



play.



live.



work.

Outdoor Sports Field Strategy:

A plan for multipurpose rectangular fields, diamonds, and cricket pitches in the City of Waterloo, 2012-2031

A Collaborative Project of Public Works Services and Community, Culture and Recreation Services

June, 2012



Table of Contents

Executive Summary

- 1.0 Introduction 1
- 2.0 Outdoor Sports in Waterloo 8
- 3.0 Analysis of the Existing Sports Field Inventory..... 21
- 4.0 Field Use Analysis and Future Need Projections..... 56
- 5.0 Proposed Implementation Plan 77
- 6.0 Envisioning Our Future 93
- 7.0 Appendices 95
- 8.0 References 128

EXECUTIVE SUMMARY

The City of Waterloo is a growing and active community. New residents and employers move into our community every year. The wide range of recreational facilities and activities available to the community helps to make Waterloo an attractive place to live, work, and play.

As part of the general movement to make cities more livable, Ontario municipalities face public pressure to deliver increasingly sophisticated recreation facilities. There are also more community groups that want access to recreation facilities for a broader range of activities than in the past. Opportunities for informal, recreational, and competitive sport are desired by local residents.

Outdoor sports fields, including multipurpose rectangular fields, diamonds, and cricket pitches, are a key component the City of Waterloo's infrastructure supporting sport, recreation, and leisure activities. These fields provide opportunities for groups of all ages and skill levels across a wide range of sports. Meeting the demand for outdoor sports fields today and in the future is important because these fields contribute to opportunities for an active lifestyle. They also contribute to the social, cultural and economic vitality of the city. Infrastructure like sports fields makes cities great places to live, thereby attracting employers to the area, who in turn attract and retain high quality talent. Additionally, sports fields can attract tourism to the city, as teams and their families come for a weekend to compete, spending money on hotels, restaurants, shopping, and other local cultural sites and attractions.

The Community, Culture and Recreation Services Master Plan identifies the need for a long-term Outdoor Sports Field Strategy. The Master Plan emphasizes the importance of improving the use and quality of existing sports fields before developing new ones. This means increasing the amount of time each field can be used in a sustainable way, and maximizing field bookings.

Development of this Outdoor Sports Field Strategy involved best practice research, data analysis and collaboration between staff from the Public Works Department and the Community, Culture and Recreation Services Department. It also involved a public engagement process that included an online survey, public open houses and stakeholder meetings.

This long-term plan for outdoor sports fields will help ensure residents have access to quality fields on an ongoing basis, and will also help city staff balance today’s needs with changing demands over the next 20 years. Participants in the public consultation process identified the development of this strategy as a step in the right direction for the city.

Vision, Guiding Principles and Strategic Goals

A vision encourages all stakeholders to strive toward a shared, ideal future. The vision of the City of Waterloo’s Outdoor Sports Field Strategy is:

“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.”

This vision provides a picture of what the outdoor sports field inventory, and its use, should look like over the next twenty years. The vision is supported by the following guiding principles:

Accessible and Inclusive	Policy and partnerships will enable reasonable and fair access to fields by all groups regardless of sport played, age, gender, ability and skill level. Fields will be affordable for direct users and for city residents as a whole.
Fiscal Sustainability	Planning will promote the development of fields, considering both need and cost, today and in the future. Planning will take into account the cost of new field development as well as the maintenance and upgrading costs for quality fields over the long-term.
Environmental Stewardship	City staff and sport groups will see themselves as the guardians of green spaces used for sports. Planning, development, maintenance and programming will aim to incorporate green practices and protect the health of our local environment.
Transparency	City staff and sport groups will openly share information with each other. Information sharing and ongoing dialogue will support working together to ensure sports fields are used in the best way to meet community needs.

Safety and Quality	Design, upgrades, maintenance, and programming practices will strive to improve playing conditions. A primary focus will be placed on supporting player safety.
Continuous Improvement	Through enhanced investment in planning, policy, monitoring and evaluation, ongoing efforts will be made to improve fields, field management and maintenance, and city services. These efforts will seek incremental change over time through improved efficiency, effectiveness, and flexibility.

The vision statement and guiding principles provide a framework for planning, policy development, field use, and maintenance.

Shaped by the vision and guiding principles, as well as informed by research and public input, seven strategic goals have been identified to form the core of the overall strategy. These goals speak to areas of greatest need where high impact changes can be made within available resources. They have been placed in order of priority based on public input.

- Goal 1:** To improve the safety and long-term quality of outdoor sports fields.
- Goal 2:** To maximize use and expand the amount of programmable time at existing fields to maximize the use of these fields prior to new development.
- Goal 3:** To develop new outdoor sports fields, within available resources while recognizing competing pressures, based on population growth and field need projections.
- Goal 4:** To enable participation in physical fitness activities in Waterloo through improved outdoor sports field access for neighbourhood, recreation, and competitive use for the full range of outdoor sports of public interest in Waterloo.
- Goal 5:** To increase capacity throughout the sport and recreation services system in Waterloo to allow for continuous improvement in field maintenance, allocation, and management.
- Goal 6:** To pursue, facilitate and encourage innovative partnerships for the provision of access to outdoor sports fields.

Goal 7: To invest in enhanced communication, relationship building and collaboration between city staff and outdoor sport organizations.

Each recommendation in the strategy that follows is tied to one or more of these goals (see Section 5.0 for additional information). Implementation of the recommendations will allow the City of Waterloo, staff, and sport organizations to strive to reach the strategy’s vision while working within a shared set of values.

Sports and Sports Facilities in Waterloo

A wide range of sports are played on outdoor sports fields in the City of Waterloo. Table 1 identifies the sports played by field type.

Table 1: Sports Played in Waterloo by Field Type

Field Type	Sports
Multipurpose Rectangular	Soccer, Football (Tackle and Flag), Rugby, Field Lacrosse, Ultimate Frisbee, Field Hockey
Diamond	Baseball, Softball, Slo-pitch, Fast-pitch, T-ball (Note: Football, Lacrosse and soccer will also use diamond outfields)
Specialized	Cricket
Neighbourhood	Pick-up games, Kite-flying, Frisbee, Informal play, etc.

For 2011, the City of Waterloo offered access to 92 facilities across the city. There are 44 diamonds that can accommodate baseball, softball, slow-pitch, fastball and t-ball, and two pitches for cricket. The remaining 46 fields are rectangular, multi-purpose fields for use by soccer, football, rugby, field lacrosse, field hockey and ultimate frisbee.

The majority of the highest quality facilities are located on the east side of the city, with some in the central part of the city. There are none on the west side, an area that has seen significant growth and expansion of residential communities in recent years. This lack of higher quality facilities on the west side of the city indicates a geographic disparity in field distribution, and points to an opportunity for new, high quality, field development, to allow access to facilities closer to home.

Table 2: Fields by location and type, estimated 2011 bookable inventory, including fields with past low-use.

Location	Field Type	# of Fields
West	Rectangular	13
	Diamond	5
	Cricket	0
	TOTAL WEST	18
Central	Rectangular	11
	Diamond	24
	Cricket	2
	TOTAL CENTRAL	37
East	Rectangular	22
	Diamond	15
	Cricket	0
	TOTAL EAST	37
Total		92

Table 3 provides additional information about the current inventory of fields. It should be noted that not all fields are owned by the city. A number of sports fields are on land leased from churches and many are located on school property.

Table 3: All fields by type and ownership, estimated 2011 bookable inventory, including fields with past low-use.

	Number	City Owned	School	Leased
Rectangular	46	29	13	4
Diamonds	44	23	21	0
Specialized	2	1	0	1
TOTALS	92	53	34	5

Of all outdoor sports fields in the City of Waterloo's inventory, 58% are on City land, 37% are on school lands, and the remaining 5% are on leased lands.

Table 4: All fields by type, characteristics and amenities, estimated 2011 bookable inventory, including fields with past low-use.

	Artificial Turf	Lights	Irrigation	Parking	Washrooms
Rectangular	2	9	9*	39	23
Diamonds	0	8	5	37	18
Specialized	0	0	0	2	0
TOTALS	2	17	14	78	41

* 9 rectangular fields have in ground irrigation system. There is also one working portable irrigation system at Bechtel Park

Amenities vary greatly from field to field. Two of the city’s multipurpose rectangular fields have artificial turf. Only 18% of all fields have lights. There is in-ground irrigation at Bechtel Field 2, RIM Fields 1-4 and 7-10, the Hillside Diamonds and RIM Diamonds 1-3. Portable irrigation is also available at Bechtel Fields. Washrooms are available at 45% of fields, and parking is available at 85% of fields. These features improve player and spectator comfort, whereas turf type, lights, and irrigation increase the amount of time the field can be used.

According to survey respondents, washrooms are the most important amenity to have at sports fields, followed in priority order by off street parking, player seating, lights, shaded areas, and spectator seating.

Current Field Use Analysis

Maximizing utilization of existing facilities is a strategic priority. To understand how facility use can be improved, it is necessary to look at how the facilities are currently used.

Drawing on the Ontario Sports Turf Association classification system, the expertise of city staff responsible for field maintenance, and booking data, CCRS planning staff assigned a maximum usage capacity for each field in the city. For the purposes of this report, maximum field capacity can be defined as the maximum hours of use allowed per week before turf quality begins to decline. The assigned maximum capacity is based on current field conditions and assumes that existing maintenance practices continue.

By assigning a capacity to each facility and comparing this to actual use in 2009 and 2010, it is possible to get a sense of which facilities are being efficiently used and which can accommodate more use.

The data analysis found below is a new approach for the City of Waterloo. Having assigned each field a maximum use capacity, we can look at how much the fields are actually used to see if they could reasonably be booked for more time. Maximum utilization of existing fields is a strategic priority. However, achieving 100% of the maximum capacity for each field is not a realistic or appropriate goal. While it is desirable and cost effective to use the fields as much as possible, the complexities of field use scheduling need to be considered. Time is needed for breaks between games, for weather related cancellations, and to allow for unexpected field maintenance. Since this is also the first time staff has assigned use capacities to each field, staff suggest 80% of the maximum use as a reasonable target.

To understand how or if field use can be improved, staff compared the capacity of each field to the field bookings in 2009 and 2010. Data from this analysis for each separate field is found in Appendix F. Tables 5, 6, and 7 provide information on the total capacities and usage for each field type and category.

Table 5: Rectangular Multipurpose Sport fields – Bookings in 2009/2010

Maximum Weekly Capacity	Number of fields	Total Hours Used (Average of 09/10 bookings)	Maximum Capacity per Season (All Fields)	% use of 100% (Max) Capacity	% use of 80% (Goal) Capacity
High (26 hours)	4	1,698.0 hrs	1,768 hrs	96.0%	120.05%
Medium (18 hours)	28	6,702.0 hrs	8,568 hrs	78.2%	97.78%
Low (10 hours)	7	862.9 hrs	1,190 hrs	72.5%	90.64%

Note: The length of a season for these fields was estimated at 17 weeks (May to August). This is an average season length. The new artificial turf fields were not included in the above numbers because they were not available in 2009/2010. Low use fields were also not included. The fields at Pillers were included in these figures, although they are not part of the 2011 inventory.

Data analysis suggests that low capacity fields are under-utilized, medium capacity fields are used appropriately, and high capacity fields are over-utilized. Based on the goal use capacity, usage results indicate 90.64%, 97.78%, and 120.05% respectively.

Table 6: Diamonds – Bookings in 2009/2010

Maximum Weekly Capacity	Number of Fields	Total Hours Usage (Average of 09/10 bookings)	Maximum Capacity Per Season (All Fields)	% use of 100% (Max) Capacity	% use of 80% (Goal) Capacity
High (32 hours)	8	4,254.1 hrs	5,376 hrs	79.13%	98.91%
Medium (26 hours)	34	10,096.0 hrs	18,564.0 hrs	54.38%	67.98%

Note: The length of a season for these fields was estimated at 21 weeks (May thru September). This is an average season length. Low use diamonds were not included. Diamond 2 at Sandowne School and Diamond 1 at Mary Johnston School were included in these figures, although they are not part of the 2011 inventory.

High capacity diamonds are also close to goal use capacity at 98.91%. On the other hand, medium capacity diamonds are used only 67.98%. The cricket pitches are used at 96.98%, suggesting there is little additional capacity for more use.

Table 7: Cricket pitches – Bookings in 2009/2010

Maximum Weekly Capacity	Number of Fields	Total Hours Usage (avg. of 09/10 bookings)	Total Capacity per Season (All Fields)	% use of 100% (Max) Capacity	% use of 80% (Goal) Capacity
Medium (32 hours)	2	1,042.8 hrs	1,344 hrs	77.5%	96.98%

Note: The length of a season for these fields was estimated at 21 weeks (May thru September). This is an average season length

There are a number of proposed policy and operational changes that would enable increased use of the fields. These include development of space allocation procedures to improve equity, changes to the way sports organizations schedule games, and identifying or creating opportunities to use fields for alternate or multiple sports. Negotiating longer term leases for leased facilities, and exploring the development of shared use agreements with school boards, will also contribute to better use of available facilities.

There is also a need to develop stronger relationships with user groups to better understand their needs and to form effective policy around usage. Enhanced relationships can also

support implementation of better data collection systems to inform decision making and planning

The above analysis does not include informal and non-sport uses of the fields. Fields are commonly used for informal play, for community events, and for neighbourhood gatherings. Access to fields for these purposes must continue, and opportunities for improvement should be pursued, such as recent development of an inventory and booking procedure for facility access for non-traditional sport use, as well as identifying a future approach for field access for informal sport play without a booking.

Future Facility Need Projection

While there is much that can be done to improve the use of the current field inventory to meet the needs of sports organizations in Waterloo today, consideration must also be given to future needs.

To project future field need, demand projections (based on current booking trends and projected population growth in the city) were compared to the capacity of the estimated inventory at 5 year intervals between 2011 and 2031. The inventory for 2016 takes into account the repurposing for Field 5 and 6 on the Bechtel lands for cemetery use as planned for 2013/2014, as well as repurposing of all programmed sports fields at Waterloo Park as per the Waterloo Park Master Plan when calculating the 2021 existing inventory. Comparing projected demand to estimated field inventory capacity reveals where there will be areas of surplus and deficit in the inventory. Based on this analysis, recommendations have been made on how many additional facilities of each type are needed to avoid a deficit situation.

The projections for rectangular multi-purpose fields, diamonds, and cricket pitches are calculated separately and appear below. The projections are presented in a cumulative format.

Table 8: Rectangular Field Need Projections.

Year	Difference between Estimated Inventory and Required Fields (Cumulative)			
	Artificial Turf	High Capacity	Medium Capacity	Low Capacity
2011	0.0	-0.4	-1.8	1.3
2016	-0.1	-2.6	-3.3	0.9
2021	-0.2	-2.8	-6.5	0.6
2026	-0.4	-3.1	-8.3	0.2
2031	-0.5	-3.5	-10.1	-0.2

Notes: Estimated inventory numbers assume no new field development between 2011 and 2031. Estimated inventories are based on 2011 inventory minus fields known to be repurposed in the projection year's estimate. The 2016 estimated inventory is the 2011 inventory minus Bechtel Park Fields 5 and 6, and 2021 is the 2016 inventory minus the two Waterloo Park Fields. It is assumed that all other fields will continue to be available until 2031; this includes leased and school fields currently in the inventory. Each bookable field was counted as one field regardless of size. The findings are cumulative. A negative number indicates a deficit in fields required and a positive number indicates a surplus in fields. A detailed overview of the projection analysis can be found in Appendix G.

Results show that even with a target of achieving 80% of field capacity, there will be a need for additional multipurpose rectangular fields over the next twenty years. By 2031, there will be a need for 0.5 more artificial turf fields, 3.5 more high capacity rectangular fields and 9.1 more medium capacity rectangular fields.

Table 9: Diamond Need Projections

Year	Difference between Estimated Inventory and Required Fields (Cumulative)	
	High Capacity	Medium Capacity
2011	0.1	8.9
2016	-0.4	7.5
2021	-2.8	4.4
2026	-3.3	2.7
2031	-3.9	1.0

Notes: Estimated Inventory accounts for the repurposing of four Waterloo Park diamonds in 2021. A negative number indicates a deficit in fields required and a positive number indicates a surplus in fields.

Diamond projections suggest that no additional diamonds will be needed until 2021. Decommissioning the Waterloo Park diamonds will create a need for field use capacity equivalent to 2.8 high capacity diamonds in 2021. By 2031, there will be a need for 3.9 high capacity diamonds over what is currently available in 2011. While there will continue to be a small surplus of medium capacity diamonds, it should be noted that, as with the low capacity rectangular fields above, these diamonds are largely on school property and cannot accommodate many of the sport organizations' needs. They are also at risk of being repurposed by the school at any time.

Table 10: Cricket Pitch Need Projections

Year	Difference between Estimated Inventory and Required Fields (Cumulative)
	Medium Capacity
2011	0.1
2016	-0.1
2021	-1.1
2026	-1.3
2031	-1.4

Notes: Estimated inventory accounts for the repurposing of the Waterloo Park Cricket Pitch in 2021. A negative number indicates a deficit in fields required and a positive number indicates a surplus in fields.

The need for an additional cricket pitch will occur as soon as the cricket pitch at Waterloo Park is decommissioned in 2021. An additional cricket pitch will also be required between 2026-2031, although only part of its' full capacity will be required.

Additional outdoor sports field development will be required in Waterloo in order to meet needs. These projections are based on the assumption that sport organizations will work with the city to increase field utilization to 80% of capacity. This will require flexibility on the part of all participants, but is essential if field needs are to be met in a fiscally sustainable manner. These projections are also based on the assumption that programmed sports will be removed for Waterloo Park, as per the Waterloo Park Master Plan, but that this displacement of programmed sports will not happen until land and funds are available to add the needed capacity to the field inventory and the funds are available to implement the changes at Waterloo Park. It is important to note that with the addition of fields, operational budgets for maintenance will need to increase to allow for appropriate maintenance to preserve the field quality.

There is not only a need for additional field, but also a need to consider how we can maintain the quality of our existing fields over the long term. Strategies to maintain the quality of our fields on an ongoing basis include development of a long term capital investment plan for infrastructure such as benches, backstops and goal posts, as well as change to operating budgets and maintenance practices to improve turf quality and to better align with user expectations and industry best practices.

To meet these projected needs, new facility developments have been identified, as outlined below. Long term plans for upgrades and renovations to existing facilities in the inventory to improve facility quality are also included. Estimated capital costs are included. Financial figures in italics are currently unfunded. All other capital costs include in the table can be covered within current project budgets.

Field Upgrades and New Field Developments Planned from 2012 to 2031 (page 1 of 3)*

Recommendations	2012-2013	2014-2015	2016-2017	2018-2019	2020-2021	2022 to 2031	Estimated Capital Cost
Creekside Church, Field 3 <ul style="list-style-type: none"> Field 3 improvement 	●						\$15,000
Field Improvement Study <ul style="list-style-type: none"> Develop an RFP to gain information regarding soil testing, specific facility improvements, drainage approaches, turf specifications, and on-going maintenance impacts. 	●						\$10,000
Old Oak Park <ul style="list-style-type: none"> Either strip drainage or full renovation. 	●						\$25,000
RIM Park, Diamonds 1-6, <ul style="list-style-type: none"> Fix the transitions between infield and outfield and remove stones from infields. Add Washroom Facility 		●					\$7,000 for field upgrades \$150,000 for washrooms (currently unfunded)
Westwind Park <ul style="list-style-type: none"> Diamond improvement as part of general park improvement plan. 		●					\$10,000
Waterloo Park, Diamonds 1 & 2 <ul style="list-style-type: none"> Remove exterior fencing and nets. Relocate batting cages from Hillside or build new batting cages at Waterloo Park. 			●				\$14,000

Field Upgrades and New Field Developments Planned from 2012 to 2031 (page 2 of 3)*

Recommendations	2012-2013	2014-2015	2016-2017	2018-2019	2020-2021	2022 to 2031	Estimated Capital Cost
University Downs, Diamond 1 <ul style="list-style-type: none"> Update benches and fencing, including the backstop. 		●					\$15,000
RIM Park, Diamond 3 <ul style="list-style-type: none"> Re-purpose existing slo-pitch diamond to become a hardball diamond. 		●					\$60,000 <i>(currently unfunded)</i>
Waterloo Park East Field <ul style="list-style-type: none"> Rectangular field upgrade 		●					\$14,000
Laurel Creek Conservation Area, Cricket pitch 1 <ul style="list-style-type: none"> Install netting on either end of the field. 			●				\$15,000
UW North Campus Fields <ul style="list-style-type: none"> New development, 3 Rectangular Fields. 			●				\$2,000,000 <i>(plus \$24,000 increase in operation budget annually for maintenance costs)</i>
Lexington Park East <ul style="list-style-type: none"> Repurpose existing diamond and create (3) atom fields 			●				\$20,000
Laurelwood Park <ul style="list-style-type: none"> Drainage improvements. 				●			\$15,000
Pinebrook Park <ul style="list-style-type: none"> Drainage improvement and transplanting trees to standardize field size. 				●			\$10,000

Field Upgrades and New Field Developments Planned from 2012 to 2031 (page 3 of 3)*

Recommendations	2012-2013	2014-2015	2016-2017	2018-2019	2020-2021	2022 to 2031	Estimated Capital Cost
Regency Park <ul style="list-style-type: none"> Standardize field size. 					●		\$15,000
Blue Beech Link <ul style="list-style-type: none"> Turf replacement 					●		\$11,000
RIM Park <ul style="list-style-type: none"> Artificial Turf Replacement 					●		\$1,000,000 <i>(currently unfunded)</i>
Future West Side Multiplex <ul style="list-style-type: none"> 4 diamonds, 2 rectangular fields, 1 cricket pitch, and 1 cricket pitch overlapping rectangular fields 						●	\$18 million <i>(currently unfunded), (plus \$75,000 increase in operational budget annually for maintenance)</i>
Waterloo Park Diamonds <ul style="list-style-type: none"> Repurposed as per Waterloo Park Master Plan Remove remaining infrastructure 						●	\$60,000
Bechtel Park <ul style="list-style-type: none"> Repurpose existing diamond to create (2) rectangular fields 						●	\$54,000 <i>(does not include cost of stadium removal)</i>
Total Est. Capital Costs	\$50,000	\$270,000	\$2,035M	\$25,000	\$26,000	\$18.114 M	\$21,520,000
<i>Total un-funded</i>	\$0	\$210,000	\$0	\$0	\$0	\$18M	\$19,210,000

The projections are only part of the story about future need. Sport organizations are looking for larger, high quality, lit fields. These needs cannot be accommodated within the city's existing inventory. While there is some surplus of fields according to the projections, much of the unused capacity in the existing inventory is on lower quality fields that do not appropriately meet existing needs.

Adding larger sized fields on the west side of the city will result in a more balanced provision of fields that will better meet user requirements. This approach also takes advantage of a project underway on the UW North Campus site, where planning is underway for the construction of three multipurpose rectangular fields that we will operational by 2016. This project helps reduce future need for new land acquisition, and will reduce reliance on year to year leases with the private sector.

The recommended facility developments aim to improve geographic distribution of fields. It is also recommended that new developments be clustered, multi-sports fields, that lights and irrigation be included to increase field capacity, to include sufficient parking and other player and spectator amenities, and to reduce environmental impact through design, construction and maintenance techniques.

The Future

Consider this future for our community....

In 2031, the City of Waterloo is a place where everyone who wants to play outdoor sports, can play outdoor sports, regardless of their sport of choice, their age, their ability, or their gender. By following the Outdoor Sport Field Strategy, the City of Waterloo has become a recognized leader in outdoor sport facility development, management, maintenance and programming. Waterloo is seen as one of the best communities in which to play, compete, coach, officiate or be a spectator in outdoor sports.

Sport organizations feel they are active partners in planning and development of fields and policies, regardless of their number of registrants. Partnerships between sport organizations and city staff have continued to grow. Each offers the other support, leadership and information when needed. There is a shared sense of pride in the success of the city's outdoor sports fields, programs and sport organizations.

I.0 Introduction

I.1 Background

The City of Waterloo is a growing and active community. New residents and employers move into our community every year. The wide range of recreational facilities and activities available to the community helps to make Waterloo an attractive place to live, work, and play.

As part of the general movement to make cities more livable, Ontario municipalities face public pressure to deliver increasingly sophisticated recreation facilities. There are also more community groups that want access to recreation facilities for a broader range of activities than in the past. Opportunities for informal, recreational, and competitive sport opportunities are desired by local residents.

Outdoor sports fields, including multipurpose rectangular fields, diamonds, and cricket pitches, are a key component of the City of Waterloo's infrastructure supporting sport, recreation and leisure activities. These fields provide opportunities for groups of all ages and skill levels across a wide range of sports. Meeting the demand for outdoor sports fields today and in the future is important because these fields contribute to opportunities for an active lifestyle. They also contribute to the social, cultural and economic vitality of the city. Infrastructure like sports fields make cities great places to live, thereby attracting employers to the area, who in turn attract and retain high quality talent. Additionally, sports fields can attract tourism to the city, as teams and their families come for a weekend to compete, spending money on hotels, restaurants, shopping, and other local cultural sites and attractions.

The City of Waterloo is committed to planning to meet the community's need for outdoor sports fields over the long-term.

The role of the City of Waterloo in outdoor sports field delivery is to:

1. Provide outdoor sports fields such as multipurpose rectangular fields, diamonds, and cricket pitches, for use by organized sport groups, as well as non-programmed field opportunities for neighbourhood and informal use.
2. Maintain the turf quality of city owned and leased fields to contribute to player safety. This includes day-to-day maintenance, such as grass cutting and fertilizing, as well strategic upgrades to fields and associated amenities.

3. Manage use of city owned, leased and school fields through strategic allocation of fields to best meet community needs and expectations.
4. Liaise with the full range of sport organizations to understand issues and concerns about the existing field inventory, to anticipate future issues, to support the development of partnerships, and to encourage better utilization of fields.
5. Plan for future outdoor sports field needs by examining population and sport trends, consulting with the public and stakeholders, identifying opportunities for redevelopment of the existing field inventory, and developing new sports fields as required.

The Community, Culture and Recreation Services Master Plan identifies the need for a long-term Outdoor Sports Field Strategy. The Master Plan emphasizes the importance of improving the use and quality of existing sports fields before developing new ones. This means increasing the amount of time each field can be used in a sustainable way, and maximizing field bookings.

A long-term plan for outdoor sports fields will help ensure residents have access to quality fields on an ongoing basis, and will also help city staff balance today's needs with changing demands over the next 20 years. A strategy supported by data will help ensure that financial and land resources are used effectively and efficiently. Additionally, this strategic plan will give staff the information and direction they need to respond quickly to unexpected opportunities as they arise. Participants in the public consultation process identified the development of this strategy as a step in the right direction for the city.

This strategy addresses only a portion of the city's outdoor recreation facilities. The focus is on three different types of outdoor sports fields: rectangular multipurpose fields used for soccer, football, lacrosse, and other sports; diamonds for sports like baseball, softball, slo-pitch and t-ball; and cricket pitches. These fields require significant amounts of land in comparison to facilities that support tennis or volleyball for example. These fields are used primarily for programmed sports; sports groups book the fields well in advance and receive a permit to use the fields. While participants in the public consultation process for this strategy indicated a need for other sport facilities, such as outdoor tennis courts, a track, cross country ski trails and an indoor field house, alternate planning processes will look at needs in these areas.

The timing is right for development of the Outdoor Sports Field Strategy. Changes in the popularity of outdoor sports, new sports field technology, increasing public expectations,

and anticipated population growth, all point to the need for a long-term plan. The Outdoor Sports Field Strategy will support development of an optimal inventory of fields, which in turn will strengthen the capacity of recreation and leisure programs in Waterloo.

1.2 Alignment with Corporate Strategic Plans

The Outdoor Sports Field Strategy aligns with existing corporate strategic plans, such as the 2011-2014 City of Waterloo Strategic Plan, the current Official Plan, the Community, Culture and Recreation Services Master Plan, the Cemetery Services – Bechtel Park Master Plan, and the Waterloo Park Master Plan.

The City of Waterloo Strategic Plan, 2011-2014

The Outdoor Sports Field Strategy supports the new City of Waterloo's Strategic Plan. This plan is intended to provide a road map to meeting community needs today and in the future. The vision for the Strategic Plan calls for access to abundant recreation opportunities.

This Outdoor Sports Field Strategy supports several of the strategic pillars in the Strategic Plan.

1. Sustainability and Our Living Environment

The Outdoor Sports Field Strategy focuses on maximizing the use of existing sports fields before building new, which supports the best use of our limited land resources. It also recommends environmentally sustainable practices in construction and renovation of sports fields.

2. Public Engagement

Development of the Outdoor Sports Field Strategy involved public consultation through the city's website, online survey, public open houses, meetings with committees of council, interviews, and meetings with multiple sport organizations. The information gathered through the public consultation process was used to revise and refine the Strategy to better reflect what we heard from residents.

3. Healthy and Safe Community

Physical activity is important to a healthy community. Outdoor sports fields and green spaces provide important opportunities for people of all ages to be active. Additionally, sport participation provides youth with opportunities to engage in positive activities where they learn teamwork and leadership skills.

4. Getting Around

This strategy reflects what we heard from the public. Residents want access to sports fields in their neighbourhoods so they can walk or bike and they want access to clustered, premier facilities with public transit access.

5. Economic Vitality

People want to live and work in cities that have abundant recreation opportunities. This means that recreation facilities are important to attracting and retaining both employers and employees. By planning for the long-term sports field needs of residents, this strategy contributes to making Waterloo a great place for employers and their employees.

The City of Waterloo's Official Plan

The Official Plan is a long-range, comprehensive municipal planning document that outlines a framework for land use for the City of Waterloo. Given that there is significant demand for limited land, it is crucial that planning for outdoor sports fields aligns with the Official Plan.

The Official Plan suggests that abundant recreation opportunities contribute to quality of life, making the city a better place to live, work and play. It also recognizes outdoor sports fields as important for creating healthy, sustainable communities, and identifies the need for long-term planning related to outdoor sports fields.

At the same time, the Official Plan recognizes the city has limited resources and funding options. All remaining undeveloped land in the City of Waterloo has been designated as housing or employment land. Since there is a shortage of undeveloped land, this strategy focuses on maximizing the use of existing fields and pursuing opportunities for land redevelopment.

Community, Culture and Recreation Services Master Plan

Both the Official Plan approved in 1990 and the 2007-2010 City of Waterloo Strategic Plan called for the development of what has become known as the Community, Culture and Recreation Services Master Plan. The Master Plan, adopted in 2008, provides a vision and strategic priorities for a broad range of recreation services including outdoor sports fields.

The Master Plan states:

- Recreation services should align with city priorities and initiatives related to health, the economy, the environment, community development and quality of life.
- Recreation services should provide fair and inclusive opportunities that encourage and facilitate participation by all residents of the city regardless of ability, age, culture, economic status, geographic location, or interests.
- Public accessibility to recreation must be balanced with revenue generation.
- Maximum utilization of existing fields is a priority before new field development.
- Recreation services should be flexible, sustainable and environmentally responsible over the longer term. This should be achieved through innovative designs that are adaptable and easy to maintain.
- The Community, Culture and Recreation Services Department should take a leadership role in the planning, development, facilitation, evaluation and support of recreation services.

This Master Plan notes the need for rehabilitation and renewal of existing fields, particularly given the constraints on land availability. The Master Plan recommends pursuing discussions with neighboring municipalities, local school boards, universities, and non-profit organizations, to explore development of an integrated service delivery model.

Cemetery Services – Bechtel Park Master Plan

Parkview Cemetery and Bechtel Park have gradually evolved since the mid 1950's when the lands were a combination of woodland, a creek valley corridor and farmland at the edge of the city. The land parcel was acquired from Mr. Levy Bechtel and has served the community

well as both a cemetery and a major community park with 'premium' sport facilities. Parkview Cemetery is currently faced with an immediate land shortage for traditional casket interment lots. The cemetery is planned to eventually require the entire 74 acre parcel of land; today the cemetery is 26 acres in size.

The Cemetery Services - Bechtel Park Master Plan addresses land-use development and operational strategies. It also establishes a vision for the lands as a whole, including cemetery spaces, natural spaces and activity spaces in an effort to balance the integrated activities currently rooted on the lands.

The vision for the lands as a whole is to satisfy three primary functions:

- 1) nature appreciation and learning,
- 2) remembrance, contemplation and healing,
- 3) year-round fitness and active recreation.

The Master Plan recommends multipurpose rectangular fields 5 and 6 be decommissioned in fall 2013 or spring 2014 to allow expansion of Parkview. The addition of two large-sized, artificial multipurpose rectangular fields at RIM Park in 2011 added capacity to the inventory to enable transition in use of the Bechtel lands.

Further examination and planning regarding the future of the diamond in Bechtel Park is required. It is important to note that following the decommission of fields 5 and 6, Bechtel lands will continue to serve as a secondary sports field cluster for a variety of recreational activities.

Waterloo Park Master Plan

Waterloo Park contains four diamonds, two multipurpose rectangular fields, and a cricket pitch for programmed sport use. These are some of the best used facilities in the city. The park is also home to the Eby Farmstead, Lions Lagoon, the Action Sports Park, boardwalks, gardens, picnic areas, and is used for festivals, events, and numerous other community purposes.

As the city continues to grow and diversify, and with little additional land for open green spaces, Waterloo Park has become an increasingly important resource to the community. There are multiple identified needs for use of the park. In response, a Waterloo Park Master Plan was developed.

The Waterloo Park Master Plan recommends phasing out programmed sports within Waterloo Park over the next 10 years or longer. The plan recommends removal of some fields to enable picnic areas and a new festival area, and relocation of other fields for non-programmed purposes, such as pick-up soccer. While there are no immediate plans to repurpose the existing programmed fields, over the long term this change will mean a significant loss of good quality, well used fields for programmed sports within the park. It is important to note that the Waterloo Park Master Plan articulates that the phasing out of programmed sports will occur only when programming can be accommodated elsewhere, whether on existing or new facilities, and only as funds become available to execute the new land use in Waterloo Park. It is anticipated that the impact to field access will begin in 10 years or more, as the initial implementation of the Master Plan will focus on the park entrance area where Diamond 1 is located.

This strategy addresses the decommissioning of Waterloo Park fields when projecting service needs and field quantities over the next 20 years.

It should be noted that numerous citizens expressed surprise during the public consultation process that the Waterloo Park Master Plan recommends removing programmed sports from the park. They noted Waterloo Park facilities are of good quality, effective for tournament needs, and that the city core is an ideal location. Change in land use at Waterloo Park will only be possible if city staff continue to work together to find the best solutions to address changing community needs and priorities. Access to land and financial resources will be primary barriers.

I.3 Planning Process

The primary objective of the Outdoor Sports Field Strategy is to develop a long-term vision for the development and use of the City of Waterloo's outdoor sports field inventory. It will enable staff to quickly assess and respond to unexpected and emerging opportunities that align with the strategy.

The strategy was developed based on the following steps:

- Ensure alignment with existing plans such as the Strategic Plan, Community, Culture and Recreation Services Master Plan and the Official Plan.

- Describe the current outdoor sports field inventory, including analysis of field bookings and capacity.
- Identify emerging issues that will shape the city's ability to respond to sports field needs.
- Examine population growth projections and sports participation trends to determine the need for outdoor sports fields over the next twenty years.
- Identify innovative approaches used by other Canadian cities to address outdoor sports field needs.
- Develop a draft vision, guiding principles, goals, and recommendations to orient the City's strategy for outdoor sports fields over the short, medium and long-term.
- Consult the public, sports groups and key stakeholders on the draft strategy.
- Finalize the strategy based on public input.

1.4 Public Consultation Process

A draft strategy was presented to Council in the spring of 2011 and Council approval was given to begin the public consultation process. The public consultation process involved several components.

1. Email/Telephone Survey

A short survey was emailed to 36 sport groups that use fields in the city. Follow up telephone calls were made to groups that did not provide responses by email. Eighteen of 36 sports groups provided responses to the survey.

The survey asked questions about participation trends in recent years, amenities at fields, user fees and the use of fields outside of Waterloo, among others.

2. Online Survey

An online survey was developed that asked questions about the number of fields in the city, the need for additional fields, the quality of fields in the city, what type of amenities are needed, and preferred locations for new fields, among other questions. The survey

was open to all residents and was advertised through social media, a local newspaper, digital monitors, signs, at city facilities, on the city's website, at sports fields around the city, and at public open house events.

In total, 146 people responded to the survey. Survey respondents were 57% male and 43% female, while 95% of the respondents were between the ages of 25 and 64. Respondents were involved in sports in a number of ways: 29% were coaches, 19 % were volunteers, 37% participated in sports themselves, and 60% were the parent of a child playing a sport. Of the respondents, 45% either played baseball or are family members of those who do, and 33% played soccer. Softball, Slo-pitch, T-ball, Football, Ultimate Frisbee, Lacrosse, Rugby, football and cricket were also reported. Only 6% of respondents said their family did not play any sports.

3. Public Open Houses

Three public open house events were held during the fall of 2011. They were advertised in the same ways as the online survey. The open houses were held at Waterloo Memorial Recreation Complex, RIM Park and Conestoga Mall. The open houses attracted 60-70 people. These individuals reviewed display information, completed a prioritization exercise on the display posters, and provided verbal input to staff.

4. Meeting with Affiliated Sports Organizations and Cricket Organizations

Meetings with City of Waterloo affiliated sports groups were arranged. All affiliated sport groups were invited. The meeting for diamond sport groups was attended by Waterloo Minor Baseball and Girls and Boys Softball. The meeting for affiliated multipurpose rectangular field sport groups was attended by Waterloo Minor Soccer and Lacrosse. A third meeting was held with the three main cricket groups in the city (Sunrise, Kaitour and AR Cricket). At each of these meetings, staff provided an overview of the strategy and provided sport group representatives with an opportunity to provide input.

5. Input from Other Stakeholders

The final consultation phase was to provide a number of Committees of Council, and key stakeholders like the universities, school boards, and Waterloo Region, with an opportunity to provide feedback on the draft strategy.

The Waterloo Park Advisory Committee, the Grand River Accessibility Advisory Committee and the Community Culture and Recreation Services Advisory Committee all provided feedback. Additional groups were invited to provide input but declined the opportunity.

Staff also sought feedback from City of Waterloo Development Services related to land needs identified in the strategy. Additional discussion and collaboration between departments will be required to realize implementation of the strategy.

The Ontario Sports Turf Association also provided input on turf quality improvements and options for maximizing use of existing fields. The Region of Waterloo provided information on future plans for transit routes near fields.

Staff used all collected feedback to make changes and refinements to the strategy and public input has been incorporated throughout the document. A summary of the findings from the online survey, open houses and the meetings with sport groups can be found in the appendices.

1.5 Vision, Guiding Principles and Strategic Goals

A vision encourages all stakeholders to strive toward a shared, ideal future. The vision of the City of Waterloo's Outdoor Sports Field Strategy is:

"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."

This vision provides a picture of what the outdoor sports field inventory, and its use, should look like over the next twenty years. The vision is supported by the following guiding principles:

Accessible and Inclusive	Policy and partnerships will enable reasonable and fair access to fields by all groups regardless of sport played, age, gender, ability
---------------------------------	---

	and skill level. Fields will be affordable for direct users and for city residents as a whole.
Fiscal Sustainability	Planning will promote the development of fields, considering both need and cost, today and in the future. Planning will take into account the cost of new field development as well as the maintenance and upgrading costs for quality fields over the long-term.
Environmental Stewardship	City staff and sport groups will see themselves as the guardians of green spaces used for sports. Planning, development, maintenance and programming will aim to incorporate green practices and protect the health of our local environment.
Transparency	City staff and sport groups will openly share information with each other. Information sharing and ongoing dialogue will support working together to ensure sports fields are used in the best way to meet community needs.
Safety and Quality	Design, upgrades, maintenance, and programming practices will strive to improve playing conditions. A primary focus will be placed on supporting player safety.
Continuous Improvement	Through enhanced investment in planning, policy, monitoring and evaluation, ongoing efforts will be made to improve fields, field management and maintenance, and city services. These efforts will seek incremental change over time through improved efficiency, effectiveness, and flexibility.

The vision statement and guiding principles provide a framework for planning, policy development, field use, and maintenance.

Shaped by the vision and guiding principles, as well as informed by research and public input, seven strategic goals have been identified to form the core of the overall strategy. These goals speak to areas of greatest need where high impact changes can be made within available resources. They have been placed in order of priority based on public input.

Goal 1: To improve the safety and long-term quality of outdoor sports fields.

Goal 2: To maximize use and expand the amount of programmable time at existing fields to maximize the use of these fields prior to new development.

- Goal 3:** To develop new outdoor sports fields, within available resources while recognizing competing pressures, based on population growth and field need projections.
- Goal 4:** To enable participation in physical fitness activities in Waterloo through improved outdoor sports field access for neighbourhood, recreation, and competitive use for the full range of outdoor sports of public interest in Waterloo.
- Goal 5:** To increase capacity throughout the sport and recreation services system in Waterloo to allow for continuous improvement in field maintenance, allocation, and management.
- Goal 6:** To pursue, facilitate and encourage innovative partnerships for the provision of access to outdoor sports fields.
- Goal 7:** To invest in enhanced communication, relationship building and collaboration between city staff and outdoor sport organizations.

Each recommendation in the strategy that follows is tied to one or more of these goals (see Section 5.0 for additional information). Implementation of the recommendations will allow the City of Waterloo, staff, and sport organizations to strive to reach the strategy's vision while working within a shared set of values.

2.0 Outdoor Sports in Waterloo

2.1 Social Value of Sport and Sport Fields

The most commonly noted benefits of participation in sports are the health benefits. Sport participation contributes to both physical health and psychological well-being. Sports also have benefits to the broader health of the community, contributing to the economic, cultural and social health and growth of our community.

Recent data from the Canadian Health Measures Survey indicates that only 7% of young people attain the recommended level of 60 minutes of moderate-to-vigorous physical activity per day, with only 9% of boys and 4% girls engaging in the recommended 60 minutes of moderate-to-vigorous physical activity at least 6 days per week. Sport participation rates in Canadian youth aged 15-18 declined from 77% in 1992 to 59% in 2005 (Ifedi, 2008).

According to the 2011 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth, children in Canada are spending six hours a day in front of television, video games and computer screens. Over the course of a week, that is as much time as their parents spend at work.

The situation is similar for Canadian adults. Only 15% of Canadian adults get the recommended 150 minutes of moderate-to-vigorous activity per week and only 35% meet the recommended 10000 steps per day. Canadian adult participation in sport declined from 45% in 1992 to 28% in 2005 (Ifedi, 2008).

These statistics are concerning given the evidence that physical activity appears to reduce the risk of over 25 chronic conditions, including coronary heart disease, stroke, hypertension, breast cancer, colon cancer, type 2 diabetes and osteoporosis (Warburton, et al., 2007).

While physical activity levels are low, outdoor sports fields are an important component of the physical activity for children. The 2011 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth reports that 59% of Ontario parents said their children use public sports fields and programs.

Given that sports fields are a popular venue for physical activity, it makes sense to ensure ongoing access to sports fields to support a healthy community.

Participation in organized sports also has other benefits. Skills learned by sport participants can be transformed into life skills applied in other areas of life, including education, employment and socialization. Sports provide opportunities for participants and their families to meet and socialize with the surrounding community. Social networks often develop based on shared interests. Additionally, sports fields that are highly visible and attractive can help strengthen community identity.

Sports fields are not just for competitive or skilled sports. They can be used for informal play, allowing people of all ages and skill levels to be involved. Spontaneous use of neighbourhood green spaces and sports fields for sport and play is also considered in this strategy.

Fields can be used for a wide variety of public events, festivals and gatherings. The Terry Fox Run and the Royal Medieval Fair are examples. Fields are used for neighbourhood gatherings and celebrations; they are important resources for supporting community building and local social networks.

Recommendation: Use the city's website to provide residents with information on how to get involved in the full range of sport opportunities. Include an interactive map of all sports fields and green spaces available for informal use. (4.a)*

*Each recommendation is followed by a number and letter code. This code helps locate the recommendation in the implementation plan (section 5.0). The number indicates which of the strategy's seven goals each recommendation will contribute to help achieve primarily, though many of the recommendations contribute to multiple goals.

2.2 Field Sports in Waterloo

A wide range of sports are played on outdoor sports fields in the City of Waterloo. Table 1 identifies the sports played by field type.

Table 1: Sports Played in Waterloo by Field Type

Field Type	Sports
Multipurpose Rectangular	Soccer, Football (Tackle and Flag), Rugby, Field Lacrosse, Ultimate Frisbee, Field Hockey
Diamond	Baseball, Softball, Slo-pitch, Fast-pitch, T-ball (Note: Football, Lacrosse and soccer will also use diamond outfields)
Specialized	Cricket
Neighbourhood	Pick-up games, Kite-flying, Frisbee, Informal play, etc.

Soccer

Since the 1990s, increasing awareness and popularity of soccer throughout North America and locally has led to a growing demand for soccer fields in Waterloo. Currently, minor soccer is by far the largest outdoor sport organization in the city. There are also a number of adult soccer organizations. City of Waterloo staff estimates there are approximately 3,700 minor soccer players, and 1,500 adult soccer players using Waterloo fields.

According to planning consultants Monteith Brown (2007), youth participation rates are expected to increase in line with population growth, while adult leagues will experience additional growth, resulting in a growing demand for sports fields. It should be noted that available data suggests that over the last few years soccer participation has begun to plateau.

Waterloo Minor Soccer has partnered with the City of Waterloo on multiple projects over the years to help ensure ongoing access to fields. Collaboration includes investment in the Creekside Church fields and, more recently, in the development of two new artificial turf fields at RIM Park. Waterloo Minor Soccer made a significant contribution toward the project in exchange for dedicated time on the artificial turf fields.

A primary concern expressed by Waterloo Minor Soccer during the consultation process is a desire to see improved turf conditions, including greater sharing of information about soil

analysis and maintenance operations. Waterloo Minor Soccer also expressed concern regarding the recent loss of the Pillers fields, the possible end of the Creekside Church fields lease in 2015, and plans to support cemetery expansion onto Bechtel lands. Waterloo Minor Soccer requested greater clarity and detail in partnership agreements for field development or upgrading.

Diamond Sports

On a national and provincial level, participation in diamond sports has generally declined, due in large part to soccer's growth. While participation in softball and slo-pitch has seen growth in adult leagues, baseball and fastball have seen declining enrolment. With fewer children coming through the minor ball system, it remains to be seen if youth will participate in these sports as they get older.

Demand for diamond rentals remains high in Waterloo, with many games being played on school diamonds that are not entirely appropriate for the level of play and sport requirements. Minor Girls Softball appears to be the most significant user of school diamonds. They noted that the RIM Park diamonds are too big for their use, but that moveable back stops may enable them to use these diamonds.

Bookings at Waterloo Park and the Bechtel diamonds remain high, though some groups using Bechtel Park may not be well suited to the large diamond size.

City of Waterloo staff has indicated that it is particularly challenging to provide adult ball groups with adequate access to diamonds during the pre-allocation process. As a result, many need to book fields without the benefit of advance planning.

The Cemetery Services - Bechtel Park Master Plan recommends the Bechtel Park stadium be decommissioned due to the poor state of repair and costs to refurbish. Although baseball organizations acknowledge the stadium is in poor condition, they are concerned about the ability to host tournament play without a stadium. On the other hand, city staff suggest the large, professional size of the diamond limits the number of groups that can make use of it. Diamond users indicate that, while many of the city's diamonds may be excellent, they could be improved with warm up areas and increased maintenance including more frequent grass cutting, backstop repairs, and removal of stones from infields. The cost of using diamonds in the City of Waterloo is an expressed primary concern.

Football

The popularity of tackle football has been cyclical. The sport appears to be gaining popularity once again in Ontario, especially for players between 7 and 19 years of age. Provincial registrations increased by 60% between 2001 and 2004 according to Monteith Brown (2007). High school football programs also continue to be popular.

The Twin Cities Tackle Football Association reports that access to well-lit fields is a common challenge. In Waterloo, minor and adult tackle football is accommodated on school and municipal fields. However, use of school fields is restricted given the high degree of wear caused by football play, and although far from ideal, football has been scheduled on diamond outfields at times. City of Waterloo staff has been working with the public school board to provide limited access at Sir John A. MacDonald High School for football but wear and tear on the fields continues to be an issue. There is also concern that football use in the fall impacts turf quality the next spring and summer as there is little time for field regeneration before the advance of winter. Ideally, football should be scheduled on artificial turf. Twin Cities Tackle Football Association has used artificial turf fields at St. David's High School and Seagram Stadium in the past.

The new artificial turf fields at RIM Park could be used for football as the needed uprights are provided; however, it remains to be seen how much time will be available for other sports given the partnership agreement with Waterloo Minor Soccer.

Rugby

In Waterloo, use of city fields for rugby is minimal and is limited to use by Wilfrid Laurier University teams when they are not able to use their own fields.

Field Hockey

Field hockey is unique in that the majority of players are women. The sport has been growing in popularity at the high school level over the last decade. Adequate access to quality fields is an issue across the province, including in Waterloo. School teams rely on city facilities due to poor turf quality and field configurations with school fields.

Field Lacrosse

Across the country, approximately 10,000 people participate in field lacrosse. In Ontario, there are 20 associations and 3,000 players. According to Monteith Brown (2007) the last decade has seen an increase in female players, with male participation levels staying relatively stable.

In Waterloo, the lacrosse organization runs five week programs. The spring is dedicated for boys, the summer for girls, and junior men are scheduled in the fall. Weather is a particular challenge for the spring programs. Fields are often closed due to spring rain, and games must be rescheduled wherever field time is available. The local lacrosse group would like to use the artificial turf fields at RIM Park but were not able to book the needed time in 2011.

It should be noted that lacrosse requires a field configuration with longer end zones than used for soccer. As City of Waterloo fields are typically set up for soccer play, they do not serve lacrosse users well.

Ultimate Frisbee

Ultimate frisbee has been a growing sport, particularly in the last decade. It appeals largely to the 20-35 year old age bracket. Across the country, there are very few youth teams although there is some growth at the high school level. As a new sport, it is difficult to determine if participation rates are reaching a saturation point or if there will be continued growth.

Although ultimate frisbee is offered through the City of Waterloo's CARL program, the Waterloo Organization of Disc Sports is the main user group in Waterloo Region. The organization primarily uses fields in Kitchener. Recently, the City of Kitchener developed seven fields that can be used for ultimate frisbee at Kiwanis Park. City staff believe that any additional needs for ultimate frisbee would likely be for lit fields later in the evening, or for youth leagues should participation in this age group develop further. Participants at the public open houses identify sports like lacrosse, football and ultimate frisbee as priority areas that require increased access to use multipurpose rectangular fields in the city.

Recommendation: *Develop a strategy, based on need and equitable access, to set up fields and allocate field time to sports that require a different field set up than soccer, such as football, field lacrosse and ultimate frisbee, while considering long-term turf quality and maintenance needs. (4.b)*

Cricket

Cricket has been increasing in popularity in a number of urban municipalities, including Waterloo. There are currently three clubs, Cricket Association of Waterloo – Kaitour Cricket, Waterloo Sunrise Cricket Club and AR Cricket Club. Players in the existing leagues are generally men aged 16 and older. These groups believe the number of cricket players will increase by up to 50% over the next 20 years as more people migrate to the area from places where cricket is commonly played and as existing organizations continue to promote cricket to the broader community. The city's cricket groups promote cricket in schools and allow youth and women to play free of charge, providing uniforms, equipment and transportation to and from games. Cricket is also played informally outside the three clubs. For example, approximately 150 university students play cricket informally in open green spaces.

There are two dedicated cricket pitches in Waterloo. The pitch at Waterloo Park and a leased pitch at Laurel Creek Conservation Area are both heavily booked.

Cricket games are of longer duration than other sports, with games lasting up to six or seven hours. Some cricket leagues are scheduling shorter games to help meet growing demand for field access.

Cricket has a significant cultural component. Games typically include socialization, community gatherings and a shared meal.

Cricket groups believe that limited access to fields impacts the amount of cricket being played in Waterloo. The city's cricket clubs would like to have their own dedicated cricket stadium, with storage for equipment and amenities for community gatherings. However, given the costs associated with dedicated use fields and the large size of cricket pitches, other cities have incorporated cricket pitches on multi-use fields. Local groups are concerned with this approach, fearing competition for field time would limit their access. Staff has identified challenges related to field layout and setup as well. Additional dialogue with sport organizations and staff is required to determine how this approach could work in Waterloo.

***Recommendation:** Explore options for meeting the growing interest in cricket in Waterloo. Consider developing a field that can accommodate cricket across two multipurpose rectangular fields with the cricket pitch between the fields. This approach would require policy to ensure equitable access to the fields by multiple sport groups. (4.c)*

Informal, Neighbourhood Use, and Non-traditional Sport Use

Non-programmed or informal recreation and play are also a key use of the city's outdoor spaces. This kind of use can include kite flying, pick-up games, or other general outdoor play. Local residents occasionally use permitted fields for informal play without the necessary permit which is contrary to current City of Waterloo policy. Permits are required for sports fields to ensure turf is not overused, to guarantee access to booking groups, and to inform maintenance staff of when and where fields need maintenance and attention. Non-permitted use of sports fields makes it difficult to maintain field quality. However, given that informal recreation is an important option for physical activity, it makes sense to identify fields and passive green spaces that can be used for these purposes. This may reduce non-permitted use of sports fields, thereby contributing to improved field quality.

***Recommendation:** Identify fields and passive green spaces for informal play and pick-up games. Promote to the public with the aim of reducing unauthorized use of outdoor sports fields that require a permit. (1.a)*

Fields are also frequently booked for non-sport purposes. Outdoor sports fields provide a larger gathering space that can be used for a wide range of neighbourhood events and community gatherings. Continued field access for these purposes is critical to supporting ongoing community development. Staff has recently established a process to allow affiliated neighbourhood associations to book select passive parks at no charge. Any requests for additional Park Staff services and amenities are charged as per the Fee Guide rates

City staff has also received an increasing number of requests for field use by non-traditional sport groups, such as fitness boot camps and Tai Chi. In response, several passive park areas have been added to the city's bookable inventory. A minimal administrative fee is charged. In addition, select sports fields are available for bookings during non-prime-time scheduling. This provides the booking group assurance of space availability and it helps ensure groups are informed about city policies.

Allowing passive park bookings for non-traditional sports programs and Neighbourhood Association activities has the following benefits:

- Supply and demand is met more efficiently while optimizing sports field and passive park use;

- Control of activities in the parks helps to protect the integrity of open spaces;
- User groups are informed of relevant bylaws, regulations and policies;
- Ensures group obtains required insurance;
- Increased efficiency for park operations;
- Increased revenue for the city.

Additionally, there are other groups wishing to use fields during the off season. Nordic skiing, for example, uses Bechtel Park fields; this sport organization would like to see the trails further developed to expand their use in the off season.

The growing diversity in Waterloo suggests that demand for fields by new sport groups is likely to occur. In 2006, 13.1% of the total population in the Region of Waterloo self-identified as a visible minority. This was a 40% increase since the 2001 census. This growth is largely due to the increasing number of new immigrants arriving from non-European countries (Statistics Canada, *The Daily*, April 2, 2008). Sports played in immigrants' country of origin may not be played in Waterloo. As the city's population continues diversify, there is a need to better understand how this diversity may impact field need in the future.

Recommendation: *Promote the ability to book select passive green spaces and select sports fields to community and non-traditional sports groups. (4.d)*

Recommendation: *Increase consultation with new immigrant and visible minority communities to better understand their recreation needs. (4.e)*

Lower Use Groups

The 55+ age group and children under the age of four do not generally participate in sports that use outdoor sports fields. Innovative uses for fields by these low use groups, particularly during non-prime time, may be a way to enhance physical activity options within the city and to increase revenue.

Recommendation: *Identify sport and recreation interests and needs of the 55+ population, and other lower use groups to identify ways these groups could use non-prime field time. (4.f)*

Consultation with residents with disabilities to improve field access is another area that needs consideration. The Grand River Accessibility Advisory Committee identifies promotion of sport options for local residents with disabilities and an improved spectator

experience as primary concerns. Access to spectator areas by way of fine gravel pathways and signage is needed. Committee members also suggest painting goal posts in bright, contrasting colours to assist persons with visual impairments. Wheelchair accessible port-a-potties are recommended for locations without permanent washrooms.

Committee members also discussed the importance of access to outdoor spaces for non-sport purposes, such as for picnics and community gatherings. Transit links are particularly important to enable persons with disabilities to access outdoor spaces. Shaded and sheltered areas are another important infrastructure feature.

***Recommendation:** Explore opportunities to make outdoor sports fields more accessible to residents with disabilities. (4.h)*

2.3 Support and Services Provided by City of Waterloo Staff

The provision of sports fields is a shared responsibility between the Environment and Parks Division of Public Works Services (PWS) and staff in the Community, Culture and Recreation Services Department (CCRS). As will be discussed below in greater detail, the Environment and Parks Division is responsible for maintaining all outdoor sports fields, except at Bechtel Park where both PWS and CCRS contribute to maintenance to achieve efficiencies. Staff in the Cemetery and Bechtel Park Services Unit within CCRS, maintain the program set up of sports fields at Bechtel Park. PWS staff responsibilities include grass-cutting, fertilizing, weed removal, seeding and turf repair, field grooming, field lining, moving equipment and more.

CCRS is also responsible for design and construction of new field, field allocation and rentals, and managing customer relations.

A Coordinator of Sports and Recreation position was created in CCRS after the most recent organizational review. This position is the primary point of contact for sport organizations and is intended to support the development of effective relationships and community capacity building sports and recreation organizations. Investment in this position indicates an enhanced commitment to working with sports groups. This liaison position can also help facilitate enhanced reporting and dialogue with sport organizations. PWS staff also regularly engage user groups to discuss issues such as field maintenance, turf quality and to get input on which fields are in need of renovation. These types of meetings are commonly between staff and a particular sport group, and may be held to address a particular issue. Staff from

both departments also engage sports groups and the general public during public consultation processes.

There may be benefit to bring all sports field groups together on a regular basis to exchange information and facilitate discussion between staff and sport organization, as well as among sport organizations.

Recommendation: Hold seasonal forums with sport organization representatives to meet, share, and learn. Forums should involve presentations from city staff on new and ongoing projects and initiatives as well as opportunities for sport groups to share information with each other. (7.a)

PWS staff also play an important communication role with sport groups. Staff maintain a webpage on the City of Waterloo's website that provides information on field conditions and cancellations. While sport groups identify this as an important resource, they would like to see more detailed information about field conditions. Limited staff resources affect the ability to enhance service in this area. It is particularly challenging to keep the webpage up to date on evenings and weekends as there are no staff scheduled to work during these periods.

Recommendation: Improve the field conditions and field cancellations webpage and identify corporate resources to enable timely updating of the webpage, particularly during the evenings and on weekends. (1.i)

Another addition to the CCRS department is the Policy, Planning and Performance staff unit. This unit is responsible for short and long-term planning, policy development and performance measurement. This work is achieved through best practice research, internal and external data analysis, and consultation with community stakeholders, such as sport organizations. Access to this information enables performance reporting and program and policy evaluation. An added benefit is increased information sharing with stakeholders, which may support their own planning processes, and encourage alignment with City of Waterloo goals.

Recommendation: Formally evaluate new initiatives and policies to determine if desired outcomes are being achieved and report on findings to sport organizations. (7.c)

There were several data-related challenges identified while developing this strategy. Some data that would be helpful is not currently collected and data related to external groups is

limited. For example, it was not possible for staff to access accurate and detailed participation numbers from sport groups.

***Recommendation:** In collaboration with sport organizations, implement a data collection strategy to enable reporting on performance, field quality and use, and sport participation trends. (7.b)*

***Recommendation:** Identify options for improving collection and use of data, including information from existing data collected through the allocation process and graphical information systems, for planning purposes. (5.n)*

Given the broad scope of this strategy, successful implementation will depend on continued collaboration and ongoing monitoring of the strategy. This can be managed by a staff implementation team that meets regularly to discuss implementation issues, to evaluate the outcomes, to develop performance metrics to monitor change, and to provide sport organizations updates on the progress. Ongoing feedback on improvements and challenges from the perspective of sport organizations will be an important step moving forward.

***Recommendation:** Establish a cross-departmental team to support the implementation of the Outdoor Sports Field Strategy (7.e)*

***Recommendation:** Develop an evaluation and/or monitoring plan for the Outdoor Sports Field Strategy and report annually on progress and achievements. (7.d)*

2.4 Sport and the Economy

In addition to the more direct benefits of field sports for residents, sporting events draw thousands of people to the City of Waterloo each year as both participants and spectators. Visiting athletes, coaches, and their families spend money at local hotels, restaurants, entertainment and cultural fields, and in shopping districts. Sport tourism benefits local businesses by attracting consumers to the city for sport events. Premier, clustered fields with amenities such as parking, washrooms, seating, concessions, and other spectator comforts are most attractive for tournament play, particularly for competitive and larger scale tournaments.

The City of Waterloo currently does not have a well-articulated policy regarding the role of the city in supporting tournaments or other sporting events that bring people into the city. Sport groups identified issues with current practices. For example, sport groups indicate that

current field rental rates charged by the city are too high to host tournaments. In some cases, tournament fees are set by a provincial governing body and the registration fees tournament organizers can charge does not cover the cost of field rentals. Alternatively, if the sport group sets their own tournament fee to cover the rental costs, the fees are not competitive enough to attract participants.

Sport groups also identified inadequate parking as another challenge when running a tournament. Large scale or multiple events at Waterloo Park or RIM Park, for example, can create parking challenges. It was noted that at times regular bookings are cancelled to ensure adequate parking for special events.

These challenges, and others, speak to the need to look at what role the City of Waterloo should play in supporting tournaments and other large scale sporting events.

Recommendation: *Develop policy to articulate the role of the city in facilitating and/or supporting tournaments and other larger scale sporting events. (4.h)*

Access to quality recreation facilities, including sports fields, can also help attract employers to the city. Employers look for locations where they can attract and retain a strong workforce and meet the needs of their workers' families. Local companies will take people they are trying to recruit on tours of recreation facilities to show them what will be available in the area for their family. Cities with strong community-based resources and infrastructure, including recreation facilities, will be attractive to workers and their families, and thus attractive to employers. In turn, companies and community groups can support the development of sustainable recreation facilities through various forms of sponsorship. Waterloo Minor Soccer recently partnered with the city to upgrade fields, and a number of other sport organizations have also contributed to field upgrades. Government grant opportunities can also help field development and improvement. Growth in outdoor sports fields over the next 20 years will require these kinds of innovative partnerships in order to be fiscally sustainable.

Recommendation: *Explore options for corporate and community sponsorship and partnerships, as well as grant opportunities, for outdoor sports fields to support fiscal sustainability. (6.g)*

3.0 Analysis of the Existing Sports Field Inventory

In 2011, the City of Waterloo offered access to 92 sports fields across the city. This total consisted of 46 multipurpose rectangular fields, 44 diamonds and two pitches for cricket. While an understanding of the number of fields is critical to understanding the city's ability to meet future needs, there are a number of other factors that must be considered to determine an appropriate outdoor sports field inventory over the long-term.

3.1 Field Classification System

The City of Waterloo uses a classification system for multipurpose rectangular fields to assess user fees, programming, and maintenance levels. The classification system is based on turf type, field size, lighting and field amenities. Table 2 outlines the current classification criteria for rectangular fields.

Table 2: City of Waterloo Multipurpose Rectangular Field Classification Criteria

<i>Class A1 - Artificial Turf Premier Lit (New for 2011):</i>
Turf is artificial
Dimensions are 330'-345' by 220'-230'
Fields have lights and drained.
Lined Fields
Examples of Class A1 fields are RIM Park's new artificial turf fields.
<i>Class A - Premier Lit:</i>
Turf is natural
Dimensions are 330'-345' by 220'-230'
Fields have lights and are manually or automatically irrigated and drained.
Lined Fields
Examples of Class A fields include Bechtel Park 2, 5 and 6
<i>Class B - Premier Unlit:</i>
Turf is natural
Dimensions are 300'-345' by 200'-230'
Lined Fields
Examples of Class B fields include RIM Park fields 1 - 4
<i>Class C - Small Park/School:</i>
Turf is natural.
For municipal fields, dimensions are 200' by 125' for Atom and 165' by 110' for Squirt.
For school fields, dimensions are 300' by 200' for House League, 200' x 125' for Atom, and 165' by 110' for squirt.
Most school fields are Class C fields.
<i>Class D - Scrub Fields</i>
Undefined dimensions, no charge and non-bookable
Not usable for organized sports; possible neighborhood conflict, overlap with ball diamond, poor drainage, etc.
Generally poor quality with limited maintenance - fields are unlined
Examples of Class D fields include RIM Park Field 5, which receives no maintenance other than mowing.

Source: Public Works Services Department, City of Waterloo

This system is largely aligned with current industry standards. City of Waterloo staff informally use a similar classification system for diamonds. No classification system exists for cricket pitches.

The current classification system is not ideal for planning or maintenance purposes. It does not consider turf quality and soil composition, both of which impact usability and approaches to maintenance. It does this system provide a consistent classification approach across all types of sports fields or the amount of time a field can be used without causing turf damage.

The Ontario Sports Turf Association, an organization with the goal of promoting better, safer sports turf, has developed its own classification system. The five categories in this system are outlined in Table 3.

This system focuses on turf quality as the primary factor for classification of fields. Given that turf quality is central to determining how much use a field can handle in a season, this model offers benefits when attempting to maximize field use while maintaining turf quality. This system also provides decision-making tools to help determine what category of field should be built when designing new fields to meet particular needs. Within this framework, categories 1 and 2 are the standard for fields intended for higher skill levels of play. These fields may be higher quality, but can actually sustain less use than a lower quality, category 3 field. While the Ontario Sports Turf Association suggests that it would be beneficial for Waterloo to have some category 2 fields in our inventory, sport groups would need to be prepared for closures for part of the summer to maintain the turf quality. Category 3 fields are better able to sustain higher levels of use and are appropriate for broader recreational use.

The Ontario Sports Turf Associations classification system also helps estimate the cost of maintaining each category of field. Maintenance costs are based on factors such as recommended mowing frequency, aeration frequency, fertilization, and over-seeding rates. This approach assists with long-term financial planning, including estimating the ongoing maintenance costs of any new fields added to the inventory. Another benefit is that the Ontario Sports Turf Association's classification system can be used for all types of natural-turf sports fields, including diamonds and cricket pitches.

While switching to the Ontario Sports Turf Associations classification system has many benefits, it will require some upfront investment in soil testing to determine the soil type of

the existing fields and may impact operational costs and revenues to align fields with appropriate maintenance standards.

City of Kitchener staff report success improving turf quality through the development of individualized field maintenance plans. Soil testing was completed to develop fertilization and over seeding plans. City of Kitchener staff indicate that while the upfront costs are higher for individualized field plans, the investment reduces maintenance costs over the longer term.

Table 3: Ontario Sports Turf Association Field Evaluation and Classification System

Category 1 Field:
Constructed with a sand based root system, with a 300 mm deep root zone constructed from imported, carefully selected sand.
Sand is primarily selected on the basis of principles of soil physics for predictable air and water relationships in the root zone.
Requires irrigation and drainage systems and a budget for a high level of maintenance.
Intended for users with the highest requirements for play that would satisfy national or international caliber adult use, and have amenities such as stands, change rooms and lights.
Fields are available for play regardless of rainfall and are not subject to compaction.
Category 2 Field:
Constructed from in situ or imported soil having less than 25% silt plus clay
Requirements for drainage are the same as category 1 except that the gravel layer is eliminated and the spacing between drainage lines is reduced from 5 to 3 meters.
May also have lights, stands and change rooms but are generally more basic than category 1 fields.
Cancellations may occur due to excessive rainfall.
Category 3 Field:
300 mm deep root zone of in situ or imported soil which may have up to 40% silt and clay.
Same drainage system as category 2 fields.
May be designed without an irrigation system.
May or may not have lights and/or basic stands and change rooms.
Category 4 Field:
For locations where the in situ soil to be used has greater than 40% silt plus clay, otherwise the design is the same as category 3.
Play may be interrupted due to weather conditions for extended period.
Difficult to maintain a safe, playable surface under intensive use without high repair costs.
Category 5 Field:
Constructed with minimal capital.
No lights, drainage or irrigation are provided.
Disturbance of in situ soil is limited to that required to shape the surface crown and level the seed bed.
Intended for regular use by local residents.

Recommendation: Update the city's field classification system to better reflect the Ontario Sports Turf Association's system. (5.i)

Recommendation: Conduct soil testing to determine the classification of each existing field according to the Ontario Sports Turf Association classification system. Use this information to aid in determining maintenance requirements on a field by field basis, to refine field use capacities, and to prioritize fields for renovation on an ongoing basis. (5.j)

Recommendation: Consider the Ontario Sports Turf Association Athletic Field Construction Manual Specifications and Guidelines when designing new fields and when projecting field maintenance costs to ensure financial sustainability. (5.k)

Recommendation: Adjust the operating budget to enable maintenance that is aligned with best practice standards, and identify ongoing maintenance needs based on soil testing to improve turf and field capacity/playability. (5.l)

3.2 Artificial Turf

Artificial turf consists of green "grass-like" fibers, surrounded by a special blend of rubber granules, that looks like real grass. Unlike natural turf, artificial turf can withstand unlimited hours of play in the short term, though over the longer term it requires grooming and replacement after 10-12 years. Natural turf fields will deteriorate with high hours of use and must be closed after heavy rain fall to allow the field to drain to avoid damage. Other than when snow covered, artificial turf fields can be made ready for play.

While the initial cost of artificial turf is high, given their capacity for play, an artificial turf field can be considered equal in capacity to two or more high quality natural turf fields. However, the high cost of these fields can only be justified if the fields are heavily used. There are also some environmental benefits to artificial turf. It is not mowed, thus reducing greenhouse gas emissions of lawn mowers. The fields are groomed every 70 hours of play but the grooming tractor is electric with no emissions. During the peak growing season, there will be a significant reduction in operational costs for the artificial turf. The fields do not require a plant health care program. While no pesticides are used in Waterloo, natural turf fields require fertilizers and other amendment applications. Artificial fields have permanent soccer and football line markings, which offer another operational cost savings. The RIM Park outdoor artificial turf fields have also contributed to environmental savings in water

consumption because the fields have a rainwater harvesting system that is used to water the adjacent natural turf fields. The success of this system will be measured to determine the exact savings for water consumption and costs. On the downside, artificial turf must be disposed of in the landfill at the end of its lifespan, which has an environmental impact.

One of the main benefits of artificial turf, particularly for a city like Waterloo where land for future development is limited, is that the field can be used for multiple purposes and sports without damaging the turf. The Ontario Sports Turf Association suggests existing high school fields make ideal locations for artificial turf. Without requiring any new land, field use capacity can be increased. The school can use the field during the day for physical education classes, team sports and informal use, and evenings and weekends can be used for programmed community use. This approach may be an ideal way to attain field space for sports like lacrosse and football that need a longer field size and cause greater wear and damage on natural turf. However, the Ontario Sports Turf Association argues that artificial fields need to be lit to maximize use capacity. Given these requirements, the lower field at Bluevale Collegiate Institute may be a good option to explore with the school board as a future site for installation of artificial turf.

The City of Waterloo, in partnership with Waterloo Minor Soccer, recently converted three multipurpose rectangular natural turf fields at RIM Park to two large artificial turf fields, that are expected address the loss of field capacity when fields 5 and 6 on the Bechtel lands are decommissioned in Fall 2013 or Spring 2014. One of the artificial turf fields is multipurpose with a combination of soccer nets and football uprights in place and the potential for bleacher seating. The second field is designed for soccer, as well as other field sports that use soccer lines. The complex includes state of the art lighting and an onsite washroom building with a shade canopy. As these are the first outdoor artificial turf fields owned by the City of Waterloo, there is much to be learned about the benefits. Survey respondents provided some initial thoughts about the new fields. While only 24% of the survey respondents have used the new artificial turf fields, $\frac{3}{4}$ of the comments are positive. Any negative comments focus on the rental cost, not the quality of the fields. The artificial turf will most likely need to be replaced in 2021-2022.

In addition to the two artificial turf fields at RIM Park, there are artificial turf fields at the University of Waterloo, Wilfrid Laurier University and St David's Catholic High School. The City of Kitchener has also added artificial turf fields to their inventory.

Recommendation: *Develop policy and procedures for use of the new artificial turf fields at RIM Park. The focus should be maximizing use, and enabling equitable access to field time by sport organizations outside of time reserved for Waterloo Minor Soccer. (5.g)*

Recommendation: *Conduct a formal evaluation of the use of the new artificial turf fields after two years to gain an understanding of usage, costs versus revenue, and sport organization satisfaction. Include comparison with other cities and explore the impact of the partnership agreement with Waterloo Minor Soccer. (5.h)*

Recommendation: *With the school boards, explore opportunities for converting a high school field to artificial turf with lights. (2.g)*

3.3 Sport Fields and the Environment

Given growing public interest in environmental sustainability, cities are focusing attention on green approaches to infrastructure development. There are ways that sports field renovation and development can reduce environmental impact.

Landscape design can focus on enhancing green spaces surrounding sports fields. Plant type and plant care standards can be implemented to reduce environmental impact. Buffers around fields can be made larger, and denser with native shrubby vegetation, to discourage human traffic. The development of new sports fields on the UW North lands off Westmount Road will include the environmental rehabilitation of 30 acres of land, via a community planting project that includes ongoing monitoring and improvement of the watershed linkage to Laurel Creek.

Light shields and light alignment that maximizes field illumination can reduce light spillage. Shade trees can also reduce light spillage.

Storm water management technologies specific to the needs of the site can be used to minimize environmental impact.

Environmental sustainability was a significant consideration for the RIM Park artificial turf field project. This project included a state-of-the-art rainwater harvesting system, green roof on the building, and the Greenlab education project to promote green outdoor spaces.

Environmental impact can also be reduced by locating fields near alternative transportation options, such as buses, walking trails and cycling routes. The public consultation survey indicates 96.4% of respondents typically drive to sports fields. Only 21.2 % indicate they carpool, and only 2.2% indicate use of public transit. With respect to active modes of transportation only 16.8% walk and 16.1% bike. Comments suggest that active modes of transportation are only used when the field is within the respondents' immediate neighbourhood. Since sport teams are typically made up of players from different areas of the city, locating fields within neighbourhoods has the potential to reduce use of cars but cars will continue be used for those travelling outside their immediate neighbourhood.

City staff met with Region of Waterloo staff responsible for transit planning to discuss potential transit route changes and the possibility of increasing transit access to key sports field locations in the city. Regional staff noted that there are currently transit routes in close proximity to all high school fields. As plans move forward with the Light Rail Transit (LRT) system, it is anticipated that bus routes will be altered to bring passengers from various parts of the city to the LRT and back along major transportation corridors more quickly and more frequently. As these proposed express bus routes are implemented in Waterloo over the next five years, it is anticipated to increase transit access to RIM Park, as well as improve access to other areas with sports fields. City staff noted that it would be valuable to have transit access to the fields currently being planned for the UW North lands along Westmount Road, between Columbia Street and Bearinger Road. There is currently no bus route along that stretch of Westmount Road.

In early 2008, Council approved the Green Building Policy which mandates a minimum sustainable design, construction, and certification standard of LEED Silver for all new City of Waterloo facilities over 500m².

There are currently no LEED standards for outdoor sports fields. Existing standards are intended only to enclosed spaces. However, there is much that can be applied from LEED requirements to the construction of outdoor sport field sites that would reduce environmental impact, and improve environmental sustainability over the long-term.

Recommendation: Consider using existing applicable LEED standards as a basis to develop tools for the design, development and renovation of sports fields and surrounding land to reduce environmental impact. (3.k)

3.4 Description of All Fields in the Existing Inventory

In 2011, there were 92 fields in the City of Waterloo's bookable inventory. But not all fields are the same. They differ in location, turf quality, onsite amenities, and other variables.

Understanding the location of fields throughout the city is important for long-term planning. Table 4 reveals the geographic disparities in access to outdoor sports fields. While the central and east areas of the city each have 37 fields, the west side, where significant population growth is happening in Waterloo, has only 18 fields. Most of these are lower quality fields on school lands.

The majority of the highest quality fields are located on the east side of the city, with some in the central part of the city and none on the west side. This lack of higher quality fields on the west side of the city indicates a geographic disparity in field distribution, and points to a need for new, high quality, sports field development in this area of the city.

Given the geographic disparities, residents from the west side of the city commonly have to travel to the east side of the city to access higher quality sports fields. While in the past travel from one area of the city to the other may have been acceptable for residents, given increasing population density and traffic congestion, travel time is typically longer. New fields on the UW north lands along Westmount road will help the city balance geographic placement of fields and reduce travel times given the proximity to residential neighbourhoods.

Table 4: Fields by location and type, estimated 2011 bookable inventory, including fields with past low-use.

Location	Field Type	# of Fields
West	Rectangular	13
	Diamond	5
	Cricket	0
	TOTAL WEST	18
Central	Rectangular	11
	Diamond	24
	Cricket	2
	TOTAL CENTRAL	37
East	Rectangular	22
	Diamond	15
	Cricket	0
	TOTAL EAST	37
Total		92

***Recommendation:** Improve geographic distribution of sports fields throughout the city by locating new development in underserved areas where possible, particularly on the west side of the city and in the city core following decommissioning of Waterloo Park programmed sport fields. (3.j)*

Table 5 provides additional information about the current inventory of fields. It should be noted that not all fields are owned by the city. A number of sports fields are on land leased from churches and many are located on school property.

Table 5: All fields by type and ownership, estimated 2011 bookable inventory, including fields with past low-use.

	Number	City Owned	School	Leased
Rectangular	46	29	13	4
Diamonds	44	23	21	0
Specialized	2	1	0	1
TOTALS	92	53	34	5

Of all outdoor sports fields in the City of Waterloo’s inventory, 58% are on City land, 37% are on school lands, and the remaining 5% are on leased lands.

Table 6: All fields by type, characteristics and amenities, estimated 2011 bookable inventory, including fields with past low-use.

	Artificial Turf	Lights	Irrigation	Parking	Washrooms
Rectangular	2	9	9*	39	23
Diamonds	0	8	5	37	18
Specialized	0	0	0	2	0
TOTALS	2	17	14	78	41

* 9 rectangular fields have in ground irrigation system. There is also one working portable irrigation system at Bechtel Park.

Amenities vary greatly from field to field. Two of the city’s multipurpose rectangular fields have artificial turf. Only 18% of all fields have lights. There is in-ground irrigation at Bechtel Field 2, RIM Fields 1-4 and 7-10, the Hillside Diamonds and RIM Diamonds 1-3. Portable irrigation is available at Bechtel Fields. Washrooms are available at 45% of fields, and parking is available at 85% of fields. These features improve player and spectator comfort, whereas turf type, lights, and irrigation increase the amount of time the field can be used.

According to survey respondents, washrooms are the most important amenity to have at sports fields, followed in priority order by off street parking, player seating, lights, shaded areas, and spectator seating.

Diamond sport groups identify lights as particularly important to maximize use of the existing diamonds. Lights allow three games per night instead of two.

Some of the sport groups would like to see drinking water available at fields, as well as rain shelter at tournament sites.

While these amenities are desirable, they can be costly. Permanent washrooms and drinking water require water and sewage servicing. Given limited financial resources, portable washrooms, while not as desirable, may be an alternative. Additionally, costs can vary significantly for off-street parking based on the size of lot and the lot surface. Amenity provision needs to be in line with available resources. Pursuit of sport group partnerships or private sector sponsorship agreements may assist with amenity costs. An alternative

strategy is to invest small amounts of funding annually to make incremental improvements such as player benches, backstop improvements, or new nets. This may include investment at well used school fields where agreements can be made with the school board.

***Recommendation:** Regularly invest in smaller field upgrades, such as player benches, backstop improvements and nets, on an ongoing basis to incrementally improve the field inventory. (1.h)*

***Recommendation:** Consider opportunities for lights to extend playing hours, irrigation and appropriate drainage to improve turf quality, and amenities such as washrooms, parking, shaded areas, and seating, to enhance the user and spectator experience, when designing new fields. (3.g)*

3.5 Sport Field Size Issues

Field size plays a significant role in determining which sports and age groups can use a particular field. Field size affects how effectively the city is able to support a full range of sport activity for each sport organization.

The Ontario Soccer Association (OSA) and FIFA international adult field size standards are 330-345' x 220-230'. The city's field size standard is 300' x 200' or larger. There are currently only three fields that conform to the OSA and FIFA size standards for adult fields - Bechtel Park Field #5 and the two new artificial Turf fields at RIM Park.

There are 23 fields that conform to the City of Waterloo's adult size standard, and an additional eight adult fields that do not meet city standard sizing. Sport organizations are increasingly requesting larger-sized fields.

It should be noted that some adult fields are configured as two smaller fields designed for atom soccer use. For the 2011 season, Bechtel Park Field 6 was configured as two atom fields and Pinebrook Park was configured as one atom field to accommodate minor soccer. There are seven fields that are only large enough for one atom field. Some of these smaller fields are not regularly booked or only used for practice due to quality issues or a preference for clustered facilities. Finally, three fields can only accommodate a squirt-sized field. Typically, an adult sized field can accommodate four squirt fields.

Table 7: Number of Rectangular Fields in 2011 by Size, estimated 2011 bookable inventory, including fields with past low-use.

Field Size Category	General Field Dimensions	Number of Fields	Typical Sports and Age Groups
Squirt	Smaller than 200' x 125'	5	Squirt Soccer
Standard Atom	200' x 125 or slightly larger	7	Atom
Non-standard Adult	Slightly smaller than 300' x 200'	8	Practice, Atom, Ages 11 to 18 Soccer
Standard Adult	300x200 or bigger, but not international sized.	23	Atom, Ages 11 to 18 Soccer, Adult Soccer, Football.
International Size Standard Adult	320x220 or larger	3	Adult

In most cases land is not available to allow expansion of adult fields to the size recommended by the OSA and FIFA; however, potential opportunities should be explored. Additionally, existing inventory would benefit if all new fields are built to a larger size where land allows. These fields could then be configured to allow a variety of field sizes, including multiple fields, to accommodate all age groups. As well, larger fields, that are longer in particular, would allow football and ultimate frisbee play. With a strategic principle to be flexible, it makes sense to design fields that will accommodate varying field layouts for various sports.

Recommendation: *Identify opportunities within the existing field inventory to enlarge smaller adult sized multipurpose rectangular field to the city's adult size standards or larger. (2.f)*

Recommendation: *Where possible, build new rectangular multipurpose fields to city adult size standards or larger, to allow reconfiguring to alternate field sizes. Ensure there is sufficient parking and other amenities to accommodate a larger number of users if an adult sized field is reconfigured into multiple smaller fields. (3.i)*

There are similar size constraints within the diamond inventory. Different diamond sports need different kinds of pitches at different distances. Different age groups require different distances between home plate and the pitching mound, as well as between the bases.

The distance between bases varies greatly in the existing inventory, but can be grouped into six categories for ease of analysis.

Table 8: Diamonds by Distance between Bases, estimated 2011 bookable inventory, including fields with past low-use.

Distance Between Bases	Number of Diamonds	Age Groups
40-49'	3	Informal Use
50-59'	4	Practice Only
60-69'	17	Minor/Major T-ball & Minor/Major Tyke
70-79'	7	Peewee/Rep/Adult
80-89'	8	Rep/Bantom/Adult
90'	3	Midget/Adult

While Table 8 examines only the distance between bases, sport organizations must also consider the depth of the outfield, and the distance between home plate and the pitch, when booking fields.

Many of the existing diamonds are smaller in size and only able to accommodate practices and t-ball or tyke leagues. Older youth leagues and adults have access to a limited number of appropriately sized fields. Only three diamonds can accommodate hardball with a raised mound. Groups indicate the hardball diamonds need upgrades. During the public consultations, slo-pitch players reported that the diamonds they use at RIM Park (diamonds 4, 5, and 6) are really too large. Open house participants indicated that resizing existing diamonds to better meet needs should be a priority.

It is crucial to consider that play requiring a larger sized field cannot be shifted to a smaller diamond and vice versa. However, there may be room in the current inventory to resize existing diamonds to meet user needs rather than constructing new diamonds.

Recommendation: *Identify opportunities within the existing diamond inventory to resize diamonds to better meet sport group need. (2.e)*

Recommendation: *Where possible, build future diamonds to current size standards, to allow for regulation play, flexibility and multi-sport use. Provide sufficient space between fields to minimize user conflicts, to allow space for warm up/practice, as well as to accommodate spectators and other amenities. (3.h)*

3.6 City Owned Fields

City owned fields account for more than half of all sports fields in the current inventory. Since there is a limited amount of undeveloped land within city boundaries and the remaining undeveloped land is zoned for residential or employment lands, it may not be possible to build new fields within city boundaries on undeveloped land. Therefore, it is necessary to demonstrate existing fields are used to their maximum benefit and to consider field renovations instead of new development, and building new fields on repurposed land, rather than undeveloped land. Field redevelopment should, ideally, occur on city-owned lands as they offer a more secure investment.

Recommendation: *Focus outdoor sports field investments on city-owned fields to ensure long-term benefit, while recognizing that not all demand for sports fields can be accommodated on city owned land. (2.c)*

Recommendation: *Where investments are made on non-city owned fields, longer term usage agreements should be in place to protect city investment. (2.d)*

There are only a few areas that might accommodate a sports field within existing new subdivision planned for the west side of the city. Developing these opportunities would positively impact the existing supply of outdoor sports fields. In particular, it would improve geographical distribution. However, small parks that are limited to a single atom-sized field are not ideal for sports field development. Furthermore, building programmable fields in small neighbourhood parks reduces the amount of open green space. A balance between fields for programmed sports and space of neighbourhood use must be considered.

Neighbourhood parks are developed through a collaborative effort between the city and the development industry. The development industry funds all new parkland development based on the *Landscape Design: Process and Requirements Manual*. Current standards require the developer to build and maintain the park for a two year period following construction. The addition of sports fields to new neighbourhood parks would require either exploration of changes to the standards, or, on a case by case basis, alternate arrangements between the

city and the developer could be made regarding responsibility for field construction and maintenance. This approach has successfully been used in the past.

For example, St. Moritz Park, which is expected to be built this year, will include a programmable atom-sized field. It may be possible to make similar arrangements at the site of a new school and park combination planned for the west side of the city. Diamonds in new parks may not work well, but a flat area for a rectangular field may be feasible. If the flat area is to be programmed, city staff would be responsible for installation of the required uprights and field maintenance.

***Recommendation:** Work with Development Services to identify existing and future park land throughout the city that could be developed for use as a sports field, based on future need projections. Development of programmable sports fields must be balanced with neighbourhood need for open green spaces. (3.f)*

A limited number of the City owned fields are located on lands designated as employment lands. This does impact the amount of space available for employment development and affects the city's "Industrial Lands Account". This issue should be resolved in the future.

***Recommendation:** Develop an action plan to either relocate fields on employment lands, or reconcile the employment lands inventory to reflect the current use. (4.i)*

3.7 Leased and Shared-Use Agreement Fields

Fields in the current inventory that are accessed through a lease or shared-use agreement are located on land being held for future expansion of a business or church or are in natural areas protected for conservation. Lease agreements have historically been for a ten year timeframe. The City of Waterloo has benefited from these leases which often stretch beyond the original lease expiry date. Access to some fields is based on shared-use agreements that are less formal in nature than a lease.

Three high-quality, high-use fields fall into this category:

- Lexington Park – The west field of this park is leased on an annual basis and could be lost following any season if the land owner decides to build.
- Creekside Church – Three fields (2 adult and 1 atom) are currently leased on this property. The current lease agreement expires in 2015. Staff are exploring the potential of extending the lease.

- Laurel Creek Conservation Area – An agreement is in place for use of space for one cricket pitch on land managed by the Grand River Conservation Authority. The agreement has recently been extended for another five years.

Generally, fields on leased lands are maintained and allocated by city staff and users pay hourly usage fees as they do for use of city owned fields.

While development or improvement investment in leased field space is crucial to addressing field need, there is a higher risk as the fields may be lost if a lease is not renewed. Long-term lease agreements with the land owners that secure access to the land and the ability to upgrade the fields help reduce the risk.

***Recommendation:** Explore options for extending leases/shared-use agreements to reduce investment risk in field maintenance and upgrades. (2.h)*

***Recommendation:** Negotiations for lease renewals or extensions should begin a minimum of one year in advance to improve planning capabilities. (6.f)*

3.8 School Fields

School fields contributed 21 diamonds and 13 multipurpose rectangular fields to the 2011 bookable inventory. This represents 37% of the total number of fields available for bookings. Most school use is with the Waterloo Region District School Board, with very limited access to Waterloo Catholic District School Board fields. Hourly user fees are not charged for use of school fields. However, the city does charge an annual administration fee to groups wishing to book a school field. Generally, these fields are maintained by the school board, with some maintenance provided by city staff.

While many of the school fields are well used, particularly by diamond sports, there are challenges with these fields. The fields belong to the school boards and with increasing school enrolment, there is sometimes a need to install portables or add an addition to the school which may infringe on existing fields. This either reduces or eliminates access to the field. While in the past, schools were built with enough land for multiple fields or diamonds, today, new schools have much less land and do not have room for sports fields. In the last 10 years, most new school sites abut a park block and the school takes advantage of park fields, if available. As such, new schools are unlikely to be a good source of fields to meet future needs.

Many of the school fields are limited in usefulness to lower level league games and practices. Issues include size, unsuitable terrain and/or poor turf quality. Some schools have permanent goal posts in a squirt soccer field configuration. While this configuration may be appropriate for use for young children, it prevents use for atom or adult soccer. Neighbours adjacent to schools have raised concerns about noise from field use and property damage from stray balls.

Turf quality is also a challenge. School fields are used by school teams and physical education classes. These uses impact turf quality and limit the opportunity for field maintenance. However, there are some school fields that provide high quality opportunities such as the artificial turf field at St. David's Catholic High School and the lower field at Bluevale Collegiate Institute, which has been used for football in recent years.

While some school fields could be altered or upgraded to better meet the needs of minor and adult sport organizations, these opportunities may not align with school board plans. Historically, a formal agreement existed between the public school board and the city for use of school fields; however, this agreement is no longer in place. Today, use of school fields is based on ongoing discussion between city and school board staff. Work is underway to develop a joint-use maintenance agreement between the Region of Waterloo District Public School Board and area municipalities. There are also ongoing discussions to improve access to use of Catholic School Board fields.

The city has made some minor investment into school fields on a case by case basis, in order to keep the fields in adequate condition. However, significant investment by the city on a school field should be protected with a use agreement that details responsibilities with respect to turf quality maintenance and ensures ongoing access to the field by the city for a specified period of time.

Participants at the public open houses identified collaboration with the school boards to upgrade fields as a priority for improving access to sports fields. It is critical that City of Waterloo staff engage in ongoing dialogue with the school boards to understand short and long-term plans for school field adjustments, developments and closures.

While school fields may not be of the best quality or format for sports play, they continue to represent a significant part of the field inventory in the city. Given fiscal and land development constraints, they will likely continue to do so in the future.

Recommendation: Enhance collaboration with the school boards and explore strategic opportunities for long-term use agreements providing access to fields that are higher quality or that could be upgraded. Agreements must identify quality standards for fields and amenities as well as responsibilities of both the city and the school board for maintenance and use of the fields. Usage agreements must be for a length of time that warrants the city's investment. (6.c)

3.9 Field Maintenance

Maintenance for outdoor sports fields falls largely under the responsibility of the Environment and Parks Division of the Public Works Services Department. The exception is the Cemetery and Bechtel Park Services Unit which provides programming maintenance at Bechtel Park where efficiencies are realized utilizing existing cemetery staff and equipment.

Environment & Parks Services is responsible for the management of woodlots, wetlands & creeks, street trees, flowers and shrubs. They are also responsible for the construction, management, and maintenance of Waterloo Park, city-wide small parks and trails, playground structures and many sports fields within the city. Responsibility for outdoor sports fields falls under the Manager of Sports & Outdoor Programs and a team of staff that perform maintenance of the fields.

Maintenance standards exist for both rectangular multipurpose fields and diamonds. Standards differ by field class, with A class fields receiving higher levels of maintenance than B class fields, and C class fields receiving the lowest amount of maintenance.

The multipurpose rectangular field maintenance standards outline the following:

- Regular infrastructure inspection on a bi-annual, post-season, bi-weekly and/or daily basis depending on field class.
- Installation, removal, storage and maintenance of goal frames for soccer fields.
- Turning on lights. Lights turn off automatically.
- Initial field marking painting on all fields, and field marking maintenance.
- Provision of garbage collection barrels, garbage collection and manual litter pick up. Amount and frequency vary by class and according to field bookings.

The diamond maintenance standards outline the following:

- Regular infrastructure inspection on a bi-annual, post-season, bi-weekly and/or daily basis depending on field class.
- Infield material and backstop/fencing materials and size requirements, and inspection standards as well as base systems, player benches, spectator seating, home plates, pitching systems, and dugout standards by field class.
- Manual and mechanical reactive weed control, weekly and pre-tournament intensive control, and mechanical turf edging (as time permits) based on field classification.

- Infield grooming, outfield foul line painting, and field preparation practices based on field classification
- Provision of garbage collection barrels, garbage collection and manual litter pick up. Amount and frequency vary by class and according to field bookings.

No maintenance standards specific to cricket pitches have been developed.

Sport organizations have repeatedly identified field maintenance as an area of concern, particularly with regards to player safety. Maintenance is noted by survey respondents as both a strength and an area for improvement, suggesting wide ranging opinion among sports field users. It should be noted that during the consultations many of the concerns around field maintenance were made in connection with school fields, which are generally not maintained by city staff. Concerns raised about maintenance may also reflect increasing expectations about turf quality.

It is challenging to meet the maintenance expectations of sport groups given limited human resources and funds. There are currently three staff responsible for turf management for all city sports fields. They are supported by summer students to complete such tasks as lining fields, putting out frames, placing bases, grooming fields and other maintenance activities. Given staff resources and the number of fields in the city, work must be prioritized. For example, while the Ontario Sports Turf Association recommends fertilizing fields to the extent where grass cutting is required twice per week, budget restrictions cannot provide for that level of fertilization, nor are their sufficient staff resources for grass cutting at that frequency.

The estimated maintenance costs are \$5,000 to \$8,000 annually for a multipurpose rectangular field, and \$10,000 to \$20,000 annually for a diamond. The cost varies depending on factors such as field quality, size, presence of outbuildings and other infrastructure, proximity to other fields, among others. It is important to note that for these cost only the minimum maintenance required is provided and it is difficult to meet the maintenance standards. Additional resources would enable increased maintenance which would contribute to improved turf quality.

The consequence of limited staff is particularly apparent when it rains. Sports groups feel there are times when fields are cancelled when they could have been made useable. Staff decide to close fields based on the amount of water on the field (both infield and outfield). If the rain ends before games begin, staff may be able to provide maintenance to enable use. Given limited staff, they must prioritize which fields to maintain and which to cancel. Staff must also make difficult decisions about which fields to close for part of the year to allow extra maintenance to improve turf. Given demand, these closures cannot typically happen earlier than August, which provides less time for field renovations than ideal.

Current constraints can be frustrating for sport groups. User fees have increased over the years but maintenance levels have not. It should be noted that user fees do not go directly to cover the cost of field maintenance; rather they are pooled into city revenues to cover general corporate overhead. While maintenance budgets are increased to accommodate increased labour costs, they have not kept pace with the need to purchase more seed, fertilizer or equipment.

Recommendation: *Explore options for directing user fee increases to enable turf quality and maintenance improvements, and infrastructure replacement or enhancement. (5.m)*

Recommendation: *Evaluate and revise existing field maintenance standards to align with Ontario Sports Turf Association guidelines, to identify areas for improvement, and to better align with user expectations, where budgets allow. (5.d)*

Recommendation: *Educate users of new maintenance standards and of the process to report field quality or safety concerns. (5.e)*

Recommendation: *Adjust maintenance budgets and revenues to align with new field maintenance standards. (5.f)*

To be cost effective, maintenance plans must take into account options to extend the life of a field before turf repairs are required. One option for multipurpose rectangular fields on larger sites is to shift the field footprint on a regular basis. City staff have had success using this approach on some fields. By shifting the field footprint, high wear areas, such as between the goal mouths and centre field, also shift. This can help postpone or reduce the need to renovate parts of the field. However, given size constraints it is not always possible to shift the footprint.

Recommendation: *Identify further opportunities in the existing inventory for shifting fields to reduce turf wear, and increase overall turf quality. Implement field footprint shifting as part of annual set up where it can be accommodated and design new fields to allow for footprint shifting. (1.g)*

Field resting is another way to improve turf quality. There are a variety of ways in which fields can be rested. For example, the City of London, Ontario is using a field resting cycle, where, on a rotating basis, designated fields are “sacrificed” or used beyond their intended capacity for a season. At the same time other fields are “rested,” by starting use later and ending early in the season so that bookings are less intensive than usual and to allow turf quality to improve. The remaining fields are used as usual. The following season, the sacrificed field is rested and receives higher levels of maintenance to rejuvenate the turf quality. The rested fields from the previous years, now with improved turf conditions, return

to normal use levels. The process begins again each season with a new group of fields. City of London staff report that this rotating process has resulted in improved turf conditions and higher field use capacities. However, for this process to be successful, it requires flexibility on the part of sport organizations to schedule their bookings on alternate fields when the locations they traditionally use are being rested. It also requires an inventory sufficient to rest fields while meeting sport organization booking needs.

Sport groups in Waterloo indicate support for the city to investigate a field resting approach to improve the existing fields, but indicated that a more conservative approach should be used in Waterloo than used in London. Sport groups do not feel the current inventory is sufficient to allow fields to be removed from the inventory temporarily to be rested. Instead, the sport groups suggest that the city explore opportunities to start play later in the season on fields that need turf improvement, or end play earlier in the fall to allow for additional maintenance to improve the turf. More intensive field resting may be possible as additional fields are added to the inventory and improvements are made to existing fields, increasing the amount of time they can be used.

***Recommendation:** Explore options for a field resting approach for Waterloo, taking into consideration the capacity of the existing inventory, as a way to improve turf quality while maximizing field use capacity. Ensure additional maintenance costs are considered. (1.f)*

3.10 Low Use Fields in the Existing Inventory

There are a number of fields in the current inventory that are available for programming, but due to size, location, or quality issues, have seen little use in recent years. Each low use field, and the primary reason they are not booked, are outlined in Appendix C.

It should be noted that most of these fields are located on school property so it is challenging to maintain turf quality. It is not within the City of Waterloo's authority to restrict use of these fields in order to regenerate the turf, or to relocate the field within school property to increase field size. Some of these sites have little potential for improvement, as the required upgrades would be cost prohibitive, or there are site constraints that prevent renovation.

Lexington Park East Field has been included on this list. This field was removed from the inventory in 2010 because there were safety concerns around conflicting use with the adjacent diamond.

A field inventory that includes non-bookable fields is inaccurate. Therefore, it makes sense to remove these fields from the bookable inventory.

***Recommendation:** Remove low use fields from the bookable inventory list provided to the public, until conditions change to enable more use. (5.c)*

3.11 Fields in Waterloo that are not in the 2011 Bookable Inventory

There are a number of sports fields in Waterloo that are not part of the City of Waterloo's bookable inventory. This means that these fields exist in Waterloo but sports groups cannot book them through the City of Waterloo, though some sports groups may make individual arrangements to access these fields. Fields in this category include those at Wilfrid Laurier University and the University of Waterloo (a total of nine fields across the two universities, three of which are artificial turf), as well as St. David's Catholic High School (which has an artificial turf field).

While some fields may appear to offer a significant opportunity to increase the bookable field inventory, most of these fields are of lower quality on school lands. Even if upgrade potential exists, the city is unable to upgrade school fields without school board approval and without a long-term use agreement; improvements on these fields would not be a sound investment.

The university fields offer potential opportunities. Wilfrid Laurier University currently allows public rental of their on-campus artificial turf field from April to September. While the University of Waterloo has historically reserved use of their fields for university students, a shared use agreement could be explored by the city. The artificial turf field at St. David's High School also offers a potential programming opportunity that the city can explore. During the public consultation process, participants encouraged the city to pursue these opportunities.

Access to existing fields not currently in the city's bookable inventory may be an option to increase community access.

***Recommendation:** Explore development of agreements to use key fields in the city, such as those at the University of Waterloo, Wilfrid Laurier University, and St. David's High School. Agreements for use of fields owned by third parties should be long-term and should ensure user costs are reasonable. (6.d)*

3.12 Fields Recently Repurposed or Slated for Repurposing

Sport fields on leased, private property, and school land are at risk of being repurposed. This is also true for some city-owned sports fields.

Table 9 outlines fields that have recently been repurposed or where there are existing plans to repurpose fields in the future:

Table 9: Repurposed Fields

Recently Repurposed Fields
<p>Pillers Soccer Fields Cluster Field</p> <p>The five atom fields that made up the Pillers soccer fields in the north east corner of the city have been unavailable for programming since July 2010 as the landowner did not want to renew the lease. This represents the loss of a major clustered venue for the Waterloo Minor Soccer Club program.</p>
Pending Fields to be Repurposed
<p>Bechtel Park Fields #5 & #6</p> <p>Bechtel Park will be reduced by two adult-sized rectangular fields in the Fall of 2013 or Spring of 2014 in accordance with the Council-approved Cemetery Services Bechtel Park Master Plan which recommends a need to expand cemetery lands in the near future to ensure the communities cemetery needs are met. The two fields are among the largest in the city and sustain some of the highest levels of usage because of the available amenities such as parking, lights and washrooms. The two new artificial turf fields at RIM Park are intended to accommodate the loss of Bechtel Park Fields 5 and 6.</p>
<p>Bechtel Park Ball Stadium</p> <p>The Bechtel Park Ball Stadium is deteriorating and although historically well programmed, there has been less use, particularly by groups requiring a large sized diamond. Ball groups agree the stadium is larger and more costly than needed by the community. However, there is a desire to have a more modest stadium facility somewhere in the city, particularly for tournament play. Additional analysis is required to determine if the stadium infrastructure is sustainable over both the short and long-term. Despite the uncertainty regarding the stadium infrastructure, the diamond should remain in place for the foreseeable future. If future examination indicates groups can be accommodated at other locations, it may be appropriate to remove the diamond and convert the land to passive use or to rectangular fields.</p>
<p>Waterloo Park Master Plan: Phasing out Programmed Sports</p> <p>The Waterloo Park Master Plan recommends phasing out programmed sports within Waterloo Park. Waterloo Park fields include: four diamonds, two multipurpose rectangular fields, and a cricket pitch. The plan recommends removal of some fields and relocation of other fields for non-</p>

programmed purposes, such as pick-up soccer. While there are no immediate plans to repurpose the existing programmed fields, it is anticipated to occur within the next fifteen years. This will mean a significant loss of good quality, well used fields. The Waterloo Park Master Plan recommendations will be phased in over time based on the ability to relocate programming to other fields and as funds become available to execute the new land use in Waterloo Park. It is anticipated that impact to field access will begin in 10 years or more, as the initial implementation of the Master Plan will focus on the park entrance area where diamond 1 and 2 are located.

Table 10: Recent and Pending Fields to be Repurposed

Location	Field Information	Scheduled Timing for Repurposing
Pillers	Field 1 (Rectangular)	End of 2010 Playing Season

	Field 2 (Rectangular)	
	Field 3 (Rectangular)	
	Field 4 (Rectangular)	
	Field 5 (Rectangular)	
Bechtel Park	Field 5 (Rectangular)	Fields: Fall 2013 or Spring 2014 as per Bechtel Park Master Plan
	Field 6 (Rectangular)	
	Diamond 1	Diamond: in the next 15-20 year unless demonstrated lack of need earlier. Infrastructure surrounding the diamond could be decommissioned sooner
Waterloo Park	West Field (Rectangular)	10+ years as per Waterloo Park Master Plan. To be phased out as programming can be moved elsewhere and funds available to execute new uses for the land.
	East Field (Rectangular)	
	Diamond 1	
	Diamond 2	
	Diamond 3	
	Diamond 4	
	Cricket Pitch	
Totals	Rectangular Fields	9
	Diamonds	5
	Cricket Pitch	1

Note: Fields 6, 11 12 at RIM Park were decommissioned in 2009 to allow for construction of 2 artificial turf fields. The Lexington Park East field was removed from the inventory in 2010 due to conflict with the adjacent diamond – the land has not been repurposed, but this field is not longer bookable.

Taking into consideration all known repurposing during the timeframe of this strategy, the anticipated loss of 9 fields, 5 diamonds, and 1 cricket pitch needs to be addressed in order to respond to projected field demand. It is not only the fields and the field use capacity that needs to be considered, but also the quality and unique amenities that they offer.

The Pillers fields offered a clustered venue for minor sports. Clustered fields offer the advantage of a consistent venue for programming and the ability to accommodate tournament play with several games at a single location.

Bechtel Park fields also deserve special attention since multipurpose rectangular fields 5 and 6 are among the largest in the city, and the diamond offers the only stadium in the city. Fields 5 and 6 will be decommissioned in fall 2013 or spring 2014 in order to expand the cemetery.

While the artificial turf fields at RIM Park should provide some capacity to address the loss of Bechtel fields 5 and 6, there may also be a need for a short term solution to provide additional field capacity until the three new fields on the University of Waterloo North lands off of Westmount road open in 2016. Staff are investigating options and plan to work with sports groups to create efficiencies with field allocation.

The stadium and diamond at Bechtel Park will also see changes over the longer term. The stadium infrastructure at Bechtel Park is in poor condition and is unlikely to be sustainable over the long-term. While the future of the stadium was noted as a concern during the public consultation process, sport groups also indicated that if spectator seating and some other stadium-like amenities were in place at another diamond, it may meet their needs. Regardless of the future of the stadium, the diamond will likely remain in place for the next 10 to 15 years. While bookings of the Bechtel Park diamond remain high, the large size of the diamond may be inappropriate for some of the user groups. Additional work is required to develop an appropriate facility for hardball use and to identify more appropriate diamonds for groups currently using the Bechtel diamond. If these sport groups can be better accommodated at other locations, it may be possible to decommission the diamond, converting it to passive use land, or for future rectangular fields. These uses may also better align with the neighbouring cemetery.

Waterloo Park is also a clustered diamond facility with the added benefit of lights at some of the diamonds. The Park's cricket pitch is one of two in the city and the only one on city-owned land. The Waterloo Park Master Plan recommends the phasing out of all programmed sport activity in the park. The first phase of implementation will begin with the land opposite the Waterloo Memorial Recreation Complex with the creation of a major entrance feature, accessible playground and the development of a second connection between the east and west sides of the park. A youth play area is proposed for the location of Diamonds 3 and 4 and will contain multi-use fields for non-programmed, pick-up play. Diamonds 1 and 2 will be the first to be impacted. A future festival area is proposed for this space. It may be possible to remove some of the diamond fencing to order to retain the diamonds while integrating with the festival area. This may also require some programming shifts between Waterloo Park and the Hillside diamonds.

Throughout the public consultation process, residents expressed surprise and concern that the Waterloo Park Master Plan proposed the removal of programmed sports from Waterloo Park; residents noted that the fields in the park are some of the higher quality fields in the city and the city core is a preferred location for sports fields.

The Waterloo Park Master Plan commits to providing alternate locations to existing sports field programming prior to the removal of multipurpose fields or diamonds. The lack of land and limited funding for new field development are barriers to implementation of the Waterloo Park Master Plan. City staff responsible for the Waterloo Park Master Plan and implementation of this strategy will need to work closely together to determine the best path to implementation. Collaborative planning will be needed to ensure the best use of resources and to ensure community needs continue to be met over the short and long-term.

***Recommendation:** Planning for new and upgraded fields should strive to equal the quality and amenities available at Pillers, Bechtel Park and Waterloo Park. (3.e)*

3.13 Use of Fields in Neighbouring Municipalities

Given the proximity to Kitchener, Cambridge and smaller towns, many of the sport organizations have non-resident participants and many book fields outside of Waterloo. Each city and town has their own policies and procedures for sports field use in terms of booking, user fees, and maintenance. These policies may not align which may pose different advantages or disadvantages for sport organizations that book outside the city. Furthermore, planning on the part of one city for a new field development can impact field needs in another.

Of the 146 survey respondents, 70% indicated they use fields in neighbouring communities. Sports groups indicate they use fields in other communities when they cannot access fields in Waterloo, because they play against teams in other communities, or because the field cost are lower elsewhere. Sports groups suggest the City of Waterloo ensure continued engagement with neighbouring municipalities to learn about innovative policy and operational approaches implemented elsewhere.

As the City of Waterloo reaches a point where undeveloped land is no longer available within city boundaries, the city may need to look outside of municipal boundaries to purchase land for the development of sports fields or to access existing fields to meet the needs of Waterloo residents.

Recommendation: *City of Waterloo staff should continue to initiate and participate in joint policy and planning initiatives with staff of neighbouring municipalities to support strategic alignment, information sharing, and field access. (6.b)*

Recommendation: *City of Waterloo staff should explore opportunities to access existing fields in neighbouring communities and to access land near to City of Waterloo boundaries for future field development. (6.a)*

3.14 Requirements and Constraints for the Development of New Fields

Clustered fields are desirable as they support league and tournament needs. They also allow streamlined and environmentally-friendly operations for both the City of Waterloo and community sport groups. Capital costs for parking and washrooms are reduced and additional amenities such as walking trails and playgrounds offer activities for families and tournament events. While clustered facilities are desirable for many reasons, the low inventory of large plots of developable land suggests that it will not be possible for all new developments to be clustered multi-sport venues. Smaller venues with only one or two fields will continue to be part of the inventory and offer opportunities to increase capacity. These smaller sites, commonly located in residential areas, offer the benefit of access to fields close to home.

Recommendation: *When developing new fields, design should focus on provision of multi-sport clustered sports fields where land is available. (3.d)*

There are other limitations that can impact the ability to improve, expand or construct new outdoor facilities. For example, lights cannot be installed at many fields due to proximity to residential areas or for environmental reasons. Fields must also be oriented with consideration to proximity to neighbouring private property, roadways, other fields or diamonds, and with respect to sunlight. There are a number of existing fields where multipurpose rectangular fields and diamonds overlap. These include the fields at Waterloo Collegiate Institute where a football field overlaps with the outfield of a ball diamond, so that only one field can be used at a time. At Lexington Park, the proximity between the east field and ball diamond limit use to the diamond only. Limited parking is also a challenge and can pose a safety issue for younger players if street parking must be used.

These challenges reveal the need to provide supporting infrastructure when developing new fields or upgrading existing fields. This will provide a high quality and safe sport experience

for all players and spectators. Participated at the public open houses identified player safety is identified as a priority area when renovating or upgrading fields.

***Recommendation:** When repurposing or redesigning existing fields, or developing new fields, the safety of players, users of adjacent fields, and the surrounding environment, should be of paramount concern. (1.e)*

3.15 Renovating or Upgrading Fields

Capital investment in the city's outdoor sports fields is ongoing. Upgrades and repairs are planned and carried out on an annual basis within the parameters of the budget. Some upgrades are made in collaboration with the public. Recently, Regency Park, the Lexington Park diamond, Lincoln and Centennial School fields, and Eastbridge Green fields were upgraded. The wicket at the Laurel Creek Conservation Area cricket pitch was replaced. The Waterloo Park cricket pitch received upgrades through a partnership involving grant funding and the Waterloo Sunrise Cricket League. This type of partnership will be key to maintaining or improving the quality of the field inventory in the future.

Beyond ongoing smaller upgrades, more significant investments have been made to improve fields at RIM Park. Three fields were converted to two artificial turf fields in time for the 2011 season through a partnership opportunity with Waterloo Minor Soccer. These fields offer a premier venue for local groups. They will also be attractive for high-level competitive sporting events.

Lights have been added to six fields at RIM Park, which means play can continue later into the evening, thereby extending the inventory of available play time. Additionally, comfort features for both players and spectators have been added, including benches, bleachers, washrooms, and a shade canopy. These types of upgrades improve both the player and spectator experience.

While upgrades to existing facilities are an ongoing process, survey respondents identified field upgrades as an area in which the city can make improvements. There are many opportunities within the existing field inventory to make upgrades, but limited human and financial resources will necessitate prioritization exercises to address areas of highest need and highest impact. Improvements must also be incremental, occurring over the next 10 years or longer.

Recommendation: Continue improving the existing field inventory through investment in a long-term plan of field upgrades (outlined in Tables 11, 12, and 13). Recommended field upgrades should focus on increasing field capacity, turf quality, and/or safety, and the process should include consultation with neighbourhood residents. (1.c)

Table 11: Rectangular Fields recommended for upgrading or renovations

Field Name		Action	Outcome
Creekside Church, Field 3	North West Waterloo	Soil test, categorize as per Ontario Sports Turf Association guidelines, replace turf, addition of sandy loam topsoil base, re-grade to ensure positive drainage.	Increased longevity of field. Provides a quality, clustered field facility in West Waterloo.
Old Oak Park, Field 1	West Waterloo	Soil Test, categorize as per Ontario Sports Turf Association guidelines, add sub-drainage system under field, grade and re-sod specific areas to ensure positive drainage.	Ability to program earlier in the season and added longevity of asset. Improves overall playability. Will become a quality field in West Waterloo.
Waterloo Park, East Field	Uptown Waterloo	Soil test, categorize as per Ontario Sports Turf Association guidelines, turf replacement, addition of sandy loam topsoil base, re-grade to ensure positive drainage.	Renovations will increase programming opportunities. Unauthorized use will need to be addressed.
Laurelwood Park	West Waterloo	Soil test, categorize as per Ontario Sports Turf Association guidelines, grading, add sub-drainage system and add to inventory as (1) adult rectangular field.	Increased capacity for adult and minor sports use.
Pinebrook Park	West Waterloo	Soil test, categorize as per Ontario Sports Turf Association guidelines, Improve drainage, transplant (3) trees to standardize field size.	Can be programmed earlier in the year. Becomes flexible to transition from adult size, to atom size, to squirt size.
Regency Park	West Waterloo	Widen and lengthen field slightly to a standardized field size.	Improved programming opportunities, adds a standardized rectangular field to the inventory on the west side of city.
Blue Beech Link	West Waterloo	Turf replacement, re-grade, and add sandy loam sub-base material.	Improved turf quality.

Table 12: Diamonds Recommended for Upgrading or Repurposing

Diamond Name	Location	Action	Outcome
RIM Park, Diamonds 1-6	East Waterloo	Improve the line dividing infield/outfield known as a “lip”	Improved playability.
RIM Park, Diamond 3	East Waterloo	Re-purpose this diamond into a hardball diamond in order to facilitate a movement of programming from the Lexington Park Diamond and potentially Bechtel Diamond.	Transition an established user group to a higher quality facility and make better use of an existing facility, as well as enabling repurposing of facility.
Westwind Park, Diamond 1	West Waterloo	Drainage improvement, update benches, improve backstop and fencing.	Improved amenities.
University Downs Park, Diamond 1	East Waterloo	Update benches, improve backstop and fencing	Improve amenities
Lexington Park, Diamond 1	West/Central Waterloo	Re-purpose diamond into (3) atom fields and move current hardball programming to RIM Park Diamond 3 (The newly created hardball diamond)	Improved use of space at Lexington Park by creating a clustered field site.
Waterloo Park, Diamonds 1 & 2	Uptown Waterloo	Explore opportunities to shift youth programming from Hillside to Waterloo Park and adult programming for Waterloo Park to Hillside. Begin to remove the outfield fencing around these two diamonds.	Helps make the overall space more usable for festivals as per the Waterloo Park Master Plan while providing appropriate diamonds for sport groups.

Table 13: Cricket pitches Recommended for Upgrading or Renovations

Field Name	Location	Action	Outcome
Laurel Creek Conservation Area, Cricket pitch 1	West Waterloo	Add solid white backstops to both ends of the field.	Improved playability

The upgrades and renovation outlined in Tables 11, 12 and 13 are slated to occur over the next 10 years, and the cost of most of the projects is within current budget projections. In addition, staff will continue to explore opportunities to partner with sport groups and the school boards, and other interested community partners, to identify additional field improvement projects.

While this is a good start to improving the existing inventory, what is needed is an ongoing approach to maintaining the quality of our sports fields at an appropriate standard. Currently, the focus is on directing the limited available funds to those sports fields where there is greatest need for upgrade or renovation. At this point, there is much to be done to improve the quality of our sports fields. A long term capital investment plan that looks at the life cycle of various components of sports fields, be it turf, benches, goal posts, or backstops, and identifies when each component would need to be replaced at each field would help to maintain overall quality. This type of approach would enable development of budget requests based on solid data, and in turn would help ensure all components of our sports fields met a quality standard.

Recommendation: *Develop a long term capital maintenance plan, that considers the life cycle and replacement cost of all components of the infrastructure of each field, to support ongoing planning for field upgrades and renovations, and to help ensure all fields in city’s inventory meet quality standards.*
(1.d)

4.0 Field Use Analysis and Future Need Projections

4.1 Field Capacity

Drawing on the Ontario Sports Turf Association's classification system, city staff expertise, and field booking data, each field in the bookable inventory is assigned a maximum field use capacity. The maximum field use capacity is based on current field conditions and assumes that existing maintenance practices continue.

For the purpose of this report, maximum field use capacity is defined as the maximum hours of use per week each field can sustain before turf quality begins to decline. The Ontario Sports Turf Association additionally recommends that each field have a day or more of rest each week, dependent on turf quality. Given that the assigned capacities are presented on a per week basis, rest days have not been included, but it would be beneficial for booking staff to spread the bookable hours across the week to allow rest days.

City of London staff identified field use capacity for planning and programming purposes and report that this approach has helped maximize field use while maintaining or improving field turf quality.

This is the first attempt to identify field capacities for the City of Waterloo. To ensure turf quality is not negatively impacted, monitoring will be required and field use capacities may need to be adjusted in accordance with observed turf wear.

Multipurpose rectangular fields are categorized as having either high, medium or low use capacities. Per week maximum use is assessed at 26 hrs for high capacity, 18 hours for medium capacity, and 10 hours for low capacity. These capacities are largely based on soil type and turf condition.

Artificial turf capacity is 57 hours per week, based on booking potential of 6 hours per week night (5 pm to 11 pm), 15 hours per Saturday (8 am to 11 pm), and 12 hours per Sunday (11 am to 11 pm). However, it should be noted that these fields can accommodate additional play on weekdays if bookings extend into non-prime time.

Diamonds are classified with either high or medium use capacities. High use diamonds can sustain 32 hours of use per week, while medium use diamonds can sustain 26 hours per

week. The difference in capacity is due to availability of lights. Diamond sports cause much less turf wear than sports on rectangular fields, so turf wear does not factor greatly into determining how much a diamond can be used.

The two cricket pitches have a maximum capacity of 32 hours per week. This is based largely on the similarities in turf wear to diamond sports and current booking patterns. While this seems like a high number of hours available on the fields, given the length of games, and lack of lights at both cricket pitches, full length games are generally only scheduled on weekend days.

Table 14 summarizes the capacities assigned to all fields and the number of fields in each category.

Table 14: Fields by type and capacity per week, from 2011 bookable inventory, not including low-use fields.

	Capacity Per Week	# of Fields
Artificial Turf	57 hours	2
Rectangular Multipurpose		
• High	26 hours	4
• Medium	18 hours	23
• Low	10 hours	7
Diamonds		
• High	32 hours	8
• Medium	26 hours	32
Cricket	32 hours	2
TOTAL		78

Recommendation: Use the field use capacities developed for planning purposes as guidelines for programming, including rest days as recommended by the Ontario Sports Turf Association. Monitor fields for turf quality, evaluate the accuracy and appropriateness of the field use capacities, and alter as needed to maintain turf quality. (1.b)

4.2 Current Field Use

The data analysis found below is a new approach for the City of Waterloo. Having assigned each field a maximum use capacity, we can look at how much the fields are actually used so see if they could reasonably be booked for more time. Maximum utilization of existing fields is a strategic priority. However, achieving 100% of the maximum capacity for each field is not a realistic or appropriate goal. While it is desirable and cost effective to use the fields as much as possible, the complexities of scheduling need to be considered. Time is needed for breaks between games, for weather related cancellations, and to allow for unexpected maintenance. Since this is also the first time staff has assigned use capacities to each field, 80% of the maximum use has been identified as a reasonable target.

To understand how or if field use can be improved, staff compared the capacity of each field to field bookings in 2009 and 2010. Data from this analysis for each separate field is found in Appendix E. Tables 15, 16, and 17 provide information on the total capacities and use for each field type and category.

Table 15: Rectangular Multipurpose Sport fields – Bookings in 2009/2010

Maximum Weekly Capacity	Number of fields	Total Hours Used (Average of 09/10 bookings)	Maximum Capacity per Season (All Fields)	% use of 100% (Max) Capacity	% use of 80% (Goal) Capacity
High (26 hours)	4	1,698.0 hrs	1,768 hrs	96.0%	120.05%
Medium (18 hours)	28	6,702.0 hrs	8,568 hrs	78.2%	97.78%
Low (10 hours)	7	862.9 hrs	1,190 hrs	72.5%	90.64%

Note: The length of a season for these fields was estimated at 17 weeks (May to August). This is an average season length. The new artificial turf fields were not included in the above numbers because they were not available in 2009/2010. Low use fields were also not included. The fields at Pillers were included in these figures, although they are not part of the 2011 inventory.

Table 16: Diamonds – Bookings in 2009/2010

Maximum Weekly Capacity	Number of Fields	Total Hours Usage (Average of 09/10 bookings)	Maximum Capacity Per Season (All Fields)	% use of 100% (Max) Capacity	% use of 80% (Goal) Capacity
High (32 hours)	8	4,254.1 hrs	5,376 hrs	79.13%	98.91%
Medium (26 hours)	34	10,096.0 hrs	18,564.0 hrs	54.38%	67.98%

Note: The length of a season for these fields was estimated at 21 weeks (May thru September). This is an average season length. Low use diamonds were not included. Diamond 2 at Sandowne School and Diamond 1 at Mary Johnston School were included in these figures, although they are not part of the 2011 inventory.

Table 17: Cricket pitches – Bookings in 2009/2010

Maximum Weekly Capacity	Number of Fields	Total Hours Usage (avg. of 09/10 bookings)	Total Capacity per Season (All Fields)	% use of 100% (Max) Capacity	% use of 80% (Goal) Capacity
Medium (32 hours)	2	1,042.8 hrs	1,344 hrs	77.5%	96.98%

Note: The length of a season for these fields was estimated at 21 weeks (May thru September). This is an average season length

Data analysis suggests that low capacity fields are under-utilized, medium capacity fields are used appropriately, and high capacity fields are over-utilized. Based on the goal use capacity, usage results indicate 90.64%, 97.78%, and 120.05% respectively.

High capacity diamonds are also close to goal use capacity at 98.91%. On the other hand, medium capacity diamonds are used only at a rate of 67.98%. The cricket pitches are used at 96.98% of goal use.

Recommendation: *Work with sport organizations to encourage scheduling of game times that allow maximum use of fields, such as starting earlier in the evening (4 to 6 pm), playing under the lights, or using more weekend time. Regularly monitor field use to determine when maximum use capacity has been achieved. (2.a)*

Recommendation: *Develop space allocation procedures for multipurpose rectangular fields, diamonds, and cricket pitches to facilitate improved use and access to the existing inventory. (2.b)*

It should be noted that the usage data is based on booked time as reported at the end of the season. It does not include the time booked at the start of the season that is then cancelled or that goes unused. Sport groups identify a common practice of booking more time than they use, which creates a challenge for projecting actual use. Often, groups do not cancel bookings if they are unable to do so in advance of the 30 day cancellation policy or groups book more time than they need for fear they will be allocated less time in future years

It is also important to note that fields are used by groups for pick-up games and casual play that are not reflected in the booking system. Some organized sport groups have also been known to use the fields without booking. Both situations skew usage data to an unknown extent. Currently, there is no method to identify how much field time is currently used without a booking or is booked without use.

Another concern is a somewhat common practice where groups book more time than required and then cancel blocks of time 30 days prior to the start of the season without financial penalty, as permitted by existing policy. It can be a challenge to rebook blocks of returned time in short notice, leading to lost revenue for the city and lost opportunity for other user groups. Additionally, requests for time that cannot be accommodated are not tracked, so it is not possible determine how much more time is requested than can be accommodated.

Recommendation: *Develop a system to track field requests that cannot be fulfilled, bookings that are cancelled, and bookings that go unused. (5.a)*

Recommendation: *Review the cancellation policy with the goal of reducing the amount of booked time cancelled 30 days or more in advance, and the amount of time that is booked but goes unused. (5.b)*

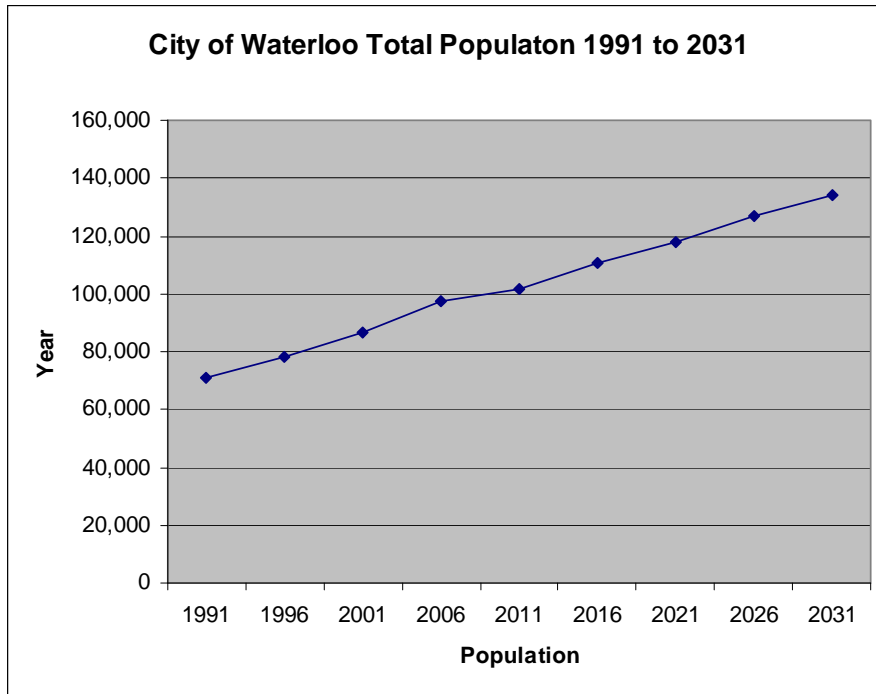
The field use analysis suggests that there are some opportunities to better utilize existing fields, particularly school fields. However, these are lower quality fields and may be seen by sports organizations as inappropriate venues. Diamond sport groups note that school diamonds are not appropriate for use by many groups, given size and/or current quality. In particular, Girls Softball feels safety is an issue at school diamonds and report that quality continues to deteriorate.

4.3 Population Forecast Analysis

A central determinant of demand for sports fields is population growth. Based on data supplied by Planning Information and Research, Region of Waterloo, between 1991 and 2011, the City of Waterloo’s population grew by 30.01% from 71,195 to an estimated 101,716 residents.

These figures do not include post-secondary students whose family home is outside of the City of Waterloo. Given the influx of students attending universities and colleges in the area, the local population is actually much higher. However, these students may be less likely to use City of Waterloo sports fields as they have access to sport and recreation opportunities offered by their respective schools. Additionally, many students are not in the city during the spring and summer months when outdoor sports are typically played.

Graph 1: City of Waterloo Total Population 1991 to 2031



Source: Region of Waterloo, November 2010

Note: These projections are based on Statistics Canada Census information. They do not include post secondary students attending the areas local universities and college with parents that live outside of the region.

Based on projections, there will be almost 32% more residents in the city by 2031. This expected growth, combined with the limited land available for new development, suggests that there will be significant challenges ahead for meeting outdoor sports field demand.

It should be noted that there will not only be population growth, but that different age groups will grow at different rates.

For the purposes of this study, population data has been divided into four age groups, 0-3 years old (those generally too young to play organized sports), 4 – 18 years old (those eligible for minor sports), 19-54 years old (those eligible for adult sports), and those 55+ (those less likely to play organized field sports).

Table 18: City of Waterloo, Population by 5 year period, 1991-2031

	1991	1996	2001	2006	2011	2016	2021	2026	2031
0 to 3	4,060	4,040	40,30	4,490	4,379	5,023	5,558	5,825	5,872
4 to 18	14,210	16,085	17,665	18,695	18,594	19,017	20,315	22,044	23,806
19 to 54	40,545	43,795	48,215	54,025	56,118	60,115	62,431	66,260	69,881
55+	12,380	14,045	16,615	20,235	22,625	26,262	29,773	32,603	34,369
Total	71,195	77,965	86,525	97,445	101,716	110,417	118,077	126,732	133,928

Source: Region of Waterloo, November 2010

Table 19: City of Waterloo, Population Change

	Total Change 1991 to 2011	% Change 1991 to 2011	Total Change 2011 to 2031	% Change 2011 to 2031
0 to 3	319	7.86%	1,493	34.09%
4 to 18	4,384	30.85%	5,212	28.03%
19 to 54	15,573	38.41%	13,763	24.53%
55+	10,245	82.75%	11,744	51.91%
Total	30,521	42.87%	32,212	31.67%

Source: Region of Waterloo, November 2010

While the 0-3 age group grew by only 7.86% from 1991 to 2011, this age groups is expected to grow by 34.09% between 2011 and 2031. Growth of the 4 – 18 age group was 30.85% between 1991 and 2011, and is expected to continue a similar rate between 2011 and 2031 (28.03%). However, the growth rate of the 19-54 and 55+ age groups between 2011 and 2031

will be lower than between 1991 and 2011, with anticipated growth of 24.53% and 51.91% respectively.

4.4 Sport Participation Trends

The “Sport Participation in Canada, 2005” report, produced by Statistics Canada, looks at general sports participation trends in Canada, focusing on both indoor and outdoor organized and team sports.

Sport participation rates dropped from 45% in 1992 to 28% in 2005. This was a reduction from 9.6 million Canadians in 1992 to 7.3 million in 2005, despite population growth during that period. In 2005, 18% of all Canadians 15 and older reported belonging to a sport club, local community league, or amateur sport association. This was down 1% from 1998.

While young Canadians aged 15-18 have the highest sport participation rates overall, the participation rate for this group declined from 77% in 1992 to 50% in 2005. Canadians aged 55 and over had a 17% participation rate in 2005, down from 25% in 1992. The trend is similar in other age groups.

Generally, the study found that as people age their involvement in sport decreases. Thus, as the population continues to age as a whole, this downward trend in sport involvement may continue.

The study also found that among children aged 5-14, soccer is the primary sport of choice, with 44% participating in soccer.

Limited data is available regarding participation trends for outdoor field sports in Waterloo. Staff attempted to collect data through a survey that could be completed by email or over the telephone. The survey was sent by email to 36 sport organizations that regularly use City of Waterloo fields. Follow up phone calls were made to organizations that did not submit a response to the survey. In the end, responses were received from 18 groups.

It is difficult to make meaningful comparisons across all sports groups with limited response from many groups. As part of the survey, sport organizations were asked to provide participation rates over the past 5 years. Data quality is a concern since the majority of participant numbers provided were estimates, and do not necessarily represent only participants that reside in Waterloo, or participants that use only Waterloo fields. It would be beneficial for sport groups to collect accurate participation numbers and willingly share this information with the city.

It would appear there has been little or no participation growth for many groups, based on provided estimates. This is particularly true for adult sport groups. Additionally, the majority of groups indicate that they did not have a waitlist for the 2010 season. Some adult groups, such as CARL, Friday Oldtimers, and Grand River Soccer had waitlists. Among the 4 diamond sport groups that responded to the survey, only one group had a waitlist. This suggests that there is not a significant unmet demand for sport participation.

Many groups indicate that they use fields in Kitchener and other cities. The primary reasons for using fields outside of Waterloo are lack of field availability at the desired times, user fees, and to play “away” games within regional leagues. For example, Waterloo Minor Ball said that there were not enough fields in Waterloo to accommodate their peewee and house leagues.

While it may be possible that sport participation levels will continue to decline as they have nationally over the last 20 years, given efforts to promote the importance of physical fitness general trends may change over the next 20 years. Without access to complete and reliable data, it is not possible to project participation growth based on past participation trends in Waterloo. Thus population growth projections are used as an alternate means of projecting participation growth in this report.

4.5 Future Field Need Projections

While there is much that can be done over the next few years to improve access to outdoor sports fields in Waterloo, planning for the more distant future is also required. Waterloo has seen growth and population change in recent years and this is anticipated to continue. These changes will impact demand for a full range of recreation opportunities including outdoor sports fields.

For the purpose of this strategy, a methodology has been developed to project future outdoor field need in Waterloo. Existing methodologies used by other cities were examined, as well as the methodology used by planning consultants Monteith-Brown (2007) in a study of soccer field need in the City of Waterloo.

The Monteith-Brown methodology does not align with the City of Waterloo’s current goals. It does not take into account either the need to maximize existing field use prior to building

additional fields, or the lack of available land for building. It also does not consider the needs of all outdoor sport organizations. The Monteith-Brown methodology is based on a comparison of the number of players per field in other Ontario cities to Waterloo, and only looked at soccer field needs.

Instead, a methodology used by Strathcona County in Alberta to project field needs is used as a starting point in this strategy. This methodology is based on the existing field inventory's current utilization patterns, projected population growth, population aging, and projected sport participation rates.

For the City of Waterloo, the methodology is adjusted to reflect the most reliable data available at present and the qualities of the local field inventory.

The methodology is complex. However, to simplify, the methodology compares 80% of the field use capacity of the current field inventory, by field type and capacity category, to the field bookings based on 2009/2010 booking data, increased by the projected population growth at five year intervals. This provides the information necessary to identify if there is a surplus or deficit between anticipated bookings and available field use capacity. The surplus or deficit in field use capacity is then equated to the number of fields needed to accommodate anticipated bookings.

Rather than basing the field need projections on the total population growth rate, the projections are based on the growth rate of the 4-18 and 19-54 age groups as these age groups are the primary users of sports fields. The growth rates for each five year increment are found in Table 20 below. The 2011 to 2031 growth rate for the 4-54 age group is 25.40%, while the growth rate of the total population for the same period is 31.67%.

Table 20: Projected Population Growth from 2011 by 5 Year Increments

Age Groups	2011	2016	2021	2026	2031
4 to 18	18,594	19,017	20,315	22,044	23,806
19 to 54	56,118	60,115	62,431	66,260	69,881
Total	74,712	79,132	82,746	88,304	93,687
% change from 2011		5.92%	10.75%	18.19%	25.40%

The field need projection methodology is based on a number of assumptions. For example, it assumes that the use capacity of a field in 2011 will remain the same in the future, though it may be possible to increase the capacity through upgrades such as the addition of lights. The methodology also groups fields of different capacities separately based on the assumption that play should continue on similar quality fields as in the present, or if available, move to a higher quality field. Play should not be moved to a lower quality field. Some sport groups note that current use may not reflect the desires of sports groups. Some groups may be playing on lower quality fields only because they are unable to book high quality fields.

The projection methodology assumes that all fields in the 2011 inventory will remain in the inventory except for fields at Bechtel Park and Waterloo Park. These are removed from the inventory calculations in the year when they are expected to be repurposed. It is assumed that it will be possible to continue to use leased fields. Staff have consulted with the field owners, and have confirmed that it is reasonable to expect that these leases will be extended. It should be noted, however, that school fields may be removed from the inventory at any time, and circumstances may change with leased fields in the future.

The methodology also assumes that increases in field use demand will be directly proportional to population growth. (For example, if the population growth of those aged 4-54 is 5%, it is assumed that the city will be asked to provide 5% more time on rectangular, diamond and cricket pitches). This may or may not be the case. While bookings from recent years have shown minimal growth annually, longer term trends in sports participation may result in slowed growth and lessening demand for field time in comparison to population growth. However, without any reliable data to support this, population growth is deemed the most appropriate way to estimate demand.

The projections for rectangular multi-purpose fields, diamonds, and cricket pitchers are calculated separately and appear below. The projections are presented in a cumulative format.

Table 21: Rectangular Field Need Projections.

Year	Difference between Estimated Inventory and Required Fields (Cumulative)			
	Artificial Turf	High Capacity	Medium Capacity	Low Capacity
2011	0.0	-0.4	-1.8	1.3
2016	-0.1	-2.6	-3.3	0.9
2021	-0.2	-2.8	-6.5	0.6
2026	-0.4	-3.1	-8.3	0.2
2031	-0.5	-3.5	-10.1	-0.2

Notes: Estimated inventory numbers assume no new field development between 2011 and 2031. Estimated inventories are based on 2011 inventory minus fields known to be repurposed in the projection year's estimate. The 2016 estimated inventory is the 2011 inventory minus Bechtel Park Fields 5 and 6, and 2021 is the 2016 inventory minus the two Waterloo Park fields. It is assumed that all other fields will continue to be available until 2031; this includes leased and school fields currently in the inventory. Each bookable field was counted as one field regardless of size. The findings are cumulative. A negative number indicates a deficit in fields required and a positive number indicates a surplus in fields. A detailed overview of the projection analysis can be found in Appendix G.

Results show that even with a target of achieving 80% of field capacity, there will be a need for additional fields over the next twenty years. In 2021, the demand for artificial turf fields will exceed supply by a field use capacity of 0.2 fields; there will be a need for 2.8 more high capacity rectangular fields and 5.5 more medium capacity multipurpose rectangular fields than currently available. By 2031, there will be a need for 0.5 more artificial turf fields, 3.5 more high capacity multipurpose rectangular fields and 9.1 more medium capacity multipurpose rectangular fields.

The projections are only part of the story about future need. Sport organizations are looking for larger, high quality, lit fields. These needs cannot be accommodated within the city's existing inventory. While there is some surplus of fields according to the projections, much of the unused capacity in the existing inventory is on lower quality fields that do not appropriately meet existing sport needs.

Table 22: Diamond Need Projections

Year	Difference between Estimated Inventory and Required Fields (Cumulative)	
	High Capacity	Medium Capacity
2011	0.1	8.9
2016	-0.4	7.5
2021	-2.8	4.4
2026	-3.3	2.7
2031	-3.9	1.0

Notes: Estimated Inventory accounts for the repurposing of four Waterloo Park diamonds in 2021. A negative number indicates a deficit in fields required and a positive number indicates a surplus in fields.

Diamond projections suggest that no additional diamonds will be needed until 2021.

Decommissioning of the Waterloo Park diamonds will create a need for field use capacity equivalent to 2.8 high capacity diamonds in 2021. By 2031, there will be a need for 3.9 high capacity diamonds. While there will continue to be a small surplus of medium capacity diamonds, it should be noted that, as with the low capacity rectangular fields above, these diamonds are largely on school property and cannot accommodate many of the sport organizations’ needs. They are also at risk of being repurposed by the school at any time.

The decommissioning of the Waterloo Park diamonds represents the loss of some of the highest quality diamonds in the city. Diamond sport groups are concerned that the projections would not meet future need and cautioned that lack of access to high quality diamond discourages residents from playing diamond sports. They also indicated that the diamonds at RIM Park need to be upgraded to better meet their needs; they are currently not the right sizes and are not premium quality. Additionally, hardball diamonds require raised pitching mounds, and there are only a select number in the city that have a mound (Bechtel and Lexington East have permanent mounts and RIM Park has a portable mound). It is anticipated that the needs of diamond sport groups can be better met by renovating existing diamonds, developing policy to improve equity in allocation, and making changes to programming locations for some of the groups.

These projections call for relatively modest increases in the number of diamonds; many of the new diamonds are required to accommodate play currently occurring on fields that slated to be decommissioned.

While some of the sport groups expressed concern that the diamond need projections are too conservative, the projections resonate with the result of the online survey. In general terms, with respect to both rectangular fields and diamonds, 53% indicate a need for more outdoor sport facilities and 24% indicate sufficient quantity. The other 23% suggested need could be met by upgrading existing facilities. Among those respondents that believe more outdoor sport fields are needed, there is a mix of responses regarding the type required; 50% suggested a need for softball diamonds, 43% suggested a need for hardball diamonds, and 42% suggested a need for more rectangular fields. This strategy is suggesting a balanced approach, upgrading fields to enable more use where it makes sense, while also adding new fields to accommodate anticipated population growth in Waterloo.

Table 23: Cricket pitch Need Projections

Year	Difference between Estimated Inventory and Required Fields (Cumulative)
	Medium Capacity
2011	0.1
2016	-0.1
2021	-1.1
2026	-1.3
2031	-1.4

Notes: Estimated inventory accounts for the repurposing of the Waterloo Park cricket pitch in 2021. A negative number indicates a deficit in fields required and a positive number indicates a surplus in fields.

An additional cricket pitch will be required to allow for the cricket pitch at Waterloo Park to be decommissioned in 2021. An additional cricket pitch will also be required between 2026-2031, although only part of its' full capacity will be required.

Additional outdoor sports field development will be required in Waterloo in order to meet needs. These projections are based on the assumption that sport organizations will work with the city to increase field utilization to 80% of capacity. This will require flexibility on the part of all participants, but is essential if field needs are to be met in a fiscally sustainable manner. The projections are also based on the assumption that programmed sports will be removed for Waterloo Park, as per the Waterloo Park Master Plan, but that this displacement of programmed sports will not happen until land and financial resources are available to add the needed capacity to the field inventory. It is important to note that with the addition of fields, operational budgets for maintenance will need to increase to allow for appropriate maintenance to preserve the field quality.

Recommendation: *Develop needed fields over the next 20 years based on the field need projections (see tables 24, 25 and 26). Fields developed should include:*

- *a mix of clustered fields and single fields;*
- *be truly multipurpose in size with infrastructure that allows for both minor and adult use;*
- *include repurposing of underutilized fields for new uses. (3.c)*

Table 24: Recommended Rectangular Field Developments to Meet Projected Need

Year	Incremental Field Need Projections				Recommended Response	
	Artificial Turf	High Capacity	Medium Capacity	Low Capacity	Recommended Development	Rationale
2011	0	0.4	1.8	0	Redevelopment of Creekside 3 Field, Waterloo Park East Field, and Old Oak Park Field to improve quality and increase use capacity.	<ul style="list-style-type: none"> There are opportunities within the existing inventory of city-owned fields to upgrade a poor quality, low-use field to a higher capacity field for less funds than building new fields, while adding the needed capacity to the inventory. Unauthorized use of Waterloo Park East Field will need to be addressed.
2016	0.1	2.2	1.5	0	3 Premier Adult Sized Rectangular fields on North Campus Lands <ul style="list-style-type: none"> Could be configured to accommodate 6 atom fields as needed. Upgrade Laurelwood Park, Pinebrook Park fields to increase quality and increase use capacity.	<ul style="list-style-type: none"> This will meet projected high capacity field need for 2016 and 2021 and much of the medium capacity field need for 2016. Provides additional capacity for broader community use. Takes advantage of an existing opportunity for new land. As these fields will not open until 2016, there may be an need to explore innovative options to meet sport group needs for the 2014 and 2015 seasons after closure of Bechtel fields 5 and 6
2021	0.1	0.2	3.2	0	Convert Lexington Park East Diamond into 1 adult sized or 2 atom fields. <ul style="list-style-type: none"> Hardball diamond would need to be relocated to a new site. Upgrade Blue Beech Link and Regency Park Fields to improve quality and increase use capacity.	<ul style="list-style-type: none"> This will meet the projected medium capacity field need for 2021 as the existing field at Lexington Park East would also become bookable with this change. Will provide a clustered field with parking and washrooms on site. Long-term lease of lands required.

Table 24: Recommended Rectangular Field Developments to Meet Projected Need, continued.

Year	Incremental Field Need Projections				Recommended Response	
	Artificial Turf	High Capacity	Medium Capacity	Low Capacity	Recommended Development	Rationale
2026	0.2	0.3	1.8	0	3 Premier Adult Sized Fields <ul style="list-style-type: none"> • Three fields, with lights, on west side of city. 	<ul style="list-style-type: none"> • Would meet the need for high and medium capacity natural turf fields. • Recommended to either occur earlier alongside development of new cluster of 4 diamonds, or as phase 2 of this development. • Based on outcome of evaluation of existing City owned artificial turf fields, explore the option of including artificial turf. This would increase the construction costs.
2031	0.1	0.4	1.8	0.2	2 Adult Sized Fields <ul style="list-style-type: none"> • Potentially located at Bechtel Park in location of existing diamond. 	<ul style="list-style-type: none"> • Build to high capacity standards to meet projected need for both high and medium capacity fields.

Table 25: Recommended Diamond Developments to Meet Projected Need

Year	Additional Incremental Projected Field Needs		Recommended Response	
	High Capacity	Medium Capacity	Recommended Development	Rationale
2011	0	0	No Development Required.	
2016	0.4	0	Delay development to 2021. Identify opportunities to use diamonds not currently in the city's inventory as an interim response.	
2021	2.4	0	4 diamonds <ul style="list-style-type: none"> • Clustered development, with lights, on west side of city. 	<ul style="list-style-type: none"> • Will meet all projected need for high quality diamonds out to 2031, much of this need is as a result of decommissioning of Waterloo Park diamonds. • Clustered diamonds will increase programming potential. • Could be delayed to 2026 if programming continues longer at Waterloo Park.
2026	0.5	0	No additional development required.	
2031	0.6	0	No additional development required.	

Table 26: Recommended Cricket Pitch Development to Meet Projected Need.

Year	Additional Incremental Projected Field Needs	Recommended Response	
		Recommended Development	Rationale
	Medium Capacity		
2011	0	No Development Required.	
2016	0.1	No Development Required.	
2021	1	1 New Cricket Pitch.	<ul style="list-style-type: none"> Stand alone pitch to meet need when cricket pitch at Waterloo Park is repurposed as currently recommended in the Waterloo Park Master Plan. Could be constructed alongside the 4 diamonds need, or delayed to 2026 if cricket pitch at Waterloo Park continues to be programmed.
2026	0.2	1 New Cricket Pitch.	<ul style="list-style-type: none"> As projections suggest that only part of the time on an additional pitch is required to meet 2026 and 2031 needs, it may be possible to construct a cricket pitch across the 2 premier adult rectangular fields. If growth in demand for cricket is greater than population growth, an additional stand alone pitch may be required.
2031	0.1	No additional development required.	

Note: There may be other groups that wish to access cricket pitches but do not have access presently. As population grows and continues to become more diverse interest in cricket may grow at a faster rate than overall population growth. This assumes Laurel Creek cricket pitch remains available for use

4.6 Locations for New Fields

Location of new fields is important to residents. In the survey, respondents said that they did not mind driving a bit farther to use fields for adult and competitive leagues, but preferred to have access to fields closer to home for use by their children.

While public consultation has indicated that the west side of the city is the preferred location for new sports fields, this strategy does not identify a specific location on the west side where these fields could be located.

Finding sufficient land anywhere in the city will be a challenge. While there is undeveloped land on the west side of the city, the Provincial Planning Policies, the Regional Official Policies Plan, and the new Official Plan Provincial Planning have set policy for the remaining land on the west side of the city. For example the Region Official Policies Plan does not allow for lighting in the northwest corner which impacts the ability to have a high quality sports field in this area. The southwest corner of the city is designated for employment lands. While there may be some future opportunity to work with the Region of Waterloo to develop landfill lands, at present it appears that the landfill will continue to be operational beyond the life of this strategy.

The proposed west side development with 4 diamonds, 3 multipurpose rectangular fields and 1 to 2 cricket pitches would require 30 acres of land to position all these fields in a single, clustered site. Such a site could also include trails, a playground, washrooms and other amenities. However, given existing land constraints, it may not be necessary to identify opportunities to redevelop pieces of land in multiple areas, rather than a single site.

Recommendation: *Initiate a process to work with Development Services and Economic Development to identify land that could be used use for development of new sports fields needed over the next 20 years. (3.a)*

It is recommended that the field need projections identified in this strategy be revisited at regular intervals as the strategy is implemented. With access to information about annual sport participation numbers for sports groups in Waterloo, improvements to data collection, as well as up to date population projections, priorities and needs may change.

Recommendation: Revisit and refine the field need projections at regular intervals, using the best available data, to identify changes in sports field needs. (3.b)

5.0 Proposed Implementation Plan

The implementation plan for the recommendations contained in this strategy has been divided into two parts. The first part of the implementation plan outlines a timeline over the next twenty years for implementation of all of the recommendations in the strategy, categorized by goal. There are seven tables, one for each goal. Each recommendation is listed under the primary goal it will help achieve, though many of the recommendations will contribute to achieving multiple goals. The recommendations do not appear in order of priority.

The budget impact of each recommendation has been identified in one of three ways:

- **No Anticipated Budget Impact** – this means that it is anticipated that the recommendation can be implemented within existing capital or operational budgets or future projected budget.
- **Potential Budget Impact** – this means that additional research and planning is required as part of the implementation of the strategy to determine if there will be a capital or operational budget impact and/or the scope of the financial impact.
- **Budget Impact** – this means that staff have been able to estimate the additional cost of implementing the recommendation. This is primarily the case for recommendations related to capital budget costs for field upgrades or renovation and development of new fields that cannot be met within current budgets.

The second part of the implementation plan outlines the sequencing of field upgrades and construction of new fields. This appears in the final chart. Capital cost estimates have been included, and have been identified as either funded within existing budget projections, or unfunded.

Goal 1: To improve the safety and long-term quality of outdoor sports fields.									
	Recommendations	Year 1	Year 2	Year 3	Year 4	Years 5-11	Years 12-20	Lead Department	Budget Impact
1.a	Identify fields and passive green spaces for informal play and pick up games. Promote to the public with the aim of reducing unauthorized use of outdoor sports fields that require a permit.	●	●					CCRS	No anticipated budget impact
1.b	Use the field use capacities developed for planning purposes as guidelines for programming, including rest days as recommended by the Ontario Sports Turf Association. Monitor fields for turf quality, evaluate the accuracy and appropriateness of the field use capacities, and alter as needed to maintain turf quality.		●	●				CCRS & PWS	Potential budget impact
1.c	Continue improving the existing field inventory through investment in a long-term plan of field upgrades (outlined in Tables 11,12, and 13). Recommended field upgrades should focus on increasing field capacity, turf quality, and/or safety, and the process should include consultation with neighbourhood residents.	●	●	●	●	●	●	PWS	Budget impact. See pages 90-93 for capital cost estimates.
1.d	Develop a long term capital maintenance plan that considers the life cycle and replacement cost of all components of the infrastructure of each field, to support ongoing planning for field upgrades and renovations, and to help ensure all fields in city's inventory meet quality standards.	●	●	●	●	●	●	PWS	Potential budget impact
1.e	When repurposing or redesigning existing fields, or developing new fields, the safety of players, users of adjacent fields, and the surrounding environment, should be of paramount concern.	●	●	●	●	●	●	PWS	Potential budget impact
1.f	Explore options for a field resting approach for Waterloo, taking into consideration the capacity of the existing inventory, and additional maintenance costs, as a way to improve turf quality while maximizing field use capacity.	●	●					PWS	Potential budget impact

Continued from previous page....

Goal 1: To improve the safety and long-term quality of outdoor sports fields.									
	Recommendations	Year 1	Year 2	Year 3	Year 4	Years 5-11	Years 12-20	Lead Department	Budget Impact
1.g	Identify further opportunities in the existing inventory for shifting fields to reduce turf wear, and increase overall turf quality. Implement field footprint shifting as part of annual set up where it can be accommodated and design new fields to allow for footprint shifting.	●	●					PWS	No anticipated budget impact
1.h	Regularly invest in smaller field upgrades, such as player benches, backstop improvements and nets, on an ongoing basis to incrementally improve the field inventory.	●	●	●	●	●	●	PWS	Potential budget impact
1.i	Improve the field conditions and field cancellations webpage and identify corporate resources to enable timely updating of the webpage, particularly during the evenings and on weekends.	●	●					PWS	Potential budget impact

Goal 2: To maximize use and expand the amount of programmable time at existing fields prior to new development.									
	Recommendations	Year 1	Year 2	Year 3	Year 4	Years 5-11	Years 12-20	Lead Department	Budget Impact
2.a	Work with sport organizations to encourage scheduling of game times that allow maximum use of fields, such as starting earlier in the evening (4 to 6 pm), playing under the lights, or using more weekend time. Regularly monitor field use to determine when maximum use capacity has been achieved.	●	●	●	●			CCRS	No anticipated budget impact
2.b	Develop space allocation procedures for rectangular multipurpose, diamond, and cricket pitches to facilitate improved use and access to the existing inventory.	●	●	●				CCRS	No anticipated budget impact
2.c	Focus outdoor sports field investments on city-owned fields to ensure long-term benefit, while recognizing that not all demand for sports fields can be accommodated on city owned land.	●	●	●	●	●	●	PWS	Budget impact. See pages 90-93.
2.d	Where investments are made on non-city owned fields, longer term usage agreements should be in place to protect city investment.	●	●	●	●	●	●	PWS	Potential budget impact
2.e	Identify opportunities within the existing diamond inventory to resize diamonds to better meet sport group need.				●	●		PWS	Potential budget impact
2.f	Identify opportunities within the existing field inventory to enlarge smaller adult sized multipurpose rectangular field to the city's adult size standards or larger.				●	●		PWS	Potential budget impact
2.g	With the school boards, explore opportunities for converting a high school field to artificial turf with lights.					●		PWS & CCRS	Potential budget impact
2.h	Explore options for extending leases/shared-use agreements to reduce investment risk in field maintenance and upgrades.	●	●	●	●			PWS	Potential budget impact

Goal 3: To develop new outdoor sports fields, within available resources, based on population growth and field need projections.									
	Recommendations	Year 1	Year 2	Year 3	Year 4	Years 5-11	Years 12-20	Lead Department	Budget Impact
3.a	Initiate a process to work with Development Services and Economic Development to identify land that could be used use for development of new sports fields needed over the next 20 years.	●	●	●	●	●	●	CCRS	No anticipated budget impact
3.b	Revisit and refine the field need projections at regular intervals, using the best available data, to identify changes in sports field needs.					●	●	CCRS	No anticipated budget impact
3.c	Develop needed fields over the next 20 years based on the field need projections (see tables 24, 25 and 26). Fields developed should include: <ul style="list-style-type: none"> • a mix of clustered fields and single fields • be truly multipurpose in size with infrastructure that allows for both minor and adult use. • include repurposing of underutilized fields for new uses 	●	●	●	●	●	●	CCRS	Budget impact. See pages 90-93 for capital cost estimates.
3.d	When developing new fields, design should focus on provision of multi-sport clustered sports fields where land is available.	●	●	●	●	●	●	CCRS	No anticipated budget impact
3.e	Planning for new and upgraded fields should strive to equal the quality and amenities available at Pillers, Bechtel Park and Waterloo Park.	●	●	●	●	●	●	CCRS	Potential budget impact
3.f	Work with Development Services to identify existing and future park land throughout the city that could be developed for use as a sports field, based on future need projections. Development of programmable sports fields must be balanced with neighbourhood needs for open green spaces.	●	●	●	●			CCRS	Potential budget impact

Continued from previous page...

Goal 3: To develop new outdoor sports fields, within available resources, based on population growth and field need projections.									
	Recommendations	Year 1	Year 2	Year 3	Year 4	Years 5-11	Years 12-20	Lead Department	Cost and Budget Allocation
3.g	Consider opportunities for lights to extend playing hours, irrigation and appropriate drainage to improve turf quality, and amenities such as washrooms, parking, shaded areas, and seating, to enhance the user and spectator experience, when designing new fields.	●	●	●	●	●	●	CCRS	Potential budget impact
3.h	Where possible, build future diamonds to current size standards, to allow for regulation play, flexibility and multi-sport use. Provide sufficient space between fields to minimize user conflicts, to allow space for warm up/practice, as well as to accommodate spectators and other amenities.	●	●	●	●	●	●	CCRS	Potential budget impact
3.i	Where possible, build new rectangular multipurpose fields to city adult size standards or larger, to allow reconfiguring to alternate field sizes. Ensure there is sufficient parking and other amenities to accommodate a larger number of users if an adult sized field is reconfigured into multiple smaller fields.	●	●	●	●	●	●	CCRS	Potential budget impact
3.j	Improve geographic distribution of sports fields throughout the city by locating new development in underserved areas where possible, particularly on the west side of the city and in the city core following decommissioning of Waterloo Park programmed sport fields.	●	●	●	●	●	●	CCRS	No anticipated budget impact
3.k	Consider using existing applicable LEED standards as a basis to develop tools for the design, development and renovation of sports fields and surrounding land to reduce environmental impact.				●	●	●	CCRS	Potential budget impact

Goal 4: To enable participation in physical fitness activities in Waterloo through improved outdoor sports field access for neighbourhood, recreation, and competitive use for the full range of outdoor sports of public interest in Waterloo.									
	Recommendations	Year 1	Year 2	Year 3	Year 4	Years 5-11	Years 12-20	Lead Department	Budget Impact
4.a	Use the city's website to provide residents with information on how to get involved in the full range of sport opportunities. Include an interactive map of all sports fields and green spaces available for informal use.			●	●			CCRS	Potential budget impact
4.b	Develop a strategy, based on need and equitable access, to set up fields and allocate field time to sports that require a different field set up than soccer, such as football, field lacrosse and ultimate frisbee, while considering long-term turf quality and maintenance needs.		●	●	●			CCRS & PWS	Potential budget impact
4.c	Explore options for meeting the growing interest in cricket in Waterloo. Consider developing a field that can accommodate cricket across two multi-purpose rectangular fields with the cricket pitch between the fields.			●	●	●	●	CCRS	Potential budget impact
4.d	Promote the ability to book select passive green spaces and select sports fields to community and non-traditional sports groups.	●	●					CCRS & PWS	No anticipated budget impact
4.e	Increase consultation with new immigrant and visible minority communities to better understand their recreation needs.		●	●				CCRS	No anticipated budget impact
4.f	Identify sport and recreation interests and needs of the 55+ population, and other lower use groups, to identify ways these groups could use non-prime field time.		●	●				CCRS	No anticipated budget impact.
4.g	Explore opportunities to make outdoor sports fields more accessible to residents with disabilities.	●	●					CCRS	Potential budget impact
4.h	Develop policy to articulate the role of the city in facilitating and/or supporting tournaments and other larger scale sporting events.			●	●			CCRS	Potential budget impact
4.i	Develop an action plan to either relocate fields on employment lands, or reconcile the employment lands inventory to reflect the current use.					●		CCRS/PWS	Potential budget impact

Goal 5: To increase capacity throughout the sport and recreation services system in Waterloo to allow for continuous improvements in field maintenance, allocation and management.									
	Recommendations	Year 1	Year 2	Year 3	Year 4	Years 5-11	Years 12-20	Lead Department	Budget Impact
5.a	Develop a system to track field requests that cannot be fulfilled, bookings that are cancelled, and bookings that go unused.		●	●				CCRS	No anticipated budget impact
5.b	Review the cancellation policy with the goal of reducing the amount of booked time cancelled 30 days or more in advance, and the amount of time that is not cancelled but goes unused.		●	●				CCRS	No anticipated budget impact
5.c	Remove low use fields from the bookable inventory list provided to the public, until conditions change to enable more use.	●	●					CCRS	No anticipated budget impact
5.d	Evaluate and revise existing field maintenance standards to align with Ontario Sports Turf Association guidelines, to identify areas for improvement, and to better align with user expectations where budgets allow			●	●			PWS	Potential budget impact
5.e	Educate users of new maintenance standards and of the process to report field quality or safety concerns.			●	●			PWS	No anticipate budget impact
5.f	Adjust maintenance budgets and revenues to align with new field maintenance standards.			●	●			PWS	Potential budget impact
5.g	Develop policy and procedures for use of the new artificial turf fields at RIM Park. The focus should be maximizing use, and enabling equitable access to field time by sport organizations outside of time reserved for Waterloo Minor Soccer.	●	●	●				CCRS & PWS	No anticipated budget impact

Goal 5: To increase capacity throughout the sport and recreation services system in Waterloo to allow for continuous improvements in field maintenance, allocation and management.

	Recommendations	Year 1	Year 2	Year 3	Year 4	Years 5-11	Years 12-20	Lead Department	Budget Impact
5.h	Conduct a formal evaluation of the use of the new artificial turf fields after two years to gain an understanding of usage, costs versus revenue, and sport organization satisfaction. Include comparison with other cities and explore the impact of the partnership agreement with Waterloo Minor Soccer.			●	●			CCRS	No anticipated budget impact
5.i	Update the city's field classification system to better reflect the Ontario Sports Turf Association's system								No anticipated budget impact
5.j	Conduct soil testing to determine the classification of each existing field according to the Ontario Sports Turf Association classification system. Use this information to aid in determining maintenance requirements on a field by field basis, to refine field use capacities, and to prioritize fields for renovation on an ongoing basis.				● ●	●		PWS	Budget impact. See page 90 for cost estimate.
5.k	Consider the Ontario Sports Turf Association Athletic Field Construction Manual Specifications and Guidelines when designing new fields and when projecting field maintenance costs to ensure financial sustainability.	●	●	●	●	●		PWS & CCRS	Potential budget impact
5.l	Adjust the operating budget to enable maintenance that is aligned with best practice standards, and identify ongoing maintenance needs based on soil testing to improve turf and field capacity/playability.	●	●	●	●	●		PWS	Potential budget impact
5.m	Explore options for directing user fee increases to enable turf quality and maintenance improvements, and infrastructure replacement or enhancement.	●	●	●	●	●		PWS	Potential budget impact
5.n	Identify options for improving collection and use of data, including information from CLASS and GIS, for planning purposes.				●	●		CCRS	Potential budget impact

Goal 6: To pursue, facilitate and encourage innovative partnerships for the provision of access to outdoor sports fields.									
	Recommendations	Year 1	Year 2	Year 3	Year 4	Years 5-11	Years 12-20	Lead Department	Budget Impact
6.a	City of Waterloo staff should explore opportunities to access existing fields in neighbouring communities and to access land near to City of Waterloo boundaries for future field development.			●	●	●		CCRS	Potential budget impact
6.b	City of Waterloo staff should continue to initiate and participate in joint policy and planning initiatives with staff of neighbouring municipalities to support strategic alignment, information sharing, and field access.	●	●	●	●	●	●	CCRS	No anticipated budget impact
6.c	Enhance collaboration with the school boards and explore strategic opportunities for long-term use agreements providing access to fields that are higher quality or that could be upgraded. Agreements must identify quality standards for fields and amenities as well as responsibilities of both the city and the school board for maintenance and use of the fields. Usage agreements must be for a length of time that warrants the city's investment.	●	●	●	●	●	●	PWS & CCRS	Potential budget impact
6.d	Explore development of agreements to use key fields in the city, such as those at the University of Waterloo, Wilfrid Laurier University, and St. David's High School. Agreements for use of fields owned by third parties should be long-term and should ensure user costs are reasonable.	●	●	●				CCRS	Potential budget impact

Goal 6: To pursue, facilitate and encourage innovative partnerships for the provision of access to outdoor sports fields.									
	Recommendations	Year 1	Year 2	Year 3	Year 4	Years 5-11	Years 12-20	Lead Department	Budget Impact
6.f	Negotiations for lease renewals or extensions should begin a minimum of one year in advance to improve planning capabilities	●	●	●	●	●	●	PWS	No anticipated impact
6.g	Explore options for corporate and community sponsorship and partnerships, as well as grant opportunities, for outdoor sports fields to support fiscal sustainability.	●	●	●	●	●	●	CCRS	No anticipated budget impact

Goal 7: To invest in enhanced communication, relationship building and collaboration between city staff and outdoor sport organizations.									
	Recommendations	Year 1	Year 2	Year 3	Year 4	Years 5-11	Years 12-20	Lead Department	Budget Impact
7.a	Hold seasonal forums with sport organization representatives to meet, share, and learn. Forums should involve presentations from city staff on new and ongoing projects and initiatives as well as opportunities for sports groups to share information with each other.	●	●					CCRS	No anticipated budget impact.
7.b	In collaboration with sport organizations, implement a data collection strategy to enable reporting on performance, field quality and use, and sport participation trends.			●	●			CCRS	No anticipated budget impact.
7.c	Formally evaluate new initiatives and policies to determine if desired outcomes are being achieved and report on findings to sport organizations.	●	●	●	●	●	●	CCRS	No anticipated budget impact.
7.d	Develop an evaluation and/or monitoring plan for the Outdoor Sports Field Strategy and report to sports groups, Council and the community annually on progress and achievements.	●	●	●	●	●	●	CCRS & PWS	No anticipated budget impact.
7.e	Establish a cross-departmental implementation team to support the implementation of the Outdoor Sports Field Strategy	●	●	●	●	●	●	CCRS & PWS	No anticipated budget impact.

Field Upgrades and New Field Developments Planned from 2012 to 2031 (page 1 of 3)*							
Recommendations	2012-2013	2014-2015	2016-2017	2018-2019	2020-2021	2022 to 2031	Estimated Capital Cost
Creekside Church, Field 3 <ul style="list-style-type: none"> Field 3 improvement 	●						\$15,000
Field Improvement Study <ul style="list-style-type: none"> Develop an RFP to gain information regarding soil testing, specific facility improvements, drainage approaches, turf specifications, and on-going maintenance impacts. 	●						\$0,000
Old Oak Park <ul style="list-style-type: none"> Strip drainage/full renovation. 	●						\$25,000
RIM Park, Diamonds 1-6, <ul style="list-style-type: none"> Fix the transitions between infield and outfield and remove stones from infields. Add Washroom Facility 		●					\$7,000 for field upgrades \$150,000 for washrooms (currently unfunded)
Westwind Park <ul style="list-style-type: none"> Diamond improvement as part of general park improvement plan. 		●					\$10,000
Waterloo Park, Diamonds 1 & 2 <ul style="list-style-type: none"> Remove exterior fencing and nets. Relocate batting cages from hillside or build new batting cages at Waterloo Park. 			●				\$14,000

Field Upgrades and New Field Developments Planned from 2012 to 2031 (page 2 of 3)*

Recommendations	2012-2013	2014-2015	2016-2017	2018-2019	2020-2021	2022 to 2031	Estimated Capital Cost
University Downs, Diamond 1 <ul style="list-style-type: none"> Update benches and fencing, including the backstop. 		●					\$15,000
RIM Park, Diamond 3 <ul style="list-style-type: none"> Re-purpose existing slo-pitch diamond to become a hardball diamond. 		●					\$60,000 <i>(currently unfunded)</i>
Waterloo Park East Field <ul style="list-style-type: none"> Rectangular field upgrade 		●					\$14,000
Laurel Creek Conservation Area, Cricket pitch 1 <ul style="list-style-type: none"> Install netting on either end of the field. 			●				\$15,000
UW North Campus Fields <ul style="list-style-type: none"> New development, 3 Rectangular Fields. 			●				\$2,000,000 <i>(plus \$24,000 increase in operation budget annually for maintenance costs)</i>
Lexington Park East <ul style="list-style-type: none"> Repurpose existing diamond and create (3) atom fields 			●				\$20,000
Laurelwood Park <ul style="list-style-type: none"> Drainage improvements. 				●			\$15,000
Pinebrook Park <ul style="list-style-type: none"> Drainage improvement and transplanting trees to standardize field size. 				●			\$10,000

Field Upgrades and New Field Developments Planned from 2012 to 2031 (page 3 of 3)*

Recommendations	2012-2013	2014-2015	2016-2017	2018-2019	2020-2021	2022 to 2031	Estimated Capital Cost
Regency Park <ul style="list-style-type: none"> Standardize field size without impacting diamond. 					●		\$15,000
Blue Beech Link <ul style="list-style-type: none"> Turf replacement. 					●		\$11,000
RIM Park <ul style="list-style-type: none"> Artificial Turf Replacement 					●		\$1,000,000 <i>(currently unfunded)</i>
Future West Side Multiplex <ul style="list-style-type: none"> 4 diamonds, 2 rectangular fields, 1 cricket pitch, and 1 cricket pitch overlapping rectangular fields 						●	\$18 million <i>(currently unfunded), (plus \$75,000 increase in operational budget annually for maintenance costs)</i>
Waterloo Park Diamonds <ul style="list-style-type: none"> Repurposed as per Waterloo Park Master Plan Remove remaining infrastructure 						●	\$60,000
Bechtel Park <ul style="list-style-type: none"> Repurpose existing diamond to create (2) rectangular fields 						●	\$54,000 (does not include cost of stadium removal)
Total Est. Capital Costs	\$50,000	\$270,000	\$2.035M	\$25,000	\$26,000	\$18.114 M	\$21,520,000
<i>Total un-funded</i>	<i>\$0</i>	<i>\$210,000</i>	<i>\$0</i>	<i>\$0</i>	<i>\$1M</i>	<i>\$18M</i>	<i>\$19,210,000</i>

*Note: All estimated costs are in 2012 dollars. They have not been adjusted for anticipated future inflation. Estimated costs that are not funded in existing long-term budgets are shown in italics. Anticipated additional operating cost increases have been identified when fields are added to the inventory. These estimates are based on minimum field maintenance requirements, and do not reflect the desire to increase field maintenance to improve field quality. Operational cost increases have not been included in the totals at the bottom of the table. However, these operational cost increases are currently unfunded.

6.0 Envisioning Our Future

Consider this future for our community....

In 2031, the City of Waterloo is a place where everyone who wants to play field sports can play sports, regardless of their sport of choice, their age, their ability, or their gender.

By following the Outdoor Sports Field Strategy, the City of Waterloo has become a recognized leader in outdoor sports field development, management, maintenance and programming. Waterloo is seen as one of the best communities in which to play, compete, coach, officiate or be a spectator of outdoor field sports. The strategy has helped the Corporation of the City of Waterloo achieve its vision of delivering stable, open and responsible government that makes Waterloo an even greater community.

The City of Waterloo has carried out a series of field upgrades to improve turf quality and safety of city fields. The city has also entered into agreements for continued leasing of field lands. Shared-use agreements with schools, including both universities, have improved access to fields.

New development of a clustered, multi-purpose outdoor field complex has occurred on the west side of the city. This has brought new sport opportunities to residents on the west side, while also reducing travel requirements.

The new fields are the envy of other municipalities, and have allowed the city to proceed with repurposing fields in Waterloo Park, while still meeting the needs of the city's growing population.

The high quality outdoor sports fields in Waterloo attract employers to the area, and in turn help employers attract and retain employees because access to recreation infrastructure contributes makes Waterloo a great place to raise a family.

While expansion and new development has been limited, the city has been able to maintain a strong inventory of outdoor sports fields as a result of collaborative relationships with sport organizations. These organizations support the city in

planning and development through consultation and sharing of information. Corporate and community sponsors have also joined the city as partners in improving the quality of sports fields.

Sport field allocation policies and procedures have been developed and embraced by all. This has enabled all City of Waterloo sport groups to access practice and game time needed to grow their sports. Sport groups have supported the implementation of long-term plans to maintain field quality through field resting and flexibility in allocation.

Sport organizations feel they are active partners in planning and development of fields and policies, regardless of the size of the organization. Partnerships between sport organizations and city staff have continued to grow. Each offers the other support, leadership and information when needed. There is a shared sense of pride in the success of the city's outdoor sports field fields, programs and sport organizations.

7.0 Appendices

Appendix A:

Outdoor Sports Field Strategy Online Survey Results

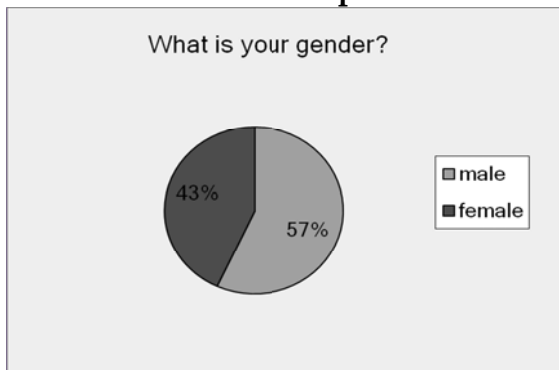
As part of the public consultation process on the draft Outdoor Sports Field Strategy report, a survey was developed to gather input on a number of key issues such as field quality, amenities, preferred location for new developments, and field access, among others. The survey was advertised on the project website (www.waterloo.ca/outdoorsport), through social media, through emails to all sport organizations booking City of Waterloo fields, at the public open houses, as well as by handing out cards promoting the project and survey to spectators at fields in the city. A total of 146 citizens completed the survey.

The results of the survey are summarized below.

Demographic Information

Respondents were asked to provide some basic demographic information including gender, age, and how they are involved in sport in Waterloo.

Chart 1: Gender of Respondents



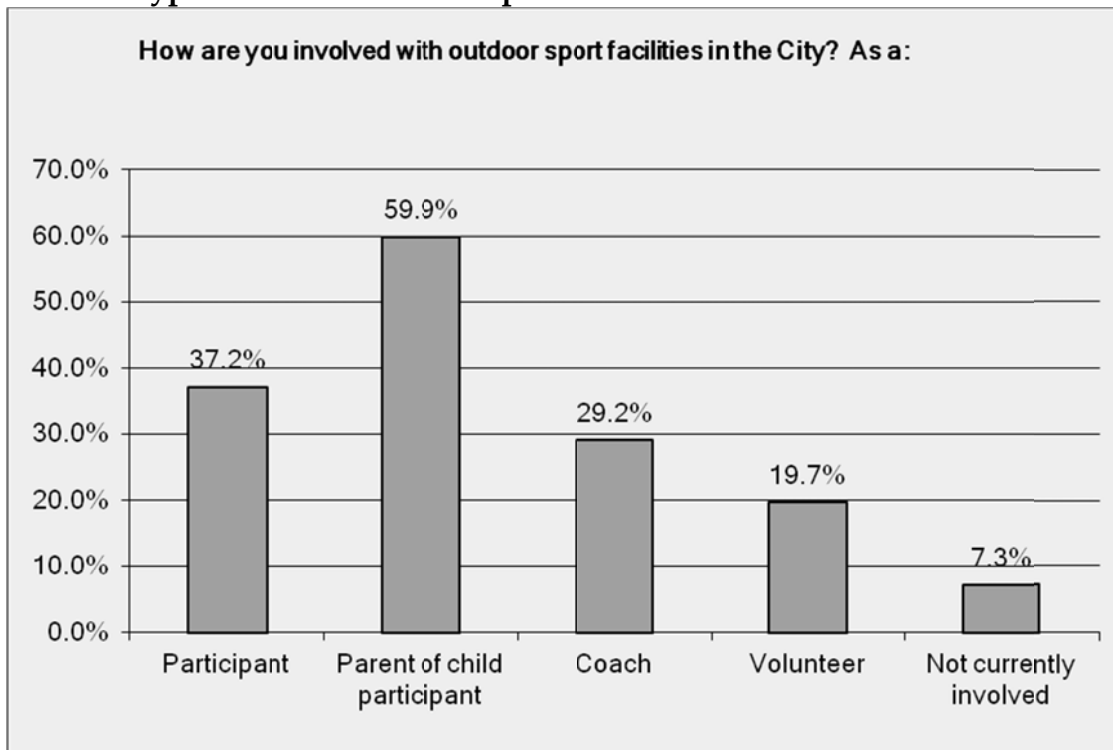
Survey respondents were 57% male and 43% female.

Chart 2: Age of Respondents

Age	Percentage of Respondents
Under 13	0%
13-18	1%
19-24	1%
25-34	17%
35-44	39%
45-54	28%
55-64	11%
65 and over	3%

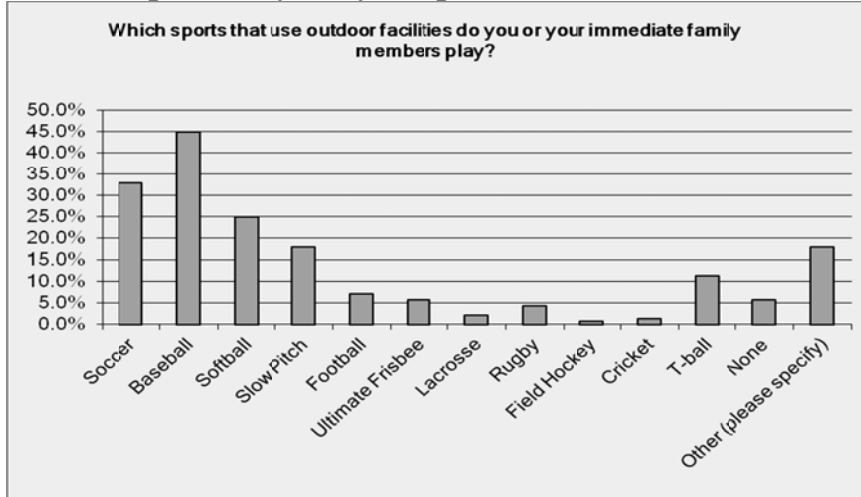
95% of respondents were between the age of 25 and 64, and 2% were between the ages of 13 and 24, and 3% were 65 or older.

Chart 3: Type of Involvement in Sports



For this question, respondents could indicate all categories that applied. The majority of respondents identified themselves as parents of child sport participants, while 37.2% indicated they participate in sports themselves, 29.2% were coaches, 19.7% were volunteers, and 7.3% did not currently have direct involvement with outdoor sports in Waterloo.

Chart 4: Sports Played by Respondents and Their Immediate Family Members

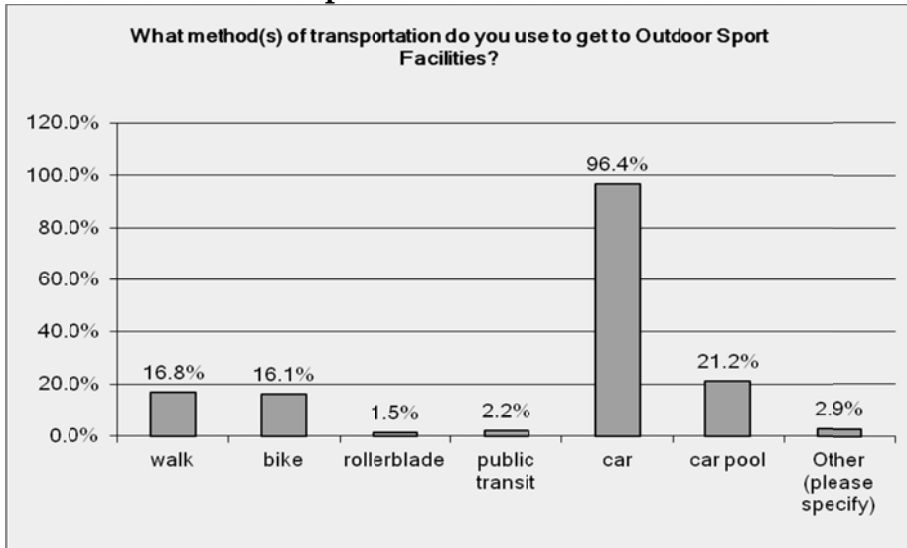


Among respondents and their immediate family, baseball, soccer and softball were the most commonly played sports. However, all major sports played at the City of Waterloo’s outdoor sports fields had survey respondents. Additionally, a number of individuals involved in tennis, cross country skiing, and other sports answered the survey.

Transportation to Facilities

Part of planning for sports fields involves understanding how people get to the fields and how far they are willing to travel to fields to help ensure new facilities are in preferred locations to provide good access.

Chart 5: Method of Transportation



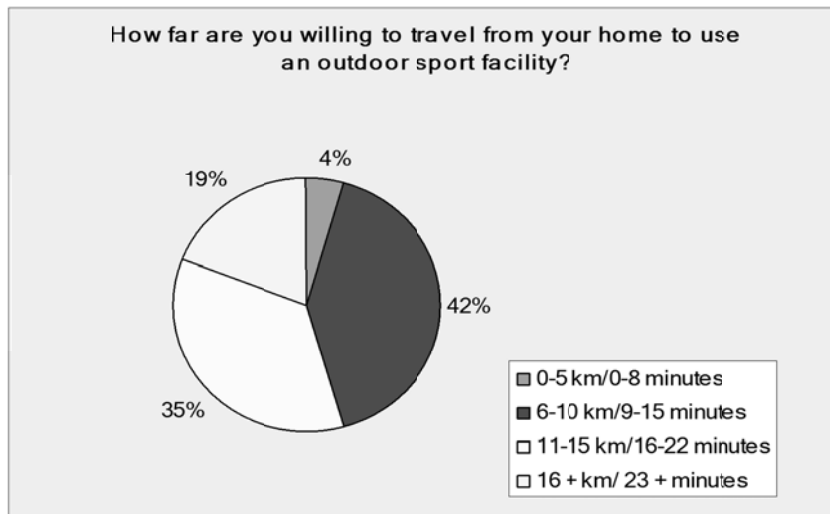
The vast majority of respondents indicated that they travel to outdoor sports field by car (96.4%), with only 21.2% indicating that they carpool. Comments left by respondents suggest that walking and biking are only used when the field is within the respondent’s immediate neighbourhood.

Chart 6: Distance/Time Travelled to Facilities

Distance/Time	Percentage of
0.5 km/0-8 minutes	17%
6-10 km/9-15 minutes	61%
11-15 km/16-22	15%
16+ km/ 23+ minutes	7%

The majority of respondents indicate they currently travel about 6-10 km/9-15 minutes travel time.

Chart 7: Distance/Time willing to Travel to Outdoor Sport Facilities

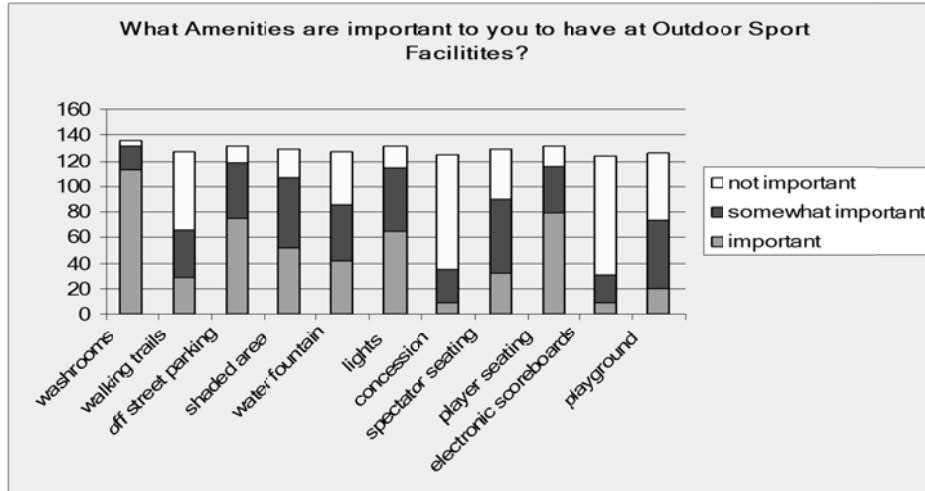


42% of respondents indicated that they were willing to travel 6-10 km or 9-15 minutes travel time, and 35% indicated they were willing to travel 11-15 km or 16-22 minutes. Only 19% were willing to travel more than 16 or more kilometres or 23 or more minutes. Respondents commented that for their children’s sports they preferred to use facilities closer to home, while for they would be willing to travel farther to use high quality fields for adult and competitive league play.

Amenities

In addition to access to fields, residents are looking for sport fields to have a variety of amenities. Washrooms, player seating, off street parking and lights were identified as the most important amenities respondents like to see at sport fields.

Chart 8: Amenities

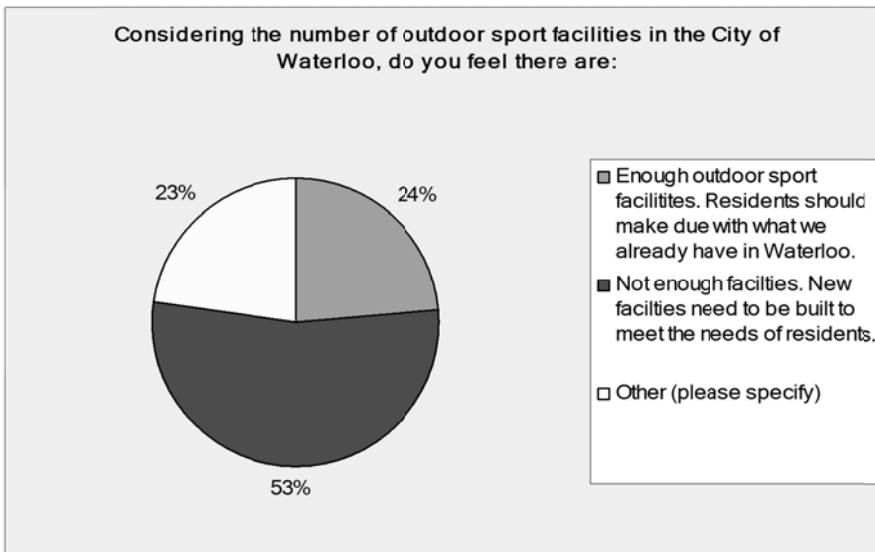


Respondents also suggested that other kinds of amenities should be considered such as covered player area, electrical outlets, geese deterrent, wheelchair accessibility, outdoor track, outdoor exercise equipment, and protection from ponds.

Number of Fields

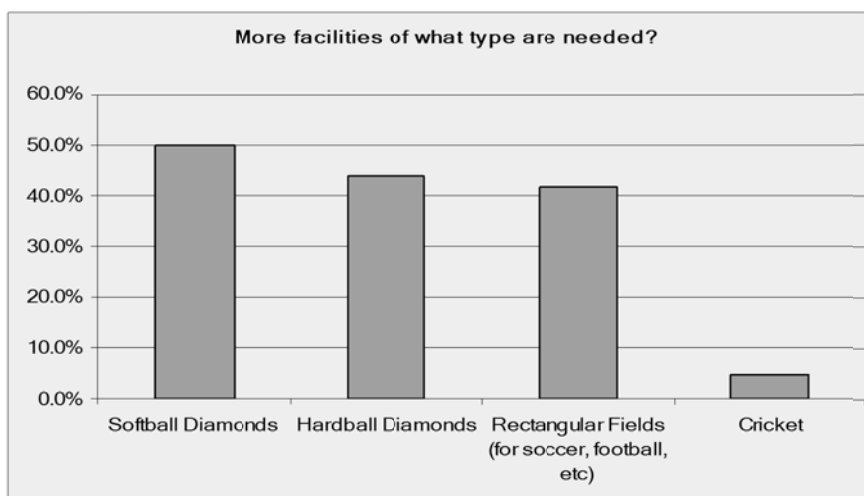
The strategy calls for maximizing use of existing fields before building more, so it was important to find out if citizens thought the city has enough fields, if more are needed, or if there are other options.

Chart 9: Number of existing facilities



53% of respondents indicated there were not enough fields and that more were need. 24% thought there were enough fields and that we should use what we have to meet needs. The remaining 23% responded with “other”, and indicated that existing facilities could be upgraded to better meet needs, that it depended on the type of field as to whether there was enough or not, or that certain areas of the city (particularly the westside) did not have enough facilities.

Chart 10: Type of Sports Fields Needed



Among those that responded to the survey, 50% felt that more softball diamonds were needed, 44% felt more hardball diamonds were needed, and 41% felt more multipurpose rectangular fields were needed. Only 5% felt more cricket pitches were needed, however this is likely due to the low number of respondents that played cricket.

Table 1: Preferred Locations for New Sport Fields

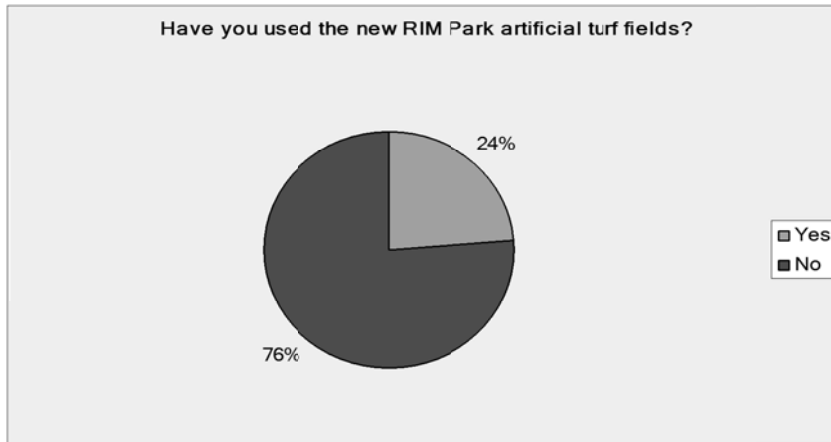
Suggested Locations	Number of Respondents
West side of City/Near new	26
Subdivisions/Close to home	11
Central/Core	6
RIM Park	5
UW North Lands	4
Northfield near Expressway	3
Expressway Access	2
Public Parks	2

The most common response was that new facilities should be located on the westside of the city. Near the new library/YMCA was suggested as a location. Other responses include within subdivisions or close to home, as well as in the core of the city, among others. It should be noted that those answering this question may not have known of the plan to move programmed sports out of Waterloo Park. Given the number of responses to add facilities to the core, this area of Waterloo appears to be a popular choice for sports fields.

Artificial Turf

Two new artificial turf fields were available for use at RIM Park for 2011. These fields were developed through a partnership with Waterloo Minor Soccer. Respondents were asked to indicate if they had used the fields or not. The fields had been used by 28 respondents. Of these, 22 were positive about their experience, and 6 gave negative comments, focusing on the cost to use the artificial turf fields.

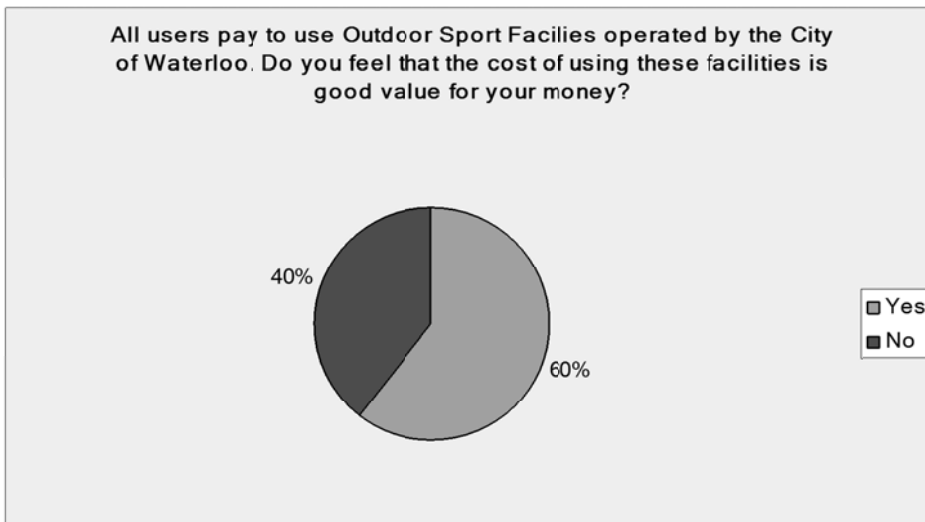
Chart 11: Use of Artificial Turf



User Fees

All users pay fees to use outdoor sports fields operated by the City of Waterloo. Fees are based on the type of field. Fees for affiliated sports groups, which serve youth in our community, receive a facility rental discount of 50% of the normal user fee.

Chart 12: User Fees

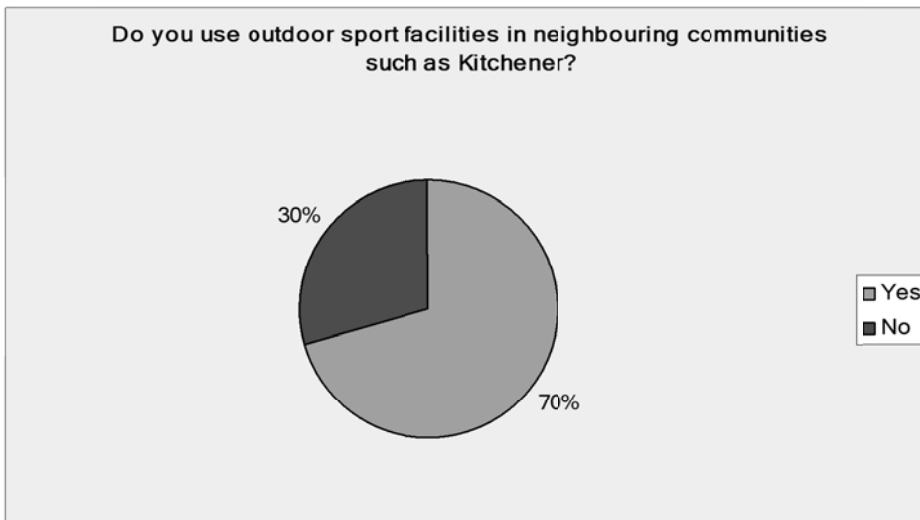


Among respondents, 60% indicated that the cost to use city field was good value, while 40% did not think they were a good value. These respondents indicated that the cost was too high compared to other cities, that the fields need more maintenance and upkeep.

Use of Outdoor Sports Fields in Kitchener

Given the proximity of Waterloo to Kitchener, many residents in Waterloo use Kitchener fields.

Chart 13: Use of Kitchener Fields



70% of respondents indicated that they had used facilities in Kitchener. Reasons given for using Kitchener facilities included league scheduling, playing on a travelling team, cost, availability, and access to washrooms.

Strengths and Areas for Improvement for Outdoor Sport Facilities in Waterloo

The City of Waterloo is dedicated to continuous improvement. Staff are focused on making improvements where they are needed and working to do even better at the things already done well. Respondents were asked what they thought were the strengths and areas needing improvement. This was an open ended question – respondents could list anything they considered relevant.

Table 2: Strengths of City Facilities

Area of Strengths	Number of
Maintenance	29
Locations	25
Quality of Facilities	8
Parking	7
City Staff	6
Number of Facilities	4
Shade at Facilities	3
Availability	3
Washrooms	3

Maintenance was the most commonly noted strength, followed closely by the location of facilities.

Chart 3: Areas for Improvement

Areas for Improvement	Number of Respondents
More Washrooms	28
Facility Upgrades	26
Maintenance	24
Parking	9
Accommodate Other Sports	7
User Fees	6
Spectator Seating	6
Safety	5
More Shade	5
Access to Water	5
More Facilities	4
Artificial Turf	1
Relationship with Sports	1

A need for more washrooms was the most common area for improvement listed, followed by a need for upgrades to facilities and improved maintenance.

Other Comments

Respondents were given an opportunity to provide some final thoughts when answering the survey.

Emerging themes in these comments included:

- Don't close the Bechtel Park diamond
- Don't take sports fields out of Waterloo Park
- The city is moving in the right direction by developing this strategy
- Poor fields contribute to fewer people participating in sports. This is happening with diamond sports in Waterloo
- Don't get rid of any diamonds in the city.

Appendix B:

Input From Meetings with Affiliated Sport Groups, Meeting with Cricket Groups, and Public Open Houses

A) Meeting with Affiliated Diamond Groups

All Waterloo-affiliated diamond sport groups were invited to a meeting to provide feedback on the draft Outdoor Sports Field Strategy. Representatives from Waterloo Minor Baseball, as well as Girls and Boys Softball groups participated. Groups were provided the draft strategy and executive summary in advance. At the meeting, staff provided an overview of the draft strategy and facilitated an open discussion. The issues raised by the attendees are summarized below:

Concerns with Future Field Need Projections:

- Did not agree that the projected number of new diamonds needed by 2031 would meet the needs of a growing population or account for the anticipated loss of Waterloo Park diamonds recommended in the Waterloo Park Master Plan.
- projection methodology does not accurately reflect demand for diamonds since it does not track requested time that is not accommodated.
- Participants would pay more to play on better facilities; methodology assumes lesser quality fields are booked due to cost rather than lack of access to higher quality fields; prefer higher quality over cost.

Quality of Diamonds Needed:

- Medium capacity diamonds not appropriate for use. More high capacity diamonds are needed.
- There is nowhere to host a tournament with enough diamonds and the appropriate amenities such as parking, washrooms and concessions.

School Diamonds

- Although school diamonds have a lot of capacity, the quality and safety of school diamonds are continually deteriorating, particularly this past year.
- Participants pay school taxes and property taxes. They expect better, safe facilities at schools.

User Fees

- Waterloo user fees are too expensive; too high to host tournaments as tournament fees established by provincial body.
- Stratford does not charge to use fields or lights; Waterloo teams go there when they cannot book diamonds in Waterloo.

Booking

- Booking practices present challenges. Multiple, concurrent events at Waterloo Park cause parking issues.
- Current cancellation policy requires 30 days notice otherwise groups are charged for the field whether it is used or not
- City should relax the cancellation restrictions or allow groups to sublet to other groups.
- No point cancelling if they have to pay for the field
- Groups are reluctant to “give back” booked time for fear that they will be allocated less time the following year

Weather Related Notices and Cancellations

- Field cancellations due to weather conditions occur too often according to the sports groups; maintenance should get them into a playable condition after rain.
- Should penalize groups that use fields closed due to weather.

Partnership Opportunities

- Groups have expressed desire to contribute to maintenance but are not allowed
- Would the city entertain leasing a facility to a sport group for them to run it?
- Would the city entertain capital enhancements coordinated by volunteer teams? Waterloo Minor Baseball would be interested in upgrading Lexington Park Diamond, provided the field is available to them over the long-term.

Amenities:

- Lights are important to maximize field use with potential of three games nightly.
- Lights are why the high capacity diamonds are so popular for booking.
- A stadium quality diamond is needed for senior baseball teams.

Issues with existing diamonds:

- Hillside should be a dedicated softball facility instead of slow-pitch as it is a better size for softball.
- RIM Park does not provide premium diamonds, backstops are too far away, the outfield is too rocky.
- The diamonds at RIM Park should be finished properly; could be upgraded to stadium style diamond and three multi-sport diamonds. RIM Park diamonds are not a desirable location.

New Diamonds:

- Groups would like to host a tournament in one location. This would require 4-8 diamonds in one area. They should be multiuse diamonds with portable fencing and moveable backstops.
- Larry Pearson facility in Guelph is a good model with 1 baseball and 3 multiuse diamonds. City of Vaughn has a nice facility.
- Need for diamonds on the west side of the city.

B) Meeting with Affiliated Rectangular Field Groups

All Waterloo-affiliated sport groups that use rectangular fields were invited to a meeting to provide feedback on the draft outdoor sports field strategy. Representatives from Waterloo Minor Soccer and Lacrosse participated. Groups were provided the draft strategy and executive summary in advance. At the meeting, staff provided an overview of the draft strategy and facilitated an open discussion. The issues raised by the attendees are summarized below:

Lacrosse Needs

- Lacrosse needs longer fields than soccer.
- Lacrosse runs five week seasons – boys in spring, girls in summer, junior men in fall.
- Spring weather poses problems. It is difficult to get sufficient access to run programs on artificial turf fields.
- Would like to improve access to winter facilities.
- Net storage for indoor lacrosse is an issue.

Field Resting

- Resting the fields would be feasible if field opening/closing dates shifted; not feasible to decommission a field for an entire season.

Access to Fields not currently in Waterloo's bookable inventory.

- WLU allows some community use; UW does not.
- St David's provides some, but difficult to book artificial turf field.
- Sports Groups would like the city to seek a long-term agreement that provides access to university fields and St. David's fields.
- Access to township fields may also help.

Partnerships

- Waterloo Minor Soccer indicated a Memorandum of Understanding template is needed to develop effective partnerships; needs to outline what will be provided by each party in the agreement.
- Lacrosse noted that just because larger groups have the funds to enter into partnership agreements, smaller groups should not be forgotten or excluded.

Artificial Turf at RIM Park

- Waterloo Minor Soccer thinks artificial turf requires better spring maintenance; snow removal and access to bleachers.
- Field house setup/takedown turnovers need to be faster.
- Parking challenge at RIM Park if multiple events; artificial turf fields require parking access.
- Will RIM Park lights be turned off by 10 pm after the housing subdivision is complete? This would further limit the ability to use these fields.

Amenities

- Desirable amenities include access to drinking water, lights, bleachers to attract spectators; machines to take water and snow off the artificial turf.
- Portable creases would be an asset.
- More soccer nets are needed.
- Washrooms important.
- Rain cover is also important particularly for large events.
- Parking is an issue. By law officers should be lenient during big events.

New Fields

- Highway access is as important as geographic location.
- West side does not have enough recreation facilities.
- Clusters of fields are ideal, minimum of 6 but up to 12 fields is ideal.

- Waterloo Minor Soccer thinks a cricket pitch over 2 adult soccer fields (with removable cricket pitch) would not be compatible and result in access challenges.
- If the city is going to develop multipurpose fields, they need the budget to change lines, goal posts, etc.
- Waterloo Minor Soccer is concerned that the fields at Bechtel Park will close before UW North Campus fields open.

Other

- Waterloo Minor Soccer thinks city should consider dedicated sports fields for specific groups and work with groups to make minor improvements; sport group would be the “owner” of a field and therefore more willing to invest in minor field upgrades. Lacrosse did not support this idea; the city needs to accommodate all groups regardless of size of the organization.
- Lacrosse suggested it would be good to understand user group peak times and schedule strategically to accommodate needs; suggested meeting with all groups prior to the season to understand schedules and peak times; this would allow mapping of demand and improve the allocation process; it may also reduce field setup changes.

D) Meeting with Cricket Groups

A meeting was held with the three Waterloo cricket groups that are the primary users of the two cricket facilities: Sunrise, AR and Kaiteur. An overview of the strategy was presented and staff facilitated discussion on five topics with the three groups. The notes below are a summary of the feedback provided by all three groups at this meeting.

Topic 1: Vision for the Strategy:

- Community health is an important part of their clubs.
- Positive for youth to participate in sport in general.
- Cultural aspects of cricket are important.
- Vision statement and collaborating with the cricket groups are a positive step forward.
- Vision statement sounds good in principle but hard to put into practice.
- Other thought the vision statement was unclear and somewhat vague, particularly with regards to what is included as a sports field.

Topic 2: Future of Cricket in Waterloo over the next 20 years:

- Interest is growing particularly among the 14-19 age group. Women's programs are also getting popular. Many people migrating to Waterloo area are interested in cricket.
- Needs of competitive and recreational cricket are very different; competitive groups need the right quality and size of pitch and the right infrastructure; recreational cricket is played in open green spaces rather than at formal cricket facilities.
- Need to increase community knowledge about cricket and get more people involved; facilities should be promoted more and cricket should be included in schools as part of gym class.
- May be interest in the business community to invest in this sport.
- Groups need three fields now (not two); all three would be fully used.
- The seven hour time slot needed for cricket matches makes their needs unique.
- Sunrise Cricket Club noted they are the biggest group in Ontario, and one of the biggest in Canada; currently have 8 teams playing at Waterloo Park; anticipate 12 teams in next 10 years. Sunrise is a member of provincial and national cricket associations. Two Sunrise teams are made up of university students and interest is growing. There are approximately 150 students at UW that play recreational cricket.
- Concerned about the plan to move the cricket facility out of Waterloo Park as per the Waterloo Park Master Plan. Waterloo Park identified is a high quality facility.

Topic 3: Location for a Potential Future Cricket Pitch:

- Sunrise Cricket Club would like to keep the pitch at Waterloo Park; one of the most beautiful places in Canada to play; well maintained and proud to play there. Would also like to see cricket at Bechtel Park; site is large, has lights, and international matches could be played there.
- New field should be close to UW; many players are students and can walk; bus access is limited on the weekends and may be a challenge for early start or late end games.
- Kaitaur Club suggested a new pitch should be near a highway for easier access for out-of-town players; suggested Grey Silo area; downtown should be avoided unless a stadium is built; should be isolated from other sports because of the complexity of the pitch and turf needs.
- AR Club suggested a new field should serve all of Waterloo; noted that Sir John A. MacDonald High School area has lots of growth; also suggested it could be located out past the landfill.

- AR would like improvements to the field at Laurel Creek Conservation Area; needs a fence and drainage.

Topic 4: Important Features and Amenities of a Cricket Facility:

- Maintenance is important; grass must be cut once a week.
- Location important; access by walking, road and transit.
- Need right type, quality and size of pitch; minimum standard size is required, but a larger size would be preferred to invite international teams.
- Clubhouse, change rooms, cooking facility are all important for hosting teams. Being a good host is an important part of the game.
- Spectator seating enables family and friends to cheer on teams; maintains game energy.
- Sunrise Club would like a natural pitch rather than artificial; natural requires a lot of maintenance, but needed for international games.
- Groups would also like washrooms, change rooms with lockers and showers.
- Other desirable features include on-site parking, side screen, side batting cages, winter indoor training space, lights, electronic scoreboards, storage, and a practice pitch.

Topic 5: Use of a Multipurpose Field – Cricket over 2 Rectangular Fields:

- First reaction from all of the groups was it would not work.
- Concerned natural pitch would be destroyed with people running across it, especially with cleats.
- Concerned demand by other groups would limit access for cricket.
- Artificial turf would not work; need to play on grass.
- A removable cricket pitch would not work, only suitable for recreational play.
- After discussing further, groups thought it might be possible to make it work for recreational play; pitch would need to be enclosed when not in use for cricket.
- Suggested cricket pitch be made multipurpose by putting a running track around it.

Topic 6: Maximize the Use of Existing Cricket Facilities:

- Adding lights would allow play early morning and late night play.
- Recreational groups could book during the day on weekdays.
- A corporate league could be started; various business groups play on weekday mornings, ending in time for work; would require on-site showers.

- Cricket groups and the city could communicate more openly.
- Cricket groups could “give back” booked time they do not intend to use.
- Increased flexibility to try a new schedule to maximize use.
- T20 games – some challenges – hard for out of town teams – can’t play starting at 8 am – next group has to wait for them to end if game goes long.
- AR Club raised an issue that applied specifically to their club. Felt each club should get a least one day every weekend for matches, and suggested rotating weekend schedule. Also thought local teams should be priority over league play involving out of town teams. Addressing sense of field ownership would help groups share the existing fields.

Topic 7: Promoting Cricket for Youth and Other New Members

- Promoting sport in high school gym classes, at universities, and with parents.
- Sunrise Club noted they provide youth with rides to games, take youth to out of town matches, and offer free youth programs
- Also recruit women, provide free uniforms and equipment, and no fees.
- Company sponsorship to promote cricket also suggested.

D) Input from Open Houses

Three public open houses were held, one at RIM Park, one at Waterloo Memorial Recreation Complex, and one at Conestoga Mall. An overview of the strategy was presented on a series of posters, and the public was asked to provide input by indicating priority areas on the posters. Additionally, staff were on hand to gather verbal feedback. The verbal feedback is summarized below.

Existing Diamonds

- Diamonds 4, 5, and 6 at RIM Park are too large for slo-pitch.
- Slo-pitch players prefer stone dust infield vs. the red clay used for hardball infields.
- The city has the diamonds; they just need to be upgraded. It is more cost efficient to upgrade an existing facility then build a new one.
- Competitive hardball cannot access diamonds during the summer. Bechtel and Lexington diamonds are the only decent hardball diamonds in the city. There is a shortage of high quality hardball diamonds
- The tarp that covers the pitching mound at Lexington Diamond is too small and erodes the mound.
- Bechtel diamond is the best hardball diamond in the city and gets maintained to a very high standard. It would be a shame to lose this facility.

- Bechtel Park is easy to find for out-of-town people; right off the highway.
- Never heard of the Waterloo Park Master Plan. Why are they decommissioning the diamonds?

Diamond Maintenance

- When maintenance staff "drag" diamond, it creates a "lip" from the infield to the outfield. This can make the ball jump unnaturally. Is it possible to fix this problem?
- Other towns are more flexible, allowing groups to maintain diamonds. In Stratford the groups/associations close and open the diamonds.

Partnerships

- Are there opportunities for small business development in this strategy? Giving small businesses an opportunity to sponsor teams, food concessions, etc?

Amenities:

- City should look at amenities other municipalities provide at fields and diamonds.
- City should be looking to other municipalities on a regular basis for best practices.
- Permanent washrooms at RIM West fields are needed. When families have siblings playing soccer, parents have to leave for 15/20min to washrooms across the street, or go in the bush.

Tournaments:

- No opportunities for hardball tournaments in Waterloo.
- Best tournament locations in area are in Stratford and Breslau.
- Tournaments require multiple high-level diamonds or fields, hotels, restaurants, and food concessions.

Projections:

- Projection methodology should break down different types and levels of diamond sports.

General Comments

- City really needs to post "Who is responsible for what" at each diamond and field.

- Seems like there is a lot of light wasted at RIM park. Why do the lights need to be on if no one is using the parking lot?
- Neighborhoods need more tennis courts.
- The fields/diamonds at RIM Park are commonly vacant during the day. Should not be sitting empty.
- Breithaupt Park in Kitchener is a great example of a well-designed facility. It has everything people need.
- Blue Beech Link should be upgraded prior to Laurelwood Park. Talk to Waterloo Region District School Board regarding shared responsibility for developing sport opportunities at this site including rectangular fields, tennis courts and trails.
- Diamond sport participation numbers have dropped in Waterloo; people playing the same amount of games with less people per team; helps explain why diamonds staying at a reasonably good booking rate.

Appendix C:

Rectangular Multipurpose Fields and Diamonds in the 2011 bookable inventory with low-use in 2009/2010

Name	Type	Usage	Reason
Abraham Erb School	Rectangular Multipurpose	No Use According to Class 2009, 2010	Permanent goals; in squirt configuration
Lexington School	Rectangular Multipurpose	No Use According to Class 2009, 2010	Users report it is too small and in poor condition.
St. Luke's School	Rectangular Multipurpose	No Use According to Class 2009, 2010	Users report it is too small and in poor condition.
St Nicholas School	Rectangular Multipurpose	No use as per Class 2009, 16 hours in 2010	Users report it is too small and in poor condition
Blue Beech Park (City Owned)	Rectangular Multipurpose	No Use According to Class 2009, 2010	Sir John A. McDonald High School uses this field for physical education.
Eastbridge Green	Rectangular Multipurpose	No use as per Class 2009, 2010	Shared outfield with diamond.
Cedarbrae Public School	Rectangular Multipurpose	No use as per Class 2009, 2010	Users report problems with vandalism of goal posts/nets.
Laurelwood Park Fields 1 and 2	Rectangular Multipurpose	No use as per Class for 2009, 37.5 hours per field in 2010	Users report that these fields are often wet and in poor condition. Used by Lacrosse in 2010.
Sir John A. MacDonald High School	Rectangular Multipurpose	No use as per Class for 2009, 67 hours per field in 2010	Users report that the field is in poor condition. Limited access to the field.
Bluevale Collegiate Institute Upper Field	Rectangular Multipurpose	65 hours in 2009, 5 hours in 2010	Users report that the field is in poor condition.
St. Luke's School	Diamond	No use as per Class 2009, 2010	Users report it is too small and in poor condition.
Eastbridge Green	Diamonds	No use as per Class 2009, 2010	Shared outfield with rectangular field.
Waterloo Collegiate Institute	Diamond	No use as per Class 2009, 2010	Diamond overlaps with field.
Empire Public School #2	Diamond	No use as per Class 2009, 16 hours in 2010	Diamond 1 was removed from inventory in 2006, but Diamond 2 remains. Poor quality.
Laurelwood Park (City Owned)	Diamond	No use as per Class 2010, 1.5 hours in 2009	Users report poor quality. Limited use for practice purposes.

Appendix D:

Existing Rectangular Multipurpose Fields and Diamonds not in the City's 2011 inventory

Name	Type	Number	Notes
University of Waterloo	Rectangular	7	2 Artificial Turf Fields with lights (1 shared with WLU)
Wilfrid Laurier University	Rectangular	2	2 Artificial Fields with lights (1 shared with UW).
Laurelwood Public School	Rectangular	1	Field size is too small, less than an atom field. Poor condition.
Mary Johnson Public School	Rectangular	1	Poor condition, permanent goal posts make it too small for adult use. Posts would need to be taken out to make an atom configuration.
McGregor Senior Public School	Rectangular	1	Field overlaps with diamond.
Westvale Public School	Rectangular	1	Poor condition, obstructions limit available space. Atom sized, but too small for an almost adult sized field.
Holy Rosary School	Rectangular	1	Poor condition and is too small for an atom field, but big enough for squirt.
St. David's Catholic School	Rectangular	1	Artificial turf field.
École L'Harmonie	Rectangular	1	Trail goes through goal mouth.
Empire Public School	Rectangular	1	Too small, poor condition, overlaps with diamond.
St. Mathews School	Rectangular	1	Poor condition and too small.
Lexington School	Rectangular	1	Poor condition and too small.
Lexington Park East (Leased)	Rectangular	1	Taken out of inventory in 2010 due to safety concern related to adjacent diamond.
RIM Park #5	Rectangular	1	Available only for community use. Not a formal field.
Elizabeth Zeigler Public School	Diamond	3	Many issues with neighbourhood complaints, poor condition. Diamond 1 has trees on the outfield so only works for t-ball.
MacEachern Public School	Diamond	1	Diamond 2 is too small with a shared outfield with another diamond. Does not have a gravel infield.
McGregor Senior Public School	Diamond	1	Overlaps with field.
Bluevale Collegiate Institute	Diamond	1	Conflicts with field, improper configuration.
St. Agnes School	Diamond	1	Poor quality.
Mary Johnston School	Diamond	1	Out of service.
Sandowne School	Diamond	1	Out of service.
St. Nicholas School	Diamond	1	Out of service.

Appendix E:

Usage Analysis by Type, per Field

Multipurpose Rectangular Field Usage Analysis

Field Name	2009 Usage	2010 Usage	Avg. Usage over 2 yrs	Annual Max. Capacity (hrs.)	Avg. Hrs per week usage.	Field Use - 100% of Capacity	Field Use - 80% of Capacity
Bechtel Park - Field 1	273.5	266.5	270.0	442	15.9	61.1%	76.36%
Bechtel Park - Field 2	394.5	471	432.8	442	25.5	97.9%	122.38%
Bechtel Park - Field 5	477.5	582.5	530.0	442	31.2	119.9%	149.89%
Bechtel Park -Field 6	432.5	498	465.3	442	27.4	105.3%	131.58%
Bechtel Park - Field 3	216.5	223	219.8	306	12.9	71.8%	89.77%
Bechtel Park - Field 4	216.5	223	219.8	306	12.9	71.8%	89.77%
Creekside Church - Field 1A	184	198.5	191.3	306	11.3	62.5%	78.13%
Creekside Church -Field 2A	184	195.5	189.8	306	11.2	62.0%	77.51%
Creekside Church -Field 3	182	183.5	182.8	306	10.8	59.7%	74.65%
Lexington Road Park - South	223.75	511.75	367.8	306	21.6	120.2%	150.22%
Northfield Park	241	194.75	217.9	306	12.8	71.2%	89.00%
Northfield Pond Park	233.5	254.5	244.0	306	14.4	79.7%	99.67%
Old Oak Park - Field 1	217	267.5	242.3	306	14.3	79.2%	98.96%
Old Oak Park - Field 2	153	263.5	208.3	306	12.3	68.1%	85.07%
Pinebrook Park	199	195.5	197.3	306	11.6	64.5%	80.58%
RIM - Field 1	342.5	346.5	344.5	306	20.3	112.6%	140.73%
RIM - Field 2	268.5	320	294.3	306	17.3	96.2%	120.20%
RIM - Field 3	273	296.5	284.8	306	16.8	93.1%	116.32%
RIM - Field 4	285	263.5	274.3	306	16.1	89.6%	112.03%
RIM -Field 7	373.25	356.25	364.8	306	21.5	119.2%	149.00%
RIM -Field 8	254.25	328.75	291.5	306	17.1	95.3%	119.08%
RIM - Field 9	274	296	285.0	306	16.8	93.1%	116.42%
RIM - Field 10	334.75	394.5	364.6	306	21.4	119.2%	148.95%
Regency Park	238	238	238.0	306	14.0	77.8%	97.22%
Waterloo Park - East Field	0	257	128.5	306	7.6	42.0%	52.49%
Conservation Meadows	90.5	203.5	147.0	306	8.6	48.0%	60.05%
Waterloo Park -West Field	230	279.5	254.8	306	15.0	83.3%	104.06%

Multipurpose Rectangular Field Usage Analysis, continued.

Field Name	2009 Usage	2010 Usage	Avg. Usage over 2 yrs	Annual Max. Capacity (hrs.)	Avg. Hrs per week usage.	Field Use - 100% of Capacity	Field Use - 80% of Capacity
Pillers - Field 1A	237.75	148.5	193.1	306	11.4	63.1%	78.89%
Pillers - Field 2B	245.25	154.5	199.9	306	11.8	65.3%	81.65%
Pillers - Field 3C	245.25	154.5	199.9	306	11.8	65.3%	81.65%
Pillers - Field 4C	222.25	140.5	181.4	306	10.7	59.3%	74.09%
Pillers - Field 5C	210	140.5	175.3	306	10.3	57.3%	71.59%
Bluevale C.I. - Lower	123.5	193.5	158.5	170	9.3	93.2%	116.54%
Bluevale C. I. - Upper	65.6	5	35.3	170	2.1	20.8%	25.96%
Lester B Pearson	72	204	138	170	8.1	81.2%	101.47%
Lincoln Heights School – Low	103.25	148.5	125.75	170	7.4	74.0%	92.56%
Lincoln Heights School - Up	101.25	101.25	101.25	170	6.0	59.6%	74.45%
Waterloo C.I. - Lower	126	110	118	170	6.9	69.4%	86.76%
Waterloo C. I. - Upper	147	225	186	170	10.9	109.4%	136.76%

Diamond Usage Analysis

Field Name	2009 Usage	2010 Usage	Avg. Use over 2 yrs	Annual Max. Capacity (hrs.)	Avg. Hrs per week usage.	Field Use - of 100% of Capacity	Field Use - of 80% of Capacity
Bechtel Park	383.5	432.92	408.21	672	19.4	60.75%	75.93%
Hillside Park - Lower	540	484	512	672	24.4	76.19%	95.24%
Hillside Park - Upper	597.75	583	590.375	672	28.1	87.85%	109.82%
*RIM Park Outdoor Fields - #1	566.58	488	527.29	672	25.1	78.47%	98.08%
*RIM Park Outdoor Fields - #2	522.5	467.75	495.13	672	23.6	73.68%	92.10%
*RIM Park Outdoor Fields - #3	370.17	266	318.085	672	15.1	47.33%	59.17%
Waterloo Park - #1	810.25	726.75	768.5	672	36.6	114.36%	142.95%
Waterloo Park - #2	692.75	576.25	634.5	672	30.2	94.42%	118.02%
Red River Park	467.50	486.50	477	546	22.7	87.36%	109.20%
Waterloo Park #3	444.00	499.75	471.875	546	22.5	86.42%	108.03%
Waterloo Park - #4	378.00	447.50	412.75	546	19.7	75.60%	94.49%
Auburn Park	245.25	297.00	271.125	546	12.9	49.66%	62.07%
Lexington Road Park	304.75	272.25	288.5	546	13.7	52.84%	66.05%
Regency Park	456.00	249.50	352.75	546	16.8	64.61%	80.76%
Kingscourt Park	383.00	202.00	292.5	546	13.9	53.57%	66.96%
University Downs	242.00	221.50	231.75	546	11.0	42.45%	53.06%
RIM Park Outdoor Fields - #5	317.00	379.00	348	546	16.6	63.74%	79.67%
Westwind Park	152.00	182.00	167	546	8.0	30.59%	38.23%
RIM Park Outdoor Fields - #6	307.00	214.50	260.75	546	12.4	47.76%	59.70%
Wintermeyer Park	159.50	143.00	151.25	546	7.2	27.70%	34.63%
RIM Park Outdoor Fields - #4	156.00	244.50	200.25	546	9.5	36.68%	45.84%
Sir Edgar Bauer School - #1	632.50	554.00	593.25	546	28.3	108.65%	135.82%
Sir Edgar Bauer School - #2	632.50	554.00	593.25	546	28.3	108.65%	135.82%
Keats Way Public School - #1	461.00	529.50	495.25	546	23.6	90.71%	113.38%
Keats Way Public School - #2	458.00	529.50	493.75	546	23.5	90.43%	113.04%
Sandowne Public School - #1	355.50	527.00	441.25	546	21.0	80.82%	101.02%
St. Agnes School	50.00	439.00	244.5	546	11.6	44.78%	55.98%
Centennial Public School - #1	384.50	344.00	364.25	546	17.3	66.71%	83.39%
Centennial Public School - #2	382.00	332.00	357	546	17.0	65.38%	81.73%
Cedarbrae Public School - #2	390.00	302.00	346	546	16.5	63.37%	79.21%

Diamond Usage Analysis, continued.

Field Name	2009 Usage	2010 Usage	Avg. Use over 2 yrs	Annual Max. Capacity (hrs.)	Avg. Hrs per week usage.	Field Use - of 100% of Capacity	Field Use - of 80% of Capacity
Our Lady of Lourdes School	332.00	301.00	316.5	546	15.1	57.97%	72.46%
Cedarbrae Public School - #1	393.00	299.00	346	546	16.5	63.37%	79.21%
Lincoln Heights Public School	377.50	316.50	347	546	16.5	63.55%	79.44%
Sandowne Public School - #2	460.00	236.50	348.25	546	16.6	63.78%	79.73%
Mary Johnston Public School - #1	0.00	199.00	99.5	546	4.7	18.22%	22.78%
Mary Johnston Public School - #2	191.00	199.00	195	546	9.3	35.71%	44.64%
N.A. MacEachern Public School - #1	186.00	186.00	186	546	8.9	34.07%	42.58%
Winston Churchill Public School - #1	130.00	140.00	135	546	6.4	24.73%	30.91%
Winston Churchill Public School - #2	130.00	140.00	135	546	6.4	24.73%	30.91%
MacGregor Public School	26.00	69.00	47.5	546	2.3	8.70%	10.87%
Empire School #2	25.00	20.00	22.5	546	1.1	4.12%	5.15%
Northlake Woods Public School	62.50	65.00	63.75	546	3.0	11.68%	14.59%

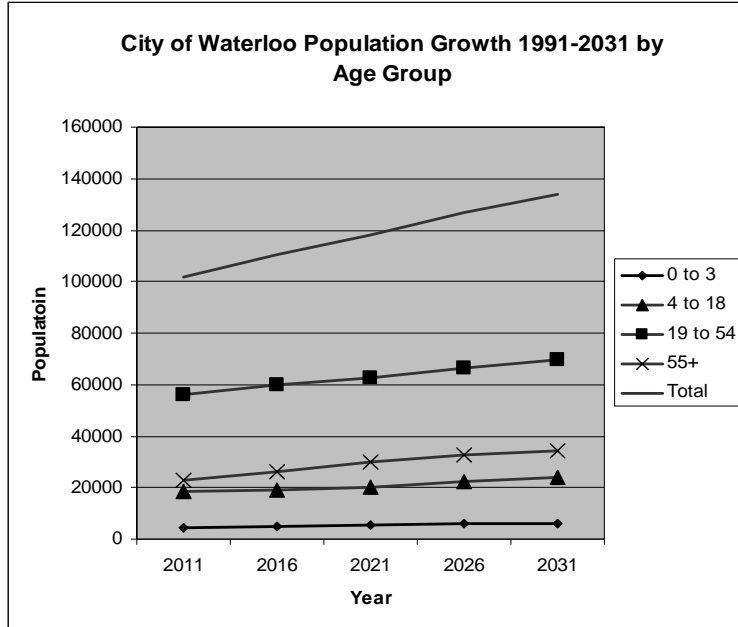
Cricket pitch Usage Analysis

Field Name	2009 Usage	2010 Usage	Avg. Usage over 2 yrs	Annual Max. Capacity (hrs.)	Avg. Hrs per week usage.	Field Use - of 100% of Capacity	Field use - of 80% of Capacity
Waterloo Park	454.5	492.0	473.3	672.0	22.5	70.4%	88.03%
Laurel Creek Conservation Area	480.0	659.0	569.5	672.0	27.1	84.7%	105.93%

Appendix G:

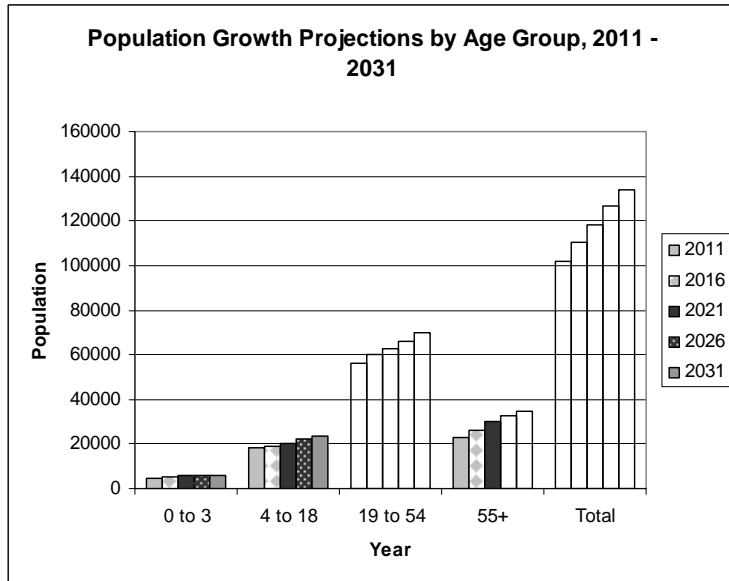
Population Projection Graphs

City of Waterloo, Population Growth by Age Groups, 1991-2031



Source: Region of Waterloo, November 2010

Population Growth Projections by Age Group, 2011-2031



Source: Region of Waterloo, November 2010

Appendix H:

Detailed Projection Calculations

Multipurpose Rectangular Field Need Projections

	80% Use Goal				
	Artificial Turf	High Capacity	Medium Capacity	Low Capacity	All Field
Average Field Capacity per Season	775.2	353.6	244.8	136	
2011 Inventory - Actual	2.0	4	23	7	37.0
2011 Capacity in Hrs	1550.4	1414.4	5630.4	952	9792.0
2011 Estimated Utilization in Hours	1550.0	1538.6	6073.0	781.9	9943.6
2011 Optimal Inventory	2.0	4.4	24.8	5.7	36.9
2011 Difference Between Optimal and Estimated	0.0	-0.4	-1.8	1.3	
2016 Estimated Inventory	2.0	2.0	23.0	7.0	35.0
2016 Estimated Capacity in Hrs	1550.4	707.2	5630.4	952.0	9084.8
2016 Estimated Utilization in Hrs (09/10 + 5.92%)	1641.8	1629.7	6432.5	828.2	10532.3
2016 Optimal Inventory	2.1	4.6	26.3	6.1	39.1
2016 Difference Between Optimal and Estimated	-0.1	-2.6	-3.3	0.9	
2021 Estimated Inventory	2.0	2.0	21.0	7.0	33.0
2021 Estimated Capacity in Hrs	1550.4	707.2	5140.8	952.0	8595.2
2021 Estimated Utilization in Hrs (09/10 + 10.75%)	1716.6	1704.0	6725.8	866.0	11012.5
2021 Optimal Inventory	2.2	4.8	27.5	6.4	40.9
2021 Difference Between Optimal and Estimated	-0.2	-2.8	-6.5	0.6	
2026 Estimated Inventory	2.0	2.0	21.0	7.0	33.0
2026 Estimated Capacity in Hrs	1550.4	707.2	5140.8	952.0	8595.2
2026 Estimated Utilization in Hrs (09/10 + 18.19%)	1831.9	1818.5	7177.7	924.2	11752.3
2026 Optimal Inventory	2.4	5.1	29.3	6.8	43.6
2026 Difference Between Optimal and Estimated	-0.4	-3.1	-8.3	0.2	
2031 Estimated Inventory	2.0	2.0	21.0	7.0	33.0
2031 Estimated Capacity in Hrs	1550.4	707.2	5140.8	952.0	8595.2
2031 Estimated Utilization in Hrs (09/10 + 25.40%)	1943.7	1929.5	7615.5	980.6	12469.3
2031 Optimal Inventory	2.5	5.5	31.1	7.2	46.3
2031 Difference Between Optimal and Estimated	-0.5	-3.5	-10.1	-0.2	

Diamond Need Projections

	80% Use Goal		
	High Capacity	Medium Capacity	All Field
Goal Hours of Use Per Field Per Season	537.6	436.8	
2011 Estimated Inventory	8	32	40.0
2011 Total Goal Hours of Use	4300.80	13977.60	18278.4
2009/2010 Utilization in Hours	4252.1	10096.0	14348.1
2011 Optimal Inventory	7.9	23.1	31.0
2011 Difference Between Optimal and Estimated	0.1	8.9	
2016 Estimated Inventory	8.0	32.0	40.0
2016 Estimated Capacity in Hrs	4300.8	13977.6	18278.4
2016 Estimated Utilization in Hrs (09/10 + 5.92%)	4503.8	10693.7	15197.5
2016 Optimal Inventory	8.4	24.5	32.9
2016 Difference Between Optimal and Estimated	-0.4	7.5	
2021 Estimated Inventory	6.0	30.0	36.0
2021 Estimated Capacity in Hrs	3225.6	13104.0	16329.6
2021 Estimated Utilization in Hrs (09/10 + 10.75%)	4709.2	11181.3	15890.5
2021 Optimal Inventory	8.8	25.6	34.4
2021 Difference Between Optimal and Estimated	-2.8	4.4	
2026 Estimated Inventory	6.0	30.0	36.0
2026 Estimated Capacity in Hrs	3225.6	13104.0	16329.6
2026 Estimated Utilization in Hrs (09/10 + 18.19%)	5025.6	11932.5	16958.0
2026 Optimal Inventory	9.3	27.3	36.7
2026 Difference Between Optimal and Estimated	-3.3	2.7	
2031 Estimated Inventory	6.0	30.0	36.0
2031 Estimated Capacity in Hrs	3225.6	13104.0	16329.6
2031 Estimated Utilization in Hrs (09/10 + 25.40%)	5332.1	12660.4	17992.5
2031 Optimal Inventory	9.9	29.0	38.9
2031 Difference Between Optimal and Estimated	-3.9	1.0	

Cricket Pitch Need Projections

	80% Use Goal
	Medium Capacity
Goal Hours of Use per Field per Season	537.6
2011 Estimated Inventory	2
2011 Total Goal Hours of Use	1075.2
2009/2010 Utilization in Hours	1042.80
2011 Optimal Inventory	1.9
2011 Difference Between Optimal and Estimated	0.1
2016 Estimated Inventory	2.0
2016 Estimated Capacity in Hrs	1075.2
2016 Estimated Utilization in Hrs (09/10 use + 5.92%)	1104.5
2016 Optimal Inventory	2.1
2016 Difference Between Optimal and Estimated	-0.1
2021 Estimated Inventory	1.0
2021 Estimated Capacity in Hrs	537.6
2021 Estimated Utilization in Hrs (09/10 use + 10.75%)	1154.9
2021 Optimal Inventory	2.1
2021 Difference Between Optimal and Estimated	-1.1
2026 Estimated Inventory	1.0
2026 Estimated Capacity in Hrs	537.6
2026 Estimated Utilization in Hrs (09/10 use + 18.19%)	1232.5
2026 Optimal Inventory	2.3
2026 Difference Between Optimal and Estimated	-1.3
2031 Estimated Inventory	1.0
2031 Estimated Capacity in Hrs	537.6
2031 Estimated Utilization in Hrs (09/10 use + 25.40%)	1307.7
2031 Optimal Inventory	2.4
2031 Difference btw Actual and Optimal Inventory	-1.4

8.0 References

Active Healthy Kids Report Card on Physical Activity for Children and Youth. (2011).
www.activehealthykids.ca

City of Edmonton. (2005). *Field Strategy 2005-2015: A vision for sports fields within the city of Edmonton.*

City of Hamilton. (2009). *Public Use Outdoor Recreation Field and Sport field Provision Plan. Presentation.*

City of Nanaimo. (2010). *Nanaimo Sport field Strategy 2009-2024.*

City of Richmond. (2005). *Richmond Field Sport Strategy: Everyone Can Play! 2006-2011.*

City of Waterloo. (2008). *Recreation and Leisure Services Master Plan.*

City of Waterloo. (2009). *Cemetery Services - Bechtel Park Draft Master Plan.*

City of Waterloo. (2009). *Waterloo Park Mast Plan: Final Report.*

City of Waterloo. (2010). *Official Plan (Draft).*

City of Waterloo (2011). *Strategic Plan.*

Ifedi, Fidelis. (2008). *Sports Participation in Canada, 2005.* Statistics Canada, Cultural Tourism and the Centre for Education Statistics Division. Ottawa.

Monteith-Brown Planning Consultants. (2007). *Needs Assessment Study for Outdoor Recreational Opportunities.* Prepared for The City of Waterloo.

Monteith, Zelinka, Priamo Ltd. (1998). *Soccer Needs Analysis and Study: Physical Resources.* Prepared for the Waterloo Minor Soccer Club and the City of Waterloo.

Ontario Sports Turf Association. *Athletic Field Construction Manual: Classification, Specifications, Field Evaluation, Field Dimensions.*

Strathcona County. (2010). *Strathcona County Sportsfield Strategy: 2010-2025. Final Report.*

Warburton, D. E. R., Katzmarzyk, P. T., Rhodes, R. E., & Shephard, R. J. (2007). *Evidence-informed physical activity guidelines for Canadian adults.* *Applied Physiology, Nutrition, and Metabolism* 32(S2E) S16-S68.