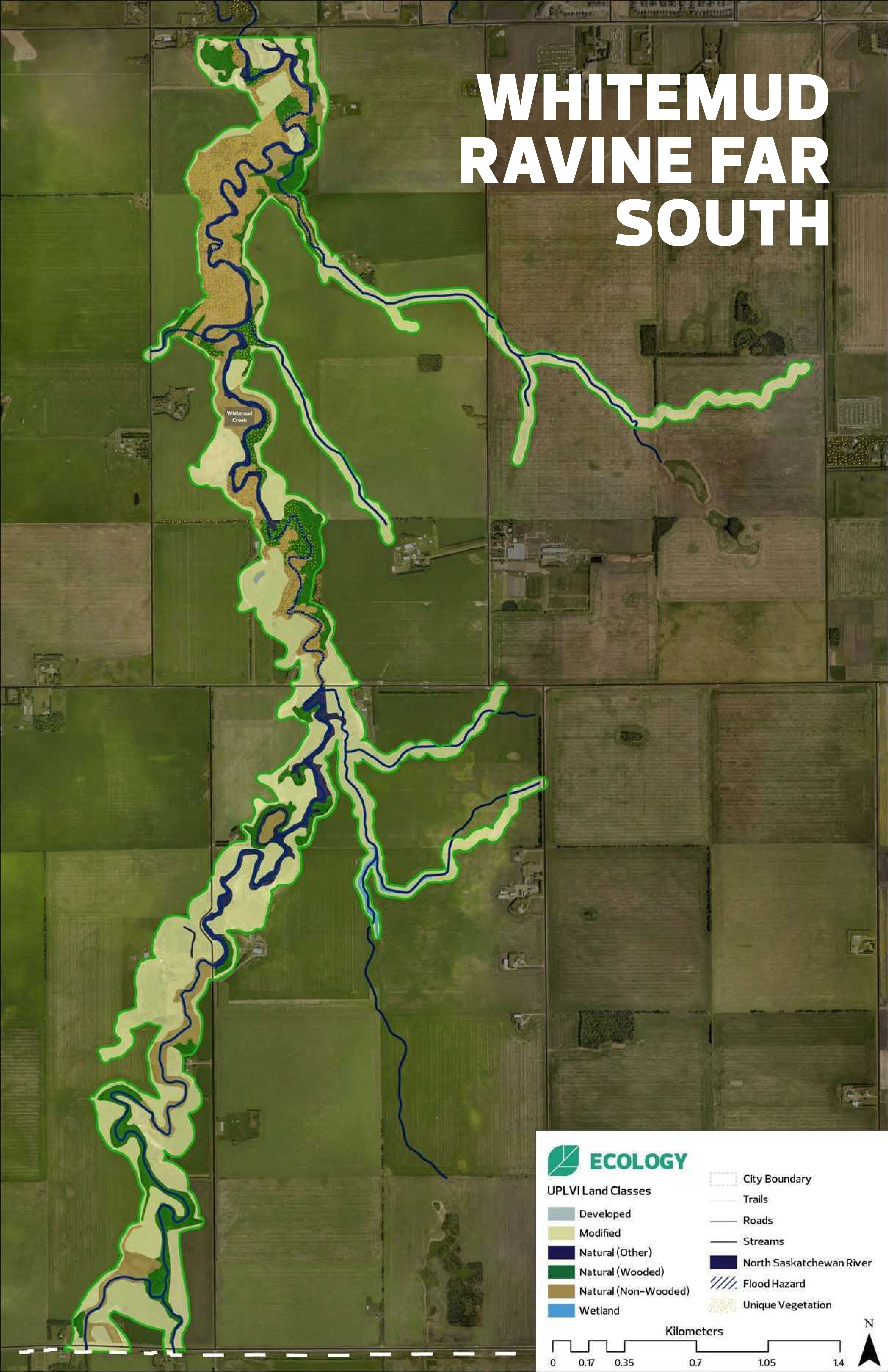


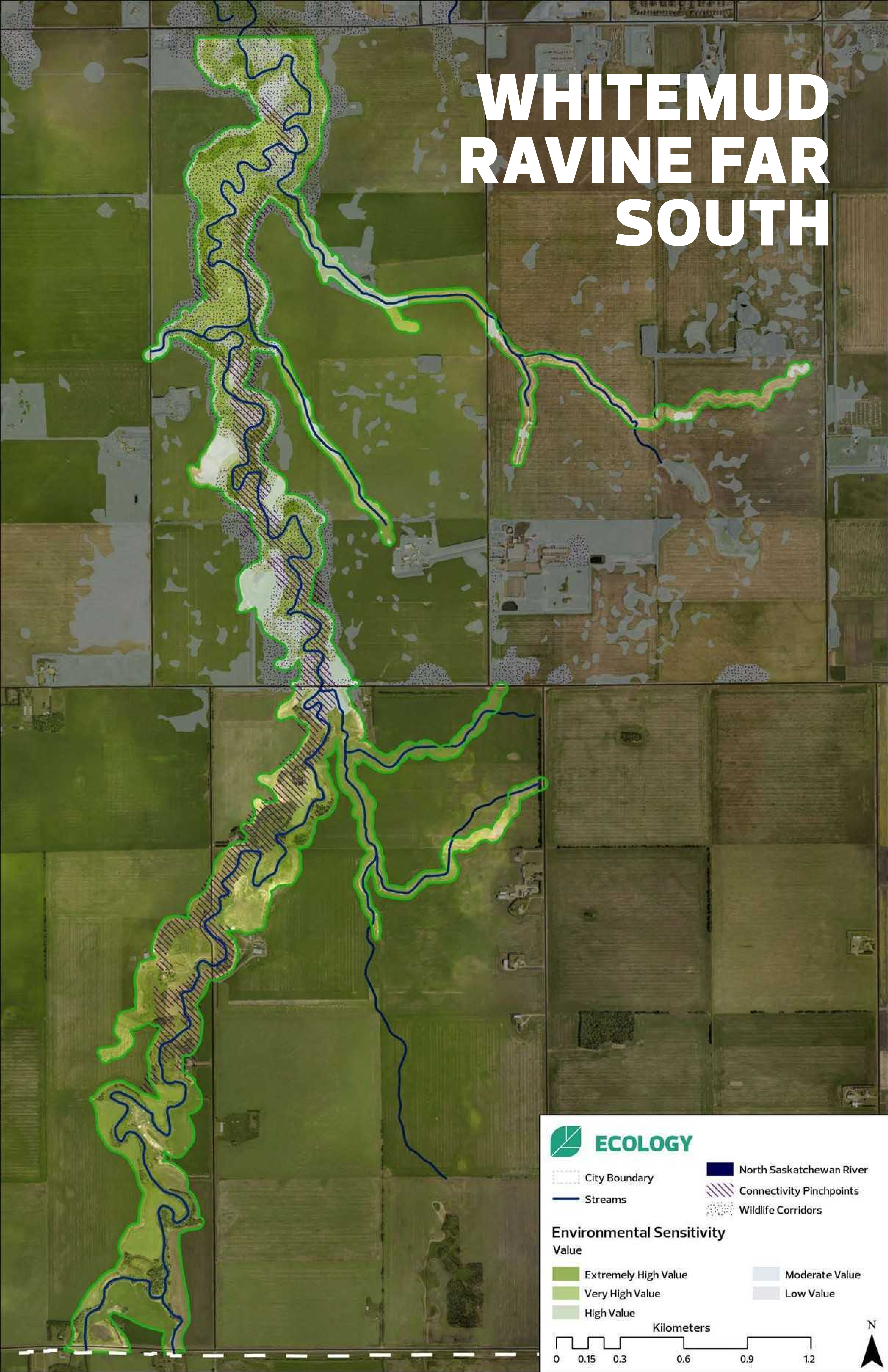


Whitemud Ravine Far South – Reach Habitat and Natural Area Rating Classification





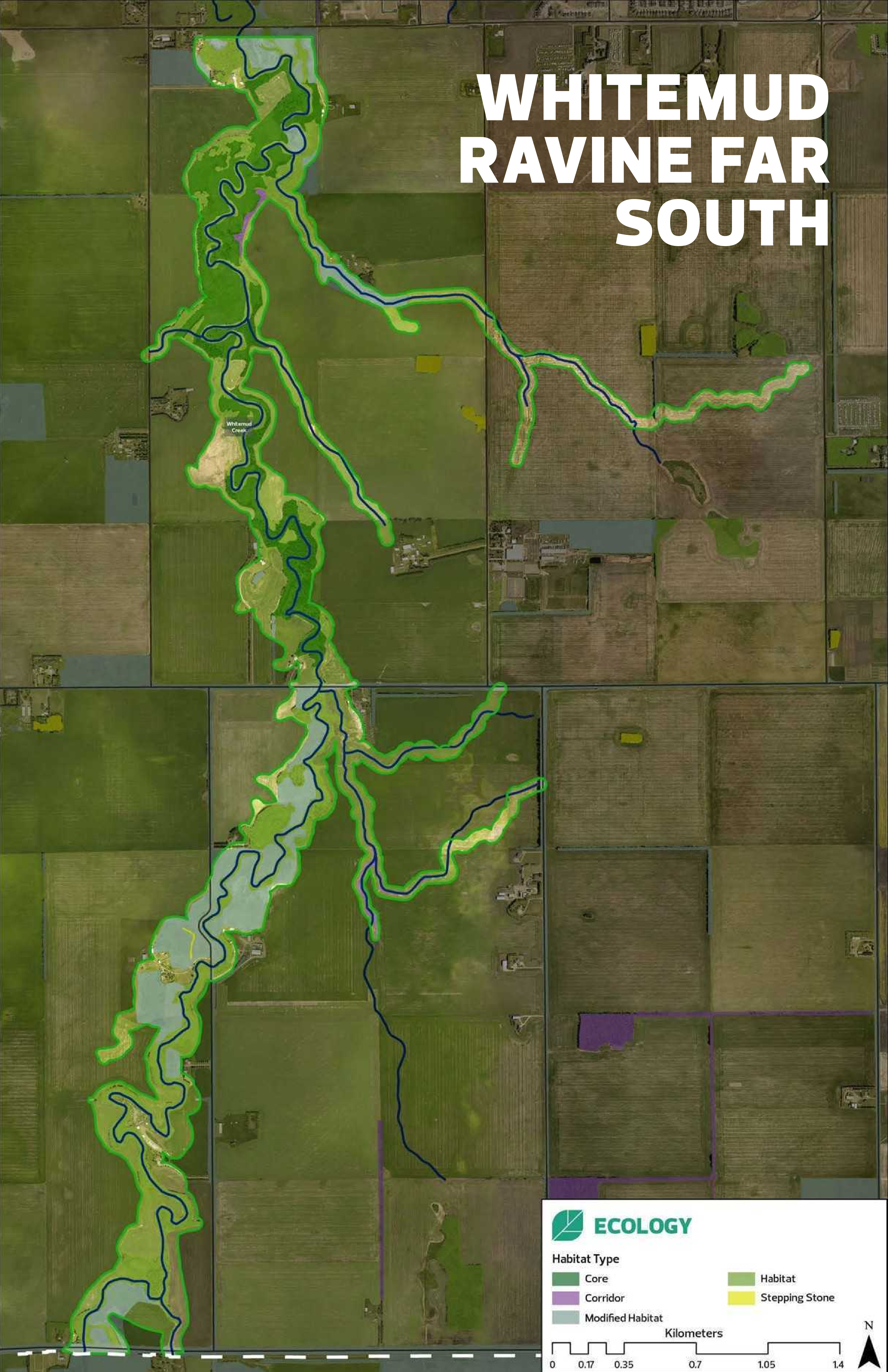

WHITEMUD RAVINE FAR SOUTH
Whitemud Creek
ECOLOGY
UPLVI Land Classes
Developed
Modified
Natural (Other)
Natural (Wooded)
Natural (Non-Wooded)
Wetland
City Boundary
Trails
Roads
Streams
North Saskatchewan River
Flood Hazard
Unique Vegetation
Kilometers
0 0.17 0.35 0.7 1.05 1.4
N

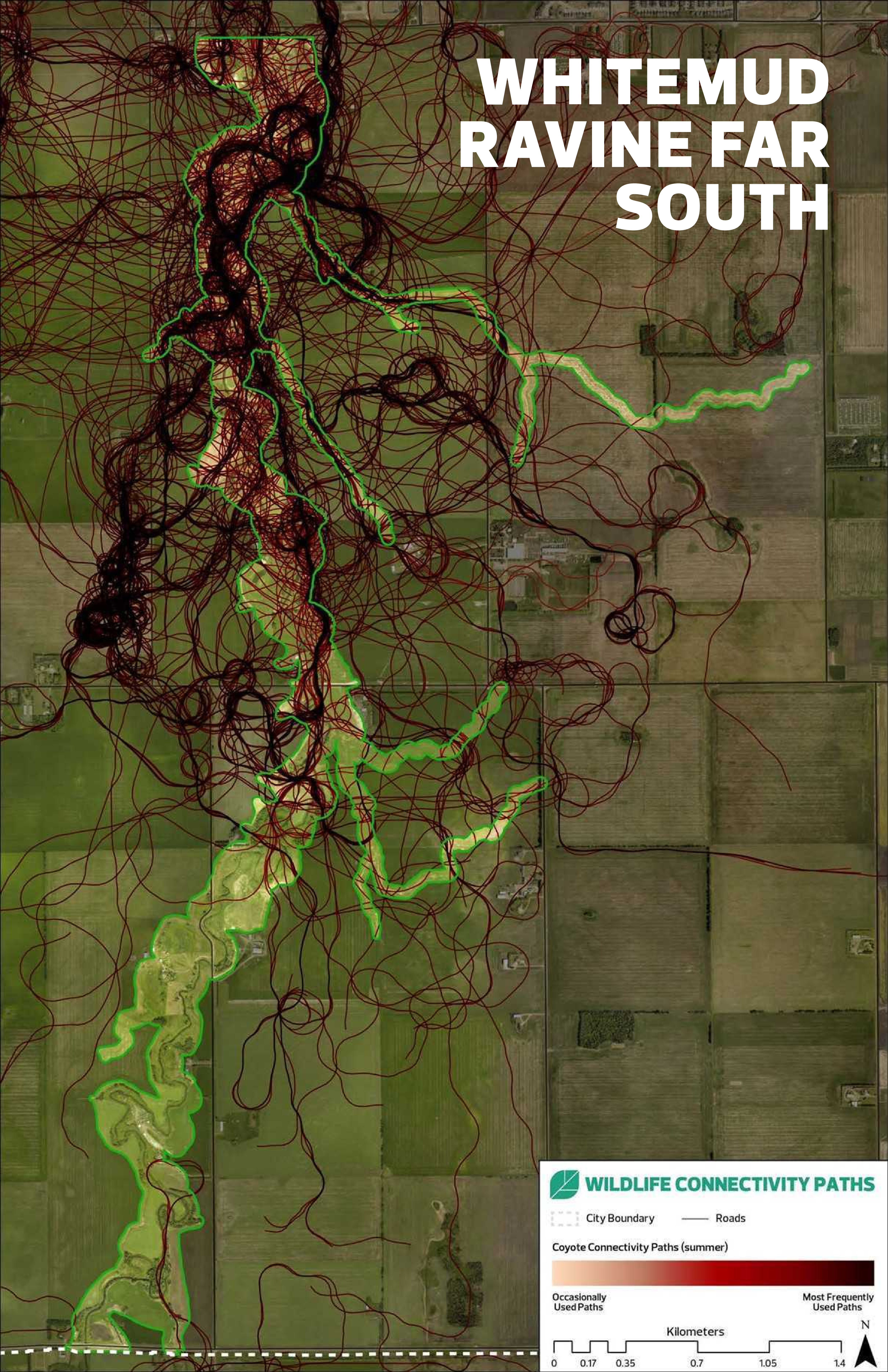


WHITEMUD RAVINE FAR SOUTH
ECOLOGY
City Boundary
Streams
North Saskatchewan River
Connectivity Pinchpoints
Wildlife Corridors
Environmental Sensitivity
Value
Extremely High Value
Very High Value
High Value
Moderate Value
Low Value
Kilometers
0
0.15
0.3
0.6
0.9
1.2
N

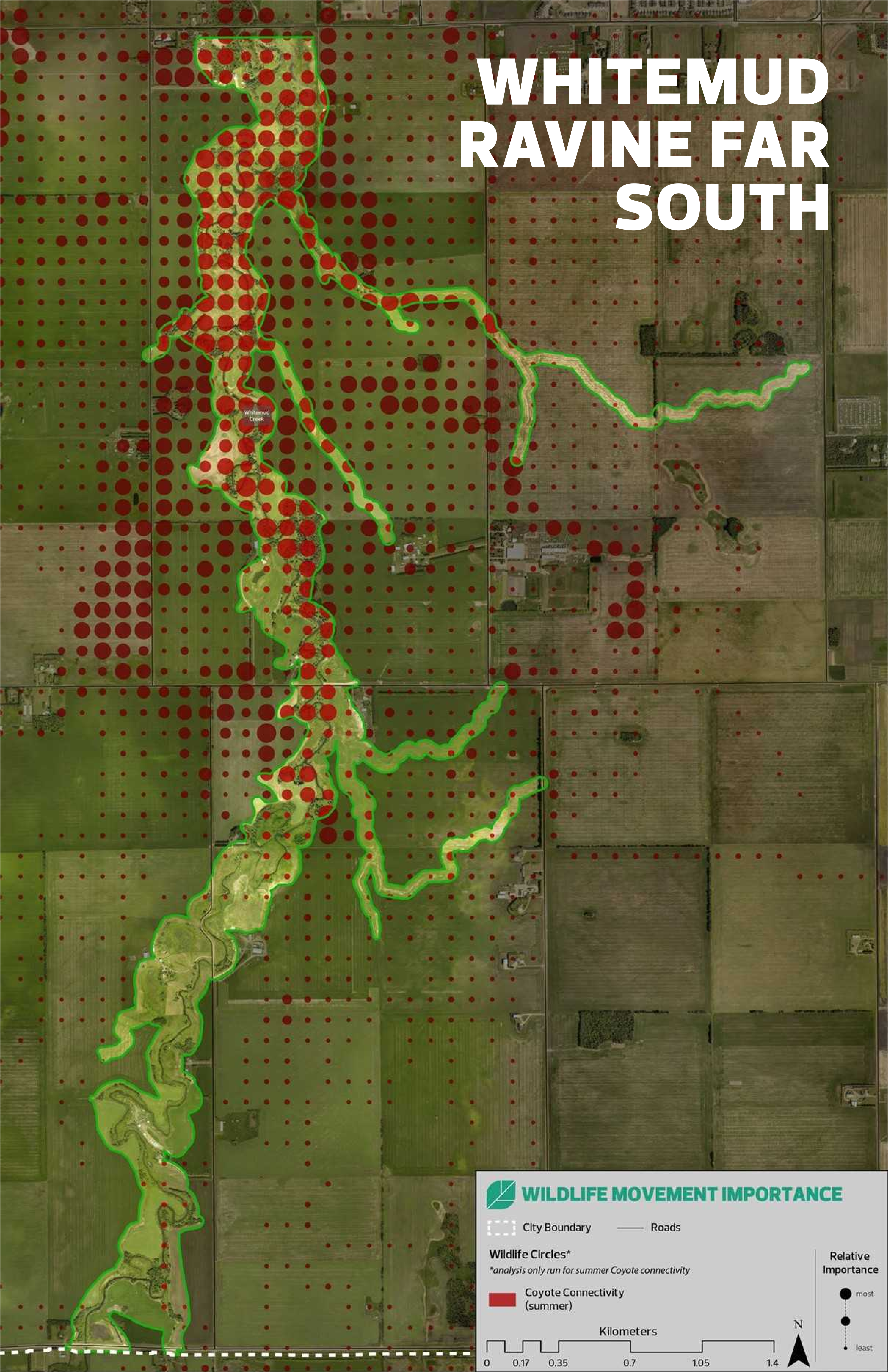
WHITEMUD RAVINE FAR SOUTH

WHITEMUD RAVINE FAR SOUTH




WHITEMUD
RAVINE FAR
SOUTH
WILDLIFE CONNECTIVITY PATHS
City Boundary
Roads
Coyote Connectivity Paths (summer)
Occasionally Used Paths
Most Frequently Used Paths
Kilometers
0
0.17
0.35
0.7
1.05
1.4
N

WHITEMUD RAVINE FAR SOUTH



CELEBRATION

This reach currently contains no amenities providing celebration functionality.

WELLNESS

This reach currently contains no amenities providing wellness functionality. Recreation amenities may be appropriate in surrounding parkland. A trail network should minimize stream crossings and ensure that riparian areas are not compromised.

WHITEMUD RAVINE FAR SOUTH
Whitemud Creek
CELEBRATION
City Boundary
Roads
Parks / Bridges / Trails
Kilometers
0
0.17
0.35
0.7
1.05
1.4
N

WHITEMUD RAVINE FAR SOUTH

CULTURE

A handful of archaeological and historic sites have been found in the north of the reach. The central portion of the reach has high potential for unknown historic sites.

VISITATION AND POTENTIAL CONFLICTS

Visitation to this area is currently very low, with hotspots in the far north and south where the roads give easy access. After residential development, the nature and amount of visitation around Irvine Creek is likely to increase drastically.

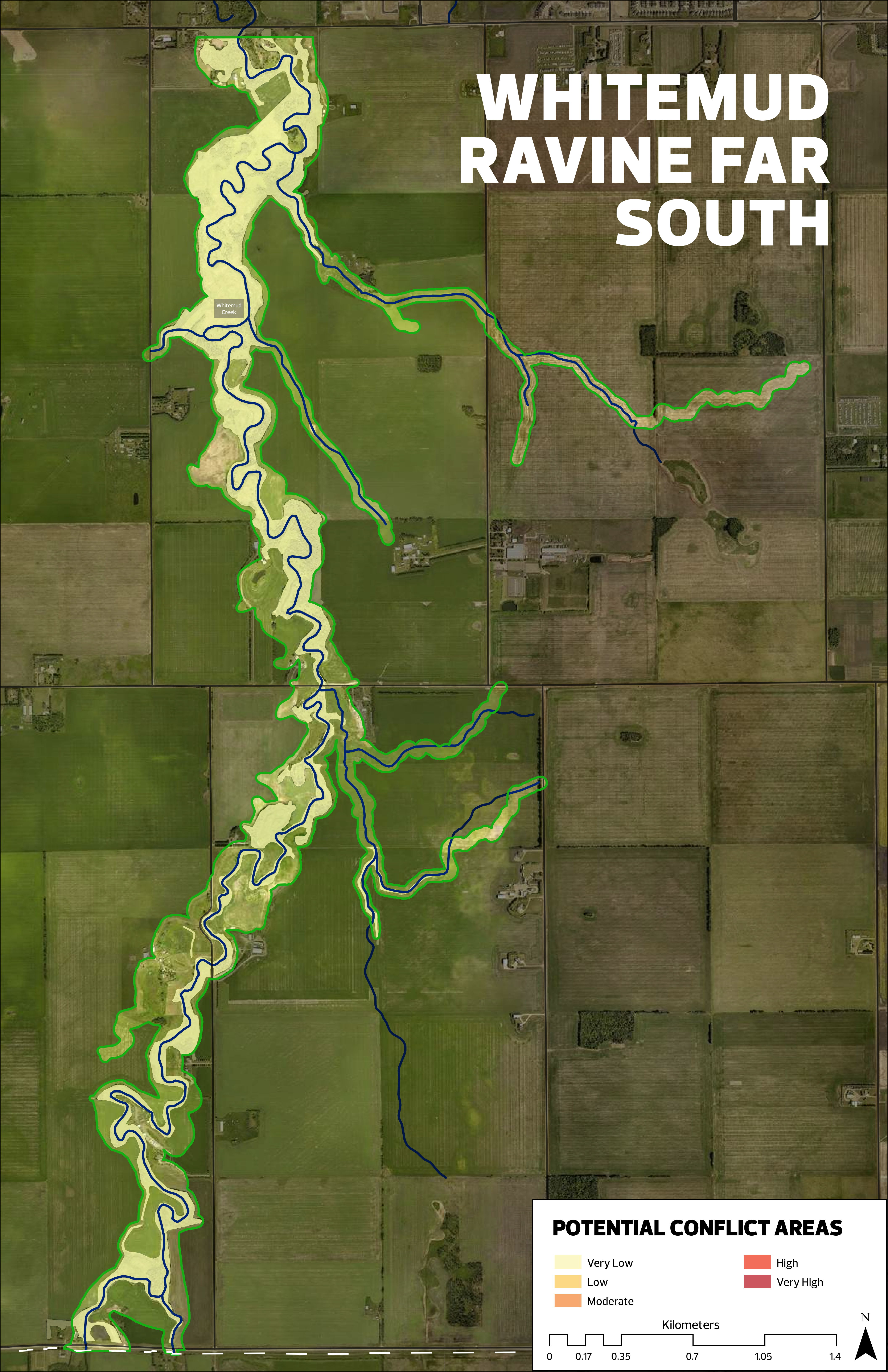
However, the relatively low natural rating of these lands means that potential conflicts are low, and can be well-managed with an effective trail system.

WHITEMUD RAVINE FAR SOUTH – FRACTION OF TOTAL RIBBON OF GREEN VISITATION

Q1 (JANUARY–MARCH)	Q2 (APRIL–JUNE)	Q3 (JULY–SEPTEMBER)	Q4 (OCTOBER–DECEMBER)
0.5%	0.6%	0.7%	1.3%


WHITEMUD RAVINE FAR SOUTH
Whitemud Creek
CULTURE
City Boundary
Trails
Roads
Known Historic Sites
Known Archaeological Sites
Recommended Avoidance
Historic Potential
High
Moderate
Low
Kilometers
0
0.17
0.35
0.7
1.05
1.4
N

WHITEMUD RAVINE FAR SOUTH


WHITEMUD RAVINE FAR SOUTH
Whitemud Creek
POTENTIAL CONFLICT AREAS
Very Low
Low
Moderate
High
Very High
Kilometers
0
0.17
0.35
0.7
1.05
1.4
N

APPENDIX A: LAND COVER CLASSES

PRIMARY CLASS	LAND CLASS	SITE TYPE
Vegetated Landscape (VEG)	Modified (MOD)	Maintained Grass Site (MG)
		Transplant Treed Site (TT)
		Non-maintained Grass/Shrub Site (NG)
		Annual Crops (CA)
		Tame Pasture (CP)
		Rough Pasture (CPR)
		Treed Shelterbelt (TS)
		Recent Clearing (CL)
		Acreage Subdivision (AS)
		Farmyard/Acreage Site (FS)
		Nursery/Tree Farm (NT)
		Agriculture Hygric Tillage Site (HT)
	Naturally Wooded (NAW)	Forested (FT)
	Wetland (WET) includes Stewart and Kantrud Classification System	Treed Bog (WT)
		Shrubby Bog (WS)
		Treed Fen (TF)
		Shrubby Fen (SF)
		Grass Fen (GF)
		Marsh (M)
		Swamp (SW)
	Naturally Non-Wooded (NNW)	Open Shrub (OS)
		Medial Shrub (MS)
		Closed Shrub (CS)
		Native Grass (HG)
Non-Vegetated (NVE)	Natural (NAT)	Natural Water Bodies (NW)
		Exposed Mineral Soil (EMS)
		Sand (NMS)
	Developed (DEV)	Anthropogenic Water Body (AW)
		Established Residential Community (ERC)
		Residential Development Site (RDS)
		Established Commercial/Industrial Site (ECS)
		Commercial/Industrial Develop. Site (CDS)
		Building and/or Parking Complex (BPC)
		Aggregates and/or Fill Site (AF)
		Oil and/or Gas Field Site (OG)
		Maintained Trails (MT)
		Transportation Surface (AIH)

APPENDIX B: NATURAL AREA RATING AND CLASSIFICATION

ECOLOGICAL EVALUATION AND NATURAL AREAS RATING

Evaluation units

The spatial evaluation units for this analysis are drawn from the City's 2013 mapping of Environmentally Significant Areas (ESAs) and Significant Natural Areas (SNAs), supplemented by all additional Natural Areas, as defined in the Environmental Senstivity final report, using the urban Primary Land and Vegetation Inventory (uPLVI) dataset (City of Edmonton ESM Final Report 2016). As there is significant overlap between ESAs and SNAs, ESA polygons were allowed to take precedence, and SNA polygons occur only where they are not already covered by ESAs. Similarly, Natural Area polygons were only included when they did not overlap with identified ESAs and SNAs. Contiguous natural land cover polygons were dissolved into a single polygon. Any ESAs containing small gaps and internal holes were filled during this step, to prevent these gaps from skewing the assessment of polygon shape, and ensure that this metric produced intuitive results.

Scoring the Ecological Evaluation

The desktop and bonus components of the Ecological Evaluation Tool (as outlined in the City's Phase II Ecological Network Report Terms of Reference 2014) were assesed for each evaluation unit, providing an estimate of the relative value of each polygon, with respect to biodiversity potential, ecological connectivity, and representative value.

Biodiversity Potential

- Size
- Shape
- Habitat Diversity

Ecological Connectivity

- Nearby Upland Habitat
- Nearby Wetland Habitat

Representative Value

- City-wide Rare/Unique Vegetation
- Locally Rare/Unique Vegetation
- Dune Moraine Landforms
- Riparian Wetlands

As the site level field surveys have not been conducted, this evaluation should be seen as a minimum value, which may be further increased once local components of species richness are included. As a caveat, it should be noted that since the units of evaluation vary in size and shape, the specific score associated with each polygon may not apply to the entire polygon itself. Field verification should always occur before any modifications or impacts are considered.

NATURAL AREA RATING

The resulting summed ecological evaluation score ranged from a high of 53 (in large, compact, highly diverse natural areas), to –5 (in small, elongated and isolated remnants of single natural cover types) and was classified using natural breaks into Low (score < 19), Moderate (19–28), or High (> 28) categories.

FACTOR	VARIABLE	METRIC	CRITERIA	SCORING
Biodiversity Potential	Size	Area (ha)	<0.5	0
			0.5–1	1
			>1– 3	2
			>3 – 6	5
			>6 – 9	8
			>9– 12	11
			>12	15
	Shape	Ratio of Polygon Perimeter to Convex Hull Perimeter	Simple round/square shape (ratio >= 0.75)	0
			A few linear/narrow areas (ratio 0.5 - 0.75)	-2
			Mix of linear/narrow areas and rounder/wider areas (ratio 0.25–0.5)	-4
			Linear/narrow throughout (ratio < 0.25)	-8
	Habitat Diversity	Number of different habitat types (> 0.5 ha) present within the natural area	Open water	3
			Marsh wetland	3
			Shrub wetland	2
			Peatland (bog or fen)	4
			Deciduous upland	2
			Coniferous upland	2
			Mixedwood upland	3
			Meadow/Naturalized field	1
Ecological Connectivity	Presence of Nearby Upland Habitat	Area (ha) of wooded, meadow, or naturalized field habitat within 100 m buffer	0–0.5	0
			>0.5 – 1	1
			>1 – 2	3
			>2 – 3	5
			>3 – 5	7
			>5	10
	Presence of Nearby Wetland Habitat	Area (ha) of wetland habitat within 100 m buffer	0–1	0
			>1–3	3
			>3–5	5
			>5	10

FACTOR	VARIABLE	METRIC	CRITERIA	SCORING
Representative Value	City-Wide Rarity/ Uniqueness	Presence of rare/unique vegetation types (at a city-wide scale)	Polygons Identified as 'Unique Vegetation' in the Environmental Sensitivity Model	5
	Local Rarity/ Uniqueness	Presence of Rare/unique vegetation types (at the local reach scale)	Natural land cover polygons from the uPLVI that cover less than 20% of the local area Southwest • Site Type Classes: Closed Shrub, Grass Fen, Herbaceous Grass, Marsh, Medial Shrub, Natural Water Body, Open Shrub, Shrub Fen, Exposed Mineral Soil, Sand • Stand Type Classes: White Spruce, Deciduous Lead Mixedwood, Conifer Lead Mixedwood Ravines • Site Type Classes: Medial Shrub, Herbaceous Grass, Closed Shrub, Natural Water Body, Exposed Mineral Soil, Sand • Stand Type Classes: White Spruce, Balsam Poplar, Deciduous Lead Mixedwood, Conifer Lead Mixedwood Northwest • Site Type Classes: Closed Shrub, Grass Fen, Herbaceous Grass, Marsh, Natural Water Body, Shrub Fen, Forested, Exposed Mineral Soil, Sand	5
	Dune Moraines	Presence of unique and irreplaceable dune moraine landforms	Polygons Identified as 'Unique Landforms' in the Environmental Sensitivity Model	5
	Riparian Wetlands	Presence of riparian wetlands (found rarely in the city)	Wetland polygons which fall within the floodplain/floodway extent	5

Habitat Classification

Following the creation of the the Ecological Evaluation Classification, a Habitat Classification was performed, which allocated natural areas and non-maintained semi-natural areas, such as road verges, into a set of four habitat classes: Core Habitat, Habitat, Corridors, and Stepping Stones. Although the initial classification drew extensively from the formal evaluation scoring results, additional hand-edits were requested by the City's ecological experts in order to arrive at a more fulsome classification that aligned with common-sense. Notable hand edits included merging small patches of habitat (< $2000m^2$) which bordered or were contained by core habitat, and splitting long corridor polygons which passed through or adjoined core areas. Additionally, non-maintained grass and treed shelterbelts (which are technically identified as 'semi-natural' land cover and thus not included in the ecological evaluation of natural areas) are included here for their functional contribution as habitat and corridors, respectively.

CORE

- Rating = 'High' and ShapeRatio >= 0.25 and Area >12 ha
- Rating = 'High' and ShapeRatio <= 0.25 and Area >100 ha
- Corridor polygons which touch Core polygons

CORRIDOR

- Rating = 'Low' and ShapeRatio < 0.5 and PolyArea <= 12 ha and PolyArea > 0.5 ha
- Rating = 'Moderate' and ShapeRatio < 0.25
- Rating = 'High' and ShapeRatio < 0.25

HABITAT

- Rating = 'High' and ShapeRatio >= 0.25 and Area <12ha
- Rating = 'Moderate' AND ShapeRatio >=0.25
- Rating = 'Low'AND ShapeRatio > 0.5 AND (Physically Connected to Core/Habitat
- Rating <> 'High' AND PolyArea >= 12 ha
- site-type = non-maintained grass)

STEPPING STONE

- Rating = 'Low'AND ShapeRatio > 0.5 AND (Not Physically Connected to Core/Habitat/Corridor)
- Rating = 'Low' and ShapeRatio < 0.5 and PolyArea < 5000

APPENDIX C: WILDLIFE MOVEMENT MODELLING

ESTIMATING LIKELY WILDLIFE MOVEMENT PATHS USING AGENT-BASED MODELLING

Methodology

The City's existing Circuitscape-based wildlife connectivity modelling work provides valuable insight and has been used to identify key pinchpoints to wildlife movement. However the existing raster-based outputs make it hard to identify the likely routing of individual wildlife movement paths. This results in blindspots when looking at areas where wildlife movement is more rare (such as through the Rossdale area of the Central Reach), or where movement in unrestrained by pinch-points (such as in the newly annexed lands). To provide another lens for visualizing where wildlife movement is likely to occur, an agent-based approach is adopted that draws on the same landscape friction surfaces as the original Circuitscape models to inform how individual paths of movement may occur throughout the city.

This methodology for visualising ecological connectivity uses agents representing a given species type that are expelled from established Core Habitat patches and follow paths of least resistance informed by the resistance raster. The agents move through the friction surface until the longest path(s) reaches a predetermined threshold. The agents are unaware of their surroundings other than within a vision radius and angle around them, thus they do not seek out other patches, rather, they continuously move in whichever direction presents the least resistance to movement.

This analysis is conducted citywide using the Coyote (Summer) friction surface to identify likely movement paths of medium-sized mammals throughout the city and its surroundings (including the newly annexed lands). Additional model runs we also conducted using the Coyote (Winter) and Chickadee friction surfaces to highlight how wildlife movement may change in the winter months, and for more mobile avian species that respond differently to urban landscapes. In all cases, agents are generated with origins in the identified Core Habitat Patches, which may overestimate movement in these areas, and underestimate movement in areas without identified Core Habitat.

Once completed, this simulation visually presents key connections and routes used by the agents moving through the landscape, as well as areas lacking in connectivity or presenting significant barriers. As the modelled paths are incredibly numerous in some areas, a simplified 'wildlife movement importance' analysis is used to calculate the relative path density across the city, which can be displayed using circles of varying size (large circles indicating that the area is more likely to be included in a movement path), which can be more easily overlaid with other data. This simplified surface allows the City to more effectively communicate where wildlife movement concerns are more pressing, informing land use decisions across the river valley.

MODEL PARAMETERS USED:

Agent density: 1 agent every expelled every 25m along habitat perimeter

Habitat boundary offset: Agents were expelled from 50m inside the habitat boundary

Maximum path length: 5 km (agents that were slowed by large amounts of resistance may not have reached this length)

Vision radius: 60m

Vision angle: 100 degrees

Initial agent velocity: 4.2 m per frame