



City of Kingston
Information Report to Arts, Recreation & Community Policies Committee
Report Number ARCP-24-008

To: Chair and Members of the Arts, Recreation & Community Policies Committee

From: Brad Joyce, Commissioner, Infrastructure, Transportation & Emergency Services
Jennifer Campbell, Commissioner, Community Services

Resource Staff: Karen Santucci, Director, Public Works & Solid Waste
Amy Elgersma, Director, Recreation & Leisure Services

Date of Meeting: August 8, 2024

Subject: Sports Field Service Level Comparison

Council Strategic Plan Alignment:

Theme: 4. Foster a Caring and Inclusive Community

Goal: See above

Executive Summary:

This report provides a follow-up to [Report Number 23-067 Ice and Sports Field Rates Update](#). On March 7, 2023, Council approved an amendment to By-Law Number 2005-10 “A By-Law to Establish Fees and Charges to be Collected by the Corporation of the City of Kingston” for Sports Fields. Following the rates approval, Council passed the following motion:

That Council direct staff to complete a service level review of maintenance for sports fields and report back to the Arts, Recreation and Community Policies Committee in Q1 2024.

A benchmarking exercise was undertaken to compare the City of Kingston’s sports field service levels to those of other municipalities. The survey was sent to 18 Ontario municipalities and 10 provided responses.

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The following sports field service levels are considered in this report:

- Sports Field Line Painting (Lining)
- Provisioning of Sports Field Equipment (nets, bases, etc.)
- User Group Storage
- Washroom Facilities Including for Special Events
- Field Maintenance
- Staffing Allotment
- Field and Diamond Inventory Level
- Season Duration
- Covered Dugouts

Based on the now completed service, staff have identified options for increasing service levels for the maintenance of sports fields and are seeking feedback from the Committee on the options discussed in this report. Staff will incorporate this feedback into a report that will be brought to Council in September 2024. Staff will additionally consult with user groups on these options and ahead of the September Council report.

Recommendation:

This report is for information purposes only.

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Authorizing Signatures:

ORIGINAL SIGNED BY COMMISSIONER

**Brad Joyce, Commissioner,
Infrastructure, Transportation &
Emergency Services**

ORIGINAL SIGNED BY COMMISSIONER

**Jennifer Campbell,
Commissioner, Community
Services**

p.p. ORIGINAL SIGNED BY CHIEF ADMINISTRATIVE OFFICER

**Lanie Hurdle, Chief
Administrative Officer**

Consultation with the following Members of the Corporate Management Team:

Paige Agnew, Commissioner, Growth & Development Services	Not required
Neil Carbone, Commissioner, Corporate Services	Not required
David Fell, President & CEO, Utilities Kingston	Not required
Peter Huigenbos, Commissioner, Major Projects & Strategic Initiatives	Not required
Desirée Kennedy, Chief Financial Officer & City Treasurer	Not required

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Options/Discussion:

Background

This report provides a comparison of the service levels for Kingston's programmed natural turf sports fields with other Ontario municipalities. The City has 52 programable, rectangular fields and 38 programable baseball diamonds. Sport fields are primarily booked during the evenings and weekends for practices, games and tournaments with prime-time bookings being after 6:00pm. Class A & B rectangular fields have consistent scheduled bookings and are typically booked out 46% - 51% during prime-time evenings. Class A & B diamonds have consistent scheduled bookings and are typically booked out 72% - 84% during prime-time evenings; however, many in-demand diamonds are booked 100% of prime-time hours. Additionally, there are currently 21 tournaments scheduled by user groups for the 2024 season, across multiple sports fields and locations.

Surveys were sent to 18 municipalities. Of the initial send out, only four responses were received. The survey was sent out a second time, followed by phone calls to those municipalities that did not respond to the survey. Surveys were sent a third time to municipalities that had not yet responded, and direct contact was made with most of the municipalities that had not responded. Ten responses were received. A review of online material was also completed to gather applicable information from municipal websites that identify service levels. It should be noted that where sections of the survey were left incomplete, these sections are identified as "undetermined" in this report. Information was obtained from the municipalities listed below.

- Hamilton
- Kitchener
- Windsor
- Oakville
- Burlington
- Oshawa
- Whitby
- Guelph
- Belleville
- Perth

The service level review included collecting information on the following:

- Sports Field Line Painting (Lining)
- Provisioning of Sports Field Equipment (nets, bases, etc.)
- User Group Storage
- Washroom Facilities Including for Special Events
- Field Maintenance
- Staffing Allotment

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- Field and Diamond Inventory Level
- Season Duration
- Covered Dugouts

Sports Fields Line Painting (Lining)

All municipalities surveyed provided some lining services except one that is considering including lining as part of its services. The service levels varied - some provided lining to Class A fields only, while some other municipalities shared the lining responsibility with the user groups. Kingston does not currently offer soccer field or diamond lining services. At present, all user groups have developed methods that meet their needs to ensure the lining of the rectangular fields and diamonds.

Responsibility for Lining Diamonds

- Provided by Municipality: Perth, Kitchener, Windsor, Whitby
- Provided by User Groups: Belleville, Kingston
- Provided by Both: Oshawa (Class A; Class B and C done by Users), Guelph (foul lines; running lines done by Users)
- Undetermined: Hamilton, Oakville, Burlington

Responsibility for Lining Fields

- Provided by Municipality: Kitchener, Guelph, Windsor
- Provided by User Groups: Belleville, Kingston
- Provided by Both: Perth (completes work but supplies provided by Users), Oshawa (Class A; Class B and C done by Users), Whitby
- Undetermined: Hamilton, Oakville, Burlington

Service Level Improvement Options

Option 1a: City provides lining for rectangular fields by staff and provides equipment/supplies for diamond lining to user groups. Estimated costs: one-time \$470,000 capital for the equipment and annual operating increase of \$235,000.

Option 1b: Similar to Option 1a, but with the rectangular fields lining work contracted out. Estimated costs: one-time \$150,000 capital and annual operating increase of \$275,000.

Option 2a: Same as Option 1a, but applicable to just Class A fields and diamonds. (Although there isn't a standard comparable definition of what a Class A field is between municipalities, Kingston defines Class A fields and diamonds as full-sized fields with irrigation and lighting). Estimated costs: one-time \$470,000 capital and annual operating increase of \$150,000.

Option 2b: Same as Option 1b, but applicable to just Class A fields and diamonds. Estimated costs: one-time \$75,000 capital and annual operating increase of \$165,000.

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Recommendation: Based on feedback from user groups, there is a clear desire for Option 1, where rectangular field lining is the responsibility of the City and the City provides the equipment and supplies to the user groups for diamond lining. Staff recommend Option 1b at this point be used for the 2025 season, and there is an option to have the user groups cover the additional operating costs that would be incurred by the City. Currently, those user groups are providing and paying for all these services wholly. The operating costs could be incorporated into the field and diamond booking fees paid to the City.

If the Committee supports this, staff will prepare and present a detailed analysis of the impact on fees and charges and share these with user groups prior to the September 2024 Council report, and if approved, corresponding amendments would be made to the Fees and Charges By-Law for 2025.

Rectangular Field and Diamonds Rates

For context, the following table provides a comparison of the most comparable hourly rate for user bookings for Adult Class A fields and diamonds. Kingston’s rates are \$29.45+HST for these fields, and \$29.11+HST for these diamonds. Kingston’s rate includes a 10% capital improvement surcharge.

Table 1: Rectangular Fields and Diamond Rates

Municipalities lining fields	Rectangular field rates as percentage of Kingston’s	Ball diamond rates as percentage of Kingston’s
Kitchener	237%	209%
Guelph	104%	84%
Windsor	111%	144%
Municipalities with user groups lining fields		
Belleville	36% (require minimum 4 hrs)	36% (require minimum 4 hrs)
Municipalities where lining cost is shared		
Perth	96%	96%
Oshawa	135%	104%
Whitby	92%	103%
Municipalities where lining cost coverage is undetermined		
Hamilton	N/A	N/A
Oakville	106%	108%
Burlington	108%	115%

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Provisioning of Sports Field Equipment

The provision of sports field equipment is conducted in several ways throughout the sample municipalities. In some cases, user groups provide the equipment, while with others the responsibility falls with the municipality and is often only provided on higher field classifications. Field equipment is defined to include the following: soccer goal netting, ball diamond bases and plates.

Responsibility for Provision for Equipment for Diamonds

- Provided by Municipality: Perth, Kitchener
- Provided by User Groups: Oshawa, Belleville, Kingston
- Provided by Both: Guelph (Tiered Municipality provides on A diamonds only), Windsor (Municipality provides on Stadiums only), Whitby
- Undetermined: Burlington, Oakville

Responsibility for Provision of Equipment for Fields

- Provided by Municipality: Perth, Kitchener, Belleville, Windsor, Whitby
- Provided by User Groups: Oshawa, Kingston
- Undetermined: Hamilton, Oakville, Burlington

Service Level Improvement Options

Option 1: City provides basic equipment to all user groups. Estimated costs: one-time \$100,000 capital (bases/plate storage) and annual operating increase of \$75,000 (\$50,000 for fields and \$25,000 for diamonds).

Option 2: City provides equipment to user groups utilizing only Class A rectangular fields and diamonds. Estimated costs: one-time \$40,000 capital and annual operating increase of \$30,000 (\$20,000 for fields and \$10,000 for diamonds).

Recommendation: User groups have expressed their desire for the City to supply basic sports equipment, particularly soccer nets. To ensure consistency in services across different age groups, it has been suggested that equipment be provided for all fields and diamonds, not just Class A fields. Staff are supportive of this initiative which is Option 1 and could assist with the provision and necessary storage of the equipment. If the City adopts this approach, it is recommended that all user groups contribute to the operating costs through increases to the fees as outlined in the Fees and Charges By-Law.

If the Committee supports this, staff will prepare and present a detailed analysis of the impact on fees and charges and share these with user groups prior to the September 2024 Council report, and if approved, corresponding amendments would be made to the Fees and Charges By-Law for 2025.

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On-site Storage

Many of the smaller municipalities provide storage for user groups to store supplies and equipment. Larger municipalities either allow for some on-site storage at the user groups expense or have some dedicated on-site storage available either at a cost or free of charge. The storage facilities available at City of Kingston sports fields is limited to a few of the larger parks. This storage is provided free of charge. Not every sports field has storage and not every group is allocated storage or has requested storage.

The cost of additional amenities and increasing the number of storage facilities has not been considered in this report, as the variables are too extensive to provide an estimate.

Responsibility for Provision of On-site Storage Facilities

- Provided by Municipality: Perth
- Limited Storage Provided by Municipality: Guelph (Only A fields and Diamonds have storage), Windsor (some locations user groups pay for storage), Kingston (provided at some locations free of charge)
- Provided by User Groups: Oshawa, Whitby (only at some locations)
- No Storage Provided: Kitchener
- Undetermined: Belleville, Burlington, Hamilton, Oakville

Service Level Improvement Options

Recommendation: Continue to provide the current level of service.

Washroom Facilities

Like most municipalities, if the number of washroom facilities is not adequate and the user groups request additional facilities, the City of Kingston will provide portable washrooms for the season, at no cost to the user group. Also, like most municipalities, the user groups are responsible for organizing and paying for any additional portable washrooms that are required for events and tournaments.

Responsibility for Additional Washroom Facilities for Events and Tournaments (port-a-potties)

- Responsibility of the Municipality: Kitchener
- Responsibility of the User Groups: Perth, Oshawa, Guelph, Windsor, Kingston
- Undetermined: Belleville, Hamilton, Whitby, Burlington, Oakville

Where permanent washroom facilities are unavailable, are portable washrooms provided?

- Yes: Oshawa, Kitchener, Guelph, Kingston
- No: Windsor
- Not Required: Perth

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- Undetermined: Belleville, Hamilton, Burlington, Oakville

Where permanent washroom facilities are unavailable, who provides portable washrooms?

- Responsibility of the Municipality: Oshawa, Kitchener, Whitby, Kingston
- Responsibility of the User Groups:
- Undetermined: Belleville, Hamilton, Burlington, Oakville
- Not Applicable: Perth

Service Level Improvement Options

Recommendation: Continue to provide the current level of service.

Field Maintenance

In May 2023, the following was moved by Council:

That Council direct staff to report back to the Arts, Recreation and Community Policies Committee prior to the Summer 2023 identifying sports fields maintenance improvements that will be implemented in 2023; and

Following this exercise, the City of Kingston maintenance programs were revised and implemented. This is the first season following a full year of maintenance under the new program and it is expected that improvements to field conditions will be achieved starting this season. It is still necessary to ensure the user groups are not overusing fields and allowing them to 'rest' when necessary.

Maintenance schedules vary by municipality. Most of the municipalities surveyed conduct fertilizing, overseeding, top-dressing and rolling when needed, whereas activities such as mowing and infield grooming have established schedules based on use and field classification.

Mowing Frequency

- Once a week – Oshawa, Kitchener (B and C Fields), Whitby, Kingston (non-irrigated fields)
- Twice a week- Perth, Kingston (on irrigated fields)
- Three times a week – Kitchener (A Fields), Kingston (if Tournaments)
- Undetermined: Guelph, Belleville, Windsor, Hamilton, Burlington, Oakville

Fertilized Per Season

- Once: Perth, Oshawa (C fields), Whitby
- Twice: Kingston
- Varies/Dependant: Kitchener (dependent on need), Guelph (varies by field type)
- Undetermined: Belleville, Windsor, Hamilton, Burlington, Oakville

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Overseeding

- Once: Perth, Kingston
- Twice: Oshawa
- Varies/Dependant: Kitchener (dependent on need), Guelph (varies by field type), Whitby (as needed)
- Undetermined: Belleville, Windsor, Hamilton, Burlington, Oakville

Top-Dressing

- Once: Oshawa (A and B once) Kingston (A fields)
- Twice: Oshawa
- Varies/Dependant: Kitchener (dependent on need), Guelph (varies by field type), Whitby (as needed)
- Never: Perth (does not get wear and tear)
- Undetermined: Belleville, Windsor, Hamilton, Burlington, Oakville

Rolled

- Once: Perth
- Twice: None
- Three Times: Kingston
- Varies/Dependant: Oshawa (as needed), Guelph (varies by field type), Whitby (as needed)
- Never: Kitchener
- Undetermined: Belleville, Windsor, Hamilton, Burlington, Oakville

In-Field Grooming

- Before each game: Perth
- Daily: Oshawa (for A and B diamonds), Kingston
- Once a week: Kitchener (C diamonds)
- As required: Whitby
- During Tournaments: Perth, Kingston
- Undetermined: Guelph, Belleville, Windsor, Hamilton, Burlington, Oakville

Service Level Improvement Options

Current feedback from user groups is that the fields are in better condition than they have been in the past. With the maintenance program just in its second season, it is recommended that the maintenance program remain as is and that it be reviewed again after the end of the 2025 season.

Recommendation: Continue to provide the current level of service, but review after 2025 season.

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Staffing Allotment

Kingston’s staffing ratio per field is on average similar to most of the larger municipalities surveyed.

Number of Full-Time Staffing per Field and Diamond

- 0 - 0.19: Hamilton (staffing information was unable to be validated)
- 0.2 - 0.29: Kitchener, Guelph, Kingston
- 0.3 - 0.39: Perth

Service Level Improvement Options

Recommendation: Continue to provide the current level of service.

Field and Diamond Inventory

Kingston has a total of 90 fields and diamonds that are currently bookable for organized sporting activities. The field and diamond inventory levels of comparator municipalities are detailed in Table 2.

Table 2: Field and Diamond Inventory Comparison

Municipality	Population (2021 Census)	Total Diamonds	Diamonds per 10,000 population	Total Fields	Fields per 10,000 population	Total	Total per 10,000 population
Hamilton	569,353	11	0.2	28	0.5	39	0.7
Kitchener	256,885	70	2.7	77	3.0	147	5.7
Windsor	229,660	N/A	N/A	N/A	N/A	N/A	N/A
Oakville	213,759	N/A	N/A	N/A	N/A	N/A	N/A
Burlington	186,948	N/A	N/A	N/A	N/A	N/A	N/A
Oshawa	175,383	54	3.1	58	3.3	112	6.4
Whitby	138,501	11	0.8	18	1.3	29	2.1
Guelph	143,740	51	3.5	53	3.7	104	7.2

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Municipality	Population (2021 Census)	Total Diamonds	Diamonds per 10,000 population	Total Fields	Fields per 10,000 population	Total	Total per 10,000 population
Kingston	132,485	38	2.9	52	3.9	90	6.8
Belleville	55,071	N/A	N/A	N/A	N/A	N/A	N/A
Perth	6,469	6	9.3	3	4.6	9	13.9

Season Duration

Kingston’s season starts approximately the same time as other municipalities; however, each autumn, play has been permitted to be extended into October and November on select fields to support school board’s use for both baseball and soccer.

Table 3: Season Opening and Closing Dates

Municipality	Open	Close	Exceptions
Hamilton	May	Oct	Undetermined
Kitchener	Mid-May	Oct	Case by case
Windsor	Undetermined	Undetermined	Undetermined
Oakville	Undetermined	Undetermined	Undetermined
Burlington	Baseball: Second weekend in May Soccer: Long weekend in May	After first full weekend in Oct	Undetermined
Oshawa	Mid-May	Mid-Sep	Case by case, field conditions permitting
Whitby	May 1	Oct 31	Undetermined
Guelph	Baseball: May 1 Soccer: May 8	Adult: Sep 30 Youth: Oct 31	Only if within a few days of closing
Kingston	Baseball: May 1 Soccer: May 15	Baseball: Oct 1 Soccer: Sep 15	Case by case
Belleville	Undetermined	Undetermined	Undetermined
Perth	May	Oct 31	Case by case

Service Level Improvement Options

Across all City fields, there continues to be interest in use beyond the current end of season dates. To accommodate this interest but still ensure that fields have appropriate time for rest

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and maintenance, staff recommend that the season be extended by two weeks in the Fall starting in 2024.

Recommendation: Extend the current season by two additional weeks into the Fall.

Covered Baseball Dugouts

Kingston's ball diamonds have five covered dugouts. Only one other comparator municipality (Kitchener) has more covered dugouts than Kingston, though it also has a population that is approximately double that of Kingston.

Number of Covered Dugouts (total, number per 100,000 population)

- Kitchener: Ten, 3.89
- Kingston: Five, 3.77
- Whitby: Three, 2.17
- Guelph: Two, 1.39
- Oshawa: One, 0.57
- Burlington: One, 0.53
- Perth: One, 15.46

Service Level Improvement Options

Recommendation: Continue to provide the current level of service.

Public Engagement

A survey was distributed to 18 municipalities. Information was collected from 10 communities to determine the levels of service that they provide in comparison to the City of Kingston's service levels. Contact was made directly with eight of the municipalities to follow up on collecting the information. This survey received a 55% response rate.

Existing Policy/By-Law:

By-Law Number 2009-76: A By-Law To Provide For The Regulation Use Of Parks And Recreation Facilities Of The Corporation Of The City Of Kingston

By-Law Number 2005-10: A By-Law To Establish Fees And Charges To Be Collected By The Corporation Of The City Of Kingston

Financial Considerations:

Preliminary estimates were provided within the report for costs associated with expanding service levels. Based on the feedback received from the committee and after additional consultation with user groups, staff will prepare and present a detailed analysis of the impact on the fees and charges as part of the September 2024 Council report. Should Council approve

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service level changes, corresponding changes to the 2025 Fees By-Law would be brought forward by year end 2024. New operating and capital expenses and offsetting revenues from fees and charges would then be included in the development of the 2025 Operating and Capital budgets.

Contacts:

Karen Santucci, Director, Public Works & Solid Waste, 613-546-4291 extension 1856

Amy Elgersma, Director, Recreation & Leisure Services, 613-546-1181 extension 1351

Other City of Kingston Staff Consulted:

Troy Stubinski, Operation Manager, Public Works & Solid Waste Services

Christian Kuhn, Supervisor, Public Works, Public Works & Solid Waste Services

Tony Gargaro, Manager, Recreation Services, Recreation & Leisure Services

Chris Paterson, Assistant Supervisor, Recreation Programs, Recreation & Leisure Services

Exhibits Attached:

Exhibit A - 2023 Sports Field Maintenance Guidelines

Exhibit B - City of Kingston Ball Diamond Classification

Exhibit C - City of Kingston Rectangular Field Classification



2023 Sports Field Maintenance **Guidelines**

City of Kingston
Public Works Department

Written by: Christian Kuhn, Supervisor, Public Works
Troy Stubinski, Operations Manager, Public Works
Karen Santucci, Director, Public Works & Solid Waste

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SCOPE

This document summarizes what the Public Works Department has planned for this upcoming season regarding turf care and infrastructure maintenance. The 2023 Sports Fields Maintenance Schedule (Appendix A) will be used as a guideline to schedule maintenance activities throughout the season. The timing of the scheduled maintenance events is subject to change based on weather and field conditions.

The previously used 2012 Sustainable Turf Care Management Plan outlines recommendations and processes regarding turf care but does not outline the specific detailed schedule and plans. This 2023 Sports Field Maintenance Guideline meets or exceeds the applicable recommendations and supersedes the 2012 Sustainable Turf Care Management Plan.

INSPECTIONS

PRE-SEASON

All fields are inspected prior to the season opening. Staff are looking for deficiencies related to lighting, fencing, bleachers, and overall field conditions. This information will form part of the operational plans and prioritize specific work to complete prior to the season opening.

SEASONAL

In addition to cutting the fields, the Mower Operators are tasked with inspecting and documenting field infrastructure (ex. fencing and bleachers). This process is an efficient use of resources as the Mower Operators visit all sports fields at least once a week, and the weekly inspections will allow for rapid response to any items that require attention.

POST SEASON

Information gathered throughout the season along with the end of year inspection data will form the starting point for our 2024 maintenance plan. User Group meetings in the fall will provide feedback on the successes and failures throughout the year from a user perspective and will help formulate operational plans for the following season.

FERTILIZER

The fertility program for 2023 was developed based on soil testing report data and recommendations from a group of Consulting Agronomists. These recommendations identify where nutrient deficiencies are present and what the appropriate corrective actions should be. In the fall of 2022, soil was sampled at all Class A and most Class B sites within The City of Kingston. This data is crucial in providing a scientific-based

approach to our fertility and field management program and will help elevate playing conditions for the users.

Based on soil testing, it has been determined that three (3) different types of fertilizers will be used throughout the season to address growth rates (Nitrogen) and noted deficiencies in Sulphur and Phosphorus. Subsequent soil sampling this fall will help determine needs for 2024.

NITROGEN

Nitrogen is a macronutrient responsible for growth, color, and facilitating plant uptake of other nutrients (among many other things). Our best defense against weed control is to have a healthy stand of turf that can outcompete and crowd out the weeds; consistent Nitrogen applications will be the driving force for this. This will also help facilitate field recovery from constant use. The main source we will use is a slow release 46-0-0 that will provide consistent Nitrogen availability to the turfgrass throughout the entire season. Fortunately, 46-0-0 is a common “urea” based product that is affordable and readily available at all agriculture fertilizer depots. Applications will begin in the spring and continue every 4-6 weeks into the fall.

SULPHUR

Sulphur is an essential nutrient for plant growth as it helps drive plant protein development and is involved in activating certain enzymes. Soil testing revealed that 80% of the fields tested are deficient in this nutrient, and as a result a late fall application of ammonium sulphate 26-0-0 with 24% Sulphur is planned. This application will also support a fall “dormant” feed which will help the turf come out of spring with readily available Nitrogen to encourage quicker “spring green up”.

PHOSPHORUS

Although phosphorus is the most scrutinized nutrient due to its environmental impacts, it remains an integral macronutrient to plant growth and plant life. Due to this, it is crucial to only apply Phosphorus where it is needed and nowhere else. Based on soil testing there are three (3) baseball diamonds and six (6) rectangular fields that will receive mono-ammonium phosphate 11-52-0 in the early spring to bring phosphorus levels at those locations into the acceptable range.

TURF MAINTENANCE ACITIVITIES

FIELD CUTTING

Field cutting is based on turf growth rates and weather conditions. During the growing season, a typical schedule has irrigated fields mowed twice per week and non-irrigated fields mowed once per week. Mowing frequency and scheduling will be adjusted to accommodate tournaments and events as per permit bookings.

AERATION

Aeration involves mechanically penetrating the soil to create holes which allow air, water, and nutrients to access the root systems. This helps the roots grow deeply and produce stronger, more vigorous plants. One of the main reasons for aerating is to alleviate soil compaction. Compacted soils have too many solid particles in a certain volume or space, which prevents proper circulation of air, water, and nutrients within the soil profile. Excessive thatch at the turf/soil interface can also starve the roots from these essential elements.

There are three (3) types of aeration processes we are equipped to perform, with deep tine and blade tine being the two we'll employ the most frequently.

DEEP TINE

This is a process in which 12" long x 3/4" diameter solid tines are used to help relieve soil compaction and promote a healthy and robust root system. Over time, this will lead to the plant root's ability to pull water from a larger area in the soil which in turn will reduce the frequency of drought stress. This process does not pull a core like conventional aeration and therefore is a low disruption/high impact maintenance practice. Deep time is intend to be performed on all sports field surfaces in both the spring and the fall.

BLADE TINE

This process utilizes a tow behind unit equipped with a drum roller and a series of 6" long thin blades that "slice" through the grass, past the thatch layer, into the soil. This process impacts a significantly smaller area than Deep Tine aeration but still serves an important purpose. Very quickly and efficiently this unit will create narrow slits that will allow gas exchange (release of CO₂ and introduce O₂) and water to penetrate deeper into the root zone. The distinct advantage this process has over the others is that it is very fast, and most field users won't even know it was done because of its minimal disruption to the field surface.

HOLLOW TINE

Hollow tine is the process of taking small plugs from the field surface. Hollow tines are mechanically driven into the grass, and a plug consisting of soil, thatch, and grass is removed by each tine. The plug is then deposited on the field's surface and must be removed to keep it playable for the users. This is the most disruptive and labor-intensive aeration process and will only be used by the Public Works Department if necessary.

TOPDRESSING

Topdressing is the process in which a material, typically sand, is evenly spread across the field. The purpose is to improve surface smoothness, and to dilute thatch and excess organic matter by incorporating sand into the soil. In conjunction with aeration

events, sand can then be further incorporated into the soil profile via the aeration holes. It is also beneficial to follow a topdressing event with a broadcast overseed to give the seed the best chance to germinate when in contact with the topdressing material.

Currently, the Public Works Department is in communication with local quarries to source out an affordable topdressing material that meets the required specifications; field applications will begin this fall once a source is secured. Moving forward from 2023, the goal will be to topdress selected fields twice per year; this is an increase from the current practice of once per year.

OVERSEEDING

Overseeding is the process of periodic application of seed to an existing turfgrass stand to improve turf density. Because the City of Kingston's sport fields are frequently utilized, there are limited breaks/resting periods for optimum turfgrass recovery. The grass cannot recuperate quickly enough when used for games, practices, and general public use. Overseeding must be done on a routine basis on high-use fields if there is any chance of providing a dense, more uniform, and safe playing surface.

Overseeding of fields is traditionally done using perennial ryegrass because of its ability to germinate quickly. It is used in combination with Kentucky bluegrass that forms the "fundamental" sports turf surface due to its resilience and ability to self-repair. Cultivar selection depends on several factors including: overall goal of field quality, resources for follow up maintenance, irrigation capabilities, etc. The Public Works Department is currently researching the best cultivar options for the City's growing region with an emphasis on wear tolerance, drought tolerance, and germination speed.

The Public Works Department intends to overseed select rectangular fields (prone to the most wear) five (5) times per year and select baseball diamonds three (3) times a year. In addition to overseeding, bare spots (goal mouths, center of field) and divots will be hand seeded with a seed/soil mixture. This operation may be completed on all classifications of fields, depending on the field's condition.

VERTICUTTING

Verticutting, otherwise known as vertical mowing, is the process of removing thatch build-up from fields. Thatch is a layer of organic matter that accumulates on a field around the base of the grass plants at the soil interface. Thatch is a combination of living and dead plant matter that can build up over time. If this is left unchecked, it can negatively impact the overall health of the turf. This process involves a unit with tightly spaced blades that cut vertically into the turf, removing the thatch material, and depositing it on the field surface. This process is typically done with a mower outfitted with verticutting heads, however, it can also be done with a purpose-built machine that can verticut and clean up the debris in the same pass. Fortunately, the City of Kingston

has recently made a capital investment in a purpose-built machine that will help the Public Works Department be more effective and efficient in this specific process.

The Public Works Department plans to verticut select rectangular fields three (3) times a year and select baseball diamonds two (2) times a year. This operation may be completed on all classifications of fields, depending the on field’s condition.

ROLLING

Rolling is the process of utilizing a weighted drum roller to smooth out the field surfaces. This is a great tool to use in the spring to repair any frost heaving from the winter months, and to smooth out the fields after an aeration event.

The Public Works Department plans to roll all fields first thing in the spring. This will be weather and field conditions dependent, and continuously completed on an “as needed” basis throughout the season.

FIELD RESTING

Field resting is a process in which high-use fields are closed for a period of time to allow the Public Works Department a window of time to perform rehabilitative and preventative maintenance tasks to allow the turf time to rest and recover. This is a necessary disruption to regular field programming with the end goal of providing a superior product for the users when re-opened. This practice is an industry standard, which historically has not been implemented in the City of Kingston. This program's success requires user groups' support by keeping off the fields during designated field resting periods.

For the 2023 Season, the Public Works Department plans to rest five (5) rectangular fields for a duration of one (1) month each.

FIELD NAME	CLOSING DATE	OPENING DATE
John Machin Int. #2	May 1st	June 1st
Woodbine #4	June 1st	July 1st
Jim Beattie #1	July 1st	August 1st
McCullough #1	August 1st	September 1st
Catons #1	September 1st	Closed for season

During the resting period, the following maintenance task will be completed as needed:

- Verticut
- Aerate
- Topdress
- Overseed
- Fertilize

- Roll
- Fill in divots and low spots

These maintenance tasks will be completed in the first week of the field resting period, with the other three (3) weeks used to allow the grass seed time to germinate and for the field to recover from user use.

IRRIGATION

Irrigation systems will be turned on in the spring and tested to ensure functionality. Any repairs required will be made at that time. Water distribution audits will also be completed once functionality is confirmed to ensure proper coverage and uniformity.

Investigations are currently ongoing to determine potential upgrades to existing systems such as valves, sprinklers, controllers, etc. Sports Fields which are irrigated are restricted by the City's bylaw on days of use.

BALL DIAMOND INFIELDS

Ball diamond infields will be assessed to determine the extent of maintenance required before opening. The assessment and work will include:

- Pitching mound
- Home plate
- Infield material: additional may be required for both clay and gravel diamonds.
- Transition from infield to outfield turf: ensure they are edged and leveled.
- Grooming: to take place once the above items are completed (if necessary)

During the season, ball diamond infields will be groomed at least once per week. Additional grooming will take place and prioritized at facilities with bookings through the Recreation & Leisure Services department.

Based on the initial infield assessments, a plan will be established outlining which clay infields require additional material. The appropriate material will be procured, and staff will add, and groom material as required. The goal is to have a uniform surface for safety and consistent playability.

A ball diamond infield maintenance clinic will take place on Wednesday, May 17, 2023 for the Public Works Department led by industry experts. This clinic will help educate new and returning staff on infield maintenance fundamentals and principles.

MAINTENANCE EQUIPMENT

Over the last 3 years, sports field equipment has been updated with new replacement tractors, mowers, draggers, and trucks. Working together with Fleet this program will continue.

New for 2023 is the Wiedenmann Super 600. This multipurpose tow-behind unit will help efficiencies in the removal of thatch build up from our fields. It also will assist in the cleanup of aeration cores, grass clippings, and leaf debris.

INFRASTRUCTURE

BLEACHERS

All bleachers will be inspected in the spring to identify parts (frame, seat boards, etc) that need to be repaired or replaced. The Public Works Department currently has 4-5 additional sets that can be set up at any location with seating deficiencies. Recreation and Leisure Services, in conjunction with the User Groups will know where these bleachers will be best suited.

The base material underneath and around the bleachers, in mainly ball diamonds, will be inspected and additional material will be added as needed. Clean up and unsightly weed/grass will be removed from this area. Additionally, weekly inspections by staff will ensure that damaged bleachers are identified for quick repair.

FENCES

All fences will be inspected in the spring to identify parts (fencing, top/bottom rails, top cap, etc.) that need to be repaired or replaced. A new fence was installed at Megaffin Stadium along the 1st and 3rd baselines in December of 2022. Weekly inspections by staff will ensure that damaged bleachers are identified for quick repair.

LIGHTING

All lighting will be inspected in the spring to identify parts (bulbs, shields, timers, etc.) that need to be repaired or replaced to ensure they are all functional for the start of the playing season. Lighting issues identified by field users can be forwarded via “contact us” for action.

WASHROOMS

All City washrooms at Sports Field facilities will be inspected in the spring to identify needs for cleaning, painting, and lighting. They will be clean and fully functional for the start of the playing season. Staffed locations will have washrooms cleaned multiple times per day and unstaffed locations will be cleaned daily.

Contractor managed Port-a-Potty's will be situated at select locations that do not have City facilities. They will be placed at convenient locations for people to use, and where odor will not pose an issue. User groups may be required to order additional portable toilets for events/tournaments.

GARBAGE / RECYCLE

Ball Diamonds will have recycling cans in both dugout areas, as well as garbage and recycling cans behind the fence at home plate. Rectangular fields will have garbage and recycling cans located near the parking lot and field areas.

The cans are placed in a consistent location across sport fields and for ease of access for staff to service. The cans at staffed locations are emptied multiple times per day or as required and unstaffed locations are emptied as part of a trash collection route completed two to three times per week. For special events, cans are emptied by weekend staff.

User groups shall clean up areas when they leave. User groups will be notified if they are leaving garbage on fields or in locations other than garbage cans when they finish. Bench areas or dug outs should be left in the condition in which they were when the team arrives.

Ball Diamond Field Name	Location	Street(s)/Address	Field Type	Lights?	Field Class
Bayridge Park Softball Diamond	Bayridge Park Complex	Bayridge Dr.	Softball Diamond	Yes	A
City Park Cricket Field Baseball Diamond #1(West)	City Park	Bagot St. Barrie St. West St.Court St.	Baseball Diamond (50/70)	No	A
City Park Cricket Field Softball Diamond #2 (East) (Youth Sized)	City Park	Bagot St. Barrie St. West St.Court St.	Softball Diamond (Youth Sized)	No	C
Cloverdale Softball Diamond #1 (West/Arena)	Cataraqui Community Centre	1030 Sunnyside Rd.	Softball Diamond	Yes	A
Cloverdale Softball Diamond #2 (Youth Sized)	Cataraqui Community Centre	1030 Sunnyside Rd.	Softball Diamond (Youth Sized)	No	A
Cloverdale Softball Diamond #3 (East)	Cataraqui Community Centre	1030 Sunnyside Rd.	Softball Diamond	Yes	A
Cloverdale Softball Diamond #4 (North)	Cataraqui Community Centre	1030 Sunnyside Rd.	Softball Diamond	Yes	A
Garrigan Park Softball Diamond	Garrigan Park	Chruch St.	Softball Diamond	Yes	A
Grenadier Park Softball Diamond (Youth Sized)	Grenadier Park	Grenadier Dr.	Softball Diamond (Youth Sized)	No	C
Hemlock Downs Softball Diamond	Hemlock Downs Park	Aragon Rd.	Softball Diamond	No	C
Hillview Park Softball Diamond (Youth Sized)	Hillview Park	Truman Dr.	Softball Diamond (Youth Sized)	No	C
Hudson Park Softball Diamond (Youth Sized)	Hudson Park	Hudson Dr.	Softball Diamond (Youth Sized)	No	C
John Brewer Park Softball Diamond	John Brewer Park Complex	3505 Brewers Mills Rd.	Softball Diamond	Yes	B
Lasalle Park Softball Diamond 1 (South)	Lasalle Park	McEwen Dr.	Softball Diamond	Yes	B
Lasalle Park Softball Diamond 2 (East)	Lasalle Park	McEwen Dr.	Softball Diamond	No	B
Lasalle Park Softball Diamond 3 (West)	Lasalle Park	McEwen Dr.	Softball Diamond	No	B
Lawrence Park Softball Diamond	Lawrence Park	Aylmer Cres.	Softball Diamond	No	C
Meadowcrest Softball Diamond	Meadowcrest Park	360 Kingston Mills Rd.	Softball Diamond	No	B
Megaffin Park Baseball Diamond	Cook Brother's Youth Centre	Bagot St.	Baseball Diamond (60/90)	Yes	A
Memorial Centre Softball Diamond #1 (West)	Kingston Memorial Centre	York St.	Softball Diamond	No	B
Memorial Centre SoftBall Diamond #2 (East)	Kingston Memorial Centre	York St.	Softball Diamond	No	B
Oakridge Park Softball Diamond	Oakridge Park	Oskridge Ave. Gibson Ave.	Softball Diamond	No	C
Optimist Baseball Diamond	Cook Brother's Youth Centre	Bagot St.	Baseball Diamond (54/60-80)	Yes	B
Pierson Park Softball Diamond #1 (East)	Peirson Park Complex	Joyceville Rd	Softball Diamond	Yes	A
Pierson Park Softball Diamond #2 (West)	Peirson Park Complex	Joyceville Rd	Softball Diamond	Yes	A
Ron Lavallee Park Baseball Diamond 1 (North) (Youth Sized)	Ron Lavallee Memorial Park	Forth Ave	Baseball Diamond (Youth Sized)	No	B
Ron Lavallee Park Softball Diamond 2 (South) (Youth Sized)	Ron Lavallee Memorial Park	Forth Ave	Softball Diamond (Youth Sized)	No	C
Rotary Park Softball Diamond (Youth Sized)	Rotary Park	Cloverdale Dr	Softball Diamond (Youth Sized)	No	C
Shannon Park Softball Diamond	Shannon Park Complex	McCauley St	Softball Diamond	No	B
Shannon's Corners Baseball Diamond	Shannon's Corners	Perth Rd	Baseball Diamond (50/70)	Yes	B
Third Avenue Park Softball Diamond	Third Avenue Park	Perth Rd	Softball Diamond	No	C
Veteran's Field Baseball Diamond	Veteran's Field	70 Hickson Ave	Baseball Diamond (50/70)	No	C
Victoria Park Softball Diamond	Victoria Park	63 Mack St	Softball Diamond	No	C
Westbrook Park Softball Diamond	Westbrook Park	Woodfield Cres	Softball Diamond	No	C
Woodbine Park Baseball Diamond #1	Woodbine Park	Woodbine Rd	Baseball Diamond (60/90)	Yes	A
Woodbine Park Baseball Diamond #2	Woodbine Park	Woodbine Rd	Baseball Diamond (43/70)	Yes	A
Woodbine Park Baseball Diamond #3	Woodbine Park	Woodbine Rd	Baseball Diamond (39/70)	Yes	A
Woodbine Park Baseball Diamond #4	Woodbine Park	Woodbine Rd	Baseball Diamond (52/90)	Yes	A

Exhibit C to Report Number ARCP-24-008

Rectangular Field Name	Location	Street(s)/Address	Field Type	Field Dimension	Goal Dimensions	Lights?	Field Class
Ashton Park 3/4 Soccer Field (South)	Ashton Park Complex	Ashton PL	3/4 Soccer Field	40m x 70m		No	B
Ashton Park Mini Soccer Field (North)	Ashton Park Complex	Ashton PL	Mini Soccer Field	36m x 60m		No	B
Bayridge Mini Soccer Field 1 (East)	Bayridge Park Complex	Bayridge Drive	Mini Soccer Field	40m x 60m		No	B
Bayridge Mini Soccer Field 2 (West)	Bayridge Park Complex	Bayridge Drive	Mini Soccer Field	40m x 60m		No	B
Bert Meunier Common Mini Soccer Field	Bert Meunier Common	739 Augusta Dr.	Mini Soccer Field	35m x 64m		No	B
Bexley Gate Park Mini Soccer Field	Bexley Gate	Muirfield Cres	Mini Soccer Field	40m x 60m		No	B
Birchwood Park (Trivoli) 3/4 Soccer Field	Birchwood Dr.	Birchwood Dr	3/4 Soccer Field	30m x 65m		No	B
Caraco Home Field (Turf Field)	Invista Centre	1350 Gardiners Rd	Football Uprights, Track and Field Facility	60m x 100m		Yes	A
Caton's Field Soccer Field #1 (North)	Caton's Field	Bagot Street	Full Size Soccer Field, Football Uprights	60m x 100m		Yes	A
Caton's Field Soccer Field #2 (South)	Caton's Field	Bagot Street	Full Size Soccer Field	60m x 100m		No	A
City Park Mini Soccer Field	City Park	Bagot St. Barrie St. West St.Court St.	Mini Soccer Field	35m x 50m		No	C
Grenadier Park Soccer 3/4 Field (West)	Grenadier Park	Grenadier Dr	Full Size Soccer Field, Football Uprights	45m x 70m		No	B
Grenadier Park Mini Soccer Field (East)	Grenadier Park	Grenadier Dr	Mini Soccer Field	40m x 60m		No	B
Highgate Park Soccer Field	Highgate Park	Carmil Blvd	Full Size Soccer Field	60m x 100m		No	A
INVISTA Soccer Field (South)	Invista Centre	1350 Gardiners Rd	Full Size Soccer Field	60m x 100m		No	A
Jim Beattie Mini Soccer Field (North)	Jim Beattie Park	Henderson Blvd	Mini Soccer Field	40m x 65m		No	B
Jim Beattie Soccer Field #1 (West)	Jim Beattie Park	Henderson Blvd	Full Size Soccer Field	60m x 100m		Yes	A
Jim Beattie Soccer Field #2 (East)	Jim Beattie Park	Henderson Blvd	Full Size Soccer Field	60m x 100m		Yes	A
John Machin 3/4 Soccer Field #1 (East)	John Machin Field	1307 John Marks Ave	3/4 Soccer Field	40m x 70m		No	B
John Machin 3/4 Soccer Field #2 (Centre)	John Machin Field	1307 John Marks Ave	3/4 Soccer Field	40m x 70m		No	B
John Machin 3/4 Soccer Field #3 (West)	John Machin Field	1307 John Marks Ave	3/4 Soccer Field	40m x 70m		No	B
John Machin International Soccer Field #1 (West)	John Machin Field	1307 John Marks Ave	Full Size Soccer Field	60m x 100m		No	A
John Machin International Soccer Field #2 (East)	John Machin Field	1307 John Marks Ave	Full Size Soccer Field	60m x 100m		No	A
John Machin Mini Soccer Field #1 (South West)	John Machin Field	1307 John Marks Ave	Mini Soccer Field	35m x 40m		No	B
John Machin Mini Soccer Field #2 (North West)	John Machin Field	1307 John Marks Ave	Mini Soccer Field	35m x 40m		No	B
John Machin Mini Soccer Field #3 (North East)	John Machin Field	1307 John Marks Ave	Mini Soccer Field	35m x 40m		No	B
John Machin Mini Soccer Field #4 (South East)	John Machin Field	1307 John Marks Ave	Mini Soccer Field	35m x 40m		No	B
John Machin Turf Field	John Machin Field	1307 John Marks Ave	Turf Field, Full Sized Soccer Field	60m x 100m		No	A
Lafleur Park Mini Soccer Field	Lafleur Park	219 Van Order Dr	Mini Soccer Field	30m x 50m		No	C
Markers Acres Soccer Field	Markers Acres	201 Conacher Dr	Full Size Soccer Field	60m x 100m		No	A
Max Jackson 3/4 Size Soccer Field #2 (East)	Max Jackson Park	23 Oak St	3/4 Soccer Field	40m x 60m		No	C
Max Jackson Soccer Field #1 (West)	Max Jackson Park	23 Oak St	Full Size Soccer Field	60m x 100m		No	A
McCullough Park Mini Soccer Field #1 (North)	McCullough Park Complex	480 Portsmouth Ave	Mini Soccer Field	35m x 50m		No	C
McCullough Park Mini Soccer Field #2 (South)	McCullough Park Complex	480 Portsmouth Ave	Mini Soccer Field	35m x 50m		No	C
McCullough Park Soccer Field #1 (West)	McCullough Park Complex	480 Portsmouth Ave	Full Size Soccer Field	60m x 100m		No	A
McCullough Park Soccer Field #2 (North)	McCullough Park Complex	480 Portsmouth Ave	Full Size Soccer Field	60m x 100m		No	A
McCullough Park Soccer Field #3 (South)	McCullough Park Complex	480 Portsmouth Ave	Full Size Soccer Field	60m x 100m		No	A
Newcourt Park Mini Soccer Field #1 (North)	Newcourt Park (Nickle Avenue)	69 Nickle Ave	Mini Soccer Field	40m x 60m		No	C
Newcourt Park Mini Soccer Field #2 (South)	Newcourt Park (Nickle Avenue)	69 Nickle Ave	Mini Soccer Field	40m x 60m		No	C
Old Colony Mini Soccer Field 1 (West)	Old Colony Road Park	Old Colony Rd, Milford Dr	Mini Soccer Field	40m x 80m		No	B
Old Colony Mini Soccer Field 2 (East)	Old Colony Road Park	Old Colony Rd, Milford Dr	Mini Soccer Field	40m x 80m		No	B
Portsmouth Park Soccer Field #1 (West)	Portsmouth Park	95 Calderwood Dr	Full Size Soccer Field	40m x 75m		No	B
Portsmouth Park Soccer Field #2 (East)	Portsmouth Park	95 Calderwood Dr	Full Size Soccer Field	40m x 75m		No	B
Shannon Park Soccer Field	Shannon Park Complex	199 Wilson Street	Full Size Soccer Field	60m x 100m	24'	No	B
Westbrook Park 3/4 Soccer Field	Westbrooke Park		3/4 Soccer Field	40m x 65m		No	C
Woodbine Park Mini Soccer Field	Woodbine Park	Woodbine Rd	Mini Soccer Field	30m x 65m		No	C
Woodbine Park Soccer Field #1 (Centre East)	Woodbine Park	Woodbine Rd	Full Size Soccer Field	60m x 100m		No	A
Woodbine Park Soccer Field #2 (East)	Woodbine Park	Woodbine Rd	Full Size Soccer Field	60m x 100m		No	A
Woodbine Park Soccer Field #3 (East)	Woodbine Park	Woodbine Rd	3/4 Soccer Field	40m x 70m		No	A
Woodbine Park Soccer Field #3 (West)	Woodbine Park	Woodbine Rd	3/4 Soccer Field	40m x 70m		No	A
Woodbine Park Soccer Field #4 (Centre West)	Woodbine Park	Woodbine Rd	Full Size Soccer Field	60m x 100m		Yes	A
Woodbine Park Soccer Field #5 (West)	Woodbine Park	Woodbine Rd	Full Size Soccer Field	60m x 100m		Yes	A