

# **Victoria Sewage Alliance - Frequently Asked Questions**

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## **What are the goals of the Victoria Sewage Alliance?**

The Victoria Sewage Alliance wants sewage treatment for Victoria, secondary or better. What will this achieve? It will:

- a) Bring Victoria's discharge into compliance with federal and provincial environmental regulations;
- b) Immediately reduce toxins entering the marine ecosystem;
- c) Reduce the health risks to mariners and other water users;
- d) Lead eventually to the reopening of closed fisheries;
- e) Provide opportunity to recover the value of a wasted resource.

## **Don't currents in the Strait of Juan de Fuca dilute the sewage rapidly?**

Contrary to what we've been told, the currents near the outfalls do not carry the sewage out into the Pacific. Rather, because currents change direction with the ebb and flow of the tide, a lot of the sewage either stays nearby or flows back into Georgia Strait. Also, dilution does not get rid of what's in sewage (organics, pathogens like hepatitis, heavy metals or chemicals) and therefore it doesn't prevent the long-term damage to the environment, or the waste of the energy and mineral resources carried by sewage.

## **Victoria has concentrated on source control - isn't this enough?**

Source control is an important part of keeping our environment healthy, and responsible municipalities both manage source control and treat their sewage. However, according to a Decision Note prepared by the Ministry of Water, Land and Air Protection (MWLAP) staff for the Minister on February 20, 2002 concerning Victoria's raw sewage situation, "*source control has limited capacity to reduce contaminants ... Treatment is not only more effective in reducing contaminants, it is effective immediately upon implementation and will remove a wide array of contaminants not targeted under source control.*"

## **Isn't Victoria's sewage non-industrial, unlike most other cities, so we don't need treatment?**

Most industrialized cities have a sewer use bylaw, similar to Victoria's sewer use bylaw, which ensures all industrial waste is pre-treated before entering the sewers. These bylaws will put industrial city wastewater on a level similar to Victoria's, however all of these other industrial cities will then have sewage treatment before discharging into surface water.

## **But science has not proven that raw sewage harms the environment, has it?**

Yes it has. In fish toxicity tests on Victoria's sewage, the fish died within 20 minutes<sup>1</sup>. In identical tests on pulp mill effluent, fish routinely survive for more than 96 hours<sup>2</sup>. These are just a few examples of the growing amount of independent scientific data (i.e. not conducted by a government agency biased against sewage treatment) that supports the need for treatment.

## **Victoria has discharged raw sewage since 1894; why change now?**

In 1894, those responsible for Victoria's sewage did what they were first asked to do - get rid of it. In that era industry also discharged its effluent untreated, but as our understanding of industrial effluent changed, so did society's tolerance for pollution. We now understand that raw sewage includes many harmful and toxic chemicals, therefore, environmental laws no longer tolerate raw sewage discharges from municipalities.

## **Shouldn't we wait for better technology?**

Treatment technology will always be improving, and doing nothing is no longer an option. We have the technology to treat our sewage. We know that secondary sewage treatment removes a large amount of organic matter, as well as many chemicals such as heavy metals and PCBs and keeps them out of the marine environment.

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<sup>1</sup> The results of industry standard fish toxicity (LC96) tests on samples of sewage taken by the Sierra Legal Defence Fund on September 23, 1993; February 10, 1994; and March 23, 1998.

<sup>2</sup> Other BC municipal sewage treatment plants and industry must conduct fish toxicity (LC96) tests monthly; results are available to the public through the Ministry of Environment.

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## **Isn't sewage treatment too expensive in Victoria?**

The new sewage treatment plant in North Saanich was designed to serve 50,000 and cost \$20 million to build. Even if we scale by a factor of ten to estimate the cost of a treatment plant for Victoria, part of the \$200 million should be paid for by the Province, and part by Federal Infrastructure funding, as is the case in Halifax and other BC municipalities. Surplus Federal land is also available in Victoria for building sites. After operating costs and depreciation, we estimate that the cost per household would be well under \$100/year, and currently residents of Central and North Saanich, Sidney, and Ganges pay about \$100/year for their sewage treatment - far less than a penny a flush. Strangely enough, if Victoria residents check their utility bills and property tax notices, they'll see they're already paying about \$100/year for "sewage". Finally, can we really afford not to protect our marine environment? Is it really an option to go on ignoring Federal and Provincial environmental laws?

## **Why is Treatment Needed?**

### **Environmental and Human Health Impacts**

- 1. It's Toxic:** Apart from the astonishingly high levels of Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS)<sup>3</sup> in untreated effluent, testing by the Sierra Legal Defence Fund in 2002 proved that Victoria's sewage fails scientific fish toxicity tests and carries *several kilograms of PCBs per year* into the environment. In addition, the CRD's own reports show sewage contains a staggering list of heavy metals, hydrocarbons, and other pollutants.
- 2. Risk to Public Health:** According to Capital Regional District (CRD) reports, the CRD's engineers, and Environment Canada studies, sewage carrying faecal coliform bacteria does rise to the ocean surface for as many as eight months per year. Wind surfers, leisure boats, eco-tourist, fishing, and other vessels routinely travel through these polluted surface waters, exposing the public to third-world health risks.
- 3. Victoria Fails World Health Organization (WHO) Guidelines:** Victoria's sewage situation doesn't even meet the basic WHO guidelines for wastewater treatment in developing countries.
- 4. Food Chain Contamination:** Although experts can't agree on the most significant sources of PCBs in ocean waters, Victoria's sewage contribution of several kilograms per year is a notable contribution to the contamination.
- 5. Harm to the Environment:** The long-term impact of dumping raw sewage into the ocean is unpredictable, but soil contamination studies already show serious impacts<sup>4</sup>. If society doesn't allow industry to pollute in this way, how can we tolerate polluting behaviour from our own government?
- 6. Contribution to Greenhouse Gases:** As untreated sewage decomposes, it generates carbon dioxide and methane – which are current carbon greenhouse gases. Enough methane gas could be recovered from Victoria's sewage to run a large number of Victoria's buses, reducing reliance on fossil fuels and overall greenhouse gases. The Greater Vancouver Regional District's (GVRD) sewage treatment plants recover enough energy to generate 7 megawatts of electricity, worth over \$1,600,000/year.

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<sup>3</sup> BOD and TSS are measurement standards used to describe the state of the effluents. The BOD is "biological oxygen demand", which measures how much the decomposition of organic matter depletes oxygen in the receiving waters, threatening natural organisms' survival. TSS refers to the total suspended solids, which is simply the solid matter suspended in the effluent, which blocks light and effects processes like photosynthesis.

<sup>4</sup> CRD's Wastewater and Marine Environment Program Annual Reports

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### **Legal Issues**

7. **It's Illegal:** Dumping raw sewage is against the law, and Victoria residents and others are increasingly aware of this fact. Since the Sierra Legal Defence Fund's tests showed Victoria's sewage kills fish, the current situation contravenes the Federal *Fisheries Act* and the Provincial *Waste Management Act*.
8. **Liability:** Environment Canada has considered charging Victoria under the *Fisheries Act* but so far has worked hard to change Victoria's raw sewage discharge without resorting to legal actions. Acting now to get secondary sewage treatment will also reduce the risk of US parties taking legal action (*Washington State farmers vs. Cominco* in 193; *EPA and Colville Confederated Tribes vs. Tech Cominco* in 2004).
9. **Uneven Enforcement:** The CRD is being given preferential treatment when it comes to enforcement of environmental laws, and this is beginning to dawn on other municipalities and the BC business community. Victoria's unregulated sewage discharge places a loading on the environment equal to *all of the kraft pulp mills in BC combined, concentrated around Victoria's harbour*. All sewage treatment plants in BC, including the CRD's own sewage treatment plant in North Saanich, pay permit fees based on BOD, TSS, and discharge volume, and if they exceed their permit, charges and fines are applied. **Victoria however does not. Why?** Also, Environment Canada has seen fit to lay charges again Dawson City, North Battleford and Iqualuit for the discharge of raw sewage into the environment, but not Victoria whose offence is far greater than any of these cities.

### **Social and Economic Impacts**

10. **Harm to Ocean-based Industries:** Those making their living through fisheries, eco-tourism, and other ocean-based industries are being directly affected by ocean pollution. The lucrative swimming scallop fishery off Victoria Harbour has been closed for over 20 years and local whale watch operators' access to whales has been severely limited, in part, because of the high levels of toxins in local orcas.
11. **Harm to Tourism:** Victoria's reputation as a polluter does not enhance tourism, especially among the residents of Washington State. In 2003, the BC tourism industry brought in nearly \$10 billion; reductions in this revenue because of Victoria's growing reputation as a polluter will be felt throughout the province. On the other hand, we have an opportunity to become a showcase for advanced sewage treatment and resource recovery processes if we take steps now to treat our sewage.
12. **Financial Losses for the CRD:** Environment Canada has so far not charged the CRD with violations of the *Fisheries Act*, but doing so could lead to fines of up to \$300,000 per day. The Federal government is also entitled to sue polluters for damages under Section 42 of the *Fisheries Act*.
13. **Pride vs Shame:** BC residents and Victorians in particular feel ashamed that one of their major cities operates below third-world standards. A *Citizen Survey* conducted by the CRD in 2003 showed sewage treatment is the most important project in the mind of the public. A second, unpublished poll conducted by the CRD in 2004 showed majority support among Victorians for moving ahead with sewage treatment. The world is coming to visit in 2010, and Victoria need not take the gold medal in pollution.
14. **Leading by Example:** How can we convince our children of the value of protecting our environment when we dump the equivalent of *2,600 tractor-trailer loads of raw sewage* into the ocean every day?
15. **Increased Awareness:** Canadians are becoming more aware of our impacts on the environment, partly through the education and activism of environmental organizations, and partly through Canada's participation in initiatives like the Kyoto Accord. In fact the CRD shows tremendous initiative on other environmental fronts such as recycling. With this kind of leadership in other areas, the public is ready for leadership on this issue too.

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### **Opportunities**

- 16. Recovery of Resources:** Victoria's sewage contains valuable resources: water, energy, and minerals. These resources should be captured and reclaimed, as they are in other modern treatment plants. MWLAP's website encourages re-use of wastewater, as do the LEED<sup>5</sup> criteria for sustainable building design. Current sewage treatment technologies require less land, and can generate energy through co-generation or provide natural gas to run public transportation.
- 17. Infrastructure Funding:** The Federal government is addressing a deficit in cities' infrastructures with a share of the gas tax, and current low interest rates will lower the overall cost. This is the time to address Victoria's sewage infrastructure deficit.
- 18. Economic Benefit:** The sewage treatment plant will cost money, though this cost can be shared equally with the provincial and federal governments. However it will also provide economic benefits to the community during plant construction and operation. The gains to tourism may be harder to measure, but they are no less significant.

### **Victoria's Sewage vs BC Kraft Pulp Mills**

Comparing the Biological Oxygen Demand of Victoria's sewage with BC kraft pulp mill effluent shows the size of the problem. And the loading is concentrated around the entrance to Victoria harbour.

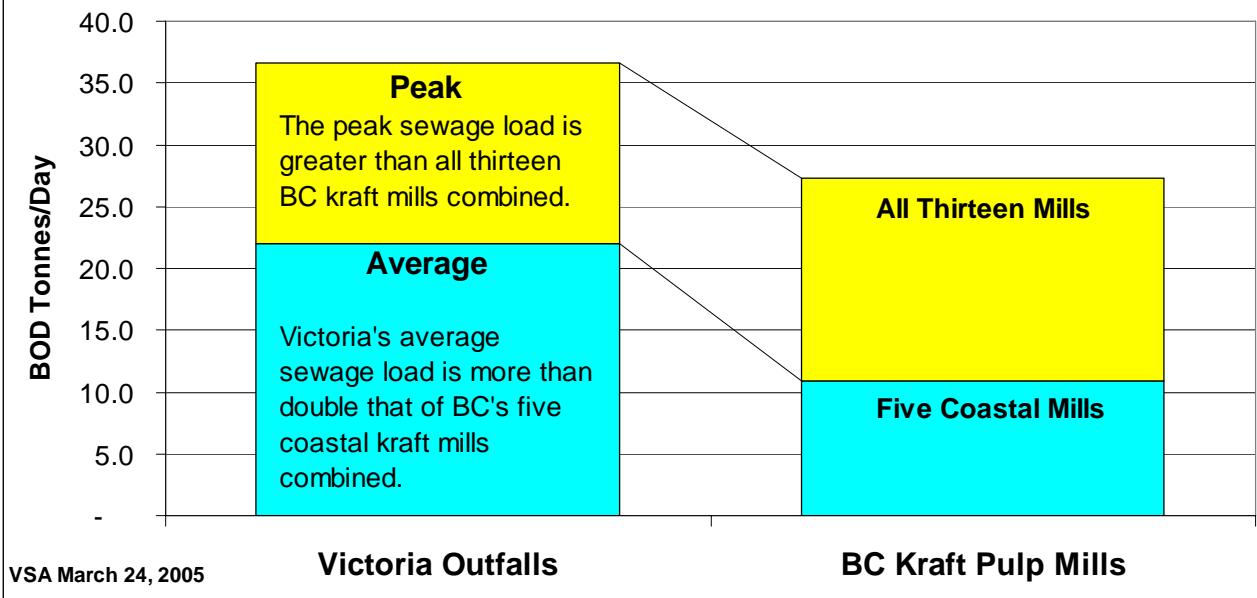
BOD (tonnes/day)	
Victoria Outfalls (peak)	All Kraft Mills
36.6	27.4

Victoria Outfalls (average)	Coastal Kraft Mills
22.0	10.9

### **Victoria's Sewage Outweighs BC Kraft Pulp Mills**

Sewage Data is from the CRD in 2002; Mill data is from Reach For Unbleached in 1998



<sup>5</sup> LEED - Leadership in Energy and Environmental Design, a green building rating system, is a voluntary, consensus-based international standard for developing high-performance, sustainable buildings.