

My Concern to Atlantic fish Farms in Puget Sounds . That scientists warn that PRV (Piscine reovirus) is a threat to Pacific Salmon. The PRV virus in turn becomes HSMI (Heart, Skeleton, Muscle ,Infection),which when wild Salmon come in contact with these viruses enable them to have the strength to make it home to there spawning grounds. PRV is know to flow freely through the currents of Salish Sea.

At this time Kenneth Warheit with the WDFW is testing for PRV in our local rivers. This is the recent E-mail sent to me by Ken

Warheit, Kenneth I (DFW) Fri, Dec 14, 2018, 2:36 PM

Mr. Pope – thanks for your email, and my apologies for a delayed response. Since last April we have collected from seven hatchery facilities in the Lower Columbia, and six hatchery facilities in Puget Sound a total of 508 samples to be tested for PRV (123 samples from juveniles or fry, and 385 samples from adults). We will begin laboratory testing after sample collections are complete (including steelhead sampling, with early runs starting now), and we have validated our molecular assays. Hopefully, we will have results available by early to mid-March. Let me know if you have any questions. Respectfully, Ken Warheit

I believe this Issue is global (Salish Sea), meaning that Canada is experiencing the same issues with there Atlantic fish Farm. This is a recent letter written By Alexandra Morton.

Dear Minister of Fisheries - Accept First Nation help

Jan 9, 2019

Dear Minister of Fisheries Jonathan Wilkinson,

Many British Columbians, myself included, felt hopeful when Prime Minister Trudeau appointed a Minister of Fisheries from British Columbia.

When you accepted the position, you inherited a highly compromising lawsuit from the departing Minister LeBlanc. In September 2018, your lawyers argued to allow Marine Harvest and Cermaq to ignore the law and continue transferring Atlantic salmon infected with the viral “disease agent” PRV into the territory of the Namgis First Nations (decision pending).

Marine Harvest has made it clear that your position benefits them. However, your scientists warn that PRV is a threat to Pacific salmon. The escalating COSEWIC listings of Pacific salmon stocks in critical decline means whatever your department is doing, is not working and change is required. Allowing a highly contagious virus, known to harm Pacific salmon, to flow out of most of the salmon farms on this coast is indefensible, especially when it violates the law.

Then on January 7, Chief Bob Chamberlin told CBC that DFO has denied the First Nations of the Broughton Archipelago access a DFO lab, after they had reached an agreement with the Province of BC giving them the authority to test farm salmon. You were present at the announcement of this agreement.

I have faced the salmon farming industry for 30 years and I know that the fish farm companies that are doing business in BC will to do everything they can to exert control over First Nation testing of the fish in their farms and hatcheries.

I accept you are in a difficult position. You were sworn in just as your office was defending the transfer of PRV-infected farm fish into Namgis territory, even though your own scientists report PRV causes Chinook salmon red blood cells to rupture and 50% of Chinook salmon exposed to salmon farmed waters are in rapid decline. Now as the world is watching in horror as 2 more southern resident orca starve to death for lack of Chinook salmon, you are obstructing First Nations, who are testing farm salmon for a virus known to kill Chinook salmon, from using their lab of choice. The optics of this are disastrous.

After reading 1,000s of emails between DFO, the Provincial Ministry of Agriculture and the salmon farming industry I know the backstory on PRV. I hope someone is making you aware that the extraordinary effort by these three parties to suppress the impact of the PRV virus on this coast has failed. The Province of BC has stepped away from this in an impressive act of reconciliation and good sense, which leaves just you and the salmon farmers downplaying the impact of their virus.

Minister Wilkinson, I would like to offer that the solution is simple. Demonstrate respect to First Nations, open your labs to them, split the samples and send a set to the lab of your choice. This virus is leaking out of fish farms all along this coast, Washington State has prohibited PRV-infected farm salmon in their farms since early last year and some of us are tracking the different PRV strains from Norway and Iceland that are circulating on this coast. The science has gotten away from those who sought to downplay the impact of PRV. What is known is not going to be unknown.

All the Ministers who permitted the controversial growth of the salmon farming industry in Canada have moved on, leaving your government on very unstable ground, presiding over terrible extinctions and disregard for our laws. Canada's chief scientist recommends 3rd party oversight of your science and federal regulators slammed DFO's failure protect wild salmon from salmon farms.

I am sure that you recognize that the request by First Nations to use a DFO lab to test farm salmon is perhaps the only honourable path out of this highly compromising situation. I am sure that you recognize that the request by First Nations to use a DFO lab to test farm salmon is perhaps the only honourable path out of this highly compromising situation. I would suggest not allowing the bureaucrats who got you into this mess to make this decision.

Respectfully,

Alexandra Morton

I Darryl Pope have been a life long citizen of Washington State . I'm a commercial fisherman, I'm a sport fisherman. I believe these two viruses, Have caused the decline of our wild salmon fisheries. Starting in 1996 with the importing of Atlantic salmon eggs to Washington State .Again I have attached a letter explaining this theory, written by Alexandra Morton.

testimony at the Cohen Inquiry into ISA virus »

Atlantic Salmon - how did this happen to British Columbia?

There were large Atlantic salmon imports to BC from eastern Canada decades ago in a deeply misguided venture to establish Atlantic salmon among healthy Pacific salmon stocks. They did not survive for long, but could have left a legacy of pathogens.

This blog reports on a series of excerpts from provincial and federal documents chronicling the conversations around the more recent Atlantic salmon egg imports into BC waters for the purpose of

salmon farming. Since the 1980s, people in government have voiced serious biological concerns, trying to defend BC. Most recently today Dr. Sally Goldes who worked for the Province of BC in fish health came forward, Times Colonist article. Despite their efforts the threat of trade sanctions appears to have dominated decision making. The source of eggs changes, suggesting problems, and each time it is preceded by industry pressure. The biology caved to the demands of commerce. But the irony is that the pristine, oxygenated, nutrient-rich waters of British Columbia - that the industry so desperately craves - has become the casualty. All our lines of defence against viral activity in salmon farms were removed one-by-one. There are some heroes in government who really tried and are still trying to protect BC wild salmon.

1982 – Canadian government and Norwegian and Canadian business interests meet:

- *“have requested consideration of alternative approaches to inspection and certification of salmon culture facilities”* (Tim Carey, DFO, Senior Program Advisor, Aquaculture and Fish Health, letter to Pritchard, DFO* Aquaculture & Resource Development re: importation of Atlantic salmon from Norway)

1984 – Fisheries and Oceans Canada (DFO) approves limited importation of Atlantic salmon, although this is not made public.

1985 – Draft Importation of Salmonids Policy states:

- Imports will cease March 1989
- Source hatcheries must meet Canadian Fish Health Protection Regulations
- 12 month quarantine
- 300,000 eggs per hatchery to maintain reasonable security
- *“I am getting increasingly anxious about our importing of Atlantic eggs. My concern is shared by many of my colleagues in both provincial and federal agencies... The fish health measures agree-to jointly by DFO and ourselves in the fall of 1984 are not foolproof. They are based on statistical sampling, so we are taking a risk when it comes to the introductions of virus. That means a risk to the nearly one-billion-dollar wild salmonid fisheries of British Columbia”* (Dave Narver, MOE* to Anthony ADM, MOE, Feb 26)

130,000 Atlantic salmon eggs imported from Scotland

1986 – Import policy remains unsigned and is not public

- *“... We are deeply concerned with the fact that the risk of exotic diseases is dependent on both the number of imports and their size... Government has made a commitment to support aquaculture, but surely not at the risk of a nearly \$1 billion resource in the wild salmon fisheries of British Columbia. The direction the aquaculture industry wants us to go will insure that we import unwanted diseases that can impact on government hatcheries and wild stocks”* (Narver, MOE to Gunn, Pacific Aqua Foods, Nov 6).

- *“... Imported fish could be more susceptible to local pathogens than native stocks. An outbreak of disease in an imported stock due to a local pathogen, as well as causing losses to that stock could result in a dramatic increase in the pathogen loads in the system to a level which otherwise refractory native fish may not be able to withstand.”* (CFSAC Advisory Document 1986) This is an extremely important observation, the unnatural salmon farm environment can cause local pathogens to become dangerous to local stocks.

- *“To start with a general comment, I am disappointed with what appears to be the prevailing attitude of a number for companies, that fish health regulations to protect wild stocks are great, but ... If we continue the way the aquaculture industry seems to dictate, we can expect to introduce new diseases.”* (Dave Narver, MOE to Dale Blackburn, Stolt Sea Farm Canada Inc.)

1,144,000 eggs imported from Scotland

1987 - Federal-Provincial Policy for the Importation of Live Salmonids was signed, but restrictions were lowered.

- quarantine reduced to 120 days to reduce industry cost of dealing with waste water
- suggestion egg imports continue until 1990 (Davis, DFO to Chamut, DFO, Jul 23)
- *“If challenged in court over denial of any imports, what is the legal likelihood we would be successful in denying imports?”* (Chamut, DFO to Davis, DFO, June 27)

1,281,000 eggs imported from Scotland / Washington State

1988 – Davis, DFO’s Regional Director of Science for the Pacific Region suggests extension of egg import to 1991

2,700,000 eggs from Scotland / Washington State

1990 - U.S. salmon farmers claim Canada import restrictions are a trade barrier.

- *“Continued large-scale introductions from areas of the world including Washington State, Scotland, Norway and even eastern Canada would eventually result in the introduction of exotic disease agents of which the potential impact on both cultured and wild salmonids in BC could be both biologically damaging to the resource and economically devastating to its user groups”* (Chamut former ADM, DFO, to Sarna, Director of Pacific Rim & Trade, Policy Division, International Directories, DFO, 1990)

1991 – The threat of a “Free Trade Ruling” remains, fish farm industry pushes for use of known diseased stocks.

- *“I am very concerned about the discussion which took place about the egg import policy and proposed changes... I think [they] have gone too far... The proposed revisions not only open the window indefinitely but essentially allow for unlimited numbers of eggs. I know your Department argues that this has to done to avoid a Free Trade ruling...”* (Narver, MOE to Chamut, DFO, Sept 30)
- *“As we have no other disease-free source available [other than Iceland] anywhere in the world, I am requesting that you reconsider your position, particularly in the light of the expected change in the DFO regulations”* (Needham, Director Aquaculture, BC Packers, to Hoskins, DFO, Dec 3)
- *“DFO and MOE are responsible for the protection of wild and cultured salmonid stocks in British Columbia. Both...agencies firmly believe that repeated large scale shipments of salmonid eggs...expose BC’s wild and farm salmonid stocks to unnecessary disease risk.”* (Ginetz, DFO to BC Trout & Char Producers, Jan 16)
- Document titled, The Need for Restrictions on the Importation of Atlantic Salmon into B.C. Atlantic salmon eggs *“clearly carry the risk of the inadvertent introduction of exotic disease, or exotic strains of indigenous agents.”* (Gary Hoskins, Scientist, DFO memo, Jul 13)
- *“Perhaps most important is the fact that new diseases are continually surfacing – their dynamics ...are totally unknown. To suggest therefore that vertical transmission should not be a concern would be irresponsible”* (Chamut, DFO to Emberley, Director General, Inspection Services Directorate, Jun 11)
- *“The proposed revisions not only open the window indefinitely but essentially allow for unlimited*

numbers of eggs. I know your Department argues that this has to done to avoid a Free Trade ruling." (Narver, MOE to Chamut, DFO Sep 30)

- "I have the distinct feeling that the seriousness of the interaction between wild/farmed fish has been downplayed by some of your staff" (Narver, MOE to Chamut, DFO Sep 30)
- "I want to therefore emphasize that despite allegations that restrictions were introduced to limit trade for the benefit of BC producers, our foremost and only concern was to protect our wild and cultured stocks from exotic disease... There are a host of examples including cases in the US... where new diseases were accidentally introduced due to inadequate regard for fish health, resulting in significant economic losses to commercial and sport fisheries and more recently the salmon farming community." (Chamut, DFO to Barrows, Free Trade Coordination Divisions, External Affairs & International Trade, Jan 23)
- "strongly urg[ing] DFO and BCMOE to modify existing policies to provide greater access to larger commercial quantities of Atlantic salmon eggs." (BC Salmon Farmers Association to Chamut, DFO Jul 15).

735,000 eggs imported from New Brunswick / Ireland / Washington State

1992 – Importation Policy redrafted – signed by Pat Chamut

- No limit on number of eggs per license,
- quarantine reduced from 12 mos., to 120 days or body weight of 3g.
- BC Salmon Farmers Association: "*imported fertilized eggs would be more competitive with domestically produced eggs if hatchlings did not have to be raised under quarantine conditions.*"

640,000 eggs New Brunswick / Washington State

1993 – The Provincial and Federal government agencies (DFO, MAL*, MOE) Wild/Farmed Salmonid Interactions. Despite all the discussion above and no literature cited it reads:

- "*There is also no evidence that wild fish in BC are placed at serious risk from disease occurrence in farmed fish.*" (Apr 6).
- Washington State exports 47 million salmon eggs worldwide (10% to BC)

1,447,000 eggs from New Brunswick / Ireland / Washington State

1995 – Pressure from US for BC to relax egg/smolt import regulations

- "*Major salmon egg exporters from Washington State agreed that there would be great market potential for their Atlantic salmon eggs in British Columbia if existing import restrictions were removed.*" (International Trade – Canada's Restriction on Certain Salmon Imports, Report to U.S. Senate Slade Gordon, April 1995, GAO/GGD-95-117)

775,000 eggs imported from Washington State / Ireland

1996

1,500,000 eggs imported from Washington State

1997

1,600,000 eggs imported from Washington State

1998

2,400,000 eggs imported from Washington State

1999

2,400,000 eggs imported from Washington State

2000

2,500,000 eggs imported from Washington State

2001

800,000 eggs from Washington State

2002

0 eggs imported

2003 – Dr. Laura Richards Director General, Science, Pacific Region (DFO) petitions John Davis Regional Director, DFO to simply waive the Canadian Fish Health Protection Regulations so Atlantic salmon eggs can come from a hatchery in Iceland that does not meet Canadian protection standard (Oct 2, Cohen Commission, Exhibit)

- *“Two BC salmon farming companies wish to import Atlantic salmon eggs from...Icelandic company which is not certified under the Canadian Fish Health Protection regulations (FHPR)*
- *Failure to provide permission for egg importation may trigger a trade challenge under the World Trade Organization...*
- *Additionally, DFO could also be viewed as causing a competitive disadvantage of the aquaculture industry by denying them access to alternate strains.”*

0 eggs imported

2004

4,700,000 eggs from Iceland

2005

80,000 eggs from Iceland (reported on DFO website), however import permit 05-PBS-1 Jan, 17, 2005 reports 150,000 eggs imported from Iceland that hatched and were destroyed April 19, 2005

2006

0 Eggs imported

2007

1,750,000 eggs from Iceland

2008

800,000 eggs from Iceland

2009

600,000 eggs from Iceland

The PRV virus was carried by the egg from the importation from these countries to the Salish Sea .At this time First Nation of Canada is preparing to do some PRV testing, DFO Canada is testing and WDFW is testing, the results of the WDFW aren't going to be known until as possible

as late March..Before any permits should be granted ,all results from both countries should be available. My personal belief is that if these Atlantic Salmon fish farms are to be shut down in 2022, there should be no NPDES permit issued , along continuation releasing of Atlantic salmon smolts into there fish pens. These pens are particularly one of the many causes of destruction of the Salish Sea ecosystems

Thank You,

Darryl Pope