



City of Richmond

Report to Committee

To: Parks, Recreation and Cultural Services Committee **Date:** January 11, 2007
From: Mike Redpath, Manager, Parks - Programs, Planning & Design **File:** 06-2345-20-STEV2/Vol 01
Re: **Steveston Water Park – Response To New Health Regulations**

Staff Recommendation

1. That the 2007 Capital Budget be amended for the new capital submission “Steveston Park Water Play – Additional Funding” in response to new Vancouver Coastal Health regulations.
2. That the 2007 Characterization – Neighbourhood Parks submission will be decreased by \$208,730 in order to fund this new 2007 capital submission.
3. Amend the Contribution Agreement dated January 9, 2006 to reflect the additional \$30,000 contribution by the Steveston Community Society.

Handwritten signature of Dave Semple

Dave Semple
 Director, Parks and Public Works
 Operations
 (3350)

Handwritten signature of Mike Redpath

Mike Redpath
 Manager, Parks - Programs, Planning &
 Design
 (1275)

Att. 2

| FOR ORIGINATING DEPARTMENT USE ONLY | | | |
|-------------------------------------|---|---|---|
| ROUTED TO: | CONCURRENCE | CONCURRENCE OF GENERAL MANAGER | |
| Budgets | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> | <i>Handwritten signature of Dave Semple</i> | |
| Law | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> | | |
| REVIEWED BY TAG | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> | REVIEWED BY CAO | YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> |
| | <i>Handwritten initials: DS</i> | <i>Handwritten initials: MR</i> | |

Staff Report

Origin

The Steveston Water Park project was originally identified in the 2000 Steveston Park Vision Plan approved by Council. Planning for the water park began in 2003 and a budget of \$1 million was established, \$600,000 of which was for the water park itself, which was reflective of the industry and health standards at the time, a concept plan is included in Attachment 1.

The decision was made at the outset that a recirculating system with water treatment was preferable to the option of the direct use of the potable water supply that is then drained to waste. Given that the system is capable of circulating over 20,000 gallons per hour, the volume of water used in a day of operation is too great to drain to waste given the City's commitment to water conservation.

The tender to design and build the water park was released in February 2006 and the tender award was approved by Council in April 2006. It was during the course of the tender period that Vancouver Coastal Health informed the City of Richmond that the regulations governing water parks would be changing and those changes have resulted in increased costs to the project.

The purpose of this report is to seek Council approval for the transfer of existing capital funding from Characterization – Neighbourhood Parks capital project 2007 to the Steveston Water Park project to address the increase in costs due to the change in health regulations and to ensure the project's successful completion.

Analysis

The water park is required to have a certificate of authorization from the medical health officer prior to construction. Consequently, staff and the water park contractor have been working closely with Vancouver Coastal Health during the past year:

- Jan. 2006 - staff contacted the Richmond Health Department to ensure that all pertinent health regulations were included in the tender. Richmond Health provided reference to the existing Health Act for Swimming Pool, Spray Pool and Wading Pool Regulations.
- Feb. 2006 – Richmond Health Department notified the City that the health regulations would be changing in response to contaminated water incidents in the State of New York in August of 2005.
- Mar. 2006 - The Health Department informed the City that; *"The Steveston Spray Pool will be permitted to have a water recirculation/treatment system that meets the requirements for a 'swimming pool' under the current regulations (i.e.; SWIMMING POOL, SPRAY POOL AND WADING POOL REGULATIONS)."*
and,
"One caveat to this allowance is that water quality testing will occur after the proposed facility has been opened to assess the safety of the water. Further requirements to the water treatment at this facility may be required based on the results of this water quality testing."

Further requirements to the water treatment at this facility may also be required based on the discretion of the Medical Health Officer (as per Sec. 100 of the Regulations noted above) as new public health information becomes available."

- May 2006 - Notification to the contractor and the City that the Health Department would be referring to the newly updated New York State Standards (Jan. 18, 2006) in the review of the water treatment system.
- May 29 to Sept. 28 – Submission of drawings to Vancouver Coastal Health for certification review followed by several meetings and numerous requests for changes to the proposed water treatment system.
- Sept. 29 to Oct. 26 – Subsequent to a meeting between the City and it’s contractors and Vancouver Coastal Health, it was agreed that the water treatment system would include Ultra Violet (UV) treatment, additional filtration, a turbidity metre, and other water quality safeguards.
- Oct. 27 to Dec. 21 – Ongoing revisions to the design of the water treatment system and submission of final drawings to Vancouver Coastal Health on Jan. 5, 2006 for certification.

With the certificate of authorization in place and approval from Council for additional funding, the project can proceed as it is currently designed. The first step will be to order the equipment from the water park manufacturer. Components will arrive in stages and so the installation by the contractor will proceed in stages over the course of 12 weeks. The water park is anticipated to be complete and ready to open for the May long weekend.

Options for Consideration:

Since the increase in cost to the project is significant, several options have been considered.

| | | |
|---|--|---|
| 1. Potable water direct to waste | Remove the water treatment system from the contract and build the much simpler and cheaper potable water to waste system. | Not recommended Is not consistent with the City’s water conservation policies. |
| 2. Reduce the size of the water park to suit the existing budget. | By reducing the size of the water park including the number of spray elements, the water treatment system would also be smaller. | Not recommended. Steveston Park Playground is already a city-wide destination and the number of users is expected to increase with the opening of the water park. |
| 3. Proceed with the proposed design. | Retain the size of the water park and the water treatment system. | Recommended The community’s commitment to fundraising for the project has met with extraordinary success and has been based on the current design. The scale of the project is appropriate to the number of users anticipated. |

Financial Impact

The original tendered amount for the water park was \$486,352.00. The total cost for the supply and installation of the water park is now \$703,380.06 which represents an increase of \$217,028.06. Staff are also recommending the inclusion of a project contingency of 10% bringing the total project budget change to \$238,730. The details of the cost increases are included in the attached contemplated scope change from the contractor (Attachment 2).

The proposed funding strategy to cover scope change would involve the reallocation of \$208,730 from the 2007 Characterization – Neighbourhood Parks Capital project. This reallocation would delay other planned Parks Characterization works from the 2007 year until the 2008 capital year. The remainder of the financial implications would be offset from an additional contribution by the Steveston Community Society project fundraising of \$30,000.

There will be a net increase of \$30,00 to the 2007 capital plan which will be funded by community contribution.

Conclusion

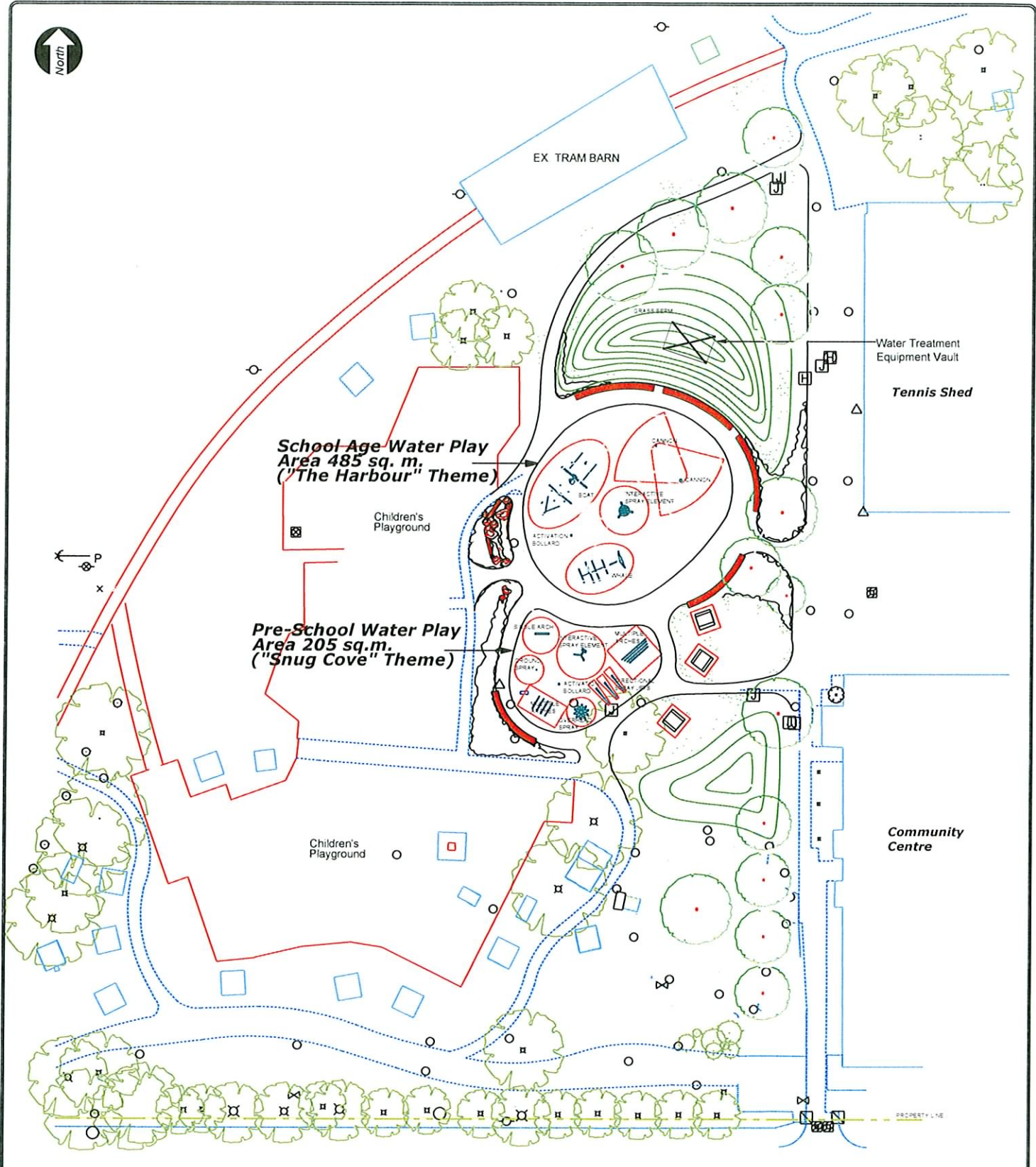
The process to receive certification has been lengthy due the new regulatory environment. The impacts of these changes are a much more sophisticated water treatment system than has previously been required and an increased cost to the project construction budget. The result will be very high water quality and a high degree of public safety for the water park.

The commitment by the Steveston Community Society to raise funding for this project has been a tremendous success due to the high level of community support and volunteer fundraising efforts. Approval of this report and funding strategy will ensure the appropriate capital is in place to construct the Steveston Park water park and realise a significant part of the Steveston Park vision plan.



Jamie Esko
Park Planner
(3341)

JE:je





2007 Pricing

Supply Vortex Equipment \$241,722.00

The Vortex equipment 2007 pricing remains equivalent to 2006, as Vortex has held 2006 pricing on all products for this project. The 2007 price reflects a site built concrete box enclosure with site built stairs (See Vancouver Coastal Health Requirements) with a Vortex supplied stainless steel access lid. The savings from the Vortex vault (included in the initial 2006 pricing) is offset by the addition of a second lid, sand filter, associated piping, additional valving, and controller upgrades to address the UV, and other DOH requirements. Vortex engineering time has also been absorbed at no charge in this quotation.

Installation of Equipment \$293,217.00

Steveston Park Splashpad Installation

Comparison 2006/2007

| | % Increase |
|---|-------------------|
| 1. Site Prep | 20% |
| 2. Installation of Site Fixtures | 15% |
| 3. Excavate and install WQMS | 0% |
| 4. Excavate and install Chemical Tanks | 25% |
| 5. Install Tank | 12% |
| 6. Plumb WQMS to tank | 10% |
| 7. Form Splash Pad Areas | 33% |
| 8. Labour | 16% |
| 9. Equipment, compactors, Bobcat, Excavator, etc | 13% |
| Materials | |
| 1. Rebar (Rebar was increased from 24" grid to 12" Grid) | 123% |
| 2. Concrete | 19% |
| 3. Concrete Plumbing | 46% |
| 4. Place and Finish Concrete | 57% |
| 5. Engineering | 0% |
| 6. Control Joint Cuttings of Splash Pad | 25% |
| 7. CAD drawings of Survey or as builts | 50% |
| 8. Supply and install of pressure regulator and backflow preventer | 25% |
| 9. Supply and installation of chemicals | 18% |
| 10. Supply and install drain down pit | 18% |

| | 2006 | 2007 | \$Increase | %Increase |
|--------------|-------------|-------------|-------------------|------------------|
| TOTAL | \$244,630 | \$293,217 | \$48,587 | 20% |

T. MOSCONE & BROS.
LANDSCAPE CONTRACTORS LTD
SINCE 1948



Summary of Installation:

- Site Preparation (other than site prep by others)
- Installation of pad fixtures
- Excavation and installation of water quality management system
- Excavation and installation of chemical tanks

Vancouver Coastal Health Requirements:

| | |
|--|---------------------|
| <i>Vault Modifications</i> | \$40,348.00 |
| Double concrete vault | |
| Cast in place construction | |
| <i>UV System</i> | \$88,044.00 |
| Ultra Violet System | |
| Supplied by ETS | |
| <i>Rain Diverter System and Controller</i> | \$27,957.64 |
| <i>Air Gap and Drain</i> | \$2,641.32 |
| <i>Turbidity Meter</i> | \$9,450.10 |
| Turbidity meter | |
| Electronic controller | |
| Subtotal | \$703,380.06 |
| GST @ 6% | \$42,202.80 |
| Total | \$745,582.86 |

