

Date: February 12, 2014

Issue

The City of Colwood is asking the Capital Regional District (CRD) for support to request an amendment to the CRD Core Area Liquid Waste Management Plan (CALWMP) that will allow for the construction of a resource recovery and sewage treatment facility in Colwood earlier than identified in the CRD plan (currently about 2030) to the financial benefit of the other CALWMP members. This note describes the environmental and fiscal benefits of this proposed approach.

Colwood recognizes the need for sewage treatment

Colwood understands that treatment of sewage in our region is important for the environment, and that the current system (primary only) is inadequate. We support sewage treatment that maximizes recovery of resources, ensures no harmful materials are discharged into the ocean (preferably no discharge at all), and minimizes environmental impacts including carbon emissions.

In pursuit of these goals, Colwood aims to construct a resource recovery and sewage treatment facility that will treat all of Colwood's sewage to tertiary standards (or better) and recover both energy and water.

Environmental Benefits of a Colwood Facility

The tertiary treatment will remove more of every class and type of pollutant than secondary treatment does. Colwood is planning for a facility that will treat water to near potable standard and eliminate the need for ocean discharge.

Colwood's facility would be targeted to begin treating sewage and selling recovered resources by 2016, treating sewage in an environmentally responsible way 2–4 years before the main plant will be in operation.

The proposed location in Colwood's town centre (noted in green in the image at right) will maximize recovery and reuse of energy and water to supply nearby facilities. Recycled water from wastewater treatment could be used for toilet flushing, irrigation and other low public contact uses, reducing the need for potable water by up to 40% in buildings



Proposed location for a Colwood sewage treatment facility is noted here in green.

that use it. Recycled heat from the treatment process will be provided to buildings through a district energy sharing system in Colwood's business core. This will reduce energy requirements by up to 60% in buildings that use it. Particular targets are the Juan de Fuca Recreation Centre and Royal Roads University.

Only about 25% of Colwood's existing residents are on sewers. As our community grows and additional sewers are constructed, the energy sharing benefits can be extended to more businesses and residences.

The City of Colwood will assume all costs and revenues associated with the finance, design, construction, operation, maintenance, and future upgrading of the wastewater treatment plant in Colwood. Colwood will use its own resources to prepare the amendment and undertake public consultation including all supporting documents, consultants' reports, environmental studies etc. as required to obtain the Minister's approval. Colwood will, through a legal agreement, guarantee complete control of the quality of the facility outputs, relieving the CRD of any risk or responsibility. It should be noted that the facility will, after a proving period, be owned by Colwood and all operations and maintenance work will be done by municipal employees.

Benefits and impacts on other municipalities

This amendment will provide major advantages to the other core municipalities.

1. The Province has consistently asked for demonstrations of innovation as one of its funding conditions. The Colwood approach will provide the opportunity to demonstrate additional innovation within the Core Area LWMP, at no cost or risk to the CRD.
2. The CALWMP calls for a Westshore facility to be built when the main plant begins to near its capacity limit (new taxation for this cost would likely start as early as 2030), financed by all of the core municipalities and with no grant support expected. By Colwood taking on the cost and construction of a treatment facility in the WestShore now, this future expense, which is expected to be at a higher cost per unit of treatment than the main plant, is no longer required of the other municipalities.
3. As Colwood will no longer require capacity in the CRD plant, other municipalities will have access to additional future capacity, deferring the need for future plant expansion.
4. Colwood will bear the entire cost of building and operating its own facility and will not seek any part of the grants promised to the CRD by the provincial or federal governments nor any financial assistance from the CRD. Colwood will continue to pay into the fund for the main plant through 2014.
5. Colwood's share of the current core area plant is small – only about 4% of the total. Therefore this proposal would cause only minimal financial impact to other municipalities (approx. 4%

increase or \$15 for the typical home) in the short term but more than offset by the substantial financial savings in 2030 and beyond. The money that Colwood has already contributed toward effective sewage treatment in the region will remain with the CRD, while further financial contributions to the core area system would cease in 2015.

Why the economics of this work for Colwood

In Colwood, the majority of homes are on septic systems, with only about 25% connected to sewers. This is dramatically different from most of the other municipalities where more than 95% of their homes are connected to sewers and their projected growth rate is much smaller. Colwood's population is projected by some to double by 2028 but may take much longer. Taking on the known costs and benefits now of a small-scale, tertiary level, modular resource recovery facility that can be expanded as our population grows is a fiscally and environmentally responsible choice for Colwood. As more buildings are added the plant will be expanded but the costs will be spread over an increasing population.

Next steps for Colwood

1. Colwood must first obtain support from the CRD Board to request an amendment (Amendment 10) to the Core Area Liquid Waste Management Plan. Note that Colwood is not seeking its own LWMP, only an amendment to the current plan that allows the Colwood facility to be built now (as was the case in the earlier Amendment 7) rather than starting in about 2030.
2. CRD must then obtain approval of the proposed amendment to the Core Area Liquid Waste Management Plan from the Minister of Environment. This step will involve public consultation throughout the region which will be carried out with Colwood's resources.
3. Colwood must then design and obtain approval for the proposed sewage treatment facility from the Ministry of the Environment. (Note that the Ministry will not discuss approval until the previous two steps are complete).
4. Construction can then begin. The first two approvals can be achieved in about six months, the third approval would take another several months and construction can begin immediately afterwards (2015). Colwood already has the required land ready for use as shown on the plan on page 1 and will use a great deal of prefabrication of the treatment modules to speed up the start date for treatment.

A resolution and supporting documents requesting CRD support for an amendment will go to the CRD Core Area Liquid Waste Management Committee on March 12, 2014.