OLESKIW
RIVER VALLEY PARK MASTER PLAN

January 2020

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Project Description

The Oleskiw River Valley Park Master Plan is a 25-year vision and management plan for Oleskiw River Valley Park, building on existing plans, policies and initiatives while identifying public needs and priorities. The Master Plan provides direction for environmental management and includes recommendations for amenities and park programming. The Master Plan was developed using a balanced planning approach, integrating direction from public input, site analysis and City policy.

Oleskiw River Valley Park sits in the floodplain of the North Saskatchewan River, paralleling a significant bend in the river to the east. Most of Oleskiw River Valley Park (approximately 82 hectares) is occupied by two dominant vegetation communities. A mixedwood forest buffers the North Saskatchewan River and a large open field composes the interior of the park. Two intermittent streams traverse the park, and an existing wetland is located in the northern portion of the mixedwood forest. The forested area in the park has been identified in The City of Edmonton Natural Connections Strategic Plan (2009) as part of the River Valley's biodiversity core area, which is an area large enough to support entire populations of different species.

The area that now makes up the City of Edmonton and the North Saskatchewan River Valley has been occupied, utilized, and stewarded by Indigenous Peoples such as the Cree, Dene, Nakota Sioux, Saulteaux, Blackfoot, and Métis since time immemorial. The relationships formed with newcomers and traders, the signing of Treaty No. 6, and the expansion of Euro-Canadian settlement saw the River Valley become a significant resource for the growth of Edmonton and the livelihood of many people.

Through previous Indigenous community engagements, dialogue with the City of Edmonton's Memorandum Partners, as well as with provincial and federal regulators, the North Saskatchewan River and River Valley has been identified as an important historical and cultural location for Indigenous communities. Plants with harvesting, medicinal and ceremonial significance were identified in Oleskiw River Valley Park. The river was also identified as having high cultural significance.

In recent history, the park has been used for recreational and agricultural purposes. In 1913, the Edmonton Country Club opened the lower golf course holes in the present-day park. The golf course remained on the land until 1930, after which the field was farmed by Curtis and Edith Munson, who called the land Wolf Willow Farm. The couple operated the farm until 1970. In 2002, the City of Edmonton acquired the property after public outcry halted private development on the land. (City of Edmonton Archives) Traces of these recent land uses are still visible in the landscape (in the form of the field and the forest) and contribute to the layered history of the site.

Access into the park has historically been limited to private road and trail connections from the top-of-bank to the north and west. Steep slopes and private land ownership present the most challenging barriers to vehicle and pedestrian access into the park. Access for recreational and commuter use has been improved through the construction of the Fort Edmonton Footbridge to the east, and more recently through the West End Trails Project the Terwillegar Park Footbridge to the south.

Project Rationale

Higher level plans and policies developed by the City of Edmonton, including Breathe: Edmonton's Green Network Strategy (2017) and the Ribbon of Green (under development), have identified a need for long-term planning in the south-west region of Edmonton's River Valley as the city continues to expand. City-wide studies have identified opportunities to protect and restore essential habitat connections, increase biodiversity and provide recreational opportunities

in the River Valley (Ribbon of Green, under development; Breathe: Edmonton's Green Network Strategy, 2017; Natural Connections Strategic Plan, 2009; Natural Area Systems Policy (C531), 2007). The Oleskiw River Valley Park Master Plan responds to direction from these higher-level plans and policies.

The Master Plan provides an opportunity to address ecological impacts from historical and current land disturbances, to develop relationships with stakeholders and user groups, and to integrate public feedback into the vision and management plan for the park.

Master Plan Process

An initial inventory and analysis of Oleskiw River Valley Park was completed in the summer of 2016. The inventory was compiled from several sources including observations from site visits, desktop analysis and archival and environmental research. The initial inventory and analysis were followed by a desktop analysis of environmental sensitivities in the park. The results are summarized in this report and in more detail in an Environmental Sensitivities Report produced in February 2017. The sensitivity analysis was used throughout the Master Plan process as a foundational decision-making tool.

Additional environmental studies in support of the Master Plan included a preliminary geotechnical investigation, an Environmental Overview (EO) and a desktop soil assessment. An Environmental Impact Assessment and Site Location Study for the Oleskiw River Valley Park Master Plan will be submitted to Council for approval.

The Master Plan process included four phases of public and stakeholder engagement, engagement with Indigenous communities and consultation with internal City staff. Feedback from public and stakeholder engagement was considered in the creation of the vision and concept plan, resulting in a Master Plan that reflects a communal vision for the park. For a summary of public and stakeholder feedback, see Table 3 in the Public Consultation section of this report.

Vision and Objectives

The following is the vision statement for Oleskiw RIver Valley Park:

The Oleskiw River Valley Park is a crucial link in Edmonton's open space network, contributing to increased biodiversity in the River Valley and providing visitors with access to nature for low-impact recreation, interpretation and cultural learning. Minimal amenities support a diverse group of park users, inviting them to linger in the River Valley and witness the active renewal of the landscape.

The vision statement provides over-arching direction for the Master Plan and represents the collective values of the public and stakeholders who participated in the Master Plan process. Complementary to the vision, the four main objectives of the Oleskiw River Valley Park Master Plan are to:

- increase biodiversity in the park;
- protect the park's natural character and cultural heritage;
- promote opportunities for a variety of park visitors to experience nature; and
- introduce educational and stewardship opportunities for the broader community.

These objectives were developed to address opportunities and challenges identified through the Master Plan process (see Figure 15), which were determined through a combination of public input, site analysis and City policy.

Summary of Recommendations

The Master Plan provides recommendations (summarized on the following pages) to address the identified opportunities and challenges, thereby aiming to meet the park vision and objectives listed above.

→ Park Use and Amenities

The following recommendations are intended to support existing park uses and ensure anticipated future park use can be supported with a minimal footprint. Recommendations include:

1. Create resting points and gathering spaces along paved and granular trails.
2. Construct two pit washrooms in the park near existing park entrances.
3. Create formal viewpoints with minimal infrastructure.
4. Provide waste receptacles at resting points and trail junctions.
5. Provide opportunities for community involvement in the stewardship of the park, developing on-going partnerships to promote educational and stewardship opportunities.
6. Collaborate with Indigenous communities for programming and cultural opportunities in the park.
7. Provide safe access to the river for educational, ceremonial or stewardship activities.
8. Maintain the park as an on-leash area.

9. Promote trail-based activity in the park during winter months.
10. Develop a program for the installation of winter warming huts along trails.

→ Access and Circulation
Recommendations in the Master Plan are intended to promote opportunities for a variety of park visitors to experience nature. Recommendations include:

11. Provide limited vehicle access into the park for service and emergency vehicles via existing park entrances.
12. Designate vehicle parking for Oleskiw River Valley Park in existing parking locations outside the park boundaries.
13. Maintain and improve existing pedestrian entrances.
14. Maintain the existing trail network.
15. Develop new granular trails to provide access into the park by different user groups.
16. Integrate new natural surface trail connections into the existing trail network.
17. Improve wayfinding signs near park entrances and along trails.

→ Natural Asset Management
The Master Plan focuses on maintaining existing resources and park uses while re-naturalizing areas that have been historically disturbed. Recommendations include:

18. Manage and conserve existing natural assets.
19. Collaborate with Indigenous communities in the management of natural assets.
20. Create a forested buffer along the west edge of the park.
21. Re-naturalize disturbed areas in the park.
22. Develop a re-naturalization plan that outlines the implementation, maintenance and monitoring of re-naturalization efforts in the park.
23. Explore partnerships for research and on-going natural asset management.
24. Protect and celebrate cultural and historical resources in the park.

→ Maintenance, Safety and Enforcement
The Master Plan includes a proposed operations and maintenance schedule, along with several proposed amenities to improve the feeling of safety and maintain a level of care in the park. For example, the Master Plan includes recommendations for waste receptacles, improved wayfinding signage and improved regulatory and information signage. Details may be found under the following recommendation:

25. Maintain existing and proposed amenities.

→ Atmosphere and Identity
It is the intent of the Master Plan to preserve opportunities to view wildlife and natural processes; to experience quiet and solitude in nature; and to connect to the park's rich cultural history while accommodating various park uses. The final recommendation of the Master Plan is to:

26. Install interpretive elements that teach visitors about the natural and cultural heritage of the park. (Interpretive elements are to be developed in partnership with Indigenous communities.)

Implementation

The implementation and phasing strategy for the Oleskiw River Valley Park Master Plan is divided into two phases in addition to an on-going re-naturalization strategy.

Phase 1 includes amenities that support the continued recreational use of the trails (such as pit washrooms, waste receptacles, resting points and lookouts). Phase 1 also includes the development of a re-naturalization plan. It is estimated that Phase 1 may be implemented over one to two years.
Estimate of probable cost: $2,737,871

Phase 2, which is to be coordinated with re-naturalization efforts, supports nature education and interpretation, inviting many different users into the park. It includes the development of the granular trail network, additional resting points and gathering areas near the Terwillegar Park Footbridge. Constructed elements in Phase 2 may be completed in one to two years, while re-naturalization will be on-going.
Estimate of probable cost: $796,123

Ongoing re-naturalization will include the reduction of invasive and weed species, an increase in native species cover and opportunities for community involvement. The cost of re-naturalization may be spread over many years and may vary considerably depending on the scale of work and methods recommended in the re-naturalization plan. The estimated cost provided in the Master Plan assumes intensive methods of re-naturalization (including invasive species removal, soil turning, importing topsoil and planting native species). It also includes required maintenance costs, such as watering and weed management in re-naturalized areas.
Estimate of probable cost: $7,547,650 or $4,907,650

Partnerships and Use Agreements
Partnerships are recommended to support the implementation of Master Plan improvements including nature education, ecological stewardship, winter warming huts and the planning and management of natural surface trails.

Introduction

The Master Plan process is based on a thorough understanding of the site conditions, environmental sensitivities, public values and City priorities.

Master Plan Objectives and Timeline

Oleskiw River Valley Park is situated in the North Saskatchewan River Valley in southwest Edmonton. The park is located in the floodplain, paralleling a significant bend in the North Saskatchewan River to the east. The park, which has historically been disturbed for recreational and agricultural use, is now a relatively 'untouched' gem in the River Valley. Oleskiw River Valley Park acts as a wildlife corridor and provides visitors with an escape into nature, with traces of its previous land use still visible in the landscape.

Bordered by residential neighbourhoods and a golf course to the west, access into the park for recreational and commuter use has only recently improved through the construction of the paved, multi-use trail along the western edge of the valley floor (part of the West End Trails Project) and the completion of the Terwillegar Park Footbridge. Through the development of the Oleskiw River Valley Park Master Plan, the City of Edmonton has created a vision and management plan for the park for the next 25 years. The objectives of the Master Plan include:

- Increase biodiversity in the park
- Protect the park's natural character and cultural heritage
- Promote opportunities for a variety of park visitors to experience nature
- Introduce educational and stewardship opportunities for the broader community

The development of a 25-year vision and management plan for the park builds on existing plans, policies and initiatives while identifying public needs and priorities. It provides direction for environmental management, as well as recommendations for civic, cultural and recreational uses that are appropriate to the park. The Master Plan is currently in the Concept Phase of the Park and Facility Development Process.

City of Edmonton Project Development and Delivery Model. This project is in the CONCEPT phase.

Oleskiw River Valley Park Master Plan Timeline (within the CONCEPT phase).

Figure 1 Master Plan Timeline

In the Concept phase, public engagement was critical to providing direction for the Master Plan. In addition to public input, City policy and environmental analysis informed the process and outcome of the Master Plan.

Project Background and Drivers

The River Valley Park Renewal Program provides a long-term strategic approach to renewing parks located in the River Valley. The program, which was initiated by key drivers such as City policies, changing demographics, demand, recreational needs and ageing infrastructure, has identified Oleskiw River Valley Park for renewal. Park renewal is based on an analysis of the physical condition and functionality of park elements as well as the ability to meet existing (and future) capacity.

Broader City of Edmonton plans and policies, such as the Ribbon of Green and BREATHE: Edmonton's Green Network Strategy, have identified opportunities for cultural, educational and recreational use in Oleskiw River Valley Park, in addition to opportunities for ecological protection and restoration. The Master Plan for Oleskiw River Valley Park builds on existing plans, policies and initiatives while responding to public needs and priorities. It provides direction for the management of natural assets in the park as recommendations for cultural, educational and recreational uses.

Master Plan Process

An initial inventory and analysis of Oleskiw River Valley Park was completed in the summer of 2016. The inventory was compiled from several sources including observations from site visits, desktop analysis and archival and environmental research.

The initial inventory and analysis was followed by a desktop analysis of environmental sensitivities in the park. The results are summarized in this report and in more detail in an Environmental Sensitivities Report produced in February 2017. The sensitivity analysis was used throughout the Master Plan process as a foundational decision-making tool.

Additional environmental studies in support of the Master Plan included a preliminary geotechnical investigation, an Environmental Overview (EO) and a desktop soil assessment. An Environmental Impact Assessment and Site Location Study for the Oleskiw River Valley Park Master Plan will be submitted to Council for approval.

- The EO involved a desktop assessment to help determine any existing environmental concerns in the park early in the Master Plan process.
- The EIA report includes mapping of rare vegetation and select bird, mammal and amphibian habitats. It outlines environmental impacts of the Master Plan and recommended mitigation measures.

Consultation with various City of Edmonton departments was an important component of the Master Plan development process. Internal stakeholders provided insight into operational needs in the park as well as opportunities to leverage other City priorities and initiatives in the Master Plan.

Consultation with the public, Indigenous communities and stakeholders has been an integral part of the Master Plan development process. The process included four phases of public and stakeholder engagement, which are described in detail in the Public Consultation section of this report. A summary of Indigenous engagement related to the Oleskiw River Valley Park Master Plan is provided in Appendix A. Feedback from the public, Indigenous communities and stakeholders was considered in the creation of the vision and concept plan, resulting in a Master Plan that reflects a communal vision for the park.

Figure 2 Oleskiw River Valley Park Context

Park Evolution

Changing environmental and cultural influences have shaped the evolution of Oleskiw River Valley Park throughout history.

Oleskiw River Valley Park's heritage is rich and layered. The area has long provided habitat for wildlife and ecological benefits for the broader region. The park's location in the River Valley has created opportunities for cultural, harvesting and recreational use throughout history. Recent disturbance of the landscape has resulted in environmental impacts, such as erosion and the spread of invasive plants and weeds.

Early Cultural Heritage

Indigenous knowledge systems indicate a presence and connection to these lands since time immemorial. The North Saskatchewan River began carving through the landscape approximately 11,000 years ago, and it is during this time period that the archaeological record points to Indigenous habitation within the River Valley (Pyszczyk, Wein and Noble, 2006). Climatic changes and geologic events influenced the ways in which the landscape was used and settled (Pyszczyk, Wein and Noble, 2006). The formation of the North Saskatchewan River created desirable micro-climatic conditions for a diversity of plants and animals, and large concentrations of spawning fish could be found at the mouths of creeks. The rivers and creeks also exposed rocks that could be used for tool making (Pyszczyk, Wein and Noble, 2006).

The unique ecosystem between the northern boreal forest and the great southern plains provided habitat for bison, which became an important food source for the early peoples. Hills throughout the region provided ideal locations for campsites because they could be used as lookouts for defence and hunting (Pyszczyk, Wein and Noble, 2006). Indigenous Peoples spoke distinct languages, had distinct cultural practices, and created complex governments and economic systems in the region (Government of Alberta, 2013).

By the late 1700s, European settlers were attracted to the Edmonton region because of the abundance of animals that could be used in the fur trade (Pyszczyk, Wein and Noble, 2006) and settled in the area for the purpose of expanding the Hudson Bay Company. Indigenous Peoples in the Edmonton area were essential to the success of the western fur trade, as they scouted, hunted, trapped and traded with the European newcomers. The signing of Treaty 6 (1876) and the adhesion at Fort Edmonton in 1877 also continued this process of developing shared lands and relationships, but with the passing of the Indian Act (1876) and the creation of the reserve system, much of the area was taken up for western settlement.

Over time, and despite these changes, Indigenous Peoples have maintained and nurtured their cultural practices, knowledge systems and ways of life. It is important to acknowledge that the lands on which Edmonton is situated are the Territory of the Treaty 6 First Nations and the Métis Nation of Alberta Zone 4. They were originally occupied by Indigenous Peoples including the Cree, Dene, Blackfoot, Nakota Sioux, Saulteaux, and Métis peoples. Dialogue with Indigenous Peoples remains an ongoing process, and through examples such as this project we have engaged with communities to help us understand some of those cultural and historical connections to place, and to share Indigenous history and traditional knowledge.

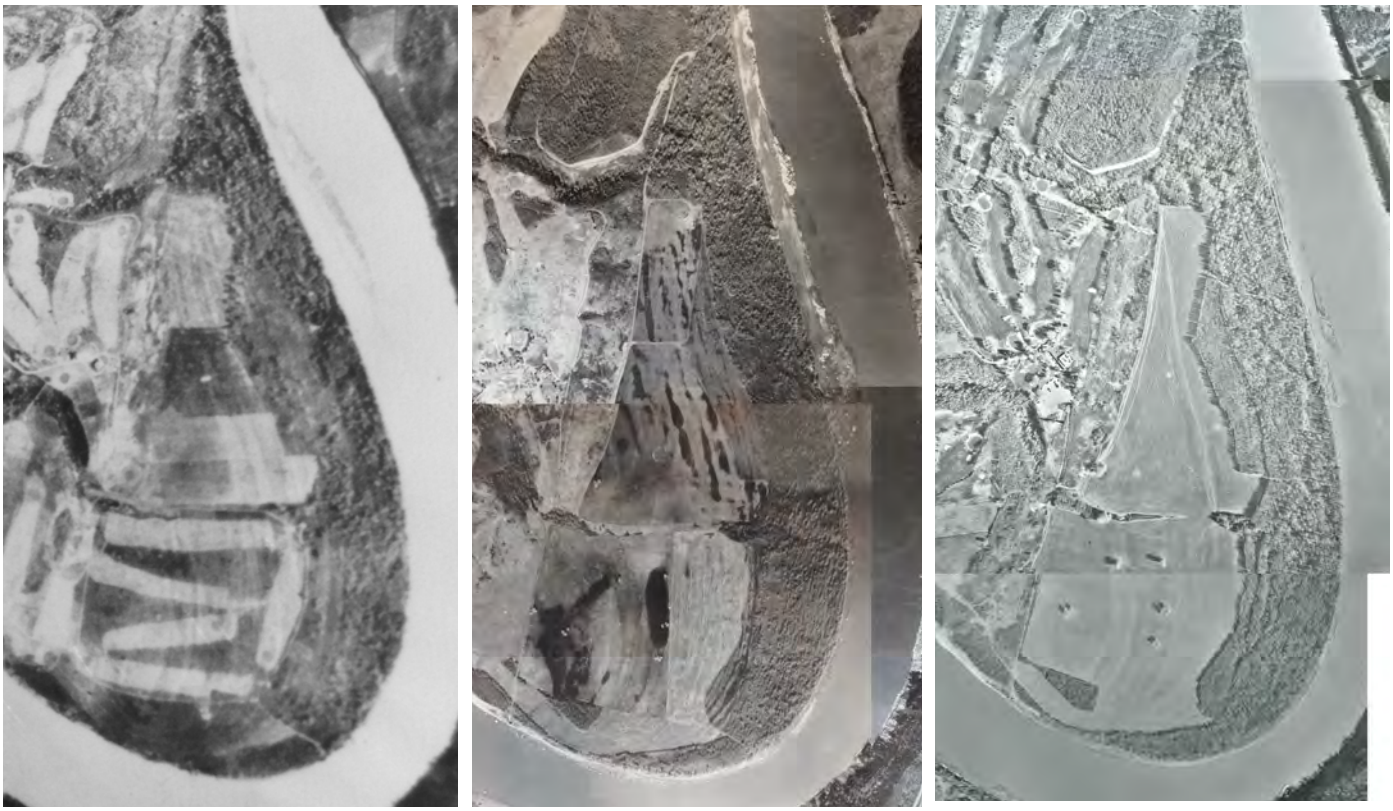
Settlement History

The neighbourhood of River Valley Oleskiw was named after Professor Joseph Oleskiw (1860-1903) who, following an 1895 visit from Ukraine to Alberta, played a key role in promoting Ukrainian immigration to the province (Edmonton Archives).

In 1910, the Edmonton Country Club acquired 426 acres of land where Oleskiw River Valley Park is currently located, making it the third oldest golf course in Canada. In 1913, the lower holes were opened on the southern portion of the Oleskiw River Valley Park and remained there until 1930 when they were moved upland (Edmonton Country Club 2019). The lower holes are visible in the present-day park in Figure 3, an aerial image from 1924. In the late 1940s, influential landscape designer Stanley Thompson made recommendations for alterations to the landscape of the golf course. The Club membership included some of Edmonton's and Alberta's most prominent citizens, including Premiers Rutherford and Sifton (Edmonton Country Club 2019).

Wolf Willow Farm was developed by Curtis and Edith Munson on about 480 acres of land in the Oleskiw River Valley Park in 1930 when the golf course was moved upland. Figure 3 depicts an aerial view of the farm in 1950. Curtis Munson was born in the United States and attended Yale University. He served in the U.S. Army during World War I. The farm produced hay on the open fields and the forest stand to the east of the site was maintained. The couple operated the farm until it closed in 1970 (Edmonton Archives). Figure 3 shows the same area of land in 1978. The field and forest appear un-changing throughout the years.

By 2002, the Oleskiw River Valley Park was acquired by Centennial Valley Properties, which sought to develop the area. The development plans were halted by public outcry and a City bylaw forbidding development inside the River Valley. This event led the City of Edmonton to seek acquisition of the property.



1924 *1950* *1978*

Figure 3 Historical Aerial Photographs

Source: Edmonton Archives

Timeline

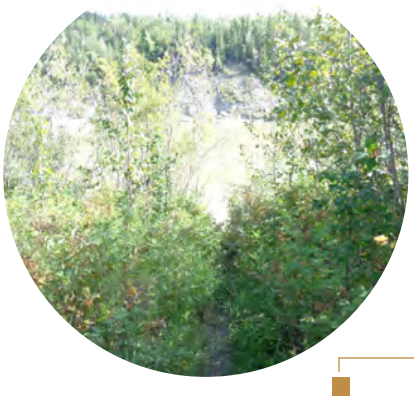
1850 1875 1900

Land Use
In recent history the park area has been mainly used as an extension of the current golf course and as a farm. Since 2002 the site is part of the River Valley parks system.

1910
Edmonton Country Club acquires 426 acres of land in its current location.

1913 – 1930
In 1913, the lower holes were opened on the southern portion of the Oleskiw River Valley Park and remained there until 1930 when they were moved upland.

Park Planning
An early vision for a River Valley park system begins to come to fruition in the later part of the 20th century with policy that protects the natural character of the River Valley landscape.



1906 – 1907
Frederick G. Todd visits Edmonton and gives his recommendations for a River Valley park system - the first vision of this kind in Edmonton.

Events and Figures
Indigenous Peoples stewarded the North Saskatchewan River for thousands of years. Recent key figures have had a major impact on the use of the River Valley for recreation and production.

The North Saskatchewan River was accessed by First Nations and Indigenous Peoples for travel, sustenance and trade, among other uses, for thousands of years. They developed territories and complex economic systems throughout Alberta.

1876
Treaty 6 signed at Fort Carlton and Fort Pitt.

1895
Dr. Joseph Oleskiw (1860-1903), a Ukrainian professor, visits Edmonton. He writes and distributes a pamphlet encouraging Ukrainians to emigrate to Canada..

Figure 4 Historical Timeline

Source of images: City of Edmonton, Connect2Edmonton, Edmonton Archives

1925 1950 1975 2000

1949
Edmonton adopts the Bland-Spence report to oppose further development in the River Valley and acquire River Valley land.

1970
Top-of-the-Bank policy introduces development principles and zoning regulations for development adjacent to River Valley.

1975
The Capital City Recreation Park Development Plan directs the development of the central River Valley. Alberta invests $40 million.

1985
North Saskatchewan River Valley Area Redevelopment Plan Bylaw 7188

1992
Ribbon of Green Master Plan

2002
Oleskiw River Valley Park acquired by Centennial Valley Properties, which sought to develop the area. Public outcry and a city bylaw forbidding development inside the River Valley halt the project.

2006
Urban Parks Management Plan

1930 - 1970
Curtis and Edith Munson start Wolf Willow Farm on about 480 acres of land on the current Oleskiw Park site. Curtis Munson was born in the U.S. and attended Yale University, serving in the U.S. Army during World War I.

Partnerships with Indigenous Peoples will help to preserve, protect and share this important history.

The Field and the Forest

Since the City's acquisition of the property, the land has remained relatively un-managed. Aside from the paved, multi-use trail and natural surface trails that run through the forested area, the park does not contain any formal amenities. The open field and the mixedwood forest, which is beginning to extend westward through natural succession, compose the major elements of the site.

Through the public and stakeholder engagement process and engagement with Indigenous communities, the City learned that the field and the forest are highly valued by participants. These features are a legacy of previous land uses and, while they are considered natural by many, they represent a disturbed landscape in an urban environment. Excessive erosion on the western slopes and invasive plants throughout the park are some of the impacts resulting from current and past land disturbances.

Edmonton's River Valley Planning History

Forward-looking policy, planning and community involvement can be traced back to the recommendations of Frederick G. Todd. Following his visit to Edmonton in 1906-1907, Frederick G. Todd shared his vision and recommendations for a River Valley park system in the city (Abma and Gibbs, 2006). Todd wrote that "a crowded population, if they are to live in health and happiness, must have space for the enjoyment of that peaceful beauty of nature – which because it is the opposite of all that is sordid and artificial in our city lives – is so wonderfully refreshing to the tired souls of city dweller..." (Todd, 1907). Although Todd's recommendations were not realized immediately, later in the early 20th century, public and private interests in using the River Valley for economic gain became apparent and municipal and provincial authorities, therefore, strived to protect the natural open space from urban development.

Only after the flood of 1915 was Todd's vision adopted by the Government of Alberta "in-principle", later to be incorporated into a zoning bylaw that protected the city's green spaces in 1933. The City of Edmonton adopted the Bland-Spence report in 1949, which recommended the opposition of further development in the River Valley and the initialization of a long-term program to acquire River Valley land. The 1970 Top-of-the-Bank policy provided regulations for development adjacent to the ravine system and influenced the development of the North Saskatchewan River Valley Area Redevelopment Plan in 1985 (Abma and Gibbs, 2006).

The Capital City Recreation Park (CCRP), which was created in 1975 through the Alberta Heritage Savings Fund and the North Saskatchewan River Valley Area Redevelopment Plan Bylaw, established a framework for the management and use of land in Edmonton's downtown River Valley. Edmonton Parks and Recreation also began to study the entire River Valley at that time, but did not begin to develop a resource management plan for the valley until the Province of Alberta announced they would provide funding for the project through a continuation of the urban parks development program in 1989.

In 1990, Council approved the preparation of a Conceptual Plan for the North Saskatchewan River Valley and Ravine System. This conceptual plan, The Ribbon of Green, was expanded into the Ribbon of Green Master Plan, approved in 1992, to include policy guidelines for the long-term development, use and care of the River Valley. The City is currently working on an update to the Ribbon of Green that provides direction to the northeast and southwest portion of the River Valley and Ravine system. Since Oleskiw River Valley Park is located in the Ribbon of Green Southwest Study Area, the Master Plan for the park will align with recommendations from the Ribbon of Green, which are being developed concurrently to the park Master Plan.

Policy and Regulations

The Oleskiw River Valley Park Master Plan exists within a framework of environmental and social policy.

Location and Zoning

Location and Land Ownership
Oleskiw River Valley Park is located along the northern shore of the North Saskatchewan River in Edmonton, south of Wanyandi Way NW and east of the Edmonton Country Club and Golf Course. The project boundary for the Master Plan includes River Valley and top of bank land, all of which is owned by the City of Edmonton with the exception of the bed and shore of the North Saskatchewan River, which is owned by the Province. Twelve parcels are contained in the boundary for the Master Plan, one of which does not have a Title or Assessment.

Zoning
The majority of Oleskiw River Valley Park is located within Zone A: Metropolitan Recreation Zone in the City of Edmonton. The adjacent Edmonton Country Club is also zoned as Metropolitan Recreation Zone A. This zone provides the opportunity for preserving natural areas and parkland along the river, creeks, ravines and other designated areas for recreational use and environmental protection. Some of the permitted uses within Zone A include: public park, urban gardens, exhibition and convention facilities, indoor/outdoor participant recreation services, natural resource development, natural science exhibits and cultural exhibits. These permitted uses are directed by the Urban Parks Management Plan's guidelines for River Valley parks.

A small portion of the park that connects to Woodward Cres. at the top of bank is located in Zone RF1 (Single Detached Residential Zone). The permitted uses in this zone include: garden suites, limited group homes, minor home based business, secondary suites and single detached housing.

The surrounding neighbourhoods are mostly residential, with single family homes making up most of the housing stock. Some vacant parcels are located across the river on the south shore of the river, which is east of the park. The surrounding neighbourhoods are compatible with the development of a new River Valley park. Future park amenities and activities should also be compatible with the surrounding land uses.

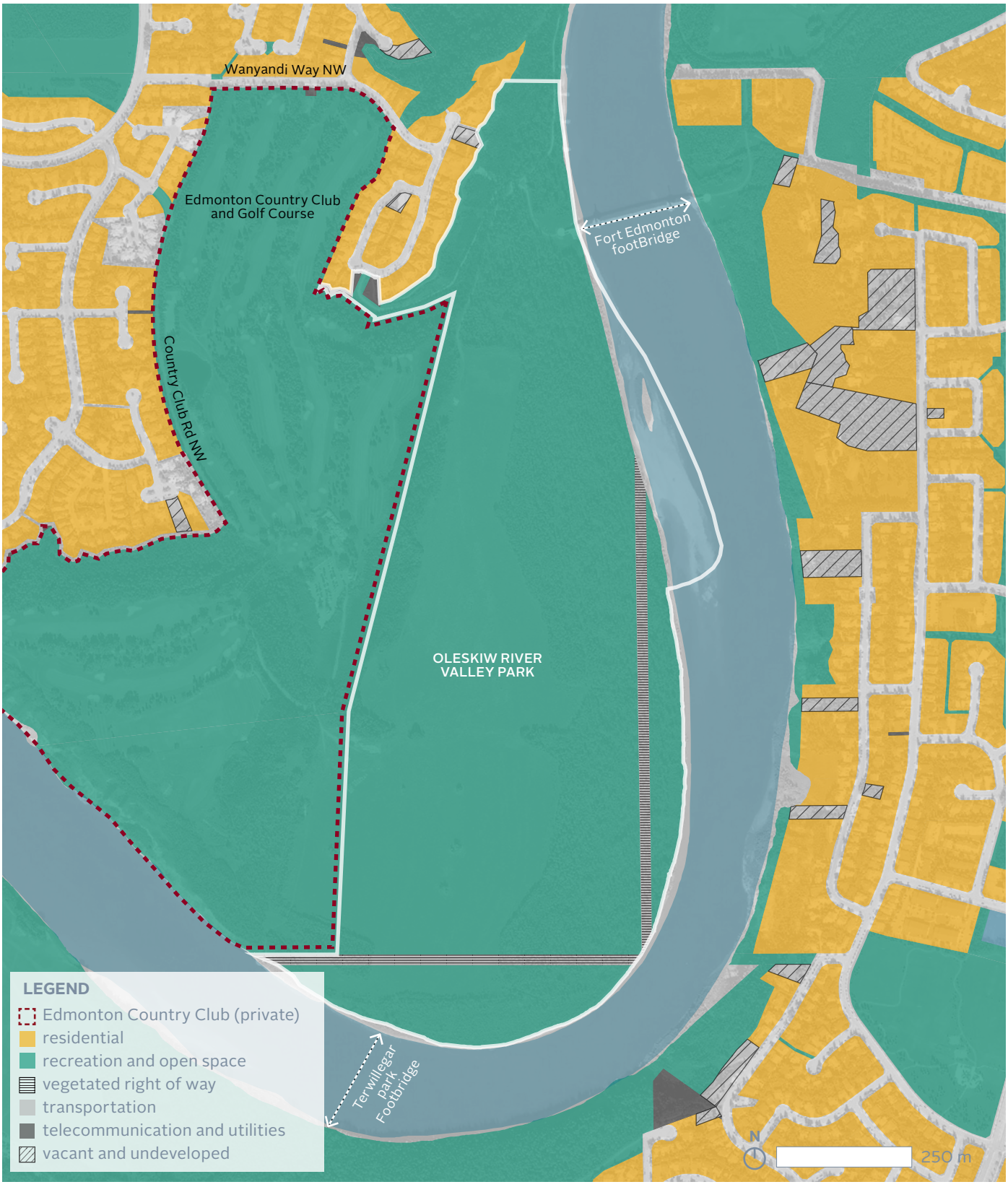


Figure 5 Oleskiw River Valley Park Land Use Map

Federal and Provincial Regulatory Requirements

Both Federal and Provincial policies direct the development and protection of parks, green spaces and habitats in Edmonton. These policies are essential to the protection of Edmonton's River Valley parks.

Federal

→ Canadian Environmental Assessment Act

The Canadian Environmental Assessment Act, 2012 (CEAA 2012) project review process pursuant to the requirements of CEAA is triggered when a federal authority proposes a project, grants money to a project, grants an interest in land to a project, and/or exercises a regulatory duty in relation to the project. CEAA only applies to projects described in the Regulations Designating Physical Activities or those designated by the Minister of the Environment.

→ Fisheries Act

The Fisheries Act is administered by the Department of Fisheries and Oceans Canada (DFO) and has provisions aimed at the protection of fish and fish habitat from serious harm. The Fisheries Act applies to all projects that have a potential to cause serious harm to fish and fish habitat that are part of or support a commercial, recreational or Indigenous fishery.

→ Navigation Protection Act

The Navigation Protection Act (NPA), administered by Transport Canada, provides the protection of navigation on all public navigable waterways in Canada through the Navigation Protection Program. Regulatory approval is required in scheduled navigable waters where the works risk a substantial interference with navigability. Scheduled navigable waters are included in the List of Scheduled Waters under the NPA. For works in non-scheduled waterways, owners of the works may opt-in for a review under the NPA. Non-scheduled waterways are still protected under the Act and could be subject to court proceedings if the works interfere with navigation.

→ Migratory Birds Convention Act

The Migratory Birds Convention Act (MBCA) is administered by Environment Canada and provides protection and preservation for migratory birds and migratory bird habitat through the Migratory Birds Regulations and Migratory Birds Sanctuary Regulations. The MBCA and its regulations apply to migratory game birds (e.g., ducks, geese and swan), migratory insectivorous birds (e.g., chickadees and cuckoos) and migratory non-game birds (e.g., gulls and herons). See Article I of the MBCA for the list of the families of migratory birds protected under the MBCA.

→ Species at Risk Act

The Species at Risk Act (SARA) is federal legislation intended to protect sensitive species. Species included under Schedule 1 are established by the Federal Cabinet and are based on recommendations by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and consultation with government, Indigenous Peoples, stakeholders and the Canadian public. SARA applies to federal lands; however, it may also apply to other lands when provincial protection is deemed inadequate by the Federal Minister of the Environment. SARA applies to all lands in Canada for Schedule 1 bird species protected by the Migratory Birds Convention Act.

SARA also has a provision to protect 'critical habitat' "...that is necessary for the survival or recovery of a listed wildlife species and is identified as the species' critical habitat in the recovery strategy or in an action plan for the species" (Section 2(1) of SARA). If an activity is expected to affect a wildlife species listed under Schedule 1 of SARA or destroy any part of its 'critical habitat', additional regulatory requirements, including notification of appropriate regulatory agencies and application for a permit under Section 73 of SARA, will need to be fulfilled.

Provincial

→ Environmental Protection and Enhancement Act

The purpose of the Environmental Protection and Enhancement Act (EPEA) is to ensure sustainable use of the environment through protection, enhancement and wise use of natural resources. EPEA ensures environmental protection is considered in the early stages of planning. This process helps predict potential environmental consequences of an activity and minimize any adverse impacts before they occur. Alberta Environment and Parks regulates a wide range of activities under the EPEA through conditions set out in regulations, approvals and Codes of Practice.

→ Historical Resources Act

The Historical Resources Act requires clearance for any development that may impact historical resources in Alberta. Clearance is issued by the Heritage Resources Management Branch of Alberta Culture and Tourism (Alberta Culture and Tourism 2015). Historical resources include structures, archaeological sites, paleontological resources, and other works of humans or nature that are of value.

→ Public Lands Act

The Public Lands Act regulates various public land uses (e.g., land dispositions), the sale and purchase of land, and the declaration of water bodies as being owned by the Crown. The Crown may claim the bed and shore of permanent water bodies (e.g., wetlands, creeks and drainage channels) found on a given property.

→ Water Act

Pursuant to Section 36 of the Water Act, activities that may impact water bodies and the aquatic environment, regardless of ownership, require an approval unless otherwise authorized by the Water Act. In the Water Act, 'activity' is broadly defined to include the following actions: placing construction works within a water body; erosion protection; draining a water body; removing or disturbing ground and/or vegetation within the bed and shore that results in altering the flow, level, direction and/or location of a water; and channel realignment.

→ Weed Control Act

The Weed Control Act regulates the control of noxious weeds, and the destruction of prohibited noxious weeds in Alberta. The Weed Control Act Regulation provides a complete listing of all designated Noxious and Prohibited Noxious weed species in the province.

The application of pesticides is controlled through the Environmental Protection and Enhancement Act and should be reviewed in the event that pesticide application is required.

→ Wildlife Act

The Wildlife Act and Wildlife Regulation provide the legislation and regulatory provisions to protect and manage wildlife on all land in Alberta. The Minister responsible for Fish and Wildlife Management has the authority under the Wildlife Act to influence and control activities that may have direct adverse effects on the populations and habitat of wildlife species (Section 103 of the Wildlife Act). If the proposed development is anticipated to disturb or destroy habitat of prescribed wildlife species listed under the Act, additional regulatory requirements may need to be met depending on jurisdiction and land ownership (Section 36(1) of the Wildlife Act).

The following birds are not protected under the Migratory Birds Convention Act (MBCA), but are protected provincially under Alberta's Wildlife Act: grouse, quail, pheasants, ptarmigan, hawks, owls, eagles, falcons, cormorants, pelicans, crows, jays and kingfishers.

Municipal Policies and Initiatives

The Master Plan for Oleskiw River Valley Park will be integrated into the planning framework for the City's green network and River Valley park system. Recommendations in the Master Plan must, therefore, align with the City's planning approach to open space, ecological preservation and the River Valley. The Master Plan will fit within Edmonton's open space planning hierarchy, beginning with The Ways plans, followed by Breathe: Edmonton's Open Space Strategy and the Ribbon of Green (under development).

The following policies and plans govern and influence the development, protection and use of parks and natural areas in Edmonton. As a River Valley park, Oleskiw River Valley Park is a crucial link in the City's multifunctional network of green spaces.

Major Influencing Policies and Plans

→ ConnectEdmonton: Strategic Plan, 2019-2028
In April 2019, City Council approved *ConnectEdmonton: Strategic Plan* 2019-2028 which replaced *The Way Ahead* 2009-2018. *The City Plan* charts out how we will get to a future city, a city that has the benefits we enjoy today with new opportunities for the future. *The City Plan* is about our spaces and places and how we move around the city. It is about our community and what we need to do together to grow, adapt and succeed. *The City Plan* will replace *The Ways* documents, including the *Municipal Development Plan* and *Transportation Master Plan*. Development of *The City Plan* started in August 2018. This is a 2-year project and it is anticipated to come to public hearing in spring 2020.

→ 10-Year Capital Investment Agenda 2012-2021
Understanding that investment in city infrastructure requires a long-term vision, the City of Edmonton created the 10-Year Capital Investment Agenda to steer city spending. The Agenda is aligned with the goals and priorities of the City's Strategic Plan, The Way Ahead.

→ Vision 2050
Vision 2050 is the City of Edmonton's people-focused plan that identifies long-term planning objectives (2019-2028) and serves as the foundation on which the City's corporate business plan, department business plans, master plans and budgets are developed and approved.

→ Open Space Policy (C594), 2017
Edmonton's *Open Space Policy* provides policy and administrative direction to applying the green network approach to open space planning. The policy outlines a framework based on a connected landscape, a multifunctional network, an evidence-based approach, equitable open space provision and a collaborative effort.

→ Breathe: Edmonton's Green Network Strategy, 2017
Implementing *Open Space Policy* (C594), *Breathe* is a transformative strategic plan to support each neighbourhood with an accessible network of parks and open space as the city grows. The main goal of the *Green Network Strategy* is to plan and sustain a healthy city by encouraging the connection and integration of open space.

The Oleskiw River Valley Park Master Plan aligns with the themes and functions directed by Breathe and the Open Space Policy. Strategic Directions from Breathe that support the Oleskiw River Valley Park Master Plan recommendations include:

- 4.2 Make open spaces vibrant, sustainable and functional to support community identity and needs.
- 4.3 Empower people to become active participants and stewards in planning, sustaining and using the green network.
- 4.4 Improve awareness of open space opportunities and appropriate use.
- 4.7 Preserve and enhance the ecological quality and connectivity of the green network.
- 4.9 Improve collaborative open space planning among City stakeholders, community partners and other jurisdictions.

→ Climate Change Adaptation and Resilience Strategy, Under Development
The *Climate Change Adaptation and Resilience Strategy* aims to help the City of Edmonton respond to the impacts of climate change and protect the community, infrastructure and services.

→ For the Love of Winter: Strategy for Transforming Edmonton into a World-Leading Winter City 2012

Developed over the course of several years using a community-led approach, the Winter City Strategy aims to enhance Edmonton's culture, urban design, civic life and economy by embracing the opportunities and challenges that come along with being a Northern capital city. Accompanying the Strategy is an Implementation Plan that provides recommended actions and partners to aid in the implementation of the Strategy throughout the City of Edmonton.

Four WinterCity Strategy Goals, that focus on Winter Life and Winter Design, outlined below, and the actions and policies associated with them will greatly influence the Oleskiw River Valley Master Plan:

- Winter Life
  - Make it Easier to 'Go Play Outside:' provide more opportunities for outdoor activity.
  - Improve winter transportation for pedestrians, cyclists and public transit users.
- Winter Design
  - Incorporate urban design elements for winter fun, activity, beauty and interest.
  - Design our communities for winter safety and comfort.

→ North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188) 1985

The ARP provides a comprehensive River Valley and Ravine management program to protect the North Saskatchewan River Valley and Ravine System. The primary goal of this bylaw is to ensure the preservation of the natural character and environment of the North Saskatchewan River Valley and its Ravine System while integrating public recreational opportunities within the landscape. It restricts development within the River Valley and defines features that should be protected, such as rare or endangered flora or fauna or historic/archaeological resources. The Plan started a process for more effectively managing the future of the River Valley and Ravine System.

→ Natural Area Systems Policy (C531), 2007

Edmonton's *Natural Area Systems Policy* underlines the City's commitment to protect natural area systems through effective urban planning and development, encouragement of public engagement in natural area issues, promotion of environmental stewardship and establishment of conservation practices using the best available science.

Excerpts from the Policy Statement of the Natural Area Systems Policy (C531) that support the Oleskiw River Valley Park Master Plan include:

- "To safeguard our natural capital and the associated ecological services, the City of Edmonton is committed to conserving, protecting, and restoring our natural uplands, wetlands, water bodies, and riparian areas, as an integrated and connected system of natural areas throughout the city."
- "The City of Edmonton recognizes that it can accomplish the work that is required to achieve conservation more efficiently and effectively by supporting and developing partnerships to achieve effective conservation results."

→ Ribbon of Green

- *Concept Plan*, 1990
- *Master Plan*, 1992
- *Southwest and Northeast*, under development

The *Ribbon of Green Master Plan* establishes policy guidelines for the long-term development, use and care of the entire River Valley. It limits development within the River Valley to an integrated trail system, which provides river accessibility but protects the valley landscape and wildlife.

The work being completed for the Southwest and Northeast portion of the River Valley and Ravine System will update and expand on the *Ribbon of Green Concept Plan* (1990) and the

Ribbon of Green Master Plan (1992). Policy Action sections of the Plan (in progress) that support the Oleskiw River Valley Park Master Plan include:

- *Mitigating Ecological Impacts*
- *Restoring and Remediating*
- *Monitoring Ecological Health*
- *Improving Accessibility for All*
- *Facilitating Year-Round Use*
- *Incorporating Public Art*
- *Recognizing Indigenous Traditional Use*
- *Promoting the River Valley + Ravine System through Interpretation*
- *Providing Educational Opportunities*

Other Supporting Policies and Plans

→ Access Design Guide, 2017 (Undergoing revisions)

The *Age-Friendly Edmonton Access Design Guide* was initiated to address the following goals:

- Parks, outdoor spaces, communities and buildings are designed to be age-friendly
- Parks, outdoor spaces, communities, walkways and buildings are maintained to ensure ongoing access by seniors

The Guide aims to promote accessibility throughout exterior paths of travel, open spaces and interior facilities owned, operated or leased by the City of Edmonton.

→ Bicycle Transportation Plan, 2009

This plan is integral to creating a bike-friendly city and is an important part of the implementation of the T*ransportation Master Plan*, *The Way We Move*. The plan proposes to expand city-wide bike routes, including increasing the number of marked on-street bike routes, expanding bicycle racks to all transit buses, expanding bicycle parking facilities and increasing education and awareness around city biking. The plan also proposes an improved maintenance and street sweeping/snow clearing schedule. A project is underway to renew the *Bicycle Transportation Plan*.

→ Community Standards Bylaw 14600

The *Community Standards Bylaw 14600* establishes construction working periods (Monday to Saturday: 07:00 to 22:00; Sunday and Holidays: 09:00 to 19:00) and acceptable noise levels (maximum 65 dBA). It is a requirement that this Bylaw be adhered to during construction. Standard protocols for exceptions may be granted with special permission by the City of Edmonton.

→ Corporate Tree Management Policy 2010

All naturally treed areas and ornamental trees on city-owned land are the responsibility of City Operations Department Parks and Roadways Branch (including procurement, maintenance, protection and preservation) and are encompassed in Edmonton's *Corporate Tree Management Policy* C456A. The policy states that where loss or damage to a City tree(s) occurs, compensation for the loss will be recovered from the individual causing the damage or loss and applied to future tree replacements. The Corporate Tree Management Policy includes the replacement of some non-native or invasive tree species and must be taken into account in projects focusing on invasive species removal.

→ Dogs in Open Spaces Strategy, 2016 and Dogs in Open Spaces Implementation Plan, 2018

The *Dogs in Open Spaces Strategy* provides planning, design and management recommendations for existing and future off-leash dog areas in the City of Edmonton. It also provides a summary of requirements for Neighbourhood, District and River Valley and Ravine off-leash areas.

→ Light Efficient Community Policy and Procedure, 2013

The Light Efficient Community Policy and Procedure provides guidance on outdoor lighting in Edmonton. It states that walkway and multi-use trails should only be lighted if all the following conditions are met:

- Urban areas;
- High night time usage;
- Paved surface.

→ Live Active Strategy 2016-2026

This strategy will raise awareness and help encourage Edmontonians to become more physically active. It provides a road map for supporting the active recreational and sporting needs of all Edmontonians, including active living opportunities within the River Valley.

→ Parkland Bylaw (C2202) Consolidated 2003

The *Parkland Bylaw* defines the uses and activities that are appropriate for parkland in the City of Edmonton. The purpose of the Bylaw is to promote safe, enjoyable and reasonable use of parks and to protect and preserve natural ecosystems in the city.

→ River Access Guiding Principles Policy C586 2015

Understanding that the North Saskatchewan River is important to Edmontonians' quality of life, the River Access Guiding Principles help to ensure that people can access the river for recreation and enjoyment. They also ensure that activities that occur in the river and the River Valley are appropriate, safe and ecologically responsible.

→ River Access Strategy, Under development

Implementing the *River Access Guiding Principles* (Policy C586), the *River Access Strategy* will inform the programming, operation and infrastructure improvements that support access to the river and activities associated with the river.

→ Urban Forest Management Plan 2012

This is a ten year strategy for sustainably managing and enhancing Edmonton's diverse urban forest, which includes all trees within City limits. The plan has three objectives, which are in support of the Oleskiw River Valley Park Master Plan:

1. Effectively manage, monitor, sustain and ensure the health and growth of Edmonton's urban forest.
    - » Develop and implement programs that will lead to the establishment of a 20% tree canopy coverage through partnerships, residential action, naturalization and additional landscape tree plantings.
    - » Enhance/strengthen design specifications and development practices for sustainability in consultation with associated stakeholders

2. Inform the public, City agencies, neighbouring communities and partners of the importance and benefits of the urban forest, relevant forestry issues and best management practices.
    - » Increase awareness about urban forest management issues and related standards; and increase awareness of the benefits of reducing our environmental impact.
    - » Communicate the ecological and health benefits of trees, proper maintenance and water saving through existing programs.
    - » Create stewardship opportunities (e.g., Adopt a Tree) for citizens and communities to play a role in our urban forest.

3. Protect native forest and tree stands in conjunction with the Office of Biodiversity.
    - » Work with affected stakeholders to protect natural areas, with emphasis on naturally treed environments.

Neighbourhood Plans

The following list includes relatively recent development projects and neighbourhood plans that have occurred within and around Oleskiw River Valley Park. The West End Trails Project introduced a paved, multi-use trail into Oleskiw River Valley Park that connects to the regional River Valley trail system, resulting in increased park use from surrounding neighbourhoods and the greater region.

» Rhatigan Ridge Neighbourhood Structure Plan, 2006
» West Jasper Place Outline Plan, 2006 Consolidation
» Riverbend Area Structure Plan, 2006 Consolidation

Parallel City Projects

→ Fort Edmonton Park Enhancement Project
Fort Edmonton, an admission-based park across the Fort Edmonton Footbridge, aims to create a heritage experience and includes amenities such as food services, washrooms, shops and creative activities. Beginning in 2017, some of the park's utilities and amenities will be upgraded as part of the Fort Edmonton Park Enhancement Project. Through a partnership with the Confederacy of Treaty 6 First Nations and the Métis Nation of Alberta, the park is soon to include an Indigenous People's Experience (to be completed around 2020). It will include indoor classrooms, an outdoor amphitheatre and villages surrounding a man-made pond.

→ Terwillegar Park Master Plan Implementation
Terwillegar Park, to the south of Oleskiw River Valley Park, includes recreational opportunities including walking, cycling, winter activities, off-leash dog walking and boating. The plan for the park includes an expansion of parking facilities and opportunities for nature-based play.

→ West End Trails Project
The West End Trails project added approximately 5km of primary (paved) and secondary (gravel) trails to the River Valley main trail in 2015-2016. The north extensions link Terwillegar Park with the Fort Edmonton Footbridge through Oleskiw River Valley Park.

→ Wildfire Threat Assessment Project
The City is working to develop a grading system that would assign a hazard rating to each area of the city with regards to fire risk and wildfire fuel. Through the Wildfire Threat Assessment project in progress, the City aims to become a FireSmart community, taking a proactive approach to wildfire prevention and prioritizing hazard areas throughout the city. The Master Plan for Oleskiw River Valley Park may be used as a pilot project for initiatives related to fire prevention with Council approval and may be used to advocate for improved wildfire prevention planning in Edmonton.

→ Whitemud Road Rehabilitation
In 2016, Whitemud Road underwent utility upgrades. The road now needs rehabilitation, including the relocation of the cul-de-sac within the road right-of-way. Whitemud Road (west of 58 Avenue) is scheduled for rehabilitation beginning in 2018. The City has sought feedback from adjacent property owners and trail users on the impacts of this project.

→ Woodward Access Trail Rehabilitation
The trail from Woodward Crescent to the Oleskiw River Valley Park, located within the project boundaries, will be reconstructed in 2018 to address identified drainage issues.

Existing Conditions

Existing conditions within the River Valley and in the park have resulted through natural and cultural processes over thousands of years.

Understanding the existing conditions within the park is essential to preserving and enhancing sensitive ecologies while incorporating opportunities for community enjoyment of the natural landscape. The City of Edmonton has adopted the practice of reviewing and analyzing environmental conditions at an early stage in the planning process. The intended outcome is that conflicts, limitations and environmental sensitivities will become apparent early in the Master Plan process, allowing time for mitigation strategies or alternate recommendations.

Environmental Conditions

The following is a summary of Oleskiw River Valley Park's environmental context, including water, geology, soils, vegetation, wildlife and historical resources. The purpose of this section is to highlight factors that have an impact on the Master Plan and that contribute to environmental sensitivities in the park. The findings presented here are informed by the environmental reporting completed as part of the Master Plan process, including the Environmental Overview and Environmental Impact Assessment. Observations of note include concerns around the quality of terrestrial and aquatic habitat, slope and bank instability, the presence of archaeological resources and invasive plants.

Water and Fish Habitat

Two small watercourses are present in Oleskiw River Valley Park, flowing east to west from the river valley slopes to the North Saskatchewan River. They are classified as intermittent watercourses, meaning that the water flow in these tributaries likely fluctuates throughout the seasons and potentially drains

Existing paved, multi-use trail through the forest in the northern portion of the park

into the North Saskatchewan River. Both watercourses are classified as unmapped Class C water bodies with a Restricted Activity Period (RAP) of September 16 to July 31 (ASRD 2012).

The watercourse to the north (WC1) flows under a culvert that supports the paved multi-use trail. It has defined banks upstream but poor definition in the wetland-like area downstream (located in the existing forest). Further downstream, it appears to become an undefined wet area with no clear connection to the North Saskatchewan River. The watercourse to the south (WC2) flows from the ravine that crosses the golf course to the west, across the open field and toward the North Saskatchewan River. It is expected that no flow has occurred in the stream in the past several years. Natural drainage of WC2 is prevented by high river banks. Both watercourses likely provide poor-quality habitat and have a low probability of fish presence (Basin Environmental 2019).

While little bank erosion is evident on the west bank through a study of historical North Saskatchewan River bank lines (spanning a period of 1969 to 2008), localized erosion is evident along the southern extent of the meander bend in the river, producing nearly vertical banks approximately 2-3 m in height. Much of the park is located within the floodplain. During a 1:100 year flood event, approximately 25% of the park area located along the east and northeastern extents would be inundated (Basin Environmental 2019).

Geology and Geomorphology

The bedrock underlying the surficial deposits at Oleskiw River Valley Park consists of the Upper Cretaceous, Horseshoe Canyon Formation. The Horseshoe Canyon Formation consists of deltaic and fluvial deposits of interbedded and interlensed fresh and brackish water sandstone, siltstone and shale. Typical sediments consist of soft grey, greenish and white weathered bentonitic feldspathic sandstone, brown bentonitic shales, coal seams and beds of carbonaceous shale (Basin Environmental 2019).

Geological and fluvial processes have contributed to the current landscape formations that give shape to Oleskiw River Valley Park. The park is located in a floodplain and is relatively flat, with low-level terrace lands ranging in elevation from about 626 m to 630 m, dipping slightly toward the North Saskatchewan River. The valley slopes at the west edge of the park are generally sloped at between 21 and 34 degrees and are approximately 35 to 40 m in height. Signs of previous landslides and existing erosion channels are noted along the slopes, which are considered marginally stable (Basin Environmental 2019).

Site Soils

Bedrock in the park area is covered by surficial deposits composed of late Tertiary and Quaternary Period deposits. Tertiary deposits in the Edmonton area are part of the Empress Formation that were deposited in pre-glacial river valleys. The Empress Formation sands and gravels are composed primarily of quartzite with minor chert, ironstone and coal fragments.

Quaternary deposits (which include glacial and post-glacial deposits) are also present in the park area. Most of the glacial deposits consist of till covered by glaciolacustrine silt and clay deposited in the glacial Edmonton lake. Postglacial deposits consist of alluvium and colluvium deposits. Alluvium is located in the River Valley, is generally a few metres thick and is composed of bedded gravel, sand and clay (becoming coarser

Existing forest edge and open field in Oleskiw River Valley Park

with depth). Colluvium is bedrock that has been moved by gravity or surficial deposits, covering much of the River Valley slopes.

In general, the major soil group in Oleskiw River Valley Park is Black Chernozemic. Local variations in topography, vegetation and weather patterns can produce minor occurrences of other soils (likely Regosols). On-site observations identified fine, sandy, silty and clayey topsoil (Basin Environmental 2019).

Vegetation

Oleskiw River Valley Park is located in the Central Parkland Subregion. Native vegetation is minimal in the Central Parkland Subregion due to intensive cultivation and urbanization (NRC 2006). Vegetation within the North Saskatchewan River Valley is dominated by trembling aspen and balsam poplar with pockets of black and white spruce. Riparian areas that are not treed are dominated by grasses, sedges and shrubs. Approximately 487 vascular plant species (e.g. trees, shrubs, forbs/herbs, grasses, sedges, aquatics, rushes, ferns and carnivorous plants) inhabit the North Saskatchewan River Valley (Hobson et. al. 2008).

There are two dominant vegetation community types in Oleskiw River Valley Park: a ruderal grassland area in the open field (formerly an agricultural field) and an aspen forest dominated by a canopy of trembling aspen and sub-canopy of rose (*Rosa* spp.), chokecherry (*Prunus virginiana*) and buckbrush (*Ceanothus cuneatus*). Riparian areas are also present along the bank of the North Saskatchewan River, and manicured vegetation can be found near the pedestrian bridges and along the top-of-bank near Woodward Crescent NW (Basin Environmental 2019).

RARE PLANTS

Through a background literature review and a background search of ACIMS database, seven rare plant species were identified to have the potential to occur within the study area. These include:

- River bulrush (*Bolboschoenus fluviatilis*)
- Porcupine sedge (*Carex hystericina*)
- Dark-green goosefoot (*Chenopodium atrovirens*)
- Wild comfrey (*Cynoglossum virginianum var. boreale*)
- Flat-topped white aster (*Doellingeria umbellatus*)
- Lance-leaved loosestrife (*Lysimachia hybrida*)
- Smooth sweet cicely (*Osmorhiza longistylis*)

Of those listed, only smooth sweet cicely was detected within Oleskiw River Valley Park during rare plant surveys for the Master Plan. In addition, four other rare plant species were documented in the park, including poison ivy (*Toxicodendron radicans*), Rocky Mountain juniper (*Juniperus scopulorum*), thorny buffaloberry (*Shepherdia argentea*) and clasping-leaf dogbane (*Apocynum cannabinum*) (Basin Environmental 2019).

INVASIVE PLANTS AND NOXIOUS WEEDS

A total of ten Noxious weeds, as defined by the Alberta *Weed Control Act*, were identified within the park during field surveys that took place in 2016 and 2017. These include:

- Creeping thistle (*Cirsium arvense*)
- Common burdock (*Arctium minus*)
- Common tansy (*Tanacetum vulgare*)
- Greater burdock (*Arctium lappa*)
- Hounds tongue (*Cynoglossum officinale*)
- Leafy spurge (*Euphorbia esula*)
- Perennial sow-thistle (*Sonchus arvensis*)
- Scentless chamomile (*Tripleurospermum inodorum*)
- Field bindweed (*Convolvulus arvensis*)
- Common toadflax (*Linaria vulgaris*)

Areas that were considered to have high concentrations of weed species include open manicured lawn areas along pathways, areas adjacent to the residential community and the open field.

WETLAND

The wetland associated with the northern intermittent stream (WC1) is classified as a Seasonal Graminoid Marsh (M-G-III) in accordance with the Alberta Wetland Identification and Delineation Directive (AEP 2015a) and the Alberta Wetland Classification System (AWCS) (AEP 2015b). Vegetation in the wetland is dominated by sedge species including common cattail (*Typha latifolia*), water sedge (*Carex aquatilus*) and small-fruited rush (*Carex utriculata*).

Wildlife

The North Saskatchewan River Valley provides diverse habitats for a variety of amphibians, avifauna, mammals and reptiles. A FWMIS database search was conducted to determine the presence of wildlife within a 2 km radius of the project area. Several species were identified from this search as having potential to occur within the park. They include the Canadian toad (listed as May be at Risk under the Alberta Wildlife Act), peregrine falcon (listed as Threatened under the Alberta Wildlife Act) and short-eared owl (listed as May be at Risk under the Alberta Wildlife Act) (Basin Environmental 2016). A desktop review and targeted field studies were completed as part of the Master Plan process to assess wildlife and wildlife habitat in Oleskiw River Valley Park. A detailed explanation of the field surveys conducted can be found in the Environmental Impact Assessment (Basin Environmental 2019).

Figure 6 Oleskiw River Valley Park Existing Conditions

MAMMALS

Coyotes, least chipmunks and red squirrels were observed during field surveys, but other mammal species including deer, black bears, cougars and rodent species have been recorded moving through the valley. During a 2016 site visit, three dens (two of which suggested the presence of coyote) were noted, along with deer tracks in the park (Basin Environmental 2016). No bat roosts were identified, but bat species have been recorded within the North Saskatchewan River Valley and may use the study area for breeding and foraging (Basin Environmental 2019).

AVIFAUNA

Thirty-nine bird species were recorded during breeding bird surveys, and six additional species were observed incidentally. Ring-billed gulls were identified along the river. Other abundant species identified in the park include yellow warblers, bank swallows and clay-colored sparrows. Six special status species were observed during the surveys (Basin Environmental 2019).

FISH AND FISH HABITAT

The North Saskatchewan River in the vicinity of Oleskiw River Valley Park is classified as a Class C watercourse with a Restricted Activity Period (RAP) of September 16 to July 31, which means that work that has potential to impact the watercourse cannot occur during that period (ASRD 2012). Eleven sportfish species and 19 non-sportfish species have been documented in the North Saskatchewan River in Edmonton (AEP 2018).

Within the park, two unnamed intermittent streams were identified, the northernmost stream contributing to a wetland-like area east of the existing paved pathway. As described in earlier sections, these intermittent streams are likely poor-quality habitat and have a low probability of fish presence (Basin Environmental 2019).

Historical Resources

Several sources were accessed throughout the Master Plan process to help inform the City's understanding of Oleskiw River Valley Park's history. The City accessed information from The Edmonton Archives, Alberta Culture, The Alberta Township Survey, the environmental assessment for the Terwillegar Park Footbridge (Stantec Consulting Ltd. 2014) and several online archival sources. Engagement with Indigenous communities, the public and stakeholders was also instrumental in the development of a well-rounded understanding of the park. See the Park Evolution section of this document for a summary of historical findings related to Oleskiw River Valley Park.

Historic Resource Values (HRV) were mapped for Oleskiw River Valley Park to determine the likelihood of the presence of historical resources in the park (Figure 7). The HRV is a number assigned to an area of land that corresponds with the classification of historic resources that lie within that area. Classes with a value of "0" suggest that investigation of the site has resulted in limited returns or the site has been heavily disturbed or destroyed. Nearly the entire project site is classified as HRV 5 (high potential to contain historic resources). Known historical and archaeological resources in the park include a large bison killsite and Indigenous camp sites. These features must be protected in accordance with the Alberta Historical Resources Act. Below is a description of all of the HRV levels:

1. Lands that have been designated under the Act as Provincial Historic Resources, World Heritage Sites or lands owned by ACCS for historic resource protection and promotion purposes.
2. Lands designated under the Act as a Municipal or Registered Historic Resource.
3. Lands that contain a significant historic resource that will likely require avoidance.
4. Lands that contain a historic resource that may require avoidance.
5. Lands believed to contain a historic resource or lands that have a high potential to contain historic resources.

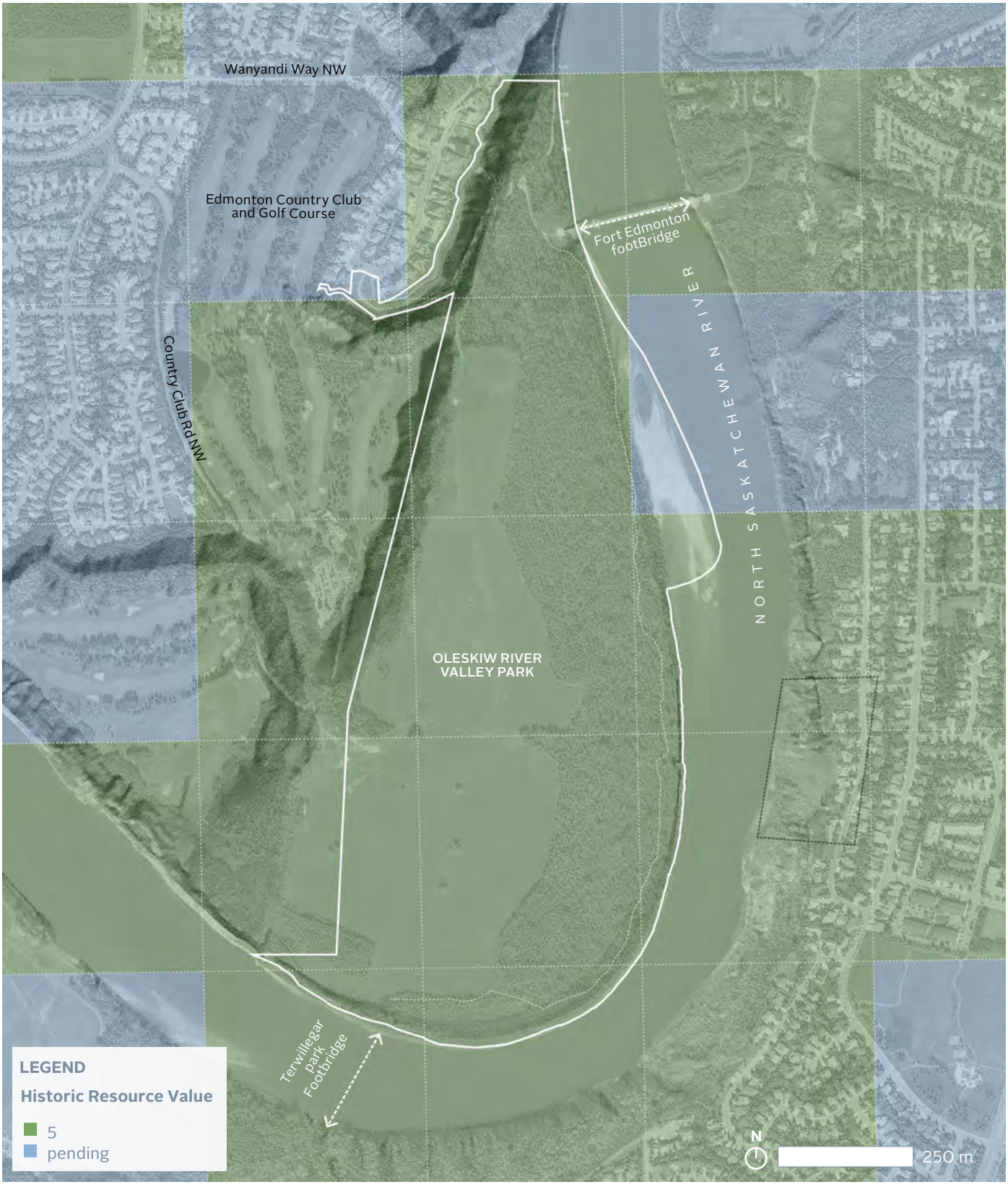


Figure 7 Known Historical Resources Map

Environmental Sensitivity Mapping

The City requires environmental sensitivity mapping of the site as part of the Master Plan process to assess the current biophysical conditions (e.g. ecological function and state of natural health) of the park. This mapping is done early in the process to incorporate the findings into all program, infrastructure and maintenance decisions for the Master Plan. The City's aim is to create a framework in which the basis for decision-making is rooted in a respect for ecological balances. This type of planning is essential to finding a balance between human use and the preservation and enhancement of the River Valley's ecological systems.

Overview of Analysis

As a response to the City of Edmonton's requirement for environmental sensitivity mapping for the Oleskiw River Valley Park Master Plan project, a desktop analysis of ecological sensitivities within the project boundaries was performed. The methodology of the analysis aligns closely with the Resource Analysis Process in the Ribbon of Green Master Plan (1992). Five resource types were classified using GIS software according to their sensitivity to potential development. The five resource types include:

- Vegetation
- Habitat potential
- Slope
- Hydrology and
- Geology / soils.

The following describes the City of Edmonton's recommended management practices for each level of sensitivity with the goal of reducing negative ecological impacts in River Valley parks:

Higher Sensitivity Areas

Higher sensitivity areas should be restricted for the protection of natural resources. This could include areas that are very steep, areas that create habitat for sensitive species or areas with unique geological features. Suggested management practices include the restriction of development, routine maintenance, restricted wildlife control and only emergency safety and security services.

Moderate Sensitivity Areas

The interaction of natural resources and people should be managed in Moderate Sensitivity Areas to prevent unnecessary environmental impacts. Moderate Sensitivity Areas could include areas that are characterized by some human disturbance with considerable native vegetation and wildlife habitat intact. Suggested management practices include development limited to trails, routine garbage pick up and trail edge maintenance, limited wildlife control, some habitat restoration and some safety and security services.

Lower Sensitivity Areas

Lower sensitivity areas have experienced the most ecological degradation and, therefore, are the most suitable for many types of park activities if increased active use is desired. However, degraded areas also have the greatest potential for ecological restoration. Restoration efforts should be explored whenever possible.

Environmental Sensitivities in the Park

Most of the park area is classified as lower or moderate sensitivity. While there is currently limited human activity in the park, historical land use has degraded habitat potential across large areas. The desktop analysis identified areas at the top-of-bank, in the open field and on the sand bar as having lower sensitivity values. However, site visits to the park and the study of river ecologies reveal that the sand bar is more sensitive to human impacts than indicated by the desktop analysis. The sand bar may provide fish and wildlife habitat, and the landform itself may be impacted by more intensive human activity because it is a temporary feature caused by river deposition.

Areas with more dense vegetation, steep slopes and limited park infrastructure (such as along the western edge of the park and the riverbank) are classified as higher sensitivity. It is anticipated that these areas provide higher habitat potential and will suffer greater negative impacts from human use. Steep slopes are unstable in some areas of the park, such as the area east of Woodward Crescent. Development should be avoided in these areas.

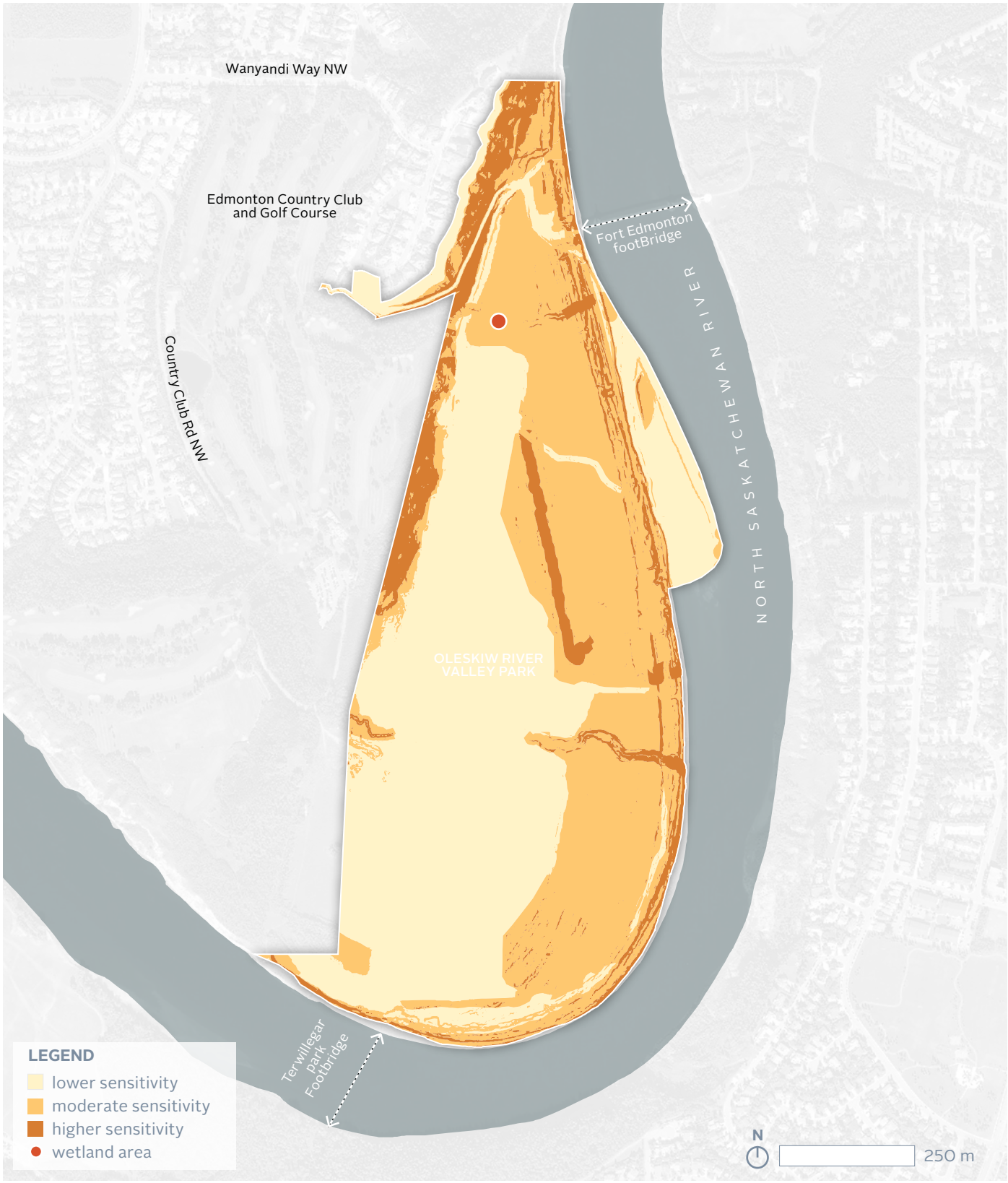


Figure 8 Environmental Sensitivities Map

Existing Park Features and Access

There is currently no major park infrastructure in Oleskiw River Valley Park. The vast majority of the park consists of the forest and open field. The park forms an important pedestrian link in the River Valley trail system and is well connected to the greater park network by the Fort Edmonton Footbridge to the east and the Terwillegar Park Footbridge to the south.

A single paved, multi-use trail travels the length of the park adjacent to the western slopes, connecting the two footbridges. To the north, the trail continues as a granular pathway and connects to the Wolf Willow Ravine staircase and to the Westridge neighbourhood. Another granular trail also ascends the slopes on the western edge of the park, connecting into the Oleskiw neighbourhood. Trail and staircase amenities are popular with trail users and provide excellent viewpoints along the North Saskatchewan River Valley. A network of informal, natural surface trails is located throughout the forest adjacent to the North Saskatchewan River. These trails are well-used by a variety of trail users, including naturalists, hikers, mountain bikers and dog-walkers. No off-leash use is permitted in Oleskiw River Valley Park.

No parking or direct public vehicle access is available in Oleskiw River Valley Park. Outside of the park boundaries, parking is available in three locations: the Terwillegar Park parking lot (approximately 0.8 km from the park entrance), the Fort Edmonton parking lot (approximately 1.8 km from the park entrance) and parking designated for the Fort Edmonton Footbridge on Wanyandi Way (approximately 0.5 km away from the park entrance). See Figure 9 for existing parking locations.

Existing features inside and around the park present limitations to providing direct public vehicle access into Oleskiw River Valley Park. Most of the park boundary is surrounded by either the North Saskatchewan River or private land. Opportunities for vehicle access from the top-of-bank along the north-western boundary of the park are limited due to concerns over slope instability and potential disturbance to wildlife habitat and connectivity that would result from road construction.

Inventory of Surrounding Parks

In addition to existing park features, the City considers the amenities and programs available in surrounding parks to ensure all communities in the City are well-served by park space and the proposed program for Oleskiw River Valley Park complements surrounding open space uses. The development occurring in surrounding parks has potential to complement programming that will be proposed for Oleskiw River Valley Park. Table 1 indicates the amenities and uses available in parks near Oleskiw River Valley Park. In particular, Oleskiw River Valley Park has the potential to complement interpretive programming in Fort Edmonton Park.

Figure 9 Current Park Access and Parking

Table 1. Inventory of Surrounding Parks

	William Hawrelak Park	Buena Vista Park	Sir Wilfrid Laurier Park	Whitemud Park	Fort Edmonton Park	Wolf Willow Ravine	Oleskiw Park (Top-of-Bank)	Callingwood Park	Terwillegar Park
Multi-Use Trails	■	■	■				■	■	■
Walking	■	■	■	■	■	■	■	■	■
Hiking / Mountain Biking						■			■
Bike Rental									
Open Space	■	■	■				■	■	■
Playground	■		■				■	■	
Sports Facilities			■					■	
Swimming Pool									
Cross Country Skiing	■								
Skating	■								
Toboggan Hill				■					
Skate Park								■	
Equine Trails				■					
Picnic Tables	■		■	■				■	
Bookable Picnic Sites	■		■	■					
Gardens									
Public Art	■	■						■	■
Performance Space									
Amenity Building / Pavilion	■		■	■					
Washrooms	■	■	■	■	■			■	■
River Access / Boating			■	■					■
Paddle boat Rentals	■								
Parking	■	■	■	■	■			■	■
Off-leash Area / Trail		■				■		■	■
Distance to Oleskiw River Valley Park	5.9 km	4.3 km	3.2 km	2.6 km	1.6 km	180 m	840 m	2.4 km	230 m

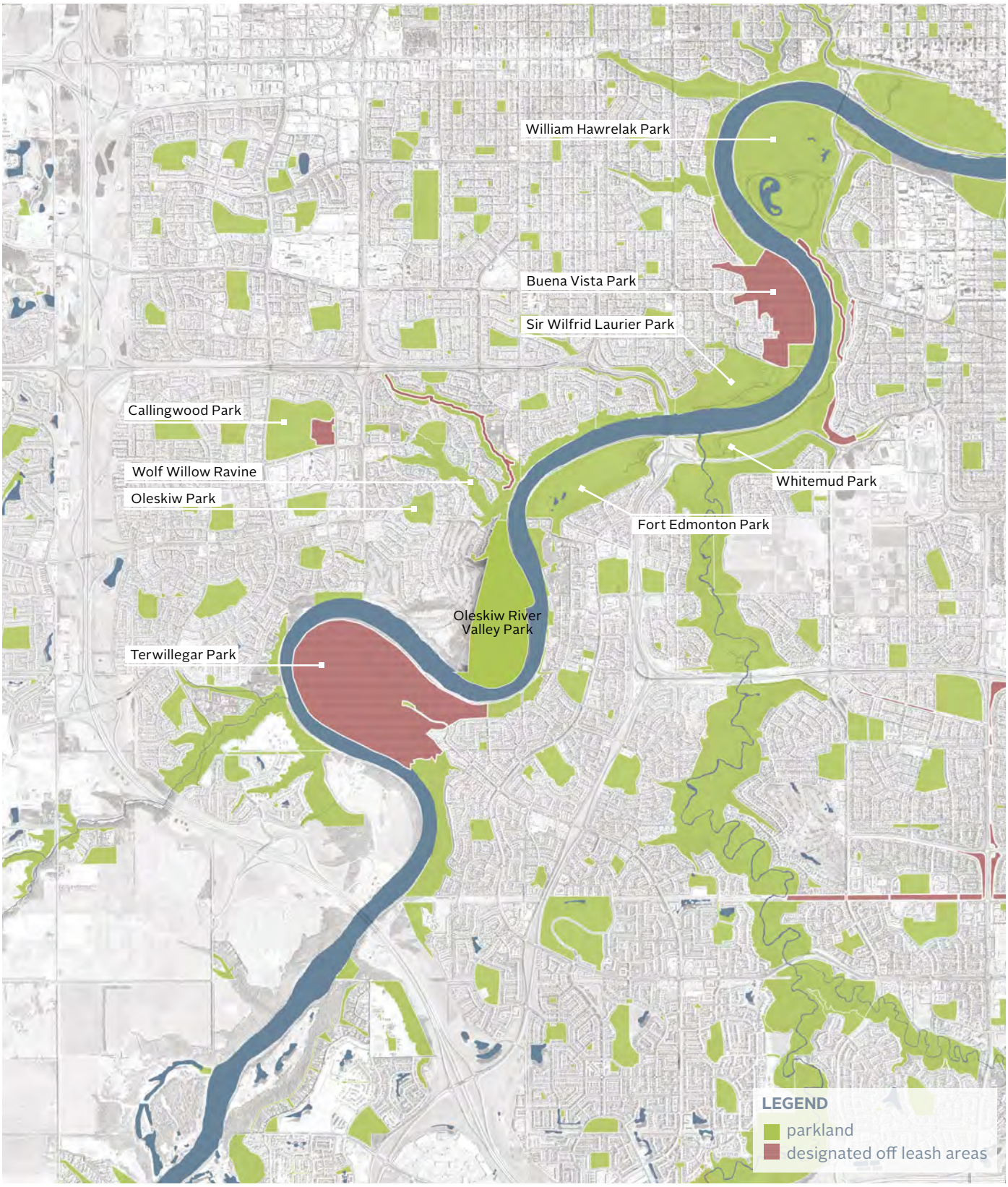


Figure 10 Surrounding Park Map

Public Consultation

The Oleskiw River Valley Park Master Plan project is an opportunity for Edmontonians to work with the City to develop a 25-year vision for the park.

Public Engagement Plan Overview

The Public Engagement Policy (C593) outlines the City of Edmonton's commitment to involving stakeholders and the public in the Master Planning process. During the engagement, Edmontonians were asked to identify key uses, needs and strategies for the park and participate in an ongoing dialogue about how the Oleskiw River Valley Park might look and function in the future. Discussions included ecological and infrastructure needs, as well as how the park can support the surrounding neighbourhoods and the larger Edmonton community.

The public was invited to participate in four phases of engagement to help develop the Master Plan. Each phase included internal and external stakeholder sessions, online engagement and public engagement sessions. Online engagement, in the form of surveys, interactive mapping and activities gave the public an opportunity to provide input at their convenience. This option was offered to facilitate input from those who were unable to attend in-person sessions and for those who wanted to provide additional comments. Material shared at public events as well as a What We Heard Report for each phase is available online at edmonton.ca/oleskiwparkmasterplan

Participants discuss the Master Plan at a Public Engagement Session

Phase 1: Project Introduction, Inventory & Analysis
August – September 2016

In Phase 1, the City sought initial feedback on the existing conditions of the project area. We asked the public: what do you like about the park space, why it is important to you and what do you want to see in the future?

Information presented to the public and stakeholders included the project scope and boundaries; key existing features, systems and functions of the park; and the relationship of the Oleskiw River Valley Park Master Plan with parallel projects such as the Ribbon of Green and BREATHE: Edmonton's Green Network Strategy. Public and stakeholder input identified key dreams, desires, issues and themes for the future of the park. This input informed the development of a park vision, identity and program.

Phase 2: Vision, Principles & Identity
June 2017

In Phase 2, the City looked to the public to help improve their understanding of the opportunities and constraints in the park, which helped to inform the vision. The public and stakeholders provided input on the material presented and were asked to prioritize elements of the vision statement and concept options. They were also asked to contribute to the inspiration for an official park name.

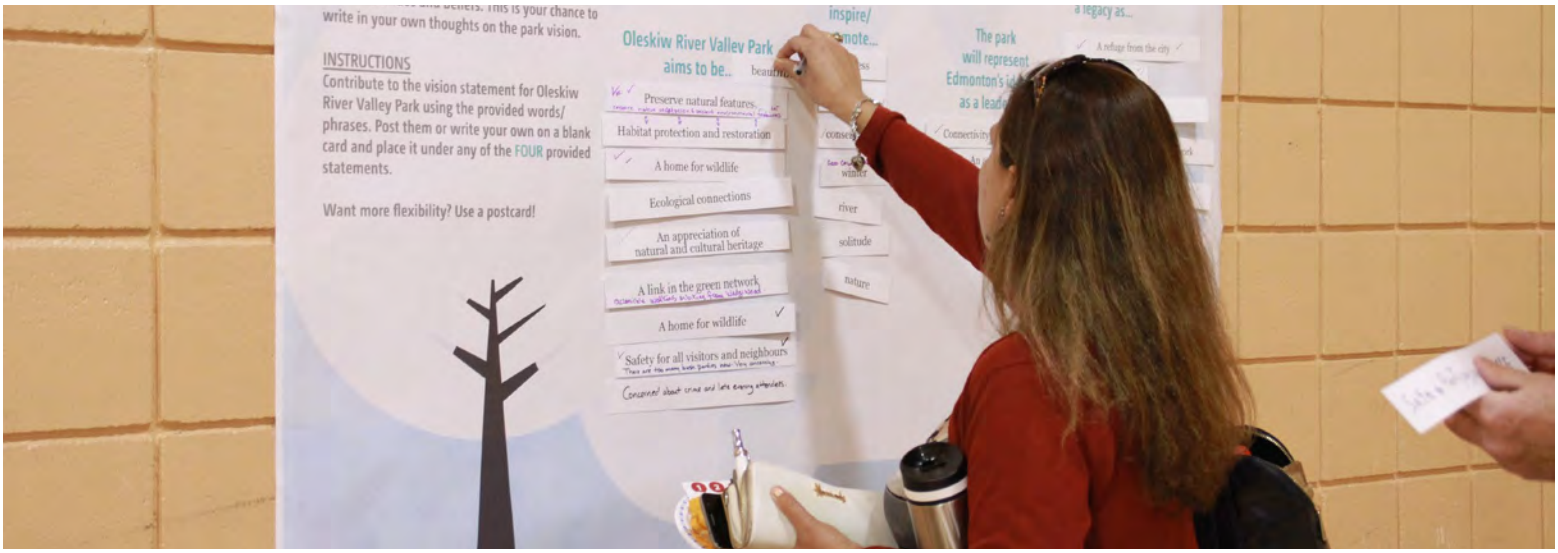
Phase 3: Concept Options
November 2017

In Phase 3, the City asked for feedback on more developed concepts for the park. Two variations on proposed activities, features and elements for the park were presented within two concept plans. The public and stakeholders were asked to choose which option they preferred and to prioritize the various proposed elements in each.

Feedback from this phase of engagement was used to develop a preferred concept plan, presented in Phase 4.

Phase 4: Preferred Concept Plan
July 2018

In Phase 4, the City presented a refined concept for the park that integrated the priorities and feedback received in Phase 3. The public and stakeholders were given the opportunity to provide feedback on the preferred concept to help fine-tune the program and its features. This feedback will support the development of a preferred concept that responds to the needs of the community and park users.



Participants contribute to the park vision at a Public Engagement Session

Stakeholder Engagement

Engaging with small groups of internal and external stakeholders allowed the City to participate in constructive conversations focused on specific issues and opportunities in the park. External stakeholders included interest groups, neighbourhood groups and other organizations who expressed an interest in being more deeply involved in the Master Plan process. Internal stakeholders were City of Edmonton employees who provided input or advice on specific aspects of the park. Phase 3 of engagement was organized in cooperation with the Ribbon of Green, which resulted in a larger list of engaged stakeholders.

External Stakeholder Groups Engaged

- Alberta Association of Landscape Architects
- Canadian Federation of University Women – Environment Group
- Canadian Hard of Hearing Association – Edmonton Branch
- Ceyana Canoe Club
- Dogs Off Leash Ambassador
- Edmonton & Area Land Trust
- Edmonton Bicycle Commuters
- Edmonton Country Club and Golf Course
- Edmonton Food Council
- Edmonton Heritage Council
- Edmonton Mountain Bike Alliance
- Edmonton Native Plant Group
- Edmonton Nature Club
- Edmonton River Valley Conservation Coalition
- Edmonton Rowing Club
- Edmonton Tourism
- Friends of Terwillegar
- North Saskatchewan River Valley Conservation Society
- Resident
- River Valley Alliance
- Sierra Club Canada
- The Ridge Community League
- Twin Brooks Community League
- University of Alberta Student's Union
- Wedgewood Ravine Community League
- Westridge Wolf Willow Country Club Community League
- Wild Rose Ramblers

Indigenous Engagement

The City of Edmonton acknowledges the traditional land on which we reside today, which is the Territory of the Treaty 6 First Nations and the Métis Nation of Alberta Zone 4. The City of Edmonton recognizes the importance of engaging Indigenous Nations in the development of Master plans. The North Saskatchewan River and River Valley has been identified as an important historical and cultural location for Indigenous communities. As a result of this recognition, Indigenous communities have expressed an interest in being engaged in the Oleskiw River Valley Park Master Planning process.

Since fall 2016, the City has reached out to Indigenous communities for initial engagement and to share information on various city projects such as The Ribbon of Green and BREATHE: Edmonton's Green Network Strategy. As part of the Oleskiw River Valley Park Master Plan, Nations were invited to attend in-person meetings to share information and get input on the site and the planning process. The Oleskiw River Valley Park Master Plan was informed by input from Indigenous communities and organizations in attendance of workshops and site visits to the park. This input helped the City make decisions around land use, preservation and programming. A summary of What We Heard from Indigenous engagement is included in Appendix A.

Table 2. Summary of Engagement Findings

	PUBLIC & EXTERNAL STAKEHOLDERS	INTERNAL STAKEHOLDERS
PARK USE & AMENITIES	» Desire for minimal development and low-maintenance amenities » Support for trail-based activities (including cycling, walking, jogging, mountain biking, etc.) » Support for low-impact activities (nature education with minimal infrastructure, picnicking, etc.) » Desire for supporting infrastructure (e.g. washrooms, waste receptacles, benches) » Support for keeping the park an on-leash area for dogs » Desire for more winter activities (e.g. cross-country skiing) and amenities to support winter use » Desire for more opportunities for environmental stewardship	» Support for minimal amenities due to access and maintenance limitations » Support for washrooms based on requests from the public » Support for keeping the park an on-leash area for dogs
ACCESS & CIRCULATION	» Mixed feedback on the provision of vehicular access (some want parking in the park, others do not) » Concerns from surrounding neighbours regarding increased traffic and parking with increased park use » Desire to maintain existing trail network in the park, including natural surface trails » Desire for east-west trail connections » Desire to address user conflict on trails » Desire for more physically accessible park entrances » Desire for improved signage and wayfinding	» Trails in the River Valley should be shared-use (no trails will be assigned for specific users) » Support for improved signage and wayfinding
NATURAL ASSET MANAGEMENT	» Desire to keep the park natural » Desire for nature and wildlife conservation » Desire to manage erosion on slopes » Support for re-naturalization and invasive species removal » Mixed feedback for reforesting the existing field	» Support for proposed re-naturalization efforts » Support for a focus on nature education
SAFETY, MAINTENANCE & ENFORCEMENT	» Desire for the enforcement of unwanted behaviour in the park » Desire increased trail maintenance » Desire fire prevention in the park » Desire for improved signage » Some desire the inclusion of lighting and/or emergency phones	» Support for improved signage and wayfinding » Lighting and emergency phones will not be provided in the park due to the lack of utilities
ATMOSPHERE & IDENTITY	» Desire to experience nature and view wildlife » Desire for a refuge from the city » Support for ecological and heritage interpretation	» Support for keeping the park relatively natural » Support for seeking partnerships for environmental stewardship and research

Phase 1: Inventory & Analysis

What We Did

In August and September 2016, the City of Edmonton asked the public and stakeholders to share their thoughts on the future of the Oleskiw River Valley Park. A variety of engagement tools were used to provide participants with convenient opportunities to contribute.

During Phase 1, the following questions were asked of participants:

1. What is your favourite thing to do in this park?
2. What would you like in the future?

The following engagement methods were used:

- Intercept Surveys
- Public Engagement Session
- External Stakeholder Workshop
- External Stakeholder Toolkits
- Internal Stakeholder Session
- Online Map Tool

Overall, 1130 comments were received during Phase 1: Inventory & Analysis. Feedback provided insight into the history of the park and activities that occur within Oleskiw River Valley Park. Engaging the public helped the City develop a clearer and more accurate understanding of the identity and functions of the area, particularly related to how past land uses helped to shape the landscape.

What We Heard

Responses were analyzed with the goal of uncovering emerging themes, outlying ideas and points of contention. To start the analysis, responses were individually analyzed for sentiments and actionable recommendations. As this analysis progressed, similar ideas, points of contention, themes and outliers emerged. These were grouped, then further grouped, resulting in five main themes. These themes are used as organizational tools for the recommendations in the Master Plan.

THEME 1: PARK USE & AMENITIES

Amenities are physical features in the park that provide a service to park users. The largest proportion of comments received during the first round of engagement related to park use and amenities because the questions posed were centered around this theme. Most people responded that they would like to see minimal development in the park. Desired activities included cycling, walking and jogging. Some participants saw more opportunities for mountain biking, picnicking and cross-country skiing, among other activities. Benches, picnic tables and washrooms were also recommended by the public.

Top 5 Future Wishes:

- No off-leash dog use
- Cycling
- Winter activities (e.g. cross-country skiing)
- Limit development in the park
- Walking, jogging and hiking

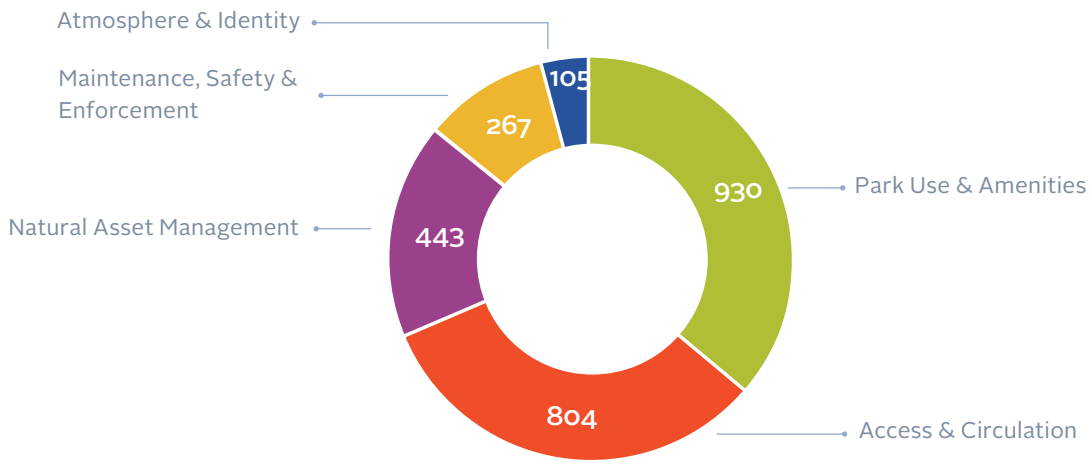


Figure 11 Summary of Phase 1 Comment Themes

* Individual comments may appear in multiple themes.

THEME 2: ACCESS & CIRCULATION

Comments were largely focused on vehicular access and whether parking would be made available in the park. Neighbours voiced concerns over traffic and parking congestion in their communities. Participants also requested that the City explore options for universal accessibility, more trail connections into the park and greater accessibility to the river.

Top 5 Future Wishes:

- Increase trail connectivity
- Keep and develop natural surface trails
- Create parking inside or adjacent to the park
- Use the footbridges as the main access points
- Do not make vehicular parking inside or near the park

THEME 3: NATURAL ASSET MANAGEMENT

Natural asset management describes the ways natural areas in the park are maintained or re-naturalized. Participants expressed that they want to keep the park natural. Some would like to see the City develop a plan for ecological restoration and/or invasive species removal in the park. Others recommended a focus on nature and wildlife conservation. Participants also wanted to see the responsible management of slope erosion and storm water in the park.

Top 5 Future Wishes:

- Keep the park natural
- Preserve natural features
- Do nothing
- Restore ecology
- Create wildlife programming (e.g. bird sanctuary)

THEME 4: MAINTENANCE, SAFETY & ENFORCEMENT

Participants would like increased enforcement of behaviour that is not in line with the prescribed uses of the park and increased maintenance of features that could pose safety hazards, such as trails that are in disrepair. Preventing fires, keeping the park clean and managing park user conflict were also topics of discussion. Some participants commented that they currently feel very safe in the park as it is.

Top 5 Future Wishes:

- Trail maintenance to improve safety
- Wayfinding improvements
- Signage and emergency phone for safety
- Increase enforcement of behaviour that is not in line with the prescribed uses of the park
- Clean up after dogs

THEME 5: ATMOSPHERE & IDENTITY

Many participants wanted to share their experiences in the park and what it feels like to visit Oleskiw River Valley Park. Some shared that being in the park feels like escaping the city. They also shared the enjoyment of experiencing wildlife and nature in the park. Participants wanted to maintain certain intangible aspects of the park, such as the quiet, the feeling of solitude, the seasonality and the history of the site.

Top Future Wishes:

- Experiencing and viewing wildlife
- Ecological interpretation
- Feeling of refuge from the city
- Historical interpretation

Summary of Participant Values

The underlying values that became apparent in Phase 1 were summarized in the What We Heard Report and were considered in the following phases, including concept development. Common values are found where participant values, such as maintaining the natural character of the River Valley and increasing safety for all in the park, align with the findings from environmental sensitivities and City policy. These common values informed the vision and guiding principles for the Master Plan.

Values expressed by the public include:

- Low impact on existing natural systems
- Stewardship and responsibility for the park
- Preserve and responsibly manage ecological features
- Access into the park should be for all people
- Access should not place a large burden on one neighbourhood
- Greater level of connectivity in the River Valley
- Increase enforcement of behaviour that is not in line with the prescribed uses of the park
- Reduce user conflict and increase safety
- Share and celebrate the history of the park
- Maintain existing identity and character of the park

Phase 2: Vision, Principles & Identity

What We Did

In June 2017, the City engaged Edmontonians using a variety of tools, including:

- Public Engagement Session
- Online Survey and Online Map Tool
- External Stakeholder Workshop
- Internal Stakeholder Session
- Focused Citizen Engagement

Three activities intended to help develop the park vision and program were available through all engagement methods. Below is a description of each activity.

1. Write your own vision

Participants were presented with phrases and words to piece together their desired vision statement for the park. Participants could also write their own original vision statement. Feedback from this activity was used to draft two vision statements for the concept options presented in Phase 3 of engagement.

2. Create your own park!

This activity allowed participants to place amenities and activities on a map of the park. To understand trends from the activity, all completed maps were layered on top of each other to create a consolidated map of amenities and programs. This created a picture of priorities and desired locations for various park elements.

3. Park Elements

A selection of 72 activities and park elements such as signage, park furniture and trails were presented to the public and stakeholders. Participants were asked to state their preferences by placing a dot under the park elements they preferred for Oleskiw River Valley Park. The results from all methods of engagement were tallied and summarized to provide an indication of the public's preferences.

Participants review background material at a Public Engagement Session

What We Heard

The activities in Phase 2 worked together to inform the vision statement, shared values and the public/stakeholder desire for specific park elements. The results of these activities were closely aligned with the results of Phase 1 of engagement. Most preferred elements were low-impact and related to enjoying and preserving nature. The top ten elements from the Create your own park! Activity were:

- Waste receptacle
- Seating
- Preservation area
- Walking
- Washroom
- Winter activities
- Map kiosk
- Cycling
- Restoration area
- Hiking

The top ten elements from the Park elements activity were:

- Natural seating
- Waste receptacle
- Informal river access
- Habitat preservation
- Directional signage
- Natural surface trail
- Shared use trails
- Informal play
- Trail running
- Pit washroom

Themes and underlying values emerged from the analysis of over 2,000 vision statements/words. While there was some variation in the desired level of activity in the park, most statements reflected the importance of maintaining the natural state of the park. The themes that were included most in the vision statements are presented in Figure 12.

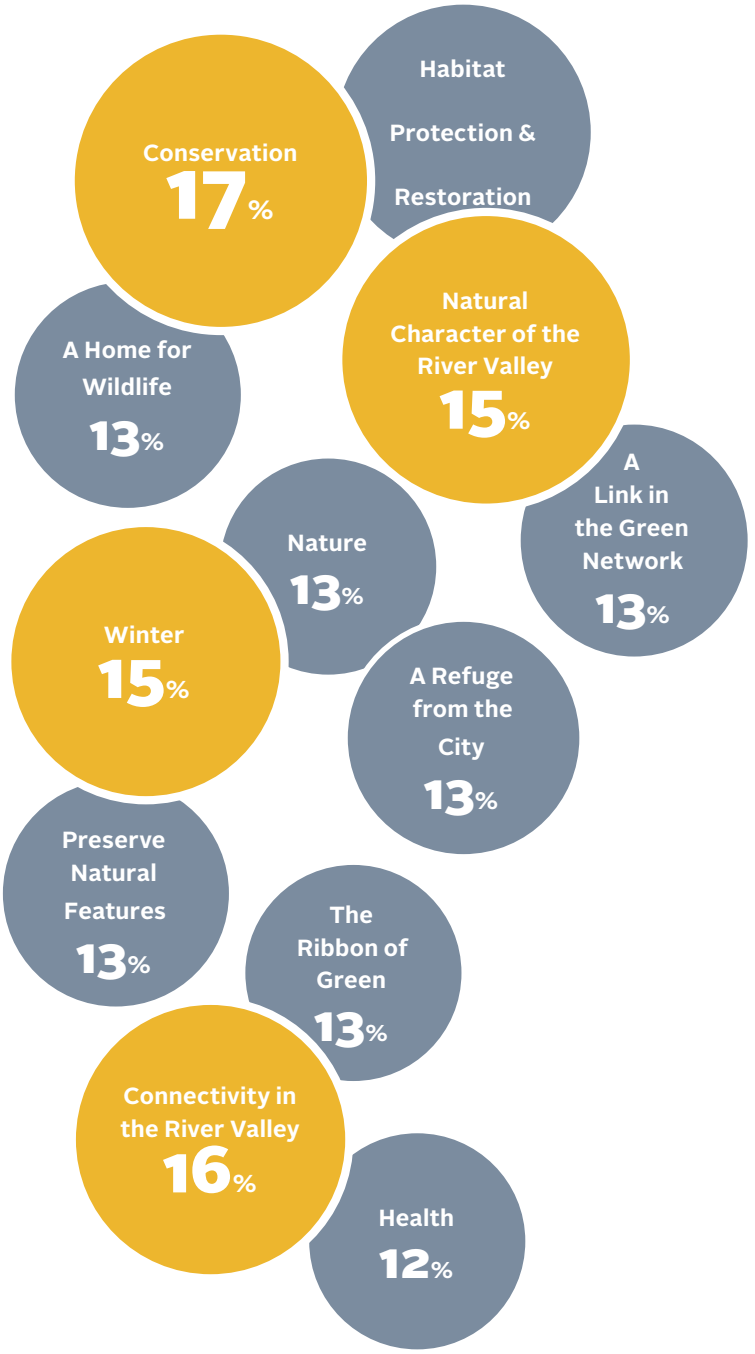


Figure 12 Summary of Phase 2 Most Popular Vision Themes

Phase 3: Concept Options

What We Did

In November 2017, two draft concept options for Oleskiw River Valley Park were presented to the public and stakeholders for feedback. Engagement opportunities included

- Public Engagement Session
- Online Survey and Online Mapping Tool
- External Stakeholder Workshop
- Internal Stakeholder Session

Four questions were posed to all participants to help understand their preferences for overall concept options and specific elements within each concept option.

1. **Which vision statement represents what you would like to see in the future for this park?**

Participants were presented with two vision statements and asked for their level of support for each.

2. **Which concept do you prefer for each theme?**

To provide more detail on the differences between the two concept options, maps and images were presented under the following themes: Access and Circulation, Park Use and Amenities, Natural Asset Management and Atmosphere and Identity. Strategic decisions for each concept were highlighted and participants were asked to provide input on which concept they preferred for each theme.

3. **Which concept responds best to the preferred vision, needs and priorities for this park overall?**

Participants were asked to select the concept that they preferred overall.

4. **What specific park elements do you prefer?**

Specific elements, features and programs from both concept options were presented on panels and the public and stakeholders were asked for their level of support for each one.

Table 3. Summary of Phase 3 Concept Option Feedback: Themes

	CONCEPT 1	CONCEPT 2
I LIKE...	Provides more trail options	Inclusion of east-west trail connections
	The new natural surface trail connection	Washroom in the north end of the park
	Provision of amenities near Terwillegar Park Footbridge	Provision of outdoor educational facilities
	Winter warming structures	Shelter for visitor groups and children
	Educational programming with minimal infrastructure	Open field maintained
	Re-forestation of the open field	Variety in plant communities
	Lower maintenance amenities	Potential for partnerships in nature education
NEEDS IMPROVEMENT...	Winter warming structures too expensive	More focus on winter activities
	Resting points on natural surface trails may result in user conflict	Too much programming based on access limitations
	Include restoration of intermittent stream	Overhead structure/shelter unnecessary

What We Heard

The following is a high-level summary of the feedback received in Phase 3. A more detailed summary is presented in the Phase 3 What We Heard Report, available on the project website at edmonton.ca/oleskiwparkmasterplan. Over 1,500 comments were received during Phase 3 of engagement, which, combined with 4,779 park element preferences, provided a depiction of the priorities of those who participated in the engagement activities.

VISION STATEMENT FEEDBACK

Vision Statement 1 was supported (73% support) for its focus on nature and ecological restoration over recreational use and built infrastructure. Vision Statement 2 was supported (53% support) for its focus on the protection and conservation of the natural environment and its emphasis on passive and health-benefiting recreational activities. Supporters of Vision Statement 2 also like the inclusion of education, interpretation and the recognition of the cultural heritage of the park.

Those who do not support either vision statement expressed concerns over costs, conflicting priorities between human activity and restoration. They also wanted to focus on restoration instead of incorporating heritage and educational elements. Others do not want to see human intervention in the park. Many people wanted the final vision statement to contain elements of both vision statements presented in Phase 3.

CONCEPT OPTION FEEDBACK: THEMES

Participants provided spatial feedback on the Online Map Tool and the Public Engagement Session boards. The chart below provides a summary of the most popular discussion topics.

PREFERRED CONCEPT

Overall, the results of engagement indicate that more people preferred Concept 1 over Concept 2. Participant comments reinforced the desire for a light touch on the landscape. The following concerns were expressed for overall feedback:

- Include more options to increase accessibility for people with mobility limitations
- Concern over removal of existing 'Oleskiw Meadows' natural surface trail
- Concern over conflict between cyclists and pedestrians
- Concern over costs of proposed infrastructure
- Washrooms at both ends of the park
- Desire for a greater recognition of the sand bar
- Desire for more cross-country skiing opportunities
- Desire to allow the landscape to restore naturally with minimal human intervention

Participants tended to prefer elements from both concepts that were minimal, low-impact and focused on the protection or restoration of the landscape. Elements with lower levels of support required more infrastructure and programming, which participants did not want to see due to their higher cost or perceived ecological impact. The elements that were most preferred are presented on the following page.

New Natural Trails
Concept 1
78% Support

River Lookouts
Concept 2
78% Support

Restored Forest
Both Concepts
72% Support

Resting Points
Concept 1
66% Support

Figure 13 Phase 3 Most Popular Park Elements

Phase 4: Preferred Concept Plan

What We Did

In July 2018, the City presented a consolidated vision and concept plan for Oleskiw River Valley Park for public and stakeholder input. The City wanted to understand the level of public and stakeholder support for the concept plan and its various components. The following engagement methods were used:

- Public Engagement Session
- Online Survey
- External Stakeholder Workshop
- Internal Stakeholder Session

In this phase, 493 participants were engaged in-person and online. Five questions were asked to encourage direct feedback on the presented material. Participants were presented with maps based on three themes (Park Use and Amenities, Access and Circulation, Natural Asset Management) and asked to provide their level of support for each. Participants were also asked to provide their level of support for the Master Plan and were asked for feedback on the potential phasing options.

What We Heard

The following is a high-level summary of the feedback received in Phase 4. A more detailed summary is presented in the Phase 4 What We Heard report, available on the project website at edmonton.ca/oleskiwparkmasterplan.

→ Park Use & Amenities

Participants support:

- Minimal amenities
- Pit washrooms
- Various trail uses
- On-leash dog walking

Participants Want:

- Less built infrastructure
- Fewer pit washrooms
- Access to drinking water
- Fewer winter installations
- Lighting

During the final round of engagement, horseback riding was identified as an existing informal use in the park. Because the Master Plan cannot provide safe and dedicated access to an equestrian centre (due to environmental site conditions and access limitations in the park), horseback riding cannot be supported as an official park use through the Master Plan.

→ Access & Circulation

Participants support:

- Increasing accessibility throughout the park
- Providing no vehicular access
- Wayfinding improvements
- Existing trail network
- Options provided for different experiences

Participants Want:

- Closer parking and access points
- Transit access to the park
- Woodward Crescent trail to be repaired
- To maintain the character of natural surface trails
- More cross-country ski trails
- Fewer trails

→ Natural Asset Management

Participants support:

- Re-naturalization
- Low-impact, natural approach
- Limited access to the sand bar
- Managing erosion on slopes

Participants Want:

- Lower costs and faster timelines
- Greater diversity
- Management of the sand bar

→ Do you support the Master Plan?

Participants support the following elements of the Master Plan:

- A natural approach to park planning while providing amenities to support low-impact use of the park.
- Re-naturalization and re-forestation efforts, including the management of invasive species.
- Low-impact and minimal amenities that support being outside in nature (such as the pit washrooms and benches).
- Improved trail connections, seen to improve the park experience for many different users.
- Maintenance of the natural surface trail network and the addition of a new natural surface trail connector

Participants would support the plan more if:

- The implementation had a shorter timeline and lower costs.
- The number and scale of built amenities was reduced.
- The City maintained clear and consistent communication with the public on the implementation of the project.

- Access into the park was improved for people of all abilities, including opportunities for vehicle access.
- Opportunities for public education and community stewardship were more obvious in the plan.
- Safety and maintenance concerns were addressed in the long-term management of the park. This includes monitoring of re-naturalization efforts, enforcement of on-leash dog walking and monitoring for unwanted activity in the park.

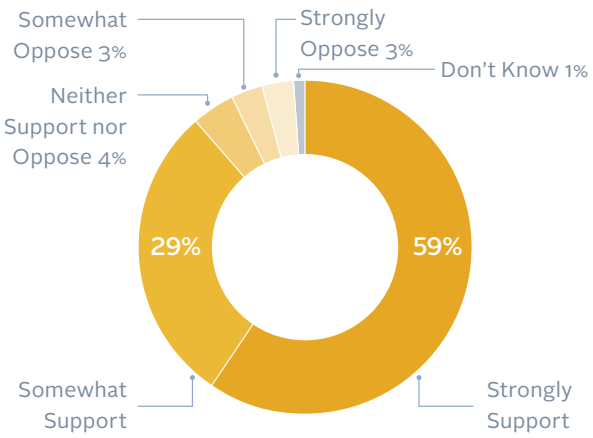


Figure 14 Level of Support for the Master Plan

→ Phasing Options

Two phasing options were presented for feedback. The first option included a one-time, large-scale removal of invasive species (including smooth brome). The second option included a phased approach to the removal of invasive species and re-naturalization of the open field. Large-scale invasive weed removal may have higher short-term costs but may result in lower long-term costs as compared to phased weed removal.

A larger percentage of participants (41%) preferred the large-scale removal of invasive species, while others (36%) preferred the phased approach. This feedback was considered in the development of final recommendations for the re-naturalization strategy presented in the Master Plan. More information on the phasing options can be found in the Phase 4 presentation material on the project website (edmonton.ca/oleskiwparkmasterplan).

The Oleskiw River Valley Park does not currently have an official name. A nearby park in the community is already named "Oleskiw Park", which makes the name Oleskiw Park unsuitable.

In Phases 2 and 3 of engagement, participants provided their input on the park name. Participants were presented with four influences for the park name (Natural Heritage, Historical, Indigenous Heritage and Political Figures). They were asked to prioritize which influence should be considered in naming the park. Results from both phases were very similar, with many prioritizing natural heritage as an important influence or inspiration for the park name.

The tallied preferences resulted in the following ranking, with #1 being the most popular theme:

PHASE 2:

1. Natural Heritage
2. Historical
3. Indigenous Heritage
4. Political Figures

PHASE 3:

1. Natural Heritage
2. Indigenous Heritage
3. Historical
4. Political Figures

Feedback received was provided to the City of Edmonton's Naming Committee for information which will be taken into consideration in the decision for the official park name.

Opportunities and Challenges

The information presented thus far in the Master Plan report has helped to inform site-specific opportunities and challenges in Oleskiw River Valley Park. Public input, site analysis and City policy are all important inputs for the Master Plan.

→ Public Input

Public input throughout the Master Plan process contributed to the development of the vision, principles and concept plan for the park. Feedback received from the public and stakeholders was influential in providing direction on the scale of programs and amenities proposed in the Master Plan, as well as the type of vegetation management and stewardship opportunities proposed. A summary of the findings from public and stakeholder engagement can be found in the Public Consultation section (page 31) of this report as well as in the What We Heard reports for each phase of engagement.

→ Site Analysis

Site analysis is the study of the environmental, historical, geographical, legal and cultural context of the park. Earlier sections of this report, including the Introduction, Park Evolution and Existing Conditions provide an overview of the City's current understanding of the park as well as the opportunities and challenges for the Master Plan. This understanding was developed from the study of city data, consultant reports and site visits.

The site inventory and analysis contributed to an Environmental Sensitivities Report, produced in February 2017. The report presents an overview of environmentally sensitive areas in the park and was completed before concept development, ensuring recommendations in the Master Plan were made with an understanding of their impacts on lower, moderate and higher sensitivity areas.

→ City Policy

The Oleskiw River Valley Park Master Plan falls within Edmonton's open space planning hierarchy, beginning with The Ways plans, followed by BREATHE: Edmonton's Green Network Strategy and the North Saskatchewan River Valley Area Redevelopment Plan Bylaw 7188. Other influencing policies are described in the Policy and Regulations section of this report. These policies, plans and initiatives provided direction for Master Plan recommendations. City staff also provided technical expertise and recommendations during internal stakeholder engagement sessions and Steering/Working Committee meetings.

At each phase in the Master Plan process, existing policies and initiatives were reviewed to ensure alignment with Master Plan recommendations. City staff also provided technical expertise and recommendations during internal stakeholder engagement sessions and Steering/Working Committee meetings.

Identified opportunities and challenges for the Oleskiw River Valley Park Master Plan are mapped in Figure 15 and listed below.

Opportunities

1. The existing multi-use trail increases access through the park for a variety of users.
2. Existing vegetation provides habitat for a variety of mammals, birds, amphibians and insects.
3. Steep River Valley slopes create opportunities to provide views into the park from the top-of-bank.
4. Disturbed areas from past land use and bridge construction create opportunities to develop amenities with minimal disturbance to existing higher quality habitat.
5. The disturbed open field and intermittent stream create opportunities to re-naturalize vegetation and create east-west ecological connections.
6. There is potential to provide ecological interpretation in combination with proposed programs and amenities.
7. There is potential to improve wayfinding throughout the park.

Challenges

8. Invasive species and noxious weeds throughout the park out-compete native species, decreasing biodiversity in the park
9. Steep, non-vegetated slopes cause erosion on the western edge of the park and informal river access contributes to erosion along the riverbank.
10. Steep slopes and private property create challenges for accessing the park from the west.
11. The distance between park entrances is a limitation for some with mobility challenges.
12. Challenges with access into the park also limit the types of activities and amenities that the park can support..
13. Multi-user trails have the potential for conflict between different trail users.
14. The open field and multi-use trail provide limited opportunities for shade and rest.
15. Existing vegetation and environmental sensitivities create limited opportunities to view and access the river in the park.

Figure 15 Identified Opportunities and Challenges

Master Plan

The Oleskiw River Valley Park Master Plan, which includes a vision statement, guiding principles, capital investment recommendations and asset management guidelines, provides direction for the next 25 years.

The Master Plan for Oleskiw River Valley Park consists of a vision statement, guiding principles, capital recommendations and management guidelines, providing direction for park development for the next 25 years. It is presented as a concept plan and a series of capital improvement recommendations, which are captured under the five themes uses throughout the engagement process (Park Use and Amenities; Access and Circulation; Natural Asset Management; Maintenance, Safety and Enforcement; and Atmosphere and Identity). The recommendations address opportunities and challenges identified throughout the Master Plan process resulting from public input, site analysis and City policy.

The vision statement and guiding principles for the Oleskiw River Valley Park, presented on the following pages, provide over-arching direction for the Master Plan. Each decision and recommendation in the Master Plan aligns with the vision statement and guiding principles, which were derived from the public and stakeholder collective values for the park and influenced by the City's strategic planning approach for Edmonton's green network. The vision statement presented in this report differs slightly from the statement presented in Phase 4 engagement. Changes were made based on public and stakeholder feedback recommending that the vision statement better reflect the proposed park use and the desire to increase biodiversity.

View of the open field and forest in Oleskiw River Valley Park with the south bank of the North Saskatchewan River visible in the background

Vision Statement

The Oleskiw River Valley Park is a crucial link in Edmonton's open space network, contributing to increased biodiversity in the River Valley and providing visitors with access to nature for low-impact recreation, interpretation and cultural learning. Minimal amenities support a diverse group of park users, inviting them to linger in the River Valley and witness the active renewal of the landscape.

PARK USE

- *Amenities should be designed to accommodate a wide range of abilities.*
- *Site furniture and built features should integrate with the park's natural character, be flexible and low-maintenance.*
- *Viewpoints should be enhanced where possible.*
- *Activities in the park should be low-impact and mainly trail-based.*
- *There should be opportunities to stop and rest in the park.*
- *Activities and amenities in the park should be compatible with access and maintenance limitations.*
- *Construction activities should not cause damage to established natural areas.*

CIRCULATION

- *Trails should be designed for a wide variety of park visitors and the park should provide a variety of trail experiences.*
- *A formal natural surface trail network should be established to prohibit the creation of new informal trails through environmentally sensitive areas.*
- *Use of the formal natural surface trail network should be regulated through public education efforts and partnerships with the City.*
- *Existing entrance points should be advertised and enhanced where possible to increase accessibility.*
- *Visitors should be informed of trail grades and distances to amenities at all park entrances.*
- *Wayfinding and information signs should be accessible and available at entrances, trail intersections and other key locations in the park.*

ENVIRONMENT

- *Vegetation should be managed to increase biodiversity and encourage the proliferation of native plant communities.*
- *The presence of invasive plant species should be reduced.*
- *Adaptive management techniques should be employed to ensure the landscape is resilient to natural and human disturbances, such as flooding and climate change.*
- *Fire prevention and management techniques should be explored.*
- *Opportunities to increase ecological connectivity within the park and to adjacent green spaces should be explored whenever possible.*
- *High-impact activity near the sand bar should be dissuaded through public education.*
- *Opportunities for partnerships with academic institutions or non-governmental organizations should be explored for restoration and research.*

The following sections outline recommended capital improvements and implementation strategies. Each recommendation may be related back to the above vision statement and guiding principles.

Figure 16 Oleskiw River Valley Park Proposed Concept Plan

Park Use & Amenities

This section provides direction on the recommended uses and activities proposed for the Oleskiw River Valley Park as well as the required infrastructure and amenities to support these activities. Based on public input and the requirements of limited access into the park, proposed amenities are minimal and support trail-based activities, nature interpretation and environmental stewardship.

→ **Summary of Public Feedback:**

- Desire for minimal development and low-maintenance amenities
- Support for trail-based activities (including cycling, walking, jogging, mountain biking, etc.)
- Support for low-impact activities (nature education with minimal infrastructure, picnicking, etc.)
- Desire for supporting infrastructure (e.g. washrooms, waste receptacles, benches)
- Support for keeping the park an on-leash area for dogs
- Desire for more winter activities (e.g. cross-country skiing) and amenities to support winter use
- Desire for more opportunities for environmental stewardship

→ **Summary of Internal City Feedback**

- Support for minimal amenities due to access and maintenance limitations
- Support for washrooms based on requests from the public
- Support for keeping the park an on-leash area for dogs

→ **Summary of Recommendations**

1. Create resting points and gathering spaces along paved and granular trails.
2. Construct two pit washrooms in the park near existing park entrances.
3. Create formal viewpoints with minimal infrastructure.
4. Provide waste receptacles at resting points and trail junctions.
5. Provide opportunities for community involvement in the stewardship of the park, developing on-going partnerships to promote educational and stewardship opportunities.
6. Collaborate with Indigenous communities for programming and cultural opportunities in the park.
7. Provide safe access to the river for educational, ceremonial or stewardship activities.
8. Maintain the park as an on-leash area.
9. Promote trail-based activity in the park during winter months.
10. Develop a program for the installation of winter warming huts along trails.

Figure 17 shows the recommended layout for various park uses and amenities in Oleskiw River Valley Park. Most amenities are small in scale and are placed near the existing and proposed trail system to support recreational and educational use of the trails. Larger infrastructure (such as a shelter and gathering area) have been located in the southern end of the park to encourage visitors to access the park via the Terwillegar Park Footbridge, thereby reducing parking pressures near other park entrances. Detailed recommendations for Park Use and Amenities are provided on the following pages.

Figure 17 Proposed Park Use and Amenities Plan

1. Create resting points and gathering spaces along paved and granular trails.

The concept plan includes new resting points with seating along paved and granular trails. They are located at intervals of approximately 150 metres along shared use trails in the open field. Resting points near the footbridges provide places to rest or meet before venturing into the park.

A gathering space for larger groups is provided at the south end of the park near the Terwillegar Park Footbridge (shown in Figure 18). It includes a small shelter for shade and protection from the elements for groups of approximately 15-30 people. Vegetation and natural seating (e.g. logs, rocks) delineate the gathering space. The gathering space may have a view of the river to the south. To the west of the Terwillegar Park Footbridge, there is potential for a smaller-scale gathering space with natural seating and a view to the river. This location could be used for ceremonial or cultural use if desired.

Resting points include waste receptacles and shade trees with planting complementary to a natural park (i.e. not manicured). When possible, resting points should incorporate recommendations from the most recent City of Edmonton Access Design Guide. Some resting points should provide opportunities to gather and socialize. (For example, a curved bench or natural seating arrangement allow several people to rest and interact.) Benches should be made of a durable material resistant to vandalism that can be easily cleaned to reduce maintenance requirements.

Rationale:

- *Resting points help to increase the accessibility of the park for a variety of users who may not be able to travel the full distance between park entrances without taking a break. (The distance between the Fort Edmonton Footbridge and the Terwillegar Park Footbridge is approximately 1.8 km.)*
- *Resting points also encourage and support visitors to linger in the park, providing locations to take in expansive views and watch wildlife that may be in the park.*
- *Shade trees provide respite from the elements in the large open field.*

Public Input:

- *Benches and seating were requested by the public during the first two rounds of engagement.*
- *Providing opportunities to rest and some protection from the elements was supported during public and stakeholder engagement.*

Resting points placed along granular trails.

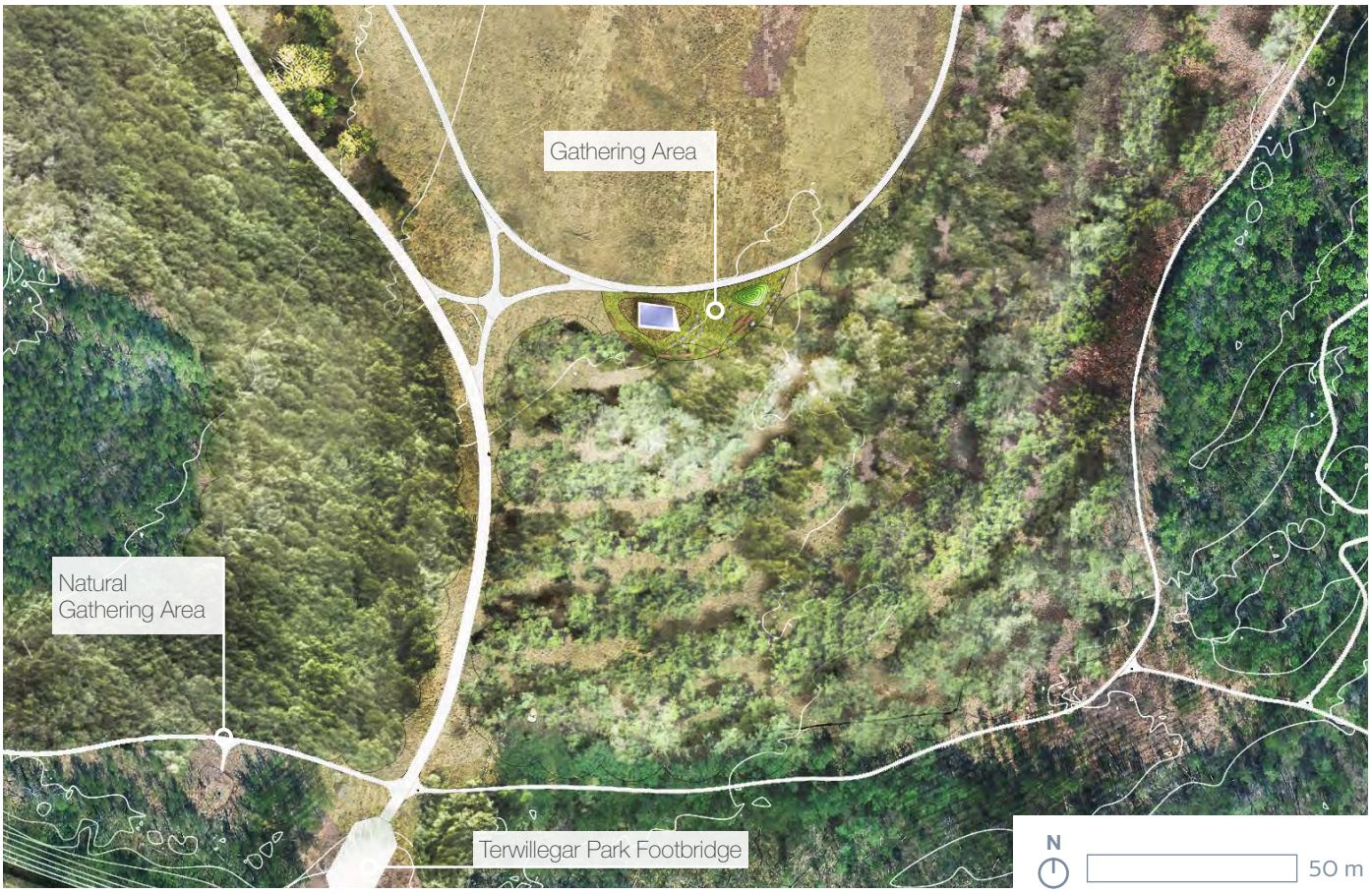


Figure 18 Plan View of Proposed Gathering Areas

Park amenities include the provision of constructed and natural site furnishings, such as picnic shelters as well as logs and boulder seating.

2. Construct two pit washrooms in the park near existing park entrances.

Two pit washrooms are proposed in the concept plan – one near the Fort Edmonton Footbridge and one near the Terwillegar Park Footbridge (see Figure 17). Pit washroom locations will also include supporting infrastructure such as bike racks and waste receptacles. They will be routinely cleaned and closed nightly. Pit washrooms are not serviced by utilities (such as sewer lines or electricity) because limited access into the park prohibits the construction and maintenance of this infrastructure.

Rationale:

- *The recommendation to include two pit washrooms in the park is based on feedback from public and stakeholder engagement for the Master Plan as well as requests received from trail users who identified a need for washrooms along this section of the River Valley trail network.*
- *As mentioned above, the servicing, maintenance and construction of serviced washrooms is not feasible in the park due to access limitations for vehicles and equipment.*

Public Input:

- *Washrooms were requested in the first two phases of engagement, and their inclusion was supported in later phases.*

3. Create formal viewpoints with minimal infrastructure.

The concept plan includes one formal viewpoint at the top-of-bank on the trail parallel to Woodward Crescent. This viewpoint will include seating and minimal vegetation thinning or pruning to facilitate views into the park while maintaining slope stability. This formal viewpoint may include interpretive signage.

Four locations have been identified along the river edge as opportunities to provide slight enhancements for river viewing. These locations may include natural seating (e.g. rocks) and interpretive signage. Any feature included at these river lookout points will need to be minimal and able to be installed with small equipment so as not to damage existing vegetation and trails. Standard interpretive signs may need to be modified for this reason. See Figure 17 for the locations of proposed river lookout points.

Bridges into the park should also be promoted as viewpoints, with the potential addition of interpretive signs at key locations on the bridges.

Rationale:

- *Views into the open field and to the river have been identified as key elements of the park's identity through public and stakeholder engagement.*
- *Park users currently approach the river edge along the eastern boundary of the park, either for river views or to access the river. Formalizing certain river lookout points can focus this behaviour to a few select locations, allowing other informal river access points to be closed and restored.*

Public Input:

- *Participants expressed desires for viewing wildlife in Phase 1 of public and stakeholder engagement.*
- *Minimal river lookout points and resting points with seating were supported throughout engagement.*

4. Provide waste receptacles at resting points and trail junctions.

Waste receptacles are recommended near trail junctions and other amenities (e.g. the shelter, resting points and washrooms). The concept plan includes six waste receptacles (see Figure 17).

Waste receptacles should be prioritized near the two proposed pit washrooms at the north and south ends of the park and near the gathering space with shelter near the Terwillegar Park Footbridge. Waste receptacles should be covered to prevent access by wildlife, and should include options for recycling when possible.

Rationale:

- *There are currently limited numbers of waste receptacles in the park. More waste receptacles will help keep the park free of litter, especially if people are encouraged to spend longer periods of time in the park.*

Public Input:

- *Waste receptacles were prioritized by the public and stakeholders during the first two rounds of engagement.*
- *The inclusion of waste receptacles is supported based on engagement results.*

River lookout points enhance the experience by the river with natural seating and educational signage.

5. Provide opportunities for community involvement in the stewardship of the park, developing on-going partnerships to promote educational and stewardship opportunities.

Opportunities for the public and community groups to be involved in the stewardship of the park should be facilitated by the City. Stewardship opportunities could include park clean-ups, weed pulls, tree planting, nature walks and educational programming, among others. The City could provide opportunities through programming or through formal partnerships with community and/or educational groups. The City should also facilitate opportunities to collaborate with Indigenous communities in the stewardship of the park and its natural features.

Stewardship opportunities should be provided to support and encourage nature education for the public and participating community groups. Opportunities should be advertised in the park, through City communications and online to provide accessible and wide-reaching information.

Examples of potential partners include environmental, Indigenous communities or educational community groups with a focus on nature education and environmental stewardship. The proposed concept plan includes infrastructure that would facilitate programming by these types of groups, including trails, interpretive elements, a shelter, a gathering space and washrooms.

Rationale:

- *Providing stewardship opportunities is a direct response to public and stakeholder input (see below). It is also supported by Ribbon of Green policies and BREATHE: Edmonton's Green Network Strategy (see Policy Actions 4.3.1 Community Stewardship and 4.9.4 Partnerships).*
- *The City would benefit from utilizing the resources and knowledge of partner groups to activate the park. The recommended partners could help with re-naturalization efforts in the park, reducing the long-term operational costs of the Master Plan and helping to realize the park vision. Partnerships are supported by the Ribbon of Green and BREATHE: Edmonton's Green Network Strategy (see Policy Action 4.4.1 Partnerships).*

Public Input:

- *The desire for community stewardship opportunities was expressed by the public and stakeholders throughout the engagement process.*
- *Indigenous communities engaged by the City expressed an interest in being involved in stewardship activities.*
- *Nature education and stewardship were supported throughout the public and stakeholder engagement process. Some participants did not see the need for infrastructure to support educational programming, while others noted that groups (such as school groups) would likely need access to shelter and/or washrooms in the park. The proposed infrastructure is meant to support educational programming while maintaining a small footprint.*

Areas within the park planned for facilitating formal and informal education opportunities.

6. Collaborate with Indigenous communities for programming and cultural opportunities in the park.

Opportunities for Indigenous cultural activities in Oleskiw River Valley Park were identified through engagement with Indigenous communities. Potential opportunities discussed in engagement include space for cultural gatherings, Elder and/or knowledge holder walks and culture camps. If temporary fire pits are desired, they should be explored in consultation with Fire Rescue Services.

Rationale:

- *Opportunities for programming by Indigenous communities were identified through the engagement process. Collaboration with Indigenous communities is also supported by BREATHE: Edmonton's Green Network Strategy (see Policy Actions 4.1.3 Inclusive Spaces, 4.2.2 Programming and 4.4.1 Education) and the Ribbon of Green.*

Public Input:

- *Indigenous communities engaged through the Master Plan process showed interest in the potential for cultural activities and historical interpretation in the park.*
- *Results of Indigenous engagement are summarized in Appendix A.*

7. Provide safe access to the river for educational, ceremonial or stewardship activities.

The sand bar to the east of the park is currently accessed by members of the public for informal recreation. At this time, the ecological impacts of public sand bar access are not fully understood. Based on an understanding of the current environmental sensitivities around the sand bar (see the Environmental Sensitivity Mapping section of this report on page 25), an increase in recreational use by the public is expected to have negative environmental impacts on the area. For this reason, recreational river access and use of the sand bar is not recommended by the Master Plan and river-based infrastructure, such as a boat launch or formal pathway to the sand bar, will not be provided through the Master Plan.

The existing river access point south of the Fort Edmonton Footbridge and north of the sand bar (see Figure 17) will be maintained as a natural surface trail, providing access to the river for educational, ceremonial and stewardship activities only. The trail will be repaired as required to ensure safe access to the river that is free of hazards (such as excessive erosion).

If informal public use of the sand bar increases, the City may choose to limit public access in order to preserve this feature. The Environmental Impact Assessment for the Oleskiw River Valley Park Master Plan (Appendix B) provides mitigation measures and on-going monitoring recommendations for the sand bar.

Rationale:

- *The sand bar is an area that is sensitive to human impacts. The Environmental Sensitivities Report (2017) depicts the sand bar as an area of lower sensitivity based on a desktop assessment. However, site reconnaissance has indicated that the sand bar is a sensitive landscape feature.*
- *Because there is limited access into the park and environmental sensitivities have been identified around the river edge and sand bar, Oleskiw River Valley Park has not been identified as a river access point for recreational activity (e.g. boating).*

Public Input:

- *Most participants in the public and stakeholder engagement process recognized the ecological significance and sensitivity of the sand bar. Some participants expressed a desire for improved access to the sand bar for river access (e.g. for boating or for use as a 'beach'), while others wanted the City to manage or limit access to the sand bar.*

8. Maintain the park as an on-leash area.

Oleskiw River Valley Park will remain an on-leash park. Dogs will be welcome on trails throughout the park, but must stay out of forested and re-naturalized areas. Dog bag stations will be located at strategic locations in the park as directed by The City of Edmonton Dogs in Open Spaces Implementation Plan (2018). Recommended locations for dog bag stations include park entrances and midway on the multi-use trail.

Rationale:

- *Oleskiw River Valley Park contains areas of higher sensitivity and opportunities for re-naturalization (Environmental Sensitivities Report, 2017). Off-leash use is a higher impact activity that conflicts with the goals of re-naturalization, invasive species management and environmental conservation. Because it is not an existing park use and does not support the major goals of the Master Plan, off-leash use is not recommended as a potential use in the park.*
- *Terwillegar Park is the largest off-leash area in the City and is located across the Terwillegar Park Footbridge (see Figure 10). The Buena Vista off-leash dog park is approximately 5 km from the northern point of Oleskiw River Valley Park via the River Valley trail network.*

Public Input:

- *Some participants expressed a desire for off-leash trails or off-leash areas in the park. For the reasons described above, the park will remain as an on-leash area.*
- *Keeping the park on-leash received support throughout the public engagement process.*

9. Promote trail-based activity in the park during winter months.

Winter activities that are recommended for Oleskiw River Valley Park include snowshoeing, cross-country skiing, hiking and fat biking. The paved, multi-use trail will be cleared in the winter.

Based on current activity levels, the Master Plan does not include track-set cross-country ski trails. If there is a desire in the future, the proposed granular trail loop may become track-set. Requirements for track-setting trails in the park include a funding partnership with a cross-country ski organization and public education on trail use.

Rationale:

- *The inclusion of winter activities in the Master Plan is based on feedback received during public and stakeholder engagement (see below).*
- *Access limitations dictate that lower impact, low maintenance trail activities may occur in the park.*
- *Trail-based winter activities are supported by BREATHE: Edmonton's Green Network Strategy, the Ribbon of Green, the Winter City Strategy and the Live Active Strategy*

Public Input:

- *Trail-based winter activity in the park was supported throughout the public and stakeholder engagement process.*
- *Some participants wanted to see greater opportunities for cross-country skiing (e.g. track-set trails or more ski trails). Trails may be track-set in the future depending on funding and interest, as stated above.*

10. Develop a program for the installation of winter warming huts along trails.

Winter warming huts are temporary, human-scale shelters that may be installed along trails in the park each winter. Warming huts add value to the park, giving people a chance to warm up and to gather. They make it easier for people to get outside and enjoy the River Valley in the winter. They also perform a place-making function, becoming a small destination for people enjoying the park in the winter. They provide protection from the elements and add visual interest along the trails. They may also include interpretive, artwork and/or interactive elements.

Winter warming huts are identified as a potential programming opportunity for the park that would be implemented through the City of Edmonton WinterCity Program. Local students, artists and/or community groups may be involved in the design and installation of the warming huts. Figure 17 identifies potential locations for these installations in the park. The actual number of warming huts will depend on available partnerships and funding. The design and construction of winter warming huts will need to take into account the access limitations of the site (e.g. be able to be transported across the footbridges and/or along pathways).

Use of the winter warming huts should be monitored periodically to prevent unwanted use and vandalism.

Rationale:

- *Winter warming huts provide some shelter from the elements in the otherwise open field in the park. They also create opportunities for low-impact interpretive or public art installations, potentially encouraging more people to get outside in the winter.*
- *Winter warming huts are supported through the WinterCity Strategy and related public engagement. Those who provided feedback for the 'Keep the Snowball Rolling WinterCity Strategy Evaluation and Report' (May 2018) rated the importance of infrastructure to support winter activities (such as warming huts) at 89% (p. 28).*

Public Input:

- *The winter warming huts received public and stakeholder support during the engagement process. However, some participants thought that they were unnecessary or that the number of proposed warming huts was excessive. The number of proposed locations for warming huts has been reduced in the final proposed concept plan to reflect this feedback.*

Winter warming huts are great ways to create shelters that are both visually compelling and functional.

Access and Circulation

Park entrances, trails and wayfinding are key components of the access and circulation in the park.

→ **Summary of Public Feedback**

- » Mixed feedback on the provision of vehicular access (some want parking in the park, others do not)
- » Concerns from surrounding neighbours regarding increased traffic and parking with increased park use
- » Desire to maintain existing trail network in the park, including natural surface trails
- » Desire for east-west trail connections
- » Desire to address user conflict on trails
- » Desire for more physically accessible park entrances
- » Desire for improved signage and wayfinding

→ **Summary of Internal City Feedback**

- » Trails in the River Valley should be shared-use (no trails will be assigned for specific users)
- » Support for improved signage and wayfinding

→ **Summary of Recommendations**

11. Provide limited vehicle access into the park for service and emergency vehicles via existing park entrances.
12. Designate vehicle parking for Oleskiw River Valley Park in existing parking locations outside the park boundaries.
13. Maintain and improve existing pedestrian entrances.
14. Maintain the existing trail network.
15. Develop new granular trails to provide access into the park by different user groups.
16. Integrate new natural surface trail connections into the existing trail network.
17. Improve wayfinding signs near park entrances and along trails.

Figure 19 shows the proposed layout of elements related to Access and Circulation in Oleskiw River Valley Park. Wayfinding signs are provided at key intersections along existing and proposed trails. A system of trail markers is proposed for the natural surface trails in the park to aid in wayfinding through the forest. Existing trails in the park are retained with the addition of granular and natural trail connections to promote educational, recreational and passive enjoyment of nature in the park. Proposed trails may help reduce user conflict by providing some separation between uses of varying intensity and increase help to increase accessibility in the park by providing users with several types of experiences and levels of difficulty. The following pages provide more detailed recommendations for Access and Circulation.

New trail segments with a granular surface allow visitors to traverse through various points of interest within the park, while mitigating other areas from being disturbed.

Figure 19 Proposed Access and Circulation Map

11. Provide limited vehicle access into the park for service and emergency vehicles via existing park entrances.

Through the Master Plan process, the public, stakeholders and internal City staff identified a potential opportunity for public vehicular access into the park to improve River Valley access from neighbourhoods to the north.

The City reviewed options for vehicular access into the park and determined that significant physical and financial barriers exist that limit the feasibility of a new vehicle road. Limitations include private land ownership and steep, sensitive slopes on the western edge of the park that would be negatively impacted by the construction of a road. The City also completed a legal review and risk analysis regarding use of the existing private road west of the park. Based on the results of these assessments, City administration recommended that no public vehicular access be provided through the Master Plan.

The programmatic and operational recommendations in the Master Plan dictate that access into the park is required for maintenance, servicing, emergency response and other operational needs. Access for these requirements will be permitted along the trail from Woodward Crescent, over the Fort Edmonton Footbridge and over the Terwillegar Park Footbridge (see Figure 20). The Wolf Willow Ravine trail entrance to the north of the park will remain pedestrian only. The limitations of each access point is detailed below. Prior to accessing the site with a vehicle, operators should confirm vehicle weight and size limitations of the access point to avoid potential safety incidents or damage to property and/or structures.

FORT EDMONTON FOOTBRIDGE

- Potential for use by a maintenance vehicle, maximum 80 kN (8,157.73 kg) gross load

TERWILLEGAR PARK FOOTBRIDGE

- Potential for use by a maintenance vehicle, maximum 80 kN (8,157.73 kg) gross load
- Potential for use by an emergency medical services vehicle, maximum 100 kN (10,200 kg) gross load

WOODWARD ACCESS TRAIL

- Potential for use by a service truck (1 tonne pickup truck) maximum 3.1m width to avoid damage to the swale adjacent to the trail

Public Input:

- *Throughout the public engagement process, the City received mixed feedback on vehicular access into the park. Some participants felt that providing vehicular access into the park would reduce parking pressures on surrounding communities. Others felt that providing vehicular access into the park would make it more physically accessible for visitors with mobility challenges.*
- *Those who did not want vehicular access into the park wanted to avoid the cost and major environmental implications that would result from building a road into the park. Others wanted the City to promote active transportation and/or transit access to the park.*

Additional Recommendations:

- *The City of Edmonton should pursue dialogue with the Edmonton Country Club to see if arrangements can be made for occasional and emergency access into the park via the golf course road.*

Figure 20 Pedestrian and Limited City Vehicle Access Points

12. Designate vehicle parking for Oleskiw River Valley Park in existing parking locations outside the park boundaries.

Parking for Oleskiw River Valley Park will be located at Fort Edmonton Park, Wanyandi Way (Fort Edmonton Footbridge marked street parking) and Terwillegar Park. (See Figure 19 for proposed parking locations.) These locations should be signed and promoted by the City as parking locations for Oleskiw River Valley Park. To increase public awareness of parking options, the City should advertise recommended access on the park website.

Schools and institutions organizing larger group visits to the park using school or tour buses should use the Terwillegar Park parking lot for access. Amenities have been concentrated near the Terwillegar Park Footbridge to support this entrance as the main entrance to the park.

To help mitigate potential impacts to surrounding communities, the City should promote the use of transit and active transportation (such as cycling and walking) to get to the park. The City should continue to monitor access and parking behaviour by performing regular observations and parking counts at the access points and parking lots to potentially alter access and parking strategies in the future.

Rationale:

- *A review of vehicle access was completed by the City and, due to physical constraints and feasibility concerns, vehicle access was not pursued as part of the Master Plan. Significant physical and financial limitations to providing vehicular access were identified by the City, including private land ownership and steep slopes along the western edge of the park.*
- *The recommendations for parking locations above resulted, in part, from a Transportation and Parking Feasibility Assessment completed for the Ribbon of Green.*

Public Input:

- *Some participants, particularly those who live near the park, shared concerns about a potential increase in street parking in their neighbourhood and the potential for unwanted increases in local traffic.*
- *Others were supportive of parking outside the park boundaries and wanted to encourage alternative modes of transportation to the park, including improved transit access.*

13. Maintain and improve existing pedestrian entrances.

Existing park entrances are identified in Figure 19. While the physical conditions of the site limit accessibility for some visitors with mobility challenges, maintaining trails in good repair, especially those near park entrances and bridges, will help to reduce barriers to entry. Trails should be maintained to current City of Edmonton design and construction standards, following the most recent Access Design Guide whenever possible.

The Woodward Access trail, which is currently a granular trail, should be paved to improve access into the park for visitors travelling from the north (see Figure 19). It is recommended that the trail be paved with a chipseal paving material, which is a combination of asphalt and granular materials, to create a more natural aesthetic and to provide some grip in inclement weather conditions. (The granular material selected to mix with the asphalt paving should be coarse and rough to prevent hazardous, slippery conditions.)

Rationale:

- *Utilizing existing park entrances avoids additional environmental impacts that would result from the creation of additional access points.*
- *Paving the Woodward Access trail will address many of the erosion issues on the trail, reducing on-going maintenance requirements. It will provide an improved entry into the River Valley from the north from a regional perspective and is supported by the Ribbon of Green Plan. A paved surface will be more durable for naturalization and maintenance vehicle access.*

Public Input:

- *Participants voiced their concern over the condition of the Woodward Access Trail (granular trail from Woodward Crescent on the west side of the park) in every round of engagement. The trail was repaired during the summer and fall of 2018. The Master Plan recommends that the trail be paved to address these comments.*

Table 4. Opportunities for Use Based on Trail Type

	Natural Surface Trails	Granular Trails	Asphalt Paved Trails
Typical Visitor Type	» Suitable for visitors with some trail experience » Walking, hiking » Mountain biking » Snowshoeing » Cross-country skiing	» Suitable for most visitors » Appropriate grading and surface material selection can increase the accessibility of granular trails » Walking, jogging, cycling, stroller, wheelchair » Snowshoeing » Cross-country skiing	» Suitable for all visitors » Walking, jogging, cycling, roller blading, skateboarding, stroller, wheelchair
General Accessibility	» Not well suited for accommodating people of all ages and abilities » Cannot typically accommodate wheelchairs, walkers, scooters, and strollers » Obstacles common, stairs may be present	» Moderately suitable for accommodating people of all ages and abilities » Can in most cases accommodate wheelchairs, walkers, scooters, and strollers » Infrequent obstacles, stairs may be present	» Best suited for accommodating people of all ages and abilities » Can in most cases accommodate wheelchairs, walkers, scooters, and strollers » Few or no obstacles, no stairs or minimal use of stairs » May be used in combination with ramps and railings to increase accessibility in areas of grade change » Will be cleared in winter
Wayfinding Requirements	» Minimal to moderate information provided (trail markers)	» Moderate information provided (basic trailheads signs, trail orientation maps, interpretive panels)	» Maximum information provided (trailheads signs, interpretive panels, trail orientation maps)

During the winter months, trail users include pedestrians, snowshoers, and cross-country skiers.

14. Maintain the existing trail network.

The paved, multi-use trail and granular trails are the only trails historically recognized in the City of Edmonton's official trail inventory. These trails are maintained in the Master Plan. Because of the difficulty in accessing the park with vehicles, the existing paved trails should be upgraded to a higher grade to accommodate some vehicle traffic without degrading the surface quickly.

The existing natural surface trail network, which is already recognized by recreational trail user groups, has been added to the official Oleskiw River Valley Park trail network through the Master Plan. Natural surface trails should be managed according to current best practices. Once developed, the City of Edmonton's natural surface trail management strategy will provide direction on the maintenance of natural surface trails in the park.

All trails in the park are shared-use. Figure 19 details a map of the existing and proposed trail network. Table 4 identifies opportunities for use for each trail type.

Rationale:

- *Existing trails provide a connection between green spaces and communities. They are important links in the River Valley trail system for recreational and commuter use.*
- *Existing trails are used and valued by those who participated in the engagement process.*
- *Recommended trail uses are supported by the Ribbon of Green (see the following Ribbon of Green Policies: Facilitating Trail Experiences, Planning Trails and Designing Trails).*

Public Input:

- *Maintaining the existing trails, particularly the natural surface trails, was supported throughout the engagement process. It is important to some participants that the existing natural surface trails do not get widened or paved.*
- *Some participants remembered the old farm road fondly as a connection to historical land uses on the site (prior to the multi-use trail being paved).*

15. Develop new granular trails to provide access into the park by different user groups.

Several new granular surface trails, as shown in Figure 19, are proposed in the concept plan. Granular surface trails may be used for several activities, including walking, jogging, cycling, snowshoeing and cross-country skiing (see Table 4). They may also be used with strollers and some mobility devices (e.g. wheelchairs).

Rationale:

- *The proposed granular trails provide visitors with the opportunity to leave the paved, multi-use trail to travel further into the park and avoid potentially faster commuter traffic on the paved trail.*
- *The granular trail loop in the open field allows visitors to make a loop through the park, which is approximately 1.2 km from the Terwillegar Park Footbridge entrance (or nearly 2.8 km from the Terwillegar Park parking lot). Creating designated trail loops to provide unique, destination trail experiences is supported in the Ribbon of Green (see Ribbon of Green Policy: Facilitating Trail Experiences).*
- *Providing a granular surface trail allows visitors who are not comfortable or are not able to use the natural surface trails an option to make a loop through the park.*

Public Input:

- *Some participants felt that the addition of granular trails in the park was unnecessary. They felt that the existing trails are adequate.*
- *Other participants appreciated the addition of trails to provide more east-west connections across the park and felt that additional trails increased the accessibility of the various sections of the park, providing more options for park visitors and different experiences in the park.*

16. Integrate new natural surface trail connections into the existing trail network.

New natural surface trail connections recommended through the Master Plan are shown in Figure 19. They integrate into the existing natural surface trail network and create connections to existing and proposed trails in other areas of the park. Natural surface trails may be used for a variety of activities, including walking, hiking, mountain biking, snowshoeing and cross-country skiing (see Table 4). Natural surface trail creation and maintenance should align with a future natural trail strategy, and partnerships should be utilized to ensure trails are maintained according to City standards and best practices.

Integrating the natural surface trail network into the official park trail network is intended to limit the development of informal, user created natural surface trails. In cooperation with partner organizations, the City should educate trail users through signage and educational programming on the ecological significance of the area and the importance of staying on designated trails. Any future trails developed outside of partnerships with the City of Edmonton should be closed and restored. Natural surface trail restoration may involve seeding, planting, bioengineering techniques (such as the placement of straw wattles) or the installation of physical barriers (natural or constructed).

Rationale:

- *The proposed natural surface trail connection in the forest helps to create two continuous trails through the forest. This addition has the potential to decrease user conflict on the natural surface trail adjacent to the river.*
- *Providing formal natural surface trail connections will help limit the creation of more informal trails.*

Public Input:

- *The proposed natural surface trail connections were popular among mountain bikers and those looking for a greater separation between users on the natural surface trails. Those who opposed the new natural surface trail connections shared concerns over their environmental impact.*

Natural surface trails are low impact and blend into the natural character of the area. Educational signage within these areas can raise awareness on the surrounding key habitats and landscape features.

17. Improve wayfinding signs near park entrances and along trails.

Park entrances should serve as trailheads for the park and should include wayfinding signs as directed by Edmonton's River Valley Wayfinding strategy. Information provided at park entrances should include:

- A map of the park including trails, amenities and natural features. Information should be provided on distances to amenities, accessibility of amenities and trail difficulty/slopes.
- Information on appropriate park use (e.g. on-leash dog-walking) and potential restrictions to park and trail use
- Information on any work or programs occurring in the park (e.g. re-naturalization work or educational programming)

At trail intersections, trail length and slope should be indicated to help visitors choose trails providing their desired level of difficulty. Trail markers (smaller wayfinding markers or posts) are recommended at natural surface trail intersections. The City of Edmonton does not currently include trail markers in their River Valley Wayfinding strategy; however, it is recommended that the City integrate trail markers into their wayfinding plans, particularly along natural surface trails. Figure 19 outlines the proposed trail network and recommended wayfinding sign and trail marker locations.

Signs may also be used throughout the park to indicate appropriate use of the trails, amenities and natural features, such as the sand bar. Signs can incorporate interpretive and educational material to inform visitors of the importance of various environmental features in the park, encouraging them to use the space appropriately.

Later design and implementation phases should ensure that trails and open spaces adhere to recommendations and guidelines in the City of Edmonton's most recent Access Design Guide.

Rationale:

- *Current signage provides some direction on the use of the park (e.g. on-leash, natural area) but is not consistent at all park entrances. The existing signage does not provide information on the proposed amenities, trail grades or distances to other park entrances.*
- *There are currently no trail markers along natural surface trails. Minimal trail markers with locational information will help users unfamiliar with the park navigate the trails more comfortably and may provide locational information during an emergency.*

Public Input:

- *Improved wayfinding signage was supported throughout the engagement process. Some participants shared their concerns over potential damage or vandalism.*

Example of Edmonton's River Valley Park Entrance Sign

Example of Edmonton's River Valley Trail Wayfinding Signage

Natural Asset Management

Natural asset management describes the ways natural areas in the park are maintained or re-naturalized. Oleskiw River Valley Park is an important green space connection in Edmonton's River Valley with essential wildlife habitat and opportunities to increase biodiversity. The proposed concept plan focuses on maintaining existing resources and park uses while re-naturalizing areas that have been historically disturbed.

→ **Summary of Public Feedback**
- » Desire to keep the park natural
- » Desire for nature and wildlife conservation
- » Desire to manage erosion on slopes
- » Support for re-naturalization and invasive species removal
- » Mixed feedback for reforesting the existing field or keeping it open

→ **Summary of Internal City Feedback**
- » Support for proposed re-naturalization efforts
- » Support for a focus on nature education

→ **Summary of Recommendations**

18. Manage and conserve existing natural assets.
19. Collaborate with Indigenous communities in the management of natural assets.
20. Create a forested buffer along the west edge of the park.
21. Re-naturalize disturbed areas in the park.
22. Develop a re-naturalization plan that outlines the implementation, maintenance and monitoring of re-naturalization efforts in the park.
23. Explore partnerships for research and on-going natural asset management.
24. Protect and celebrate cultural and historical resources in the park.

Figure 21 shows the recommended measures for Natural Asset Management throughout the park. Overall, existing natural features are retained. Minimal infrastructure is recommended, mainly limited to trails and supporting amenities. The Master Plan recommends that the City pursue the re-naturalization of large areas of the park that have been previously disturbed, such as the open field. Detailed recommendations for Natural Asset Management in the park (including recommendations for a re-naturalization plan) are provided on the following pages.

18. Manage and conserve existing natural assets.

Oleskiw River Valley Park contains valuable natural assets that contribute to Edmonton's green network. They provide habitat for many species of animals, including mammals, birds, fish, insects, reptiles and amphibians; they mitigate impacts of flooding by acting as a natural floodplain; and they help to filter the air and water through natural processes, among other services. The Master Plan recommends the management and conservation of existing natural assets in the park, described in more detail below.

Water and Fish Habitat

Visitor access around the intermittent streams should be limited by preventing the creation of new trails and discouraging foot and cyclist traffic off designated trails. Where existing trails cross intermittent streams, the City should consider integrating small bridges (preferably using natural materials) to limit disturbance to the streams. In addition, public access to the sand bar and river edge should not be promoted outside of the designated natural lookouts.

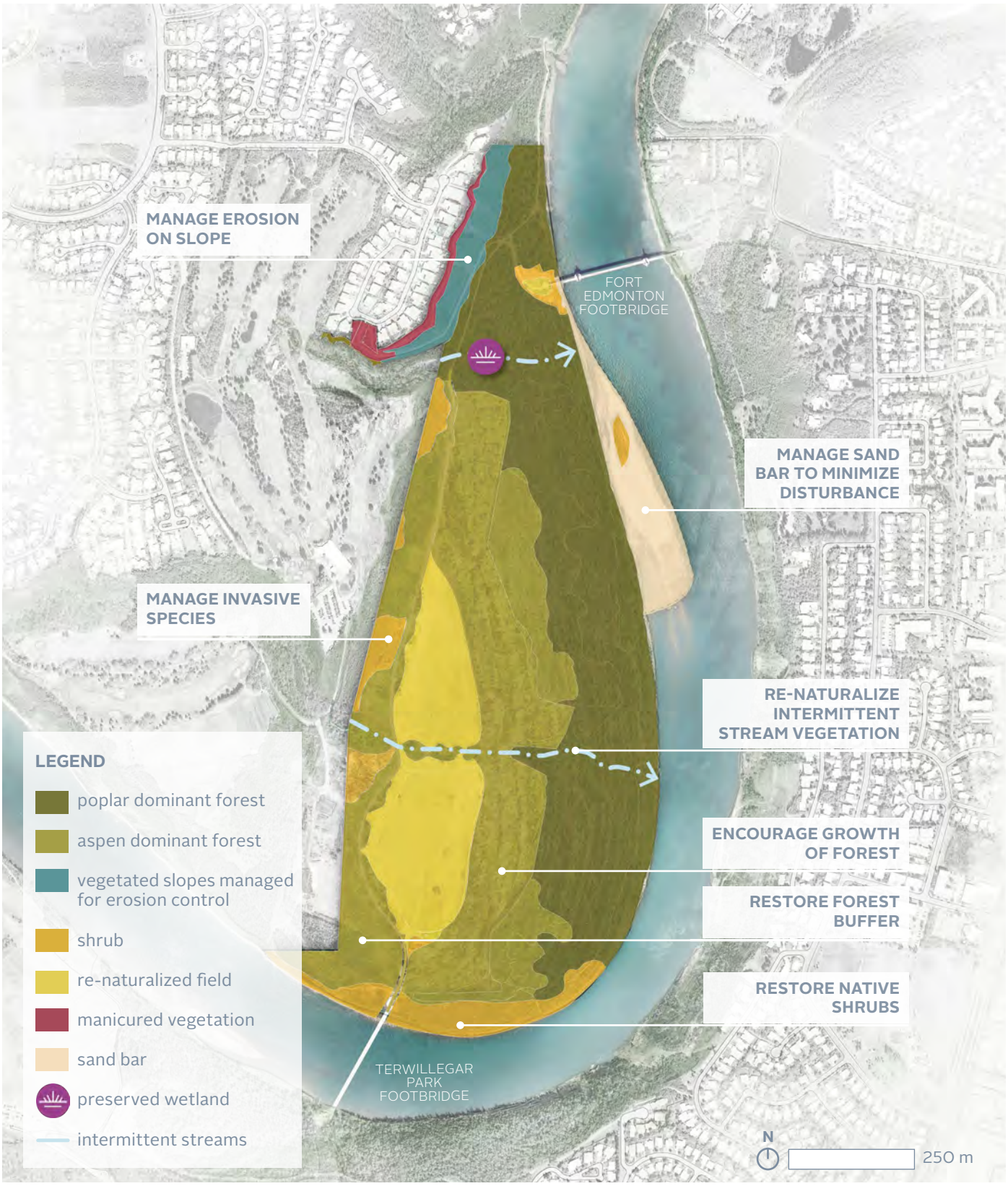


Figure 21 Proposed Natural Asset Management Plan

Geology, Geomorphology and Site Soils

As described in the Existing Conditions section of this report, previous landslides and existing erosion channels were identified along the western slopes in the park. The City should prepare and implement a slope stabilization plan to address this slope instability. The plan could use planting, bio-engineering or constructed elements (preferably a combination of all three) to improve stability on the slopes. Visitor access should not be promoted on the slopes except along designated trails and pathways.

Vegetation

The two dominant vegetation communities identified in the park are the aspen forest and the ruderal grassland (i.e. the open field). The forest should be managed according to existing and future City of Edmonton forest management guidelines and policies. Natural trails through the forest should be designed and maintained according to best practices to reduce their environmental impact. New informal trails (outside of those proposed through the Master Plan) should be discouraged and closed. (See Recommendation 16 for more recommendations on the natural surface trail network.)

The concept plan for the park provides for the maintenance of large portions of the open field in the interior of the park. Invasive species in the field should be addressed through a re-naturalization plan (see Recommendation 21). Noxious weeds throughout the park should be treated according to the Alberta *Weed Control Act*, and rare plants should be protected. See further recommendations for vegetation management and protection in the Environmental Impact Assessment (Basin Environmental 2019).

Wildlife

The North Saskatchewan River Valley provides habitat for a wide variety of animal species. Several sensitive wildlife species were noted as having potential to reside in the park area. The City should identify and protect known sensitive wildlife habitat features, such as dens and nesting sites. The City may decide to limit access to these features, especially during sensitive times of the year, such as important nesting, breeding or migratory periods. (One potential method to limit access could be temporary trail closures.)

Rationale:

» *Site reconnaissance, results of the Environmental Sensitivities Report (2017) and city-wide studies indicate that the park provides valuable services within park boundaries and to the regional ecological network.*

Public Input:

» *Feedback received during public and stakeholder engagement indicates that the existing natural features in the park are valued by participants. Participants appreciate the open field and the forest in the park and want to see the park maintained as a natural park.*

Park users are encouraged to respect the natural features in Oleskiw River Valley Park through public education and programming.

19. Collaborate with Indigenous communities in the management of natural assets.

Continued dialogue and collaboration with Indigenous communities should be pursued in relation to the management of natural assets in the park. Through partnerships with Indigenous communities, there may be opportunities for environmental stewardship and traditional plant harvesting in the park.

Rationale:

» *Collaboration with Indigenous communities is supported by policies and strategic actions in Breathe and Ribbon of Green.*

Public Input:

» *Collaboration with Indigenous communities was identified as important during engagement with Indigenous communities.*

20. Create a forested buffer along the west edge of the park.

Currently, the area to the west of the paved, multi-use trail is open with views into the adjacent golf course property. The Master Plan recommends planting the area to create a forested buffer as part of the re-naturalization plan.

Rationale:

» *A forested buffer will provide shade, increase potential habitat for birds and other animals and create a visual buffer between the park and golf course property.*

Public Input:

» *The forested buffer along the west edge of the park was supported during engagement.*

21. Re-naturalize disturbed areas in the park.

Although Oleskiw River Valley Park is considered by many to be a natural park, one of the major challenges that has been identified in the park by the City and stakeholders is the spread of invasive species and weeds. Invasive species are plants that out-compete native plants, taking over disturbed areas, such as the open field in Oleskiw River Valley Park. Smooth brome (a non-native, invasive grass) and other invasive species, such as Burnet Saxifrage (*Pimpinella saxifraga*) and Yellow Lady's Bedstraw (*Galium verum*), have infested areas where native plants were removed in the past to construct the historical golf course and Wolf Willow farm, or more recently for bridge and trail construction.

Historical use of the site has led to an invasion of non-native invasive plant species. This has resulted in a lack of native vegetation and poor biodiversity in a large portion of the site. This area could represent a threat to adjacent native plant communities by acting as a seed source for listed and invasive species. Historical use has also impacted the intermittent stream, reducing vegetation cover and habitat potential.

In response to site observations, policy direction and a desire from the public and stakeholders to keep the park natural, the Master Plan recommends that the City implement a re-naturalization plan in Oleskiw River Valley Park. The re-naturalization plan for the park should have the following objectives:

Objectives for re-naturalization:

» Reduce non-native species (e.g. brome and listed weeds) in the park. (Future plans will determine the acceptable level of invasive species.)
» Increase species richness and diversity.
» Increase cover of native species relative to appropriate reference communities. (A reference community refers to the target ecosystem for habitat restoration, which is usually represented by undisturbed similar native habitat located near the project site or elsewhere in the same natural subregion.)
» No expansion of caragana patches. (Caragana is an invasive shrub, which can be found in large numbers on the western slopes in Oleskiw River Valley Park.)
» Provide opportunities for park visitors to view wildlife and naturalization of the park.
» Provide opportunities for community involvement.

Feedback from the public and stakeholders indicates that the open field is valued for the character it adds to the park and for the views across the park it permits. Participants also wanted to see the natural ecological succession of the forest into the open field. (Ecological succession is the process by which ecosystems develop and plant communities change over time.)

The proposed concept plan depicts the long-term re-forestation of the eastern portion of the open field with the western portion of the field maintained as an open field. The open field and intermittent stream will be re-naturalized with native grasses and shrubs. The concept plan represents what the park could look like in the distant future. For the next 25 years and beyond, the park will be in a state of flux, allowing visitors to observe changes in the landscape due to ecological succession as well as re-naturalization through human intervention.

Rationale:

» *Edmonton's 2008 Biodiversity Report and the Ribbon of Green identify invasive species as a present-day threat to biodiversity in the city and in the River Valley. Increasing biodiversity in the park through re-naturalization provides ecological benefits for the immediate area and the broader ecological network.*

Public Input:

» *Public interest in conservation and restoration was the impetus for the recommendation for a re-naturalization plan for the park.*
» *When the option for re-naturalization in Oleskiw River Valley Park was presented for feedback in Phases 3 and 4, it received support from the public and stakeholders. Concerns that were expressed included the high level of effort re-naturalization would require and the associated financial costs.*
» *In Phase 3 of engagement, participants were asked to provide their level of support for a 'Restored Forest' and 'Open Field' in the park. The restored forest received a higher percentage of support, with 72% either strongly or somewhat supporting forest restoration. Fifty-two percent of participants strongly or somewhat supported the open field for its low costs and the character it adds to the park.*

22. Develop a re-naturalization plan that outlines the implementation, maintenance and monitoring of re-naturalization efforts in the park.

A re-naturalization plan is recommended to provide direction on the long-term implementation, maintenance and monitoring of re-naturalization efforts in the park.

The re-naturalization plan should be informed by a qualified biologist and should support the objectives presented in Recommendation 21. The plan should inform the development of construction drawings and documentation for the implementation of the project. In general, it is recommended that the re-naturalization plan include the following:

» an ecological overview of the park;
» a description of the reference habitat(s);
» a restoration hypothesis;
» project goals and objectives;
» a conceptual implementation strategy;
» a feasibility assessment; and
» a detailed monitoring and maintenance plan for the re-naturalization work.

Table 5 identifies potential short- and long-term strategies to help achieve each objective that may be incorporated into the re-naturalization plan. The parties responsible for each required activity will depend, in part, on the development of partnerships with research/environmental organizations and the level of community involvement.

Rationale:

» *The inclusion of a monitoring and maintenance plan in the re-naturalization plan is essential to the plan's success, and is supported by the Natural Area Systems Policy, which states that incorporating some monitoring and a feedback loop into the management plan is key to successful site management.*

Public Input:

» *The development of a detailed, scientifically-based re-naturalization plan was supported during the final round of public and stakeholder engagement.*
» *In the final phase of engagement, the public was asked if they would prefer a large-scale re-naturalization program in the park or a more phased approach (which would leave some smooth brome remaining in the field). Forty-one percent of participants preferred a large-scale approach because they appreciated the shorter timeline and potentially lower overall cost. Thirty-six percent preferred the phased approach, commenting that it would afford the City more time to research effective invasive species management techniques and would allow the public to use and access the park during re-naturalization.*
» *This feedback was considered in the development of the Master Plan, which aims to manage invasive species throughout the park, develop partnerships to increase efficiency and allow public use of park amenities in coordination with re-naturalization efforts.*

23. Explore partnerships for research and on-going natural asset management.

Partnerships should be a major component of the re-naturalization plan for the park. Partnerships with research organizations and/or non-governmental organizations can provide valuable resources and information on invasive species management and restoration work. Partnerships with educational institutions can provide further resources for the park as well as research opportunities for students.

As previously mentioned, the City should also pursue partnerships and on-going dialogue with Indigenous communities for the management of natural assets in the park.

Finally, partnering with one or more external organization with a mission to facilitate nature education would be an opportunity to involve the community in park programming and environmental stewardship.

Rationale:

- *Providing opportunities for partnerships responds to feedback received from the public, Indigenous communities and stakeholders throughout the engagement process.*
- *Partnerships are also supported by the Ribbon of Green and Breathe policies.*

Public Input:

- *Public and stakeholder feedback indicated a desire to bring nature education programming into the park with minimal infrastructure requirements.*
- *Feedback in the fourth round of engagement indicated that participants want to see more research into the methods of re-naturalization to be used in the park.*

24. Protect and celebrate cultural and historical resources in the park.

Through the inventory and analysis work associated with the Oleskiw River Valley Park Master Plan, archeological sites in the park have been identified and located. The Master Plan was informed by a historical resources overview to avoid potential impacts to known archaeological resources.

As a result of a Historic Resources Application, and pursuant to the *Historical Resources Act*, a Historic Resources Impact Assessment is required for all areas of high archaeological potential within the project boundaries and must be completed before the Master Plan is implemented. At a minimum, all development footprints will require subsurface testing.

Rationale:

- *The Master Plan aims to protect historical resources for their value and historical significance, which is supported by higher level municipal policies and plans.*
- *The Master Plan also adheres to the Alberta Historical Resources Act, which requires clearance for any development that may impact historical resources.*

Public Input:

- *Throughout the engagement process, the public and stakeholders showed support for educating the public on potential historical and cultural resources in the park.*
- *There was a strong sentiment resulting from consultation with Indigenous communities that Indigenous Nations should be engaged to participate in the oversight and management of historical resources with archaeologists from the Province as well as the management of traditional use sites if any are discovered.*

Table 5. Recommended Re-naturalization Strategies

Objectives:	Reduce non-native species (e.g. brome) in the park.	Reduce listed and nuisance weeds in the park.	Increase cover of native species relative to appropriate reference communities.
Short-Term Strategies:	» Develop and test methods for invasive species removal. » Control brome according to best management practices available. » Explore the use of fire as a control mechanism of brome. » Consider conflicting objectives (e.g. avoid activity during nesting periods and other sensitive times for wildlife).	» Control noxious and nuisance weeds according to City policy and best management practices available. » Implement preventative measures to limit the spread of weeds in the park. Examples of preventative measures include: minimizing soil disturbance, planting native grasses at construction sites and installing a boot cleaning station and educational signs for the public at the connection point with Terwillegar Park.	» Re-plant areas with native species based on reference communities. » Consider a planting plan that is aligned with the natural succession of the area (i.e. early successional species). » Allow poplar/aspen communities to sucker naturally over time. » Plant potted trees and shrubs (5-10 gallon plants as opposed to seedlings) that are more likely to out-compete the root structure of brome. » Plant native grasses. » Whips of some species may work in certain areas depending on soil moisture.
Long-Term Strategies:	» Partner with research organizations and/or educational institutions for invasive species management. » Integrate monitoring of invasive species into partnership agreements. » Explore opportunities for monitoring by community or environmental groups. » Apply restrictions with respect to project objectives. » Apply adaptive management techniques based on the success of invasive species control methods.	» Minimize soil disturbance during park maintenance activities. » Monitor natural surface trail use. Close and restore informal trails. » Implement an on-going public education program to help prevent the spread of weeds.	» As planting larger plant material will require more water, explore opportunities to bring potable water on-site for watering. » Use water conservation and efficient water uptake techniques (e.g. mulch, surfactants, gator bags, etc.) to reduce the amount of water required on-site. » Implement Integrated Pest Management principles in newly planted areas. » Create opportunities for the public and community groups to participate in planting and maintaining native vegetation.

Increase species richness and diversity.	No expansion of caragana patches.	Provide opportunities for park visitors to view wildlife and naturalization of the park.	Provide opportunities for community involvement.
» Plant a variety of native species that are present at this location and are appropriate for the reference communities. » Choose plant material that will be tolerant of the soil conditions present on site. (A soil analysis should be completed as part of the re-naturalization plan.) » Explore opportunities to research the effects of adding soil nutrients while planting.	» Control caragana according to best management practices available.	» Develop trails and resting points that provide visitors with opportunities to view wildlife and the re-naturalization work in the park. » Coordinate construction and re-naturalization work, taking advantage of opportunities to restore areas that have been disturbed during construction.	» Create a process for public involvement in the development and management of the site. » Partner with community, and/or educational groups and Indigenous communities who can carry out programming focused on nature education in the park.
» Partner with research organizations and/or educational institutions to study and monitor plant growth. » Apply adaptive management techniques based on the success of planting techniques used. » Use a phased approach for invasive species removal and native species planting so that lessons from previous phases may inform the on-going re-naturalization efforts in the park.	» Minimize soil disturbance to limit the spread of caragana.	» Monitor park use for impacts to environmentally sensitive areas and areas where naturalization work has occurred. » Adaptively manage the use of park amenities and trails, potentially limiting public access during sensitive times for wildlife (such as nesting, breeding or migratory periods) or during periods of re-naturalization work.	» Maintain open communication with the public on re-naturalization work in the park. » Carry out educational strategies that enhance the objectives of the re-naturalization plan. » Ensure opportunities for community involvement are well advertised and accessible for a wide variety of groups and individuals. » Collaborate with Indigenous communities in the stewardship of the park.

Figure 22 Park Section Depicting Re-naturalization Strategies - 5 - 25 years

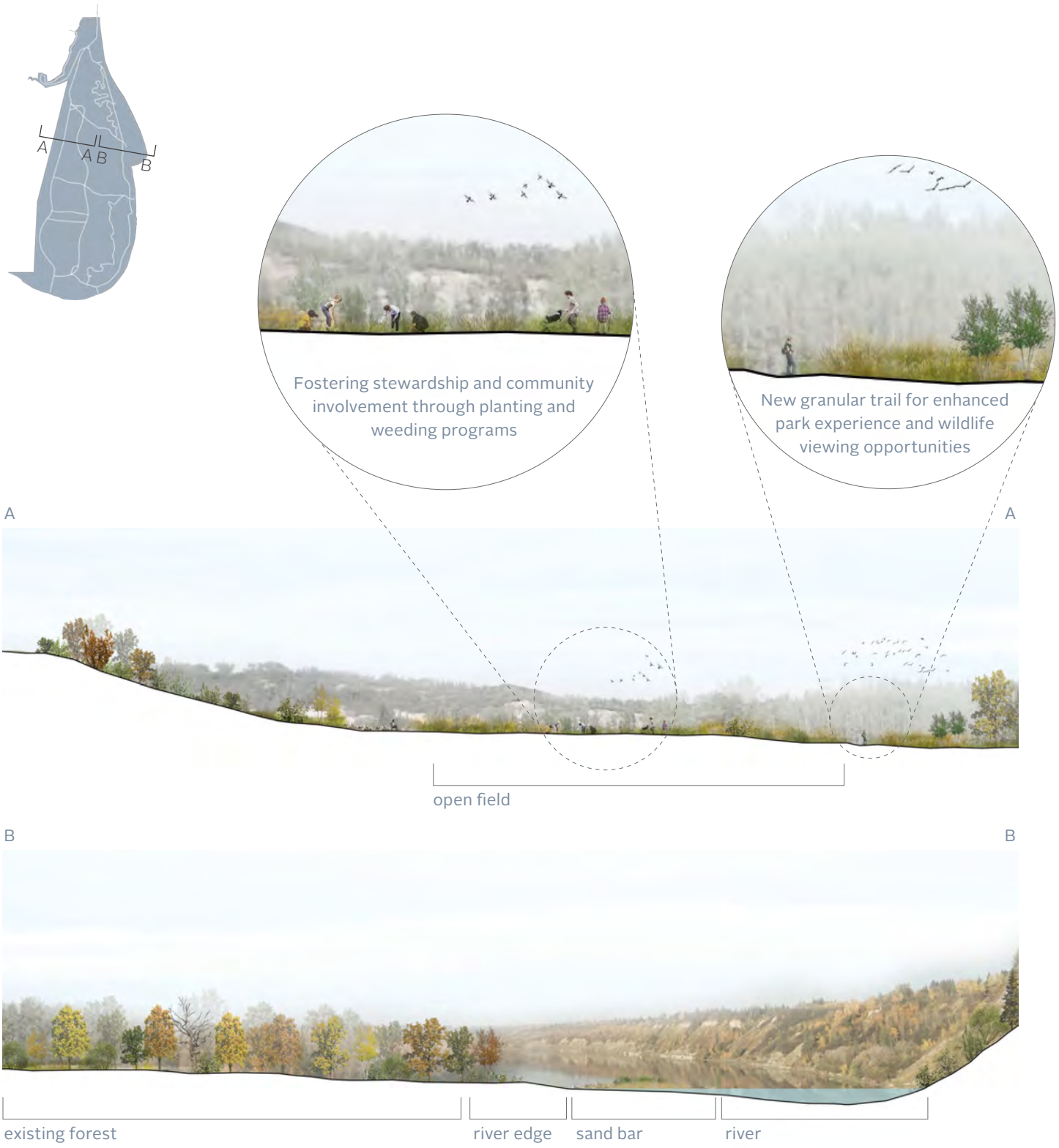
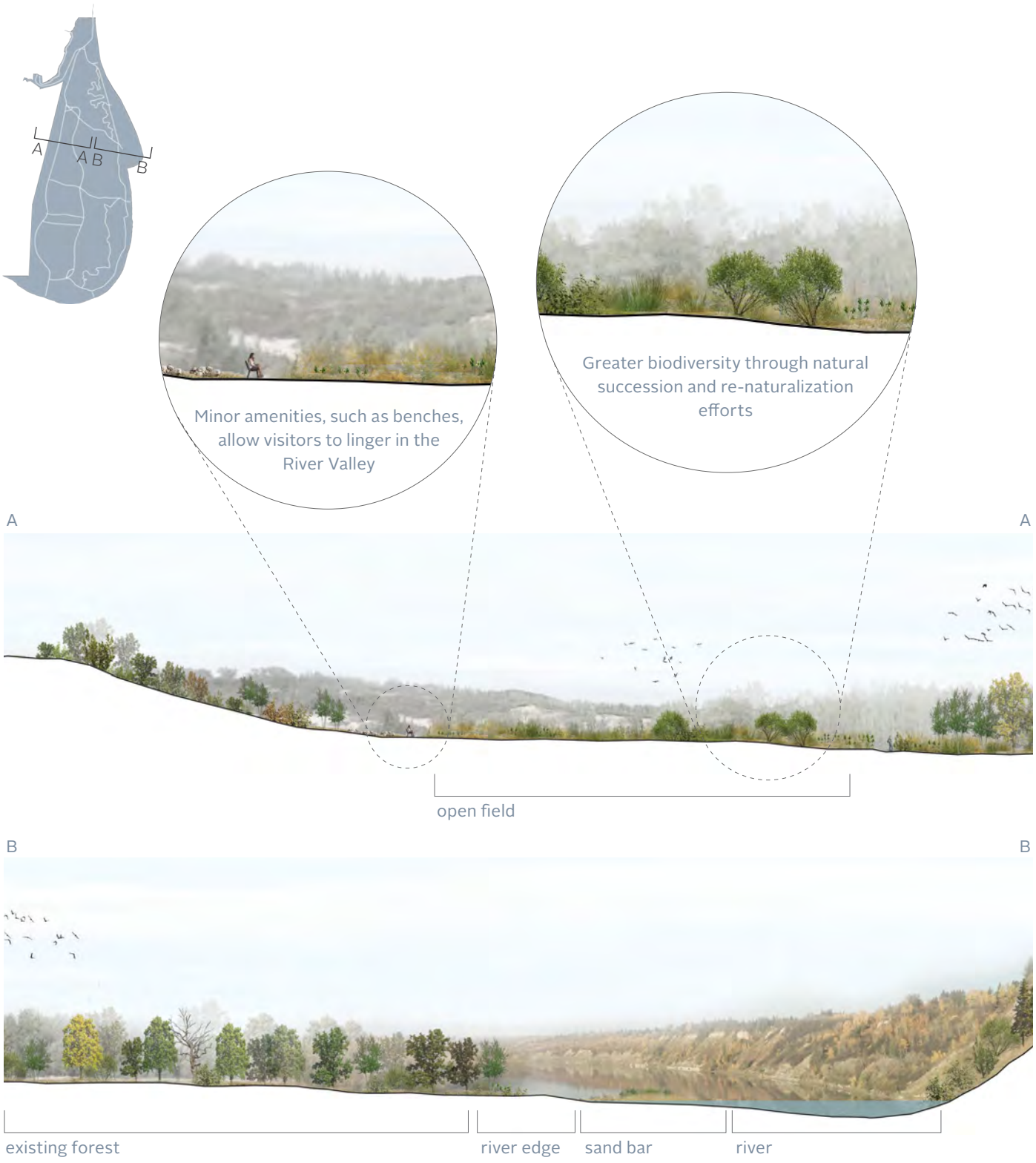


Figure 23 Park Section Depicting Re-naturalization Strategies - 25 - 50 years



Maintenance, Safety and Enforcement

Access limitations into Oleskiw River Valley Park create unique challenges related to maintenance and enforcement of activity within the park. Proposed park amenities and programming are affected by the restrictions on vehicular access from both a user and maintenance perspective (e.g. travel distances and topography from current parking and transit locations). There are limitations to the types and intensity of access, programming and maintenance that can occur in the park.

The public and stakeholders also expressed safety concerns influenced by the limited access into the park. Concerns relate to unwanted activity in the park after hours, the potential for vandalism, increased litter and the risk of wildfire. Recommendations in the Master Plan are intended to promote the safe enjoyment of Oleskiw River Valley Park by Edmontonians.

→ **Summary of Public Feedback**
- » Desire for the enforcement of behaviour that is not in line with the prescribed uses of the park
- » Desire increased trail maintenance
- » Desire fire prevention in the park
- » Desire for improved signage
- » Some participants wanted the plan to include lighting and/or emergency phones

→ **Summary of Internal City Feedback**
- » Support for improved signage and wayfinding
- » Lighting and emergency phones will not be provided in the park due to the lack of utilities

→ **Summary of Recommendations**

25. Maintain existing and proposed amenities.

25. Maintain existing and proposed amenities.

The Master Plan includes a maintenance plan with direction on the level and frequency of maintenance required for specific park elements. The maintenance plan is provided in the following section of this report (see Operations and Maintenance on page 79).

Maintenance and safety in the park were considered in all phases of concept development. Through the public and stakeholder consultation process, some participants voiced concerns over potential for unwanted activity, vandalism and litter in the park. The maintenance plan is intended to address some of these concerns. According to Crime Prevention Through Environmental Design (CPTED) principles, park spaces that are well-maintained and well-used tend to discourage vandalism and other unwanted activity. The following recommendations also address safety and maintenance in the park:

→ **The concept plan includes:**
- » Waste receptacles – see Recommendation 4.
- » Improved wayfinding signage – see Recommendation 17.
- » Improved regulatory and information signage – see Recommendation 17.

→ **The concept plan does not include:**
- » The plan does not include utility servicing (e.g. plumbing or electrical) due to the lack of required infrastructure in the park. Installing utility services would come at a high cost and high environmental impact.
- » The plan does not include lighting. In general, the City of Edmonton does not light pathways in the River Valley. Lighting the park would not conform to the City of Edmonton's Light Efficient Community Policy and Procedure, as it is not a highly urban park and the level of use is relatively low. Should park use increase substantially or safety concerns arise, the City may re-visit lighting requirements for the park.
- » The plan does not include emergency phones. The City is reviewing the provision of emergency phones in open spaces to provide better, safer, reliable and more cost-efficient service to those requiring emergency services.

Atmosphere and Identity

Throughout the public and stakeholder engagement process, participants shared the tangible and intangible aspects of the park that give Oleskiw River Valley Park a unique identity in the North Saskatchewan River Valley. Opportunities to view wildlife and natural processes; to experience quiet and solitude in nature; and to connect to the park's rich cultural history were all prioritized as important elements of the park's atmosphere and identity. It is the intent of the Master Plan to preserve these valued qualities while accommodating various park user groups.

→ **Summary of Public Feedback**
- » Desire to experience nature and view wildlife
- » Desire for a refuge from the city
- » Support for ecological and historical interpretation

→ **Summary of Internal City Feedback**
- » Support for keeping the park relatively natural
- » Support for seeking partnerships for environmental stewardship and research

→ **Summary of Recommendations**

26. Install interpretive elements that teach visitors about the natural and cultural heritage of the park.

The recommendations presented in earlier sections of the report (Park Use and Amenities; Access and Circulation; Natural Asset Management and Maintenance; Safety and Enforcement) align with the collective vision for the park and the desired park identity. Recommendations in the Master Plan aim to protect the natural qualities of the park, improve biodiversity and maintain ecological connectivity while improving access to nature and low-impact amenities.

The Master Plan maintains the character of the park's field and the forest; establishes visual connections to the river; encourages partnerships for nature education and environmental stewardship; and promotes use by a variety of users – all supported through public and stakeholder engagement.

The following recommendation provides guidance on natural and cultural interpretation. Interpretive elements teach visitors about the park's natural and cultural heritage and help to ensure that historical elements of the park's identity are preserved and remembered.

26. Install interpretive elements that teach visitors about the natural and cultural heritage of the park.

Interpretive signs, educational programming, public art and park design may be used to interpret the layered natural and cultural history of the park. Interpretive elements may be integrated with other programming elements, such as the winter warming hut program, nature education programming or the design of gathering areas.

The City should consult with Indigenous Nations, naturalist societies, community groups/associations, local archives and other interested parties in the implementation of any interpretive element.

Rationale:
- » *Installing interpretive elements will give visitors the opportunity to learn about the impacts of historical land uses in the park, the re-naturalization efforts and the continued management of the park. There is also opportunity to teach visitors about Indigenous history in the area.*
- » *Natural and cultural interpretation in the River Valley is supported by the Ribbon of Green.*

Public Input:
- » *Ecological and historical interpretation were identified as opportunities for the Master Plan during the first round of engagement and were supported throughout the remainder of public and stakeholder engagement.*
- » *Engaged Indigenous communities expressed a desire for recognition of Indigenous heritage and culture in the park, depicting an appropriate, accurate and public interpretation of Indigenous culture and history.*

Partnerships and Use Agreements

The following list summarizes the partnerships recommended throughout the Master Plan. The Master Plan encourages partnerships between the City and community organizations that possess the skills, resources and enthusiasm required to implement the programs and re-naturalization efforts proposed in the Master Plan. Other partnerships that are consistent with the vision and principles for the park may be considered.

→ Indigenous Partnerships

Oleskiw River Valley Park may be a site for programming by Indigenous partner communities or organizations. Through city-wide engagement efforts, the City has heard that there is a desire for certain types of activities, such as culture camps or ceremonies, to occur within River Valley parks. The Master Plan provides amenities and protects natural features that may be used for these purposes if there is interest among partner groups

→ Nature Education

The park may be programmed through a partnership an external organization with a mission to facilitate nature education. The following organizations are examples of potential partners:

- Sierra Club Canada
- University of Alberta Botanic Gardens
- Indigenous Communities

→ Ecological Stewardship

Partnerships with naturalist clubs and societies with an interest in re-naturalization should be pursued. Partnerships with Universities and/or other research organizations should also be pursued for the implementation of the re-naturalization plan and for on-going ecological monitoring in the park.

→ WinterCity

Partnerships for the creation and installation of winter warming huts in the park may be pursued through the City of Edmonton's WinterCity Program.

→ Natural Surface Trails

A future trail strategy is expected to help with the planning and management of natural surface trails in the park. The City has developed a partnership agreement with a mountain biking user group that allows maintenance on single track trails via the Adopt a Trail program.

Operations and Maintenance

The following pages outline the recommended maintenance and operations of park facilities and programming for Oleskiw River Valley Park (see Recommendation 25), including immediate maintenance requirements, standard amenities and specialty amenities.

Natural surface trails in the park may be maintained in partnership with trail user groups. Above is an illustration of the existing Oleskiw Meadows natural surface trail.

Table 6. Maintenance and Operational Requirements

Immediate Maintenance Requirements

Old mechanical equipment/remnants of the farm	Remove structures and/or equipment that pose safety hazards.
Noxious weed treatment	Control noxious and nuisance weeds according to City policy and best management practices available. Treat noxious weeds identified through the Environmental Impact Assessment.
Slope stabilization	Close and restore informal river access points along the riverbank. Develop a detailed strategy incorporating planting native species, seeding and erosion and sediment control techniques to minimize erosion on the western slopes.

Standard Amenities

	Quantity	Maintenance Requirements	Recommended Servicing Schedule
Benches	Several throughout the park.	Remove graffiti.	As required. Repair damaged slats as soon as possible.
Waste receptacles	Six proposed bins throughout the park.	Maintain and empty bins for garbage (and recycling) regularly in accordance with City of Edmonton procedures.	Summer: Check three to four times weekly and empty as needed.
Shelter	One constructed shelter with picnic tables and seating near the Terwillegar Park Footbridge.	Year-round maintenance. Specific maintenance requirements to be determined based on detailed design.	Summer/Winter: Inspect sites daily for garbage and vandalism. Empty garbage receptacles as required. Suggested frequency in summer is weekly, at minimum. Replace or repair damaged tables as soon as possible.
Paved (asphalt) trails	One trail through the park and Woodward Access trail.	Maintain trails to City of Edmonton parks standards. Immediately repair areas of degradation that will impact public safety.	Inspect surfaces biannually (for example, in April and October) and record degradation. Repair major cracks, heaves, depressions and washouts promptly. Repair asphalt as required.

	Quantity	Maintenance Requirements	Recommended Servicing Schedule
Granular surface trails	Several trails throughout the park.	Maintain granular trails to City of Edmonton parks standards. Immediately repair eroded areas that impact public safety immediately.	Inspect surfaces biannually and record degradation. Repair areas of erosion, depressions, washouts and channels promptly.
Snow removal	Only on paved, multi-use trails.	Keep the paved, multi-use trail clear in winter for running, walking, cycling and use of mobility devices.	Clear per City of Edmonton standards.
Manicured vegetation	Turf areas and planting along the top-of-bank.	Weeding, pest control, trimming, soil cultivation and amendment as required. Manicure turf along the top-of bank near Woodward Crescent. Maintain planting beds to City of Edmonton parks standards. Include native shrubs wherever possible.	Cut manicured turf areas – service level A1 – weekly from May to September. Maintain planting beds monthly.
Tree/forest management	Areas throughout the park.	Inspect trees for hazards and prune as needed.	Inspect trees for hazards and prune as needed.

Specialty Amenities

	Quantity	Maintenance Requirements	Recommended Servicing Schedule	Implementation Requirements
Pit washrooms	Two pit washrooms in the park – one located near each footbridge.	Maintain new washrooms to City standards. Inspect daily.	Clean pit toilet interiors regularly. Empty on demand.	Access will be over the footbridges or via the Woodward Access.
Natural seating (rocks)	Several located at river lookout points and throughout the park.	Specific maintenance requirements to be determined based on detailed design.	Summer: inspect for damage/vandalism weekly. Winter: inspect for damage/ vandalism biweekly. Repair promptly.	Specialized equipment will be needed for installation at river lookouts to avoid damaging trails and vegetation.
Natural seating (logs)	Several located in gathering areas and throughout the park.	Specific maintenance requirements to be determined based on detailed design.	Summer: inspect for damage/vandalism weekly. Winter: inspect for damage/ vandalism biweekly. Repair promptly.	

	Quantity	Maintenance Requirements	Recommended Servicing Schedule	Implementation Requirements
Winter warming huts	4 locations identified in the Master Plan.	Specific maintenance requirements to be determined based on detailed design.	Winter: Inspect sites daily for garbage and vandalism.	Design and construction may be completed in partnership with local artists and/ or community members.
Natural surface trails	Several throughout the park.	Maintenance to align with a future natural trail strategy. Damage from erosion and rutting to be repaired to maintain smooth surface. Vegetation pruned if encroaching.	Inspect for degradation and vegetation encroachment. Prune and repair promptly.	The City will develop design, construction and maintenance guidelines as part of a future natural surface trail strategy.
Trail markers	Quantity to be determined in detailed design. Trail markers are recommended at natural surface trail intersections.	Remove graffiti. Ensure trail markers are visible and do not create a tripping hazard.	Inspect bimonthly during natural surface trail inspection. Repair damaged markers as soon as possible.	Specific maintenance requirements to be developed based on detailed design.
River Valley and interpretive signage	Quantity and type of sign to be determined in detailed design.	Signage should be inspected periodically.	Inspect monthly. Complete repairs promptly.	Specific maintenance requirements to be developed based on detailed design.
Gathering areas	Two proposed gathering areas near the Terwillegar Park Footbridge. Each includes natural seating, planting and possible small earthworks depending on detailed design.	Weeding, pest control, cutback, soil cultivation and amendment as required. Specific maintenance requirements to be determined based on detailed design. Mowing is not recommended.	Inspect sites daily for garbage and vandalism.	Consider using mulch or low-growing/ creeping vegetation (e.g. fescues) that does not require mowing and can withstand moderate foot traffic in these areas to reduce maintenance requirements.
Re-naturalized areas	Areas to be re-naturalized throughout the park. See Recommendation 21.	Specific maintenance requirements to be determined through a re-naturalization plan.	Servicing schedule to be determined through a re-naturalization plan.	Implementation to be directed by a re-naturalization plan.

Implementation & Capital Costs

Implementation of the Oleskiw River Valley Park Master Plan will occur over a period of 25 years, with capital improvements divided into two phases.

Project Implementation Strategy

The two phases set out in the Master Plan are approximate and contingent on several factors, including budget, infrastructure life-cycling and City priorities. The phases are sequenced such that components of Phase 1 should be implemented before components of Phase 2. The re-naturalization strategy is the exception to this rule, however, as there is some flexibility in how it may be carried out (e.g. as a large scale project or using a phased approach). There are challenges to accessing the park with large construction equipment; therefore, estimated costs have been adjusted to account for anticipated additional costs accrued from the use of lower-impact construction techniques.

At the time of implementation, budget may not be available for all elements within a given phase. The City will determine at the time of implementation how to prioritize the elements to provide the best value based on priorities and life-cycling requirements.

The implementation strategy for the Master Plan has been divided into two phases. The first phase includes amenities that support the continued recreational use of the trails (such as pit washrooms, waste receptacles, resting points and lookouts). The second phase, which is to be coordinated with re-naturalization efforts, supports nature education and interpretation, inviting many different users into the park. It includes the development of the granular trail network, additional resting points and the gathering area near the Terwillegar Park Footbridge. The timelines and estimates of probable costs for both phases include considerations for design and construction. On-going re-naturalization is described separately from Phases 1 and 2.

Figure 24 Potential Design and Construction Timeline

Phase 1

Major components of Phase 1 include benches/seating, waste receptacles, river lookouts, a viewpoint off Woodward Crescent, improvements to wayfinding and natural trail connections.

Intent

- Support continued recreational use of the park's trails by providing supporting amenities (e.g. benches, washrooms and waste receptacles), wayfinding and trail connections.
- Address immediate maintenance and environmental requirements.

Phase 1 Components

- The Woodward Access trail is paved. (Recommendation 13)
- Immediate and on-going maintenance requirements are addressed. (Recommendation 25)
- Soil on steep slopes is stabilized to mitigate the effects of erosion. (Recommendation 18)
- Areas to the west of the multi-use trail are re-forested. (Recommendation 20)
- Resting points along the paved, multi-use trail are constructed. (Recommendation 1)
- Wayfinding signs and trail markers are installed. (Recommendation 17)
- Interpretive signs are installed. (Recommendation 25)
- Two pit washrooms are constructed near the footbridge entrances. (Recommendation 2)
- Waste receptacles are installed. (Recommendation 4)
- Natural river lookouts and the viewpoint off Woodward Crescent are constructed. (Recommendation 3)
- Development of new natural trail connections. (Recommendation 16)

Phase 1 Implementation Strategy

The construction and installation of elements proposed for Phase 1 may be completed in one or two years. Installation of elements such as benches, waste receptacles and pit washrooms should be completed at the same time. Installation of signs should occur in coordination with other River Valley wayfinding projects. The design and construction of natural surface trails and/or trail markers may be completed in partnership with one or more trail user groups. Interpretive signs should be developed in consultation with Indigenous communities. Construction activities should limit disruption to park and trail use as much as possible.

In addition to the above amenities, the City should undertake the development of a detailed re-naturalization plan for the park with the objectives presented in the Master Plan (Recommendation 22). The preparation of a re-naturalization plan will provide direction for carrying out a phased naturalization strategy over many years. The re-naturalization plan should be drafted in cooperation with potential partners, such as community groups, stewardship groups, Indigenous communities and/or University groups. The re-naturalization plan should consider construction activities in the park if implementation of the re-naturalization plan occurs before Phase 1 and Phase 2 are complete.

While developing the re-naturalization plan, the City should also pursue the following to support the plan's objectives:

- An operational and maintenance plan in support of the re-naturalization efforts
- A public engagement strategy in support of the re-naturalization efforts
- The development of partnerships for implementation, research and monitoring (Recommendation 23)
- An education and communication strategy to inform the public of the project's progress
- Internal and external funding opportunities

Studies / Prerequisites

- Topographical surveys
- Geotechnical reports
- Contact Alberta One Call to locate utilities
- Historical Resources Act clearance
- Required building and development permits
- Detailed plant surveys

Contingency and Soft Costs

A contingency of 20% has been assigned to Phase 1 due to the risk of potential for historical resources in the park and in the event that geotechnical investigations require greater slope stabilization methods than those identified in the Master Plan.

The design and management fee of 35% is intended to include project management costs and costs for implementing recommended studies and prerequisites. This value does not include costs associated with further phasing of Phase 1 project components.

Implementation Phase 1

Figure 25 Implementation Strategy - Phase 1

Elements Included in Phase 1:

- viewpoint / lookout
- resting point
- pit washrooms
- all-season amenity
- waste receptacle
- trail marker
- park entry sign
- wayfinding sign
- forested buffer
- trail development

Table 7. Summary of Probable Capital Costs - Phase 1

COMPONENTS	PROBABLE COST
PHASE 1	
Amenities	$313,200
Resting Points along Paved Trail	$30,000
Pit Washrooms (2)	$50,000
Waste Receptacles	$5,600
Natural River Lookouts	$42,500
Woodward Crescent Viewpoint	$8,400
Natural Trail Connections	$59,400
Woodward Access Trail Paving	$117,300
Signage	$108,000
Entry Signs	$50,000
Wayfinding Signs	$14,000
Trail Markers	$24,000
Interpretive Signs	$20,000
Re-naturalization (Re-forestation west of the Paved Trail)	$1,055,169
Studies and Plans	$290,000
Slope Stabilization Plan	$85,000
Slope Stabilization Implementation	$115,000
Re-naturalization Plan	$90,000
Sub-Total	$1,766,369
Contingency (20%)	$353,274
Design and Management Fee (35%)	$618,229
Total	$2,737,871

Phase 2

Major components of Phase 2 include benches, a flexible picnic shelter, winter warming huts, gathering areas, waste receptacles and improvements to wayfinding and new granular trail connections.

Intent

- Support potential educational and interpretive uses.
- Increase accessibility of the park interior.

Phase 2 Components

- On-going maintenance requirements are addressed. (Recommendation 25)
- New granular trails are constructed with resting points. (Recommendations 1 and 15)
- The proposed shelter and gathering areas near the Terwillegar Park Footbridge are constructed. (Recommendation 1)
- Areas along new trails are planted and naturalized.

Phase 2 Implementation Strategy

Phase 2 may be completed in one to two years. (Phase 2 elements may be included in Phase 1 if funding is available at the time of implementation.) Trail development, construction of the shelter and gathering areas and the installation of supporting amenities (such as benches and wayfinding signs) may be completed in one construction season. Interpretive signs should be developed in consultation with Indigenous communities. Construction activities should limit disruption to park and trail use as much as possible.

Proposed winter warming huts may be installed during Phase 2, however this is seen as a long-term programming opportunity that may be implemented seasonally in the park for a number of years, depending on partnerships and funding.

Studies / Prerequisites

- Contact Alberta One Call to locate utilities
- Historical Resources Act clearance
- Required building and development permits

Contingency and Soft Costs

A contingency of 10% has been assigned to Phase 2 to account for unexpected costs during construction.

The design and management fee of 35% is intended to include project management costs and costs for implementing recommended studies and prerequisites. This value does not include costs associated with further phasing of Phase 2 project components.

Implementation Phase 2

Figure 26 Implementation Strategy - Phase 2

Elements Included in Phase 2:

- resting point
- shelter
- all-season amenity
- winter warming huts
- waste receptacle
- wayfinding sign
- trail development

Table 8. Summary of Probable Capital Costs - Phase 2

COMPONENTS	PROBABLE COST
PHASE 2	
Amenities	$513,050
Granular Trails	$146,250
Resting Points	$24,000
Shelter	$200,000
Gathering Areas with Natural Seating and Landscaping (2)	$100,000
Waste Receptacles	$2,800
Winter Warming Huts	$40,000
Signage	$36,000
Wayfinding Signs	$6,000
Wayfinding Signs	$30,000
Sub-Total	$549,050
Contingency (10%)	$54,905
Design and Management Fee (35%)	$192,168
Total	$796,123

Re-naturalization

Re-naturalization activities in the park will be guided by a re-naturalization plan that is to be completed in Phase 1 of the Master Plan implementation. The re-naturalization plan will provide guidance on appropriate methods, timing and phasing of re-naturalization work, and the acceptable level of invasive species in the park. It will also provide direction on potential partnerships and funding opportunities. Any methods recommended by the re-naturalization plan should be tested for effectiveness and the community should be engaged in the decision-making process through public consultation. For more information on the proposed re-naturalization plan, see Recommendation 22.

Two different cost estimates have been prepared for the re-naturalization work associated with the Master Plan for this report in order to inform future decisions by the City. The main difference between the options presented is the approach to invasive species management.

Option 1 includes mechanical removal of invasive plants (e.g. by machine or by hand), which is resource intensive and, therefore, more costly. Option 2 includes the use of herbicides for invasive plant control prior to planting and seeding. While the City does not currently use herbicides on non-listed invasive weeds, Option 2 allows for cost savings and has been effective in similar re-naturalization projects in other municipalities. The City will be required to apply for an exemption for herbicide use in the park if this option is pursued.

Both of the presented cost estimates assume that the entire open field will be re-naturalized and that the City will carry the full cost of re-naturalization. The re-naturalization plan may propose less intensive methods and/or additional options not explored in through the Master Plan, in which case the costs could be lower than those presented in this report. Cost savings may be attained through project timing, partial re-naturalization, partnership development, and the use of alternative re-naturalization methods.

Re-naturalization Components

The costs for re-naturalization have been separated into the following categories: site preparation, planting and maintenance. A list of assumptions has been provided for each category in the following paragraphs. Estimates of probable costs are calculated based on the area of the open field (approximately 240,000 square metres) and the area of proposed re-forestation on the eastern portion of the open field (approximately 150,000 square metres). More intensive planting methods (such as whips and container shrubs) have only been calculated for an area of approximately 40,000 square metres combined.

SITE PREPARATION INCLUDES:

- Option 1:
  - Mechanical weed control and vegetation removal.
  - Covering topsoil with sheet mulch (or comparable biodegradable cover) to eradicate brome.
  - Supply and placement of soil amendment (peat sand mix or similar).
- Option 2:
  - Combination of mechanical and chemical weed control for two years prior to seeding.
  - Supply and placement of soil amendment (peat sand mix or similar).

PLANTING INCLUDES:

- Seeding with native seed mix.
- Planting container shrubs (#2 containers).
- Deep pole planting of tree whips.

MAINTENANCE INCLUDES:

- Watering, weeding and re-planting for a 3-year maintenance period. This is estimated to be 15% of the planting costs.

Contingency and Soft Costs

No design or management fees have been assigned to the re-naturalization costs, as these will be defined during or after the development of the re-naturalization plan. A contingency of 10% has been added to the cost to attempt to account for potential changes in methodology or unanticipated challenges in the field.

Table 9. Summary of Probable Capital Costs - Option 1: Re-naturalization with Mechanical Invasive Species Management

COMPONENTS	PROBABLE COST
RE-NATURALIZATION	
Site Preparation	$4,320,000
Vegetation removal and minor grading	$1,920,000
Sheet mulch to extinguish brome and other weed species	$960,000
Supply, place, site shaping and final grading 50mm soil amendment	$1,440,000
Planting - Open Field and Intermittent Stream	$2,210,000
Native grass seeding and establishment	$480,000
Planting - container shrubs	$1,625,000
Planting - deep pole tree planting (whips)	$105,000
Maintenance (3-year)	$331,500
Sub-Total	$6,861,500
Contingency (10%)	$686,150
Total	$7,547,650

Table 10. Summary of Probable Capital Costs - Option 2: Re-naturalization with Chemical Invasive Species Management

COMPONENTS	PROBABLE COST
RE-NATURALIZATION	
Site Preparation	$1,920,000
Vegetation removal and herbicide application (2 years)	$480,000
Supply, place, site shaping and final grading 50mm soil amendment	$1,440,000
Planting - Open Field and Intermittent Stream	$2,210,000
Native grass seeding and establishment	$480,000
Planting - container shrubs	$1,625,000
Planting - deep pole tree planting (whips)	$105,000
Maintenance (3-year)	$331,500
Sub-Total	$4,461,500
Contingency (10%)	$446,150
Total	$4,907,650

Overall Project Budget

Costs for the Oleskiw River Valley Park Master Plan are estimated based on recent park projects of similar size and scope. Larger project elements and custom features have been assigned an allowance or budget that incorporates all associated costs. These estimates are based on costing information from previous projects of similar size. Measurable items are priced by product unit or unit measurement (such as square metre). Table 7 provides a high-level summary cost estimate for each phase of the Master Plan.

The figures presented are an opinion of probable costs, not guaranteed cost figures and will be refined as detailed designs are prepared. Due to the conceptual nature and large scale of the Oleskiw River Valley Park Master Plan, these figures may not reflect actual costs. The cost estimates have an expected cost accuracy range of -30% to +50% (consistent with a Class 4 cost estimate). Each estimate of probable costs per phase includes a project management fee and a contingency value based on the anticipated risk associated with the project components. The costs are presented in 2018 Canadian dollars with no escalation. When projects are implemented in the future, cost estimates should be increased to account for inflation.

Project Opportunities

Partnership opportunities may be explored to assist with implementation components of the Master Plan. See Recommendations 23 as well as the Partnerships and Use Agreements section for more detail.

Table 11. Summary of Probable Capital Costs - Full Project Implementation

COMPONENTS	PROBABLE COST	
PHASE 1	$2,737,871	$2,737,871
PHASE 2	$796,123	$796,123
RE-NATURALIZATION	OPTION 1 $7,547,650	OPTION 2 $4,907,650
TOTAL ESTIMATED PROBABLE COST	$11,081,644	$8,441,644

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