



ISSUED FOR REVIEW

<b>To:</b>	Liz Cookson	<b>Date:</b>	December 17, 2019
<b>c:</b>		<b>Memo No.:</b>	2
<b>From:</b>	Zachary Lirenman, B.Sc. Wilbert Yang, P. Eng.	<b>File:</b>	704-SWM.SWOP03315-02
<b>Subject:</b>	AVICC Solid Waste Technical Group – Solid Waste Research Data Update		

*This 'Issued for Review' document is provided solely for the purpose of client review and presents our interim findings and recommendations to date. Our usable findings and recommendations are provided only through an 'Issued for Use' document, which will be issued subsequent to this review. Final design should not be undertaken based on the interim recommendations made herein. Once our report is issued for use, the 'Issued for Review' document should be either returned to Tetra Tech Canada Inc. (Tetra Tech) or destroyed.*

## 1.0 INTRODUCTION

Tetra Tech Canada Inc. (Tetra Tech) was retained by the Association of Vancouver Island Coastal Communities (AVICC) to update the data collected as part of the Solid Waste Management (SMW) Research Project. This tech memo is an update to the similar memo produced in 2017.

The aim of the special SWM committee is to understand how member regional districts manage their solid waste, identify mutual goals, objectives and challenges, and to see where collaborative opportunities could benefit the AVICC. Regional districts share similar issues with respect to waste management systems; the need to reduce waste generation and increase diversion to protect limited resources, dwindling landfill capacity, and escalating management costs. For the AVICC to meet its objectives, the committee requires comprehensive and comparable information from all member regional districts.

All regional districts that are part of the AVICC special SWM committee were contacted as part of this research project to develop comparable data and information regarding the current state of waste management in each regional district. The data has been summarized, and aggregate totals and averages have been calculated to update statistics about AVICC solid waste management programs.

**Table 1: Association of Vancouver Island and Coastal Communities Member Solid Waste Data Summary for 2018**

Metric	Alberni Clayoquot	Capital	Comox/Strathcona	Cowichan Valley	Mount Waddington	Nanaimo	Powell River	Sunshine Coast	Total
<b>General Information</b>									
Population (2018)	36,555	413,406	119,662	85,234	11,139	167,156	21,358	29,696	884,206
SWMP <sup>1</sup> First Approved (Year)	2008	1995	2013	1995	1996	2004	1996	2011	
SWMP <sup>1</sup> Current Status	Updated 2017	New Plan Development (Stage 3)	5 year effectiveness review	Finalized and posted publicly October 2018	Amendment in Progress	Pending	Approved	Update Anticipated for 2021	
Disposal/Capita (kg)	511	380	554	374	724	401	579	403	422
Reported Diversion Rate	16%	--	48%	64%	37%	68%	-	56%	
<b>Residual Management</b>									
Disposed MSW/yr (t)	18,678	156,931	64,974	0	8,063	56,074	134	12,894	317,748
Exported MSW/yr (t)	0	0	0	33,699	0	8,935	12,236	669	55,539
<b>Total MSW/yr (t)</b>	<b>18,678</b>	<b>156,931</b>	<b>64,974</b>	<b>33,699</b>	<b>8,063</b>	<b>65,009</b>	<b>12,370</b>	<b>13,563</b>	<b>373,287</b>
Controlled Waste/yr <sup>2</sup> (t)	1,148	13,511	1,286	0	0	1,985	0	25	17,955
Tipping Fee	\$120	\$110	\$130	\$140	\$125	\$125	\$225	\$150	
Disposal Cost <sup>3</sup>	\$2,241,360	\$17,262,410	\$8,446,620	\$4,717,860	\$772,784 <sup>6</sup>	\$8,126,116	\$2,783,250	\$2,034,416	\$46,384,817
<b>Organics Management<sup>4</sup></b>									
Generated/yr (t)	1,968	11,515	14,837	19,707	3,010	15,029	2,036	6,295	74,396
Organics/Capita (kg)	54	28	124	231	270	90	95	212	84
<b>Recycling<sup>4</sup></b>									
Generated/yr (t)	1,748	17,522	46,947	48,516	1,893	118,254	491 <sup>5</sup>	5,170	239,824
Recycling/Capita (kg)	48	42	392	569	170	707	23 <sup>5</sup>	174	271
<b>Total Material Generated (Disposal+Recycling+Organic s)/Capita (kg)</b>	<b>613</b>	<b>450</b>	<b>1,059</b>	<b>1,196</b>	<b>1164</b>	<b>1,186</b>	<b>697<sup>5</sup></b>	<b>843</b>	<b>778</b>

<sup>1</sup>Solid Waste Management Plan (SWMP)<sup>1</sup>

<sup>2</sup>Controlled waste includes suspect asbestos containing materials, sewage plant screenings, medical waste, animals.

<sup>3</sup>Disposal cost = tipping fee \* disposed MSW.

<sup>4</sup>Not all Regional Districts track Private Sector Organics Management and Recycling tonnages. This data is not comparable between Regional Districts.

<sup>5</sup>qRD could not obtain recycling numbers at this time

<sup>6</sup>RDMW provided MSW disposal cost directly

**Table 2: Breakdown of Revenue Sources for Operating Budgets**

Description	Alberni Clayoquot	Capital	Comox/ Strathcona	Cowichan Valley	Mount Waddington	Nanaimo	Powell River	Sunshine Coast
Operating Budget <sup>1</sup>	\$4,013,621	\$26,946,614	\$17,107,368	\$7,979,115	\$1,546,881	\$14,052,253	\$1,904,904	\$4,670,664
Population	36,555	413,406	119,662	85,234	11,139	167,156	21,358	29,696
<b>Total Revenue</b>	<b>\$4,759,500</b>	<b>\$26,946,614</b>	<b>\$17,107,368</b>	<b>\$11,919,115</b>	<b>\$1,441,481</b>	<b>\$19,101,727</b>	<b>\$2,106,699</b>	<b>\$5,532,778</b>
Tipping Fees	\$4,093,698	\$18,599,320	\$10,036,384	\$2,541,000	\$505,336	\$10,070,700	\$1,131,621	\$2,708,153
Recycle BC/EPR Revenue	\$368,960	\$5,525,887	\$94,616	\$305,000	\$213,947	\$1,019,992	\$60,552	\$133,994
Other Recycling Revenue	\$8,640	\$1,693,214	\$403,482	\$543,000	\$80,386	\$103,660	\$0	\$0
Landfill Gas Revenue	\$0	\$666,662	\$0	\$0	\$0	\$0	\$0	\$0
Taxation	\$194,823	\$0	\$3,999,999	\$4,520,900	\$440,500	\$831,133	\$498,042	\$1,772,895
Utility Fees	\$30,359	\$0	\$0	\$0	\$0	\$3,691,344	\$0	\$0
Surplus	\$0	\$0	\$2,459,935	\$0	\$0	\$2,390,980	\$333,346	\$0
Permits, Fines, Grants, Operations, Misc.	\$63,020	\$111,532	\$112,952	\$878,895	\$36,180	\$164,777	\$82,015	\$0
Loan	\$0	\$0	\$0	\$2,970,320	\$0	\$0	\$0	\$0
First Nation Requisition	\$0	\$0	\$0	\$0	\$88,000	\$0	\$790	\$0
Reserve Fund	\$0	\$350,000	\$0	\$160,000	\$300,000	\$726,133	\$0	\$25,442
Interdepartmental Recoveries	\$0	\$0	\$0	\$0	\$0	\$103,007	\$0	\$0
<b>Shortfall/Profit</b>	<b>\$745,879</b>	<b>\$4,018,509</b>	<b>\$0</b>	<b>\$3,940,000<sup>2</sup></b>	<b>\$0</b>	<b>\$1,998,900<sup>3</sup></b>	<b>\$201,795</b>	<b>\$862,114</b>

<sup>1</sup> Based on operating budget only for the regional district (No municipal costs included). Some regional districts provide collection services to municipalities and electoral areas, and other Regional Districts operate depots, transfer stations and landfills so financial numbers are not directly comparable as different services are offered.

<sup>2</sup> Posted surplus was allocated for additional capital budget.

<sup>3</sup> Included contributions to reserve fund and additional capital budget in addition to base operating budget.

## 2.0 LIMITATIONS OF REPORT

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## 3.0 CLOSURE

We trust this technical memo meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,  
Tetra Tech Canada Inc.

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Prepared by:  
Zachary Lirenman, B.Sc.  
Environmental Technician  
Solid Waste Management Practice  
Direct Line: 778.895.9647  
Zach.lirenman@tetrattech.com

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Reviewed by:  
Wilbert Yang, P.Eng.  
Senior Planning Engineer  
Solid Waste Management Practice  
Direct Line: 604.608.8648  
Wilbert.Yang@tetrattech.com

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