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**REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, JULY 24, 2013**

SUBJECT **CORE AREA WASTEWATER INFRASTRUCTURE UPGRADE PROJECTS FOR 2013**

ISSUE

To provide information on the Core Area Wastewater infrastructure upgrade projects for 2013 as identified in the Core Area Liquid Waste Management Plan (LWMP) and/or the five-year capital budgets.

BACKGROUND

The CRD Board approved the 2013 Capital Project and Financial Plans for the four Core Area Trunk Sewer budgets (Northwest Trunk Sewer, East Coast Interceptor Sewer, Northeast Trunk Sewer – Clover, Northeast Trunk Sewer – Bowker) at its March 27, 2013 meeting. Each of the budgets include a Schedule G (attached as Appendix C), outlining the five-year capital plans. The projects in the plan include upgrading of the Capital Regional District (CRD) sewer infrastructure to address capacity, structural deficiencies, health and safety issues and other operational needs. None of the 2013 projects result from Core Area Liquid Waste Management Plan commitments.

Attached are Appendix A, which provides a description and budget figure for the 2013 projects, and Appendix B, which presents the cost-sharing apportionment based on each participant's flow as specified in the *Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 2312*, as amended by Bylaw No. 3028 and 3319. There are a total of eight projects planned for 2013 with a total budget of \$797,000. Funding for these projects is to be provided from each participant's share in the Core Area trunk sewer reserve fund or, with respect to the First Nations, from cash on hand. The reserves for each participant are generated primarily from operating surpluses in past years, in addition to MFA borrowing surpluses on particular projects. As of April 16, 2013, there is a total of \$5,848,269 available for existing Core Area conveyance infrastructure capital projects, of which \$2,220,000 is identified as funding for 2014-2017 projects. No additional borrowing is required by any of the participants for 2013.

ALTERNATIVES

That the Core Area Liquid Waste Management Committee (CALWMC) receive this report for information.

IMPLICATIONS

Appendix A provides details of the proposed improvements and the justification for the work. There are sufficient funds available in each participant's share of the Core Area trunk sewer reserve fund to pay for the proposed infrastructure projects as detailed in Appendix B. No loan authorizations or additional requisitions are required. These projects are not part of the Core Area Wastewater Treatment Program. They are ongoing capital improvements or projects driven by operational requirements of the existing conveyance system. Contracts related to these projects with a value in excess of \$200,000 will be brought to the CALWMC for a recommendation for CRD Board approval.

CONCLUSION

Each year infrastructure upgrades are required, as identified in the core area LWMP and Schedule G of the annual capital budgets, to replace equipment that has reached the end of its service life, address deficiencies, health and safety issues, and to keep the system in reliable operating condition. Eight projects with budget estimates totaling \$797,000 have been identified for 2013.

RECOMMENDATION

That the Core Area Liquid Waste Management Committee receive the staff report for information

Ted Robbins, BSc, CTech
General Manager, Integrated Water Services

Diana Lokken, Dip Bus Admin, CMA
General Manager, Corporate Services
Concurrence

Robert Lapham, MCIP, RPP
Chief Administrative Officer
Concurrence

TR:mm

Attachments: 3

Core Area Liquid Waste Management Committee - July 24, 2013
 Core Area Infrastructure Upgrade Projects for 2013

APPENDIX A - PROJECT DESCRIPTION
Core Area Sewers Infrastructure Upgrade Projects for 2013
 (Identified in the LWMP and Schedule G of the 2013 Budgets)

Item	Improvement	Estimated Cost	Description
1	Aldeane Bioxide Station	\$ 40,000	The current Bioxide injection systems at the Westshore Recreation Centre (Juan de Fuca Rec Centre) and Craigflower pump station are not able to control the high levels of H ₂ S from the Westshore communities. A new Bioxide station is required in the Aldeane/Sooke road area. This system will improve control of the increasingly high levels of H ₂ S that have become common in the downstream portion of the NWT sewer mains.
2	Marigold Surge Tank Construction Removal	\$ 500,000	In 2011/12 a smaller and more practical tank was designed, together with a plan for removal of the existing tank. The smaller tank will result in O&M savings, and removing the larger tank will eliminate vandalism and the liability of someone falling off the current above-ground tank.
3	NWT Trunk Metering Improvements	\$ 120,000	This project includes recommendations from a flow measuring audit that Kerr Wood Leidal (KWL) undertook for CRD in 2011/12. As part of the audit KWL has put forth recommendations that will improve flow monitoring accuracy at 8 flow monitoring stations on the North West Trunk collection system.
4	Screen Wash Pump and Filter System (Macauley Point)	\$ 30,000	This project includes installation of a packaged pump and automatic filter system that will be used to wash/rinse the solids from the Macauley Point mechanical screening equipment. The current system is tied into the City Of Victoria's domestic water supply and the annual domestic water bill for Macauley Point in 2011 was over \$23,500. The screens are operating 24 hours a day and this system will provide domestic water use savings of up to 50%.
5	NET Trunk Flow Metering Improvements	\$ 27,000	This project includes recommendations from a flow measuring audit that Kerr Wood Leidal (KWL) undertook for CRD in 2011/12. As part of the audit KWL has put forth recommendations that will improve flow monitoring accuracy at 2 flow monitoring stations on the North East Trunk collection system.
6	Screen Wash Pump and Filter System (Clover Point)	\$ 30,000	This project includes installation of a packaged pump and automatic filter system that will be used to wash/rinse the solids from the Macauley Point mechanical screening equipment. The current system is tied into the City Of Victoria's domestic water supply and the annual domestic water bill for Macauley Point in 2011 was over \$23,500. The screens are operating 24 hours a day and this system will provide domestic water use savings of up to 50%.
7	Currie Pump Station Lighting Upgrade (Dry)	\$ 30,000	The current lighting system at Currie Road pumpstation has become obsolete. Parts are no longer available and when there are failures the only fix is a one off replacement fixture. A complete upgrade is required to maintain reliability and consistency within the facility. Increased savings should also be realised with the installation of more modern and energy efficient lighting.
8	Trent Pump Station Carbon Filter Room Exhaust	\$ 20,000	Currently there is no exhaust system in the Trent pumpstation carbon filter room. A belt driven centrifugal sidewall exhaust fan will need to be installed to ventilate the room so staff can safely work in the area.

APPENDIX C

CAPITAL REGIONAL DISTRICT - SCHEDULE G

CAPITAL BUDGET FORM 2013 to 2015 & Forecast 2016 to 2017

Service #: 3.710
Service Name: North West Trunk Sewer

Year (1)	Type Code (2)* ↓	Specific Project Description (3)	Capital Expense \$	Funding (5)		Grant Program Sponsor (6)	Loan Authorization # (7)	Participants (8) ↓	%
				Source (4)** ↓	Amount Total \$				
2013	S	Marigold Surge Tank Construction Removal	500,000	R	500,000		Reserve		
2013	S	Screen Wash Pump and Filter System	30,000	R	30,000		Reserve		
2013	S	NWT Trunk Flow Metering Improvements	120,000	R	120,000		Reserve		
2013	S	Aldeane Bioxide Station	40,000	R	40,000		Reserve		
2014	S	NWT Priority Equipment Replacement Review	54,000	R	54,000		Reserve		
2014	S	NWT Shoreline Trunk Sewer Capacity Study	50,000	R	50,000		Reserve		
2014	S	Odour Control Improvements	50,000	R	50,000		Reserve		
2015	S	Odour Control Improvements	60,000	R	60,000		Reserve		
2016	S	NWT West Pipe Inspection and Sediment Removal	300,000	R	300,000		Reserve		
2016	S	Shoreline Trunk Sewer Upgrade	1,000,000	D	1,000,000		New		
TOTAL			2,204,000		2,204,000				

Type Codes (2)*	Funding Source Codes (4)**
L = Land	D = Debenture Debt (new debt only)
S = Engineering Structures	E = Equipment Replacement Fund
B = Buildings	G = Grants (Federal, Provincial)
V = Vehicles	O = Donations / Third Party Funding
E = Equipment	

C = Capital Funds on Hand
R = Reserve Fund
S = Short Term Loans
L = Lands Sales

CAPITAL REGIONAL DISTRICT - SCHEDULE G

**CAPITAL BUDGET FORM
2013 to 2015 & Forecast 2016 to 2017**

Service #: **3.712**
 Service Name: **North East Trunk Sewer**

Year (1)	Type Code (2)* ↓	Specific Project Description (3)	Capital Expense \$	Funding		Grant Program Sponsor (6)	Loan Authorization # (7)	Participants (8) ↓	%
				Source (4)** ↓	Amount Total (5) \$				
2013	S	NET Trunk Flow Metering Improvements	27,000	R	27,000		Reserve		
2013	S	Screen Wash Pump and Filter System	30,000	R	30,000		Reserve		
2014	S	NET Priority Equipment Replacement Review	40,000	R	40,000		Reserve		
2014	S	Odour Control Improvements	20,000	R	20,000		Reserve		
TOTAL					117,000				

Type Codes (2) *

- L = Land
- S = Engineering Structures
- B = Buildings
- V = Vehicles
- E = Equipment

Funding Source Codes (4) **

- D = Debenture Debt (new debt only)
- E = Equipment Replacement Fund
- G = Grants (Federal, Provincial)
- O = Donations / Third Party Funding

C = Capital Funds on Hand
R = Reserve Fund
S = Short Term Loans
L = Lands Sales

CAPITAL REGIONAL DISTRICT - SCHEDULE G

Service #: 3.713
 Service Name: East Coast Interceptor

**CAPITAL BUDGET FORM
 2013 to 2015 & Forecast 2016 to 2017**

Year (1) ↓	Type Code (2)* ↓	Specific Project Description (3)	Capital Expense \$	Funding		Grant Program Sponsor (6)	Loan Authorization # (7)	Participants (8) ↓	%
				Source (4)** ↓	Amount Total (5) \$				
2013	S	Currie Road Pumpstation Lighting Upgrade (Dry)	30,000	R	30,000		Reserve		
2014	S	Currie Road Pumpstation Lighting Upgrade (Wet)	60,000	R	60,000		Reserve		
2014	S	ECI Priority Equipment Replacement Review	17,000	R	17,000		Reserve		
2015	S	Penrhyn Lift Station Genset Upgrade-Construction	500,000	R	500,000		Reserve		
2015	S	Odour Control Improvements	20,000	R	20,000		Reserve		

TOTAL 627,000 627,000

Type Codes (2) *
 L = Land
 S = Engineering Structures
 B = Buildings
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 E = Equipment
 D = Debenture Debt (new debt only)
 E = Equipment Replacement Fund
 G = Grants (Federal, Provincial)
 O = Donations / Third Party Funding
 Funding Source Codes (4) **
 C = Capital Funds on Hand
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 L = Lands Sales

CAPITAL REGIONAL DISTRICT - SCHEDULE G

CAPITAL BUDGET FORM 2013 to 2015 & Forecast 2016 to 2017

Service #: 3.715
 Service Name: North East Trunk 2 (Bowker)

Year (1)	Type Code (2)* ↓	Specific Project Description (3)	Capital Expense \$	Funding Amount Total (5)		Grant Program Sponsor (6)	Loan Authorization # (7)	Participants (8) ↓	%
				Source (4)** ↓	\$				
2013	S	Trent Pumpstation Carbon Filter Room Exhaust	20,000	R	20,000		Reserve		
2014	S	NET-B Priority Equipment Replacement Review	9,000	R	9,000		Reserve		
2014	S	Odour Control Improvements	20,000	R	20,000		Reserve		
2015	S	Odour Control Improvements	20,000	R	20,000		Reserve		

TOTAL 69,000 69,000

<p>Type Codes (2)*</p> <p>L = Land S = Engineering Structures B = Buildings V = Vehicles E = Equipment</p>	<p>Funding Source Codes (4)**</p> <p>D = Debenture Debt (new debt only) E = Equipment Replacement Fund G = Grants (Federal, Provincial) O = Donations / Third Party Funding</p>
<p>C = Capital Funds on Hand R = Reserve Fund S = Short Term Loans L = Lands Sales</p>	