

**DATE:** October 23, 2013

**FILE:** 5360-01

**TO:** Chair and Directors  
Comox Valley Regional District (Comox Strathcona waste management) board

**FROM:** Debra Oakman, CMA  
Chief Administrative Officer

**RE:** Capital Projects Status Summary Report

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### **Purpose**

To provide an update to the Comox Strathcona waste management (CSWM) board on the status of the major solid waste facilities capital projects currently underway in 2013 and projected to be completed in the preliminary 2014 – 2018 financial plan capital budget.

### **Policy analysis**

The regional solid waste service area covers the Comox Valley and Strathcona Regional Districts' geographic areas and is operated by the Comox Valley Regional District (CVRD) under letters patent and branded as Comox Strathcona waste management. The service was established under bylaw no. 1822 in 1996 to establish and operate a local service for the collection, removal and disposal of waste and noxious, offensive or unwholesome substances. Annual costs are currently recovered through fees and charges associated with bylaw no. 170.

The 2012 Comox Strathcona solid waste management plan (CS-SWMP), Table 23-1 capital schedule, adopted by the CSWM board September 2012 and the updated capital schedule in Appendix 'A' of this report represents major projects in the CSWM services facility operational capital plan.

### **Executive summary**

All work described in this report is described and is a part of the CS SWMP. Major CSWM solid waste facility capital projects currently underway as discussed in this report, are taken from the current capital schedule (Appendix 'A') originally developed in the CS SWMP facility capital schedule, updated, and now form the basis of the CSWM function 391, preliminary 2014 – 2018 financial plan capital schedule. Updates to the original CS SWMP capital schedule include project budget estimate changes and extensions to the project start-up times to better manage capital funding.

### **Recommendation from the chief administrative officer:**

None. This report is for information purposes only.

Respectfully:

*D. Oakman*

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Debra Oakman, CMA  
Chief Administrative Officer

Referencing Appendix 'A' items the following major capital projects were begun in 2012 including:

1. Campbell River landfill closure
2. Comox Valley landfill closure
3. Zeballos landfill closure
4. Tahsis landfill closure
5. Gold River landfill closure

Each of the above capital projects are a part of the final closure which is related to provincial compliance. For the regional landfills of Campbell River and Comox Valley phase 1 includes about 75 per cent of total closure including landfill gas collection systems. The remote landfills capital projects include final closure stormwater system construction, final waste relocation, fencing and other compliance issues including improvements to the landfill leachate control systems.

In 2013 work continued on 2012 major infrastructure works listed above and in July, 2013, the CSWM board authorized award to EBA Tetra Tech Inc. for the Comox Valley landfill facility - landfill expansion and leachate treatment system design.

The following Table 1 - October 2013 capital project status report and the Table 1 notes directly following the table, are for information to the CSWM board in reference to the November 7, 2013 update to the capital budget, preliminary 2014 – 2018 financial plan.

To preface Table 1, tenure transfers from municipalities to the CVRD through the Ministry of Lands have been completed (July 16<sup>th</sup>, 2013) for the landfills of Zeballos, Tahsis and Gold River. Campbell River waste management facility tenure transfer, Block 'C', has been delayed by the Ministry of Lands and is now part of the Campbell River – CVRD host agreement, landfill tenure expansion and a part of Part 2, liability provision of the host agreement.

Table 1 – October 2013 Capital Project Status Report and Estimated Construction Dates.

Note	Project	Design Work per cent Completed	Construction To Begin	Construction To Be Completed
1	Comox Valley Facility Landfill Expansion	10 per cent	2017	2017
2	CVWMC landfill closure Ph1	95 per cent	2015	2015
3	CRWMC landfill closure Ph1	100 per cent	2013	2014
4	GRWMC landfill closure Ph1	50 per cent	2015	2015
5	Tahsis landfill closure Ph1	95 per cent	2014	2014
6	Zeballos landfill closure Ph1	100 per cent	2014	2014

Table 1 notes include:

1. Comox Valley Disposal Facility Landfill Expansion. The design of this facility includes two parts, A and B respectively. Part B mostly involves construction tender document synthesis and Part A includes:
  - a. Preliminary Expansion Options Assessment
  - b. Landfill Liner Options Assessment

- c. Leachate Treatment Options Investigation
- d. Updated Design, Operations and Closure Plan
- e. Updated Operations Certificate (Permit)

Work on each of the five listed tasks is underway with particular emphasis on part (c) Leachate Treatment Options Investigation which is the critical path item for Part 'A' at this point. The leachate system assessment is a part of the CVRD – Village of Cumberland (VoC) memorandum of understanding (MOU) (Appendix 'B') which represents a commitment by the CVRD to assess and work toward an integrated host community infrastructure system that would attempt to find a common leachate treatment and liquid waste treatment system that could be shown to benefit both the CVRD and the VoC.

The leachate treatment assessment report to the CSWM board is to include a minimum of four treatment options, two with on-site discharge and two with off-site discharge including:

- On-site biological treatment
- On-site chemical/physical treatment
- On/off site pre-treatment and discharge to VoC existing sanitary system
- On/off site pre-treatment and discharge to CVRD sanitary system (South Sewer Project)

Due to regulatory and technical constraints related to the sensitivity of Baynes Sound to the potential discharge of treated low level industrial waste, the two on-site options appear to be the best leachate management options at this point. However, in September 2013, the following option was added to the assessment contract to be able to continue to assess an integrated treatment option with VoC per the Appendix 'B' MOU:

- Assessment of transport and treatment of excess VoC residential liquid waste at the landfill facility that would include liquid waste quantities beyond the known South Sewer Project allotment for VoC.

The leachate treatment assessment report including all five above options to the CSWM board is targeted for completion before the end of 2013. Then, after a treatment option is authorized by the CSWM board, a proposal will be obtained to prepare the construction drawings and tender documents for the leachate treatment facility in preparation of the opening of the expanded landfill facility on or before 2018.

2. Comox Valley Waste Management Center Landfill Closure Phase 1. Project design is 95 per cent completed including tender drawings for the 75 per cent closure of outside slopes using 60 mil low density polyethylene, 100 per cent landfill gas system designed to target capture over 80 per cent of GHG emissions, leachate collection system components and, a comprehensive site stormwater collection and treatment system. The design engineer is assisting CSWM services in completing a contractor RFQ<sub>i</sub> to short list qualified construction companies for phase 1 construction. Construction is scheduled for 2015 so work in 2014 will include mostly tender plan updates with survey data, RFQ<sub>i</sub> completion and possibly assessment of alternative landfill gas disposal options. Discussions have begun (September 25<sup>th</sup>, 2013) with Fortis Gas Business Development office towards the possibility of providing landfill gas to Fortis Gas pipelines. Development of this technology is also a commitment to the VoC per the attached MOU.
3. Campbell River Waste Management Center Landfill Closure Phase 1. The final closure project has now been divided into three phases including:

- a. Phase 1 - Mechanically Stabilized Earthen Wall and closure of lower outside slope along Argonaut Road. This will permit operation of the landfill to continue to 2018.
- b. Phase 2 – Install landfill gas system and close approximately 75 per cent of the outer slopes. Construction is scheduled to be completed in 2016 to meet Ministry of Environment (MoE) landfill gas requirements.
- c. Phase 3 – In 2018 construction is scheduled to complete the closure of the landfill and begin 100 per cent transfer of waste to the expanded Comox disposal facility expanded landfill in accordance with the CS SWMP.

In July, 2013 Phase 1 request for proposals (RFP) tenders were rejected due to cost variations from the Engineer's construction estimate. In September 2013 two contracts for Phase 1 closure work were issued and a request for qualifications (RFQu) for wall construction scheduled to begin in the spring of 2014 was issued by the CSWM in October 2013. Phase 1 closure work for 2013 includes Phase 1 waste relocation and embankment excavation for final stormwater system. Tenure transfers involving the Ministry of Lands that will expand the landfill Block 'C' tender to include waste found outside the tenure boundary and associated liability provision of Part 2 of the CVRD-CR Host Agreement are progressing acceptably. With the completion of the mechanically stabilized earth (MSE) wall and the Phase 1 slope closure work scheduled in 2014, the system capital improvement plan will remain on schedule.

4. Gold River Waste Management Centre Landfill Closure Phase 1. Updated closure and operations plans have been completed and submitted to the Ministry of Environment for initial review and will be submitted to Gold River for review in 2013. Construction plans and tender documents are at the 50 per cent design level and target date for 90 per cent level document submission is in December 2013. Adjusted tenure boundary to include regulatory setback have been reviewed and approved by the MoE and have been submitted to the Ministry of Lands. Construction is presently scheduled to commence in 2015.
5. Tahsis Landfill Closure Phase 1. Updated closure and operations plans have been completed and submitted for review to the Village of Tahsis and the MoE. Construction and tender plans and documents are about 80 per cent completed, and request for tenders are targeted to be issued before the end of 2013 for CSWM board approval and contract award most likely in February 2014. Increase in capital budget estimate, per engineers construction estimate noted in attached Appendix 'A', is mostly due to the amount and location of buried waste that must be relocated into the Tahsis landfill and the final stormwater collection and treatment construction estimate.

In September 2013 Tahsis landfill roadway bridge inspection revealed structural failings that have required closure of the bridge to all traffic. The Village of Tahsis is examining several bridge replacement options as the bridge is the only access to the Tahsis landfill. Consequently, the CSWM and the Village of Tahsis working together, have set up a temporary transfer station for Tahsis waste disposal at the abandoned sawmill facilities in Tahsis. The CSWM has supplied transfer station bins and will truck the waste to the CRWMC per the unified transportation plan. Tahsis is to operate the interim facility until landfill access is re-established, projected sometime in 2014. CSWM services has requested to be kept informed of Tahsis bridge replacement option analysis. The MoE was notified as to the bridge failure and is being informed as to developments. The Tahsis interim transfer station is in accordance with the CS SWMP.

6. Zeballos Landfill Closure Phase 1. Updated closure and operations plans as well as phase 1 construction plans have been completed and submitted for review to Zeballos and the MoE. Construction and tender documents are ready to be issued. However, request for tenders are to be delayed due to excessive winter rains in Zeballos, and are planned to be issued at the same time as Tahsis tenders near the end of 2013. Contract award request to the CSWM board is targeted in February 2014 with completion of Phase 1 construction in 2014.

### **Options**

This report is presented for information only at this time in conjunction and support of the November 7<sup>th</sup>, 2013 submission to the CSWM board of the function 391 preliminary 2014 -2018 financial plan.

### **Financial factors**

Discussed project budget estimates and project schedules affect function 391 borrowing amounts and thus debt servicing reflected in the preliminary 2014-2018 financial plan. Report capital projects are in accordance with CS SWMP.

### **Legal factors**

The CVRD has a legal obligation to fulfill the requirements of their operational certificates/permits for the continued operation of the waste management centres. Under the MoE, these obligations include meeting environmental compliance for existing and future disposal waste disposal facilities. Further to this, the ministry requires the CVRD to provide updated closure plans, operations procedures, leachate management plans, landfill gas management plans and long term care, post closure maintenance plans and then to complete facility construction in accordance to the CS SWMP. The solid waste capital plan projects discussed in this report represent a legal commitment to the province through the CS SWMP to be in compliance with operational mandates.

### **Sustainability implications**

The solid waste capital projects plan supports the following goals and objectives of the Comox Valley sustainability strategy:

#### Goal 3.2:

Establish a diverse network of clean and renewable local energy supply systems

- Objective 3.2.3: Energy is harnessed from waste sources in the community

#### Goal 3.3:

Waste diversion and recycling programs approach zero waste targets

- Objective 3.3.1: Develop a regional zero waste strategy, including promotion of recycling that is aimed at waste reduction and diversion from landfill disposal

#### Goal 6.2:

Increase the ecological sustainability of the local food system

- Objective 6.2.1: Improve the ecological sustainability of local food systems through increasing energy efficiencies, improving land stewardship practices, and limiting or recycling waste.

### **Intergovernmental factors**

All corporate members represented in CSWM board and the provincial government through the CS SWMP are affected and involved in the solid waste capital projects.

**Interdepartmental involvement**

A number of departments have been involved in the solid waste capital plan including but not limited to:

- Solid Waste Services
- Public Affairs and Information Systems
- Property Services
- Legislative Services

Most of the work represented in this report will be undertaken by the CVRD staff of the community services branch with the assistance of qualified professional services.

Prepared by:

***T. Boatman***

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Thomas A. Boatman, PE  
Manager of Solid Waste

Concurrence:

***I. Smith***

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T. Ian Smith, MCE  
General Manager of Community  
Services

Attachments: Appendix A – Financial Plan Budget Schedule: 2014 Landfill and Transfer Station Budget Estimates

Appendix B – Comox Valley Regional District and Village of Cumberland leachate MOU

## Financial Plan Capital Schedule: Major Disposal Facilities (CS SWMP)

ITEM	2014	2015	2016	2017	2018	2019	TOTAL BUDGET
CAMPBELL RIVER CLOSURE	\$3,898,677	\$357,176	\$7,143,520	\$148,313	\$2,966,250		\$14,513,936
COMOX VALLEY CLOSURE	\$100,000	\$8,250,000			\$102,960	\$2,353,363	\$10,806,323
COMOX VALLEY NEW LANDFILL EXPANSION	\$650,000		\$100,000	\$12,918,333			\$13,668,333
GOLD RIVER LANDFILL CLOSURE	\$25,000	\$604,200			\$130,000	\$2,132,000	\$2,891,200
GOLD RIVER TS UPGRADE			\$688,859				\$688,859
TAHSIS LANDFILL CLOSURE	\$510,000				\$130,000	\$1,735,000	\$2,375,000
TAHSIS TRANSFER STATION			\$676,936				\$676,936
ZEBALLOS LANDFILL CLOSURE	\$176,000				\$80,000	\$922,500	\$1,178,500
ZEBALLOS TRANSFER STATION			\$676,936				\$676,936
SAYWARD LANDFILL CLOSURE		\$90,000	\$300,000				\$390,000
CORTES ISLAND CLOSURE		\$90,000	\$300,000				\$390,000
TOTAL	\$5,359,677	\$9,391,376	\$9,886,250	\$13,066,646	\$3,409,210	\$7,142,863	\$48,256,022

14' - '18  
\$41,113,159

## Table Notes:

Gold River, Tahsis, Zeballos landfills from 2013 EBA liability tables Plus 15% Engineering Plus Budget Contingency Factor = 20%

Sayward and Cortes Island Landfill Closures, MOE Requirement - approximation; To be adjusted when liability tables computed by design engineers (wells \$50,000, eng \$20,000, test pits \$10,000, survey \$10,000)

Comox Valley new expanded landfill - AECOM construction estimate plus contingencies

Comox Valley Closure - EBA 90% design construction estimate. Liability table to be adjusted 2014

Campbell River Closure - SCS 100% construction estimate liability table to be adjusted in 2014

Gold River, Tahsis, Zeballos transfer station from AECOM Northern Communities Disposal Assessment, Sept 2013 plus budget contingency factor 20%.

**Adjustments made to Sept 12, 2013 version include: 2014: Gold River, Tahsis, Zeballos; 2015 Comox Valley Closure, Gold River Closure; 2016 Gold River TS Upgrade**

This MEMORANDUM OF UNDERSTANDING is entered into on this 15<sup>th</sup> day of July, 2013

Between:

**COMOX VALLEY REGIONAL DISTRICT**

600 Comox Road  
Courtenay, BC V9N 3P6

(the 'CVRD')

And:

**THE CORPORATION OF THE VILLAGE OF CUMBERLAND**

Box 340  
2673 Dunsmuir Avenue  
Cumberland, BC V0R 1S0

(the 'Village')

WHEREAS:

- A. The CVRD owns and operates the Comox Valley waste management centre (CVWMC or Facility) located within the Village of Cumberland, at 2400 Pidgeon Lake Road, Cumberland, BC,
- B. The CVRD and the Village recognize that the management and operations of the CVWMC will be guided by the following principles:
  - i. Provides a more equitable and fair response to the affected community and its residents;
  - ii. Opens up lines of communication between an affected community, its residents and the decision makers regarding the Facility;
  - iii. Promotes sensitive consideration of the affected residents' concerns;
  - iv. Fosters better and more equal relationships between the affected residents and the decision makers regarding the Facility;
  - v. Provides for shared decisions that are usually more actively supported by the affected community;
  - vi. Directly addresses the fairness of competing interests between those who benefit from the Facility and those who live as its neighbours;
  - vii. Based on the 20 year Comox Strathcona solid waste management plan (CS-SWMP) operational life for the CVWMC and landfill;
  - viii. Provides for post-closure communications between host community and owner of the landfill;
  - ix. Benefits are directly connected to solid waste management plan;
  - x. Must be financially feasible;
  - xi. Considers risk analysis; and
  - xii. Opens up potential economic opportunities.

**DATED: February 1, 2013**

**NOW THEREFORE** this Memorandum of Understanding (MoU), which is not intended to, and cannot, create legally binding obligations on the parties, is to serve as the basis for which the parties will work together towards a mutually beneficial wastewater treatment solution and engage in discussions regarding the management and operations of the CVWMC as they relate to the Village.

### **1.0 Leachate Treatment/Integrated Resource Recovery**

The Village and the CVRD recognize the potential economic benefits of shared facility costs for the treatment and management of their respective liquid waste and leachate. The CVRD agrees to work with the Village in exploring the risk and financial assessment of a mutually beneficial solution to a joint sewerage service between the CVWMC and the Village.

The CVRD will explore with the Village the possible uses for any integrated resource recovery from the CVWMC, including exploring the provision to the Village of a first option on the use of any integrated resource recovery.

### **2.0 Joint CVRD and Village Resources Committee**

CVRD and the Village will establish a joint staff-to-staff committee to discuss the resources shared between the parties (Joint Resources Committee). The Terms of Reference for the Joint Resources Committee will include staff meetings twice per year at the CVRD or Village offices to discuss and exchange shared resource ideas and to more fully understand the concerns related to the CVWMC operations, including roadway concerns, litter control, residential complaints, wastewater issues, environmental monitoring (the CVRD will provide a report on compliance update at these meetings) and other issues of common concern. A record of each meeting including the agenda will be forwarded to the Comox Strathcona waste management committee, management advisory committee, and Village of Cumberland for discussion.

The Joint Resources Committee will assist in a feasibility assessment of the Village's preferred wastewater treatment option in relation to a joint wastewater management agreement between Village and CRVD, which agreement would be submitted to the Comox Strathcona solid waste board and the Village council for discussion.

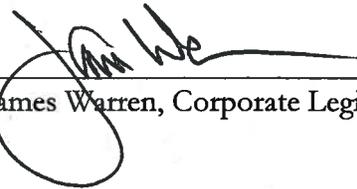
### **3.0 CVRD will explore the feasibility of ending the operations of the Tervita Bioremediation facility at the CVWMC by January 1, 2014 in support of the concerns expressed by the Village that the CVWMC be a municipal solid waste facility and not an industrial by-product waste site.**

***DATED: February 1, 2013***

The parties have executed this memorandum of understanding as of the day and year first above written.

**COMOX VALLEY REGIONAL DISTRICT**

  
\_\_\_\_\_  
Edwin Grieve, Chair

  
\_\_\_\_\_  
James Warren, Corporate Legislative Officer

**THE CORPORATION OF THE VILLAGE OF CUMBERLAND**

  
\_\_\_\_\_  
Leslie Baird, Mayor

  
\_\_\_\_\_  
Clerk **Sundance Topham, Chief Administrative Officer**