



**REPORT TO CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE
MEETING OF WEDNESDAY, 23 APRIL 2008**

SUBJECT CORE AREA INFRASTRUCTURE UPGRADE PROJECTS FOR 2008

PURPOSE

To seek approval for completing infrastructure upgrades for 2008 as identified in the Core Area Liquid Waste Management Plan (LWMP) and/or the capital budget form (Schedule G of the 2008 Environmental Services budget).

BACKGROUND

Chapter 16 of the Core Area LWMP and Schedule G of the capital budget (applicable pages attached as Appendix A), include upgrading of the Capital Regional District's (CRD) sewer infrastructure to address capacity and structural deficiencies, health and safety issues, and other needs.

The CRD Board approved the updated Chapter 16 of the Core Area LWMP and Schedule G of the 2008 Environmental Services budget at the 12 January 2005 and 16 November 2007 meetings, respectively.

This report identifies the infrastructure upgrade projects that are to be completed in 2008. Appendix B describes the projects and why they are needed. Appendix C presents the cost-sharing proportions for the projects based on each participant's design capacity as authorized under Liquid Waste Service Establishment Bylaw No. 2312.

FINANCIAL IMPLICATIONS

Some municipalities have sufficient funds available in the trunk sewer reserve fund to fund their share of the proposed projects, while others could fund a portion of their share through borrowing as indicated in Appendix C.

SUMMARY/CONCLUSIONS

Each year certain infrastructure upgrades are required, as identified in the Core Area LWMP and Schedule G of the annual budget, to address deficiencies, health and safety issues, and keep the system running well.

Five projects, with a total estimated cost of \$800,000, have been identified for 2008 (see Appendix B).

RECOMMENDATIONS

That the Core Area Liquid Waste Management committee recommend to the Board that:

1. authorization be given to proceed with the infrastructure upgrading projects identified in Appendix B;
2. costs be shared as outlined in Appendix C;

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3. funding be provided by the trunk sewer reserve fund in the amount of \$639,970, with the remaining \$160,030 to be funded by the attached Loan Authorization Bylaw No. 3532; and
4. Bylaw No. 3532, "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 2, 2008", be introduced and read a first time, read a second time and read a third time.

Malcolm J. Cowley, PEng
Manager, Engineering Design Services

Dwayne Kalynchuk, PEng
General Manager, Environmental Services
Concurrence

Kelly Daniels
CAO Concurrence

COMMENTS

Attachments: 4
MJC:cl

CAPITAL REGIONAL DISTRICT - SCHEDULE G

Service #: 3.713
 Service Name: EAST COAST INTERCEPTOR (SEWER)

**CAPITAL BUDGET FORM
 2008 & Forecast 2009 to 2012**

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)**	Total (5)				
2008	S	Clean and Video Inspect the Trunk Sewer	250,000	D	250,000		New		
2008	S	Arc Flash upgrades	75,000	D	75,000		New		
2008	S	Ripon valve chamber upgrade	75,000	D	75,000		New		
2008	S	Instrumentation upgrade on St. Charles Street	50,000	D	50,000		New		
2009	S	Address deficiencies discovered from trunk inspection	250,000	D	250,000		New		
2010	S	Penrhyn Pump Station Genset	725,000	D	725,000		New		

TOTAL 1,425,000 1,425,000

Funding Source Codes (4)**

Type Codes (2)* L = Land S = Engineering Structures B = Buildings V = Vehicles E = Equipment	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
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Prepared by: Malcolm Cowley
 Phone number: _____

CAPITAL REGIONAL DISTRICT - SCHEDULE G

CAPITAL BUDGET FORM 2008 & Forecast 2009 to 2012

Service #: **3.710**
Service Name: **NORTHWEST 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				
2008	S	Macaulay PS vortex drop chamber	360,000	D	360,000	New			
2008	S	Craigflower PS upgrade	6,000,000	D	6,000,000	3244			
2008	S	Parsons siphon - remove inner barrel	100,000	D	100,000	New			
2008	S	Arc Flash upgrades	75,000	D	75,000	New			
2008	S	Meaford Weir upgrade	75,000	D	75,000	New			
2009	S	Craigflower PS upgrade	6,000,000	D	6,000,000	3244			
2009	S	Address deficiencies discovered from trunk inspection	500,000	D	500,000	New			
2010	S	Demolish old Craigflower PS	2,000,000	D	2,000,000	New			
TOTAL									
				15,110,000					

<p>Type Codes (2)*</p> <ul style="list-style-type: none"> L = Land S = Engineering Structures B = Buildings V = Vehicles E = Equipment 	<p>Funding Source Codes (4)**</p> <ul style="list-style-type: none"> D = Debenture Debt (new debt only) E = Equipment Replacement Fund G = Grants (Federal, Provincial) O = Donations / Third Party Funding
<p>C = Capital Funds on Hand R = Reserve Fund S = Short Term Loans L = Lands Sales</p>	

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APPENDIX B

**CORE AREA INFRASTRUCTURE UPGRADE PROJECTS FOR 2008
(IDENTIFIED IN THE LWMP AND SCHEDULE G OF THE 2008 BUDGET)**

Item	Improvement	Estimated Cost	Description and Need
1	Macaulay Point pump station vortex drop chamber	\$360,000	<ul style="list-style-type: none"> existing 4-metre drop manhole creates gases causing odours, corrosion and health and safety concerns. excessive gases require the carbon to be changed every two years, costing some \$120,000. a vortex drop significantly improves hydraulic flow mitigating all of the above issues.
2	Parsons siphon – remove inner barrel	75,000	<ul style="list-style-type: none"> inner barrel was temporarily installed to maintain cleansing velocity during initial low flow demand when the West Shore was first serviced in 1994. peak wet weather flow now requires the inner barrel to be removed to prevent overflows.
3	Meaford weir upgrade	40,000	<ul style="list-style-type: none"> existing weir often fouls up and does not function correctly. accurate measurement is required for cost sharing and I&I purposes.
4	Clean and video inspect the east coast interceptor	250,000	<ul style="list-style-type: none"> the interceptor has never been inspected or cleaned since it was constructed some 17 years ago. cleaning is required to improve performance, reduce corrosion and odours, and assess its condition.
5	Ripon valve chamber upgrade	75,000	<ul style="list-style-type: none"> existing isolation valve on the east coast interceptor is often under water and subject to corrosion, etc. a sump pump and kiosk are required to prevent this critical valve from seizing.

APPENDIX C

**CORE AREA PROJECTS FOR 2008
(IDENTIFIED IN THE LWMP AND SCHEDULE G OF THE 2008 BUDGET)**

COST SHARING

Item	Improvement	Estimated Cost	Cost Sharing (% / Allocation)								
			Langford	Colwood	View Royal	Songhees IR	Esquimalt IR	Esquimalt and DND	Victoria	Saanich	Oak Bay
1	Macaulay Point pump station vortex drop chamber	\$360,000	7.1% \$25,560	6.6% \$23,760	4.5% \$16,200	0.7% \$2,520	0.3% \$1,080	25.1% \$90,360	24.3% \$87,480	31.4% \$113,040	--
2	Parsons siphon – remove inner barrel	75,000	49.0% \$36,750	44.8% \$33,600	6.2% \$4,650	--	--	--	--	--	--
3	Meaford weir upgrade	40,000	100% \$40,000	--	--	--	--	--	--	--	--
4	Clean and video inspect the east coast interceptor	250,000	--	--	--	--	--	--	43.6% \$109,000	24.8% \$62,000	31.6% \$79,000
5	Ripon valve chamber upgrade	75,000	--	--	--	--	--	--	43.6% \$32,700	24.8% \$18,600	31.6% \$23,700
Total		\$800,000	\$102,310	\$57,360	\$20,850	\$2,520	\$1,080	\$90,360	\$229,180	\$193,640	\$102,700
Source of Funds		Trunk Sewer Reserve	\$40,000	\$10,000	\$20,850	on hand	on hand	\$40,000	\$229,180	\$193,640	\$102,700
		Loan Authorization Bylaw No. 3532	\$62,310	\$47,360	--	--	--	\$50,360	--	--	--
Annual Debt Servicing per \$100,000 Residential Assessment			\$0.17	\$0.20	--	--	\$0.25	--	--	--	

CAPITAL REGIONAL DISTRICT

BYLAW NO. 3532

A BYLAW TO AUTHORIZE THE BORROWING OF \$160,030 FOR THE ESTIMATED COST OF WORKS RELATING TO THE CORE AREA (NORTHWEST TRUNK SYSTEM) INFRASTRUCTURE AND RELATED FACILITIES UPGRADE

WHEREAS:

- A. By Supplementary Letters Patent, Division VII dated the 28th day of December, 1967, as amended by further Supplementary Letters Patent, the Capital Regional District was granted the function of acquisition, design, construction, operation, maintenance, renewal and administration of trunk sewers and sewage disposal facilities within all member municipalities of the Regional District, except the electoral areas of Sooke and Outer Gulf Islands;
- B. Under Bylaw No. 2312, "Liquid Waste Management Core Area and Western Communities Service Establishment Bylaw No. 1, 1995", and as amended by subsequent bylaw, the Capital Regional District converted the function of trunk sewers and sewage disposal facilities for the Core Area and Western Communities portion of the Regional District, under Sections 774.2(3) and 796 of the *Local Government Act*;
- C. It is deemed desirable to fund works relating to upgrading of the Core Area Infrastructure, including Macaulay Point Pump Station, Parsons Siphon, and related facilities in the Northwest trunk sewer system;
- D. The works shall include the planning, study, public consultation, site selection, design, land and material acquisition, construction, supply and installation of all material, equipment and components and all construction necessary for the preparation and works relating to the upgrading of the Core Area Infrastructure, including Macaulay Point Pump Station, Parsons Siphon, and related facilities in the Northwest trunk sewer system;
- E. Other funding sources shall be used to fund part of the desired works;
- F. The estimated cost of the facilities designed, constructed and installed as aforesaid including expenses incidental thereto to be funded from debt servicing, is the sum of One Hundred Sixty Thousand Thirty (\$160,030) dollars, which is the amount of debt intended to be created by this bylaw;
- G. The Capital Regional District Core Area Liquid Waste Management Plan, dated July 12, 2000, was approved by the Minister of Water, Land and Air Protection, March 26, 2003 and as amended and approved, in accordance with Section 24 (5) of the *Environmental Management Act*;
- H. Under Section 24 (7) of the *Environmental Management Act*, adoption of a bylaw in respect of an approved waste management plan does not require a petition, the assent of the

electors or the approval of the electors referred to in the *Local Government Act or Community Charter*;

- I. It is proposed that the financing of the said works to be acquired, designed and constructed is to be undertaken by the Municipal Finance Authority of British Columbia pursuant to proposed agreements between that Authority and the Capital Regional District

NOW THEREFORE the Board of the Capital Regional District in open meeting assembled enacts as follows:

1. The Board is hereby empowered and authorized to undertake and carry out or cause to be carried out the planning, study, public consultation, site selection, design, land and material acquisition, construction, supply and installation of all material, equipment and components, and all construction necessary for the sewerage facilities herein before described and to do all things necessary in connection therewith and without limiting the generality of the foregoing:
 - (a) to borrow upon the credit of the Capital Regional District a sum not exceeding One Hundred Sixty Thousand Thirty Dollars (\$160,030); and
 - (b) to acquire all such real property, easements, rights-of-way, licenses, rights or authorities as may be requisite or desirable for or in connection with construction of the said facilities.
2. The maximum term for which debentures may be issued to secure the debt intended to be created by this bylaw is 10 years.
3. This bylaw may be cited as "Liquid Waste Management Core Area and Western Communities Service Loan Authorization Bylaw No. 2, 2008".

READ A FIRST TIME THIS	day of	2008
READ A SECOND TIME THIS	day of	2008
READ A THIRD TIME THIS	day of	2008
APPROVED BY THE INSPECTOR OF MUNICIPALITIES THIS	day of	2008
ADOPTED THIS	day of	2008

CHAIR

SECRETARY