

# Update

April 2017

on the Comox Valley Waste Management Centre Engineered Landfill Cell 1 Construction

## Overview:

The Comox Strathcona Waste Management (CSWM) service is constructing a new engineered landfill and leachate treatment facility at the Comox Valley Waste Management Centre in Cumberland to serve the waste disposal needs of the region. Work has been ongoing on this exciting project and we are pleased to share some stories and images from the past few months. The information in this newsletter details the construction process and helps explain the project and how it benefits our community.

## Latest News:

Cell 1 and the equalization pond are nearing final completion. Heavy rain and snow caused some delays in fall and winter. The new landfill is expected to be in operation by summer 2017.

Detailed design of the leachate treatment facility is almost complete, and initial construction has started on site. It is expected construction will now be finished by early fall 2017. This postponement is a result of poor weather conditions throughout February and March, as well as a delay in the finalization of the detailed design of the facility.

### Highlights:

The placement of the final drainage rock in Cell 1 is complete (see photo 1). Prior to placement the liner was tested to ensure there were no defects. After placement, a dipole method for leak location will be used to identify and repair any damage caused during the installation of the drainage rock. This testing will ensure protection of the groundwater surrounding the landfill area.

Leachate is generated when storm water comes in contact with waste. A pumping station will convey leachate from Cell 1 to the equalization pond (see photo 2).

The equalization pond has been excavated and the primary liner is installed (see photo 3). Leachate will be stored in this pond before it is treated in the future onsite leachate treatment plant. Still to be installed in the pond is the secondary liner and gravel protection layer. A leak location layer will be installed between the two lining systems that will continually monitor the performance of the liner to ensure environmental protection.

Leachate will be pumped to the leachate treatment facility from the equalization pond. The leachate bioreactor tanks – where the first steps of the leachate treatment process will take place – have been excavated and the concrete tanks are under construction.

After the bioreactor process, leachate will be pumped to membrane filtration tanks where filtration will occur prior to metals removal. The formwork and concrete pouring for these membrane filtration tanks is currently taking place on site (see photos 4, 5, and 6).

The pre-fabricated leachate treatment facility building that will house all of the process equipment and machinery is being constructed off site over the next month. It is expected to be delivered at the end of April for assembly.

The total Cell 1 and leachate treatment facility cost is estimated at \$16,138,820. An estimated \$3.6 million will be spent in locally supplied services, materials and equipment. The construction of Cell 1 has resulted in approximately 20 full-time workers from Vancouver Island and the construction of the leachate treatment facility is expected to provide approximately nine full-time/part-time workers from Vancouver Island for the duration of the project. This equates to a total of approximately 5,528 work days of local employment.



1 Placing of final drainage rock in Cell 1



2 Leachate pump station



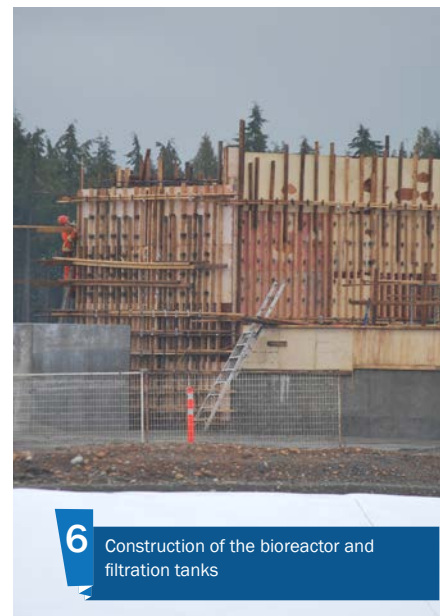
3 Equalization Pond



4 Pouring concrete for construction of the leachate treatment tanks



5 Building formwork for the membrane filtration tanks



6 Construction of the bioreactor and filtration tanks