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The Regional Municipality of Durham Report

To: Works Committee
From: Acting Commissioner of Works
Report: #2023-W-22
Date: June 7, 2023

Subject:

Approval of Unbudgeted Capital Work and Related Financing for Emergency Capital Work at the Oshawa Water Supply Plant

Recommendation:

That the Works Committee recommends to Regional Council that financing of the unbudgeted capital work in the amount of \$5,000,000 related to Emergency Capital Work at the Oshawa Water Supply Plant, to be provided at the discretion of the Commissioner of Finance, be approved.

Report:

1. Purpose

- 1.1 The purpose of this report is to provide an update on an emergency at the Oshawa Water Supply Plant, declared by the Commissioner of Works in accordance with Section 10 of the Regional Municipality of Durham's (Region) Purchasing By-law 16-2020, and to obtain approval for the financing to be provided at the discretion of the Commissioner of Finance.

2. Background

- 2.1 In April 2023 the Commissioner of Works declared an emergency at the Oshawa Water Supply Plant (WSP) for the replacement and refurbishment of filter units 5 and 6.

- 2.2 In December 2022, plant operations staff noted a significant issue with Filters 5 and 6 which triggered a full review of the infrastructure. The filters are experiencing high and rising turbidity and extremely short timelines between required backwash intervals. These observations, along with apparent media breakthrough indicate that the filters are failing. Turbidity at an excessive level would require the filters to be removed from active service, which would reduce the capacity of the Oshawa WSP by 33 per cent.
- 2.3 Jacobs Consultancy Canada Inc. (Jacobs) visited the site early in 2023 to review the issues observed by the plant operators to identify the potential urgency of necessary repairs due to their familiarity with the Oshawa WSP. The initial site investigation identified issues with the underdrains and filter media. Anthratch Western Inc. (AWI), a specialist in filter remediation and replacement, has been retained by Jacobs as a sub-consultant to further evaluate the continued operability of the filters. AWI is headquartered in Calgary and are the contractor municipalities use for filter rehabilitation across Canada.
- 2.4 Several alternatives to address this issue were discussed. The recommended approach to ensure water production security of service is the replacement of the existing underdrains and media.
- 2.5 To perform additional investigation needed for contract design and specification development, the filters need to be sequentially removed from service immediately before peak water demand season. This will permit the procurement of filter and underdrain material for installation beginning in December of this year through a direct purchase order to AWI.
- 2.6 The Whitby, Oshawa and Courtice water distribution systems are interconnected. Capital works improvements have begun at the Whitby WSP. As this programmed work ramps up, water supply from the Whitby WSP will also be reduced periodically. To maintain overall water supply requirements to the Whitby, Oshawa and Courtice water distribution systems, it is imperative that the Oshawa WSP be restored to its full capacity as soon as possible.
- 2.7 Capital funds have been budgeted for design works to rehabilitate filters 1 to 6, with a planned program of design through 2024, and construction works through 2029. However, the accelerated failure of filters 5 and 6 has necessitated immediate action.

3. Financial Implications

- 3.1 Section 10 of the Region's Purchasing By-law #16-2020 specifies the process to procure goods and/or services to address emergency situations. The process requires reporting to Regional Council on the nature of the emergency and the necessity of actions taken in cases where the costs will exceed \$100,000.
- 3.2 Section 14.2 of the Budget Management Policy requires the approval of the Treasurer and C.A.O. and the applicable Standing Committee and Regional Council to approve project financing in excess of \$50,000 prior to the award of the applicable contract.
- 3.3 Jacobs will continue their design efforts. AWI will source the required materials for repair and perform the installation. Staff estimate the value of the project works to be approximately \$5,000,000. The funding of this emergency project will be determined at the discretion of the Commissioner of Finance. The project components are detailed as follows:

Project Element	Estimated Project Cost (\$)
Internal Staff	173,500
Design Services	700,000
Construction (including Contract Administration and Equipment)	4,000,000
Sundry	40,000
Estimated Project Cost	4,913,500
Net HST (1.76%, rounded)	86,500
Total Project Cost	5,000,000

4. Relationship to Strategic Plan

- 4.1 This report aligns with the following strategic goals and priorities in the Durham Region Strategic Plan:

- a. Service Excellence Goal #5.1: Optimize resources and partnerships to deliver exceptional quality services and value.
- b. Service Excellence Goal #5.2: Drive organizational success through innovation, a skilled workforce and modernized services.

5. Conclusion

- 5.1 It is recommended that the financing of the unbudgeted capital work in the amount of \$5,000,000, related to Emergency Capital Work at the Oshawa Water Supply Plant, to be provided at the discretion of the Commissioner of Finance, be approved.
- 5.2 This report has been reviewed by the Finance Department and the Commissioner of Finance concurs with the recommendations.
- 5.3 For additional information, please contact Mike Hubble, Director of Environmental Services, at 905-668-7711, extension 3460.

Respectfully submitted,

Original signed by:

Ramesh Jagannathan
MBA, M.Eng., P.Eng., PTOE
Acting Commissioner of Works

Recommended for Presentation to Committee

Original signed by:

Elaine Baxter-Trahair
Chief Administrative Officer