

The Nature of Wastewater Has Changed

Curt Kerns, M.S., R.P.Bio., C.F.S.

Among the growing global problems we have is that sewage is a different beast than it was even 50 years ago. It was once largely akin to a dilute manure solution. Now it is still that, plus being a devil's brew of trace contaminants of endocrine disruptors, prescriptions, and personal care products (EDC/PPCPs) resulting from our science and consumer culture. Recent research has found that conventional municipal treatment does little to remove contaminants which have inimical ecological consequences at parts per million, parts per billion, and even parts per trillion levels¹.

The centralized model is increasingly flawed. With huge quantities of wastewater all discharged (or dumped to be more accurate) in one place surface discharge is what is typically done. The ever increasing trace contaminant loads are having an ecologically devastating effect upon surface waters. With freshwater it has long been nutrient over loading, and with marine waters it is harmful algae blooms. Now increasing trace contaminant loads are wreaking additional ecological havoc. Consequently we must move towards ceasing direct surface water discharge of even advanced secondarily treated wastewater if we want any semblance of aquatic species arrays that were once the norm to exist. The use of capital and energy intensive advanced physio-chemical-electrical treatment is also a dead end path due to their huge ecological footprint, consequently contributing towards global climate change.

It's not a secret: raw sewage in vast quantities flows into our water ways all too frequently from centralized, municipal treatment plants. We all know about our capital city, Victoria. It does not have sewer pipes as sewer pipes lead to treatment plants. All they have are pipes! What is not common knowledge is how British Columbia's most populous region, the Greater Vancouver Region, deals with their sewage overflows. In

a recent educational television program, The Sustainable Region, a GVRD representative stated that during every rain with runoff, raw sewage is automatically directly discharged to the surrounding surface waters².

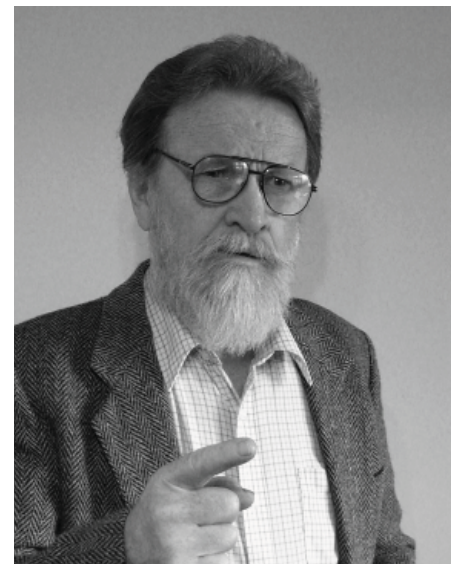
In the event of a failure of a treatment system, the environment much better off with failed onsite system vs: centralized. A failed onsite system releases small quantities of primary-treated sewage into the ground in a localized area. With centralized, every time it rains as well as when there are mechanical problems, dilute raw sewage flows into our surface waters in ever increasing volumes carrying ever increasing ecologically inimical contaminant loads. Aquatic ecosystems have not evolved receiving such substances

in such quantities.

Global warming is not our only global issue.

We must move towards decentralized, distributed

management of our wastewaters with beneficial reuse as the most desirable use, due to further contaminant removal inherent in reuse.



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1. There Is No "Away." Pharmaceuticals, Personal Care Products, and Endocrine Disrupting Substances: Emerging Contaminants Detected in Water. by Susan Holtz. Senior Policy Analyst, Canadian Institute for Environmental Law and Policy. <http://www.cielap.org/pdf/NoAway.pdf>

2. <http://www.gvrd.bc.ca/TV/TheSustainableRegion.htm>