

June 24, 2014

**REPORT TO:** ENGLISHMAN RIVER WATER SERVICE MANAGEMENT BOARD

**FROM:** ENGLISHMAN RIVER WATER SERVICE MANAGEMENT COMMITTEE

**SUBJECT:** CONSENT ON CAPITAL COST ALLOCATIONS FOR THE NEW WATER INTAKE, TREATMENT PLANT, SUPPLY MAINS AND AQUIFER STORAGE AND RECOVERY WELLS.

**PURPOSE:** To obtain Englishman River Water Service Management Board approval of capital expenditure allocations between the City of Parksville and the Regional District of Nanaimo for the creation of a loan authorization bylaw for the required new water intake, treatment plant, supply mains and aquifer storage and recovery wells.

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**EXECUTIVE SUMMARY:**

Prior to the public referendum scheduled to coincide with the election on November 15, 2014, several bylaws and approvals are required. Section 179 of the Community Charter requires the approval of the Inspector of Municipalities in order to adopt a loan authorization bylaw. Section 180 of the Community Charter requires the approval of the electors in order to adopt a loan authorization bylaw. Section 39 of the Local Government Act states in part that in order for a bylaw to apply; in relation to a general local election, the bylaw must be adopted at least 8 weeks before the first day of the nomination period of the general local election. For the 2014 election, this sets the deadline for bylaw adoption at August 05, 2014. The closest City of Parksville Council meeting date to that deadline is July 21, 2014 and the closest Regional District of Nanaimo Board meeting is July 22, 2014. Therefore the required borrowing bylaw must receive three readings by July 21 2014 for the City of Parksville and July 22, 2014 for the Regional District of Nanaimo. Following respective Council and Board approvals, the bylaws will be submitted to the Inspector of Municipalities for approval; once approved it will then appear as a referendum question on the ballot to receive the assent of the electors. Assuming it receives majority assent it will be forwarded to each Council and Board respectfully for Final Adoption in December, 2014.

Appendix A - Englishman River Water Service (ERWS) Project Cost Allocation shows each jurisdictions cost apportionment in relation to the ERWS joint venture agreement, mutually benefitting shares and individual jurisdiction improvements.

**River Intake, Treatment Plant, Siteworks, Operations Building and Joint Transmission Mains**

Cost sharing the new water intake, water treatment plant and joint transmission mains are based on the ERWS joint venture partnership agreement. These costs are from the current capital expenditures outlined in the Final Predesign Report prepared by CH2M Hill dated June 5, 2014. The preliminary design cost estimates for the Siteworks are \$ 3,605,172, 16 % of these works was determined to be benefitting the City of Parksville's exiting Public Works Yard. The preliminary design cost estimates for the Operations Building is \$ 1,405,726, 60 % of the floor area was determined to be for the City of Parksville Public Works Operations.

### **Aquifer Storage and Recovery Wells**

Estimated capital expenditures for the Aquifer Storage and Recovery wells are from the Technical Report 2 prepared by Associated Engineering dated May 9, 2014. Cost sharing for the ASR wells between each joint venture was determined based on a water management strategy that will help defer water treatment plant expansion, reduce treatment plant operation, address potential climate change impacts and help maintain critical fisheries flow in the Englishman River. These have been determined to be mutually beneficial to each community, show good water management practices, partnership and cooperation between jurisdictions. It has been suggested that the potential of the ASR wells at Caudet Road would generate an additional yield of 3,000 cubic meters per day.

### **Transmission and Distribution System Improvements**

Cost apportions for distribution and transmission upgrades within each region that are only benefitting that jurisdiction have been fully allocated to the benefiting jurisdiction. The new Craig Bay pump station and associated transmission pipe works are required in year 2018. If ASR at the Claudet Road wells is proven to be successful, the new Craig Bay pump station upgrades could be deferred past year 2035.

### **Annual Operating and Maintenance Costs**

Estimated annual operating and maintenance projections (including labour, materials, supplies, hydro etc.) based on previous projects of similar size and magnitude are shown in Appendix A for the purposes of identifying operating and maintenance costs for future financial plans. The costs allocations for each jurisdiction are based on each jurisdiction using their full allotted annual water amount.

### **RECOMMENDATION(S):**

THAT the Englishman River Water Service Management Board adopt the capital cost allocations for the new water intake, water treatment plant, transmission mains and aquifer storage and recovery wells as shown in Appendix A entitled ERWS Project Cost Allocations, dated June 24, 2014.

### **BACKGROUND:**

The Englishman River Water Service joint venture agreement was adopted by the City of Parksville and the Regional District of Nanaimo on July 1, 2011 for the purpose of sharing bulk surface water from the Englishman River to supplement existing supply sources owned and operated by the individual jurisdictions. The Englishman River Water Service joint venture agreement describes the infrastructure (intake, treatment plant and transmission mains) that will be cost shared by its two joint venture participants for the purpose of receiving bulk water. The Englishman River Water Service joint venture agreement percentages of interest for bulk water and capital infrastructure are:

- City of Parksville 74%
- Regional District of Nanaimo 26%

Technical Report 2, prepared by Associated Engineering dated May 9, 2014 determined the feasibility of aquifer storage and recovery and the Preliminary Design Report, prepared by CH2M Hill, dated June 5, 2014 are complete and adopted by the ERWS Management Board. These reports recommended strategic phasing of the required capital improvements and associated costs in order to achieve additional water supply, provide enhanced health requirements and improved water management practices. The Englishman River Water Management Committee has used the capital infrastructure improvements costs from these reports to establish a summary of works required that identifies each jurisdiction's cost apportionment. The project cost allocation can be seen in Appendix A attached.

### **OPTIONS:**

1. Accept the project cost allocations as shown in Appendix A of this report.
2. Direct the Englishman River Water Service Management Committee to look at other cost sharing options.

### **ANALYSIS:**

Option 1 - proceeding expediently with the project cost allocations follows the Englishman River Water Service Joint Venture agreement and allows the project to proceed in accordance with the adopted Implementation Plan and will see the project complete prior to the December 31, 2016 condition set by Island Health.

Option 2 - The Englishman River Water Service Management Board could reject the project cost allocations shown in Appendix A and direct the Englishman River Water Service Management Committee to look at other cost sharing options outside of the ERWS Joint Venture Agreement. This would delay the construction and commissioning of the project and result in additional costs. It is unclear at this time how Island Health would react if the ERWS did not comply with the new operating conditions by December 31, 2016. If Island Health did not offer an extension to the deadline, the ERWS would be operating a non-compliant water service. The resulting liability implications for the stakeholders could be substantial.

### **INTERGOVERNMENTAL IMPLICATIONS**

The Englishman River Water Service Management Committee agree unanimously to the project cost allocations identified in Appendix A.

### **REFERENCES**

- Englishman River Water Service Joint Venture Agreement
- ERWS Board Committee Meeting held on June 5, 2014
- ERWS Board Committee Meeting Minutes held on May 16, 2014

Respectfully submitted,

**Englishman River Water Service Management Committee**

MS:ms

## Appendix A ERWS Project Cost Allocation

Description	Predesign Cost Estimate (\$)	Capital Cost - CoP Share		Capital Cost - RDN Share		Annual Operating Estimate (\$)	*Estimated Annual Operating Costs - CoP Share		*Estimated Annual Operating Costs - RDN Share		
		%	\$	%	\$		%	\$	%	\$	
<b>River Intake, Treatment Plant &amp; Aquifer Storage and Recovery</b>											
Intake and Raw Water Pump Station	3,081,983	74%	2,280,667	26%	801,316	140,000	74%	103,600	26%	36,400	
Raw Water Main	1,238,748	74%	916,674	26%	322,074	5,000	74%	3,700	26%	1,300	
Water Treatment Plant	15,174,391	74%	11,229,049	26%	3,945,342	490,000	74%	362,600	26%	127,400	
Siteworks	3,028,344	74%	2,240,975	26%	787,370	5,000	74%	3,700	26%	1,300	
Operations Building	562,290	74%	416,095	26%	146,195	20,000	74%	14,800	26%	5,200	
<sup>b</sup> ASR - Claudet Well Field	2,600,000	50%	1,300,000	50%	1,300,000	30,000	50%	15,000	50%	15,000	
Joint Transmission Mains	749,978	74%	554,984	26%	194,994	25,000	74%	18,500	26%	6,500	
Document Preparation / Tendering	962,320	74%	712,117	26%	250,203	-	74%	-	26%	-	
Engineering Construction Services	2,212,304	74%	1,637,105	26%	575,199	-	74%	-	26%	-	
Existing CoP River Intake Operation and Maintenance Costs						(107,000)	82%	(87,740)	18%	(19,260)	
<b>Sub-Total:</b>	<b>29,610,358</b>		<b>21,287,665</b>		<b>8,322,693</b>	<b>608,000</b>		<b>434,160</b>		<b>173,840</b>	
<b>Transmission and Distribution System Improvements</b>											
<sup>a</sup> CoP (Springwood Booster Pump)	101,695	100%	101,695	0%	-						
<sup>a</sup> CoP Transmission Main	5,549,111	100%	5,549,111	0%	-						
<sup>a</sup> NW Bay Transmission Main	473,330	0%	-	100%	473,330						
<sup>c</sup> Craig Bay Pump Station	1,250,000	0%	-	100%	1,250,000						
<b>Sub-Total:</b>	<b>7,374,136</b>		<b>5,650,806</b>		<b>1,723,330</b>						
<b>TOTAL COST ALLOCATION:</b>	<b>36,984,494</b>	73%	<b>26,938,471</b>	27%	<b>10,046,023</b>						

\* assuming each jurisdiction is using their full share of water allotment. Actual annual costs will be accounted using bulk water meters.

<sup>a</sup> Capital Cost estimate for the River Intake, Water Treatment Plant and Transmission Mains are based on the Predesign Report - prepared by CH2M Hill, dated June 5, 2014 and includes 25 % for contingencies, 6.51 % Escalation & 7% PST

<sup>b</sup> Capital Cost estimate for Aquifer Storage and Recovery based on the Phase 2 Technical Report - prepared by Associated Engineering, dated May 9, 2014

<sup>c</sup> Capital Cost estimate derived from Nanoose Water Supply Study - prepared by Koers and Associates.