

Diving into the Murky Waters of the Sewage Debate

Much of my over 35 years of commercial fishing experience has been spent diving for octopus, year round, in the murky waters off the Victoria waterfront and areas adjacent to it.

Perhaps more than any other person, I have observed the damaging effects the practice of dumping raw sewage through outfalls located off Macaulay & Clover Points has had on the local seabed and marine environment.

Just a casual glance at a Current Atlas for Juan de Fuca Strait shows that the tidal currents running along the Victoria and Esquimalt waterfronts over both outfalls are consistently weak and variable.

A more critical analysis of the region's tidal currents and geography reveals that rather than dispersing the effluent into oblivion, they actually work effectively to settle thousands of tons of contaminated sediment on the local seabed.

East of Race Rocks, the Strait of Juan de Fuca more than doubles in width and is where the entire Victoria waterfront from William Head to Trial Island forms what is in effect a large 'bight' where the tidal currents counter-rotate and weaken substantially.

Further insulating the more shallow inshore waters from the Strait and complicating the tidal flushing of the waterfront is Constance Bank, a relatively long, shallow gravel bank, running east/west between Trial Island and William Head, which creates what is in effect a large marine basin into which both outfalls are discharged.

The typical ebb current draws weakly, often less than ¼ knot, across the Victoria waterfront from east to west, from Trial Island toward Esquimalt and Royal Bay, where it eventually turns southwest and is further baffled by Albert and William Heads.

This weak current carries the effluent from both outfalls in the same direction where in the relatively low energy water it settles out of the water column and accumulates on the seabed in the form of a fine, brownish - black sediment. This sediment has been accumulating for decades and is truly staggering in places.

Being warmer and less dense than the surrounding seawater, the effluent rises rapidly into the water column after discharge. Soon after, the solid waste from the effluent streams begins to settle out and accumulate on the local seabed. There is both a large upstream and downstream settlement pattern!

The flood tide isn't much better at dispersing the effluent. It typically pushes northeast from William Head directly toward the Victoria waterfront where it curls east towards Trial Island and then filters and eddies through the Oak Bay islands into Haro Strait. There is a lot of sediment accumulation on the seabed throughout these areas including between 10 Mile Point and Gordon Head in Haro Strait. Over the past 10 years it has gotten much worse. The Macaulay Point effluent is discharged directly into a current stream that twice daily fills the Inner and Esquimalt Harbours and the Gorge with billions of litres of water.

The persistent sewage contamination of the Region's seabed is not a new development. In the early 1980's, operating out of Fisherman's Wharf in Victoria, my brother and I helped pioneer the Swimming Scallop by dive fishery. Unfortunately, that fishery was soon relocated to the Gulf Islands because the Swimming Scallop beds that once carpeted the seafloor off the Victoria waterfront and adjacent areas were contaminated with such high levels of fecal coliform bacterium they were deemed unfit for human consumption. Back then, the levels of fecal contamination were so high and so persistent it led to the permanent commercial shellfish harvesting closure of the entire area from Becher Bay all the way to Sidney and James Island in Haro Strait.

Anyone who has spent any time in a boat along the Victoria waterfront has likely noticed the hundreds of seagulls that crowd over the plumes of both outfalls. The gulls feed on the whitish brown specks of grease rising in the center of the plume. The CRD pumps somewhere around a million pounds of grease and oil annually through these outfalls, some of which, after being emulsified in raw sewage, is being consumed by a large local bird population. The transfer of fecal matter and fecal borne illnesses by bird populations that have come into contact with untreated sewage is a legitimate public health concern.

I've spent my entire adult life fishing and diving for a living off the Victoria waterfront and what I see is a serious environmental and public health problem hidden just below the surface. I've witnessed the expansion of dead zones, the sediment creep and from time to time have experienced total 'brown outs' while diving off the Victoria waterfront. Sad to say, over the years I have also witnessed

a significant loss of biodiversity. Places that were once colourful and vibrant marine habitat, such as the entire Esquimalt waterfront, are now dull remnants of their former selves, where only the most silt tolerant marine life can exist.

Secondary treatment is not a waste of money but rather a long overdue and necessary investment we need to make to ensure a much cleaner future for our region.

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