City of Waterloo

Parkland Strategy

Reseach, Analysis & Visioning Report

June 2019



DILLON CONSULTING

In association with:
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THE CITY OF Waterloo

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1 Introduction

1.1 Purpose of this Report

The purpose of the Research, Analysis and Visioning report is to conduct and analyze background research and utilize the information to assess the existing parkland in the City of Waterloo.

Information that has been reviewed pertains to acquisition, development, community use, maintenance and funding. The inventory of Waterloo's existing parkland will be analyzed as well as the socio-demographic profile for the city. Successes from current activities pertaining to parkland in the city will be highlighted. Utilization and participation will be reviewed and trends and benchmarking will be investigated in this report. Following the summary and analysis, the report will then identify opportunities or constraints/gaps in the existing system and help to set development priorities or areas of focus for the future phases of work.

Any potential strategies discussed within this report are not to be considered recommendations at this stage. They are potential solutions and topics to assist in the development of outcomes for parkland. Final recommendations for Waterloo's Parkland will be presented in the Waterloo Parkland Strategy document.

1.2 Waterloo Parkland Highlights

It is clear that Waterloo has an extensive network of parks and open spaces. There are a number of elements to note which indicate successes that the City has already achieved with their parkland.

- There is City-wide recognition of the importance of parks.
- At a high level parks are well used and somewhat well located.
- The trail system is very well used and moves have taken place to close the gaps in the system.
- More attention has been paid to parks than in previous years.
- Additional active programming established in city spaces.
- Active management of the urban forest and commitment to expanding the tree canopy in the city.
- Completion of the 2012 Outdoor Field Sport Strategy and the 2013 Action Sports Strategy which outlines direction for their respective sports facility needs.
- A number of parks have been successfully redeveloped or are in the process of redeveloping including but not limited to:
    - Clair Lake Park (completed construction of community fundraised neighbourhood playground and gathering space.);

- Mary Allen Park expansion (completed redesign including updated elements per local input including pavilion, games tables, natural play area etc.);
- Alexandra Park expansion (ongoing);
- Ongoing city-wide playground replacements;
- Westmount Sports Park (completed new park with natural playground and soccer fields.); and
- Waterloo Park (completed new entry feature and central promenade, rest of Master Plan to be finalized and implemented.)

The items listed are not an exhaustive list of what the City of Waterloo has accomplished but is a sampling to show what has been completed recently.

1.3 Benefits of Parks and Open Space

Parks and open space have been key elements of cities since the 19th century. At that time, parks were being promoted as having public health benefits by planners including the founder of landscape architecture, Frederick Law Olmsted. He said that great public parks are the "lungs of the city" —where residents could breathe clean air[1]. The sentiment caught on and led to the development of many well-known parks across North America including New York's Central Park and others in Chicago, Buffalo and even Toronto. Density levels are rising in cities especially those with provincially designated growth targets which places increased emphasis on city parks and open spaces, which are essential city and community building elements providing a variety of health, psychological, social economic and environmental health benefits.

1.3.1 Public Health Improvements

Physical Health

Parks and the urban forest naturally filter the air; they remove pollution and other particles, which aggravate those with respiratory issues. Air pollution has also been linked to an increased risk for certain types of cancer. Parks and trees help to lower that pollution and consequently the associated risks. "Trees trap lung-damaging dust, ash, pollen and smoke" while also producing oxygen and absorbing carbon dioxide. "Studies show one acre of trees produces enough oxygen for 18 people every day." [2]

Cities are building up, and dwelling units are shrinking. Parks and open space provide an 'unofficial' back yard for some people who don't have the luxury of their own fenced-in area for physical activity and they also provide opportunities for social interaction.

[1] Thomas Fisher. *Frederick Law Olmsted and the Campaign for Public Health*. Places Journal. 2010

[2] United States Environmental Protection Agency. *Using Trees and Vegetation to Reduce Heat Islands. https://www.epa.gov/heat-islands/using-trees-and-vegetation-reduce-heat-islands*

Parkland also provides the community a space to be physically active. On average, Canadian adults spend almost 10 hours of their day in a sedentary state including sitting and reclining. Leading a sedentary lifestyle is directly linked to obesity and associated health problems. Having public open space nearby makes a difference in residents' levels of physical activity. People who have parks and/or trails nearby are 25% more likely to exercise at least three times a week.[3]

Mental Health

Improvement to mental health is another benefit of parks and open space. Parks provide easier access for physical activity and a location for meeting up with friends, family and neighbours in a natural setting. "Physical health and strong relationships are important to maintaining mental well-being." [4]As well many people seek out quiet places for relaxation and recharge and passive areas of parks and other green spaces can support this need. Studies have shown that being directly exposed to nature has immediate benefits including stress reduction and an increase in feeling happiness. Researchers in Finland discovered that spending only 10 minutes in a parkland type setting noticeably reduces stress. This reemphasizes the importance of parks especially with intensification since the study also found that "time spent in the city centre decreases positive feelings among the participants," but it can be remedied through "short term visits to urban nature areas" which "have positive effects on stress relief."[5]

There are other psychological benefits as well. Nature has a calming and centering effect on those with various types of psychological ailments such as ADD/ADHD. One study concluded that "children diagnosed with ADD/ADHD concentrate better and have a general reduction in symptoms after spending time in nature."[6] The same symptom reducing effect was felt in patients with Alzheimer's disease and other forms of dementia when they spent time in natural settings and gardens. [7]

1.3.2 Community Building Stronger Relationships

Parks provide the community with places to gather, interact and play. They also provide a space for nature appreciation. Loneliness is on the rise especially with the prevalence of the digital world. It has even been called an epidemic. The National Post in 2017 conducted a survey on loneliness and ways to avoid it. The results indicated that one of the best ways to avoid loneliness was to "have easy access to transit or live near a park."[8] Parks provide space for regular neighbourhood

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[3] Active Living Resource Centre. *Active Facts: Parks, Trails and Recreation.* National Center for Bicycling & Walking. Bethesda, MD.

[4] Gardiner Green Ribbon. *8 Reasons Why Parks are Important.* http://www.gardinergreenribbon.com/why-parks-are-important/

[5] Tyrväinen, Ojala, Korpela, Lanki, Tsunetsugu, Kagawa. The Influence of urban green environments on stress relief measures: A field experiment. The Journal of Environmental Psychology, June 2014, Vol. 38, pg. 1-9

[6] Taylor, Andrea Faber., Kuo, Frances E., *Could Exposure to Everyday Green Spaces Help Treat ADHD? Evidence from Children's Play Settings.* Applied Psychology: Health and Well Being. Volume 3, Issue 3. November 2011.

[7] Jarrott, Shannon., Gigliotti, Christina. *Comparing Responses to Horticultural-Based and Traditional Activities in Dementia Care Programs. American Journal of Alzheimer's Disease and Other Dementias.* 2010.

[8] Morris, Wanda. *Walk in a park a coping strategy for loneliness: Being near green space mattered in improving health outcomes, studies find.* National Post. 2017. Retrieved from: http://nationalpost.com/health/walk-in-a-park-a-coping-strategy-for-loneliness-being-near-green-space-mattered-in-improving-health-outcomes-studies-find

interaction and a venue for special events which strengthens the sense of place and sense of community.

The recent City of Waterloo Neighbourhood Strategy received the same feedback. After speaking extensively with community members (over 1,700) they found that "Neighbours in Waterloo turn to parks and green spaces as gathering spaces, as they are commonly the only public space in their area. Additionally parks are seen as inclusive spaces where everyone is welcome. These spaces are used for a range of activities from a parent and child playing catch, to family picnics, to larger carnival-type neighbourhood events. When speaking with the community, it was clear that parks and other green spaces are very important to residents."[9]

Child Development

Access to parks and interacting with nature is also very important for healthy cognitive development in children. A "lack of outdoor play can limit creativity, impede cognitive development, and diminish social skills in young children."[10] Furthermore, experiencing nature at a young age will help children to develop and maintain a lasting attachment to the environment.[11]

1.3.3 Climate Change Resiliency Stormwater Quality & Management

Parkland provides the benefit of climate change adaptability through the ability to collect and absorb stormwater runoff. Extreme weather events are happening more frequently including intense rainfall. The ability of the landscape to collect and retain rain water helps to unburden traditional municipal stormwater infrastructure such as culverts and storm sewers. "Unpaved ground absorbs water. Trees and grass are a far more efficient – and less expensive – method of managing storm water than sewers and drainage ditches made of concrete."[12] Vegetation also acts as a water filter as well as helping to "significantly slow the movement of stormwater, which lowers total runoff volume, erosion and flooding."

Urban Heat Island

Natural surfaces and trees are effective at cooling the surrounding area. Hard surfaces (asphalt and concrete) retain the sun's heat during the day and release it slowly over time. This phenomenon is known as the urban heat island effect. Natural and rural areas are noticeably cooler than built up urban centres and city neighbourhoods. Trees reduce the urban heat island effect through

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[9] City of Waterloo. *Waterloo's Neighbourhood Strategy: Supporting Resident-led Neighbourhood Community Building.* May 2018. pg. 24.

[10] NLI (Natural Learning Initiative). January 2012. Benefits of connecting children with nature: Why naturalize outdoor learning environments. Retrieved from http://naturalearning.org/sites/default/files/Benefits%20of%20Connecting%20Children%20with%20Nature_InfoSheet.pdf

[11] NAAEE (North American Association for Environmental Education). 2010. *Early Childhood Environmental Education Programs: Guidelines for Excellence*. Washington, DC: North American Association for Environmental Education.

[12] Gardiner Green Ribbon. *8 Reasons Why Parks are Important.* http://www.gardinergreenribbon.com/why-parks-are-important/

evapotranspiration and creation of shade. "A single large tree can produce the cooling effect of ten room-size air conditioners operating 24 hours a day."[13]

Carbon Sequestration

Greenhouse gases worsen the effects of climate change. Trees and other vegetation work to capture and store greenhouse gas emissions. A study done on carbon sequestration in the U.S. National Parks found that "Over the course of 2001 to 2005, a maximum grand total of 29.16 million metric tons of carbon dioxide was sequestered from the atmosphere"[14] within the National Park system.

Habitat Protection

Protecting of land for parks and open spaces benefits and protects urban wildlife and associated habitats. As urban boundaries expand and cities intensify, existing parkland and natural areas provide safe homes for species displaced by urban developments. Corridors provide safe spaces for wildlife to move between urban and rural areas and encourage overall biodiversity. For example, the City of Mississauga identified a number of 'ecosystem services' provided by its green system including: pollination of crops and other vegetation and providing a habitat for native biodiversity, and ecological connectivity.[15]

1.3.4 Economic Benefits Healthcare

In addition to the benefits listed in previous sections, there are also lesser known economic benefits which are often the most useful for quantifying and validating the importance of parks.

Parks provide communities the opportunity to be healthier, which reduce the need for medical services and lessen the cost and pressure on the health care system. Healthy active people incur less direct medical expenses than inactive people and parks provide an avenue for physical activity. According to a 2014 article written for the Centers for Disease Control and Prevention (CDC), having enhanced park use and increased physical activity that achieves "a 5% reduction in the burden of diabetes, hypertension, and related conditions could save an estimate $24.7 billion annually in avoided health care costs."[16] Also, in 2007 the City of Philadelphia, USA calculated the health care savings from the benefits of exercise in parks which was estimated at $69.4 million.[17]

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[13] Sherer, Paul M., *The Benefits of Parks: Why America Needs More City Parks and Open Space.* The Trust for Public Land, 2006

[14] Banasiak, Adam., Bilmes., Linda.,. Loomis, John., *Carbon Sequestration in the U.S. National Parks: A Value Beyond Visitation. Faculty Research Working Paper Series.* Harvard Kennedy School. 2015. Pg. 18

[15] City of Mississauga. *Natural Heritage and Urban Forest Strategy.* 2014. Pgs. vi-vii

[16] Barret MA, Miller D, Frumkin H. *Parks and Health: Aligning Incentives to Create Innovations in Chronic Disease Prevention.* Prev. Chronic Dis 2014;11:130407. Retrieved from: https://www.cdc.gov/pcd/issues/2014/13_0407.htm

[17] The Trust for Public Lands, Centre for City Parks Excellence., *How Much Value Does the City of Philadelphia Receive from its Parks and Recreation System?* 2008

Environmental

There are a number of environmentally related economic benefits of parkland. When it comes to stormwater, "communities that utilize this important function of trees and canopy cover may spend less money developing additional stormwater management infrastructure." [18]

A study was done on the various economic benefits of the Greater Toronto Area's (GTA) urban forest. In terms of cooling benefits, it determined that there is an energy savings benefit from cooling from the GTA's urban forest estimated at $20 million annually.[19] There is also a calculated economic benefit related to the capturing and storing of carbon from the atmosphere. The GTA's urban forest stores 2.7 tonnes of carbon annually, which has an estimated worth of $70 million.[20] Lastly, it was calculated that the GTA's urban forest reaps the economic benefit of $36.5 million as an estimated annual value in terms of air quality improvement.[21]

Attractiveness & Property Values

Having an abundance of quality greenspaces has shown to have influence on businesses and people to wanting to locate to a certain municipality. This attraction and subsequent relocation can result in more job opportunities leading to increased tax revenue and overall affluence of the city.

Parks and natural areas are associated with an increase in property values. As far back as the 19th century, city planner Frederick Law Olmsted tracked property values immediately adjacent to Central Park in New York City "in order to justify the $13 million spent on its creation". He found that over a 17-year period "there was a $209 million increase in the value of the property impacted by the park" resulting in an increase in tax revenue and as a result, the park made a profit.[22]

One last example is a study of the City of Mississauga Credit River watershed completed by Credit Valley Conservation (CVC) in 2011 which looked at real estate values in order to place a monetary value on adjacent parks and open space. The study found that the closer the proximity to a park or open space is, the greater the impact it has on the real estate value. In total, the study found that parks and open spaces add in excess of $250B to Mississauga's real estate values."[23]

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[18] Georgia Forestry Commission. *Environmental and Nature's Benefits of Trees.* http://www.gfc.state.ga.us/community-forests/tree-benefits/environmental-benefits-of-urban-trees/

[19] Green Infrastructure – Ontario Coalition. State of the Urban Forest in the Greater Toronto Area

[20] Green Infrastructure – Ontario Coalition. State of the Urban Forest in the Greater Toronto Area

[21] Green Infrastructure – Ontario Coalition. Stat of the Urban Forest in the Greater Toronto Area.

[22] City Parks Forum. *How Cities Use Parks for…Economic Development.* American Planning Association. 2002. Pg. 2

[23] Credit Valley Conservation. *The Credit River Watershed - Property Value Appreciation: Impacts of Natural Features*. 2011

2 Existing Policies & Practices

2.1 Background Planning Documents

The following documents have been highlighted and summarized as they are pertinent to the work required for the Research, Analysis and Visioning report.

2.1.1 City of Waterloo Official Plan

The City of Waterloo's Official Plan was approved by Council for the Regional Municipality of Waterloo in November 2012. The last official consolidation was in August 2018. The Official Plan is the City's main document for long-range municipal planning which sets the City's framework and direction for decision making pertaining to land use. The Official Plan sets the course for the vision for all City owned lands.

The vision for the City includes the desire for "a green City with healthy green spaces, land, water and clean air" as well as "an exciting City with abundant recreation, leisure, arts and cultural opportunities; and a City that is accessible to all."[24] The Principles of the Plan discuss themes of diversity and adaptability; accessibility and equity; connectivity; and, health and vitality all of which are directly applicable to Waterloo's parkland system. It is set out in the OP that the City "will plan for trails and open space networks and supporting facilities that are interconnected and serve transportation, recreation and leisure and environmental functions."[25]

The chapter which discusses the Trails and Open Space Network has more detailed policies including but not limited to the following:

- Provide important linkages to parks and open spaces between neighbourhoods and to major activity areas throughout the City;
- Locate, design and build to promote and support healthy active lifestyles as well as accommodate active, non-motorized forms of transportation;
- Design to be clearly visible and well-demarcated with signage especially at access points;
- Design to evolve with the changing needs of the community and balance the needs of park users with the need to protect the environment;
- Protect and preserve the environmental function and quality of natural areas;
- Promote and educate users of the open space and trails on their multi-level functions;

[24] From "Chapter 2 – Vision Principles and Basis of the Plan" *City of Waterloo Official Plan*, pg. 7

[25] From "Chapter 2 - Vision Principles and Basis of the Plan" *City of Waterloo Official Plan*, pg. 8

- Plan to accommodate a variety of functions: environmental, social, cultural, recreational and transportation; and
- Plan to be flexible and multi-purpose and accommodate multi-season activities.

2.1.2 City of Waterloo Strategic Plan 2015-2018

The City of Waterloo develops a strategic plan every four years, to coincide with each council term. The strategic plan identifies the most important priorities for the city and acts as a road map to help make Waterloo an even better place to live, work, learn and play. Departmental business plans contain initiatives and action items required to achieve the goals and objectives identified in the strategic plan.

The last strategic plan guided the city's decision-making from 2015-2018. Over 1,200 stakeholders representing residents, business and education leaders, city council, post-secondary students and city staff provided input for the plan, which contained five guiding principles and six strategic pillars:

Guiding principles – the lens used to guide decision-making

1. Service excellence
2. Effective communication
3. Healthy workplace
4. Fiscal responsibility
5. Personal leadership

Strategic pillars – key priorities of focus

1. Multi-modal transportation
2. Infrastructure renewal
3. Strong community
4. Environmental leadership
5. Corporate excellence
6. Economic development

The multi-modal transportation pillar is relevant because of the need to expand our active transportation network, which includes completing trails, many of which run through the city's parkland. The strong community pillar speaks to bringing people together, which is one of the important attractions of our city's parkland and one of the reasons we initiated the parkland strategy. The environmental leadership pillar speaks to the growing importance of protecting the environment and the need to preserve and contribute to the park and open-space system. Once of the initiatives that falls under that strategic pillar is the development of a plan for strategic parkland improvement, expansion or acquisition.

The development of the 2019-2022 strategic plan is currently underway. Nearly 11,000 people have contributed to the goals and objectives of the plan, which include six proposed strategic pillars, one of which is sustainability and the environment. Council will review the proposed strategic pillars and approve the final strategic plan on June 24. The development of departmental business plans will immediately follow. The Parkland Strategy recommendations will take into consideration, and support the new strategic plan.

2.1.3 Recreation and Leisure Services Master Plan

The Recreation and Leisure Services Master Plan was completed in 2008 and at the time, was the latest update to the City's first Parks and Recreation Master Plan which was completed in the early 1990's. The Plan was developed to respond to changes in operations, new trends and ways of thinking for recreation. The Recreation and Leisure Services Master Plan was developed to provide strategic direction for several areas including: Recreation Services & Facilities; Parks, Open Space and Trails; Arts, Culture & Heritage; and, Festivals & Events.

The vision for this plan is: "*Waterloo residents will have access to a diverse and balanced array of recreation and leisure opportunities that respond to evolving resident interests, improve resident health and well-being, and facilitate individual and community participation, development and leadership."* The principles also speak to strategic alignment; balanced variety of experiences; fairness and inclusion; integrity and evaluation of services; balance between accessibility and revenues; maximizing utilization of facilities; defining leadership roles in the department; conserving natural resources; and, creating facilities that are flexible and sustainable.

2.1.4 Neighbourhood Strategy

In 2018, Council approved the Neighbourhood Strategy. The City of Waterloo has many strong neighbourhoods, and the Strategy builds on the already well-established and successful initiatives in place to support those neighbourhoods. The Strategy provides neighbourhoods throughout the City with tools to make their community stronger. The stakeholders which helped to build the Strategy included the various Neighbourhood Associations and Homes Associations throughout the City as well as others such as the universities, various advisory committees, the library, the police and the school boards. Over 1,700 community members were consulted to inform the strategy. The purpose for the creation of the Neighbourhood Strategy was to define how the City can support its neighbourhoods and community members to create a network of strong and connected neighbourhoods, including how to best support neighbourhoods without affiliated neighbourhood associations. Some of the key actions from the Neighbourhood Strategy looked to nurture place-based neighbourhood pride, belonging, identity and placemaking through initiatives such as formalized community garden funding and programs in parks, as well as outdoor rinks and other similar projects. The Vision for the Neighbourhood Strategy is *"Waterloo is a city of caring, vibrant, engaged neighbourhoods where everyone belongs."* The principles and goals speak to volunteerism, inclusion, empowerment, collaboration, and support for residents, resident led community building and neighbourhood initiatives.

During the consultation for the Neighbourhood Strategy, a number of key messages were shared during the engagement sessions about parks and their importance to neighbourhoods. It was clear from feedback that parks and open spaces are very important to the residents in Waterloo's neighbourhoods. Based on the consultation completed for this strategy, the following list highlights high level topics relating to Waterloo's parkland:

- More opportunities for neighbourhoods to be involved in designing or redesigning new or existing parks to enhance placemaking.
- Adapt parks to changing neighbourhood demographics (amenities for multiple age groups) and build in design flexibility.
- Increase capacity and ability of neighbourhood parks to be used for gathering and events (infrastructure and customer service).
- Clarification and streamlining of the City's administrative processes for community activities in parks (e.g. community events, community gardens, community art, neighbourhood skating rinks, message boards, little library, etc.).
- Assess feasibility for enhanced neighbourhood participation in parks (adopt-a-park / friends of parks programs).

This feedback has been considered in the evaluation and analysis of Waterloo's Parkland for this report.

2.1.5 Outdoor Sport Field Strategy

The Outdoor Sports Field Strategy was completed in June of 2012, and it looks ahead from then to 2031 in terms of a plan for multi-purpose rectangular fields, diamonds and cricket pitches. The Strategy looks at current use levels of sports facilities in Waterloo and forecasts the need based on current gaps and anticipated needs based on the projected population, and to support consistent service levels. The vision for this strategy was: "The residents of Waterloo have equitable access to quality outdoor sports fields throughout the city, thereby fostering improved individual and community health and increased capacity for sport and play."

The recommendations from the 2012 Outdoor Sport Field Strategy are still valid and will be maintained as the current direction for the City's sports fields. It is not the scope of the Parkland Strategy to reassess previously completed work. The Parkland Strategy will look to continue implementation of the 2012 Outdoor Sport Field Strategy recommendations.

2.1.6 Action Sports Strategy

The Action Sports Strategy was completed in April 2013 and looks at setting the vision, approach and actions in order to determine opportunities for action sports such as skateboarding, BMX biking and mountain biking in the City of Waterloo. The need for this Strategy was outlined in the Community, Culture and Recreation Services Master Plan as there was a need for designated facilities for action sports in the City. The model consisted of proposed two main tiers in a hierarchy of development: 1. Action Sport Hubs that are meant to meet the City-wide need; and 2. Action Sport Spots that are

geared towards smaller facilities located within neighbourhoods. This strategy is meant to be a guideline which sets direction for how to address increasing demand for action sports and associated amenities in the future. Work is currently underway to design and construct facilities per this strategy's recommendations.

The recommendations from the 2013 Action Sports Strategy are still valid and will be maintained as the current direction for the City. It is not the scope of the Parkland Strategy to reassess previously completed work. The Parkland Strategy looks to continue implementation of the 2013 Action Sport Strategy.

2.1.7 Area-specific Plans

District Plans

Through its Official Plan the City has identified a number of District Plan areas that organize the City into sub-geographies. Since the 1970s approved District Plans have been used to direct the planning and development of new community areas and to demonstrate in greater detail the implementation of the objectives, policies, and land use designations of the Official Plan. This includes that "the locations and amount of parkland to be provided may be shown in District Plans" (OP s.10.5.2.1(5)).

An example of a district plan completed by the City in recent years is the Beaver Creek Meadows District Plan.

Beaver Creek Meadows District Plan (2016)

Beaver Creek Meadows in north Waterloo is located adjacent to the Township of Woolwich boundary, and is one of the last remaining 'greenfield' growth areas. It is characterized by pockets of low density residential development and significant natural features. The Council approved district plan for this new development area includes land use mapping, direction for residential, commercial, and related uses, as well as policies for transportation, urban design, and environmental protection.

Other Area Plans with Parks Planning Implications

Outside of the districts the City has completed plans for other sub-areas, including the Northdale Neighbourhood and Uptown Waterloo Urban Growth Centre. These area-specific plans also inform parks planning, through the outlining of new or expanded public open space, improved connections, and upgrading of existing parks.

Northdale Land Use and Community Improvement Plan Study (2012)

The Northdale neighbourhood, one of the City's near-campus neighbourhoods, was the subject of a study between 2011-2012 which looked to develop a clear vision and plan for Northdale and address issues related to evolving neighbourhood demographics and associated development pressures for student rental housing, the conversion of existing dwellings, and higher density housing forms. It resulted in a comprehensive planning and regulatory framework to guide change in Northdale. The plan envisions that, "By 2031, Northdale is revitalized and re-urbanized into a diverse, vibrant and

sustainable neighbourhood, integrated with educational, residential, commercial, cultural, heritage and recreational functions and improved open space, pedestrian, cycling and transit networks."[26]

This plan was followed in 2015 by the *Northdale Streetscape Design and Reconstruction Master Plan* which included design concepts and strategies for public spaces and reconstruction of streets in Northdale.

In 2016 the first phase of the *Wilfrid Laurier University / Waterloo Collegiate Institute (WLU/WCI) Feasibility Study* was completed which examined opportunities for the re-development of the WCI/WLU Northdale Lands (which accounts for 17% of the Northdale neighbourhood). It recommended a 'Community Hub' model which is envisioned as a destination for one-of-a-kind experiences related to arts & culture, health & wellness and focused innovative education. It is proposed to include a collection of educational facilities, indoor and outdoor programs, commercial services and uses that fosters interaction, gathering and community-belonging. It is currently in its second phase which is looking at refining the vision, with a strong neighbourhood focus, including a neighbourhood commons, WCI learning/academic space, WCI arts and indoor athletics, Laurier community engaged research programs and student experiences, and outdoor athletics and green space.

Uptown Public Realm Strategy

Uptown Waterloo located in central Waterloo is considered the City's urban core area. The Uptown Waterloo Urban Growth Centre, also the City's Primary Node, is identified as a growth area in the City's Official Plan and conceptually in the Provincial Growth Plan and the Regional Official Plan. The *Uptown Public Realm Strategy* was initiated in 2017 as part of the City's growth related planning for the area. It is examining existing uses and implications of intensification and redevelopment on Uptown's existing public realm which includes: City-owned parks and spaces, connections such as streets and trails, and privately-owned spaces that are publicly accessible. Approved in March 2019 the Uptown Public Realm Strategy includes plans, strategies and area-specific initiatives to guide the transformation of the area's public spaces in a manner that leverages both private and public investment. The plan recommends enhancement of existing parks and new park types to meet a broader range of uses including: play spaces, dog parks, linear parks, gardens and plazas. The plan also advocates for high quality urban design in architecture, streetscapes and other aspects of the public realm including parks.

2.1.8 Waterloo Park Master Plan

The Waterloo Park Master Plan provides a vision for the long-term development of one of the City's premier parks, in recognition of changing demographics and leisure needs, and urban intensification. The plan was completed during the preparation of the City's Recreation and Leisure Services Master Plan and the planning for the Region of Waterloo Rapid Transit Initiative (RTI). The report's supporting implementation strategy is structured to allow for the planning, funding and execution of

[26] Northdale Land Use and Community Improvement Plan Study: Final Report: June 2012.

individual project initiatives over a 20-year time period. The Waterloo Park Master Plan is scheduled to be updated within 3-5 years.

2.1.9 Design Standards

Landscape Design Standards

The *City of Waterloo Landscape Design Process & Requirements Manual for New Subdivision Development* outlines the processes, procedures and requirements to guide the design and development of parks and open spaces within new subdivisions which are the responsibility of the Developer. The manual is used in conjunction with the *Development Engineering Manual* which directs the Site Plan approval process, and the *Landscape Design Process & Requirements Manual* contains both written guidelines and design details.

Accessible Design

Accessible design allows for all residents regardless of gender, culture, religion or ability to feel welcome and participate. The City of Waterloo promotes a high level of physical as well as psychologically accessibility in its public spaces and encourages developers to do the same. The *City of Waterloo Accessibility Standards (2016)* were prepared following the Province's adoption of Ontario Regulation 191/11 (Integrated Accessibility Standards) under the Accessibility for Ontarians with Disabilities Act 2005 (AODA). The Integrated Accessibility Standards include Part IV.1 Design of Public Spaces Standards (DOPSS) which addresses elements of public spaces including trails and pathways, outdoor play areas, parking facilities, and outdoor eating areas. The City, developers and other organizations are obligated to follow these standards and gain approval by the Grand River Accessibility Advisory Committee (GRAAC), which advises and comments on projects, to create barrier-free access to facilities and activities within the community.

The City's Accessibility Standards includes both written guidelines and details to promote barrier-free access and includes provisions which may be outside or exceed the DOPSS.

Crime Prevention through Environmental Design (CPTED)

CPTED is being used worldwide to enhance safety of spaces by building in certain design elements of the physical environment which also encourages positive social interaction. CPTED notes that our physical environment directly affects behaviours and responses to what we interact with which helps us to interact in our communities safely. These principles can be applied anywhere including parks and open spaces.[27]

Using CPTED principles reduces opportunities for criminal acts to take place outdoors and help users feel safer and makes the space more attractive.

The three basic principles and two additional are:

[27] Crime Prevention Through Environmental Design (CPTED). Calgary Police Service. Retrieved from: http://www.calgary.ca/cps/Pages/Community-programs-and-resources/Crime-prevention/Crime-Prevention-Through-Environmental-Design.aspx

Natural Access Control: guides how people enter and exit a space by locating entrances, exits, fencing, lighting and vegetation strategically. This deters unwanted activity by creating a sense of risk for would-be offenders.

Natural Surveillance: guides the placement of features and elements to increase visibility in and out of a space using lighting and landscaping. Potential offenders are unlikely to commit unwanted activities if they feel they might be seen, and users are more likely to use a space if you feel you can see and be seen.

Territorial Reinforcement: creates an area of territorial influence that may deter potential offenders such as property lines or clear distinctions between public and private property. Landscaping, paving, gateways, signage and fencing can all contribute to territorial reinforcement.

Maintenance as a Deterrent: well-maintained spaces create a sense of ownership which helps deter criminals.

Activity Support: when activities occur in public spaces by legitimate users, unwanted activities are deterred.

Using CPTED principles in parks and open spaces will help with unwanted activities like loitering, vandalism and graffiti amongst other more serious offences such as drug use or violence.

2.2 Asset Management & Park Improvements

2.2.1 Asset Management Plan

Similar to other Canadian municipalities, the City of Waterloo has infrastructure needs that exceed available funding. A comprehensive Asset Management Plan was completed in 2016 which provides recommendations for planning for asset management and for future improvements as well as identifying the infrastructure funding gap by asset class. The Asset Management Plan currently includes some types of green infrastructure (e.g. street trees and parks). The plan states that around 45% of park assets are in poor to very poor condition and without appropriate capital expenditures which will result in a decline in the overall condition of park assets over the next 25 years that is not acceptable.

The Environment and Parks department is currently undertaking a comprehensive park inventory in order to increase the asset maturity level of parks assets.

Annual Park & Playground Upgrades

The Asset Management Plan includes the budgeting information for the next 10 years between 2016 and 2025. There are routine expenditures identified for Park Upgrades and Revitalization as well as Playground Upgrades city-wide. The 10 year total for Park Upgrades is $1,018,000 and $1,075,000 for playgrounds. Both budget line items start lower ($62,000 for parks and $88,000 for playgrounds in 2016) but eventually incrementally increase to $147,000 and $172,000 respectively in the year 2025.

Rehabilitation / Replacement Strategies

Parks amenities are replaced when they fall below the target condition for that particular item. According to the Asset Management Plan, components with a higher consequence of failure such as playgrounds have a better target condition than elements that have less consequence such as benches. Performance levels for rehabilitation and replacement are currently being developed.

2.2.2 Park Improvement Projects

The City undertakes annual projects to improve and upgrade parks. These may be derived from the recommendations of over-arching plans and strategies, linked to implementation of park master plans or be undertaken as standalone design projects in association with equipment replacement needs, such as playgrounds. Depending on their complexity, projects may involve a multi-stage design and implementation process and are completed in consultation with the community and Neighbourhood Associations, where existing.

3 Community Profile

3.1 Overview

The Community Profile to inform the Waterloo Parkland Strategy was prepared by Monteith Brown Planning Consultants. This section summarizes the findings of that report. A full version of the Demographic Profile can be found in **Appendix A.** The information presented in the Demographic Profile is based on Statistics Canada data along with forecasts[28] developed by the Region of Waterloo and the City of Waterloo through various long-range planning exercises. The Demographic Profile forecasts future population to 2031 which is the next planning horizon.

For analysis purposes the data generally corresponds with Statistics Canada's Census Tracts, Dissemination Areas, as well as the Region's growth forecast by small geographic area boundaries where applicable.

3.2 Current and Forecasted Populations

3.2.1 Current Population

According to the 2016 Census of Population, Waterloo's population was 104,986. This was an increase of 6.3% from the 2011 Census. The Census counts people that live in regular households and in collectives (e.g. nursing homes), however, it does not count post-secondary students who are living temporarily in the City while they study, as they are generally counted at their parents' home.

Because of this, the Region releases an annual Year-End Population and Household Estimates for Waterloo Region Report. According to the most recent one, **the City of Waterloo had an end of 2017 population of 137,420**. This estimate is based on data from the 2016 Census and includes adjustments for recent residential development, students and other temporary/foreign residents, net Census undercount, and vacancy rates.

3.2.2 Forecasted Growth

According to the Regional Official Plan, the City of Waterloo is forecasted to have a population of 140,000 by 2031 (based on Census and includes Census undercount but not post-secondary students who temporarily reside in the City to study at post-secondary institutions).

According to the City of Waterloo's Development Charges Background Study, **the City's population is forecasted to reach 158,770 by the year 2031**[29]. The Development Charges forecast includes net Census undercount and off campus student populations. If excluding off-campus student

[28] Primary Forecast Sources: Region of Waterloo. Planning, Development and Legislative Services Community Planning. Year-End 2017 Population and Household Estimates for Waterloo Region. Report PDL-CPL-18-12 to the Planning and Works Committee dated March 20, 2018. And City of Waterloo, Integrated Planning and Public Works Department, Growth Management Division. Email dated December 10, 2018.

[29]

populations, the City's 2031 population would be 140,000 persons in conformity with the Regional Official Plan.

Planning District Growth

The City is expected to see some growth in almost every Planning District; however some districts are expected to receive more intense growth than others. **Figure 1** illustrates the boundaries for the Census Planning Districts and **Table 1** illustrates the forecasted population for each district. The Central, Conservation, Rural East / Country Squire and University districts are forecasted to experience the greatest percentage of change. It should be noted that a breakdown of current population by Census Planning District is only available for 2016, as the Census occurs every five years, therefore the population figures in **Table 1** do not account for the increase in the city-wide population estimate to 2018 that is stated above. The population forecast is in conformity with the Regional Official Plan and thus is based on the Census, includes an undercount but does not account for students who temporarily reside in the City to study at post-secondary institutions.

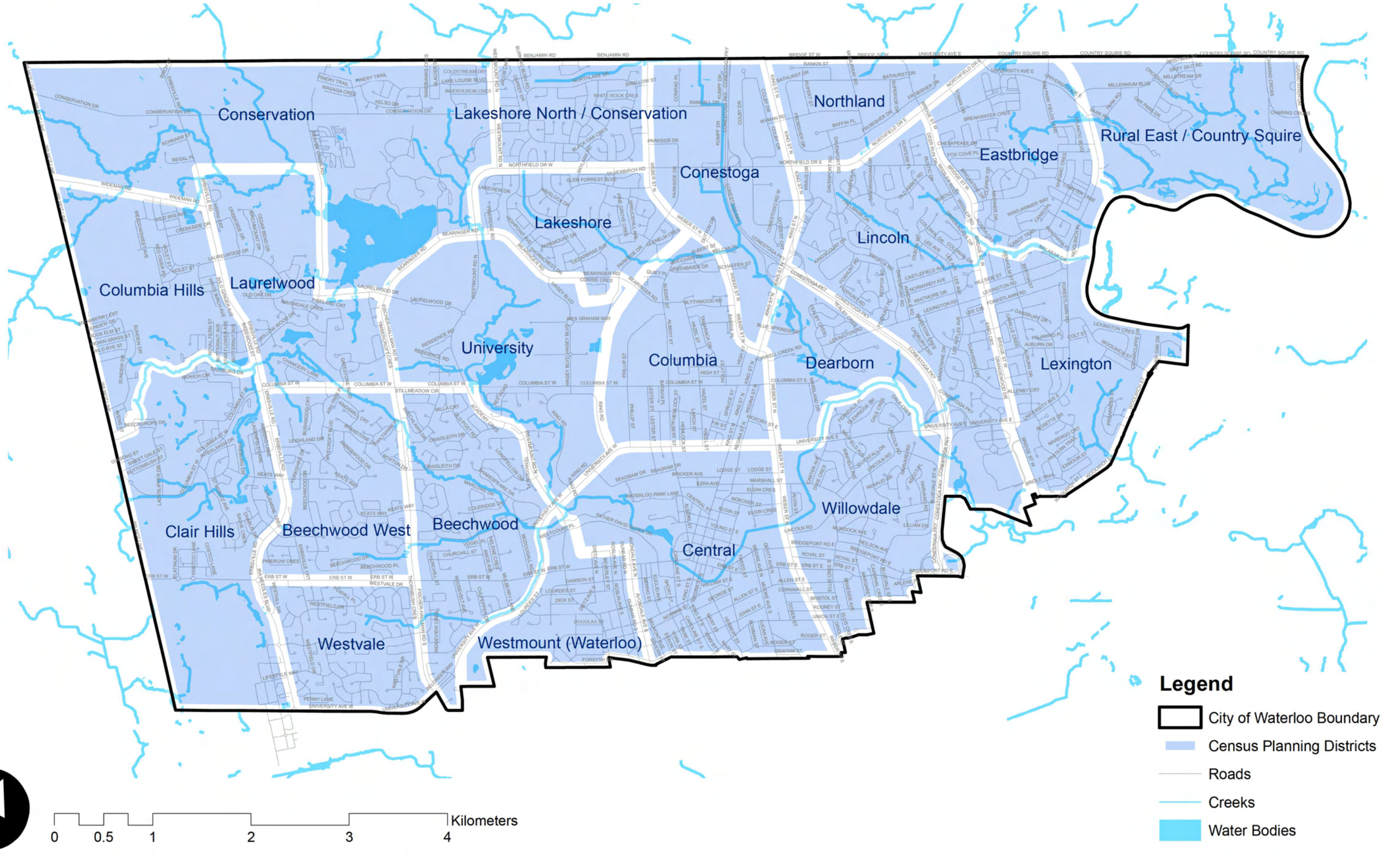
Table 1: Forecasted Population Growth by Planning District, 2016-2031

Planning District Name	2016 Population	2031 Population	% Change
Beechwood	9,550	9,970	4.4%

Source: Region of Waterloo population forecast by small geographic area rolled up to Planning Districts. Data is based on the Census and includes 4% under coverage but excludes students who temporarily reside in the City while they study at post-secondary institutions. 2031 forecast is based on the 2011 Census.

City of Waterloo Parkland Strategy

Figure 1 - Planning District Boundaries



3.3 Nodes and Corridors

Urban growth is anticipated to be concentrated in areas that the City has identified as Nodes, Corridors and Station Areas, as identified in Official Plan Schedules B and J respectively. The Uptown Waterloo Urban Growth Centre (UGC) which is designated by the Provincial Growth Plan is designated a Primary Node in the City's Official Plan and it is located in the Central Planning District. It has a minimum density target (minimum 200 persons and jobs per hectare by 2031). Major Nodes are expected to have medium high to high density and mixed use and Minor Nodes will have medium to medium- high density mixed use. Major Corridors will connect a series of Major Nodes with the Primary Node and will accommodate medium high to high density uses and Minor Corridors will connect Major and Minor Nodes to the Primary Node and will be predominantly medium to medium-high density residential areas. Refer to **Figure 2 – Schedule B – City Structure for the nodes and corridors.**

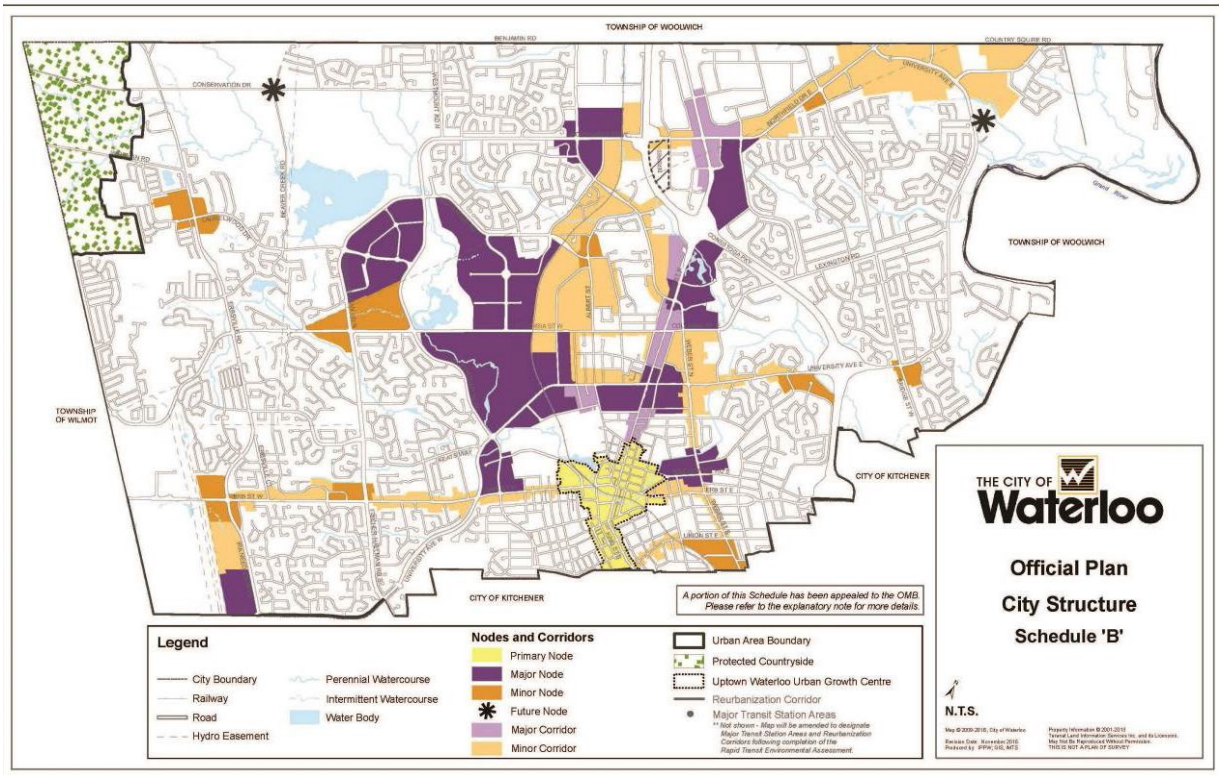


Figure 2: Official Plan Schedule B – City Structure

The City of Waterloo Official Plan includes targets for planned densities around Major Transit Station Areas associated with the Light Rail Transit (LRT) system. Station areas have a planned target of 160 residents and jobs per hectare by 2041. Refer to **Figure 3 – Schedule J for the Station Areas.**

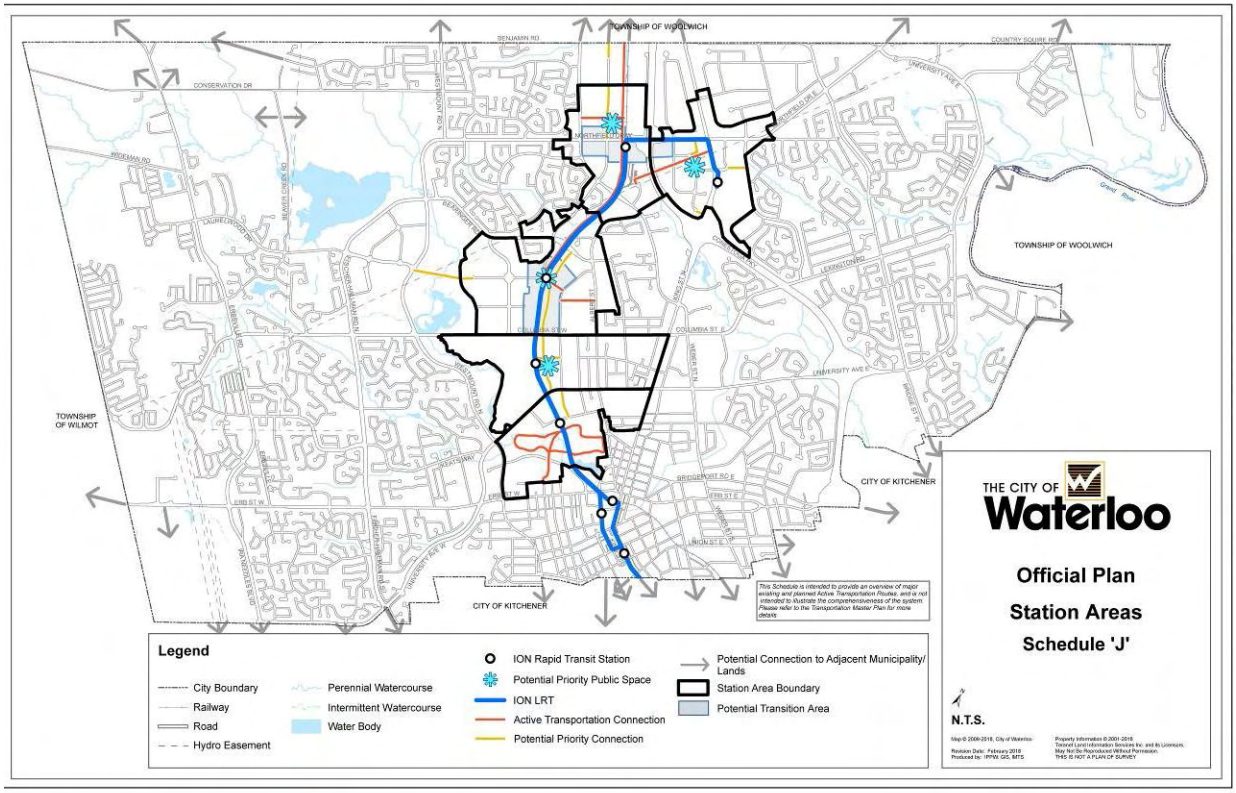


Figure 3: Official Plan Schedule J – Station Areas

3.4 Demographics

3.4.1 Age Composition & Distribution

According to the 2016 Census, the median age in the City of Waterloo is 37.7 years. The City of Waterloo's 2016 population is younger than the median age of the Region of Waterloo (38.5 years) as well as the Province of Ontario (41.3 years). Adults aged 20 to 34 make up almost one quarter (25%) of the City of Waterloo's population. The 20 to 24 cohort was disproportionately high when compared to all other age groups in both the 2011 and 2016 Censuses (not including the estimated off campus student population). The 'baby boomer' cohort while not as high as the 20 to 24 year cohort was still substantially higher than the remaining age groups. These demographic trends seem to indicate that younger adults are moving to the city for a short period of time, and baby boomers are aging in place. Consideration is needed for the parks related needs of these different age groups in the City.

There is a higher concentration of children, teens and mature adults on the eastern and western edges of the City. Young adults (ages 20 – 34) are located in or close to the City's core.

3.4.2 Cultural Diversity

The unique makeup of a municipality can influence participation and usage of the parkland system. Most of Waterloo's residents primarily speak English (89%), and 9% are bilingual in English and French. About 25% of the population are immigrants, and 26% of the population are identified as visible minorities. Visible minority groups which have the largest concentrations are

Chinese (9%) and South Asian (6%). Of note, 1.2% of Waterloo's population identifies as Aboriginal.

3.4.3 Income & Education

The median 2015 income in the City of Waterloo was $34,445 for individuals and $72,239 for households. This statistic is higher than that in the Region of Waterloo as well as in the Province of Ontario. As such local participation in parkland can be expected to be above average in the City. Those that fall within the 'Low Income Measure After Tax' are not evenly distributed throughout the City and are largely located in the central areas of the City. The value of parks to these residents is important to consider.

The City of Waterloo's population is also highly educated, with 38% of the population over the age of 15 holding a university certificate, diploma or degree at the bachelor's level or higher.

3.5 What This Means for Parkland

The City of Waterloo is changing. All of the statistics stated previously help to better identify the current and diverse needs for the City of Waterloo's parkland.

Anticipated future population increase will create further demand and pressure on the existing parkland system and associated recreational facilities. There are finite amounts of land left for parkland acquisition making having a strategy for the future important. Anticipated growth will occur along the Nodes and Corridors as well as near Station Areas which helps to provide some initial criteria for targeting locations for new / redeveloped parks. The presence also of a large population of students is also important to consider. Although students are not permanent residents of the City, they still use the parks and open space system while they are completing their studies so it is important not to discount their presence.

The dominance of certain age groups and their concentration in certain parts of the City help delineate a finer grain of detail for parks and open space in the different geographic areas across the City.

Cultural diversity also affects how parks are used by different groups. For example some cultures place high value on having large open spaces for family social gatherings.

Lastly, although there is a correlation between higher income and education and more participation in physical and social activities in parks and open spaces it is important that parkland play a strategic role in providing meaningful and cost free outdoor opportunities to all residents regardless of income or education and to provide equitable access of parks across the city in both high and low income areas.

4 Parkland and Open Space

4.1 Trends & Emerging Needs

4.1.1 Demographics & Intensification

Parks for All Ages

The Community Profile in Section 3 noted that the population in the City of Waterloo is slightly younger compared to the Region of Waterloo and to the Province of Ontario. The trends have been indicating that younger adults and young families are moving into the city while at the same time existing resident 'Baby Boomers' are choosing to age in place. The impact of this trend is that there are a variety of demands that will be placed on the parks. Older adults and seniors have different park expectations than younger adults and families with children as well as teens who have differing recreational needs. The opportunity here is to make existing parks and future parks into spaces that are flexible and can respond easily to changing needs of park users as a community grows.

Many parks have been geared towards the younger child, but there are also needs for teens and younger adults. There are a number of features that may attract and accommodate teens including Wi-Fi, interactive lighting and public art, play spaces for older children/adults such as informal lawns for pickup games, and elements that facilitate spontaneous play, and various events and programming to attract this often missed demographic.

Parks also help to support healthy lifestyles and aging by fostering physical activity. More adults are becoming aware of the health benefits of physical activity to manage their long-term health, and are renewing their commitment to active pursuits as evidenced by trends towards long- distance running, cross-fit, and participation in organized sports (sometimes as part of social leagues). Research reveals that there is considerable segmentation amongst older adults and seniors (age 55 and over). From a recreation perspective, the spectrum ranges from those that participate in active physical activities (e.g., pickleball) and those that prefer traditional seniors' activities that are social or hobby-oriented (e.g., cards or social gatherings in parks, day trips). In response, municipalities, agencies and volunteer organizations are providing a broad range of activities to engage as many older adults and seniors as possible. Active and passive recreational areas within parks are being supported through comfort amenities (e.g., washrooms, seating, shade, etc.) to encourage use by older adults and other age groups.

Cultural Diversity

Trends in immigration and the ethno-cultural makeup of the community can influence how residents use the park system and participate in recreational activities. Approximately one quarter of Waterloo's population are immigrants to Canada. Some cultures have different views about park space, and different family dynamics which may lead to lower or higher volumes of use in the parks. As noted with the diversity in ages in the City, building in resiliency and flexibility in the parks will be important in accommodating the various needs of the ethno- cultural community as well. This may include the creation of places for gatherings for large family or group celebrations in parks or the

provision of flexible playing field space, and may influence the popularity of different sports over another.

Intensification and Growth in Nodes and Corridors

Infill and intensification has been taking place where the city has designated nodes, corridors and LRT station areas due to the diminishing supply of undeveloped lands. These specific growth areas stretch across the entire city and are meant to accommodate a large portion of the population and employment growth leading into the year 2031. The Primary Node, which has been designated by the Provincial Growth Plan, is where the maximum amount of density is planned for. Much of the growth will be located in the Central Planning District, which contains Uptown Waterloo and Waterloo Park, meaning that the urban public spaces and the City's major park will have a larger volume of use as a result of the increased population.

More People in the Parks

The influx of population and the limited supply of available land to create new parks will create pressure on the existing park system, especially in areas of infill and intensification. Higher density dwellings such as apartments tend to have smaller or no private amenity space such as a back yard for residents to enjoy so residents rely on the surrounding parks and natural areas for outdoor social activities as well as recreation.

Privately Owned Publicly Accessible Open Space (POPS)

These are spaces that are becoming more popular due to intensification. These are spaces that are privately owned and maintained but are also universally accessible and open to the public. Intensification areas and a growing city are pressures which require innovative solutions to providing new and interesting public spaces in areas with constraints on land, especially in urban areas where growth will be focused.

Shared Streets

The concept of shared streets seeks to integrate pedestrians and vehicles by removing features such as curbs, lane markings, and traffic lights. While conceived of to reduce the dominance of cars and promote traffic calming, shared streets are increasingly being used as an alternative strategy in areas where high land values or lack of space limit the potential for the acquisition of parks. In the shared street concept multifunctional pedestrian and play spaces share the roadway with vehicles. Formalization of this philosophy can be seen in such projects as Bell Street Park in Seattle, where four blocks of roadway were transformed into a vibrant public space with continuous decorative pavement treatment, planters, seating areas, public art and moveable play spaces while still allowing one lane of automobile, bus, bicycle and emergency vehicle access. The shared streets approach could be applied both to the retrofitting of existing streets as well as the design of service lanes and roads within new development areas.

4.1.2 Changing Expectations and Service Levels for Parks After Hours Use of Parks

Working hours for people are also becoming more complex and outside of traditional business hours, which result in residents wanting to use parks when is convenient for their schedule.

Consequently this is leading to people wanting to use the parks outside of regular hours of operation. In Waterloo this varies depending on the facilities and programs, but typically involves parks being open from 6am to 11pm, with shorter hours for seasonal facilities such as skateparks and splash pads. Another issue occurs during the winter months when the amount of daylight is severely limited. Lighting is something that municipalities are using to remedy the demand on the parks after hours.

Multi-Seasonal Use of Parks

While the majority of outdoor recreational usage occurs during the summer months, many communities are creating formal and informal multi-season opportunities within their parks and recreation systems. The City of Waterloo is no exception, and states in their OP that the city will plan, design, operate and maintain a wide range of parkland for multiple users which give consideration to four season use. This approach extends outdoor activity and is part of year-round health promotion. Residents are looking to use their parks in the fall, spring and wintertime which increases requests for lighting and snow clearing of paved trails. Since it is not financially feasible to provide winter maintenance on all trails it will be important to define the main trail network and identify key multi-use trails and connections, including bicycle lanes that are maintained for winter use. Signage can help to limit liability by stating that winter use of parks and trails are at the risk of the user.

Recreational infrastructure such as hard surface courts (e.g. tennis or basketball) can be flooded during the winter to provide outdoor ice skating, berms and hills can be used for tobogganing (where supported by the proper safety measures), while artificial turf surfacing is being used on sports fields to extend the regular playing season and is also sometimes used in other heavily used areas of parks to withstand multi-season use. While some activities do bring about issues with safety and liability such as with tobogganing, the city has permitted tobogganing in selected parks for this reason. There are opportunities to have purpose built hills and berms to allow for this activity to cut down on the risks associated.

There are also costs associated with winter maintenance which at times can be quite expensive. Priority areas will need to be identified and a careful selection of no-to-low cost activities can be implemented throughout the year to benefit to the community.

Food and Beverage Services

The provision of food and beverage services formally or informally in parks and public spaces is also an area being explored by municipalities Historically these services have been provided in association with special events, however with the increasing use of parks for social activities and family outings, there is increasing demand for these services in sports-oriented parks, garden parks and other attractions.

Formal opportunities for the City to introduce food and beverage services into parks include: seasonally permitted mobile food vendors (e.g., ice cream trucks, food trucks, food stands); teahouses or concessions; and standalone restaurants. Currently the city does not employ private operators for food services, it is run internally. For permanent buildings, such as restaurants, there can be challenges with sustaining business unless the site is well used year-round. Facilities and potential locations would need to be examined carefully and backed by a business case. There is currently a permanent concession stand in Waterloo Park called the Park Inn which is being used for concessions. There are also other buildings which may have the capability, with refurbishment, to house similar services since infrastructure is already in place in the park.

Informal opportunities for the consumption of food and beverages in parks include having non-permitted areas for small group picnicking, in addition to large group picnic areas.

4.1.3 Accessibility

A certain level of service needs to be applied to new parks and existing parks to be redeveloped to make them compliant with the recent Integrated Accessibility Standards outlined under the Accessibility for Ontarians with Disabilities Act. It is important to provide accessible connections and access to outdoor equipment and amenities for those with disabilities, parents with strollers and mature adults with mobility issues. As well, it is important to recognize and address other challenges such as vision and hearing impairment in the design of public spaces.

4.1.4 Inclusion

Parks are critical components of a city's social infrastructure and play an important role in creating an inclusive, equitable and welcoming environment for all people who use them. Socio-demographic influences can also bring new opportunities and requests for amenities that make parks usable and welcoming to all. Trends are showing that parks are often highly used in locations with high-rise dwellings where there is a lack of private outdoor space, or in neighbourhoods with high numbers of people living on lower incomes, which may include students, newcomers, families, seniors, and vulnerable populations. As seen in parts of Waterloo, parks are equally important in neighbourhoods with strong social connections where residents seek out park spaces for events and gatherings. To respond to these interests parks of the future need to be designed not only to serve recreation purposes, but to foster and support social interaction. This may include providing informal social gathering spaces such as fire pits, or spaces with event infrastructure (hydro, potable water), places to obtain, cook or share food, and creating flexible spaces that can support and encourage entrepreneurial initiatives, such as craft markets, cultural activities or artisan displays.

4.1.5 Community Placemaking

Placemaking helps to add a sense of place and identity to parks in the City. Parks that have culturally significant elements, have an active neighbourhood association or interesting elements worth highlighting can be done so through interpretation, locally sourced or community driven public art or other educational elements. Parks can tell their own unique story through this use of

placemaking and there are opportunities to have increased participation with neighbourhoods regarding theming and the unique stories of their neighbourhood parks.

4.1.6 Technology in Parks

Parks are no exception in terms of trends in technological advancements. One growing trend is the provision of Wi-Fi hotspots in certain parks which allow users to stay connected throughout their stay in the park. Waterloo has been proactive in this since at least 2005 and now offers free Wi-Fi at most of its municipal and community facilities, including Waterloo Park, Waterloo Public Square and RIM Park. The City also provides electronic messaging boards at RIM Park and WMRC facilities, and has outdoor electronic signage on the corner of Erb Street and Father David Bauer Drive. The inclusion of personal device charging stations in community facilities is also of growing interest, particularly in urban centres such as Toronto. These are most commonly being provided in indoor locations although some examples exist of outdoor stations in well-used public spaces. The charging stations are typically being provided by, or in partnership with cell phone providers, although some start-up companies in the industry are providing prototypes of charging stations to market their product.

Other examples of technology in parks include the incorporation of QR codes or location based apps into information signage, including trail maps, fitness videos, location based games and other mapping features. Cities can also use technology to improve their data collection and operational efficiencies through the use of technology. Advancements in this area include data and GPS enabled devices to catalogue park amenities which helps to maintain current inventories and park / facilities condition assessments, as well as mobile units used by operational teams for time-tracking and to interface with work schedules.

4.1.7 Signage and Branding

Municipalities are beginning to also update and refresh their standards and branding for all of their municipal service areas including parks. The most visible aspect of this branding for the community is with signage for parks and recreation facilities. Having a consistent design for signage will foster a sense of consistency and unity for all parks and having it consistent with city-wide branding will make for a more coherent system. Wayfinding signage for parks can have several hierarchies including pedestrian oriented signage and auto oriented signage as well as interpretive signage within the park. There are some parks in the city which would benefit from enhanced signage, especially those that are located behind residential dwellings and have walkway only entrances that are hard to see from the sidewalk.

4.1.8 Stewardship

Resident volunteerism has the possibility of helping to alleviate burdens on a municipality by diverting some tasks for managing, operating and animating parks to park groups. Municipalities of all sizes are seeking opportunities to collaborate with public/non-profit groups, corporations, agencies, public/private partnerships for park development and stewardship. The presence of active neighbourhood groups and their healthy interest in matters related to city-planning,

environmental initiatives and parks and recreation is a positive sign towards the opportunity for stewardship of the Waterloo's parks. However, volunteerism is changing in the city, following general national trends in volunteerism and there is sometimes disinclination to use volunteers, due to the high level of support they require to undertake certain works, which often negates any financial savings from using volunteers. At times, the only benefit is the increased feeling of ownership and community involvement. Current stewardship projects in the city have focused on community gardens, outdoor rinks, cleanups and general park improvements including trail mulching.

The recently approved Neighbourhood Strategy outlines actions that the City is committed to taking to foster increased engagement with the community to help with stewardship efforts such as park placemaking, a program for community gardens, funding for outdoor rinks as examples. The City currently supports and manages its volunteer efforts through several funding programs, several staff support contacts and an Environmental Stewardship coordinator. Expansion from the current model will require additional resources and enhanced funding. As well concerns over liability and the cost to community organizations of obtaining insurance can place significant limits on what level of citizen involvement municipalities, including Waterloo, will entertain. If increased community involvement is to be considered, then a balance on these issues needs to be found.

There are examples from other municipalities of potential models for umbrella organizations that provide assistance in coordinating the efforts of different volunteer groups, identifying priorities and in applying for external funding. Examples include Toronto's Parks People, Evergreen Foundation (e.g. Neighbourhood Nature Play program in Kitchener) and the Calgary Parks Foundation.

4.1.9 Climate Change

Climate change effects are becoming more and more apparent throughout Ontario, and are impacting parks as well as other urban infrastructure. The intensity of storm events are increasing, as is their frequency for all seasons. Flooding and damage to trees and other stands of vegetation from high winds, rainfall and ice damage have been experienced across the province in recent years. Increasing annual temperatures are also bringing an increased threat to natural areas and urban vegetation from pests and other invasive species (animal, insect, plant). Now is the time to start thinking of how parks and open spaces can assist in the mitigation and management of the effects of climate change. The use of species that are resistant to drought, salt, wind and ice damage, implementing low impact development measures to slow down and collect stormwater in designated areas (bioswales, rain gardens, permeable paving) and using new technologies to bolster the health of and increase sustainability of urban trees, are just some of the strategies to increase the resiliency of parks and open spaces.

The City is currently developing a Corporate Climate Change Adaptation Plan. The Plan will be scoped to the effects of climate change on the infrastructure, assets and services that are the direct responsibility of the City. Through the identification of impacts, an assessment of

vulnerability and an assessment of risk, the Plan will identify adaptive actions to reduce vulnerability and risk and build resilience. It is anticipated that the Plan will be completed in 2019

4.1.10 Natural Areas in Parks

Implementing natural park areas are used to increase the amount of native vegetation cover, which is important for improving the health and quality of the environment and natural areas. These areas can also provide a buffer between actively managed areas such as lawns, sports fields from the more natural woodlots, or creek systems. Adding natural park areas is sometimes viewed as neglect by residents and thought of as no-maintenance by municipalities; however there is still a level of maintenance that is required to ensure that weeds and invasive species do not overtake the intended ecosystem and the desirable native plant species. There are times when municipalities have left their naturalized areas to themselves and they quickly become overgrown. Awareness of the need to maintain these spaces, as well as education for the population to know what is native and what is not, and the benefits of adding natural areas to parks, may help with continual monitoring of these spaces. Communities can monitor these spaces and be charged with litter pick up on their own. If provided with support, guidance and empowerment they can also participate in planting activities (trees, plants) with onsite staff to help mitigate risks. There is also an opportunity to provide education for identification of invasive species that can either be removed personally (on private property), or with staff supervision during public park events.

4.1.11 Cemeteries as part of Open Space System

As land supply decreases so does the opportunity for new publicly accessible open spaces and natural areas. Cemeteries are beginning to become part of the accepted open space system in many cities. Residents are starting to use their cemeteries as part of the parks and open space system, especially if it is well designed or historic. There have been instances when small events such as concerts or walking tours (self-guided or paid) have been located within a cemetery.

Toronto's Mount Pleasant Cemetery is a favourite spot for nearby condo dwellers for walking and cycling. They are also an interesting strategy to move forward with, since cemeteries will remain open green space for the foreseeable future.

4.1.12 Sport for Life & Long Term Athlete Development

Activities that enable skill development and year-round play are expanding, consistent with the Canadian Sport for Life and Long-Term Athlete Development models. Municipal parks and recreation departments tend to emphasize introductory and community-level sport activities along with multi-use spaces that can be enjoyed by people of various ages and abilities. Many of these facilities can be used by sport enthusiasts for training purposes as their activities can be easily adapted to common facility components. Traditionally, municipal facility provision has focused on the lower end of the spectrum of the Long-term Athlete Development continuum (shown below), which identifies several key stages of athletic development from basic fundamentals to world class competition. Most municipalities do not endeavour to develop elite

athletes, but rather provide sport facilities at a basic level to encourage lifelong participation ("active for life").



Figure 4: Long Term Athlete Development Model
Source: Sport for Life, 2017

In recent years, a number of governing bodies for sport have changed the playing dimension of their facilities at the lower end of the LTAD spectrum to focus on skill development rather than competition. Using rectangular sports fields as an example, this has created new pressures for land and parking as large fields have been subdivided and more players are using the fields at the same time (which in turn affects the amount of space available in a park for other active and passive recreational uses).

4.1.13 Partnerships with Other Providers

Many municipalities are pursuing partnerships with private or non-profit organizations to share capital costs and/or operating responsibilities when providing recreation services. Partnerships are also a way to increase the geographic distribution and reach of services to areas that may have been previously underserviced based on the finite resources of a single provider. Common municipal partners include school boards, post-secondary institutions, as well as quasi-public providers such as the YMCA and Boys and Girls Clubs; however, there are countless others depending on the municipality in question. Many affiliated user groups (such as minor sport organizations) can also be considered to be partners given their role in administering and delivering valuable programs in exchange for access to facilities at a reasonable cost. Formal partnerships between municipalities and user groups are also becoming increasingly common, particularly with respect to constructing/operating recreation facilities, such as artificial sports fields and club facilities like high quality tennis courts.

Partnerships are only viewed as a success when all parties benefit, and should not be considered as the only solution to meeting needs. No one partnership can be expected to be the same due to the wide range of circumstances, factors and risks that are at play in any given municipality for a particular facility or service provision opportunity. As such, partnerships should be vetted through consistent and transparent decision-making frameworks prior to pursuing them, including written agreements that clearly state the benefits, roles and responsibilities of each party, and the duration of the agreement.

4.2 Evaluation of Existing Policies & Practices

4.2.1 Park and Open Space Classifications and Provision Standards

Official Plan Open Space Land Uses

Chapter 10 of the Waterloo Official Plan outlines a vision for a high-quality urban environment in which Open Space is an important component, with objectives to "protect ecologically significant natural features and to provide a comprehensive and connected open space system that balances the needs of the community in terms of recreation/leisure, culture, transportation, infrastructure and environmental management." Chapter 10 further contains policies to generally guide the acquisition and development of municipal parkland in the City.

Open Spaces in the City of Waterloo are outlined in Chapter 10 of the Official Plan and include:

Parks and Other Green Space: This is the predominant use in the Open Space system and is comprised of all municipal parkland and trails as well as other open space areas including: hydro corridors; stormwater management facilities; conservation areas; environmental reserves; and, natural features and associated buffers.

Cemeteries: This land use includes cemetery uses and buildings or structures required for the operation and maintenance of the cemetery use or services. Cemeteries are still public spaces that should be used in a respectful way. Passive recreation should be incorporated near the edges away from active burials.

Golf Course: Predominant use is the golf course including manicured turf grass playing areas, driving ranges, putting greens, landscapes areas, natural areas and associated buildings and structures. Golf courses provide important habitat corridors and links within the natural system.

Natural System: Lands within this use include landscape level systems, core natural features, supporting natural features, fish habitat, restoration areas and linkages. There are natural systems which overlap with existing open space uses throughout the City.

Landfill: The current landfill is owned and operated by the Region of Waterloo and will continue to operate until it reaches capacity. At that time it will be rehabilitated and deeded to the City for use as future open space. Expansion or addition to this use is not permitted.

The open space land uses are illustrated highlighted in **Figure 5 – Official Plan Schedule A3 – Open Space Land Uses**.

Municipal Parkland Classification System

Within the Parks the Official Plan policies outline three main park classifications, as follows: [30]

City Parks: City parks are the City's largest parks and their size is dependent on land features, base facility and venue purpose. These parks project an image for the City, and are comprised of large recreation areas for both active and passive recreational opportunities.

Community Parks: Community parks are located, planned and designed with a city-wide perspective to serve a large population. The location of community parks may be based on natural resources rather than proximity to population.

Local Parks: Local parks are neighbourhood-oriented parks. Basic facilities could include informal active play fields, skating rinks, play facilities, seating, trails and landscaping.

Additional criteria with respect to size, location and provision targets can be found for City, Community and Local Parks in Table 10-1 Municipal Parkland Classification System, of the Official Plan, as follows. Other open spaces do not have targets as part of the OP.

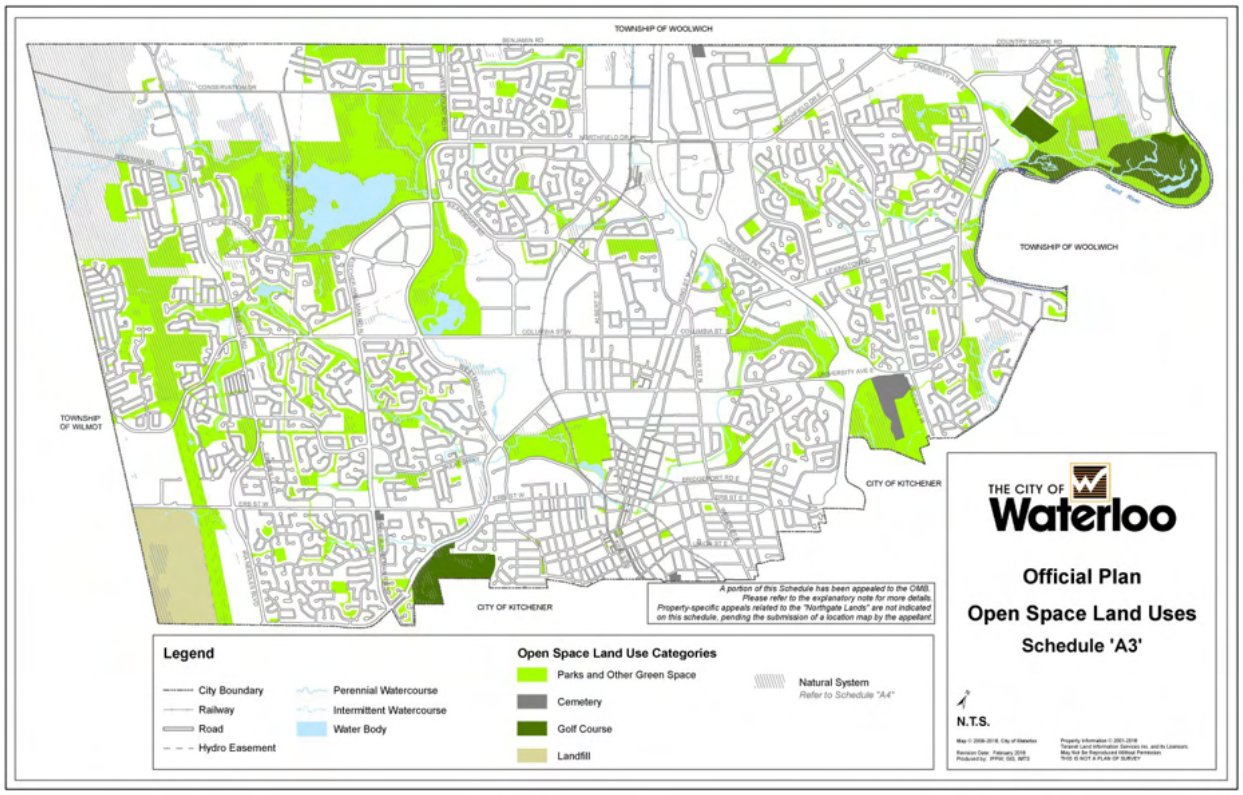


Figure 5: Official Plan Schedule A3 – Open Space Land Uses

[30] From " Section 10.5 – Open Space Land Use Policies" *City of Waterloo Official Plan*, pg. 218

Table 2: Existing Parkland Classification System

Municipal Parkland Type	Size	Minimum Hectares per 1,000 pop.	Accessibility per Distance	Location
City	Varies depending on land features, base facilities and venue purpose	3ha./1000	Serves the entire City and beyond	Prominent street frontage > 50m More than 3 access locations

The foregoing criteria are guidelines only and the Official Plan notes that "in certain situations, particularly in developed areas, it may not be possible to attain the guidelines. However, where renewal or redevelopment proposals are contemplated within areas where a municipal parkland deficiency has been identified, the City will endeavour to obtain additional parkland to satisfy or approach the guidelines."

Other Municipal Open Space Lands

Supplementing the Municipal Parkland Classification System are other forms of Open Space lands including stormwater management facilities, hydro corridors, conservation areas, environmental reserves, natural features, buffers associated with natural features, cemeteries and golf courses. These lands, which may not be managed as parkland or even City-owned, are identified as Open Space in the Official Plan as they "provide important connections and green space which contribute to the connectivity of the comprehensive open space system." They are as follows:

Environmental Reserves: Parks incorporating important environmental resources such as Environmentally Sensitive Areas (ESAs), Environmentally Sensitive Policy Areas (ESPAs), floodplains, meadows, woodlands, wetlands, hedgerows, etc., but not including Environmental Links. As a guide, wooded areas 2 hectares or larger contained in a park parcel would be placed in this class.

Environmental Links and Corridors: Any linear open or wooded spaces that connect to other open spaces by way of trails or corridors, but are not on the Trails Master Plan. These spaces may contain features of neighbourhood parks and/or environmental features and/or Creek Buffer Areas.

Stormwater Management (SWM) Ponds: Any park containing water retention ponds or constructed wetlands (these generally have little to no value as a neighbourhood park).

Other Park Classifications in the Municipal Inventory

In addition to the Official Plan designated municipal classifications for parks, the City also has additional types identified which further articulate the other types of parks in the city's inventory.

Culturally Significant Parks: Parks with cultural or historic significance and of City-wide importance.

Pedestrian Links and Linear Parks: Pedestrian links provide pedestrian and bicycle oriented travel from one destination to another, connecting parks and areas of the City. These trail systems will

constitute trail systems included in the Trails Master Plan. Linear parks may contain features of neighbourhood parks and trail systems and may or may not link areas of the City.

Special Agreement Parks: Park facilities that are developed, maintained and programmed by the City on private properties through a use agreement with the property owner. These include hydro corridors, school board property and private commercial/industrial lands.

Works Parks: Public works space used as parkland, and facilities maintained by Services (e.g. water pumping station lands.)

The Municipal Parkland Classification System contained in the Official Plan may be limiting for the city and there is a need for further differentiation in a revitalized list of park and natural area classes and types in addition to the parkland stated in the OP. The classifications should cover a range of uses and should look to new classes of urban parks to respond to intensification. Incorporation of some of the additional types of parks specified above may be something to consider.

4.2.2 Parkland Acquisition

Official Plan Policies

Parkland acquisition is provided for in the Official Plan through parkland dedication policies included in section 12.2.9 - Implementation Chapter and enacted through a Parkland Dedication By-law. The Official Plan requires that lands for park or other public recreational purposes, or cash-in-lieu of conveyance, shall be conveyed to the City, at the rate of:

- 2% of the lands to be conveyed to the City for park or other public recreational purposes as a condition of commercial and industrial development; and
- 5% of the lands to be conveyed to the City for park purposes or other public recreational purposes as a condition of all other uses unless the alternative parkland dedication rate applies.

The current OP consolidation allows for an alternative parkland dedication rate of **up to** 1.0 hectare per 300 units, and applied at the City's discretion to proposals for residential development, as well as residential portions of mixed-use developments. This policy is further articulated in the City's Parkland Dedication By-law. (See Section 5.2.2 Parkland Dedication Bylaw).

Cash-in-lieu of parkland is to be paid to the City for the value of the required conveyance where no suitable lands are available on the subject property, or where more suitable lands are available outside the subject property and which are accessible to the residents of the area. The amount of cash to be accepted in lieu of parkland dedication is to be based on the appraised market value of the land as set out in the Planning Act.

Parkland Dedication By-law

Specifics of the City's parkland dedication policies, pursuant to the Official Plan, are contained in the City's Parkland Dedication By-law. In 2011 the City approved a revised Parkland Dedication By-law based on 0.15 hectares per 300 units as the "Alternative Rate". The City did not change its cash-in-lieu of parkland fee for non-residential uses (industrial and commercial projects) that is limited to 2% land value. The City also maintained the 5% land area parkland requirement for new subdivisions.

In 2015 a comprehensive review of the 2011 Parkland Dedication By-law was completed (CAO 2015-012 and 012.1 Parkland Dedication By-law and Policies Report); in the context of evolving market conditions and escalating urban land prices. The 2015 review included a number of recommendations for Council approval such as changing the fees and rates for Uptown, as follows:

- Reduce the Uptown cash-in-lieu of parkland fee for infill housing by approximately 33% from 0.15 hectare per 300 units to 0.10 hectare per 300 units.
- The amendment of Parkland Dedication By-law 011-92 (as amended by By-law No. 2011-098) including: amend the Uptown Alternative Rate for any residential project from 0.15 ha per 300 units to 0.10 ha per 300 units until December 2019.

Provincial Legislation

In 2016 new legislation was enacted through Bill 73, Smart Growth for Our Communities Act which, in part, impacted the rate at which cash-in-lieu can be collected for higher density development pursuant to Section 42(3) of the Planning Act, particularly as it pertains to revising the previously allowable amount of 1 ha/300 units (or such lesser rate as may be specified in a parkland dedication by-law) to a maximum of 1 ha/500 units. With the enactment of the 2011 Parkland Dedication Policy and subsequent revisions in 2015, the City of Waterloo was in compliance with this change.

With a new provincial government in place in 2018, further changes are proposed under Bill 108, The More Homes, More Choice Act, 2019. Based on the current Act these changes are anticipated to affect both the Planning Act and Development Charges Act, and are widely believed to negatively impact the provision of parkland and community facilities and to increase the financial burden on a municipality. The changes to existing municipal policies and practices will be reviewed as part of the Parkland Strategy.

4.2.3 Park Development & Redevelopment

Official Plan Policies

Waterloo's park system comprises parks of varying ages, and the City has a demonstrated commitment to both new park development as well as the upgrading and improvement to existing parks in response to facility replacement needs, leisure trends and community interests.

Planning and decision-making is informed by a series of tools which are described in the Official Plan.

Section 10.5.2 identifies that the City will plan, design, operate and maintain "a wide range of municipal parkland intended for, and accessible to, a range of users, and giving consideration to:

- Four season use;
- Active and passive use; and
- Partnerships with institutional uses to facilitate joint usage of park spaces.

Policies contained in the Waterloo Official Plan direct that matters related to parkland development are "outlined in the *Landscape Design Process and Requirements Manual*, the *Development Services Engineering Manual*, and the *Recreation & Leisure Services Master Plan* and any other applicable implementing tools, as updated from time to time".

Waterloo's Official Plan policies also provide for a comprehensive and connected trail network that accommodates pedestrian, bicycle and other forms of non-motorized travel, in both on-road and off-road trails and cycling facilities. When planning for off-road components of the trail network, the City's policies identify that trails will connect and complete the park and open space system within the City of Waterloo and to adjacent municipalities. Trails will be located in all new park developments and may also be considered in other open space linkages, including stormwater management areas, creek valley lands, utility corridors or other areas as deemed appropriate by the City.

High-level trail connections throughout the City are illustrated on *OP Schedule 'F' – Active Transportation*, and addressed in more detail in implementation documents including the *Community Trails and Bikeways Master Plan* and *Transportation Master Plan*. A review of the City's trails is not a specific requirement of the Parkland Strategy.

4.2.4 Cemetery Services

The Bechtel Park Master Plan (2009) provides strategic direction, recommendations and the implementation plan for Parkview Cemetery and Bechtel Park. The Master Plan looks to balance a variety of needs for the city including cemetery services, sports facilities, park space, and natural areas.

Given that it is approaching 10 years old, the City should consider an update in the next few years. The update should include but not be limited to:

- Status of actions, recommendations and accomplishments of the current approved plan, including: understanding current burial capacity and growth needs, various types of burial services, services offered at both cemeteries in Waterloo, and the potential need for an additional cemetery site and the issue of very limited land supply available for expansion.

- What opportunities exist for revenue generation, including opportunities for new burial sites and locations as well options such as columbarium, memorial trees and benches.
- Improved marketing and sales.
- Current and long term use of Bechtel Park for sports fields.

4.3 Inventory & Evaluation of Supply

4.3.1 Existing Park Inventory

Over the years and through its developments and initiatives to date the City of Waterloo has been able to achieve an impressive parkland system which is comprised of more than 1000 ha of parks, open space and environmental areas.

Figure 6 illustrates the location and distribution of different types of parks and open spaces across the City. **Table 3** following shows a breakdown of the parkland within each of the park classifications and open space types that are used in the City's parkland inventory and mapping. It is important to note that in the City's inventory the parkland and open space areas are of the entire parcel and do not net out land occupied by indoor recreation facilities, buildings, parking lots or stormwater management pond areas which limit the usability of the park space.Furthermore, additional parcels that are currently maintained by Parks, but are not used as parks are also included. The inclusion of all these parcels skews the data related to the amount of available park space, and the per capita parkland calculation. A revised inventory is needed that corrects these discrepancies.

Upon first glance there appears to be a variety of parkland spread throughout the city with a variety of uses. Further analysis has been done and is explained in proceeding sections.

Table 3: City-wide Inventory of Parkland & Open Space

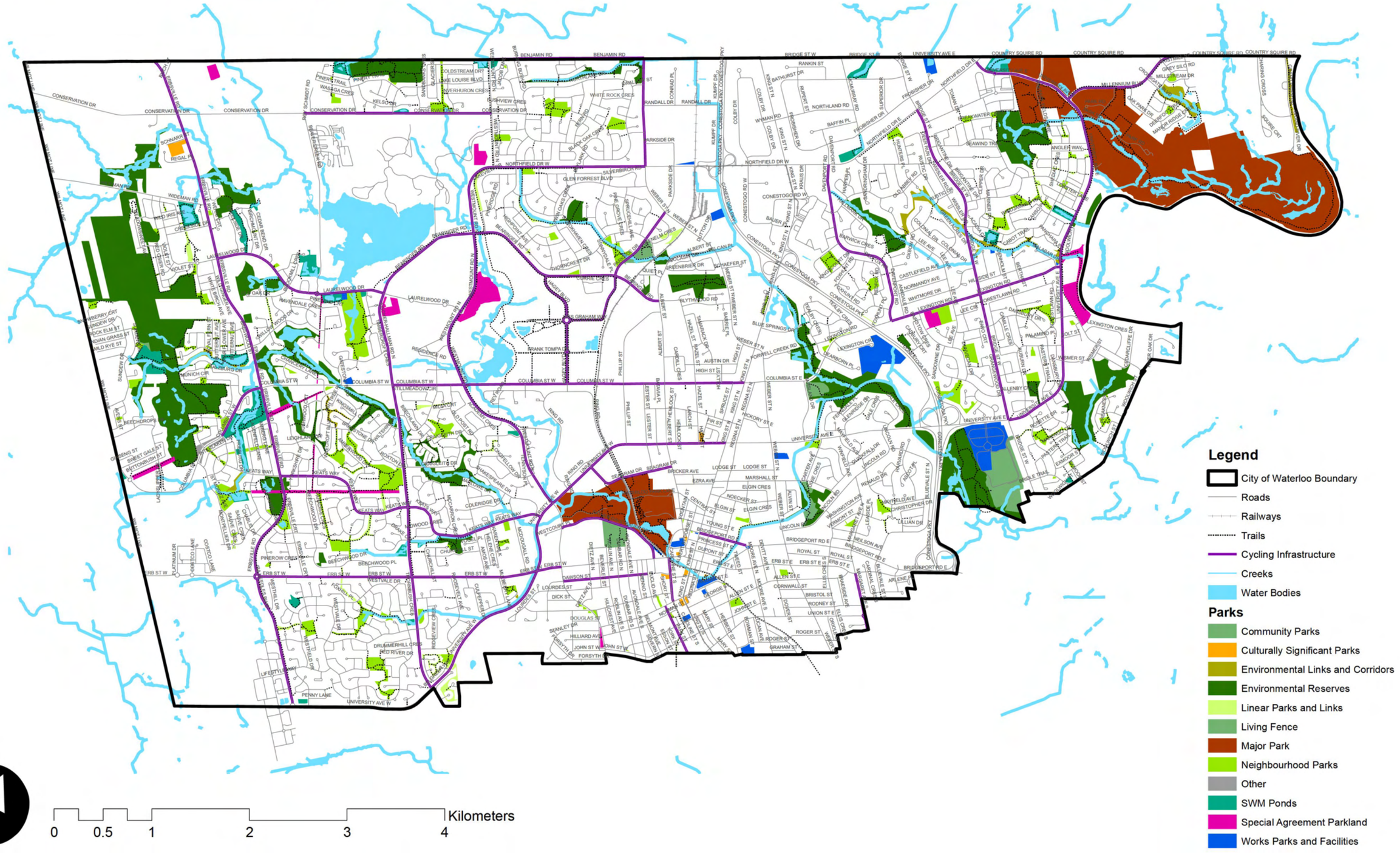
Parkland Type	Area (ha)
Parks (Official Plan Classifications)	
Community Parks	33.53
Neighbourhood (Local) Parks	105.84
Major Parks	267.94
SUBTOTAL 'OP' PARKS	***407.31***
Other Parks	
Culturally Significant Parks	3.94
Special Agreement Parkland	98.05
Linear Parks and Links	17.97
SUBTOTAL OTHER PARKS	***119.96***
TOTAL COMBINED PARKS	**527.27**
Environmental Open Space	
Environmental Reserves	381.85
Environmental Links and Corridors	23.59
SWM Ponds	54.95
Cemeteries	14.85
SUBTOTAL ENVIRONMENTAL OPEN SPACE	***475.24***

Parkland Type	Area (ha)
TOTAL CITY WIDE PARKS AND OPEN SPACE	1,002.51

Just over half of all the parkland in the City of Waterloo is classified within one of the municipal parkland classifications from the OP as well as Culturally Significant Parks, Special Agreement Parkland and Linear Parks and Links. This leaves just under 50% as Environmental Open Space. Natural areas can occur in both traditional parks as well as environmental open space.

City of Waterloo Parkland Strategy

Figure 6 - Existing Parks and Open Space



Planning Districts

In addition to the City-wide analysis, it is helpful to look at the parkland in terms of smaller geographic areas to determine if there is equitable supply across the city and not just as a whole. This will help the City identify areas which may not have access to parkland, and set these as priority areas for increasing the local level supply. Census Planning Districts have been used because of availability of population data. Refer back to **Figure 1 for a map of the Planning District Boundaries**. The inventory of the parkland supply at a Planning District level is provided in **Table 4**, following.

Table 4: Summary of Existing Parkland by Planning District

Planning District Name	Size (ha)	Local Parks (ha)	Comm. Parks (ha)	Major Parks (ha)	Other Parks (ha)	Env. Open Space	Works & Facilities Space*
Beechwood	320	6.3	-	-	4.03	17.86	0.02
Beechwood West	269	15.32	-	-	8.52	18.41	-
Central	414	5.41	2.20	48.43	3.47		3.98
Clair Hills	468	7.01	-	-	2.15	25.64	1.37
Columbia	283	-	-	-	0.80	11.58	-
Columbia	297	5.06	-	-	1.50	135.25	-
Conestoga	295	0.36	-	-	-	-	1.48
Conservation	711	3.73	-	-	5.56	32.59	-
Dearborn	172	0.44	2.90	-	-	11.22	10.84
Eastbridge	275	6.84	-	-	1.09	32.45	-
Lakeshore	200	4.69	3.47	-	4.91	4.41	-
Lakeshore North / Conservation	171	6.81	-	-	-	7.18	-
Laurelwood	277	14.03	-	-	1.18	45.86	0.83
Lexington	309	6.66	-	-	7.93	27.72	0.21
Lincoln	465	12.69	18.94	-	2.54	44.96	13.80
Northland	160	-	-	-	-	4.99	1.70
Rural East / Country	371	1.00	-	219.51	63.60	7.77	-
University	388	-	-	-	11.08	-	-
Westmount	170	0.34	-	-	0.42	-	-
Westvale	195	9.49	-	-	1.03	1.86	-
Willowdale	317	2.72	2.80	-	0.15	30.09	0.84

*Note: Works and Facilities space includes non-park lands owned by parks, cemeteries, and lands surrounding city facilities such as City Hall, Library, pump stations, etc.

4.3.2 Existing Parkland Supply Standards

Measuring the parkland per capita is a common and useful tool for monitoring how a municipality is achieving its goals in comparison to both historical standards of supply and future projections. The Region's Year-end 2017 Population and Household Estimates for Waterloo Report identified a City of Waterloo population of 137,420. The estimate is based on the 2016 Census and includes adjustments for recent residential development, students, foreign/temporary residents, net Census undercount and vacancy rates. As stated student populations are typically not included in service level calculations, however off-campus post- secondary population directly impact Waterloo's parkland system use and demands. Due to this reason, the Region's current year estimate has been adjusted to remove on-campus student populations and add back in students that are Waterloo residents that leave the City for post-secondary studies, resulting in a **2018 citywide population estimate of 129,070 persons.**[31] This 129,070 population figure was used to calculate the current parkland provision levels on a City- wide basis (ha / 1000 population). Please refer to **Table 5** which explores provision levels city- wide.

Table 5: Existing City-Wide Parkland Provision Levels (2018 Population)

Parkland Type	Area (ha)
Parks (OP Classifications)	
Community Parks	33.53
Local (Neighbourhood) Parks	105.84
City (Major) Parks	267.94
SUBTOTAL 'OP' PARKS	407.31
Total ha/1000 pop'n	**3.16**
Other Parks	
Culturally Significant Parks	3.94
Special Agreement Parkland	98.05
Linear Parks and Links	17.97
SUBTOTAL OTHER PARKS	119.96
TOTAL COMBINED PARKS	**527.27**
Total ha/1000 pop'n	**4.09**

According to the OP the current overall city-wide target for parkland is 5ha / 1000 population which is based on the summation of Neighbourhood Parks (Local Parks), Community Parks and Major Parks. Neighbourhood and Community Parks have a target of 1ha / 1000 population target and City Parks (Major Parks) have a target of 3 ha / 1000 population target.

[31] City of Waterloo, Integrated Planning and Public Works Department, Growth Management Division. Email dated December 10, 2018.

As **Table 5** illustrates, if only the three classifications of parks contained in the Official Plan (OP) Parkland Classification System are utilized to calculate the current provision level, it equals 3.16 ha / 1000 population which is below the target of 5ha / 1000 population.

If the other parks in the City's parkland inventory are included, including the Culturally Significant Parkland, Special Agreement Parkland and Linear Parks and Links, this brings up the current provision level to 4.09 ha / 1000 population, which is closer to the City-wide target, but still falls short.

This means that even though the current supply standard is 3.16ha per 1000 population, which is comparable to cities like Mississauga, the city is currently well below its own target of 5ha / 1000 for its current population. The discrepancy is such that it would be nearly impossible to achieve the current target for the forecasted future population. The issue lies with the 5 ha / 1000 population provision target, which likely historically included all types of open space. Notwithstanding the discrepancies in the parkland inventory, which includes some non-park parcels, there is currently a good amount of parkland when viewed city-wide in Waterloo.

4.3.3 Comparison with Other Municipal Service Levels

Three nearby municipalities were examined to assist in evaluating Waterloo's parkland supply: City of Kitchener, City of Guelph and City of London. The statistics for parkland provision are summarized in **Table 6.**

Many residents of the City of Waterloo report using parks and recreational facilities in the City of Kitchener and have cited them as examples when explaining parks and facilities they would be looking for in Waterloo.

Table 6: Summary Record of Parkland Visited

Park Name	Classification	Location (Planning District)	Condition
Anndale Park	Environmental Reserve	Lincoln	Good
Auburn Park	Neighbourhood Park	Lexington	Fair
Barrel Warehouse Park	Culturally Significant Park	Central	Good
Bechtel Park	Community Park	Lincoln	Good
Black Cherry Park	Neighbourhood Park	Columbia Hills	Good
Blue Beech Link/ Square	Neighbourhood Park / Linear Park & Links	Columbia Hills	Good / Fair
Brighton Park	Neighbourhood Park	Central	Fair
Chesapeake Park	Neighbourhood Park	Eastbridge	Fair
Clair Lake Park	Environmental Reserve	Beechwood	Good
Culpepper Park	Neighbourhood Park	Beechwood	Good
Deer Run Park	Neighbourhood Park	Lincoln	Good
Grey Silo	Neighbourhood Park	Rural East / Country	Good

Park Name	Classification	Location (Planning District)	Condition
Community Park		Squire	
Haida Park	Neighbourhood Park	Eastbridge	Good
Heasley Park	Neighbourhood Park	Lakeshore	Good
Hillside Park	Community Park	Dearborn	Good
Kingscourt Park	Neighbourhood Park	Lincoln	Good
Laurel Creek CA	Conservation Authority	Conservation	Good
Laurel Creek Forest	Environmental Reserve	Laurelwood	Good
Lexington Park	Neighbourhood Park	Lexington	Fair
Lookout Park	Neighbourhood Park	Clair Hills	Fair
Mary Allen Park	Neighbourhood Park	Central	Good
Maverick Park	Neighbourhood Park	Lexington	Good
Moses Springer Park	Community Park	Willowdale	Good
Old Oak Park	Environmental Reserve	Laurelwood	Fair
Old Post Park	Neighbourhood Park	Beechwood	Good
Pinebrook Park	Neighbourhood Park	Lakeshore North / Conservation	Good
Red River Park	Neighbourhood Park	Westvale	Good
Regency Park	Neighbourhood Park	Beechwood West	Good
RIM Park	Major Park	Rural East / Country Squire	Good
St Moritz Park	Neighbourhood Park	Clair Hills	Fair
Sundew Park	Neighbour-hood Park	Columbia Hills	Good
Thorndale Park	Neighbourhood Park	Beechwood	Fair
Wasaga Park	Neighbourhood Park	Conservation	Good
Waterloo Park	Major Park	Central	Good
West Wind Park	Neighbourhood Park	Westvale	Good
Westvale Park	Neighbourhood Park	Westvale	Good

4.3.4 General Assessment of the Parks

Overview

During the summer of 2018, a cross section of parkland within Waterloo was visited. A list of 36 parks and open spaces, which approximates 25% of the overall inventory, was generated with the help of City staff. The local / neighbourhood / environmental parks were visited on weekday afternoons, and the larger parks were visited and assessed on the weekend in order to capture a variety of users and events.

There were also opportunities during consultation events and through the online platforms for the public to identify specific parks that they would like to see improvements applied to. These as well as initial visits by the core project team provided a sense of the parks inventory and a cross-section of conditions found within different parks.

Parks Visited

The breakdown of the parks which were visited by the project team included: 2 major parks, 3 community parks, 1 culturally significant park, 24 neighbourhood parks and 6 environmental areas, totalling 36 parks and open spaces. The City also sent frontline staff out during the summer to survey individuals using the parks and trails. They went out on 8 separate occasions and visited 5 different locations (Mary Allen Park, Waterloo Park (3 separate visits), Hillside Park / Trails, Waterloo Public Square (2 separate visits), and North East Trails between RIM Park and Eastbridge Green. The City staff visits involved surveying individuals using the parks. The following is a summary of the typical comments received:

- Accessible playground equipment (swings.);
- Outdoor fitness equipment;
- More dogs off-leash areas;
- More seating in parks and along trails;
- More shade in parks; and
- More splash pads are needed.

During the project staff park visits, a high level assessment was completed noting the types of amenities in the park, the perceived general condition of the park, and a record of how many users were in the park at that time. The project field staff determined that of the parks surveyed most (26) were in good condition, however 10 were identified as only in fair condition (refer to Table 7). When a park was deemed 'fair' it was largely due to issues of maintenance regarding garbage cans, graffiti. In some cases it was because the equipment appeared to be aging. If there were visitors in the park they were also given the opportunity to complete a short survey regarding their use of the parks in Waterloo and improvements they may want to see. Refer to **Appendix B** for a chart summarizing the Visitor Park Record.

Table 7: Comparative Service Delivery Summary

Municipality	Area (sq. km)	Population	Inventory	Provision Level Targets (per 1000 population)
City of Kitchener	136.77	232,222[32]	• 1,519 ha (includes parkland, trails and natural areas) • 348 public parks	• 1.5 ha • 1 neighbourhood park or playground within 5 minute walk (400-500m)
City of Guelph	87.2	131,794	• 302 ha of parkland	• 3.3 ha of parkland
City of London	420	383,822	• 2,645.1 ha parkland • 465 parks	• 3 ha of neighbourhood and district parkland
City of Waterloo	64	129,070	• 1,002.94 ha • Over 260 parks and open spaces	• 5 ha / 1000

4.4 Issues, Opportunities & Constraints

4.4.1 Park Classifications

There is a need to examine the City's parkland classification system and associated locational, design and development criteria. Currently there are only three park classifications outlined in the Official Plan, with several more park types that are commonly in use by the City for inventory and mapping purposes. In developing a new classification system consideration needs to be given to the range, type and distribution of parks that best reflects the City's current inventory. There are currently only five Community Parks identified in the City's inventory and only half of the 'community parks' fit the size requirement in the classification. Consideration of whether or not this particular classification is still useful should be made moving forward with this strategy.

A revised park classification system will specifically address parks in areas of growth and intensification. To reflect the reality of parkland dedications in these areas the classification systems will consider smaller urban parks and public spaces.

4.4.2 Parkland Provision Targets

The provision target for parkland in the Official Plan is 5 ha / 1000 population, based on the current park classifications of City, Community and Local Park. In reviewing the City's inventory and provision levels it appears that the current service level for these types of parks is between 3 and 4

[32] https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?B1=All&Code1=3530013&Code2=35&Data=Count&Geo1=CSD&Geo2=PR&Lang=E&SearchPR=01&SearchText=Kitchener&SearchType=Begins&TABID=1

ha / 1000 (3.16 ha / 1000) and that historically other types of open space have been included in order to get close to the target. Typically park provision levels relate to municipally- owned properties that are developed specifically for parks purposes. The current provision level is not considered a sustainable or achievable goal when only the classifications under the OP for municipal parks are used. The 5 ha / 1000 provision level target should be re-evaluated as well as which parks will contribute to its achievement.

The following are opportunities for changes to be made to the parkland provision standard that will be considered moving forward:

- Adjustment of the city-wide target to be in line with the current inventory of the OP classification of parks;
- Adjustment of the target criteria to include some or all of the other park types (Culturally Significant Parkland, Special Agreement Parkland and Linear Parks and Links) included in the City's inventory in order to reach the OP target provision level (5 ha / 1000 population); or
- Adoption of a new (as yet to be determined) provision target, city-wide and/or specifically for intensification areas.

4.4.3 Location and Distribution of Parkland

Outside of the District Plans which have been prepared over the last several decades the City currently does not use smaller boundaries to help analyse whether or not a community is adequately or underserved. It is difficult to make such assumptions at a city level. For the purposes of the parks analysis in this report, the consultant team used Planning Districts as geographic areas to assess parkland supply. However, although this is helpful to inform areas undergoing growth and intensification, an evaluation of Planning Districts across the city may raise undue concerns about underserviced neighbourhoods. As well, small geographic areas are not well suited for the location of community-oriented services and facilities.

Moving forward the City may wish to consider the adoption of a service area type model specifically for parks and recreation purposes. This approach has been used in both the City of Mississauga and the City of Brampton. This approach could be beneficial for the City of Waterloo both in parks and recreation facilities planning (both indoor and outdoor) as well as in the delivery of programs. It may also be useful to parks operations although maintenance facilities are generally not organized or located on the same catchment areas as parks and recreation facilities.

4.4.4 Accessibility

Currently under provincial legislation the development of new parks will need to adhere to the standards for accessibility as set out by the AODA and the Design of Public Space Guidelines to ensure that anyone in the community can have access despite their abilities. As well there are regulations inn place relating to accessibility of new outdoor play spaces (i.e., playgrounds). These require that new playgrounds "*incorporate accessibility features, such as sensory and active play*

components, for children and caregivers with various disabilities". Accessibility upgrades to existing parks and trails will need to consider this (or any revised) provincial legislation as well as the required capital investment.

4.4.5 Connectivity

Ensuring that there is an equitable distribution of parks and amenities and making a meaningful effort to fill in the gaps using appropriate and achievable park provisions standards will be an important component of future parkland acquisition.

It is equally important to consider connectivity between parks and throughout the system in order to provide a continuous network of parkland and open space wherever possible. This will facilitate development of trails for both recreational and active transportation purposes, allow for diverse experiences for residents, and, from an ecological standpoint, will provide connected habitats for wildlife and promote biodiversity. It is understood that the City of Waterloo will be conducting an update to the Transportation Master plan which will include the trail network in addition to roads.

4.4.6 Parkland in Areas of Intensification

With the forecasted population it will still be important for the City to provide new opportunities for parkland. This includes priorities for acquisitions and parkland dedication for new and existing areas of the city that will experience growth through infill development and intensification.

Intensification is happening in the city in the growth areas, the nodes and corridors and in proximity to the LRT Station Areas through Transit Oriented Development. Development in these areas is expected to be at a higher intensity which creates the need for more complex urban open spaces. Opportunities for the development of Privately Owned Publicly accessible Spaces (POPS), including grade-level parks built on over underground parking garage infrastructure ('Strata' Parks), may be considered as elements of the future park system. These types of urban parks may also function as outdoor community centres, as replacement for private back yards, and people will be experiencing them as they wait for transit. There needs to be further refinement of policies and unique service standards for these spaces as they require different attention than traditional neighbourhood parks.

4.4.7 Programming and Activation

Programming and activation are important elements which make parks more attractive and better utilized by residents. Early discussions suggest that the City should consider looking into providing city-run programs in the parks (yoga, Zumba, fitness classes, boot camps, sports clinics) as well as providing other animating and activating features such as different types of festivals, art installations, food services, public art, light installations etc. With new programs, there will be a need to create roles and fill them as needed either with existing staff or new staff to facilitate the programming and activation. This could be coordinated with the need for enhanced customer service needs for booking events and amenities at the City which historically has been an issue.

There are also opportunities for the city to provide amenities which speak to cultural appreciation. It could be through permanent and physical elements such as: art installations, gardens,

interpretive signage, themed playground infrastructure or park amenities can go to tell different stories for different themes. There could also be more temporary elements such as smaller events and festivals, or art-in-the park type activities. Other opportunities include creating pop-up parks in corners of underutilized parking lots, and re-purposing streets, either permanently or temporarily, as shared spaces for vehicles and people. These types of temporary parks could be used to supplement permanent parks at peak use times in existing under-serviced areas, as well as in neighbourhoods experiencing intensification where the acquisition of new parkland may be challenging.

4.4.8 Inventory Management

An up to date municipal inventory and associated mapping are important for identifying the number and type of existing parks and recreation facilities, their location and geographic distribution, and whether they are local, community or city-serving. This database can also be used to inform operational and maintenance procedures and equipment conditions assessments. Many municipalities, including Waterloo are moving toward having maps and facilities information available to the public through on-line viewing or interactive mapping, which makes an up to date inventory even more important. The parkland analysis revealed discrepancies between the City's inventory and its GIS mapping, including the inclusion of open space areas which are maintained by the City but which do not constitute parks. This was resolved to the extent possible in order to move forward with the parkland analysis, but may not yet be fully resolved. Inclusion of non-park space such as buildings and other infrastructure in park area calculations may result in overstating the existing supply, which can be critical when evaluating parkland at a local area level. As well there may be a further need to refine the parks and facilities inventory to better inform the City's asset management plan. The age and maturity of the City's current park assets presents challenges for the Division in planning for and addressing its infrastructure renewal.

4.4.9 Response to Change

The overall population and socio-demographic make-up is changing province-wide and most notably in areas that are targeted for growth. The City of Waterloo has several considerations to make in this regard, including the aging (in-place) population, young families (with and without children), students, and newcomers. New and redeveloped parks should consider the current and anticipated demographics of the City and include facilities and amenities that appeal to different ages and interests. However, they should also have the ability to be flexible to change in the future. This includes the provision of multi-use spaces that provide informal opportunities for recreation, programming and events. These may include the use of 'pop-up' park spaces or temporary sport facilities, such as portable (boxed) mini-soccer fields, such as have recently been installed in Mississauga, or moveable skate parks, that meet a specific need of a neighbourhood at a particular time.



City of Mississauga Portable Soccer Field. Source: Metro News

4.4.10 City-Wide Parkland Needs

In the Community Profile section, it was noted that the City is expected to reach a population of **158,770 by the year 2031**. Notwithstanding that the City has a generous existing supply of parks and open spaces, the parks system will need to keep pace with population growth in order to continue to meet the needs of its residents. In particular, areas undergoing infill development and intensification will need new or upgraded parks to maintain existing service levels, and to support anticipated residents' expectations. **Table 8** notes the existing provision level for parkland and the needs for the current and future populations. It is important to note that the forecast of parkland for 2031 is based on the 5 ha per 1000 population target and includes the current shortfall as well as the forecasted need. It is provided to demonstrate the issue of the high OP provision level target and will be revisited in the Parkland Strategy.

Table 8: Forecast of City-wide Parkland Needs (2031 Population)

Parkland Type	Area (ha)
Parks (OP Classifications)	
Community Parks	33.53
Local (Neighbourhood) Parks	105.84
City (Major) Parks	267.94
TOTAL 'OP' PARKS	***407.31***
Total ha/1000 pop'n	*3.16*
Assessment	
Existing Parks (OP Classifications only)	407.31
Parkland required to support 5ha / 1000 pop'n	645.35
Shortfall / Additional needed (ha) for current population (2018)	**238.04**
Additional needed (ha) for future population (2031) ***including current shortfall.*	**386.54**

The analysis of existing provision levels reveals that the City is already experiencing a shortfall of approximately 238 ha relative to its historic provision target of 5 ha / 1000 population, which pertains to the Municipal Parkland Classifications in the Official Plan. If this target is maintained there will be a need for another 149 ha on top of the 238ha to achieve 386.54 ha in order to meet the needs for the forecasted population growth of close to 29,700 residents by 2031. This is not a sustainable objective given that there is a limited land supply city-wide in which to look for new parkland. As well most of the growth is anticipated in the urban core where land costs are high, and parkland dedications yielded from development are anticipated to be small.

While the OP target as a total is high, the current provision level for City (Major), Community and Neighbourhood (Local) Parks at 3.16 ha / 1000 population is reasonable in comparison to the target objectives of nearby municipalities. For example the City of London targets 3 ha / 1000 population and the City of Guelph targets 3.3 ha / 1000 population (Refer to **Table 7** in Section 4.3.3. The City of Kitchener which has a similar definition of parkland including all municipally owned and/or operated parks, natural areas, trails and outdoor recreation facilities and amenities, actually has a lower target of 1.5 ha / 1000 population which can be compared to the targets of higher population cities such as Toronto, Brampton and Mississauga.

It should be noted that in most municipalities provision targets are typically limited to municipally-owned parks that are acquired and developed specifically to serve recreation purposes. Leased lands or lands which may have been acquired for environmental purposes often supplement the parkland supply. Further examination of the 'Other' park categories in use in the City will need to be made to determine if any or all meet criteria to be considered parks. A refinement of the City's classification system will be completed through the Parkland Strategy.

As well municipalities with lower per capita standards have typically excluded land associated with indoor recreation centres or other City facilities from the inventory in order to better reflect the actual parkland supply. This will be an important exercise for Waterloo to complete.

4.4.11 Planning District Parkland Needs

Notwithstanding the city-wide assessment of future parkland needs it is anticipated that an assessment at a more local level will be more useful in planning for growth. Based on the availability of population data it was determined that this evaluation would be made at a Census Planning District level. **Table 9**, following, provides a forecast of parkland needs to 2031 for each Planning District, the population data has been rounded to the nearest 10. Since Planning Districts are relatively small geographic areas, for the purposes of this forecast, only the Neighbourhood (Local) Park provision target of 1 ha / 1000 population has been used. This represents a more realistic, albeit challenging, measure of parkland supply. Eleven of the 21 planning districts will be experiencing a shortfall for the anticipated 2031 population.

As already noted in the Community Profile section of this report, the population figures are based on the Census, include a Census undercount but do not include students who are temporarily living in the City to study at post-secondary institutions. According to the 2017 DC Background Study the

off-campus student population was approximately 17,500 and is estimated to be 18,700 in 2031. Although students live throughout the City, they are most concentrated in the City's near-campus neighbourhoods, primarily in the Central and Columbia Census Planning Districts.

Note for Table 9 –Planning Districts highlighted in green have >15% expected population growth from 2016 to 2031. Negative values in the last column denote a Planning District which has more than the amount of parkland required to support 1ha per 1000 population.

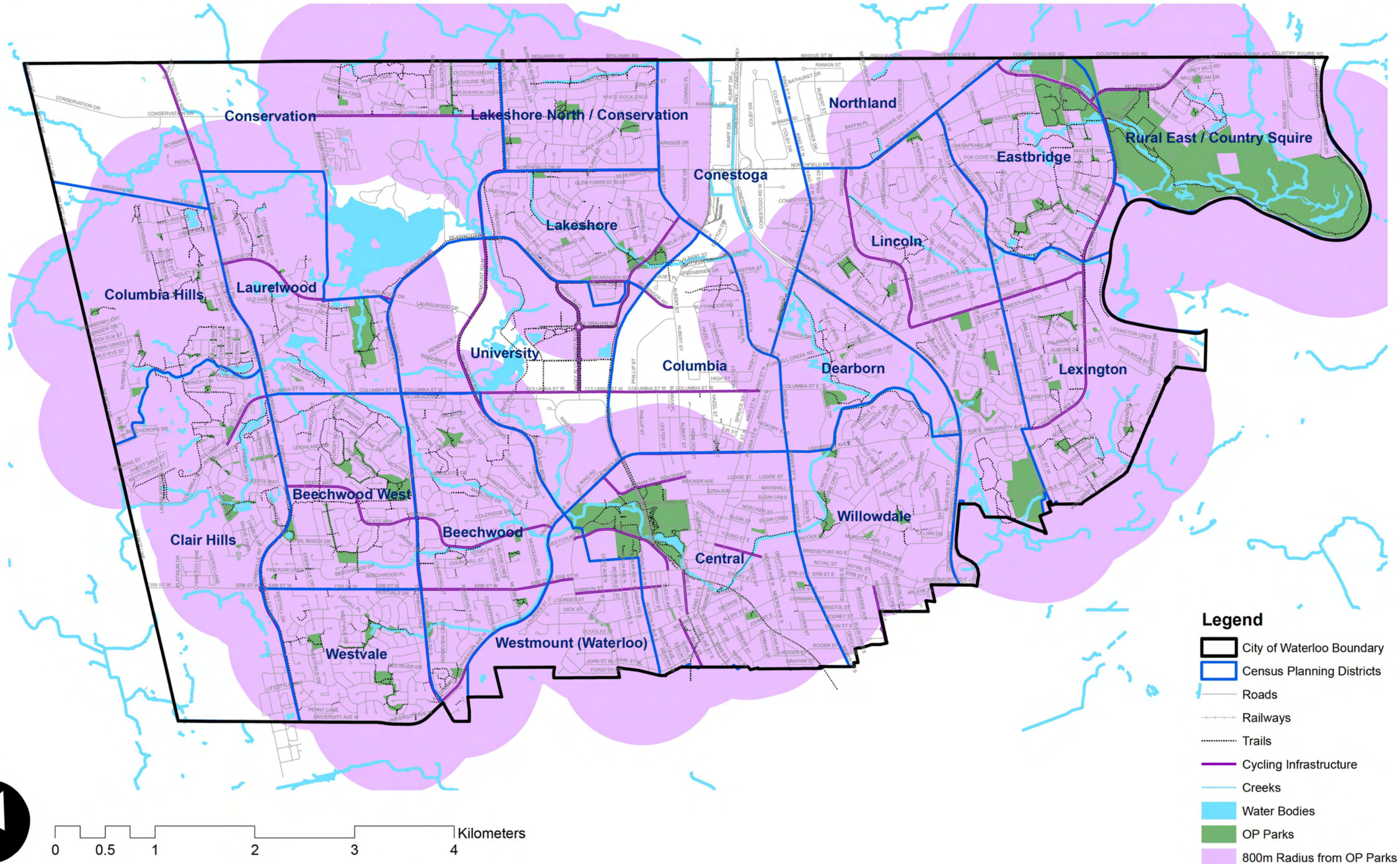
Table 9: Forecast of Local Parkland Needs by Planning District (2031 Population)

Planning District Name	2016 Pop'n	2031 Pop'n	Local / Neighbourhood Parks (ha)	Parkland required to support 1ha/1000	Shortfall / Additional Required (ha)
Beechwood	9,550	9,970	6.3	9.97	**3.67**
Beechwood West	7,430	7,6780	15.32	7.68	-7.64
Central	9,830	18,700	5.41	18.70	**13.29**
Clair Hills	1,490	1,330	7.01	2.18	-4.83
Columbia	7,060	8,090	0	8.89	**8.89**
Columbia Hills	9,280	13,740	5.06	13.74	**8.68**
Conestoga	0	260	0.36	0.26	-0.10
Conservation	3,500	7,580	3.73	7.58	**3.85**
Dearborn	1,690	2,370	0.44	2.37	**1.93**
Eastbridge	7,300	6,170	6.84	6.17	-0.67
Lakeshore	6,380	6,620	4.69	6.62	**1.93**
Lakeshore North / Conservation	5,600	5,710	6.81	5.71	-1.10
Laurelwood	5,490	5,630	14.03	5.63	-8.40
Lexington	7,050	8,370	6.66	8.37	**1.71**
Lincoln	8,960	11,020	12.69	11.02	-1.67
Northland	0	150	0	0.15	**0.15**
Rural East / Country Squire	580	2,560	1	2.56	**1.56**
University	720	2,120	0	1.33	**1.33**
Westmount	2,650	2,660	0.34	2.66	**2.32**
Westvale	6,960	7,660	9.49	7.66	-1.83
Willowdale	7,880	9,760	2.72	9.76	**7.04**

Official Plan section 10.5.2.1 (5) states that parkland should be acquired based on locational criteria in addition to population based targets. It states that wherever possible parkland shall be acquired according to the guidelines found within Table 10-1, for example Local Parks should be located within 600-800m of residential areas. This may be a more achievable and realistic target for new parks and public spaces in small geographic areas experiencing infill development and intensification. A spatial analysis of the current parkland supply using an 800m service radius around each park (Official Plan categories) is illustrated on **Figure 7**.

City of Waterloo Parkland Strategy

Figure 7 - Official Plan 'Parkland' Service Areas (800m Walking Radius)



5 Park Amenities

Amenities located within the parks system provide residents with opportunities to participate in organized and unstructured forms of physical activity and social interaction. These facilities contribute to the overall experience and function of the park. There are several examples of emerging activities where demands or popularity are localized but have not necessarily become service provision norms across the municipal sector. Emerging activities can require specialized facilities and equipment, some to a greater extent than others, while some can be accommodated within existing municipal infrastructure. Some examples that are gaining popularity include pickleball, outdoor adventure play (e.g., natural playgrounds, climbing/bouldering, high ropes, zip-lining), disc sports (e.g., Ultimate Frisbee, Frisbee Golf, disc golf), and roller sports (e.g. inline skating, roller derby), among others. Municipalities have been working alongside interest groups to help support and provide for emerging sports as they have deemed appropriate.

There is an exhaustive list of amenities that are found in parks across the country, and thus the analyses contained herein focuses upon the activities discussed in the following sections. This is not to say that other amenities should not be explored in Waterloo; the City may choose to gauge interest in new levels of service but should do so using a strategy that may consist of (but not be limited to) responding to public requests for new/emerging facilities, undertaking business planning, using pilot projects, and exploring partnerships to fund, maintain and/or program new facility types where partnerships/agreements are not exclusive in nature.

Activities and amenities are located throughout Waterloo in locations in addition to City parks, such as at schools, conservation authorities, volunteer and not-for-profit providers, and the private sector. Waterloo is also unique in the sense that people are able to participate in certain activities across the Tri-City area and thus supplies located in area municipalities such as Kitchener and Cambridge also contribute towards the regional recreational supply.

It is important to note that the 2012 Outdoor Sports Field Strategy is and remains the guiding document for assessment of needs for rectangular fields, diamonds and cricket pitches. Please refer to the 2012 Strategy for information regarding these three elements. Also, the 2013 Action Sports Strategy is the guiding document for needs assessment regarding action sports including skateboarding, BMX and mountain biking. Please refer to the 2013 Strategy for information regarding these elements.

An analysis has been undertaken for the park amenities in the following sections that are currently provided throughout the parks system.

5.1 General

5.1.1 Issues, Opportunities & Constraints

Asset Inventory and Management System / Park Renewal

The City has an approved Corporate Asset Management plan which generally addresses the overall condition of parks and the associated replacement costs, and identifies targets for the replacement of specific facilities and equipment (playgrounds, structures, fencing, etc.) when the condition falls below a specific performance level. However, it is identified in the report that the details are not sufficient for the purposes of operationalizing asset management processes, and further assessment is required to confirm the increase in annual budget allocations needed to achieve the performance targets. Staff are currently developing a comprehensive inventory of all parks assets in a format that supports the operationalization of the data into the analytical system. Based on best practices in other municipalities this work should include confirmation of, or updates to:

a) **Parks and Facilities Inventory**: Composed of a variety of asset sub-classes that include but are not limited to: pathways and trails (by type) , irrigation systems, play structures, furniture and furnishings (i.e. trash cans, tables, benches etc.), fencing, sports fields, tennis courts, lighting, signage, picnic sites, skateboard parks, gazebos, foot bridges, shade structures, park washrooms and other park buildings. In addition, the inventory should also include a summary of land holdings with property descriptions, hectare size, sports and recreation facilities contained within, based on parks classification system.
b) **Conditions and Life Cycle Reports**: An assessment of the condition of the asset, the year installed and expected life replacement date. The conditions of each asset should be described in a designated system such as (Good, Fair, Acceptable, Poor and Requires Immediate Repair or Attention). It should also address safe condition of the asset and normal life cycle expectancy of the asset.
c) **Asset Description:** Value of the asset (actual purchase price).
d) **Estimated Value of Asset to Replace**: Estimated value to replace the asset (actual purchase price with an escalation factor to the year of expect life replacement date).

The benefits of a comprehensive Park Asset Inventory and Management Systems are as follows:

- Effective capital planning and replacement, estimating, budgeting and forecasting;
- The longevity and replacement of assets are tracked, monitored, prioritized and dealt with in a timely and a cost effective manner;
- Development of a consistent preventative maintenance program; and
- Tracking of “actual” maintenance and operating unit costs and replacement costs.

The Waterloo Asset Management Plan (2016) estimated that approximately 45% of parks assets are in poor or very poor condition, and that at current budgeted capital expenditures “there will be a decline in the condition of parks assets over the next 25 years to a level which is anticipated to not

be acceptable to most stakeholders." It was also identified through consultation that Waterloo residents appreciate the amount and proximity of parkland in the city for the most part, but the quality and facilities of some parks has either declined over time, or is not up to contemporary expectations.

Enhanced Levels of Service

In addition to maintenance and upkeep expectations residents are looking for different amenities and enhanced levels of service in existing parks, influenced by the high quality parks being provided in newer areas. Considerations should be made to identify existing neighbourhood parks for redevelopment and reconstruction, as well as others that maybe just require facility renewal. Through the consultation process certain parks received more comments than others which may already signal priority parks. The most requested improvements include paving of trails, different styles of playground equipment for different ages/abilities, outdoor fitness equipment, splash pads, trees and/or shade structures, hydration stations etc.

Climate Change Resiliency

The roles and expectations of parks are changing and it is important for them to be able to transform as the needs of the environment and the community change. Climate change again is a big issue. Park elements should be able to mitigate the effects of climate change moving forward and elements should be resilient to things such as drought, heavy rainfall, high winds and ice storms.

Low Impact Development (LID) practices such as using green infrastructure including permeable paving, rain gardens, bioswales, and engineered wetlands help to capture and collect rainfall and slow its re-entry into the Grand River watershed as well as improve the quality of the water returning. Other techniques can be used including structured soils which help to make trees stronger overall which protect them against the elements.

5.2 Playgrounds

5.2.1 Trends & Emerging Needs

The following playground-related trends are of relevance to the Parkland Strategy:

- Playgrounds containing naturally-occurring materials and replicating features of natural areas aim to connect children with nature and provide them with multi-sensory, tactile and stimulating play environments.
- Barrier-free playground components allow use by children/caregivers with disabilities and special needs to make use of the equipment. Barrier free playgrounds in Waterloo are have typically been provided with relatively inexpensive play elements that be limiting interest compared to components that have a higher design quality/appeal.
- Renewal of playgrounds is an expensive endeavour due to equipment replacement costs and associated site works thus having a playground replacement strategy with dedicated funding is considered best practice.

- Many schools also provide playgrounds; however, access, design and condition widely varies.
- The encouragement of physical fitness for a variety of ages is an important role of parks and can be achieved through a couple of different strategies. For younger children and adolescents, one such amenity is an adventure or natural playground. Adventure playgrounds provide physical activity opportunities for a wider audience than some traditional play site designs. They use logs, boulders, woodchips and interesting earthworks to provide multi-sensory environments which are stimulating for all users.

5.2.2 Evaluation of Policies & Practices

According to the Recreation and Leisure Services Master Plan, Neighbourhood/Local Parks should, as a basic requirement, have a playground while Community Parks should have a Major Playground. This is generally good practice, especially for local parkland in order to provide basic amenities to the neighbourhood.

5.2.3 Inventory & Evaluation of Supply

Current Supply

Playground Structures	**85**	
Natural Playgrounds	4	**Natural Playgrounds**: Mary Allen Park, Rock Elm, Waterloo Park, Westmount Sports Park
Fully Accessible Playgrounds	2	**Fully Accessible Playgrounds**: RIM Park,(Waterloo Park)
Standard Playgrounds	79	**Standard Playgrounds**: various sites

The City of Waterloo's playground inventory consists of 85 structures distributed across 78 parks. Natural play structures are provided at Mary Allen Park, Rock Elm, Waterloo Park, and Westmount Sports Park. Fully accessible playgrounds are provided at RIM Park and Waterloo Park.

Provision Levels

The current provision level for playgrounds for **2018** is **1:1,700 residents** and the provision level for **2031** will be **1:2,000 residents**.

5.2.4 Issues, Opportunities & Constraints

There are 130 Local Parks and 5 Community Parks. The recommended criteria set out in Table 6-1 and 6-2 in the 2008 CCRS Master Plan state that playgrounds are a basic requirement for both Local and Community Parks. This may not be a realistic goal given the number of parks and overlapping "catchment areas" of some (i.e. it could be capitally and operationally inefficient to install play structures at two parks located in near proximity to one another). Rather than providing a playground solely on the basis of a park's classification, a provision standard based on geographic distribution may be more effective. For gap areas, existing parks may provide an opportunity to accommodate new amenities if where park size permits.

There is only so much room in the budget for new equipment, and the City has an extensive inventory of amenities in its parks that require maintenance as well as replacement as part of the Asset Management Plan.

5.2.5 Needs Assessment

Playgrounds are typically provided within a 10-minute walk (500 to 800 metres) of residential areas where users do not have to cross major barriers such as arterial roads, railways, and bodies of water. The City's 85 playground locations yield fair geographic coverage. There appear to be gaps present in Northland, Conestoga, Columbia, Lincoln, Willowdale, Beechwood and Clair Hills. Some of these gaps are relegated to future development areas that would presumably be serviced with neighbourhood-level parks containing play structures. A gap near the universities is also noted though it is recognized that there are elementary schools in the area and sizeable post-secondary populations which would not warrant provision. There is a need to fill the gaps that exist in neighbourhoods across the city to ensure that the provision standards meet the 5-10 minute walking distance recommendation. For example, Roselea Park is currently missing a playground to fulfill this criteria. With the City's service level by population also similar to other municipalities, future investments in playground equipment should thus be directed to parks located within residential growth areas in addition to areas with gaps.

Playground renewal should also be a priority for the City as consultations noted refurbishment/replacement projects are required at a number of sites.

5.3 Splash Pads

5.3.1 Trends & Emerging Needs

The following trends related to splash pad are of relevance to the Parkland Strategy:

- Many municipalities are transitioning aging rectangular and wading pools towards splash pads to provide a fun/interactive outdoor aquatics experience that does not require lifeguarding.
- Children up to 9 years of age are the primary users of splash pads though older age groups may also use them.
- Splash pads tend to serve a community and city-wide catchment area, though some municipalities consider neighbourhood-based distribution as well.

5.3.2 Evaluation of Policies & Practices

The CCRS Master Plan noted that splash pads have become important to the City. The plan previously recommended three splash pads, one of which is dedicated to Central District which was to replace Lions Lagoon through implementation of Waterloo Park Master Plan, however, the plan is now to have 2 small splash pads in Waterloo Park.

The CCRS Master Plan recommends that splash pads be developed in facilities in the east, centre and west areas of Waterloo in order to create a more equitable distribution of the supply. [33]

5.3.3 Inventory & Evaluation of Supply Current Supply

Splash Pads	**1**	Waterloo Park (Lion's Lagoon) *Note: Design underway for 3-4 additional splash pads with a community focus. Capital funding has been identified for 2020, 2021, and 2022. Lions Lagoon will close at end of 2019 season as it has surpassed its lifespan. Plan is 2 small splash pads in Waterloo Park (open 2020)and 3 additional citywide (opening in 2020-2021)*

Provision Levels

5.3.4 Issues, Opportunities & Constraints

Splash pads are sometimes associated with higher capital and operating and maintenance costs, however, it is recognized such costs are typically lower than borne by traditional outdoor pools. Splash pads are especially popular among families with children that are looking to cool down on hot summer days, something that can be expected to continue with warmer daytime temperatures associated with climate change.

With one aging splash pad presently serving the entire population of Waterloo, the supply is constrained both in terms of number and facility condition. An opportunity exists to enhance the geographic distribution of splash pads to enhance access to residents living in Waterloo, as has been noted in the CCRS Master Plan.

The City's capital budget identifies 3 to 4 new splash pads and has allocated funding for the years 2020 – 2022, timed to align with the closing and replacement of Lions Lagoon at the end of 2019. There are two small new splash pads slated to be constructed in Waterloo Park, with the first splash pad set to open in 2020 on the west side of the park.

5.3.5 Needs Assessment

Many municipalities target splash pad provision based upon the number of children (usually at a rate of one splash pad per 3,000 children ages 0 to 9) and/or geographic distribution. Based upon 2016 Census data, the City's level of service is 1 per 10,330 children though the Lions Lagoon is considered a

[33] City of Waterloo. 2008. Recreation and Leisure Services Master Plan. pp. 5-4.

large splash pad compared to most thus it is able to service a greater number of users and is centrally located within Waterloo.

Population projections by age group are not available. A broad assumption has been made that children up to 9 years of age will continue to account for 10% of the population (per 2016 Census data) resulting in 15,800 children by the year 2031. With the splash pad at Waterloo Park addressing the centre district, there continues to be merit in developing a splash pad in the east and another splash pad in the west as previously recommended through the CCRS Master Plan. Assuming that implementation of the Waterloo Park Master Plan results in two splash pads and another two splash pads are constructed in the east and west, Waterloo's level of provision would be 1 per 3,900 children by the year 2031.

Potential locations should meet a set of criteria including but not limited to: proximity to existing splash pads; adequate area within the park to accommodate the footprint and facilities; existing amenities within the park and if there will be enough area to accommodate all amenities; connectivity into the adjacent neighbourhoods; accessibility requirements; CPTED considerations; access for emergency and service vehicles; and any constraints related to the environment. Potential locations include the Albert McCormick Community Centre in the north, Lexington Park in the east and St. Moritz Park in the west.

5.4 Dog parks

5.4.1 Trends & Emerging Needs

Studies have shown that dog ownership is on the increase, not just in the suburban areas of cities, but also in the urban core. This includes people living in high rise buildings. Limitations in private amenity space, especially those on upper floors and small balconies result in dog owners using public parks as places for pet exercise and socialization. Many municipalities, including Waterloo, frequently receive requests for new or expanded dog off-leash areas along with supporting amenities such as waste stations and water. The increasing popularity of leash-free areas could justify additional spaces.

There are a number of models of leash-free areas that municipalities can consider: fenced leash- free areas, unfenced leash-free areas, areas of parks and trails that are leash free for only portions of the day and the use of unoccupied sports fields all with pros and cons. The City of Mississauga developed a Leash Free Zone policy which outlines how to establish, remove, and locate leash free zones as well as responsibilities of the City versus stewardship groups and the design standards. Standards include: perimeter fencing, double service gates for maintenance, double entrance paddock gates, waste containers outside of the fenced area, groundcovers (grass, woodchips, and accessible hard surface material) and picnic tables.

Dog parks vary in size depending on who it is serving or how they are located. The City of Winnipeg developed an Off-Leash Dog Areas Master Plan which was approved by Council in July of 2018. They have outlined different sizes for their off leash areas including:

- Neighbourhood, Small: 0.04ha to 0.1ha
- Neighbourhood, Large: 0.1ha to 0.5ha
- Community: 0.5ha to 8ha
- Regional: greater than 8ha

As cities intensify there is a need to think about developing smaller off leash areas for dogs. The City of Mississauga's 2019 Parks and Forestry Master Plan recommended the development of a leash-free model that can be applied to smaller parks or urban spaces in intensification areas on a case by case basis, or if requested during development. These smaller spaces have been coined as 'micro dog parks' and they exist in the City of Toronto (e.g. in Allen Gardens) as well as the City of Kitchener. The latter offers two micro dog parks, the most recent of which is a fenced-in dog park less than 1 acre in size that is located at The Aud (off Stirling Avenue), close to downtown and within walking distance of many residents in the city; the second is located at George Lippert Park, serving the Mount Hope and Breithaupt neighbourhoods.

5.4.2 Evaluation of Existing Policies & Practices

The City currently does not have existing policies or practices regarding dog parks. There has been a long history of requests for additional leash-free areas in Waterloo and four separate staff reports to Council on the topic between 2002 and 2011. There was also interest expressed during the 2008 CCRS Master Plan. The latest report was released in 2011 and proposed six additional leash free areas in the city. The project was not initiated due to lack of community support. The community felt that neighbourhood parks are not large enough to accommodate all the users.

Over the last 10 years there have been discussions back and forth as well as research which ultimately has resulted in only one leash free area to date at Bechtel Park.

5.4.3 Inventory & Evaluation of Supply

There is currently only one city-run off leash area in the City of Waterloo and it is located at Bechtel Park. The area is two hectares in size and fenced. The condition of the park is generally good; however, some users believe that there are improvements to be made to the existing park including ongoing maintenance, water access for dog hydration, and improved accessibility. There is also an off leash area just outside the city boundary in Kiwanis Park in Kitchener which may be used by Waterloo residents.

5.4.4 Issues, Opportunities & Constraints

Traditionally dog parks have been area intensive spaces requiring regular maintenance. Since land is in short supply and there haven't been policies in place previously it has been difficult to implement new locations.

With intensification, and the presence of larger existing parks, there are opportunities to implement facilities in existing parks, and create new micro dog parks in areas of intensification. There are also opportunities to utilize other open spaces such as the city's linear hydro corridors.

Partnerships with community led organizations are helpful when it comes to maintenance and enforcement of the rules at city-owned dog parks. The City of Mississauga partners with Leash- Free Mississauga and according to their Leash Free Zone policy, the community group is responsible for any upgrades that go above and beyond the City standard, cleanup, pathway clearing, spreading mulch/wood chips, liaising with City staff and any other amenities that they require as approved by the City.

5.4.5 Needs Assessment

There is demand for more off-leash areas in the city and locations such as in Waterloo Park and at Westmount Sports Park were mentioned as potential sites. Considering there is only one off leash area in the city, it can be determined that for this amenity, the city on the whole is underserved.

There are no hard and fast provision levels from other municipalities; typically they are based on demand by the community. There are precedents that are discussed in the Winnipeg Off Leash Areas Master Plan including Edmonton which looks to have one large off leash area in each district of the city and aims to have targets for off leash areas (unfenced) based on population density and dog ownership. Needs are typically based on the city's own unique context.

5.5 Outdoor Skating Rinks

5.5.1 Trends & Emerging Needs

The following trends related to outdoor rinks are of relevance to the Parkland Strategy:

- Outdoor 'natural' ice skating rinks are increasingly difficult to maintain due to climate change.
- Some municipalities provide artificially refrigerated ice surfaces, such as the Public Square in Waterloo, that operate for a longer season but come at a higher cost to build and operate compared to natural ice.
- Volunteer-maintained rink programs allow municipalities to leverage the capacity of the community to cost-effectively strengthen geographic distribution by having volunteers maintain natural rinks in neighbourhoods. They also help to contribute to community building.

5.5.2 Evaluation of Existing Policies & Practices

None of the City's guiding documents articulate an implementation strategy for outdoor skating rinks. A neighbourhood rink program is in place whereby volunteer convenors are selected to train other volunteers to operate a neighbourhood rink and coordinate a volunteer schedule.

Rink volunteers maintain the rinks by flooding and shoveling snow, caring for equipment and monitoring the rink.

Outdoor Rinks	**28**	
Refrigerated Rinks Natural Rinks	1	**Refrigerated Rinks**: Waterloo Public Square
	27	**Natural Rinks**: Anndale Park Autumn Willow Park, Bluenose Park, Bluestream Park, Bolingbrooke Park, Carriage Way Park, Cornerbrook Park, Craigleith Park, Culpepper Park, Deer Run Park, Dunvegan Park, Haida Park, Lakeshore Optimist Park, Laurelwood Park, Lexington Park, Mary Allen Park, McCrae Park, Pinebrook Park, Pinerow Park, Regency Park, St. Mortiz Park, Stillmeadow Park, Thorndale Park, University Downs Park, Vermont Park, West Wind Park, Westvale Park

5.5.3 Inventory & Evaluation of Supply

The City's only refrigerated outdoor skating rink is located at the Waterloo Public Square while volunteer-maintained rinks are distributed across parks located throughout various neighbourhoods and may vary from year to year.

The provision level for outdoor rinks for **2018** is **1:4,600 residents** and the provision level for **2031** will be **1:5,700 residents**.

5.5.4 Issues, Opportunities & Constraints

Outdoor rinks are heavily dependent on volunteers, and thus the number of natural rinks can fluctuate year-to-year. If no volunteers are available to maintain, the rink does not get set up for the season. For the same reason there is not an equitable geographic dispersion of rinks. Whether volunteer or municipally run, climate change is creating weather fluctuations which make outdoor ice rinks more challenging to operate and maintain.

5.5.5 Needs Assessment

If the City pursues the development of an additional outdoor artificial ice rink (geared to recreational skating, outdoor shinny/hockey, or a combination thereof), it should be rationalized through further study. Artificial rinks are typically provided through an opportunity-based approach to create distinctive recreational experiences that cannot be offered within an arena, and contribute to broader civic and/or economic development objectives. With one centrally located refrigerated rink, it is unlikely that need will be demonstrated for another facility of this type. Additional outdoor artificial rinks should only be considered in conjunction with other civic planning, urban design and/or economic development analyses given the sizeable costs to construct and operate refrigerated rinks.

5.6 Tennis Courts

5.6.1 Trends & Emerging Needs

Tennis is experiencing a resurgence in Canada, partially associated with the aging population but also among other age groups due in part of the success of Canadians on the professional tours and cultural diversity. Growth in the sport is also attributed to organized tennis programs (e.g. clinics, lessons and competition) offered by private sector and community-based clubs, along with some municipalities.

5.6.2 Evaluation of Existing Policies & Practices

None of the City's guiding documents articulate an implementation strategy for tennis.

5.6.3 Inventory & Evaluation of Supply

Current Supply

Tennis Courts	**30**	
Public Courts	**10**	**Public Courts**: Bechtel Park (3), Dunvegan Park (1), Heasley Park (2), Pinebrook Park (1), St. Moritz Park (1), Warrington Park (2)
Club Courts	**12**	**Club Courts**: Waterloo Park (12) that are owned and maintained by the Waterloo Tennis Club
Shared School Tennis Courts	**8**	**Shared School Tennis Courts:** Bluevale Collegiate Institute (4), Waterloo Collegiate Institute (4) *Note: Parks Services provides some minimal support to 8 school tennis courts at Bluevale Collegiate Institute and Waterloo Collegiate Institute. Tennis courts located on Homes Association lands are private and are excluded from the supply.*

The supply includes 12 club tennis courts owned and maintained by the Waterloo Tennis Club at Waterloo Park (land lease agreement) – 6 of these courts are covered with a dome during the winter months for indoor use. Excluded from the supply are tennis courts owned by neighbourhood homeowners' associations as these are typically available only to members / those that live in the neighbourhood but it does alleviate a degree of pressure on the City to build courts in those areas.

Current Provision Levels

The provision level for outdoor tennis courts for **2018** is **1:4,300 residents** and the provision level for **2031** will be **1:5,300 residents**. These numbers include both school and club courts. All city courts are constructed with asphalt except for St. Moritz Park (concrete)

Best practices in design combine a minimum of two courts per park to allow the potential for neighbourhood-based programs as well as reducing the possibility of players having to wait between games.

5.6.4 Issues, Opportunities & Constraints

Given limited parkland development potential at the Community Park level due to land scarcity, the City may have to develop tennis courts in a neighbourhood park contrary to the CCRS Master Plan direction.

5.6.5 Needs Assessment

Tennis courts are typically provided on the basis of distribution and provision targets in the range of 1 per 4,000 to 6,000 population. Including the club-courts in the supply places the City in the upper range of the targeted provision spectrum. Geographic distribution analysis using a 1 kilometre radius shows gaps across the northwest and northeast areas of Waterloo though some of these are serviced by homeowners' association courts.

Despite lack of direction, in other documents the CCRS Master Plan recommends one "play court" within Community Park classifications (play courts could be designed for basketball, ball hockey, tennis or multiple activities). Targeting provision at 1 tennis court per 6,000 population in recognition of the contributions club and school courts would result in a total supply requirement of 26 tennis courts by the year 2031, 4 more than currently provided. It is preferable that these future courts are allocated equally across two parks (i.e. two tennis courts at each).

5.7 Pickleball Courts

5.7.1 Trends & Emerging Needs

The following pickleball-related trends are of relevance to the Parkland Strategy:

- Pickleball is a sport steadily growing in popularity that is frequently being played indoors but demands for outdoor courts is emerging where the sport has established itself in the City of Waterloo as well as Provincially. Since 2014 pickleball attendance has grown from the low hundreds to well over 1500 attendees.
- Waterloo has the largest operating indoor pickleball club in Ontario. It involves all ages and abilities and is noted in the Tri-Cities and across Ontario as the Centre of Pickleball Excellence.
- Pickleball is also very popular among the 55+ age group, of which there are over 27,000 residents in Waterloo (and growing).
- Many municipalities are constructing dedicated outdoor pickleball courts or designing combination tennis/pickleball courts in a multi-use court format that is lined for both sports.
- The size occupied by a typical tennis court can accommodate up to four pickleball courts if using portable nets, although one pickleball court can be lined within a tennis court if using the tennis net. This approach is shown as an option from the USA Pickleball Association.

- The Waterloo Pickleball Club has nearly 300 members as reported on its Facebook page, providing a partial indication of demand. According to data collected on pickleball by the

City of Waterloo, there have also been on average about 9400 people participating in pickleball annually since 2014 with a steady increase every year.

5.7.2 Evaluation of Policies & Practices

None of the City's guiding documents articulate an implementation strategy for outdoor pickleball courts, largely because it is an emerging level of service in Waterloo and other parts of the country.

5.7.3 Inventory & Evaluation of Supply

Current Supply

Pickleball Courts	**2**	
Multi-use courts	2	**Multi-use Courts**: Existing courts are located at Bechtel Park using a multi-use design template whereby existing tennis courts are lined to also allow pickleball
Dedicated courts	0	

Provision Levels

The provision level pickleball for **2018** is **1:64,500 residents** and the provision level for **2031** will be **1:79,400 residents**. These numbers include both school and club courts.

5.7.4 Issues, Opportunities & Constraints

The recent growth and popularity of pickleball has resulted in municipalities being pressed for outdoor courts. Thus far, the most common approach to testing demand for outdoor pickleball has been to overlay pickleball lines on tennis courts (i.e. a multi-use court approach) though players of both sports sometimes report challenges with the number of lines and sharing court times with each other. There is a potential for outdoor pickleball courts to attract more users into a park during the daytime as well as for users to mobilize into formal clubs, though the ability to find space within parkland could become challenging given the pressure for parkland to accommodate many interests within their finite boundaries.

5.7.5 Needs Assessment

The City of Waterloo has added basic pickleball line markings to two tennis courts at Bechtel Park to test interest for outdoor play given that the sport is proving to be popular within City recreation centres. The popularity of the outdoor version of the sport is still being tested in Waterloo, and thus the City presently does not have a level of service standard in place for the provision of outdoor pickleball courts.

The preferred implementation strategy for pickleball in Waterloo centres upon a centrally located dedicated outdoor court complex that is surrounded by community-based opportunities for play within neighbourhood and community-serving parks. Larger outdoor pickleball destinations – such as those located in larger parks – should contain a minimum of four courts while smaller parks serving a more localized area would ideally contain at least two courts. Other important considerations to guide where outdoor pickleball courts should be placed include established areas characterized by a sizeable population of older adults, those with easy access to parking, parks containing washrooms and shade, and areas having strong connectivity to the City's public transit and/or trail system.

Waterloo Park is the preferred candidate for a centralized, dedicated pickleball complex given logical synergies with organized tennis already established onsite. Users of a seniors centre (proposed as part of the Waterloo Memorial Recreation Centre expansion) would also benefit from the courts. It is recognized, however, that a heavy intensity of use at this park is already likely if implementing the full extent of the Waterloo Park Master Plan.

The second phase of implementation would involve strategic placement of outdoor pickleball courts in order to improve geographic distribution. Depending upon the site(s) ultimately chosen, the City has the option of a balance of strategies including but not limited to:

- constructing dedicated pickleball courts as part of a park development or redevelopment project;
- making use of asphalt multi-sport courts that are largely located in neighbourhood- serving parks; and/or; and
- continuing to employ the multi-line marking approach where pickleball is accommodated on new or existing tennis courts.

5.8 Basketball Courts

5.8.1 Trends & Emerging Needs

The following basketball-related trends are of relevance to the Parkland Strategy:

- The steadily increasing popularity of basketball in Kitchener-Waterloo and across the Greater Golden Horseshoe is fueled by factors such as access to free outdoor courts, growth in immigrant populations, a growing Toronto Raptors fan base, a strengthened national men's and women's program, and success of local athletes at the NCAA and professional levels.
- The primary users of outdoor courts are youth between the ages of 10 and 19, thus it is important that courts are available in reasonable walking distance of residential areas.

- Basketball courts are sometimes designed as multi-use to also allow activities such as ball hockey to be played.
- Many schools also provide hoops, however, access and condition varies widely and access is often during off-school hours.

5.8.2 Evaluation of Existing Policies & Practices

None of the City's guiding documents articulate an implementation strategy for basketball courts.

5.8.3 Inventory & Evaluation of Supply

Current Supply

Basketball Courts	**7**	
Full Courts	3	**Full Courts**: Mary Allen Park, McCrae Park, Pinebrook Park
Half Courts	4	**Half Courts:** Dunvegan Park (2), Vista Hills Park, Waterloo Park

These six courts are contained within five parks (two courts are provided at Dunvegan Park).

Mary Allen Park, McCrae Park and Pinebrook Park contain full basketball courts while half court templates are found at Dunvegan Park (2), Vista Hills Park and Waterloo Park

Provision Levels

The provision level for basketball for **2018** is **1:18,400 residents** and the provision level for **2031** will be **1:22,700 residents**.

5.8.4 Issues, Opportunities & Constraints

Outdoor basketball courts are important facilities for local children and youth, and can be readily distributed throughout the parks system (especially the smaller half court templates). Noise can be an issue but is commonly mitigated by ensuring appropriate setbacks from adjacent residences as well as developing courts at the outset of new park development so that new residents are aware of a court's existence before moving in.

5.8.5 Needs Assessment

The City's guiding documents presently do not articulate an implementation strategy for outdoor basketball courts; although the CCRS Master Plan recommends one "play court" within Community Park classifications (play courts could be designed for basketball, ball hockey, tennis or multiple activities). In many communities, outdoor basketball courts are provided on the basis of distribution to enhance accessibility by active transportation (walk, bike, skateboard) given their primary users are youth that do not have consistent access to a personal motor vehicle. Municipal

master planning provision targets in the range of 1 per 800 youth between the ages of 10 and 19 are commonly applied in tandem with distributional analyses.

Based on Census data, Waterloo's six courts result in a service level of 1 per 1,900 youth ages 10 to 19. Distribution of basketball courts in six parks leaves a number of geographic gaps that heavily relies upon school courts whose design and maintenance standards are not the same as municipal courts. Geographic gaps based on a 1 kilometre service radius are most prominent in the northwest (with no City-owned courts located northwest of the Columbia Street/Westmount Road intersection) and northeast of Lexington Road and the Conestoga Parkway. As opportunities arise, basketball courts should be considered for parks located in developing greenfield areas such as the Beaver Creek Meadows/Erbsville planning district and the Country Squire/Rural East planning district.

Three half basketball courts are proposed within a Youth Play Area as part of implementing the Waterloo Park Master Plan design brief, replacing the existing court (contingent upon the sports field implementation strategy for the park).[34] A new park scheduled to open in Vista Hills may also add a half court to the supply.

5.9 Community Hubs (Gathering & Event Spaces)

5.9.1 Trends and Emerging Needs

Parks need to evolve to become Community Hubs by providing multi-age and multi-cultural community gathering spaces, areas for physical fitness, places to socialize and reflect, places for pets.

As cities become more diverse and complex, so do the roles of parks and open spaces. Parcels for parks are becoming smaller by necessity but have high expectations to provide a variety of amenities for different users. Parks are also serving as backyards for those that live in high density developments. There is an opportunity to plan for the more ephemeral or 'soft' needs of a community by designing parks to be 'community hubs'.

Community hubs provide not only recreational aspects that are consistent with parks, but also provide community gathering spaces, areas for special events, as well as quieter areas for contemplation and recharge. It is anticipated that with intensification there will be an increased need for parks that serve multiple functions and which can be achieved through the community hub approach. This is important especially for areas that do not have access to brick and mortar community recreation centres.

Some examples of park features creating community hubs include flexible gathering spaces, outdoor programming (table tennis, checkers, chess) and outdoor event space.

[34] City of Waterloo. 2009. Waterloo Park Master Plan, Final Report. pp.54.

5.9.2 Evaluation of Existing Policies & Practices

None of the City's guiding documents articulate a strategy for community hubs, although the concept is prevalent in the Neighbourhood Strategy recommendations. As well there is current and increasing demand for existing parks in some neighbourhoods to support local community led events. This suggests that a review of the parks that can support these uses is needed to ensure that there is appropriate infrastructure (e.g. access to water and hydro, sufficient open space, adequate parking). As well there is a need for the establishment of policies and practices to address staff support, and to ensure more unified and user-friendly processes as noted in the Neighbourhood Strategy.

5.9.3 Inventory & Evaluation of Supply

Waterloo Park is the largest bookable park in the City meaning that there are a number of bookable amenities within its borders. Some of the amenities that can be permitted include: several picnic areas, two gazebos, a picnic shelter, a hospitality area, the area that fronts on Father David Bauer Drive, a bandshell, all or portions of the shade shelter at Lion's Lagoon, and, the Grist Mill and Gardens for weddings. The hospitality area in Waterloo Park is the only real outdoor kitchen area that can be booked in the City.

There are also other more active parks that have amenities that can be booked including: Hillside Park and Bechtel Park and Waterloo Public Square. However these are typically for larger events.

The City also currently has a list of more passive neighbourhood parks that can be booked for events. They are listed below with the services that are available. Currently hydro in these parks comprises light poles for skating rinks only – there are no outlets for community use.

- Deer Run Park (has water service, has hydro)
- Dunvegan Park (has water service, has hydro)
- University Downs Park (has water service, has hydro)
- Cornerbrook Park (has water service only)
- McCrae Park (has water service, has hydro)
- Old Post Park (no services)
- Warrington Park (has water service, has hydro)
- West Wind Park (has water service, has hydro)
- Moses Springer Park (no services)

There are also other parks not identified under these lists which have servicing which could potentially contribute to the inventory of bookable parks please see list below:

Table 10: Inventory of bookable parks

Parks with Water Service Only	Parks with Hydro Only	Parks with Hydro and Water Service	
• Exmoor Park • Jacob Green • RIM Park • Veteran's Green • Vista Hills Park • Memorial Park	• Clair Lake Park • New Bedford Hub • Regency Park	• Brewmeister Green • Anndale Park • Bechtel Park • Craigleith Park • Stillmeadow Park • Autumn Willow Park • Bluestream Park • Bolingbrooke Park • Carriage Way Park • Culpepper Park • Kingscourt Park • Laurelwood Park	• Lexington Park • Mary Allen Park • Pinebrook Park • Roselea Park • St. Moritz Park • Sundew Park • Thorndale Park • Vermont Park • Westvale Park • Willowdale Park • Westmount Sports Park

Picnic Areas are also opportunities for the community as well as the residents of the larger city to come together in parks to gather and socialize. Currently the only picnic areas and shelters that can be booked in the city are located at Waterloo Park. There are parks that currently are not booked that contain shelters (gazebos, picnic shelters) that can be used for gatherings. These include: Hillside Park, Moses Springer Park, New Bedford Hub and Old Oak Park.

5.9.4 Issues, Opportunities & Constraints

The parks and areas that can be booked for events are in larger more active parks and are often for larger events. One of the findings from the Neighbourhood Strategy stated that neighbourhoods are looking for areas in their local parks that can be booked for events, or even just to have small informal community gatherings in their parks.

As stated in the previous section, there are opportunities to create some informal, non- permitted spaces in existing city parks to allow for smaller informal gatherings. Having a list of these areas in a more accessible location and format would help create a better understanding of what the City of Waterloo's parks and open space network has to offer for residents and neighbourhoods.

5.9.5 Needs Assessment

There are no standards of provision for community hubs or event spaces in the City. Since there has been interest noted in studies like the Neighbourhood Strategy and in the early consultation efforts for the Waterloo Parkland Strategy, there may be a need to develop a strategy for community hubs in the City of Waterloo.

There is also a need to have a more streamlined process for coordinating events and other activities and programs with the City as that was noted as needing some work. Having one place where residents can go to book amenities, sign up for programs etc. would help lessen confusion and increase efficiency.

5.10 Community Gardens

5.10.1 Trends and Emerging Needs

Community Gardens have seen a recent resurgence in popularity particularly in higher density areas, where they replace backyard gardening activities. They are low cost, create opportunities for neighbours to socialize, provide for both physical activity and quiet contemplation, allow for interaction with nature and can be enjoyed by many age groups.

The Region of Waterloo's community garden page identifies the following benefits for community gardens.

- More inclusive neighbourhoods by providing a chance for people to meet and work together
- Healthier diets due to eating locally grown fresh fruits and vegetables
- Physical and mental health: gardening is part of a healthy lifestyle and outdoor physical activity can help relieve stress
- Easy access to affordable food
- Food skill development through sharing ideas from various cultures

Enhanced environmental awareness; people learn that growing food locally means less use of fossil fuels compared to importing food

5.10.2 Evaluation of Existing Policies & Practices

Community garden practices on city land are currently being reviewed to help enhance community support and involvement. A volunteer-led model with staff support, similar to outdoor rinks, is being pursued. City staff are requesting budget in the 2020-2022 budget process to support the new community garden process.

5.10.3 Inventory & Evaluation of Supply

The City maintains an inventory of Community Vegetable Gardens that are on City lands. It does not inventory those that are not on City lands. Currently, there are 4 gardens across the City on City lands: Haida Park, Heasley Park (2 gardens), EMS Site, and St. Moritz Park. The City provides in-kind support to these gardens. According to the Community Garden Council of Waterloo Region's website, there are a total of 17 community garden locations in the City of Waterloo including those mentioned. The remainder are not located on City parks or open space lands.

5.10.4 Issues, Opportunities & Constraints

The development of community gardens requires consideration of the suitability of the location (e.g. proximity to a residential area, ease of access) and the physical parameters of the site itself (e.g. soil conditions, openness and terrain) and typically require some infrastructure to be sustainable (e.g. fencing, water supply, storage boxes or shed). In reviewing locations for community gardens and its associated policies the City may wish to outline its policies and procedures in the form of an information handbook that can be provided to interested residents or community organizations.

As an example, the City of Brampton developed a Community Gardens Handbook which outlines community gardens and their benefits as well as the process to getting a community garden into neighbourhoods. It outlines the level of support that the City will provide to a Community Garden Group including:

- Resource information on community gardening;
- Expertise on the garden location;
- Provision of a water source; and,
- Installation of: garden plots (soil, wood framing); woodchip pathway; fencing; signage; and storage shed.

In association with the City's ongoing review of community garden practices, there may also be opportunities for the City to coordinate with partners like the Community Gardens Council of Waterloo Region to post community garden information on their website, or signage in suitable parks or open space to encourage nearby residents to start a community garden.

5.10.5 Needs Assessment

Unlike sports facilities there are no standards of provision for community gardens in the City, which is typical of most municipalities. There are currently quite a number of community gardens located throughout the City, although not all are on City land. Experience from other municipalities indicates that community gardens are likely to be most successful when undertaken as a community initiative with support from the City.

5.11 Other Amenities

5.11.1 Sport & Recreation Amenities

Today's consumers expect and demand high quality, a trend that is applicable to sports and recreation facilities. Modern recreation facilities are typically constructed in highly visible areas and are being positioned as desirable community destinations that leverage design to support principles of place-making and foster sense of place. New facility design should strive to provide pleasing and inclusive experiences. Such design considerations may include removing barriers to improve physical accessibility and providing causal spaces or viewing area (such as a lobby, open area, or galleries) for people to gather, meet, or relax. From a sport perspective, users are seeking facility designs with high performance surfacing (e.g. synthetic turf for sports fields,

painted/textured hard surface courts), lighting, irrigation and drained playing areas for grass sports, seating for players and spectators, and washroom/change rooms to name but a few.

Through renewal and enhancement activities, as well as new construction, municipalities are exploring ways to design facilities in ways that can accommodate and withstand higher levels of use. Many communities are using synthetic turf systems that are less susceptible to damage after periods of inclement weather and week-long usage. Synthetic turf fields are able to offer more playable hours and can be used in months outside of the traditional grass field season. More playable hours can also be created through turf management in design (e.g. irrigation and drainage) and operations (fertilizing, watering). Lighting is another way to extend hours of play whether it is at a sports field, hard surface court or other outdoor recreation facility. Sports fields that are designed to accommodate greater use are also being used as a means to add capacity without having to acquire new lands for sports field development; this is critical in municipalities that have limited amounts of vacant, developable land and where land scarcity drives up the cost of parkland acquisition.

Employing multi-use or multi-sport designs where facilities can be subdivided or lined for different sports can result in higher usage profiles throughout the playing season. Skateboard park designs can incorporate/replicate many features found in public areas (stairs, benches, etc.) and the emergence of “skate spots” is a trend to increase geographic outreach. Multi-use functionality goes beyond sport facilities with splash pads being an example where designs have been oriented to both waterplay and urban design through use of public fountains, public art and hardscape features commonly found in civic plazas/squares. As noted earlier, playgrounds are another example where natural playgrounds, adult playgrounds (outdoor fitness), and other forms are emerging to complement traditional playground structures.

5.11.2 Comfort Amenities

Park amenities that are currently in-demand across Ontario are those which add to the comfort of park users, and allow for extended visits. These include: washrooms, seating such as benches or picnic tables; and hydration stations (water fountains, bottle refilling stations). These types of amenities also cater to the aging population who require intervals along trails to stop and rest out of the sun.

Seating is an easy an inexpensive option for parks, locating benches within view of sports fields, playgrounds and other amenities which may require or facilitate the desire for viewing by parents, or by park users is important.

Washrooms help to extend the lengths of stay in parks and are useful in parks with facilities which may facilitate these longer duration visits such as sports fields, playgrounds, splash pads etc. Parks which have washrooms include: Bechtel Park, Hillside Park, Lexington Park, RIM Park, and Waterloo Park. The City of Waterloo currently does not have criteria for washrooms in parks, which may be helpful moving forward with new parks and park redevelopment in the future.

Due to increasing temperatures during the summertime, hydration is also important in parks. Locating elements such as water fountains, water bottle filling stations or even having more involved 'misting zones.' Locating these elements may need development criteria as well as a plan for prioritization.

5.11.3 Trails and Pathways

Throughout consultation, the use of trails and pathways were generally at or near the top of the most popular activities performed by Waterloo residents. It is felt that the network of trails and pathways is quite extensive and they are well loved and well used. Also during consultation, many of the comments that were reported by residents involved improvements to the trails and pathways in the City. It is important to note that the scope of this Waterloo Parkland Strategy does not pertain to the greater network of city trails and pathways. The greater network will be under the scope for the upcoming Transportation Master Plan update. This strategy will look at internal trails and paths within the city's parkland. That being said it is important to know where the external connections are in order to effectively close the gaps within Waterloo's Parkland.

Making accessible connections to external trails, bike lanes, multi-use paths, transit, internal park amenities and parking areas are all important to improving the internal circulation of the parks.

Many requested that trails should be paved to allow for a better quality experience, some noted that in some areas the trails need to be regraded to mitigate the effects of flooding. Feedback also was received noting the desire to have some trails plowed during the wintertime to facilitate all season use. To fulfill these requests will require staff time, resources and budget. Future consideration of these improvements should be evaluated following the identification of a main trail and bikeway system and key linkages, which may be based on such criteria as user demand, proximity to transit, entrances to amenities, school routes and parking areas etc.

5.11.4 Shade

The effects of climate change are becoming more evident through higher temperatures in the summer and stronger UV radiation from the sun. As a result, the importance of providing shade in parks is becoming increasingly apparent. Shade through trees, gazebos, or shade sails protect users from the sun and the heat which improve overall comfort.

It will be important for the city to develop a strategy for shade in parks to help provide the different types of shade throughout the city's parkland as well as work to make it a basic requirement in the development of new parks in the city moving forward.

5.11.5 Places for Spontaneous Play & Interaction

Cities are increasingly receiving requests for amenities which provide spaces for spontaneous play. These are permanent (often concrete) features placed in parks and open spaces and allow for anyone to meet and participate. Elements include: outdoor table tennis (ping-pong), checkers/chess, cornhole, ladder toss etc. These amenities also help to cater to the often forgotten demographic of older children and teenagers allowing for parks to truly be places for all ages.

Success of these elements however requires contextual knowledge of the neighbourhood and consultation with the community including the youth to see what they would be interested in having placed in their parks.

5.11.6 Outdoor fitness

Outdoor fitness equipment is another very popular trend, especially for adults. These facilities are generally human powered and located in parks or along trails to provide an outdoor-gym environment or placed at intervals along a path or trail to provide exercise stations. They can include instructional signs for example exercises which, if used collectively, can provide a complete fitness program. Outdoor fitness also provides a cost effective replacement for traditional gym equipment while also experiencing the outdoors and nature.

These elements also cater to all demographics health and wellness purposes. Consultation with the community would be needed to see where these may be placed to benefit the whole community

5.11.7 Placemaking and Public Art

Placemaking is increasingly being used by municipalities to design and manage parks and urban spaces, largely as a result of the advocacy of Project for Public Spaces (PPS)[35]. PPS defines placemaking as “both an overarching idea and a hands-on approach” which “inspires people to collectively reimagine and reinvent public spaces as the heart of every community”. Placemaking is not a new ideology and many municipalities aspire to, and achieve, the objectives promoted through placemaking using other methods. However the current trend at the heart of placemaking is community-based participation both at an early stage, and throughout the design and development process, with a view to identifying patterns of use, and the “physical, cultural and social identities that define a place and support its ongoing evolution". The integration of placemaking into the design process has resulted in many quality, well used and loved public spaces that support a communal vision.

Public art is also an increasingly common element found in urban parks, frequently identified and implemented through the placemaking process. The City of Waterloo understands the importance of public art and that it contributes to quality of life, strengthens pride in a community, enhances the aesthetic of the public realm, celebrates culture and heritage and helps to create sense of place. The City has a Public Art Policy in place which specifies how public art is funded and where it can be placed. The purpose of the policy is to standardize the public art process, manage the collections, and to establish a sustainable funding model.

Opportunities for the inclusion of public art, including encouraging functional, interactive and engaging installations can be done through expansion of parks, park upgrades or rehabilitation, and new park development. The City should require consideration for public art when new parks or developed or existing parks are expanded or upgraded.

[35] “What is Placemaking? Project for Public Spaces, 2018, https://www.pps.org

5.11.8 Wi-Fi

Wi-Fi in parks is another trend on the rise. Currently the City of Waterloo provides Wi-Fi at their community recreation centres, but not in parks or public spaces. This trend allows for increased time spent in parks and open spaces and allows people to remain connected throughout their stay. Wi-Fi also is attractive for youths who may choose to use a space based on the availability of an internet connection to stay connected to friends as well as study outdoors.

There will be a need to determine a strategy or policy developed for Wi-Fi in parks based on location, type of park and the uses. Wi-Fi can either be free or paid depending on what the city deems appropriate. Locating Wi-Fi in parks in areas of intensification, in public spaces near LRT stops, urban public spaces or areas that have many programmed events may be an initial strategy. Challenges may arise with initial set up, operations, maintenance and troubleshooting.

6 Natural Areas

Just under half of all the parks and open spaces in the City of Waterloo are considered natural areas. They are more passive in use, providing residents with an opportunity to experience the natural areas through trails, seating and interpretation. They require a different level of consideration, because many contain sensitive environmental features such as woodlands, creeks, rivers and wetlands. These natural areas contribute to the overall urban forest canopy and provide habitat for local wildlife, as well as decreasing soil erosion, filtering out pollutants and providing cleansing and cooling effects for watercourses. The contribution of these areas to water quality is particularly important to Waterloo as the city uses both groundwater and water from the river as its drinking water supply.

6.1 Trends & Emerging Needs

Natural Areas and the urban forest are increasing in importance. They are natural assets which deliver a range of benefits to the City itself as well as to the residents. These include: improving air and water quality, sequestering carbon and helping to conserve energy through shading and cooling of the urban environment, cooling of watercourses, mitigation of noise, dust and pollutants and providing habitat for wildlife. Trees are especially important as they are often more successful than tree planting in other areas.

Encroachment from adjacent landowners, climate change and invasive species all threaten the health of the urban forest canopy and can negatively impact plant and wildlife habitat. As well, as the City grows in population, more users will put pressure on existing parks and natural areas, threatening overuse and decline in quality and the environment.

Urban forests and natural areas require protection from these threats and many municipalities are completing Urban Forest Management Plans to address impacts and identify actions and priorities for long-term management of these valuable assets.

Protection of native pollinators is also a trend that is on the rise. The City of Waterloo was designated a ‘Bee City’ by Bee City Canada in May 2018. As a ‘Bee City’ the goal is to inspire the community to take stewardship actions towards creating healthy native pollinator habitat on municipal parkland and to develop a greater public awareness and appreciation for native pollinators during local events.

6.2 Evaluation of Existing Policies and Practices

The following strategies and policies direct the management of the City’s natural areas.

Urban Forest Policy (1998)

The Urban Forest Policy directs the removal, planting, pruning and protection of trees upon the right of way of any street, alley, sidewalk or other public space in the City of Waterloo.

The Urban Forest Policy addresses:

- Preservation of historical features, i.e., integrity of mature trees, streetscapes, and historic planting patterns;
- Tree removal / replacement on City streets and rights-of-way; and
- Planting standards and specifications for new street trees.

Urban Forest Operation Program (2010)

The Urban Forest Operation Program consolidates a range of policies, procedures, by-laws and standards for management of the urban forest in one document. It includes standards for maintenance and pruning of street trees and trees on other public lands, as well as general practices to direct management of City-owned natural areas (e.g., inspections, monitoring, debris removal, encroachment, invasive species, and forest trail development).

Canopy Coverage

Waterloo has an environment first policy to ensure that trees are preserved and any trees lost are replanted. There is a general target to maintain a healthy urban forest and proactively increase tree coverage over time. As with many Ontario municipalities, major storm events in 2013 and 2016 caused significant tree loss and staff are anticipating a nearly complete loss of the city's ash trees due to the emerald ash borer. Trees are being replaced to compensate however the loss of mature trees has a significant impact on the canopy cover. Initiatives such as Partners in Parks and Earth Day activities are helping to expand the City's urban forest. Canopy coverage is monitored periodically although information is not gathered annually, with the City's website noting that 2016 was the last year the information was collected.

Emerald Ash Borer Management

Emerald ash borer was first identified in the City in 2010 and management protocols have been in place since that time. The City of Waterloo is committed to maintaining ash trees where possible and 2014 was the first year that tree removals were necessary. An Emerald Ash Borer Management Plan was completed in 2015, which proposed an annual budget for monitoring, removals and replacement tree planting through 2027. Annual monitoring has been a key component in identifying ash tree decline, with dead or severely declining trees identified for removal. Chemical injection is used on significant trees to prolong their life. Forestry staff re- plant non-invasive trees as soon as possible after removals.

Tree By-Law

Trees located on city property, including in public parks and greenspaces, along trails and along City streets are protected by the **public tree by-law.** The By-law states that City trees must not be damaged or destroyed, and cannot be cut down, uprooted, topped or harmed in anyway both above and below ground. The City does not currently have a **private tree by-law** although according to staff the suggestion that there is a need for one periodically arises.

Environmental Strategy

To remain proactive and build upon existing environmental management capabilities, the City of Waterloo approved an Environmental Strategy in April 2010. The Environmental Strategy is a living document that includes five theme areas: "Energy, Air and Waste", "Planning and Growth", "Water Resources", "Greenspace", and "Environmental Awareness and Culture". Under each theme, there are Goals, Strategic Objectives, Indicators, Completed and On-going Actions, and Opportunities for Action. The Strategy's implementation is ongoing and is intended to guide corporate decision-making, enable evaluation of progress, and steer the municipality towards greater levels of environmental sustainability. A new sustainability coordinator position was created in 2015.

6.3 Inventory & Evaluation of Supply

Natural areas which include environmental reserves, environmental links and corridors, stormwater management ponds and cemeteries total 475.24ha, which makes up just less than 50% of the entire city parkland supply.

There are 35 environmental reserves, 10 environmental links and corridors, 32 stormwater management pond areas, and 2 cemeteries. The breakdown is shown in **Table 11**.

Table 11: Existing Natural Areas / Open Space Supply

Natural Areas / Open Space	Area (ha)
Environmental Reserves	381.85
Environmental Links and Corridors	23.59
SWM Ponds	54.95
Cemeteries	14.85
SUBTOTAL ENVIRONMENTAL OPEN SPACE	***475.24***

6.4 General Assessment of the Natural Areas

During the visits to parkland in the summer of 2018 which were outlined in the Section 4 for Parkland, a sampling of Waterloo's natural areas were visited and evaluated. The following were visited and evaluated.

- Anndale Park, Environmental Reserve
- Bomberger Woodlot, Environmental Reserve
- Clair Lake Park, Environmental Reserve,
- Laurel Creek Forest, Environmental Reserve
- Old Oak Park, Environmental Reserve
- St. Moritz Park/Reserve, Environmental Links and Corridors

The natural areas were generally deemed to be in good condition; however some were identified as fair. The reasons pertained to the presence of litter, graffiti and general maintenance. It was

noted that in certain areas the trees and shrubs had become overgrown within the airspace of the trail. In other areas trees are dead or dying which may become a hazard to users moving forward.

Some areas lacked signage indicating that it was in fact public space which may lead to confusion moving forward. The use of wayfinding, entrance and informational signage about the natural area as well as usage etiquette would help to enhance user experience.

During consultation, feedback received regarding the priorities for improvement to the parkland had Natural Park Areas listed as the fifth most popular response. The public recognizes the need for improvements to Natural Areas and this is shown in the response.

6.5 Issues, Opportunities & Constraints

Natural park areas were an issue that was raised in discussions with both City staff and the public. These areas increase the urban forest canopy, have a greater ability to infiltrate and filter rainfall and stormwater runoff, reduce erosion, cool our cities and reduce urban heat island effect, provide extended habitat for animals, birds and pollinating insects (including pollinators), and over the long term are more cost effective and environmentally sound to maintain as they require less mowing and attention. Natural areas and open spaces are often under-acknowledged, especially when parks are getting most of the attention. Natural areas require increased attention internally with the city as well as externally with Waterloo residents.

Comments received through public consultation suggest that some naturalized areas in the City have had little to no vegetation management and are overgrown. When undertaken in parks the appearance of 'neglect' has also affected some residents' perceptions of the value of efforts made through replanting programs. Encroachments onto parkland and especially onto natural areas is widespread through residents actions such as mowing naturalized vegetation, clearing out shrub buffer zones that develop between homes and adjacent forests, expanding gardens into parks and natural areas, and placing structures (such as fences, play structures, sheds, etc.) on park property. The practice of dumping (especially yard waste) into parks and natural areas is also widespread. Currently the City does not have resources to adequately address these issues.

Natural Park Spaces are not a 'no maintenance' solution, there is still vegetation management required to maintain access, and to ensure that invasive species do not take over. However, this takes considerable time and budget from an operational standpoint and both short and long- term management of naturalization area needs to be factored into planting efforts made through volunteer efforts and the City's stewardship programs. This may require prioritizing of naturalization areas to ensure the greatest environmental benefit for the effort.

There are opportunities to foster increased stewardship and community engagement for natural areas. Some approaches which could be taken include developing marketing information and strategic partnerships which help to bring awareness to the importance of the natural areas. Partnerships could include nature or environment clubs in the city or region, schools, universities etc. Increased education would also help inform the community about the natural areas and why they need protection.

Preservation and conservation of natural and wooded areas is an important element of a healthy, sustainable urban environment. Empowering communities with knowledge and stewardship tasks to help protect and enhance their community's natural areas will help with public support for City initiatives as well as encouraging maintenance, monitoring and self- policing

The City of Waterloo was designated a 'Bee City' by Bee City Canada in May 2018. As a 'Bee City' the goal is to inspire the community to take stewardship actions towards creating healthy native pollinator habitat on municipal parkland and to develop a greater public awareness and appreciation for native pollinators during local events.

In cities, the land supply is shrinking and so is habitat for wildlife. In the urban context, increasing the public's understanding of, and respect and value for urban wildlife is important.

Development often will displace urban wildlife and cause disruption and conflict with residents. Further education of the public about this issue and providing substitute habitats in other natural areas are important issues. Educating the public about urban wildlife and enhancing natural areas through the establishment of native pollinator habitat is beneficial.

Increasing public awareness could include: publication of tree inventories and urban forest health reports; city-wide web-based mapping of naturalization areas and other enhancement projects; informational and instructional videos; and expanding opportunities for on-site education (e.g., interpretive signage, walks and talks, tree identification tags). Some of these activities and initiatives are already in place in Waterloo, delivered in partnerships with organizations such as the University of Waterloo (Geo-time trail) or city Earth Day events (e.g. nature education).

The City could continue to have special opportunities and events for natural areas such as tree planting, community clean ups and other initiatives that are supported by volunteers. However, it has been shared previously that there are coordinator and staff dedicated to these types of activities and any expansion to their activities would require more resources in the form of staff and budget.

6.6 Needs Assessment

Natural areas need increased attention by both the city and public. There is room to improve these areas including adding / upgrading trails to enhance and add to the trail system. Natural areas could also benefit from the installation of wayfinding and entrance signage so that users are aware that the natural areas are accessible by the public and where they can expect to explore once they are on the trails. The needs pertaining to operations and maintenance of the natural areas and the urban forest are discussed in the next chapter.

Best practices from other municipalities include the development of Natural Heritage Strategies and Urban Forest Management Plans which the City of Waterloo should consider developing going forward.

The City currently has an Urban Forest Policy. It was originally written in 1998, and was updated in 2001, making it nearly 18 years old. It was disclosed during some of the interviews that staff would like to pursue development of an Urban Forest Management Plan. A comprehensive UFMP serves to guide the management and enhancement of the City's urban canopy cover and treed environment. In alignment with the City's official plan, a UFMP provides a roadmap with actions to help staff and residents invest in and maintain its urban forest for the future. It typically includes performance measures such as tree canopy cover and naturalization targets and guidelines for achieving them. Recognizing that the urban forest includes both public and private components, the plan should include actions that could be undertaken by City staff, community and conservation groups, interest groups, homeowners, businesses and developers. This includes policies for tree planting and maintenance on public and private lands by community and environmental groups as well as initiatives that increase planting cover such as community planting days, community tree advocacy programs, etc.

Additional initiatives and strategies that could be addressed separately or as part of an Urban Forest Management Plan include:

Private Tree Bylaw: A number of municipalities are pursuing private tree bylaws and staff have periodically raised the potential need for one. Staff may wish to test the capacity of Council and residents to develop and be prepared to enforce a private tree bylaw.

Block/Neighbourhood Pruning Programs: The City should strengthen its existing neighbourhood or block pruning program where Forestry staff on a rotating basis prunes existing trees neighbourhood by neighbourhood.

7 Operations and Maintenance

7.1 Trends & Emerging Needs

7.1.1 Aging Infrastructure

The City of Waterloo has an extensive inventory of parks which have been developed over time since its inception as a municipality in the mid-19th Century. Aging infrastructure is a current issue for many municipalities including Waterloo. As evidenced by community consultation feedback, some of the City's park facilities have reached or are nearing the end of their lifecycle. The City's Asset Management Plan is being updated to include parks and outdoor facilities which will help with prioritization of infrastructure renewal. In other cases, the needs and desires of the community have changed and there are additional elements that are being requested in local parks. Additional criteria will be needed to plan life-cycle replacements to address these interests.

7.1.2 Climate Change

As noted previously in other sections, one of the biggest trends and needs pertains to climate change. Infrastructure and materials within the softscape (plants, trees, etc.), hardscape (paving, concrete, etc.) and park amenities need to be durable and able to withstand a range of weather related elements (hot, cold, rain, ice, snow, wind, flooding, etc.)

7.2 Evaluation of Policies & Practices

7.2.1 Parks

Parks maintenance responsibilities are currently split between IPPW and Community Services (Environment and Parks Services) which leads to a lack of adequate supervision within the parks / capital development section. Parks maintenance staff report directly to the Director of E&PS and include Operations Managers and teams who are responsible for the following maintenance aspects of parks and open spaces.

- Turf, Construction & Playgrounds – natural turf sports field maintenance, mowing, trail maintenance, benches, playgrounds and signage;
- Sports and Outdoor Programming – Waterloo park maintenance, outdoor sports field program delivery and maintenance, park picnics and special events support;
- Forestry & Horticulture – forestry, Uptown and city wide floral displays and planting in parks and on streets, urban forest management; and
- Cemeteries.

Although the parks structure includes 4 managers, the city lacks a supervisor level. This is concerning for a division with such a high number of staff and particularly for oversight of seasonal/students. A dedicated supervisor layer would improve staff support and on-site

supervision; allowing the manger positions to provide more attention to strategic planning and initiatives.

Parks that were reviewed through the Parkland Strategy assessment process appear well maintained although a need for higher levels of service (increased garbage pick-up and mowing, winter path clearing) were noted in the public surveys, for trails systems in particular. With most new parks in subdivisions being developer built, operational budgets have not been included in budgeting for new parks in the past. The budgeting process changed in 2016 where every capital budget sheet now has a line item for associated operations budget. Currently, operations budgets are approved at the same time as the capital budget. This will help with the planned addition of new or redeveloped urban parks which are anticipated to require higher levels of maintenance. However, this does not address new parks that are built by developers and then assumed by the City. There are also gaps in policy relation to newly developed or upgraded trails by others (other City departments or the Region), which the City assumes responsibility for maintenance.

Based on documents provided, and discussions with staff, it appears that Parks operations teams utilize traditional maintenance practices and time tracking protocols consistent with those of other municipalities. However, from information received, it appears that the Division has limited written maintenance service standards that are tied to work plans and yearly business plans.

7.2.2 Cemeteries

The City of Waterloo provides cemetery services at Parkview Cemetery which includes a chapel, cemetery and crematorium situated on 11.7 hectares of land surrounded by trails and sports fields; and Mount Hope Cemetery on the Waterloo-Kitchener border which dates to the mid-1800s and is jointly managed with the City of Kitchener.

The management of Parkview Cemetery and Bechtel Park is directed by the *Cemetery Services – Bechtel Park Master Plan (2009)* which addresses both land-use development and operational strategies, including:

- An assessment of cemetery pressures, long-term cemetery needs and an overall approach for delivering cemetery services;
- An assessment of long-term park needs, and an inventory of sports fields and facilities in the park, including the indoor soccer facility on site (Manulife Financial Soccer and Sports Centre);
- A plan for improvements to both the cemetery and Bechtel park; and
- The preservation and protection of sensitive environmental features.

The Cemetery Services - Bechtel Park Master Plan establishes a vision for the site, including the cemetery, natural areas and park activity areas, with implementation over 15 years. There is a long term plan for the entire site to be a cemetery which will mean accommodating the existing sports fields elsewhere and the need to acquire additional lands to accommodate for outdoor recreation needs. The Plan also establishes an approach to overall service delivery for Waterloo Cemeteries

Operations, as a Self-Funded Enterprise Model. This model however is not sustainable and tax based funding will be required by 2020 to 2024.

7.2.3 Forestry, Horticulture and Environment

The Environment and Parks Services Division also includes a separate Forestry and Horticulture team that oversees the management of the urban forest canopy, which includes all trees and natural vegetation on city streets, rights of way, and public lands in the City. The Forestry and Environment team oversees the management of the urban forest, including responsibilities for the planting and maintenance of trees on City property (streets, parks and woodlands) and the protection and preservation of City-managed natural areas. Implementation is achieved through tree inspections and management practices, invasive species management, woodland restoration, and enforcement of applicable by-laws. Forestry personnel also respond to unforeseen events such as ice storms that may impact trees. There are a number of strategies and policies in place to direct this work The City has a number of strategies and policies in place to direct this work (refer to Section 7 Natural Areas), although it does not have a comprehensive Urban Forest Management Plan, or an Invasive Species Management Plan. Discussions with staff suggest that operational practices might be better supported through the preparation and formalization of such strategies.

Horticultural beautification is an initiative that was also discussed during consultation sessions. Horticulture is managed as part of the recently merged Forestry and Horticulture department. Opportunities exist to cross-train staff in both groups and to explore how to enhance efficiency and effectiveness. Additionally, service levels for horticultural work are determined on an ad hoc or ‘as needed’ basis. Current service levels are not well defined and criteria for determining appropriate service levels are not clear.

7.3 Issues, Opportunities & Constraints

7.3.1 Park Maintenance Service Standards

A number of the comments received through the online survey tools pertain to maintenance and service. Vegetation management/trimming, grass cutting, waste collection, dog waste issues are some examples mentioned. Observations made through the parks tour suggest that Waterloo’s parks are well maintained in a manner consistent with available funding and municipal service level expectations. These service levels are known internally by city staff but from discussions it appears that they have not been formally documented or posted for community access. This is something to consider moving forward. New projects and more complex urban park designs are increasing maintenance requirements and it is important to consider a formalized and written standard of maintenance and services which is tied to budget allocation.

Having a formalized and publicly visible set of maintenance and service standards will assist in departmental procedures and in fostering better understanding by the public of the City’s day to day maintenance practices for different classes of parks and open spaces. There will be a clear set of expectations.

Staffing and budget are some of the main issues plaguing operations and maintenance of natural areas. Vegetation management, tree trimming, grass cutting, waste collection were all mentioned during consultation.

Opportunities exist with the updates to the Asset Management Plan to develop a more fulsome inventory for parks, park amenities and natural areas. A more complete picture of the entire inventory will help with development of a consistent maintenance program and tracking actual maintenance and operating costs. Gaps in service where improvements in resources are required to meet standards will be clearly defined as well.

7.3.2 Work Order Management System

In addition to maintenance service standards it does not appear that the City has an automated "Work Order Management System" that identifies maintenance and asset replacement schedules. While staff may incorporate informal manual systems, paper and emails to direct work, the lack of a formal and automated system creates uncertainty around a number of things including:

- The longevity and replacement costs of the assets in the parks system because work being performed is not quantitatively tracked;
- The development of consistent preventative seasonal work plans;
- The "actual unit cost" of parks maintenance work being performed;
- Effective data to measure achievements and standards and develop performance measures;
- Task time allotted for work being performed; and
- Improvements in response times to community service requests.

The Environment and Parks Division currently retains third party contractors for a variety of services e.g. waste collection, some forestry works, some winter maintenance, some sports field maintenance. The City should evaluate the effectiveness of such contractor services required by the City and other municipalities (i.e. the Region). Without a work order management system in place it is difficult to track unit activity costs and determine and analyze cost of work performed internally against third party vendor costs.

7.3.3 Cross-Organizational, Functionality, Structure and Coordination

After initial discussions with staff, there appears to be a need to clarify the process to tie staffing levels and skill levels to maintenance tasks, standards and frequency. Especially as new parks and maintenance requirements come on board. The City should consider reviewing its delivery processes for a more flexible organizational structure that allows the completion of routine maintenance activities (within the set standards) while being able to respond to the community for every day requests, special projects and increased service demands.

7.3.4 Maintenance, Policy and Procedures Management

Parks Policy and Procedures Manual

There was high level discussion on the need for maintenance, policy and procedures management to direct the management of full-time, part-time and seasonal staff. The Environment and Parks Services Division currently does not have a Parks policy and procedures manual; however there are plans to develop one starting this year. A typical manual includes, but is not limited to the following components. The City may have some or all of these procedures already in-place:

- Staff and Volunteer Training;
- Vehicle and Equipment Management (this is often the responsibility of municipalities "Fleet Services";
- Use, Training, Repair and Maintenance Standards for Equipment;
- Supply Inventory and Control;
- Hazmat Requirements;
- Security Requirements;
- First Aid, Injury, Emergency Response Protocols;
- Internal Communications and Use of Radios and Technology;
- Customer Service Protocols and Response Process for Community Requests;
- External Communications (this is often developed by corporate communications);
- Work Orders;
- Parks and Landscape Maintenance Standards (routine);
- Data Tracking;
- Safety Protocols and Training Requirements;
- Inspection Management; and
- Asset Management.

Emergency Response

Forestry procedural policies and practices should be clear on who to call for emergency responses, including pruning under hydro lines, storm damage, hazard trees in parks and on trails, and how responses are prioritized. In addition, to be effective in storm response, regularly updated staff training and contractor contact information should be available at all times. Forestry management staff should also be considered for emergency preparedness training as part of the core emergency response team.

Cross-Disciplinary Collaboration

Managing the urban forest as a strategic resource and green infrastructure is the responsibility of all departments in the City. Historically, tree management has been the responsibility of municipal parks departments. However, the reality is that a range of municipal planning and operations activities impact trees. The city should review its tree planting and maintenance as a cross-disciplinary approach to include planners, engineers and utility providers and develop a formal cross-disciplinary approach in implementing the UFMP.

Customer Services & Community Event Support

A recurring theme resulting from discussions with stakeholders, as well as from the Neighbourhood Strategy and public comments, is the need for improved customer service in relation to community events. It appears that there is currently no one point of contact for residents to liaise with to organize and deliver an event, and some community events result in unexpected and unplanned increases in Parks maintenance activities, sometimes to the detriment of regular standards of service delivery.

The City may wish to undertake a review of who permits parks, (in consultation with recreation and neighbourhood services staff as well as culture staff), how permits are issued and scheduled, and how operational support (i.e. Picnic tables, trash containers, barricade fencing, etc.) is delivered. The review should also address the provision of labour and equipment services during after hours, evenings, holidays and weekends. Associated with this is a need to identify parks that can best support events, both large-scale corporate events as well as local neighbourhood events initiated by community groups. The City is supportive of neighbourhood events and has made a number of commitments through the Neighbourhood Strategy. However, it would be helpful to all parties to have clear policies in place that address scheduling, bookings, permits, site usage and operational support. The City should consider undertaking a Special Events Strategy to comprehensively address these issues.

8 Economic Development & Funding

8.1 Trends & Emerging Needs

As with most municipalities funding sources for park related municipal expenditures in Waterloo include, but are not limited to: tax-based funding, debt financing, reserve funds, development charges, and available capital and operating grants.

To ensure that residents have access to quality recreation facilities to maintain healthy lifestyles, strategic investment in the municipal recreation infrastructure is required. The funding formula in Ontario and certain other provinces is heavily dependent upon the Development Charges Act (or occasional grant programs) to generate capital funding for construction through land development. Once the facilities are constructed, however, the primary funding for operation comes partly through user fees.

Many users are paying more for sports and recreation facilities / services than they have in the past, and with the rise in user fees province-wide comes an expectation for higher levels of service and facilities. User fees however, are an important element of municipal financial sustainability since facility investment and reinvestments are tied to municipal budgeting and competing priorities for tax base funding. Not all recreation facilities will seek to recover all of their costs through user fees as municipalities recognize that services benefiting a great number of residents should receive a greater level of tax subsidy compared to services that serve only a small segment of the population. Municipalities have tools for capital cost recovery such as development charges and cash-in-lieu of parkland that can fund the capital construction of eligible works, partnerships to share costs with other providers, external grants and funding sources, community fundraising, and through diligent financial practices such as contributions towards reserve funds. User fees again contribute to the operational side of the amenity.

8.2 Evaluation of Policies & Practices

The City of Waterloo's capital forecast and financing strategy identifies the capital needs necessary to ensure infrastructure needs are met and service levels are maintained for its various service lines, while ensuring fiscal sustainability. Council approves a three-year capital and operating budget, with a 10-yr outlook, which allows for predictable funding for the City's departments. The capital forecast is built on the City's strategic goals and informed by recommendations that result from focused studies undertaken on various aspects of service delivery. The Parkland Strategy will be one of these studies, together with the updated Asset Management Plan.

The primary tools and strategies currently used by the City of Waterloo to secure or develop new parkland space or to enhance existing parks and facilities are outlined below.

8.2.1 City Reserve Funds

The City manages a series of reserve funds to facilitate its budgeting process. With respect to parks these include the Parkland Dedication Reserve Fund (PUB), Development Charges (DC), the tax base through the Capital Reserve Fund (CRF) and the Capital Infrastructure Reinvestment Reserve Fund (CIRRF) (Discretionary) 860035 POLICY as well as other grant opportunities.

Parkland Dedication Reserve Fund (PUB) provides for the purchase and development of parkland in developing areas and redeveloping areas and/or supports the upgrading of existing parks/facilities (neighbourhood, community or city-wide) provided the need to upgrade is due to intensification of the surrounding neighbourhood.

Development Charges (DCs) are collected by the City of Waterloo to fund some components of park development in new development areas. Elements that may be funded through DCs include play structures, water, and hydro services. The Province's Bill 108 is anticipated to have an impact on how DCs are collected and utilized.

Capital Reserve Fund (CRF) provides a source of financing for new build general capital projects and is a critical component of the City's long-term sustainability.

Capital Infrastructure Reinvestment Reserve Fund (CIRRF) provides for expenditures associated with the rehabilitation or replacement of existing capital infrastructure such as roads, including sidewalks and related infrastructure, and facilities. The Capital Infrastructure Reinvestment Reserve Fund may be used to assist in meeting the funding requirements of matching programs developed by senior levels of government for rehabilitation or replacement of existing capital infrastructure.

Other related reserve funds in use at the City include:

- Environmentally Sensitive Lands Reserve Fund (ESL) which provides for the acquisition and purchase of environmentally sensitive lands to ensure their protection, preservation and maintenance; and
- Cemetery Reserve Fund (CEM) which provides a source of funding for the purchase, replacement and expansion of capital items related to Cemetery operations.

8.2.2 Section 37 Benefits

Section 37 of the Ontario Planning Act allows municipalities to authorize increases in permitted height and/or density through the zoning by-law in return for community benefits that would not otherwise be provided for through the Planning Act or the Development Charges Act. Although Section 37 has been in place for many years, it is a tool that has become increasingly used in Ontario cities. The Waterloo Official Plan currently allows for increases in height and/or density, subject to certain criteria, in return for a range of facilities, services or matters that are most related to parks and other community services. The Province's Bill 108will change Section 37 benefits, as currently written in the Planning Act. The full impacts of this are not yet known.

8.2.3 Community Engagement

With close to 30 Neighbourhood Associations, Home Associations, and Neighbourhood Groups the City is well supported by its residents through both formal and informal partnerships that seek to create and enhance leisure and recreation opportunities. A number of the neighbourhood associations and groups are engaged in planning and environmental matters at a city-wide level and contribute to parks and recreation at a neighbourhood scale, including fund- raising for specific projects which has been accomplished a couple of times so far. Many of the homes associations were initiated through covenants formed by land developers and are focused around neighbourhood-shared assets such as pools and tennis courts which are located on private property.

The City has recently clarified its role, relationship and actions to support its neighbourhoods through the *Neighbourhood Strategy (2018),* which was completed in consultation with the associated organizations.

Neighbourhood led and delivered recreation, leisure, and community events and projects are supported by the City through a number of ways such as the Neighbourhood Matching Fund and Partners in Parks, among others. Neighbourhoods can access these programs for initiatives that are open to all in the community. Support is also available from the City's Environmental Stewardship Coordinator and Neighbourhoods Coordinators.

The Neighbourhood Matching Fund is funded by the City of Waterloo and the United Way Waterloo Region Communities and supports neighbourhood place-making projects put forward for consideration by neighbourhood groups. Groups are defined as two or more people and may include newly formed groups, or groups seeking funding for projects beyond their regular activities. Applicants can receive up to $7500 in funding if matched on a 1:1 basis with volunteer labour, donated professional services or materials, cash or any combination of these.

The Partners in Parks program provides an opportunity for residents to contribute to stewardship activities in the City’s parks and open space system. These include both short and long term projects, many of which are environmentally-based.

Short-term stewardship activities through Partners in Parks include one-time events in neighbourhood parks such as: birdhouse maintenance and monitoring; community planting; invasive plant species management; litter clean-up; plant salvaging; and, woodland trail mulching.

Long-term stewardship projects generally involve ongoing maintenance throughout the spring to fall for up to five years. Examples include: plant and maintain a mulched garden bed; plant and maintain a vegetated buffer adjacent to your property backing onto the park; mow grass on public greenspaces on a regular basis; manage an invasive plant species; and, install and monitor a ‘little library’ or community message board.

8.3 Issues, Opportunities & Constraints

8.3.1 Role in Economic Development & Community Vibrancy

There is opportunity for the City of Waterloo to better market their parks to support tourism. At present the major draws are Waterloo Park and Uptown Waterloo Public Square. Marketing of the parks and encouragement of tourism in other prominent parks will help to spread tourism dollars around and awareness of the other parks in the City.

8.3.2 Funding

Determining which projects are related to growth and development in the City, distinct from projects that are required to fill a gap or address a deficiency will be an important element of the Financial Plan and critical in assigning appropriate funding sources. In keeping with the City's current Development Charges By-Law, the development-related share of the capital costs associated with parkland improvements will be identified, which may be recovered through Development Charges in the future.

Alternative funding sources that will be explored in the Parkland Strategy include: opportunities for public or private sector partnerships, corporate sponsorships, and community fundraising.

Potential parties for partnerships that may be considered include, but are not limited to, school boards, service clubs, community and sports organizations, private entities, adjacent municipalities, and more.

The Parkland Strategy will be supported by an Implementation and Financial Plan that will ensure the City's financial capability to successfully implement the recommendations of the plan. From the foregoing analysis these are assumed to cover different aspects of service delivery in the Parks and Environment Division including: capital projects, operating procedures and organizational efficiencies.

The Implementation and Financial Plan will consider the City's current funding practices and asset management planning practices together with future infrastructure needs, stakeholder feedback, and a full range of available revenue sources. It will consider current operational processes and tools utilized by the City of Waterloo including the Asset Management Plan, the Development Charges By-Law, and the Capital and Operating Budget.

The Implementation and Financial Plan will include the following components:

Analysis of Capital Costs: The capital investments proposed in the Parkland Strategy will be assessed based on the ability of both future development and the City to pay for these costs. The City's Asset Management Plan will inform assumptions about asset renewal and replacement requirements. It is critical that this analysis reflect the financial requirements to maintain the City's infrastructure at the desired levels of service.

Operating Costs: Capital induced operating costs that will arise from the construction of new parkland infrastructure will be identified in discussion with City staff and through a review of

current operating costs for existing infrastructure in the City. These costs would largely be funded through taxation.

10-year Financial Plan: The 10-year plan will identify short-term (1-3 years), medium term (4-10 years), and longer term (10+ years) projects and priorities, based on identified costs and available revenue sources. As requested by the City it will explore the following financial models prior to recommending a final one.

- A “conservative model” which continues with current standards to minimize impacts to property tax, parkland dedication, development charges rates and other revenue tools while meeting the highest priorities of the Parks Strategy;
- A “middle ground” model which updates standards and l seeks to fund all the priorities of the Parks Strategy while considering impacts to taxpayers and developers; and
- A “fully funded model” which applies industry best practices and demonstrates the financial impacts of fully implementing the recommendations of the Parks Strategy.

The final recommended model may represent one or any combination of the three financial models developed to best balance the provision of necessary parkland infrastructure with the financial impacts.

9 Community Vision

9.1 Summary of Consultation Activities

Over the course of the spring and summer of 2018, there were a number of consultation initiatives which occurred in person at meetings, online and even on site in the selected parks for visitation. There was also consultation information which was brought forward from the Neighbourhood Strategy which is also being considered as important information for the Waterloo Parkland Strategy.

Table 12: Summary of Consultation Activities

Type of Consultation Event	Date Undertaken & Location	Purpose of Consultation / Questions Asked	Participation Levels
Online Engagement			
MySocial Pinpoint	June-August 2018 - Online	• Where do you currently play/relax • Where would you like to play/relax pending improvements • Other issues/concerns the City should be aware of	• 423 Unique Visitors • 99 Comments
Online Survey	June-August 2018 - Online	• Outdoor activity participation and sports; use of City facilities; general potential improvements; satisfaction with facilities; location specific improvements etc.	• 306 Completed Surveys
In Person Engagement			
Pop Up Event #1	June 9th 2018 – Waterloo Service Centre Open House	• Introduction of the project • Exposure to project website • Opportunity to complete hard copy survey	• 7 hard copy surveys completed
Public Open House #1	June 19th 2018 – RIM Park 2001 University Avenue East, Room 207.	• Present study purpose, process schedule, planning policy, City's strategic priorities, current trends and issues for parks. • Outline existing parkland, encourage participation to highlight improvements or gaps • Initial analysis and visioning • Various interactive activities, opportunities to complete surveys	• 13 Participants • 3 hard copy surveys completed
Pop Up #2	August 19th 2018 – Open Streets, Waterloo	• Continued project exposure (activities, website) • Opportunity to complete hard copy survey	• 1 hard copy survey completed

Type of Consultation Event	Date Undertaken & Location	Purpose of Consultation / Questions Asked	Participation Levels
	Park		
Park User Intercept Surveys	July – August 2018 – in 35 selected parks for visitation	• Connect with people using the parks during their visit • Frequency of use; types of activities; improvements needed; other parks used; location of residence etc.	• 41 Park User Intercept Surveys Completed
City Staff Park Visits & Surveys	July 17, 2018 – August 24, 2018	• Connect with people using the parks and trails • Collect feedback on their comments and concerns regarding the parkland system.	• 170 Individuals surveyed.

Table 13: Parks that need improvement

Ainsworth Park	Carriage Way Park	Heritage Green	Moses Springer Park Reserve	Roselea Park
Alexandra Park	City Centre Link & Cenotaph	Hillside Park Reserve	Mount Hope Cemetery	Snyder-Gingrich SWM Area
Anndale Park	Clair Lake Park	Iron Horse Trail	Old Oak Park	St. Moritz Park
Ashberry Park	Colonial Creek Link	Kaufman Flats	Peppler Trail	University Downs Park
Auburn Park	Conservation Meadows Park	Laurelwood Park	Pinebrook Park	Wasaga Park
Barrel Warehouse Park	Cornerbrook Park	Lexington Park	Public Square	Waterloo Park
Bearinger Park	Creekside Church	Mary Allen Park	Red River Park	Westmount Sports Park
Bechtel Park Reserve	Culpepper Park	Maverick Park	Regency Park	Westvale Park
Black Willow Link	Eastbridge Green	McCrae Park	Rhineland SWM Area	Wintermeyer Park
Bluestream Park	Heasley Park	Millen Woodlot	RIM Park	Woolgrass Park

The project team also met with various city staff and officials, liaisons to groups, the general public and park users. Once all the information was gathered there were a variety of recurring themes presenting themselves as important to note for the Parkland Strategy. There will be additional engagement with staff and other stakeholders moving forward.

9.2 Summary of Feedback from Consultation

9.2.1 Top Outdoor Activities

The online survey asked respondents about their recent outdoor recreation activities and that of their household over the past 12 months. These activities were reported to have taken place in Waterloo

parks, other municipal parks, conservation areas, along trails and pathways and on school or university grounds. The 10 most reported activities were:

- Walking for Leisure;
- Hiking a Nature Trail;
- Swimming;
- Attending an Event/Festival;
- Cycling;
- Playing at a Playground;
- Gardening;
- Static Activities (sunbathing, reading a book);
- Playing at a Splash Pad; and
- Ice Skating.

9.2.2 Most Requested Improvements

The online survey also provided a list of possible park improvements and respondents were asked to select up to 10 of the priorities that they felt should be incorporated into the park system. The 10 most requested improvements or enhancements to Waterloo parks were:

- Shade (trees or structures);
- Nature Trails;
- Water Fountains / Water Bottle Filling Stations;
- Washrooms;
- Natural Park Area Improvements / Vegetation Management;
- Paved Multi-Use Pathways;
- Seating Areas (benches, Picnic Tables);
- Playgrounds;
- Park Pavilions and Picnic Areas; and
- Splash Pads.

9.2.3 Other Key Findings

The following is a list of other findings resulting from consultation on Waterloo's parkland and trails:

- The majority of respondents do use Waterloo's parkland system including trails, and some also use parkland outside the City's boundaries.
- Neighbourhood parks and pathways/trails are the most used with frequency of at least once per week.
- The provision of passive amenities, programming and activation opportunities, overall park maintenance and trail improvements were the most popular elements stated that would encourage increased park use.
- Overall respondents were largely somewhat satisfied with Waterloo's Parkland.
- There was also a lot of interest in providing more locations for dog's off-leash areas, other than at the existing Bechtel Park including introducing dog friendly parks/amenities/materials in smaller urban parks in intensification areas.
- Interest in additional neighbourhood parks.

9.3 Parks Identified for Improvements

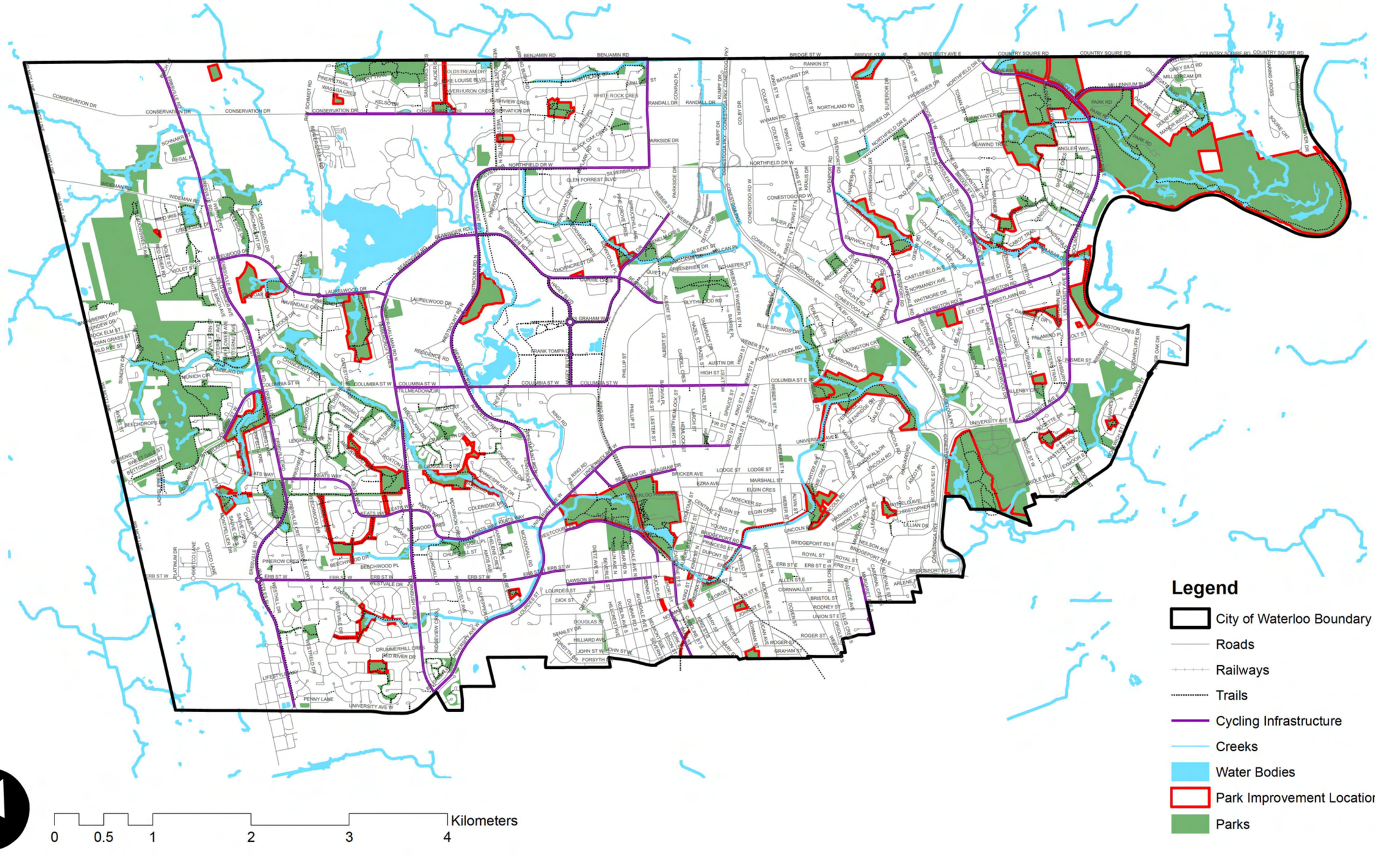
Throughout the consultation process, the public were invited to identify parks where they would like to see improvements. Parks were identified during the interactive mapping exercise, within the survey, and park user intercept questionnaire. **Table 14** and **Figure 8** identify the parks that were flagged by the public for desired improvements.

Table 14: Parks that need improvement

Ainsworth Park	Carriage Way Park	Heritage Green	Moses Springer Park Reserve	Roselea Park
Alexandra Park	City Centre Link	Hillside Park	Mount Hope	Snyder-Gingrich
Anndale Park	Clair Lake Park	Iron Horse Trail	Old Oak Park	St. Moritz Park
Ashberry Park	Colonial Creek	Kaufman Flats	Peppler Trail	University Downs
Auburn Park	Conservation	Laurelwood Park	Pinebrook Park	Wasaga Park
Barrel	Cornerbrook Park	Lexington Park	Public Square	Waterloo Park
Bearinger Park	Creekside Church	Mary Allen Park	Red River Park	Westmount
Bechtel Park	Culpepper Park	Maverick Park	Regency Park	Westvale Park
Black Willow Link	Eastbridge Green	McCrae Park	Rhineland SWM	Wintermeyer
Bluestream Park	Heasley Park	Millen Woodlot	RIM Park	Woolgrass Park

City of Waterloo Parkland Strategy

Figure 8 - Parks Identified as Locations for Improvement During Consultation



9.3.1 Critical Issues

Based on the feedback received as well as the Consultant team's own assessment of the parks, the most critical issues identified for Waterloo parks are as follows:

- Park path and trail improvements.
- Upgrades and improvements to playgrounds.
- Shade in parks (trees or shade sails).
- Splash pads / water features.
- Waste management (garbage pickup / dog waste pickup).
- Washrooms (new and upgraded).
- Seating (benches / picnic tables).
- Hydration stations (water fountain / bottle filling).
- Dog off leash areas.
- Signage improvements (parks are behind houses, hard to find).
- Vegetation management.

9.4 Vision Statement

Waterloo's park system contributes to the City's overall sustainability and reputation as a green, diverse, city and creates lasting and memorable experiences for both residents and visitors - making Waterloo a welcoming place to live, work, learn and play.

9.4.1 Goals

1. Ensure equitable and inclusive access to parks, facilities, services, and experiences for all cultures, ages and abilities.
2. Support residents' needs and interests through customer focused services.
3. Connect people and nature through appropriate and sustainable use of natural areas.
4. Provide a range of amenities, infrastructure and programs to allow organized and informal activities throughout the seasons.
5. Provide visitor comfort amenities in parks to encourage use and extend the length of stay.
6. Ensure that all parks, trails and facilities are well maintained and sustainable.

7. Ensure a safe environment for users.
8. Incorporate innovative, interactive and multi-season activation elements in the design and programming of parks and urban spaces.
9. Provide for future adaptation to change, including climate change resiliency.
10. Ensure effective communication and engagement and ease of access to information about natural systems, parks, recreation services and amenities.

9.5 Reconciliation and Engagement with First Nations

The City of Waterloo is committed to building meaningful and respectful relationships with First Nations. The 2019-2022 Strategic Plan, which is currently being finalized, is anticipated to include a statement on this, and the Parkland Strategy will take its direction from the Strategic Plan.

10 Emerging Areas of Focus for Parks

After receiving input from the public, members of Council and staff, and analyzing the current situation in the City of Waterloo, the Research, Analysis and Visioning report has identified a number of emerging areas of focus for the City to consider. These will be further examined in the next phase of study with recommendations brought forward into the Draft Parkland Strategy. The following list is largely related to new parks development, upgrading of existing parks, and customer focused services. As noted in the foregoing sections of this report, attention will also need to be paid to the updating of some policies and procedures that support the planning, design and operational aspects of parks and forestry services in the City.

More / Improved Play Spaces for All Ages and Abilities (playgrounds for different ages, levels and abilities, upgrades to aging equipment, playgrounds in neighbourhoods with no facilities).

More Opportunities for Shade (shade trees, shade structures, shaded areas by playgrounds and for watching spectator sports).

More Locations for Water Based Play (interactive water features, splash pads, an additional outdoor pool).

Provide Hydration Stations in Parks (water fountains, bottle filling, cooling / misting stations).

More Locations for Seating (benches along paths, benches by playgrounds, picnic tables in parks).

More Locations for Washrooms (near sports fields, near dog parks, near playgrounds).

Improved Maintenance of Parks (dog waste cleanup, vegetation management, maintain what we have versus implementing more amenities, cleanup of Silver Lake).

Trail Improvements (paving multiuse trails, trail grading to mitigate flooding).

Parking Lot Improvements (repaving / surfacing, parking lot trees, reduction of parking lots where necessary).

Informal Play (adult fitness equipment, open space for informal play, basketball courts, ping pong, chess).

Overall Accessibility (accessible trails and paths into parks, accessible dog parks, accessible playground equipment, pedestrian bridges over watercourses, fill in trail gaps, maintain public access to water courses).

Improved Wayfinding (better signage between parks, better signage at entrances to parks)

Improved Safety in Parks (lighting at trail and park entrances, vegetation management for sightlines, CPTED, pedestrian crossings, lower speeds at park entrances, safety netting for baseball fields).

More Opportunities for Events (clarified process for bookings, ability to book events in neighbourhood parks, water and power for events).

Activation of Parks (food and beverage, beer gardens, art, lighting, interactive elements, Wi-Fi, multi-season programming (ice skating) and required infrastructure (water hookups), neighbourhood parks as gathering spaces for community events and activities, with more amenities for events (water, electrical, storage, shelters).

Increased Information & Education (waterfowl management & education for public, more readily accessible park information).

Multi-use, Multifunction, Flexible Spaces (adapting parks to respond to changing neighbourhood demographics, amenities for youths, seniors, adults, different cultures, different abilities).

Enhance Customer Service (easier and clearer process for booking/planning events and day of service delivery in parks).

Dogs Off-Leash (develop off-leash, maintenance in terms of dog waste, conflicts in parks.)

Community Involvement & Sense of Place (enhanced neighbourhood engagement in parks, adopt-a-park or friends of park programs, participatory budgeting related to parks, neighbourhoods want to make their parks unique and be involved in shaping the look and feel of their parks, residents want to participate and have a greater role in their parks (taking charge of winter ice rinks, weeds etc.), art, community gardens).

Natural Park Spaces (locating natural areas in parks appropriately, ensuring proper maintenance practices and standards and management to prevent overgrowth, managing invasive species).

The themes included in these opportunities, together with already established visions within the departments of the City of Waterloo, helped to form the Vision Statement for the City of Waterloo's Parkland.

11 Next Steps

11.1 Study Process & Schedule

With the completion of this report and the associated presentation to Council in 2019, the study will be entering into its fourth stage and the development of the Draft and Final Parkland Strategies.

11.2 Next Phase of Work

11.2.1 Draft Parkland Strategy

The feedback received on the Research, Analysis and Visioning report as well as confirmation on the Areas of Focus in the previous section will assist in forming and refining the framework for the Draft Parkland Strategy.

The different plans which comprise the strategy will be drafted including: The Parks Policy and Strategic Plan; Parks Service Plan and the Implementation and Financial Plan will be drafted and presented to the Steering Committee for review as well as during a public engagement session (PIC #2) to confirm these Strategic Directions. The plans will also be presented to Council.

11.2.2 Final Parkland Strategy

Using feedback received during the Draft Parkland Strategy development, the Final Parkland Strategy and Financial/Implementation Plan will be developed and reviewed by the Steering Committee, reviewed at a final public engagement session (PIC#3), and presented to Council.