



Protect the Salish Sea—**VOTE FOR CHANGE**

Rebuttal to Bill Veenhof's Re-Election Advertisement

October 4, 2018 in PQB News

| Bill Veenhof's Claims | The REAL Science-based Facts |
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| The outfall will release secondary treated effluent with UV disinfection, NOT SEWAGE, 2.2 km off shore. | Secondary treated sewage effluent is still sewage effluent with reduced levels of organic material and suspended solids. UV at proposed levels won't sterilize non-enveloped resistant viruses, parasites and resistant bacteria (Carlow et al 2018). Diluted secondary effluent offshore is a “HIDDEN KILLER-BuckSuzuki.org” . |
| Swimming will remain completely safe. The effluent quality at the outfall (2.2 k, from beach), will be 1,400% cleaner than the Federal standard for safe swimming water. | The effluent quality at the outfall is based on the use of outdated bacterial indicators (fecal coliform) counts that do not correlate with pathogenic virus levels, protozoan parasite levels and some pathogenic Vibrio (Cholera) bacteria (Carlow et al 2018). Wind surfing regularly occurs in the Initial Dilution Zone so human health risks remain. With poor UV disinfection sewage effluent will not meet the 10,000:1 viral reduction required by Environment Canada for human health protection (Stantec 2017 page 129; GPE&E p. 32). |
| Will meet the shellfish standard within 5 meters of the outfall terminus. | The standard is based on bacterial count dilution and bacterial counts are not well correlated with virus levels such as Norovirus and Hepatitis. Shellfish filter and hold pathogens at very low levels so the European Food Safety Authority says disposal of fecal contaminated effluent is a high risk, and aquaculture should not be permitted in these areas. Eating contaminated shellfish can be life threatening! |
| Odour causing processes will be enclosed within an odour eliminating carbon scrubber. | The smell from the open sludge pit is not confined. More sequential batch reactors are proposed for expansion over time (Stantec 2017). |
| Effluent from the similar RDN Duke Point Plant, was about 10X cleaner than permit standard. | Duke Point has a sanitary shellfish closure so a similar Bowser sewage effluent will likely present health risks (http://maps.bccdc.org/shellfish/) |
| The outfall is twice the required distance from the shellfish farm, (800m). | The act of polluting the Salish Sea is not improved by changing location. |
| Island Health endorsed Bowser wastewater. They indicate that the cholera event was natural and the Norovirus outbreak in shellfish was likely caused from raw sewage from boats. | False! Island Health's letter recognized the “significant values” of proposed UV to minimize human disease organisms such as Norovirus and only “suspected” untreated marine operations sewage as the cause of disease. This is not an endorsement nor does it identify the source of contamination. <u>“Given the low infective dose and the viability of norovirus in cold water, we postulate that sewage spread by ocean currents may have contaminated geographically dispersed farms. Among potential sources under investigation are sewer overflows, metropolitan and local wastewater treatment plants, municipal raw sewage discharge, and commercial fishing vessels.” BC Med J 2017).</u> Cholera occurs naturally but when people get it, they add it to sewage, treated sewage ends up in the ocean where it binds to substrates like herring eggs and levels are not measured in effluent (Carlow et al 2018). |

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| <p>Non-toxicity will be confirmed by required regular government testing and the system will have necessary backup.</p> | <p>Toxicity testing is for immediate short term effects not for measuring long term accumulating toxin effects in the environment. The RDN's Consulting Engineers proposed two (2) Batch Reactors (SBR's), a standard practice to ensure a back-up line in the event of sewage treatment upset (Stantec 2017- Technical Memo 1). Only one SBR is being planned for initial construction.</p> |
| <p>Secondary treatment provides significant levels of removal of many contaminants including 99% of microplastics.</p> | <p>Not true! Secondary treatment is well known to contain a large number of residual contaminants. <u>The 2017 Salish Sea Toxic Monitoring Review</u> found 81 different chemicals in effluent and 42 were elevated in fish. Microplastics reduced to 1 to 10% in secondary treatment still accumulates to high environmental levels because they do not break down. This is because of the high volumes of effluent entering the marine environment. Microplastics are now considered toxic by Environment Canada.</p> |
| <p>No industrial waste or surface runoff water will be allowed in the system.</p> | <p>Many household chemicals are the same as those found in industrial wastes and there is no control of what people pour or flush such as drugs, household cleaners and garage/garden chemicals.</p> |
| <p>Sludge from the system will be processed and used as a forest fertilizer.</p> | <p>Land based recycling of sludge as forest fertilizer is a commendable sustainable development practice. Logically this should be extended to include land based recycling of highly treated sewage effluent.</p> |
| <p>Land-based disposal systems can lead to water contamination and the only one on Vancouver Island of similar size (Arbutus Ridge) has failed.</p> | <p>False! Globally, wastewater is now considered a resource for purification and recycling to groundwater or for irrigation with the added benefit of nutrient content. There are numerous BC Government approved, safe land based systems operating on Vancouver Island and within the RDN that do not pollute groundwater (e.g. Spider Lake Springs with 320 hook-ups). Arbutus Ridge is replacing their old conventional system with new land based technology capable of producing Class A Effluent in a very small land disposal field with optional golf course irrigation (650 homes with about 1100 residents).</p> |
| <p>Polluted storm water runoff and uncontrolled sources of septic wastes are the primary source of shellfish closures.</p> | <p>False! There is no credible published Bowser Area scientific report or monitoring program to support this statement. RDN style sewage outfalls at Nanoose, French Creek, Duke Point and Greater Nanaimo all have sanitary shellfish closures.</p> |
| <p>Environmental Groups TBuck Suzuki Foundation and the Georgia Strait Alliance support secondary sewage treatment.</p> | <p>Secondary Sewage treatment is a necessary first step to begin cleaning up the massive amounts of sewage being dumped into the Salish Sea by existing large cities. Higher level treatment should be required for all new projects to ensure environmental and human health protection especially in the premier world class shellfish and recreational waters of Baynes Sound and Bowser BC. An up to date precautionary approach avoiding marine disposal is now considered essential for sustainable development!</p> |

Given all that we have learned about over the last few years about the decline of our oceans, why would we ever consider doing only what we have always done! Bill Veenhof has not done his homework! **VOTE FOR CHANGE! www.SOSBowser.ca**