

### Section I – Items for Authority Action

**TO:** Chair and Members of the Executive Committee  
Meeting #7/18, Friday, September 07, 2018

**FROM:** Nick Saccone, Senior Director, Restoration and Infrastructure

**RE:** **BLUFFER'S PARK CHANNEL DREDGING**  
Award of Contract #10008665 for Maintenance Dredging of the Bluffer's Park Entrance Channel, City of Toronto

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#### KEY ISSUE

Award of Contract #10008665 to complete maintenance dredging of the navigation channel at Bluffer's Park in the City of Toronto.

#### RECOMMENDATION

**THE EXECUTIVE COMMITTEE RECOMMENDS THAT Contract #10008665 be awarded to Galcon Marine Ltd. for the maintenance dredging of the navigation channel at Bluffer's Park in the City of Toronto at a total cost not to exceed \$211,250.00 plus HST, it being the highest ranked bidder that best meets Toronto and Region Conservation Authority (TRCA) specifications;**

**THAT TRCA staff be authorized to approve additional expenditures to a maximum of \$42,250.00 as a contingency allowance if deemed necessary;**

**AND THAT if the contingency is not required when the work is nearing substantial completion, that staff be allowed to authorize the Contractor to remove additional sediment from the channel with these funds to maximize capacity;**

**AND FURTHER THAT authorized TRCA officials be directed to take any action necessary to implement the agreement including obtaining any required approvals and the signing and execution of documents.**

#### BACKGROUND

In 1981 Bluffer's Park opened at the foot of Brimley Road as a waterfront park in the former Borough of Scarborough, now City of Toronto. Included within the park is a commercial marina as well as four boating clubs that access Lake Ontario by way of the entrance channel.

Due to coastal and sediment transport processes, the navigation channel is susceptible to deposition of sand and other material. This deposition reduces the depth of water in the navigation channel and can severely impact the ability to safely navigate boats through the area, including marine-based emergency access, if left unaddressed. The channel bed is owned by the federal Department of Fisheries and Oceans (DFO), however the City of Toronto is responsible for maintaining safe navigation depths as per its lease agreements with the boating clubs. TRCA assists the City on request with the dredging given staff's experience with marine-based construction.

Sedimentation rates are expected to decline substantially in the channel over the long-term following the armouring of the Meadowcliffe sector of the Scarborough Bluffs shoreline in 2011, which was identified as the primary source of material depositing in the channel. Furthermore,

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the Scarborough Waterfront Project has proposed changes to the hardpoint to the east of the channel that should further reduce sedimentation rates in the future. However, until the large deposit of sand in the nearshore east of the channel is depleted from cutting off the supply from the Meadowcliffe Sector, and the structural changes to the hardpoint at Bluffer's Park are implemented, maintenance dredging of the channel can be expected to continue, albeit at a declining volume over time.

In early 2008, concerns of insufficient water depths in the entrance channel were brought to TRCA's attention by members of the boating clubs. TRCA notified the City of Toronto (Parks, Forestry & Recreation) of the hazard, who in turn retained TRCA to undertake maintenance dredging later that summer. Upon completion of the 2008 dredging project, approximately 1,700 cubic metres of sediment was removed from the entrance channel; a relatively minor amount compared to the more than 70,000 cubic metres of sediment which is estimated to have accumulated over the more than 30 years since the entrance channel was constructed. Recognizing that the maintenance work restored only the minimum depth required for safe passage through the channel, with no allowance provided for ongoing siltation, it was communicated by TRCA staff to the City of Toronto that future maintenance dredging would likely be required.

In 2010, insufficient water depths in the entrance channel were again brought to TRCA's attention. In response, TRCA completed a hydrographic survey of the entrance channel in April 2010 to provide updated information to the City of Toronto and determine the appropriate course of action. The survey showed that a large sand bar formed laterally across the entrance channel, reducing water depths to approximately 1.5 m and creating a risk to the members of the boating community who require a minimum draft of 1.8 m below chart datum for safe passage. As a result of shallow water in the entrance channel, the boat of a Cathedral Bluffs Yacht Club member got stranded on the sand bar on the evening of April 26, 2010, requiring rescue. Although no injuries were reported, it is noted that the draft on the stranded boat was 1.4 m, confirming that the low water levels and ongoing sedimentation issues were increasing risk to boater safety.

Emergency dredging was completed within the entrance channel in June 2010, allowing for approximately 3,500 cubic metres of sediment to be removed. Unfortunately, a sounding completed by TRCA on May 9, 2011 revealed that more than 2/3 of the volume removed 11 months earlier had re-accumulated, and another dredging project was subsequently carried out later that year.

Dredging of the entrance channel has been completed four times since 2011, in 2013, 2014, 2016 and 2017, to address the results of hydrographic surveys completed by TRCA in the spring of each year. Dredging was not required in 2012 or 2015 based on these same surveys, allowing the City of Toronto to reallocate funding to other Parks, Forestry and Recreation (PF&R) priorities.

In April 2018 TRCA completed a hydrographic survey and determined that only 200 cubic metres of sediment is required to meet minimum navigation requirements. This substantial reduction from an average of 3,500 cubic metres annually is a result of over-dredging in 2017, which was done to source and recycle clean sand from the channel to restore various beaches along the Toronto waterfront that suffered significant erosion and other damage following the historic high lake levels during the spring and summer that year.

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Using average unit rates from previous dredging projects, staff estimate that approximately 2,500 cubic metres of sediment can be removed from the channel in 2018 with a budget of \$340,000. It is noted that TRCA has recommended that the City of Toronto consider completing a major sediment removal exercise to restore the channel to its original design condition as it is costly to mobilize and demobilize marine equipment on an annual basis; however, the City has been unable to approve this larger budget request to date.

Sediment samples were collected from the channel and sent for laboratory analysis to determine disposal options for the dredgeate. Based on the results of these analyses, the sediment meets Ministry of the Environment, Conservation and Parks Table 1 background data meaning that the material meets unconfined disposal guidelines. Given that on-site disposal is the most cost-effective solution and site disturbance is expected to be minimal, permanent disposal of the dredgeate is to be placed along the east beach above the high water mark to prevent re-deposition into the entrance channel.

### **RATIONALE**

Request for Proposals (RFP) #10008665 was publicly advertised on Biddingo.com on July 13, 2018, and a mandatory site meeting was held on July 19, 2018. The following contractors attended this meeting:

- Galcon Marine Ltd.; and
- Dean Construction Company Ltd.;

Bids were opened at the Procurement Opening Committee meeting held on August 2, 2018 by TRCA staff (Jet Taylor, James Dickie, and Lisa Moore).

Members of the Selection Committee, consisting of TRCA staff reviewed the proposal submissions and evaluated them on a weighted scoring system consisting of 50% reasonableness of cost, 30% corporate experience and resources and the remaining 20% on the reference check. Along with unit rates for the channel maintenance dredging, bidders were to include company resources, relevant experience, references, and health and safety certificates to ensure TRCA is receiving good value for services. From the evaluation, the highest ranked Bidder is selected to complete the works. The table below summarizes the results of RFP #10008665 assuming removal of 2,500 cubic metres of sediment.

**RFP # 10008665**  
**Bluffer's Park Project – Channel Dredging Works**

<b>BIDDERS</b>	<b>MOBILIZATION/ DEMOLITION</b>	<b>DREDGING (\$/m<sup>3</sup>)</b>	<b>DISPOSAL (Bluffers East Area \$/m<sup>3</sup>)</b>	<b>TOTAL (plus HST)</b>	<b>Overall Ranking</b>
Galcon Marine Ltd.	\$80,000.00	\$28.50	\$24.00	\$211,250.00	1
Dean Construction Ltd.	\$210,889.20	\$145.00	\$30.70	\$650,139.20	2

The main tender items that varied substantially between contractors were the proposed mobilization/demobilization cost and the dredging cost. The difference in pricing between mobilization/demobilization is based on the location of the contractor's equipment relative to the

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work area and cost associated with transporting their machinery to the site. Galcon Marine Ltd. intends to mobilize by water from Keating Channel and has priced their mobilization accordingly. Dean Construction Company Ltd. has to mobilize their equipment by water from LaSalle Ontario (Detroit River) which is more expensive due to the time and distance from the site. The difference in pricing between dredging cost is based on equipment and company size. Galcon Marine Ltd. is a relatively small company using small equipment where Dean Construction Company Ltd. is a relatively large company with large equipment. The deviation in disposal cost per cubic metre is within the range that Restoration and Infrastructure staff anticipated for this contract.

Based on the evaluation of the received proposals, it was determined that Galcon Marine Ltd. was the highest ranking bidder and most competitively priced overall. Galcon Marine Ltd.'s experience and ability to undertake similar projects was confirmed through reference checks which resulted in positive feedback. Therefore, staff recommends that Galcon Marine Ltd. be awarded Contract #10008665 for dredging works for a total amount not to exceed \$211,250.00, to be expended as authorized by TRCA staff, plus a 20% contingency, plus HST; it being the lowest bid that meets TRCA specifications and requirements as outlined in the RFP contract documents.

As it is standard practice to include a contingency in project estimation in the event of unforeseen events, 20% of the base contract price, or \$42,250.00, has been set aside for this contract. However, as the City has directed TRCA to remove as much material as possible with the available budget, it is recommended that staff be allowed to utilize the contingency to remove additional material as available. Staff will monitor the progress of the contractor and the budget before extending the scope of work.

Dredging is tentatively scheduled to commence in early October 2018, pending authorization to award Contract #10008665 and the receipt of all necessary approvals. Work is anticipated to take approximately four weeks to complete, weather permitting.

This project is aligned with leadership strategy number two "Manage our regional water resources for current and future generations." Dredging of the channel will improve shoreline access making the system more navigable for canoes and other boats. In addition, this project aligns with enabling strategy number seven "build partnerships and new business models." TRCA has now completed this work on behalf of the City multiple times allowing us to demonstrate TRCA's expertise and capability in performing this critical maintenance thereby increasing TRCA's financial resilience.

### **FINANCIAL DETAILS**

A budget of \$340,000 has been identified to complete the 2018 maintenance dredging works, including Contract #10008665, the recommended \$25,000 contingency allowance, and staff time to secure approvals and manage the contract. Funding for this project is 100% recoverable from the City of Toronto within account 186-10.

### **DETAILS OF WORK TO BE DONE**

Dredging is scheduled to commence in October of this year pending the receipt of approvals. Project updates, including start date, estimated duration and any delays will be communicated to primary stakeholders such as the City Councillor, Parks Supervisor and the Scarborough Bluffs Boating Federation through ongoing email correspondence. Impact to the public is anticipated to be minimal as the dredging will be undertaken in October, following the busy boating season.

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**Date: August 9, 2018**