

DATE: May 10, 2013 **FILE:** 5360-20/CR

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

FROM: Debra Oakman, CMA
Chief Administrative Officer

RE: Campbell River partial landfill closure: design review and proposed Phase 1 construction schedule

Purpose

To provide additional information on the Campbell River landfill closure including design status and proposed construction schedule.

Policy analysis

The Comox Strathcona waste management (CSWM) service area covers the Comox Valley and Strathcona regional districts' geographical areas; and is operated by the Comox Valley Regional District (CVRD) under letters patent. The service was established under Bylaw No. 1822 being "Regional Solid Waste Plan Local Service Area Establishment Bylaw No. 1822, 1996" to establish and operate a local service for the collection, removal and disposal of municipal solid waste. Fees and charges for this service are provided for under Bylaw No. 170 being "Solid Waste Fees and Charges Bylaw No. 170, 2011", so that annual costs may be recovered.

The 2012 Comox Strathcona solid waste management plan (CS-SWMP) supports the design and closure work included in this report.

At the March 15, 2012 meeting of the CSWM board staff received authorization to issue a request for proposals (RFP) and to award a design contract for the partial closure of the Campbell River waste management centre landfill.

THAT the Campbell River landfill closure design request for proposal and 2012 design schedule update be accepted by the board;

THAT the board adopt a bylaw the delegated to the chair and corporate legislative officer the authority to enter into a contract in an amount not to exceed \$650,000 for capital works relating to the Campbell River landfill closure and improvements project.

Executive summary

The Campbell River landfill is nearing the Ministry of Environment (MoE) permitted capacity and therefore, partial landfill capping/closure and installation of a landfill gas collection system is required. Beginning in June 2012 some landfill waste is being transported to the Comox Valley waste management centre (CVWMC). Waste being transferred to the CVWMC is less than 15 per cent of total landfill waste being received at the Campbell River waste management centre (CRWMC) and limited transfer is necessary due mainly to landfill access difficulties at the Campbell River site. Residential and commercial municipal solid waste (MSW), known as residual or landfill waste, from the City of Campbell River, Cortes Island transfer station, Gold River transfer station, the Valley and Village of Sayward, as well as all commercially collected waste from the Strathcona

Regional District (SRD) is presently being landfilled at the CRWMC. Operationally in 2013, the CRWMC is projected to receive and landfill less than 30,000 tonnes of residual waste.

To meet provincial requirements for landfill closure, on March 5th, 2012 a design RFP for the closure of the existing landfill and associated facility improvements was issued to the top three solid waste services design firms shortlisted through the (Request for Qualifications) RFQu issued in October of 2011. On April 29th, 2012 after a competitive bid process, SCS Engineers were awarded a contract to update the closure plans of the landfill, update landfill financial liability, and revise landfill operational plans. In addition, SCS was tasked with preparing construction plans for phase one closure including a mechanical stabilized earthen (MSE) wall. The waste center MSE wall will serve two primary purposes:

1. Stabilization of the overly steep landfill slope along Argonaut Road for closure construction;
2. Provide additional airspace for northern waste shed landfill needs until the new cell at CVWMC can be prepared to receive system waste in accordance with the CS-SWMP;

On March 27th, 2013 the CSWM service received approval for the SCS proposed closure design plan including the phase one construction of the MSE wall from the Ministry of Environment. The approved closure design plan includes a three phase closure construction schedule including:

- 1) Phase One Construction. Construction target date is before August 1, 2013, after City of Campbell River permitting is completed. The project critical path is now City of Campbell River development/construction permitting. Closure construction includes MSE wall construction and closure of the lower portion of the outer slope along Argonaut Road. Completion of phase 1 will include a portion of the leachate collection system, the final stormwater system along Argonaut Road and a small portion of the landfill gas system. Under the current plan, completion of the wall will enable landfilling to continue for up to five years including:
 - i) Continuous landfilling with minimal transfer of waste to the CVWMC until completion of the environmentally engineered expanded landfill facility;
 - ii) Meeting required provincial compliance, landfill gas system to be operational in 2016;
 - iii) Significantly reduce risk of waste transfer to the mainland until expanded landfill is ready to receive waste per the CS-SWMP at the CVWMC. There is an estimated two years of system capacity remaining at CVWMC and without the wall less than one year of system capacity at CRWMC which was obtained through the March 27th MoE closure plan approval;
- 2) Phase Two Construction. Scheduled to begin in late 2015, after approximately two years of landfilling is completed, this phase will include installation of two thirds of the vertical gas extraction wells, will meet MoE landfill gas requirements and, allow for final capping/closure of over two thirds of the landfill outer slopes as well as completion of the leachate collection system.
- 3) Phase Three Construction. At the end of about five years of filling at which time the CS-SWMP landfill expansion at CVWMC is projected to be fully operational, the final capping/closure of the CR landfill and all facility improvements will be completed.

All construction and closure work will be in accordance with the CS-SWMP, provincial and local permit requirements. As indicated, to be able to start construction this summer the phase one project critical path is completing Campbell River local permits for construction of the MSE wall, drainage modifications along Argonaut Road and conclusion of Argonaut roadway ROW easement provisions. Project meetings with the City of Campbell River staff began in August 2012 and are on-going for all city requirements.

Closure design professionals, SCS engineering, by proposing the above three phase construction schedule over the previous two phase schedule have provided an opportunity to the CSWM for continuous landfilling at the CRWMC throughout the closure process. This is projected to result in a potential operational budget savings of \$400,000 in waste transport to the CSWM service with no added costs to the project. However, until the construction RFP is awarded estimates of costs and potential savings should be considered very preliminary.

Estimates of MSW received by area at the CRWMC, based on CS-SWMP waste generation per capita and 2011 population data are shown in Table 1. Approximation of northern washed MSW waste generation by area.

Table 1. Approximation of northern washed MSW waste generation by area.

Northern Washed Area	Year	Estimated Population	Approximate Waste Generation (tonnes)	Percent of Total Waste Generation
City of Campbell River	2013	35,705	21,780	86%
Village of Gold River	2013	1,451	885	3%
Village of Sayward	2013	363	221	1%
Cortes Island area B	2013	1,153	703	3%
Quadra Island area C	2013	2,978	1,817	7%
Total		41,649	25,406	

Table 1 approximation taken from 2012 CS-SWMP population and system waste generation

Construction management and oversight- phase 1 closure construction contract

In accordance with design and construction guidelines supported by the Consulting Engineers of British Columbia and Professional Engineers and Geoscientists of BC from which it is recognized that it is a best practice for the purposes of continuity of understanding, responsibility, accountability and ease of administration to engage one consulting engineering to undertake planning, design, construction administration and field review activities, as well as per CVRD Bylaw No. 75, Section 1.4.13.13, *Where the competitive process is impractical because of the need to obtain unique third party skills, there is a requirement for contractor continuity, or there is a strong case for the cost effectiveness of maintaining a current contractor for a specific task;*

It is therefore requested that SCS Engineers, based upon unique qualifications and experience measured during the competitive process of the 2011 RFQu and, recognized industry practice for design – oversight of such projects, be requested to submit for CSWM board consideration, a continuing contract phase one proposal to assist staff including:

1. Construction tendering assistance including a report recommending award of construction contract to the most qualified construction RFP proponent;
2. Phase one construction project management and field review;

Funds for the above engineering oversight and project management has been budgeted in the 2013 – 2017 financial plans – function #391.

Recommendations from the chief administrative officer:

1. THAT based upon resolution of tenure issues along Argonaut Road and successful completion of local permitting issues with the City of Campbell River, that phase one ‘Campbell River Landfill Closure’ construction contract tendering be completed this summer to be able to landfill in permitted areas.
2. THAT staff be authorized to negotiate a proposal with SCS Engineers, to be presented at the June 13, 2013 CSWM board meeting, to continue their current contract to manage and provide oversight of the phase one Campbell River Landfill Closure construction contract.

Respectfully:

D. Oakman

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