

**REGIONAL DISTRICT OF NANAIMO
REGULAR BOARD MEETING
ADDENDUM**

Tuesday, August 22, 2017

7:00 P.M.

RDN Board Chambers

This meeting will be recorded

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Delegation: **Dick Stubbs, re Importance of the Bowser Sewer Project Moving Forward**

Summary: I will talk about the long history that has brought us to the point of considering a sewer system, the Bowser Village Centre Plan and its vision.

Action Requested: It is my understanding that the Board will be receiving a staff report regarding the petition results for the proposed Bowser Village Sewer System and maybe be other related items....tonight.

My request is that the Board move this project forward and instruct staff to work with the Bowser residents to ensure that we have the best possible system for the community...financially, environmentally, socially and culturally.

Delegation: Owen Bird, re Concerns regarding current Bowser sewage proposal

Summary: Inadequate notification and consultation
No evidence that the expenditure is warranted
Tourism impacts – fishing, reputation and environment
Commercial fishing and shellfish lease activity in the immediate and tidal area
Regressive approach not proactive – Victoria as example. Should this proposal go ahead the process of dismantling it or moving to fully land based would likely begin the moment it began operation. We are living in an age of environmental protection not degradation
Perception/Reputation is as important as reality
Risk providing opportunity for expansion of the system thereby increasing burden on the environment

Action Requested: That the RDN not adopt the the Bowser Village Sanitary Sewer Service Establishment bylaw as presently petitioned. Require that all effected stakeholders are properly consulted before any further consideration is given to the feasibility of the project proposal. And, that a land based system be proposed if, after proper consultation and subsequent voting occurs, it is determined that all stakeholders are in agreement that a Bowser Village Sanitary System is desired.

Delegation: Laurie Basok, re Concerns Regarding the RDN's Process in Obtaining Bowser Village Centre Property Owners' Support to Establish a Sewer Service for Bowser Village

- Summary:**
- Failure to consult residents and stakeholders in the area known as the receiving environment for the sewage effluent that will be piped from the proposed Bowser Village Sewer Service and into the Salish Sea through a marine outfall pipe
 - Failure to inform these same residents of the planned marine outfall
 - Contrast between RDN communications to village property owners and communications to those living outside the village boundaries
 - Failure to provide representation for the 96% of Area H residents who live outside the Bowser Village Centre boundaries
 - Failure to inform Bowser Village Centre property owners of pertinent details that may have affected their choice to support or not support the sewer service petition
 - Failure to consider green alternatives to the proposed marine outfall that have been submitted
 - Location of the sewer treatment plant and effects of sewer venting odours in Bowser Village core
 - The Bowser Divide

Action Requested: I request the Regional District of Nanaimo Directors vote NO on the "Bowser Village Sewer Service Establishment Bylaw No. 1760, 2017."

I request the Regional District of Nanaimo Directors take action to develop and implement strategies to recognize, address, and repair the damage done to community relations in and around Bowser as a result of the exclusionary, hurried, and flawed process that was followed in order to obtain the support of the village property owners for the Bowser Village Sewer Service.

Delegation: Sandra Finley, re Bowser Sewage Treatment Plan

Summary: Please see following two pages.

Action Requested: Please send the Design Report back to the drawing board. There is a better, less expensive, and more effective way to deal with sewage than the proposed Sequencing Batch Reactor.

August 21, 2017

TO: Regional District of Nanaimo, for Regular Board Meeting, August 22

SANDRA FINLEY

SUBJECT OF PRESENTATION: Bowser Sewage Treatment Plan

ACTION WHICH IS BEING REQUESTED OF THE BOARD OR COMMITTEE:

There is a better, less expensive, and effective way to deal with sewage than the proposed Sequencing Batch Reactor in the engineers' Design Report. Please send the proposal back to the drawing board.

EXECUTIVE SUMMARY OF PRESENTATION

My experience with sewage treatment and water systems began in Halifax-Dartmouth 45 years ago. The East Coast is the same as the West Coast: fresh water in extremely large quantities, on a daily, continuous process, becomes salt water through "marine disposal".

My experience with sewage treatment and water systems when a River is at hand, a process in which fresh water returns to fresh water, is helpful in explaining some of the problems with the proposed Bowser Treatment Plant.

I studied Commerce (a business degree, graduated with honours). That background biases me toward consideration of the cost estimates of the proposed Sewage Treatment Plant with which I'll begin.

COST ESTIMATES:

A sewage plant has to have sewage to process. The Capital Cost in the Design Report (Stantec, April 2017, the one sent to me by the RDN) quotes "**Collection System \$4,052,000**".

I did not find a quote for the part of the system that is absolutely required, if the Plant is to go into operation. In order to have the water to go down the drains into the sewage collection system, to provide the fodder for the Sewage Plant, in this status quo design, you have to have a water source (underground aquifers or underground rivers in the Bowser example).

Then a Water Treatment Plant to bring the water up to drinking water standards is required. In its wake, water lines are required to deliver the water to every home and business, so that everyone has the water to put down the kitchen sink and the toilet, to make the sewage required for the Sewage Treatment Plant. If a community signs up for the cost of Sewage Treatment, they automatically sign up for the capital and annual operating costs of infrastructure for "Water" treatment and delivery pipes.

The newspaper reports that \$7.6 million dollars in grant money is on the line. Is that just for the Sewage Treatment part of the Project? As I understand, Bowser people balked at paying a one-time fee of \$38,000 for their share of the Sewage Treatment. To rebut, the developers committed \$2 million from their profits, which reduced the amount payable by the locals down to \$2,900, generally speaking.

Full disclosure: what are the capital costs and funding plans for the “Water” side of the one coin. That’s the largest of my concerns on the financial side. I have other, almost as serious, questions.

A SEQUENCING BATCH REACTOR DOES ZILCH ON SYNTHETIC CHEMICALS (ONE OF THE INGREDIENTS IN THE LIQUID EFFLUENT).

I was four years back-and-forth with City Council. When you use a River for disposal of effluent, the same process repeats itself from the first community with water and sewer, down to the last one:

Calgary draws its water from the River. The water goes through the Water Treatment Plant, into “water lines” and is distributed to all the residences and businesses for drinking and washing and flushing. It exits the home or business through the sewer line, to the Sewage Treatment Plant. The liquid effluent is discharged into the River.

The next major city on the River is Medicine Hat. It draws water from the River . . . it repeats what Calgary did. And so on down the line, through Alberta, Saskatchewan, Manitoba, eventually to River’s end.

When I heard that Saskatoon had replaced augering-out of tree roots in sewer lines with a chemical combination, Vaporooter, that dissolveS tree roots, I groaned. Sure enough Calgary and other communities upstream and downstream of Saskatoon had bought into the contracting-out of sewer line tree roots to companies that used Vaporooter. The City defended itself: it ordered testing of the River water for the presence of the two chemicals in Vaporooter.

What they found: for one of the chemicals they could not find a lab that knew a protocol for testing for the presence of the chemical. For the other chemical, it cost \$3,000 for one test, for one water sample, taken on one day, from one location. Probably would cost more today. One of the two chemicals is a known cause of cancer.

THE QUESTION:

Which step in the proposed Sequencing Batch Reactor will remove the synthetic chemicals (and micro beads from personal care products like body washes?) from the effluent?

THE ANSWER:

There isn’t a step and we don’t have the technology to allow us to test, to know which chemicals are in the liquid effluent. The starting point: you have to know which chemical you are testing for, in order to know what test to run. But you don’t know what chemicals are in the effluent. You do not know what has gone “done the drain” and down the toilets in the collection system, which includes from businesses, that for example, discharge heavy metals.

IN CONCLUSION:

When I was young there were 2 billion people on the Planet. We could get away with things; the Earth had the capacity to deal with what we did to it. More than 7 billion people cannot get away with what was done back then. We act as though the world has not changed.

Delegation: Alan Grozell, re Bowser Village Sewer System

Summary: Support of the Bowser Village Sewer. The Bowser Village has been supported by the community for over 20 years. The sewer grant will assist in making the village develop in a way that the community has wished for and allows the developing area to move forward in an environmentally friendly manner. I am part of the Bowser Village Developing group and we as a group have come together to support the Village Plan and have agreed to cover a large portion of the shortfall that has arisen between the available grant monies and the construction costs. The Developers Group and the RDN Staff with a representative of Stantec, the design engineering firm, have met and will continue to review design changes that will result in the best and most cost effective and workable design possible. Once the final design and construction costs have been established and reviewed by the RDN and the Bowser Village Developers Group we will be able to move forward with development applications.

Action Requested: Approval of the Bowser Village Sewer System.

Sent: Saturday, August 19, 2017 11:02 AM

Subject: An ELDER living in Area H of RDN makes a good point by sending us this reading:

Please distribute this email to the board members prior to the board meeting on Tuesday August 22 at 7pm.

It is very important information for them to help make the decision about putting more sewage, treated or not into the INLAND SEA of the Georgia Straight.

It is time for Nanaimo to clean up its act and stop polluting the ocean. LAND BASED SEWAGE TREATMENT makes sense now, where ocean pollution does not.

THE SOLUTION TO POLLUTION IS NOT dilution...its distribution on land with plants and enzymes doing the work. Keep our Oceans clean.

Thanks you

Len Walker

Bowser

this article is 17 years old and more pertinent today than ever before:

<http://www.thecanadianencyclopedia.ca/en/article/canada-dumping-raw-sewage-into-its-waterways/>

Canada Dumping Raw Sewage into Its Waterways

VICTORIA'S churning river of effluent does not look as awful as you'd think, considering the unholy reputation that precedes it.

Ken MacQueen

Canada Dumping Raw Sewage into Its Waterways

VICTORIA'S churning river of effluent does not look as awful as you'd think, considering the unholy reputation that precedes it. It's past breakfast time, and Jim McFarland, environmental services operations manager for the Capital Regional District, shows off the end result as the surge hits the Clover Point pumping station on Vancouver Island's south coast.

It's possible, watching the volume of flow through this station, to chart the rhythm of the B.C. capital: the 7:30 a.m. swell of morning ablution and breakfast cleanup; another peak, 5 p.m. to 6 p.m., for the supper hour. In the throes of a hot broadcast event, the time of TV commercials can be charted by the flood of waste through the giant pumps and the kilometre-long ocean outfall pipes both here and at nearby Macaulay Point. Few things are as elemental, as essential, and unavoidable. It explains the passion that sewage - such a lowly and unlovely topic - can generate. This is especially true here, where it is dumped, untreated, into the Juan de Fuca Strait. The raw waste itself resembles a weak, greyish tea, and throws off a muted scent of compost and a cloying whiff of decay. "It's 99.9 per cent water and 0.1 per cent solids," says McFarland, whose responsibilities include the region's sewer system. "We use a lot of water to wash our waste away." The entire Pacific Ocean, in fact.

Canadians generate an impressive three trillion litres of sewage annually: a mix of water, human waste and the pathogens it can contain (such as cholera, typhoid and hepatitis B), microorganisms, toxic chemicals, heavy metals and excreted pharmaceuticals. The waste threatens drinking water, as well as recreational users, aquaculture and fisheries. "Municipal sewage is the largest source of pollution discharged to surface water bodies in Canada," warns the Canada Council of Ministers of the Environment, a political group that has finally awakened to the issue. And Environment Canada says, "It is widely recognized that inadequate or no waste water treatment have negative impact on aquatic life, human uses of water, fisheries and human health. Therefore it is unacceptable and shortsighted not to maintain and upgrade infrastructure."

Why then is Canada flushing some 200 billion litres of *raw* sewage into its waterways every year, enough to fill more than 40,000 Olympic sized swimming pools? It's a situation the Sierra Legal Defence Fund, which monitors effluent discharge, calls a "national disgrace."

There are three levels of sewage treatment: primary, which reduces some solids through a settling process; secondary, which further reduces solids and other pollutants; and tertiary, the most stringent. In the European Union, all communities with more than 15,000 people have been required to have secondary treatment since 2000, with all urban centres slated to have tertiary treatment by 2010. In the United States, all coastal cities must have secondary treatment. Canada, by contrast, has no national sewage standards, though the environment ministers are working to develop a countrywide strategy for "municipal waste water effluent" by November 2006.

The council's push for standards is led by federal Environment Minister Stéphane Dion, who says he wants "at least secondary treatment" across the country. Modern developed countries should not be dumping untreated sewage, he

said in a blunt series of interviews in Victoria this July. In the meantime, says the Sierra fund in the third edition of its National Sewage Report Card, released last fall, "This significant environmental health issue has been relegated to the haphazard standards of individual municipalities."

Haphazard about covers it. Calgary, Edmonton, parts of Hamilton, and Whistler, B.C., have world-class tertiary levels of treatment that reduce sewage to clear effluent and disinfected compost safe enough to use as fertilizer. At the other end of the scale, St. John's, Nfld., and Halifax are building treatment plants after years of using their grossly polluted harbours as sewage dumps. Montreal flushes a total of 900 billion litres of sewage into the St. Lawrence River annually. Most of it gets minimal primary treatment - but some 3.6 billion litres enter the river as raw sewage. Even Saint John, N.B., with one primary treatment facility and two secondary treatment plants, emits 6.6 billion litres of untreated effluent a year into the Saint John River and the Bay of Fundy.

Then there is Victoria, as genteel and photogenic a provincial capital as Canada has: a city of afternoon tea, of horse-and-carriage rides, of museums and pleasant walks along the harbour. It is a city of whale-watching tours, of waterfront cafés - and a capital region that pees into the ocean some 34 billion litres of raw sewage a year. It pees without shame. Indeed, it pees with pride, convinced it is on the side of the environmental angels. "We think we're doing the right and responsible thing," says Denise Blackwell, chairwoman of the liquid waste management committee of the regional government. Montreal rated an F on the sewage report, but a despairing Sierra fund ranked Victoria "suspended" for its refusal to see a need to change.

The bulk of the region's sewage - the waste of about 210,000 residents as well as businesses - is only screened to remove solids larger than six millimetres and floatable objects like tampon applicators and condoms. It's then pumped through two outfall pipes running more than 60 m deep and a kilometre into the swirling currents of the strait. There, it diffuses "without causing environmental harm," says the regional district. Or, as critics claim, it makes an ominous return up the food chain - starting as a buffet for fat colonies of sea worms and swimming scallops congregating at the outfalls, and ending in the frightening toxic load carried by resident pods of killer whales.

Blackwell entered regional politics more than a decade ago to fight for sewage treatment, only to be convinced that the strait's tidal currents serve as a natural, environmentally sound and cost-effective alternative. There are "tons" of ways to better spend taxpayers' money to protect the environment, she says. While the practice is known to offend some across the strait in Washington state, she takes a pragmatic view. "The amount our tourism industry would be putting out in taxes to pay for our treatment is less than it loses by the few conferences or whatever that say, 'I won't come because of that.' " Moreover, unlike land-based treatment plants, there is no environmentally dubious waste sludge to dispose of, she notes. "It's counterintuitive - you just take it and put it in the ocean and don't worry about it." What critics don't consider, she adds, "is what are we going to do with it if you don't put it in the ocean?"

Well, respond the many environmental groups ganging up to force an end to the Victorian era of waste management, try running it through treatment plants like the rest of the civilized world. "Dilution," goes the mantra they seem to share, "is not the solution to pollution." That's the message from James Skwarok, as amiable a piece of excrement as you'll ever meet. "It's time for us to stop treating the ocean like a big toilet and preserve it for the health of future generations," he says. Skwarok, 35, is better known in these parts as Mr. Floatie, a cheerful, falsetto-voiced, two-metre-tall piece of pooh.

We're dining at a Victoria waterfront brew pub, where, mercifully, he's not in uniform: a brown velour full-body costume that leaves little doubt as to Mr. Floatie's intestinal origins. "So tell me," I ask, as the beers arrive, "when you were a little boy did you dream of growing up to be ..." Skwarok finishes the thought: "A big piece of pooh?" No, he concedes with a subversive grin, he did not. He's a one-time worker for the Western Canada Wilderness Committee who resumed university studies this fall to become a teacher. He was a founding member last year of People Opposed to Outfall Pollution - the resulting acronym being no accident. Like others in POOP, who have a singular gift for guerrilla marketing, he says he is motivated by disgust and embarrassment at Victoria's sewage dumping.

POOPsters now pop up at events, from parades to political meetings, making lighthearted asses of themselves, while hoping to shame the region into action. They'll run Mr. Floatie for mayor of Victoria this fall, generating yet more publicity. The theory is, you catch more flies with honey than vinegar, though Mr. Floatie draws flies in any event. "He's a sweet, lovable turd," says Skwarok. "He doesn't want to harm anybody, he just wants people to treat their sewage and stop dumping toxins down the drain."

Activists from groups like Sierra Legal, the Georgia Strait Alliance and the T. Buck Suzuki Environmental Foundation have spent years making the case for treatment. Never have they generated the kind of media offensive POOP manages with bad puns and bathroom humour. "The thing that makes politicians move the quickest is when you embarrass them," says John Werring, a staff scientist at the Sierra fund's Vancouver headquarters. "I think Mr. Floatie is doing a great job of that." That may explain Blackwell's pinched look when the issue of Mr. Floatie arises. "They have certainly found a vehicle that will generate publicity for them," she says.

Too true. A talking turd is a bizarre enough symbol of Victoria's incontinence to generate media hits as far away as South Africa. It's not a winning image for a tourism-dependent city, warns Skwarok. Nor will it improve as the 2010 Winter Olympics approach, and the world media focuses on the bathroom habits of the host province.

Our meals arrive; Skwarok has ordered halibut. A local bottom fish, I note maliciously. "Thanks," he says, "for pointing that out."

SEWAGE TREATMENT is a complex and expensive issue, one Sierra has been tracking with a series of report cards for more than a decade. Progress is often slow, and grudgingly made, says Werring. In the 1990s, Sierra filed private

charges against the Greater Vancouver Regional District for dumping massive quantities of primary treated sewage in the Fraser River and the ocean. The charges, taken over by the provincial Crown, together with pressure from the federal Fisheries Department, forced upgrades to some of the region's treatment plants, says Werring. Two Vancouver-area plants, however, still discharge sewage with only primary treatment, pouring many chemicals and toxins into the ocean. Overflowing sewers spill as much as 22 billion litres of storm and waste water into Georgia Strait each year.

Notably, it is coastal cities, as well as Montreal on the St. Lawrence River, that have the lowest levels of treatment. Such cities "have had the luxury of being able to dump where people don't see it," says Christianne Wilhelmson, clean air and water program coordinator for the Georgia Strait Alliance. Inland communities with downstream neighbours are forced to be far more careful. No inland city is more fastidious than Calgary, which rates an A+ in Sierra's report. All of its sewage receives the highest, tertiary level of treatment before being disinfected with ultraviolet light. Remaining sludge or biosolids are injected into farmland soil. A sewer service bylaw regulates industrial discharges, and there are commitments for even more upgrades. Edmonton also has tertiary treatment and an enviable A- rating. Alberta's two major cities make their B.C. neighbours look positively Third World by comparison.

Toronto and Ottawa - both rated B- in the report - have secondary levels of treatment and innovative waste reduction strategies. Ottawa converts volatile organic matter in its sludge into methane, which is burned on-site to generate electrical and thermal energy. Toronto, while still plagued with sewage overflows into Lake Ontario and the Don River, was lauded by the Sierra fund for one of the toughest sewer-use bylaws in the country. It restricts what industrial users discharge into city sewers, lessening the toxins that reach treatment plants.

Comparing the status of cities is a difficult proposition without national standards in place. Nor is consistent logic applied to enforcing what limited environmental sanctions are available. Winnipeg, for instance, faced a fine of up to \$300,000 when it was charged under the federal Fisheries Act after an open valve at a city treatment plant accidentally poured raw sewage into the Red River in 2002. The charges, for spilling a substance "deleterious to fish and aquatic life," were stayed this June after the Crown admitted at trial there was insufficient evidence of criminal neglect. Why, then, does Victoria escape charges for doing intentionally what Winnipeg did accidentally? "We don't know," concedes Sierra's Werring. "It's just a lack of political will."

That may change during Dion's tenure as environment minister. Werring, among other environmentalists, suspects Victoria was spared from prosecution because David Anderson - the city's veteran Liberal MP and a federal fisheries and then environment minister from 1997 until 2004 - supports the region's ocean dumping. There is "no environmental advantage" to spending hundreds of millions on a treatment plant for Victoria, Anderson told the Commons in 1999. "In the oceans, there is the possibility of allowing the natural effect of heavily oxygenated sea water to treat sewage." Dion, however, says such arguments are based on old science. He signalled this July he'll consider

charges under the Fisheries Act for communities that don't eventually mend their ways. His comments prompted a thunderous defence of the status quo by Victoria's daily newspaper, the *Times-Colonist*. "[Dion] can't understand how we, living in this paradise, with our reputation as caring stewards of the environment, could be dumping our raw sewage into the Juan de Fuca Strait," it editorialized. "He's isn't impressed when we tell him that Nature has provided us with a natural toilet, whose flushing action disperses our screened sewage far and wide, unlike places like Halifax, where they're spending millions to treat their effluent because the harbour there is more like a large chamber pot."

VICTORIA'S SEWAGE debate is clouded by too much emotion and too little fact, says Jim McFarland. He and Laura Taylor, the region's manager of scientific programs, are frankly ticked that their community is painted by critics as an environmental backwater. And so they set out to prove otherwise, piling into a van for an epic, day-long sewer tour. It begins at Clover Point, a park-like grass-covered spit, used this morning by joggers, moms wheeling strollers, and a group of young men fighting a stiff onshore breeze for possession of an improbably large kite. Somewhere underfoot, a river of sewage encased in a metre-diameter pipe flows toward the wind-whipped strait. This is the journey's end, but Taylor is eager to head downtown to the beginning: the region's \$1-million-a-year "source control program."

We breeze into a pizza parlour to look at a grease trap; into a photo shop to view a silver recovery cartridge; into a back closet at a dentist's office where an amalgam separator traps mercury and silver used in dental fillings. These and other industrial contaminants would once have been flushed down the drain and out to sea in the case of Victoria, or left to contaminate the sludge remaining from sewage treatment in other communities. Now, places like Victoria and Toronto, with effective sewer use bylaws, are able to limit some contaminants in the waste stream. Otherwise, warns Taylor, "these things don't just disappear." Sewage treatment, she points out, filters some toxins and heavy metals out of waste water, but it leaves behind contaminated sludge with the potential to leach into ground water and out to sea. "Our philosophy is, let's deal with it at the top of the pipe," Taylor says.

We clamber aboard a tiny, rented ferry and chug up the inner harbour - well inland from the sewage outfalls - to view some of the region's other environmental challenges. Away from the usual tourist orbit, storm culverts drool into the water, and gritty industrial plants crowd the shore. Beneath us, a witch's brew of toxins is buried in the harbour floor. We stop at the mouth of Cecelia Creek, one of several urban watersheds slowly recovering after years of being poisoned by effluent leaking from overflowing storm sewers. Looking at it, Taylor asks whether building an unnecessary treatment plant is where limited funds should be spent. "Local governments," she says patiently, "have to set priorities."

The day continues. McFarland drives to neighbouring Saanich to show off a recent initiative. We enter the tidy little Marigold pumping station, set in a pleasant residential area. He opens a submarine-style door and we peer down into an underground cement vault so audaciously out of scale with its surroundings it makes you gasp. It looks, with its soaring ceiling and rows of columns, as though the region has built and buried a gothic cathedral. It's a "super-tank,"

McFarland explains, a place to store a million gallons of waste when storm surges would otherwise spill it into a nearby river. It's one more way environmental dollars are spent where they're really needed, he says.

We drive up the Saanich Peninsula, where the region does operate a state-of-the-art secondary treatment plant. Here there is no debating the need for treatment. This effluent discharges into shallower waters, weaker tides and the more fragile environment of the Georgia Strait. McFarland stops at an open concrete tank, watching microorganisms, giddy with oxygen, chow down on a frothing brown sewage stew. "This would happen in the ocean the way it happens here," he says. "But this is just a more efficient way of doing it."

IN 2003, after years of delay, the province signed off on the capital region's waste management plan. It is essentially a 25-year permit allowing Victoria and environs to keep voiding its sewage into Juan de Fuca Strait, unless certain environmental "triggers" show it is causing irreparable harm. The regional government considers this a validation of the status quo, but it's clear that staff in what was then the Ministry of Water, Land and Air Protection harbour significant doubts. Two ministerial briefing notes written in early 2003 - and obtained through a freedom of information request by Jim McIsaac of the T. Buck Suzuki Environmental Foundation - outline several concerns, including:

- "considerable uncertainty" about the long-term fate of contaminants in raw sewage, "which the trigger process will not address";

- the unacceptable dependence on dilution to manage the environmental impact of flushing heavy metals into the strait;

- the "limited capacity" of source control to reduce contaminants. "Treatment is not only more effective in reducing contaminants, it is effective immediately ... and will remove a wide array of contaminants not targeted under source control."

- a study for Environment Canada that found the "effluent plume reaches the surface eight months of the year ... Seabirds feed on the sewage and there is potential health risk to recreational users such as windsurfers, kayakers and recreational fishers."

The capital region's waste plan also reneges on a 1993 agreement B.C. reached with neighbouring Washington state after Victoria was hit by a tourist boycott for its refusal to treat its sewage. B.C. committed Victoria to having primary treatment by 2002, and secondary treatment by 2013. But with the boycott long behind it by 2003, Joyce Murray, then B.C.'s water protection minister, ignored staff concerns and let the region drop plans for treatment. Considering the reservations officials had, McIsaac is stunned that Victoria's waste management plan was approved. "They're giving us this image," he says, "that there's some kind of magical water out there, that all of the contaminants, all of

the pathogens in there are not impacting the marine ecosystem as they would anywhere else on this planet." That's not much of an exaggeration. As the region's website puts it: "The south coast of Vancouver Island where the outfalls are located may be the best location for the discharge of municipal waste water on the entire west coast of North America."

Midway through the sewer tour, Taylor and McFarland break for lunch on the outdoor terrace of a Victoria waterfront café. I glance at Taylor's plate. "You're having chicken," I note. "I am not," she replies with a grin, "avoiding the fish." We talk sewage, a dubious topic for luncheon conversation. Taylor offers science-based answers for every concern I raise. But, I press, at the end of the day you're dumping crap into the ocean, a pretty gross thing to do. That, she says, appropriately enough, "is a gut reaction." But fine, she adds, justify treatment on those grounds; just don't think spending all that tax money will help the environment. "Say I'm doing it because I feel morally I should," she says. "Or I'm doing it because everybody else is."

For all its bravado, the regional district committed this July to spend \$605,000 for an independent review of its waste plan. Critics call it an expensive stall tactic. It may also be that the regional government is feeling the heat. "If we find out that we're wrong," says Blackwell, the regional councillor, "then we'll have to do something else." With Halifax and St. John's, the two major East Coast holdouts, now constructing treatment plants, Victoria sits alone on its porcelain throne. With Mr. Floatie working to render the community an international laughingstock, that's a vulnerable place to be.

See also WATER POLLUTION; SOLID WASTE.

Maclean's October 17, 2005

Sent: Sunday, August 20, 2017 5:20 PM
Subject: Transferring sewage to French Creek

Please distribute this citizen comment to the board for Tuesday Aug 23 7pm meeting. Thank you.

Looking into this Bowser Sewage proposal that was rudely pulled off by discounting the citizens where the disruption will be most obvious; smell, pipes; signs on the beach entrance warning SEAWAGE OUTFALL in a tourist area as well as pollution of the Strait of Georgia indicate that hauling would be of the final solids. I am not sure that even FC deals with the final solids. I think even its solids are sent south to Nanaimo. Last I heard they were composted in a program sponsored by VIU to fertilize its forestry holdings.

If the mention of hauling sewage to FC is meant to suggest a glorified pump-and-haul way of handling the sewage disposal I would almost prefer that concept to an outfall into anywhere near the shellfish farms. With FC being upgraded and expanded in the next two years it seems almost reasonable to include the discharge from Bowser and maybe much of Area H proposed to be developed in an intensive manner into the expanded FC plant. The number of connections from Area H now and into the future almost seems insignificant compared to what they are proposing for FC i.e. doubling to let's say 36,000 cubic metres per day. The FC plant currently serves a population of about 25,000.

Then maybe the senior government grant funding could have been put to better use by upgrading FC to a tertiary treatment plant.

I just looked at the report to the board more closely. I see the proposed plant is in the SW corner of the service area. Very clever. With the prevailing SE winds that means most of the odours will travel outside the service area. Did those down-wind property owners get to vote in the petition? Is the RDN willing to zone those down-wind properties industrial, commercial, recreational or agriculture in perpetuity? Or can the RDN guarantee no odours? Why isn't the plant built on the coast near the outfall - like FC? Sanitary sewers seem to work most economically when they collect by going downhill. Is it because the plant will be in the "centre of gravity" of most development when Phases 2 and 3 etc. are built?

Sent: Sunday, August 20, 2017 5:39 PM

Subject: Words from an experienced speaker at the RDN podium

Please give this email to all members of the board prior to Tuesday Aug 22 meeting at 7pm

Sewage treatment plants smell. I have researched effects of domestic wastes in the UK and here in Canada and been part of regulation and assessment and also testified in court resulting in changes to disposal and fish habitat recovery - I have a technical background on this and similar issues that span decades.... Technical issues are likely less understandable than the emotional ones. I wonder if Bowser wants any smelly treatment plant in its midst and I am not aware of any plants being decommissioned around here except for consolidation (e.g. into other outfalls along the Fraser River; River Thames estuary in the UK). Once built I would expect expansion not contraction....as I understand is happening in other water-starved areas where increasing demands due to development is questionable. I wonder if the area that would be required for individual septic treatment systems for private dwellings multiplied by the expected expanded number of dwellings for the Bowser region would be similar to the area of some of our existing subdivisions where septic systems have been installed and agreed to - based upon percolation tests? Is there really no suitable land for on land disposal.....all of a sudden? Development seems to proceed without common sense. UV treatment/sterilisation only works efficiently with clear solutions (e.g. drinking water) and is inefficient in cloudy water with particulates...hence the need for clarification before "disinfection". Some compounds cannot be removed by treatment and some can disrupt the treatment process (e.g. metals). There is no panacea and dilution will not eliminate concerns over bioaccumulation of some materials that cannot be removed. Another significant issue is that of drainage water from developments. Storm water drains in old cities were combined with sewers resulting in high flows which could not always be dealt with at treatment plants resulting in raw sewage discharges. Current practices tend to separate domestic waste from storm drainage but the latter convey many contaminants. Hence development can result in both surface water contamination and also that from domestic waste with its myriad of contaminants.

I am not sure of the frequency of the trucks, but the solid waste is to be trucked to FRENCH CREEK.

The crush of off loading pump-and-dump customers and septic systems in the spring creates major odour problems at the FC plant.

I am sure Bowser residents were not told of this detail, particularly the ones that signed. And there are so few of them. I think many now think their land will now be worth gold. But wait until it all starts to smell --- just like this whole process!

Take videos of the process. If you need an iPhone, I have my old one – I use it for pictures and games! It is not connected to Rogers anymore. Easy to use. Borrow it if you like.

I'm afraid if I attended I would start shouting at them and have my blood pressure go over the top! One thing that does help when attending is to applaud the speakers you support.

Section 22

**Talk to the others that are there to do it as well!
Very important to demonstrate support.**