



englishman river
WATER SERVICE

DATE: July 27, 2015

REPORT TO: ENGLISHMAN RIVER WATER SERVICE MANAGEMENT BOARD

FROM: ENGLISHMAN RIVER WATER SERVICE MANAGEMENT COMMITTEE

SUBJECT: ENGLISHMAN RIVER WATER SERVICE (ERWS)
REVISION TO THE PROJECT IMPLEMENTATION STRATEGY

PURPOSE: TO OBTAIN BOARD DIRECTION

EXECUTIVE SUMMARY:

On June 29, 2015 the ERWS project received funding support from the Government of Canada of \$3 million and \$3 million from the Province of British Columbia through the New Building Canada Fund: Small Communities Fund. Prior to this, the ERWS project was on hold until announcement of such funding. The City of Parksville and the Regional District of Nanaimo (RDN) Nanoose Peninsula Water Service Area are now in a position to proceed with this high priority project and ensure a safe and secure water system for the community.

The current plan is to provide a reduced scale phase water treatment plant at a cost of \$ 24.3 million which comprises of:

- The preliminary design of the intake, pump station, raw water main and transmission mains from Plan A
- The conceptual plan of a reduced scale phased water treatment plant with 8 million liters a day of firm membrane filtration capacity, 16 million liters a day of disinfection and a clear well tank sized for 24 million liters a day - ready for future expansion.
- Un-factored water demands (Plan A - minus the 25% factor to account for unexpected growth and climate change)

Given the recent award of \$ 6 million in senior government funding, the uncertainty of climate change and the need to be in conformance with Island Health requirements there is a need to review Plan B to provide a minimum of 16 million liters a day of firm filtration capacity for the first phase of the project. Based on the costs of similar water treatment plants it is estimated an additional \$ 4 million dollars will be required to increase the water treatment plant filtration capacity of Phase 1 to 16 million liters per day.

Further design is required to the conceptual design of Plan B to 16 million liters per day of firm filtration capacity prior to the referendum in late November 2015 in an effort to provide up to date cost estimates, provide public consultation and ensure the project remains on schedule for the June 2018 completion date.

Increasing the water treatment plant firm membrane filtration capacity would increase the overall project cost to \$28.3 million. Annual water rate increases for the City of Parksville required to fund the project would be in the 2 to 2.5% range for 2016 through 2024 based on the federal / provincial grant of \$ 6 million. The City of Parkville and the RDN through the ERWS joint venture partnership will contribute the remaining costs through borrowing and reserve funds. The City of Parksville will need to borrow \$ 5.6 million, use water reserve funds, use water DCC and gas tax reserve funds and water accumulated surplus for their share while the RDN - Nanoose Bay Peninsula Water Service Area will use water reserve funds to pay for their share.

A revised ERWS 2015 - 2019 Financial Plan has been prepared based on the additional firm water membrane treatment plant capacity of 16 million liters per day and total project costs of \$ 28.3 million for each jurisdiction to take forward to each respected Council / Board for ratification.

RECOMMENDATION(S):

1. THAT the report from the Englishman River Water Service Management Committee dated July 27, 2015 entitled ERWS Revision to the Project Implementation Strategy be received;
2. AND THAT staff be directed to further engage CH2M Hill to complete the new water intake and transmission mains designs to full detailed design and tendering stage as a separate contract,
3. AND THAT staff be directed to further engage CH2M Hill to update the conceptual Plan B option of the water treatment plant to 16 million liters per day of full membrane filtration and disinfection to a preliminary design stage prior to public referendum,
4. AND THAT, staff be directed to further engage and negotiate the detailed design, value engineering and work plan with CH2M Hill up to detailed design and tendering services for the project providing satisfactory performance of CH2M Hill and sufficient budgets identified in the Financial Plan.
5. AND THAT the ERWS Management Committee be directed to work with the previously established Community Working Group stakeholders to obtain meaningful feedback on the design development of the Water Treatment Plant.
6. AND THAT the ERWS Management Board recommend Parksville City Council conduct a referendum on November 21, 2015 to obtain elector approval to borrow funds required for construction of a water intake and treatment plant.

BACKGROUND:

On June 29, 2015 the Honourable John Duncan, Minister of State and Member of Parliament for Vancouver Island North, on behalf of the Honourable Denis Lebel, Minister of Infrastructure, Communities and Intergovernmental Affairs, and Minister of the Economic Development Agency of Canada for the Regions of Quebec and the Honourable Michelle Stilwell, Minister of Social Development and Social Innovation for BC and MLA for Parksville-Qualicum announced senior government support funding for the ERWS project approved under the New Building Canada Fund: Small Communities Fund. The Government of Canada will provide up to \$3 million through the Small Communities Fund for the project and the Province of British Columbia will contribute \$3 million to this project. The City of Parksville and the RDN through the ERWS joint venture partnership, will contribute the remaining costs of the project.

At the May 7, 2015 ERWS Management Board meeting the Board passed the following resolution:

That the ERWS Management Board:

- receive the ERWS Revised Project Implementation Strategy dated April 21, 2015,
- direct staff to continue working with the Department of Fisheries and Oceans Canada (DFO) to obtain the water intake construction permit,
- direct staff to request Island Health to amend the Operating Conditions by deferring the completion date of the water treatment plant completion to June 30, 2018,
- and direct staff to suspend all Plan B (a multi phased approach with reduced water treatment plant capacity) work pending further ERWS Board direction subsequent to the borrowing referendum, with the exception of the water intake construction permit and any predesign works budgeted in 2014 and carried forward to 2015,

Subsequent to the May 7, 2015, ERWS Management Board meeting, staff have been corresponding with officials from DFO and is now in a good position to submit a full application in the next several weeks. At this point all indications are the application will meet all DFO requirements and that an approval will be received in early fall of this year.

On June 26, 2015, staff formally replied to Island Health and indicated that the project has been delayed as a result of financial constraints, required timing for public consent and DFO approval. Given this, the proposed new project completion / commissioning date is now June 2018.

In order to meet the critical project milestone of June 2018, it is imperative the intake be constructed during fisheries windows that cause the least disruption of to fisheries. Typically these windows are in late June and early July of each year and would be a requirement under the DFO application. This leaves a construction window for the intake works within the river in June 2016 and June 2017. Continuing with the design of the intake and the transmission mains now would allow some of the construction to start in June 2016 providing funding and all approvals are met. Tendering of these works could be done in a

separate contract ahead of the water treatment plant construction to ensure that the in-river component works are in place given the limited fisheries window opportunities between now and the June 2018 deadline.

Now that the funding announcements have occurred and the amount to be borrowed is known the next step is to obtain assent of the electorate for borrowing. The earliest a referendum could be held and still provide adequate time to allow for a fully informed electorate would be November 21. This requirement is in accordance with Section 180(1) of the Community Charter.

From today's date it is estimated that to proceed with and complete at least the first phase of Plan B which would include detailed design of Phase 1, tendering, tender evaluation, tender awards and finally construction will take approximately over two years and assumes the in-river component of the new intake is completed June -July of 2016 or June - July 2017. Assuming all funding was in place and the Board authorized the project to go forward, this would put completion of Phase 1 (including water treatment plant commissioning) at approximately June 2018, just in time to meet the 2018 summer peak demand requirements with the new intake and treatment plant.

On November 8, 2014, staff prepared a report to City of Parksville Council which explored four reduced scale phased water treatment plant options in comparison to the original preliminary design of the 24 million liter a day firm membrane water treatment plant (Plan A). The four reduced scale water treatment plant options were reviewed for the sole purpose of determining what could be constructed should no financial support be obtained by senior government. The four options were explored to determine what could be constructed for a cost that would not financially burden the City of Parksville and create undue hardship on both businesses and residents. This cost was determined to be around \$ 20 million for the City of Parksville without any funding assistance from senior government. At this time it was determined the original option of constructing 24 million liters a day of firm membrane filtration was the most feasible option over a 20 year period given the prospect of receiving a substantial senior government funding. On May 7, 2015, the ERWS directed staff to pursue Option 4 (formally Plan B) of the reduced scale water treatment plant assuming around \$6 million dollars of senior government funding is received before fall 2015.

Plan B is based on:

- The preliminary design of the intake, pump station, raw water main and transmission mains from Plan A
- The conceptual plan of a reduced scale phased water treatment plant with 8 million liters a day of firm membrane filtration capacity, 16 million liters a day of disinfection and a clear well tank sized for 24 million liters a day - ready for future expansion.
- Un-factored water demands (Plan A - minus the 25% factor to account for unexpected growth and climate change)

The total cost of the first phase of Plan B is \$ 24.3 million and the current ERWS financial plan assumes \$ 6 million in senior government funding.

Given the recent award of \$ 6 million in senior government funding, the uncertainty of climate change and the need to be in conformance with Island Health requirements there is a need to review Plan B to provide a minimum of 16 million liters a day of firm filtration capacity for the first phase of the project. Based on the costs of similar water treatment plants it is estimated an additional \$ 4 million dollars will be required to increase the water treatment plant filtration capacity of Phase 1 to 16 million liters per day.

Further design is required to the conceptual design of Plan B to 16 million liters per day of firm filtration capacity prior to the referendum in late November 2015 in an effort to provide up to date cost estimates and ensure the project remains on schedule for the June 2018 completion date.

OPTIONS:

1. Move forward with detailed design of all components of Phase 1 of Plan B with a minimum of 16 million liters of firm membrane filtration capacity using existing reserve funds and the \$ 6 million in senior government funding in anticipation of a positive borrowing referendum.
2. Wait for results of the referendum.

ANALYSIS:

Option 1.

From today's date it is estimated that to proceed with and complete at least the first phase of Plan B will take approximately over two years and assumes the in-river component of the new intake is completed in the June - July of 2016 construction window. This would put completion of Phase 1 at approximately June 2017, just in time to meet the 2017 summer peak demand requirements with the new intake and treatment plant, ahead of the June 2018 deadline.

This option assumes a positive borrowing referendum. The risk would be the detailed design expenditures between now and November 21, 2015 if the borrowing referendum was negative.

Option 2.

Waiting for the results of the borrowing referendum anticipated to be held November 21, 2015 would delay completion of Phase 1 of Plan B to approximately June 2018 assuming approval of the borrowing referendum.

FINANCIAL IMPACT:

Increasing the water treatment plant firm membrane filtration capacity would increase the overall project cost to an estimated \$28.3 million. Annual water rate increases for the City of Parksville required to fund the project would be in the 2 to 2.5% range for 2016 through 2024 based on the federal / provincial grant of \$ 6 million.

The Regional District funds the Nanoose Bay Bulk Water Service through parcel taxes. Based on current cost estimates for a 26% share of the \$22.3 million cost net of grants, there is a projected 10% per year increase for 2015 through to 2018 in order to transfer funds to reserve for these projects; to ensure adequate funding for debt servicing and to provide for additional operating costs. There is an existing borrowing authority of approximately \$4.45 million available in the Nanoose Bulk Water Service which will be utilized for this project

REFERENCES:

November 13, 2014 report from Englishman River Water Service Management Committee regarding ERWS Water Intake and Treatment Plant Phasing Options

November 8, 2014 report from City of Parksville Chief Administrative Officer to the Mayor and Council of the City of Parksville regarding ERWS Water intake and Treatment Plant Options.

May 7, 2015 ERWS Board meeting, report from the Englishman River Water Management Committee regarding the Revised Project Implementation Strategy dated April 21, 2015.

May 7, 2015 ERWS Board meeting, Adoption of the ERWS 2015 - 2019 Financial Plan, dated April 22, 2015.