

Splashpads

Part of the City of Kitchener's Parks Master Plan

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Related sections

Places Spaces Park Amenities Park Design Approach Trails & Lighting Signature & Feature Parks

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Acknowledgement

4 Splashpads

Places & Spaces is focused on the park service provided to the Kitchener community. Parks and open spaces are integral to communities, providing spaces where people play, explore, and build connections with the environment and with others.

The City is uniquely positioned to provide, care for, maintain, and secure public access to parks and open spaces for all members of its communities. The City of Kitchener recognizes that these public spaces are planned and built on land that is the traditional territory of the Chonnonton, Anishinaabe and Haudenosaunee Peoples. We recognize our responsibility to serve as stewards for the land and honour the original caretakers who came before us. Our community is enriched by the enduring knowledge and deep-rooted traditions of the diverse First Nations, Métis, and Inuit in Kitchener today. The significance of this land to Indigenous communities is respected, and we value the role that parks and open spaces can play in Reconciliation. The City of Kitchener acts as a steward for almost 2,000 hectares of land as part of a parks and open space system. Through the implementation of Places & Spaces, we will work to better understand and address community needs and the barriers preventing use of these spaces, so that all community members in Kitchener might feel welcome, safe, and able to use our parks and open spaces.



Introduction

This section focuses on the background information and specific details that inform the context for the recommendations made for this topic.

Background

Splashpads are a common alternative to outdoor pools. They are used by municipalities all over the province for recreational purposes. Several factors play an important role in splashpad planning. This includes proximity to supporting infrastructure (e.g., washrooms), demographic needs for cooling, and most importantlyunderstanding water consumption. With water consumption as a foundation, gaps in the inventory can be identified and addressed with a full picture of the resource demands and costs.

The purpose of this section is to inventory Kitchener's current splashpads and project the number and location of future investments.

What is a splashpad?

Outlet

Sewer

A splashpad is an area that provides immersive water play without standing water. This feature allows them to be included in public spaces without life guard supervision, making them ideal recreational opportunities in many of Kitchener's parks. They offer a place to cool down and to play during the summer months. There are a variety of types, looks, and sizes throughout the city. Splash pads can include ground jets, play features, over head spraying, interactive nozzles, and more.

> Play feature

Concrete pad

Drain

Water use

A typical splash pad draws its water from a potable municipal water line (1), and distributes that water through a central manifold (2) that controls the water pressure for each feature.

After passing through play features, there are three ways the water is treated.

Most common in Kitchener is a single-use approach where water is diverted to sewer lines (3) to move water off site. In some instances, infiltration in nearby stormwater facilities is possible (4). Finally, the water can be collected and recirculated back into the system to reduce the total volume of water used (5).



Existing inventory

Kitchener features ten splash pads throughout the city. There is currently no distinction between them despite a wide variety of sizes, activities, and experiences. This booklet will define new categories based on these features, including **Destination**, **Local**, **and Urban splashpads**.

Destination splashpad

Service area: 10 minute drive

A large pad area with a variety of water play features, high use facility and supported by adequate parking, seating, changing, and washroom facilities.

Local splashpad

Service area: 10 minute walk or located at a community centre

Moderate to small pad area with a narrower variety of water play features. Community pads may be standalone or supported by a community centre facility.

Urban splashpad

Service area: 10 minute walk or 2-5 minute drive Pad area varies with single use water play or cool down misting features. Typically located in urban park settings or urban squares. Splashpads are located around the city in a variety of park and non-park settings, including Feature parks (two), City parks (one), Community parks (one), urban square (one) and community centres (three).



Destination

- McLennan Park
- RBJ Schlegel Park
- Victoria Park
- Kiwanis Park*



Local

- Breithaupt Park
- Centreville Chicopee Community Centre
- Chandler Mowat Community Centre
- Kingsdale Community Centre
- Doon-Pioneer Park Community Centre



Urban

Carl Zehr Square

*The Kiwanis Park splashpad is located within the outdoor pool area. It can only be accessed through controlled entry to the pool compound.



Water usage

Water consumption is one of the most important factors in managing existing splashpads and planning future expansions. As single use systems are most common within the city, water drawn for splashpads is used only once before being centrally treated.

Destination splashpads use approximately 25,000 cubic meters of water annually within the operating season. The largest consumer of water is Victoria Park at over 30,000 cubic meters (30 million litres) annually. Local splashpads, on average, draw approximately 10,000 cubic meters (10 million litres) of water annually. For context, 6,000 cubic meters (6 million litres) equates to filling a standard soccer field area with one meter of water. This use comes at a cost. At the time of writing this master plan, water supply costs \$2.54 per cubic meter with a sewer surcharge rate of \$3.21 per cubic meter. Only two of the city's nine splashpads do not pay the sewer surcharge rate as all waste water is managed on site.

Splashpads can be made more economically sustainable by eliminating sewer surcharges. This means adapting or selecting locations where water can be re-used or otherwise managed entirely on site.



Average annual water consumption (2017-2022)

(less 2020 data for COVID-19 shutdowns)





Water resource management

There are two common designs for a splashpad's use of water: single use (or flow through), and recirculation. Recirculation provides the greatest opportunity to conserve water. Of the city's ten splashpads, two are recirculating systems at Carl Zehr Square and Kiwanis Park.

Recirculation can significantly reduce the cost and use of water. There are other factors to consider however, which have led to Kitchener primarily installing single use splashpads.

A third design option is being developed that combines the benefits of both systems: a dual-use approach.

Recirculation

		O Recirculation
Additional installation cost	None	High Requires all the same equipment, plus underground storage, pumps, and filtration
Seasonal water use	6,000 - 20,000 cubic meters Average local and destination splash pad water consumption	~1,000 cubic meters Approximate volume required as minimum replacements and water losses
Maintenance and inspections	Seasonally Typically inspected on opening and closure of the system	Daily / Weekly Recirculated water requires daily testing every 4 hours and more frequent maintenance
On site staffing	None No daily staff oversight required	Daily Water requires daily testing and action if chemically unbalanced
Drinkable water	Yes Equivalent to tap water	No Equivalent to pool water with chemical disinfectants
Risk of shutdown	Low Constant clean water supply eliminates risk of shutdowns beyond mechanical	High Small volumes of water can be chemically impacted quickly, causing full shutdown until correction

Water is collected and treated through recirculation and re-used in adjacent large scale irrigation systems such as a natural turf sportsfield. This maintains reliable access to the splashpad, nearly eliminating public health risks related to recirculation, and promotes environmental and financial sustainability. A dual-use system is a new approach to splashpad water management and has few precedents in the province.



High Requires all the same equipment, plus underground storage, pumps, and filtration

Half Potential to eliminate water consumption needs of adjacent uses

Weekly / Monthly

Largely automated irrigation controls to determine water source, system diagnostics, etc.

None

No daily staff oversight required

Yes

Equivalent to tap water

Low

Constant clean water supply eliminates risk of shutdowns due to contamination

Precedents

Splashpads support a common recreational activity and are used by municipalities across the province. There is no standard or target provision for splashpads. The City can benchmark and set an approximate average provision by understanding how many splashpads there are to serve Kitchener's population compared to other municipalities' splashpad provisions. The number of splashpads each municipality has can help frame trends around the province, but needs to be understood within the context of the quality of the splashpads, their locations, accessibility, water usage, environmental and financial sustainability among other factors. Measuring strictly by number of splashpads, Kitchener is slightly under serviced compared to the median Ontario city.





*9 splashpads that are independent and free to use

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Data Sources

This section highlights the relevant sources of information and research used to develop recommendations for this topic. A total of 12 data sources, including engagement, have informed the Parks Master Plan recommendations. For more detailed information on each data source, please refer to the Places booklet.



Equitable engagement

community



External research

Policy



City of Kitchener strategies



Engagement with City of Kitchener departments

Engagement with the broader



Engagement with partner organizations



Comparative analysis







Best practices



City of Kitchener staff experience





Findings



20 Splashpads

Several themes emerged across topic areas, engagement audiences, and data collection methods. The following section reflects major themes that cut across several datasets from engagement methods. Findings relevant to more than one theme are reflected in each. For more detailed information on the overall engagement effort, please refer to the Places booklet.



Mapping each splashpad shows visible gaps in access to splashpads, either by biking, walking or driving. Notable gaps are highlighted on the map. The majority of responses show residents primarily drive to splashpads, and, of those drivers, are willing to drive over 10 minutes to their preferred facility.

Any consideration of expansion will consider specific parks within each community gap, and be selected based on equity metrics, including proximity to critical needs neighbourhoods and access to public transit. Furthermore, any expansion must take the Outdoor Pool Strategy into consideration.

Splashpads offer nearly all of their recreational value free of charge to any person, significantly decreasing their barrier to participate. Difficulty getting to splashpads that are too far away from individuals' homes was the most common theme raised through engagement. Others included they are too crowded, and people are unsure of where to find them.



Considering environmental sustainability and water conservation for splashpads surfaced as themes in engagement findings. Respondents shared creative ideas to improve splashpads, including using recycled water, natural splashpads, timed/motion sensor features, and using more water-efficient equipment.

In addition to the suggestions made through engagement, treating all water on site can sustain ground water levels and decreases the burden on centralized treatment. Re-using water at least once can significantly reduce water consumption and associated costs.



The majority of splashpad users are satisfied with Kitchener's splashpads. When asked why residents use splashpads, the top three responses included keeping kids active, free to use, and providing a way to cool down. The most common frequency of splashpad use was found to be "a few times per month", followed by "two to three times per week". Most splashpad users visit splashpads frequently.



Engagement reflected that some existing splashpads could be better maintained, sometimes illustrating their condition as a safety risk.







Recommendations

This section summarizes the recommendations specific to this topic that are informed by the broad and local context, data sources, and findings. Each recommendation begins with a number representing the order in which its implementation is prioritized. For a comprehensive list of all recommendations made for this master plan update and the implementation framework, please refer to the Places booklet.

Consider water conservation systems for splashpads

Design all splashpads as single-use systems with the option to become recirculation or hybrid systems where applicable. Include water conservation features such as isolated timers, motion sensors, and lower volume play features.

Splashpads are a valued community recreational amenity. They are also a resource intense facility, available for use during all park hours, seven days a week, up to 18 weeks per year. Managing water as a resource is not only an environmental and financial best practice, but also highly supported by residents. All new and renovated splashpads will have water conservation as a prioritized design consideration, inclusive of a recirculation treatment model and potential connection to water treatment cycling of outdoor pools.

29: More splashpads

Develop three new local splashpads in alignment with the Outdoor Pool Strategy.

In order to maintain the city's existing provision of splashpads, an additional splashpad is recommended for every 22,000 new residents. Annual projections over the next 20 years are between 3,700 and 4,300 new residents per year. This means one new splashpad will be needed in Kitchener every five to six years.

Potential locations will be influenced by the Outdoor Pool Strategy and by a set of developed criteria. Each location should be located in an area that:

- Is adjacent to existing or future irrigation;
- Is conducive to waste water management and infiltration;
- Features existing active park uses (e.g., playgrounds, courts, etc);
- Has access to washrooms or change room facilities;
- Is in an active and highly visible location;
- Is in proximity to critical needs neighbourhoods as identified in Spaces;
- Includes existing parking facilities;
- Addresses geographic gaps;
- Is within walking distance of public transit;
- Can be paired with existing outdoor pools;
- Can be incorporated into the future Outdoor Pool Strategy by the City of Kitchener.

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Design considerations

All ages and abilities design

With flat, concrete surfaces, splashpads are generally accessible by nature. When planning each pad's programming, play elements, and spaces, it is important to consider that all ages use these spaces. This can be achieved through varying spray types, heights, and play experiences. Similar to playgrounds, separating ageappropriate structures can provide comfort to those overwhelmed by a crowded, highly active space.

Value neutral space

One of the reported barriers to using splashpads is overcrowding. It is important to give value to the space between features to account for high-energy movements.

Water conservation methods

Employ a variety of water conservation techniques like separation of zones, tighter timing activation windows, "push to play" elements, and a balance of high water volume play features with lower water volume ones like misters and ground features.

Be unique

Make the splashpads stand out to be engaging and maintain interest for the whole season. Consider local influences on design like surrounding neighbourhood themes, park context, or community centre architecture.

Washrooms, shade, and seating

Splashpads are only as successful as their supporting amenities. Access to washrooms are a requirement at each new location. Adequate shade and seating are equally as important as the splashpad features themselves.

Recommendations summary

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