



Award of Excellence Sechelt Water Resource Centre



Consultant

Urban Systems Ltd.

Owner/Client

District of Sechelt

Category

Municipal

For more information, please contact:

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The District of Sechelt operated two aging and inefficient wastewater plants, resulting in frequent complaints about odour and noise. Furthermore, all of the treated effluent was discharged to the ocean. After reflecting on the shortcomings of these plants, the District decided to radically alter its wastewater management philosophy, and view wastewater as a resource that could be harnessed instead of a liability to be disposed.

Urban Systems was selected to design and construct a new wastewater treatment and reclamation facility that would treat water to the highest effluent reuse quality required in BC. The result is a municipal effluent among the top five cleanest in Canada.

The new facility is integrated into a residential neighbourhood, operating without complaints about noise or odour. This is possible because the Organica process has the outward appearance of a greenhouse incorporating plants as a key part of the wastewater treatment process. The plant roots provide habitat that increases biomass and biodiversity in the tanks, creating an environment that allows higher order organisms to live in the tanks, increasing treatment efficiency while reducing waste production.

To achieve the very stringent effluent criteria target, the treatment system is also equipped with Ultra-Filtration (UF) membranes, with pores approximately 1/1000 the diameter of a human hair. These are very effective at removing remaining solids, suspended BOD and turbidity in the effluent.

The facility meets LEED gold requirements, and uses approximately half the energy of the old plant, but provides treatment capacity that is twice that of the old system.