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REPORT TO FULFORD WATER SERVICE COMMITTEE
MEETING OF WEDNESDAY 22 APRIL 2009

SUBJECT **CAPITAL PROJECT UPDATE**

PURPOSE

To present to the Fulford Water Service Committee (FWSC), a status report on the capital project and to present alternatives and a recommendation for funding works required to complete the project.

BACKGROUND

The Fulford water service, a local service of the Capital Regional District (CRD), applied for an infrastructure grant in 2000 and received a grant under the Canada/British Columbia Infrastructure Program in 2005 for the purpose of constructing a new water treatment plant to meet current drinking water standards, metering all water service connections, and modifying and upgrading distribution infrastructure as required to connect the new treatment plant. The original project budget was $1,544,900. The grant funded up to two-thirds of eligible project costs, to a maximum grant amount of $972,146. The balance of $572,754 was provided through borrowing under the Municipal Finance Authority (MFA) over a 15-year term, with the annual debt servicing cost of $52,510 recovered through parcel taxes levied in the Fulford water service area.

Due to construction market conditions in 2005 and 2006, tendering construction to a prime contractor as originally planned was not feasible within the project budget. An alternative project delivery model was approved by the FWSC, consisting of the CRD as prime contractor and project manager with most construction contracted on a cost plus basis. General and mechanical construction was to be provided at favourable rates by North Salt Spring Waterworks District staff on an as-available basis. While this approach was expected to minimize construction costs, its main disadvantage was a significantly longer timeframe to complete the work.

The combination of higher than planned construction cost inflation rates and slower than planned construction progress has caused actual costs to exceed the original budget, including contingency. Staff reports presented to the FWSC on 03 April and 07 October 2008 projected that costs to complete the project would exceed the original budget by $200,000 to $260,000. On 03 April 2008 the FWSC approved an increase in the project budget of $106,000 from reserve funds. On 07 October 2008, the FWSC approved a further increase of $146,439 consisting of the remaining reserve funds and the projected 2008 year-end surplus in the operating budget. These increases resulted in a revised project budget of $1,797,339.

At the 7 October 2008 meeting, staff also estimated that the costs to complete the project, excluding metering of most service connections, would exceed the revised budget by $42,361. Completion of metering (included in the original project scope) was estimated to cost a further $50,000, bringing the estimated funding shortfall to complete the full project scope to $92,361. Staff were asked to explore alternatives to increasing tax or fee levels in the existing service area for raising further project funds; including approaching BC Ferries and the Cedars of Tuam Water Service Committee.

Project Status at 22 April 2009

Construction of the water treatment plant is complete, and commissioning of the plant began in February. Due to a previously unknown design limitation in the filter component of the Dissolved Air Flotation (DAF) process tank, completion of commissioning was delayed several weeks in order to design modifications and procure components. While the modifications are minor and do not have a significant impact on project cost, the changes are necessary to prevent structural damage to the DAF tank in the event of failure of a pressure relief valve on the backwash supply. It is anticipated that plant commissioning will be completed in May.

Supply and distribution works are substantially complete, with the exception of the following tasks:

1. Metered connections to new distribution mains for properties currently served by mains that will become raw water pipeline.
2. Metered connection to school.
3. Waste connection from water treatment plant to school wastewater plant.
4. Resolve "grandfather agreement" connections to supply pipeline near Weston Lake (outside Fulford water service area).
5. Complete metering of all remaining service connections.

Task 1 must be completed in order for the new treatment plant to supply the entire Fulford service area. In order to decommission the existing chlorine injection system at the Weston Lake intake, task 4 must also be completed. Tasks 2 and 3 are required in order to fulfill the agreement with School District 64, and task 5 is required in order to recover operating costs based on usage. It is proposed to add radio read components to meters, increasing the cost of Task 5 by $10,000. This brings the metering portion of the work up to the current CRD standard and greatly reduces the cost of meter reading and billing.

As of 15 April 2009 total project expense was $1,795,885, leaving an available balance of $1,454 in the revised project budget.

Costs to Complete Project

The costs to complete the remaining work included in the original project scope are estimated as follows:

Task	Estimated Cost
Complete water treatment plant commissioning	$30,000
Complete 2" metered connection to school	$10,000
Complete water treatment waste connection to school wastewater plant	$5,000
Connect properties in service area served by raw water line	$30,000
Resolve "grandfather agreement" connections	$40,000
Complete metering of remaining connections, including radio read components	$60,000
Total estimated cost to complete project	**$175,000**

The cost of commissioning the Fulford system is estimated to be significantly greater than that of other DAF based treatment systems planned for CRD water service areas since it is the first to be commissioned. Commissioning work on the Fulford system that will directly benefit other projects includes the majority of process control programming and debugging, identifying and correcting minor design flaws, and training and orientation of staff and contract operators. The estimated total cost of this work of $25,000 will be shared among five service areas for which DAF based systems are planned or under construction (including Fulford), reducing the commissioning cost to the Fulford project by $20,000. With this adjustment, the estimated overall cost of commissioning of the Fulford system will be similar to that of other DAF systems of similar size and complexity such as the Beddis system.

The estimated cost to resolve "grandfather agreement" connections represents the cost to connect the three dwellings nearest to the Fulford service area, which are all located on a single parcel. Since these dwellings are not currently in the Fulford service area and are not subject to the parcel tax, the full cost to connect them and include them in the service area at the property owner's option would be recovered directly from the owner as a cost of inclusion in the service area. Should the owner opt to pay the full cost of providing metered connections to these dwellings from a distribution main served by the new water treatment plant and amending the Fulford water service area establishment bylaw (estimated at $40,000), the parcel would be included in the service area. A user charge would then be billed for each of the three dwellings in addition to the parcel tax. Should the owner choose not to pay this cost within a reasonable timeframe (i.e. one year), the existing connections would be abandoned and the owner would be required to secure an alternate source of water such as a well. The committee may also wish to consider requiring the owner to pay a capacity purchase charge on the basis that the owner has not contributed to the cost of constructing and maintaining the existing water distribution system. Since it is not practicable to connect the single dwelling near the Weston Lake intake to the treated water distribution system, it is proposed to inform the owner that the existing connection will be abandoned within one year, and that the owner will be required to secure an alternate source of water such as a well. On the basis that plant commissioning costs of $20,000 will be recovered from other service areas, and that connection costs of $40,000 (if incurred) will be recovered directly from a single property owner outside the service area, the estimated cost to the Fulford service area to complete the project is $113,546.

Deferral of Remaining Project Tasks

Given that the remaining unfunded cost to bring the water treatment plant into service for the majority of the Fulford area is only $10,000, it is assumed that this work is an immediate priority and should be completed in 2009. The 2009 operating budget is approximately $40,000 greater than the 2008 actual cost on the basis that the treatment plant was expected to be operating through the full year. However, since the plant will not begin operation until May, operating cost savings of approximately $13,000 are anticipated. By reallocating $10,000 from Contract for Services to the capital project, it is anticipated that the treatment plant could be brought into service without requiring a revenue increase in 2009.

By maintaining the existing chlorinator at Weston Lake for one year after the new treatment plant enters service, connection of services currently served from the raw water line to the treated water system could reasonably be deferred until 2010. Given the small additional operating cost to maintain the chlorinator at Weston Lake and the discrepancy in the level of service that would be provided to users in the service area before the connections are completed, this work should not be deferred longer than one year. Similarly, in order to fulfill the agreement with School District 64 and to reduce waste disposal costs for the water treatment plant it is preferable to complete the water and wastewater connections to the school in 2010. The total estimated cost of this work proposed for 2010 is $45,000, for which new funding would be required. Without further borrowing, funding this work from the Fulford area would require a one-year increase in the parcel tax of $469, or a one-year increase in the annual residential user fee of $383 with corresponding increases in commercial fees.

Metering of all residential service connections was a required component of the grant agreement that funded the majority of the project, and materials for the metering work have been purchased. Fully metering the service area also enables operating cost recovery based on water usage, and greatly improves the ability to manage water losses. It is proposed to complete metering in 2011, at an estimated cost of $60,000, including radio read components. Without further borrowing, funding this work from the Fulford area would require a one-year increase in the parcel tax of $625, or a one-year increase in the annual residential user fee of $511 with corresponding increases in commercial fees.

If the project work is phased over the next two years and costs are recovered without borrowing, a two-year (2010-2011) increase in the residential user fee of $450 with comparable increases in commercial fees is estimated to be sufficient to complete the project. In the Fulford area, user fees distribute costs more equitably than parcel taxes due to the significant commercial component of usage. Alternatively, the FWSC could seek public approval to borrow up to $105,000 through the Municipal Finance Authority, enabling the project to be completed in 2010 and reducing the annual cost to users by

amortizing it over 15 years. The cost and risk of failure of a public approval process would need to be carefully considered in this case.

Deferring work that does not require completion in 2009 also provides time to make further progress on prospects for inclusion into the Fulford service area, including BC Ferries, Cedars of Tuam, "grandfather agreement" properties and additional properties near the Fulford area that have expressed interest in inclusion. A decision by the committee on how to fund deferred work will be required as part of the budget approval process later this year.

ALTERNATIVES

1. That the Fulford Water Service Committee receive this report for information, authorize the transfer of $10,000 from the 2009 operating budget to the capital project in order to bring the new treatment plant into operation, and direct staff to defer the remaining project works to 2010 and 2011.

2. That the Fulford Water Service Committee receive this report for information, authorize the transfer of $10,000 from the 2009 operating budget to the capital project in order to bring the new treatment plant into operation, and direct staff to prepare for a public approval process to borrow up to $95,000 through the Municipal Finance Authority with the objective of completing the remaining project works in 2010.

3. That the Fulford Water Service Committee receive this report for information and provide alternate direction to staff for phasing and funding outstanding project works.

FINANCIAL IMPLICATIONS

The overall cost to complete the Fulford water system upgrade project has escalated from the original (2000) budget of $1,544,900 to a current (2009) estimate of $1,910,885, an increase of $365,985 or 24%. In 2008, the FWSC approved a total increase in the project budget of $252,439 from reserve funds and the 2008 operating budget surplus. This increase fully depleted the reserve fund, leaving the project with an unfunded shortfall of $113,546. It is anticipated that the 2009 actual operating cost will be roughly $13,000 below budget due to delays in bringing the new plant into operation. Transferring $10,000 from the operating budget to the capital budget is expected to enable the treatment plant to be brought into operation in 2009 without any increase in parcel taxes or user fees, leaving a project funding shortfall of $103,546.

Completion of the remaining project works in 2010 and 2011 without borrowing would require the residential user fee to be increased by $450 in 2010 and 2011, with corresponding increases in commercial fees. Alternatively, borrowing up to $105,000 through the Municipal Finance Authority to complete the project would require an annual revenue increase of approximately $11,550 for 15 years. This would require an increase in either parcel taxes or user fees of $120 or $98, respectively. The public approval process required to borrow capital would likely cost $5,000 to $10,000 and there is a significant risk that the process would fail.

SUMMARY/CONCLUSIONS

The Fulford water system upgrade project is nearly complete, and the water treatment plant is expected to be brought into operation before summer 2009. The project budget, as revised by the committee on 07 October 2008, is fully depleted. Transferring $10,000 from the 2009 operating budget is expected to enable the treatment plant to be brought into operation without requiring an increase in taxes or fees. However, completion of distribution system works including metering of service connections is estimated to require an additional $95,000. Deferring this work to 2010 and 2011 is expected to enable the remaining works to be completed through a temporary increase in the residential user fee of $450 per user over two years, with corresponding increases in commercial fees.

RECOMMENDATION

That the Fulford Water Service Committee receive this report for information, authorize the transfer of $10,000 from the 2009 operating budget to the capital project in order to bring the new treatment plant into operation, and direct staff to defer the remaining project works to 2010 and 2011.

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