



INFORMATION REPORT

TO:	Chair and Members Audit, Finance and Administration Committee
COMMITTEE DATE:	November 6, 2017
SUBJECT/REPORT NO:	Costs and Savings for Spray Pads (PW17073a) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Cynthia Graham (905) 546-2424, Extension 2337
SUBMITTED BY:	Craig Murdoch, B. Sc. Director, Environmental Services Public Works
SIGNATURE:	

Council Direction:

Audit, Finance and Administration Committee, at its meeting on September 11, 2017 approved the following:

“That Staff report back to the Audit, Finance and Administration Committee this quarter, respecting specific line by line breakdowns on the costs and cost savings of splash pads with regards to City of Hamilton policies and procedures.”

Information:

Recent Report History

On May 11, 2017, Information Update ES17009 was circulated to Members of Council in response to a request of staff to provide an update on the costs of constructing spray pads in the City of Hamilton. This update outlined the design considerations and construction costs, as well as a specific example recently constructed at Buchanan Park in Ward 8. This information update provided a total construction cost of \$329,000; other project related costs of \$89,000 for a total spray pad cost of \$419,000. The other project related costs included design, other consulting costs including archaeology and geotechnical testing costs, and staff recovery fees. This Information Update also included a table benchmarking the City of Hamilton against other communities.

Additionally, Information Update ES17009 discussed alternatives to provide a water play amenity at a lower cost.

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OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

On September 18, 2017, Information Report PW17073 was brought to Public Works Committee, responding to direction for staff to investigate options for reducing the cost for the design and construction of future spray pads. This report outlined two design options, and three construction options that could potentially result in cost savings in the design and construction of future spray pads. Information Report PW17073 was received.

Cost Comparisons

Not all spray pads are the same in design; therefore there are differences in construction costs as well. Spray pads with existing servicing connections are less expensive to construct than those requiring new services from the main utilities in the road (i.e. water, storm, sanitary). Upright features are more expensive than ground level jets. Custom upright features cost more than “off the shelf” options. Coloured concrete and patterned concrete are more expensive than natural concrete with a standard broom finish. Due to these differences, staff endeavoured to undertake a comprehensive comparison of spray pad amenities constructed by other municipalities.

The attached Appendix A to Report PW17073a illustrates how the City of Hamilton compares with other municipalities in the development and construction of spray pads. The chart attempts to “correct” for inclusions or exclusions as much as possible to create an “apples to apples” comparison. City of Hamilton projects are found throughout the cost spread, demonstrating that City of Hamilton projects are neither the most expensive, nor the cheapest. Costs per square metre for spray pads range from \$557.08 to \$3,462.47 for all the municipal examples provided. The adjusted average is \$1,453.30 per square metre of spray pad for all of the examples provided. For the Hamilton examples only, excluding Durand Park as not representative of a typical project, the adjusted average is \$1,461.31 per square metre, compared with the other municipalities’ adjusted average of \$1,248.38 per square metre. When reviewed as a project total, the Hamilton adjusted total cost average is \$312,286.67, compared with the other municipalities average of \$387,363.64. When the other municipalities’ costs per square metre were analyzed, it was clear that typically they are larger projects, and therefore attain better economies of scale, resulting in lower per metre costs than Hamilton projects. Hamilton projects tend to be a bit smaller, because Hamilton has so many more spray pads than other comparable municipalities, so the pads tend to be smaller to serve a smaller catchment area.

The adjustments made to the construction costs in Appendix A to Report PW17073a are as follows:

- Removal of “to road” sanitary service premium = \$55,000. This is based on recent City of Hamilton tender prices, where the average difference between a sanitary sewer connection within the park and a sanitary sewer connection to a

main in the road was \$55,000. This correction was applied because most examples from other municipalities connected to existing services in their parks.

- Addition of a “to existing” sanitary service = \$30,000. This is to correct for those examples where the spray pad connected to a storm sewer only. The value of \$30,000 is based on information contained in a City of Ottawa spray pad report ACS2015-COS-PRC-0002 including supporting document #2 to that report. City of Hamilton spray pads connect to the sanitary sewer only.
- Addition of “upright costs” to adjust for those spray pads that had ground level jets only = \$9,000 per upright, with an assumption that 4 uprights would be a conservative estimate for a spray pad = \$36,000. Most City of Hamilton spray pads of similar size contain 4 or more upright features. In the case of spray pads that are smaller than 100 square metres, no adjustment was applied because staff felt it was unrealistic to include an upright feature on such a small spray pad.

Policies and Procedures

The direction to staff also included mention of City of Hamilton policies and procedures. Other policies and procedures that relate to the design and construction of spray pads which may or may not contribute to additional costs are as follows (with further detail in the paragraphs below):

- Spray pads are subject to water and sewer connection permits and compliance with Sewer By-Law.
- Water services shall be designed and installed in compliance with the City of Hamilton Construction and Materials Specification Manual.
- Electrical work must comply with the latest electrical code applicable to the City of Hamilton.
- Some park locations are subject to approvals by the Niagara Escarpment Commission or the applicable Conservation Authority.
- Geotechnical testing
- Archaeological study related to obligations from the Hamilton Archaeological Management plan and the Ministry of Tourism, Culture, and Sport Ontario Heritage Act.
- Maintenance procedures
- Applicable purchasing policies

In the City of Hamilton, the current standard is to have all spray pads connect the drain outlet from the pad to the sanitary sewer, where services are separated, or to the combined sewer. Staff are evaluating the requirements and alternatives to this standard.

The City of Hamilton has four Conservation Authorities with jurisdiction over lands within the City boundaries. The Conservation Authorities are the permit-granting agency for works that would impact or be located in the regulated areas as defined by the Conservation Authorities Act and Regulations. Any project that impacts lands within the regulated area of a Conservation Authority is subject to review and approval by the Conservation Authority. Permit fees are often required, as well as additional staff time for communication and revisions based on comments received by the Conservation Authority staff.

Some City of Hamilton lands are also subject to permit approval for work by the Niagara Escarpment Commission, by the authority of the Niagara Escarpment Planning and Development Act. These approvals often require permit fees as well as additional staff time for communication and revisions based on comments received by the Niagara Escarpment Commission staff.

Previous information updates and reports have briefly discussed other studies that are undertaken during the design of a spray pad. In particular, geotechnical tests are completed to ensure that the concrete pad will not be subjected to differential settling, causing cracking of the concrete creating tripping hazards, compromised piping, leaks, and increased maintenance. The tests require specialized equipment and training that cannot be completed with existing City of Hamilton staff.

Archaeological studies are normally undertaken, in compliance with the Ontario Heritage Act, which makes it illegal for anyone but a licensed archaeologist to disturb an archaeological site. The City of Hamilton's Archaeological Management Plan shows that most of the City is considered as having potential for archaeological resources. In order to be in compliance with the Act, and consistent with the Archaeological Management Plan, a minimum of a Stage 1 assessment is undertaken for all park development projects where a potential for findings is determined.

Parks and Cemeteries staff regularly inspect all spray pads in the City, using a standard inspection sheet. In addition, Public Health inspects each spray pad twice per season. The "Operating Procedures for Non-Regulated Recreational Water Facilities Guidance Document" published by the Ontario Ministry of Health and Long Term Care provides general guidance regarding construction and safe operation of spray pad facilities.

Supply and installation of spray pads must be procured in accordance with the City's Procurement Policy. The City's obligations to the Carpenter's Union CBA applies as well as any Fair Wage Policy implications if applicable.

Appendices and Schedules Attached

Appendix A - Cost comparisons of spray pad construction with comparator municipalities.