

Biofilm, Essential for Wildlife, to be Destroyed by the Port of Vancouver's Roberts Bank Container Terminal 2 Project.

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The central issue surrounding the Vancouver Fraser Port Authority (VFPA) Roberts Bank Terminal 2 (RBT2) project is the significant adverse environmental effect on polyunsaturated fatty acids - PUFA for short – on which millions of shorebirds, fishes, southern residents killer whales and other wildlife rely as an essential source of food. This has long been a key area of concern for Environment and Climate Change Canada (ECCC) scientists.

Biofilm, a community of diatoms, is the prime source of PUFA and Omega 3 for millions of shorebirds, fishes, and other wildlife that, whilst essential to their very survival, they cannot produce themselves. It is found on Roberts Bank in the Fraser Estuary and presents as a slimy coating on the surface of the mudflats. This is the crux of the environmental issues surrounding RBT2.

The richness of the diatoms in marine biofilm results from the interaction of fresh water (especially the spring freshet from the Fraser River) and the salty tidal flows across the mudflats of Roberts Bank. This interaction is what causes diatoms to become rich in fatty acids. RBT2 will denigrate the biofilm on Roberts Bank, denying shorebirds and other wildlife that rich diet essential to their very survival.

As the wildlife feeds directly on the diatoms (or indirectly through eating other creatures), they ingest the fatty acids, an essential element in building body and muscle strength and maintaining their health. This is the crux of the environmental issues surrounding RBT2.

Ultimately the decision to approve or deny hinges for the most part on that one issue – the irreversible damage from RBT2 that will result to polyunsaturated fatty acids. The government knows that, the scientists know that. In reality the Port of Vancouver knows that as well.

Yet VFPA is in denial regarding PUFA and refuses to accept its importance in the dietary health of wildlife. So they have been working behind closed doors in Port initiated workshops involving Port Authority staff, its consultants, First Nations representatives and DFO staff. Notably ECCC scientists have not been invited despite the fact that much of what is being discussed are key areas of ECCC responsibility. The Port are scrambling to invent “the holy grail” by suggesting they can create biofilm to replace that which will be destroyed if RBT2 is built.

Cannot be done. Has never been done, nor is it feasible on a scale necessary to replicate what will be lost if RBT2 is built. The Review Panel in its final report stated, “*There would be significant adverse and cumulative effects on wetlands and wetland functions at Roberts Bank*”. In fact the Panel agreed with ECCC “...that mudflat creation at Roberts Bank is unproven as a mitigation measure for biofilm and as such cannot be considered feasible until best practices can be developed”. There are no proven best practices on the scale required.

Despite that the Port has gone about developing a biofilm guidance manual. This is a useless, unnecessary piece of work. Wildlife doesn't need a biofilm guidance manual. Nature doesn't need guidance on how to create biofilm, it does that perfectly well without help on its own. The only entities that need or think they need a biofilm guidance manual are those such as the Port of Vancouver that are intent on destroying habitat critical to the survival of wildlife species to satisfy its own selfish ends.

The biofilm science is fact and its necessity for wildlife proven and supported by independent peer-reviewed papers published in science journals. The VFPA science has never been published in peer-reviewed science journals, its validity is challenged by Environment Canada and other scientists. Yet VFPA continues to promote its flawed science in the hopes that regulators will buy into it.

Nature created this incredible food source. Port and industrial development cannot be allowed to destroy the mudflats, wetlands and wetlands functions, that are an integral part of the Roberts Bank ecosystem. The Federal Government has no choice. It must deny approval for Roberts Bank Terminal 2.

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