

May 25, 2016



Ray Ritcey, Chair
Halifax Water
Halifax, Nova Scotia

A special meeting of the Halifax Water Board will be held on Thursday, May 26, 2016 at 8:30 a.m. in the Boardroom at 450 Cowie Hill Road, Halifax.

AGENDA

Regular Meeting

1. Federal/Provincial Infrastructure Funding – Additional Candidate Project

Original Signed By

James G. Spurr
Secretary

TO: Ray Ritcey, Chair and Members of the Halifax Regional Water Commission Board

SUBMITTED BY: Original Signed By: _____
Jamie Hannam, P. Eng., Director Engineering & IS

APPROVED BY: Original Signed By: _____
Carl Yates, M.A.Sc., P. Eng., General Manager

DATE: May 25, 2016

SUBJECT: **Federal/Provincial Infrastructure Funding – Additional candidate Project**

ORIGIN

HRM Regional Council – Building Canada Fund Infrastructure Projects – July 29, 2014

RECOMMENDATION

Approve the J.D. Kline Water Supply Plant Filter Media replacement project at an estimated cost of \$5,600,000 as an additional HRWC priority for potential federal/provincial infrastructure funding.

BACKGROUND

On March 31, 2016, the Halifax Water Board approved a list of additional projects as priorities for potential federal/provincial infrastructure funding. The project list was forwarded to HRM for integration with an HRM Regional Council report recommending the endorsement and submission of the additional candidate projects to the Building Canada Fund.

DISCUSSION

On May 19, 2016, HRM staff advised that they had recently met with Nova Scotia Municipal Affairs staff and received an update on federal infrastructure funds. Near term funding is available for water, wastewater and stormwater projects under the Clean Water Wastewater Fund (CWWF); however, they now state that projects are only eligible if Halifax Water can attest that the project would not have proceeded without federal funding within the next two years. Essentially they require projects that can be completed prior to March 31, 2018 but that have budget allocation after March 31, 2016.

Based on this criterion, staff have reviewed the projects currently approved by HRM Regional Council and the March 31, 2016 additional projects, and only four projects meet this revised criterion. The four projects are Northwest Arm Sewer, Halifax Peninsula Water Transmission Main Rehabilitation, Lake Major Dam Replacement and Sullivan's Pond Storm Sewer Renewal.

As a result of the recent feedback from government officials, staff completed a review of the current five year capital plan to identify any projects that may meet the revised criteria. Staff identified the proposed J.D. Kline Water Supply Plant Filter Media replacement project as a candidate, as it is scheduled to be completed over four years concluding in 2020. However, with the base design complete, this project could be brought forward and fully completed by March 31, 2018. The estimated total project cost is \$5,600,000.

Thus, staff are recommending that this project be approved by the Halifax Water Board, and included in the upcoming HRM Regional Council Report for endorsement. Subsequently, these five projects would be forwarded to the federal/provincial agencies for consideration.

It is anticipated that in subsequent years the criteria for the CWWF will be enhanced to provide greater clarity for long term planning.

BUDGET IMPLICATIONS

The additional project is currently within the Five Year Capital Plan. The five year capital plan is a notional budget. The capital budget and associated funding is only approved one year at a time. Projects and funding beyond March 31, 2017 are not approved and subject to charge pending availability of funding. Successful approval of a project for funding assistance will have a positive impact on the overall capital funding plan for HRWC in future years and will reduce debt requirements and rate impacts and may enable other projects.

ALTERNATIVES

N/A

ATTACHMENTS

J.D. Kline Water Supply Plant Filter Media Replacement Summary

Report Prepared by:

Original Signed By: _____

Jamie Hannam, P. Eng. Director of Engineering & IS,
902-490-4804

Original Signed By: _____

Financial Reviewed by: _____

Cathie O'Toole, MBA, CPA, CGA, Director, Corporate Services
902-490-3685

Project Proposal for consideration under PTIC-NRP

Revision Date: May 25, 2016

Project Name: JD Kline Filter Media and Underdrain Replacement

Applicant: Halifax Regional Municipality

Eligible Category: Water

Project Description:

The project involves the replacement of the existing filter media and underdrains in all eight filters and the installation of new air-scour backwashing capabilities at the JD Kline Water Supply Plant.

The J.D. Kline Water Supply Plant, commissioned in the 1970s, supplies treated water to the communities of Halifax, Bedford and Sackville. The treatment plant has eight granular media filters. Six of the filters still have the original ceramic underdrains and associated sand and anthracite filter media. Previous underdrain failures in the other two filters within the last 15 years resulted in new plastic underdrains being installed. Following the most recent underdrain failure in December 2013, a decision was made to review the entire filtration system at the JD Kline facility.

Properly functioning filters are critical to the production of safe drinking water. The JD Kline filters provide the only specific barrier to prevent pathogens from entering the drinking water supply. Thus this project is a high priority for public health considerations.

In March 2014, AECOM was retained to complete a study of the filtration system and carry out a study investigating treatment options for Geosmin at the facility. The final report (March 2015) recommended new gravel-less style filter underdrains that are compatible with bio-filtration. AECOM also recommended that the new filtration system have air-scour backwashing capabilities. The addition of air-scour will add improved treatment functionality consistent with emerging water quality and compliance issues.

Considering that the majority of the filter media is well beyond its recommended life and there is a risk that the remaining ceramic underdrains could fail, it is proposed to replace the underdrains and filter media in all eight filters as soon as practical. AECOM estimates that the total cost for replacing the filter media, the underdrains and installing air-scour capability is approximately \$5,600,000 including contingencies and net HST.

The detailed design work is proposed for 2016 with construction proposed to be undertaken in 2017/18.

For Highways/Major Roads, Date Traffic Count and AADT: NA

Project Information:

Location: Halifax Regional Municipality

Project Timelines:

- Project design – September 2016
- Construction begins – November 2016
- Construction ends – March 2018

Type of Construction: New construction

Financials:

Total Project Cost: \$5.6 million

Projected Cashflow:

2016/17: \$1,200,000

2017/18: \$4,400,000

Total Eligible Cost: \$5,600,000

Requested Federal Contribution: \$1,866,666

Other Federal Funding: NA

Council Resolution (date): Proposed