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

**SUBJECT:** Implementation of Liquid Waste Management Plan in Core Area and West Shore Municipalities  
- Impact on the Average Household

**PURPOSE/ISSUE:**

The Core Area Liquid Waste Management Committee requested an update on projection of potential costs for the proposed treatment system in the treatment areas, and the following is provided for information purposes.

**HISTORY/BACKGROUND:**

As the implementation of the Liquid Waste Management Plan proceeds, staff will provide updates on the implications to households. As with any projections, the costs provided are based on the most current information available, subject to a number of assumptions including:

- capital and operating cost estimates from the consulting engineers' current multi-treatment plant model
- no development cost charge funding
- no cost sharing agreement
- costs are allocated between municipalities based on the most recent engineering projections for total sewage and I&I flow within the area
- flow allocation between jurisdictions have been adjusted since the earlier projections, based on recent updates.
- borrowing at 6% over 25 years and inflation at 2.5 %
- projections for population and assessment growth

The treatment system capacity is calculated as a function of dry weather flows, which then drives the majority of the capital costs. A portion of capital costs are projected to be incurred for Inflow and Infiltration (I&I) and operating costs will be impacted by I&I.

These costs exclude the operating and debt costs of the current sewer infrastructure and thus represent the net increase in the system expenditures based on projected system completion as of 2016 (see attached schedules for more detailed information).

The estimates reflect the impact of the current condition of the collection system in the various municipalities and the method currently used by the individual municipalities for cost recovery, whether property tax based or water consumption based. There are further changes expected in the methodology to be used for billing in some municipalities.

- Two examples of potential costs by municipality are provided for information on the basis of allocating:
- (a) operating costs based on total projected flows including I&I and capital costs based on projected flows, excluding I&I (as capacity is primarily based on dry weather flow),
  - (b) all costs, operating and capital, based on total projected flows.

Potential cost per average residential household per year based on cost apportionment by:

	<u>(a) Dry Weather Flow</u>	<u>(b) Total Flow</u>
Colwood	\$ 220.71	\$197.81
Esquimalt	368.76	408.45
Langford	188.70	157.49
Oak Bay	541.11	712.98
Saanich	548.35	471.12
Victoria	412.59	464.85
View Royal	499.33	430.88

**ALTERNATIVES:**

- (1) A consultant be engaged to prepare a principles and options report to be used for future cost sharing.
- (2) Staff continue to provide updated cost projections as assumptions change or new information becomes available; cost sharing discussions commence upon completion of site selection.

**FINANCIAL IMPLICATIONS:**

As there is no cost sharing formula, the examples are illustrative only

**SUMMARY/CONCLUSIONS:**

The information provided with respect to the impact on the average household is based on a number of assumptions with respect to costs, cost apportionment and method of recovery by individual municipalities and, as such, is illustrative only. Further development of cost apportionment basis, in particular, is needed to provide more useful financial impact information.

**RECOMMENDATIONS:**

That the report be accepted for information purposes and that a consultant be engaged to prepare a principles and options report to be used for future cost sharing.

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Brian MacDonald  
Manager, Financial Planning & Treasury

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Rita M. Estock, DBusM, FCGA  
Sr. Manager, Financial Services

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

COMMENTS:

**L.W.M.P. - Core and Western Communities**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Incremental Costs</b>										
Interest accrual & debt res.	150,890	274,329	492,104	801,622	1,099,224	1,248,250	1,393,635	635,850		
Annual debenture charges	223,388	1,031,235	2,461,898	5,028,256	9,208,822	14,941,406	23,509,624	33,075,791	37,440,383	37,440,383
Operating					1,373,000	2,859,325	2,930,808	5,539,261	16,120,222	16,523,227
<b>Total</b>	<b>374,278</b>	<b>1,305,564</b>	<b>2,954,002</b>	<b>5,829,878</b>	<b>11,681,046</b>	<b>19,048,981</b>	<b>27,834,067</b>	<b>39,250,903</b>	<b>53,560,605</b>	<b>53,963,610</b>

**Dry Weather Flow Allocation Basis**

## Impact on average household

Colwood	2.44	8.11	17.31	32.57	61.22	94.79	133.55	179.60	229.62	220.71
Esquimalt	2.73	9.41	21.03	40.98	82.60	133.69	191.56	268.21	370.44	368.76
Langford	2.32	7.56	16.11	29.99	55.29	85.02	118.63	157.56	196.93	188.70
Oak Bay	3.65	12.59	28.14	54.84	114.78	187.63	265.19	375.42	542.78	541.11
Saanich	4.00	14.52	32.74	64.40	125.64	202.83	297.91	415.54	546.99	548.35
Victoria	3.03	10.43	23.32	45.45	91.92	148.93	213.10	298.69	414.41	412.59
View Royal	4.12	14.18	31.70	61.79	119.53	191.28	278.37	384.90	502.56	499.33

## Cost allocation

Colwood	10,111	36,411	85,040	173,222	352,092	589,666	894,871	1,295,063	1,780,289	1,848,677
Esquimalt	25,323	88,046	198,552	390,505	794,113	1,296,943	1,874,956	2,648,844	3,691,444	3,707,798
Langford	16,030	58,058	136,375	279,383	565,622	950,134	1,455,735	2,112,588	2,880,904	3,007,670
Oak Bay	23,946	82,601	184,796	360,568	758,307	1,242,233	1,754,878	2,489,725	3,622,529	3,615,658
Saanich	157,232	546,693	1,232,843	2,424,709	4,730,249	7,636,506	11,216,333	15,645,215	20,594,506	20,645,694
Victoria	124,694	434,418	981,595	1,934,390	3,955,312	6,478,748	9,372,510	13,281,175	18,629,410	18,751,824
View Royal	14,692	51,285	116,110	229,267	449,297	728,339	1,073,768	1,503,965	1,989,249	2,002,158
First Nations	2,250	8,053	18,691	37,835	76,054	126,412	191,016	274,327	372,273	384,131
<b>Total</b>	<b>374,278</b>	<b>1,305,564</b>	<b>2,954,002</b>	<b>5,829,878</b>	<b>11,681,046</b>	<b>19,048,981</b>	<b>27,834,067</b>	<b>39,250,903</b>	<b>53,560,605</b>	<b>53,963,610</b>

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Annual debenture charges	223,388	1,031,235	2,461,898	5,028,256	9,208,822	14,941,406	23,509,624	33,075,791	37,440,383	37,440,383
Operating					1,373,000	2,859,325	2,930,808	5,539,261	16,120,222	16,523,227
<b>Total</b>	<b>374,278</b>	<b>1,305,564</b>	<b>2,954,002</b>	<b>5,829,878</b>	<b>11,681,046</b>	<b>19,048,981</b>	<b>27,834,067</b>	<b>39,250,903</b>	<b>53,560,605</b>	<b>53,963,610</b>

**Total Flow Allocation Basis**

## Impact on average household

Colwood	2.08	6.93	14.80	27.85	53.27	82.90	116.07	156.97	205.56	197.81
Esquimalt	3.15	10.87	24.30	47.41	93.89	151.31	218.48	304.41	410.39	408.45
Langford	1.79	5.85	12.46	23.22	44.00	68.21	94.26	126.33	164.05	157.49
Oak Bay	5.56	19.16	42.86	83.61	164.92	265.51	383.94	534.31	716.49	712.98
Saanich	3.21	11.67	26.33	51.82	103.55	168.39	245.32	344.89	469.14	471.12
Victoria	3.59	12.37	27.66	53.96	106.85	172.21	248.65	346.45	467.06	464.85
View Royal	3.32	11.46	25.64	50.01	99.04	159.62	230.48	321.13	432.93	430.88

## Cost allocation

Colwood	8,639	31,117	72,695	148,120	306,374	515,721	777,764	1,131,888	1,593,802	1,656,823
Esquimalt	29,225	101,694	229,508	451,749	902,665	1,467,847	2,138,481	3,006,435	4,089,533	4,106,829
Langford	12,381	44,872	105,480	216,252	450,070	762,299	1,156,754	1,693,863	2,399,888	2,510,238
Oak Bay	36,420	125,724	281,492	549,676	1,089,631	1,757,828	2,540,643	3,543,505	4,781,872	4,764,022
Saanich	126,230	439,234	991,285	1,951,178	3,898,762	6,339,878	9,236,455	12,985,294	17,663,378	17,738,083
Victoria	147,691	514,930	1,164,424	2,296,517	4,597,900	7,491,584	10,935,988	15,405,098	20,996,477	21,127,073
View Royal	11,865	41,449	93,914	185,588	372,304	607,813	889,022	1,254,807	1,713,631	1,727,701
First Nations	1,827	6,545	15,203	30,799	63,340	106,011	158,960	230,012	322,024	332,840
<b>Total</b>	<b>374,278</b>	<b>1,305,564</b>	<b>2,954,002</b>	<b>5,829,878</b>	<b>11,681,046</b>	<b>19,048,981</b>	<b>27,834,067</b>	<b>39,250,903</b>	<b>53,560,605</b>	<b>53,963,610</b>