

## Waste: The bad . . . and the good

### Our region's dirtiest secret lurks beneath the waves

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Beneath the waves of Burrard Inlet and Georgia Strait is our region's dirtiest secret. Every day, the Greater Vancouver Regional District is dumping hundreds of millions of litres of toxic sewage into our coastal waters. Our leaders know that this is irresponsible, but refuse to act.

Conservation groups have, therefore, turned to the courts for a solution -- better sewage treatment -- and at the end of this month, we will know whether the federal government will enforce its laws to stop this pollution.

What is sewage? More than human waste, it is a brew of disease-causing organisms, heavy metals and chemicals discharged by households and industry. Nitrates and ammonia threaten fish by limiting the amount of oxygen in their water. Mercury and copper contaminate the seabed. Hormone-mimicking chemicals, found in pharmaceuticals and cosmetics, harm the immune and reproductive systems of fish. PCBs increase in concentration as they move up the food chain, from bottom-dwelling invertebrates to mammals, including us.

Take Victoria, for example. Human health concerns have caused the provincial government to close hectares of shellfish grounds near the city's sewage outfalls. In 2006, an expert consultant hired by Victoria concluded that the seabed near these outfalls is contaminated enough to be declared a contaminated site.

Today, sewage treatment usually means secondary or tertiary treatment. Secondary treatment has been the minimum standard in Europe and the United States for years. It biologically removes roughly 90 percent of oxygen-depleting organic waste, and 90 percent of bioaccumulative chemicals and heavy metals, including PCBs and hormone mimics. Other cutting-edge technologies, loosely labelled tertiary treatment, use oxidation to remove nitrogen and phosphorus. Innovative "resource recovery" methods also use sewage to create heat and biofuel (as Stephen Salter explains in the accompanying op-ed).

Seattle began implementing secondary treatment 15 years ago, completing upgrades in five years. Victoria now plans to have secondary treatment, by as soon as 2014.

Sadly, the Lower Mainland is way behind. Only three of GVRD's five sewage plants have secondary treatment, none have tertiary. The Lions Gate plant in West Vancouver and Iona



CREDIT: Ward Perrin, Vancouver Sun

Recycling is offered locally but some countries have made even greater progress at reducing waste.



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(Outfalls) such as this one at the north foot of Victoria Drive dump millions of gallons of sewage into the harbour

plant in Richmond treat sewage at a mere primary level. Primary treatment screens out solids, but leaves behind in the liquid effluent most of the oxygen-depleting organics, heavy metals and bioaccumulative chemicals.

Consider this: Every day, Iona dumps the equivalent of 221 Olympic-sized swimming pools of toxic sewage at the mouth of the Fraser River. A growing body of research suggests that this threatens the billion juvenile salmon that migrate annually through these waters. The GVRD acknowledges that primary treatment is inadequate. Its Liquid Waste Management Plan also requires Lions Gate and Iona to be upgraded to secondary.

In other words, everybody agrees: To protect Burrard Inlet and Georgia Strait, the GVRD must upgrade Lions Gate and Iona plants to secondary treatment.

Sadly, though, GVRD wants to postpone secondary treatment for a long time: Upgrading Iona and Lions Gate in 2020 and 2030 respectively.

When GVRD proposed this Plan to the provincial government in 2001, federal officials expressed alarm. Fisheries and Oceans Canada staff warned that, under the Plan's flawed environmental monitoring, Lions Gate and Iona could kill millions of marine animals. Environment Canada inspectors sampled the two plants' sewage, warned GVRD that it was in violation of the Fisheries Act and threatened prosecution.

Victoria was aware of these concerns. Yet in 2002, it rubber-stamped GVRD's Plan. Since then the province and GVRD have thumbed their noses at Ottawa-and conspired to pollute Burrard Inlet until 2030.

Five years later, Ottawa has yet to make good on its threat to take legal action against the GVRD. Conservation groups therefore launched two private prosecutions against GVRD and the province in 2006. Represented by Sierra Legal Defence Fund, investigator Douglas Chapman filed charges after hunting down evidence that Lions Gate and Iona effluent regularly fails monthly toxicity tests because it is acutely lethal to fish.

Provincial court judges have approved his charges and opened the door to trial. On May 31, Sierra Legal and Chapman will be back in court. The big question is: Will the federal government now help to prosecute these polluters -- or will it shield the GVRD and the province by shutting down the prosecutions?

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