

CAPITAL REGIONAL DISTRICT

Micro-organisms may be small but they're 'resource-full'

SEWAGE TREATMENT doesn't have to be rocket science. Whether it's a large plant or a septic system in your back yard, it all comes down to millions of one-celled creatures, turning our waste into a resource we can all use.

In our region, wastewater plants serve the Saanich Peninsula and some communities on the Gulf Islands. Also 27,000 households are on septic systems. With upcoming secondary treatment system for the Core Area municipalities, all households not on septic will soon be served by a treatment plant.

The key to sewage treatment is in the end product. Icky as it sounds, the solids and liquids from sewage itself (everything that leaves your house in pipes) contain a host of resources just waiting to be captured and turned into something useful, such as biofuel or solid fuel for cement kilns.

How does this happen? Simple, really. Wastewater that arrives at a treatment plant is broken down by millions of micro-organisms. Organic matter from your pipes is separated into liquids and solids.

Liquids are treated, then disposed of into our oceans. The solids are eaten by bacteria cells during what is called the digestion process. These digested solids make up the bulk of what is then named biosolids. Once digestion is complete, these biosolids can be dried for use as a replacement for coal in cement kilns in Vancouver or in a future waste-to-energy facility on the south Island.

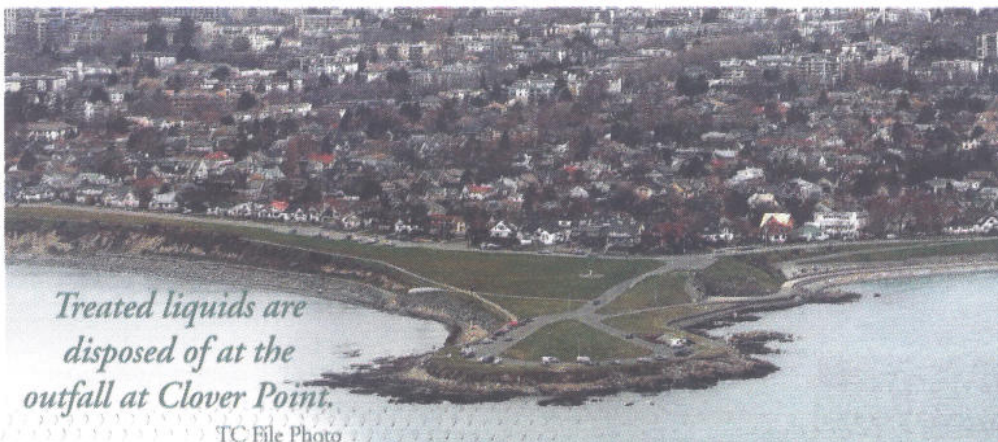
In the CRD's Core Area Treatment Project, biogas given off during the digestion process will be cleaned and turned into biofuel. Methane capture and biofuel protect our air, combat climate change and provide a renewable fuel source. Quite the feat for a micro-organism!

Not connected to a regional sewer? This same process of digestion happens in your septic tank, albeit on a much smaller scale. Wastewater from pipes enters your tank and is treated and digested by a similar colony of bacteria cells. Solids stay in the tank and the treated liquid trickles into your drain field through perforated pipes, where it's filtered through soil and rock and digested by creatures in the soil. When properly maintained, septic systems are a superior way to protect your groundwater!

Waste from septic tanks is useable, too. Septic Processing Limited (SPL), a company based in Langford, is responsible for most of the material collected from local septic tanks. SPL processes the digested sludge from your tank along with food and grease-trap waste from countless locations on the south Island. All three are sent to a Chemainus facility, digested and dried, then mixed with sand, bark and wood chips to form a soil supplement.

"We sold the first 1,000 yards of material before we had even opened our doors in October 2009," said operator Dan Lazaro. "It's a great product for landscaping and soil amendment."

As well, both types of sewage systems do best with only natural ingredients. Bacteria colonies don't like hazardous waste, medications or large amounts of surfactants (cleaning products). Whether you're on septic or a regional sewer, keep these creatures happy and productive by feeding them only natural ingredients. Micro-organisms — they're small, but they're "resource-full."



Treated liquids are disposed of at the outfall at Clover Point.

TC File Photo

A healthy starts in o

That's why we've made it so easy to maintain our septic systems. We keep ahead of the technology because it's important to have a good part for the environment. Our maintenance plan designed for Onsite Wastewater Treatment Plants maintained system will likely save you money over time will likely save you money.

To find out more about our services, call us up for a free workshop.

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