

Presentation to the Cohen Commission of Enquiry
“Harmful effects of toxic substances in fisheries habitats”
Presented by: Donald Costin, Chilliwack, B.C. September 29, 2010

My background:

- **BSc in Math and Physics, MSc in Computer Science, Diploma in Adult Education,**
- **University lecturer for 4 years in Computer Science,**
- **Worked at the Freshwater Institute, University of Manitoba (1974-1980),**
- **Career as an IT Executive in Government and Industry,**
- **15 years farming experience in Manitoba,**
- **Enrolled in Environmental Science at the University of the Fraser Valley.**

A Little Bit of History:

As a young person growing up on our farm near Birds Hill, Manitoba I witnessed the demise of the pollinating bee. Before that we had a great variety of wild fruit, plants, trees and shrubs; there was also a notable variety of insects. Diversity was everywhere and our harvest was notable until 1950 when we had to spray insecticides to defend our cereal crops (wheat, oats, barley and flax) from a province-wide infestation of grasshoppers. Not many years later I noticed that there were few if any bees, wild fruit, flowers and the shrubs gradually died off; our harvest was cut in half. Diversity was lost and has not since recovered. No matter which part of our diversity we destroy, bees for example, it has an impact on everything else in the environment, i.e. it even has consequences for the Sockeye Salmon. The problem is systemic, when we touch one part (component) of the environment all other components are affected.

Why Are We Here Tonite?

The objectives of the **Cohen Commission of Enquiry** (a part of my interpretation) are to gather information on Sockeye populations from various sources, including public meetings, and available scientific reports, and finally to try to determine the cause of the rapid decline in Sockeye returns into the Fraser River system over the past decade. [Past estimates have predicted that the Sockeye return could be as little as a few million; in the last three months that prediction has been revised upwards to possibly more than 50 million.]

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Therein lies a dilemma, why the sudden abundance in Sockeye? ... and can we predict what the return will be next year and the years after that?

The Federal and Provincial governments employ talented scientists who have demonstrated their capabilities to assess fish populations through biological sampling and studies. They have conducted numerous studies into the possible harmful effects of various toxic substances, like Mercury, Arsenic and Pesticides, that we continue to dump into our waterways.

Why do we seem to be incapable of determining the cause of the decline in Sockeye populations considering the knowledge and experience demonstrated by our scientists, government bureaucrats, fishers and First Nations people? Could the cause be something as simple as the effects of the cyclical nature of events in the Universe?

Effects of Toxic Substances:

Raw sewage and oil spills continue to find their way into the Fraser River system, the Straits of Juan de Fuca and Georgia. Toxic substances include: ROUNDUP (Herbicide), Fertilizers (Nitrogen), Methane, engine oil and oil products, gasoline, diesel, industrial effluents, paint solvents, arsenic, mercury and other metals from pulp mills. When will the quantitative and qualitative analyses on toxic substances found in these watercourses be published suitable for public scrutiny without the necessity to invoke the terms of the Freedom of Information Act?

The general public, municipalities, farmers and other forms of agriculture enterprises all continue to apply necessary and cosmetic pesticides in excessive quantities, including: ROUNDUP (Herbicide) and fertilizers (Nitrogen), apparently to reduce infestations of pests and weeds. Traces of these substances, harmful to aquatic life, find their way into creeks, rivers and aquifers. Uncontrolled application of toxic substances has led to the demise of pollinating bee populations and has severely reduced habitat diversity. Diversity that is essential

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for the survival of all species on earth. When will the Gov (incl DFO) enact legislation that limits the application of toxic substances?

Impact of casual uncontrolled scattering of garbage:

Bilges of ocean liners are regularly flushed within the 300 mile limit—when will the Gov. enact and enforce legislation to police the recreational, merchant marine and cruise ship traffic?

Plastic bags, fish nets, etc in increasing amounts are being dumped into our waterways by recreational boat traffic.

DFO and the Governments have speculated that such pollution may be detrimental to aquatic life, nutritiously beneficial or aquatically inert. When will we know the final result?

Is the global persistence of acid rain detrimental to the reproduction of aquatic species including Sockeye?

Cultus Lake Sockeye:

There is a growing persistence of spent gasoline and oil from 2-cycle outboard engines that is being emitted into channels, lakes and inland bodies of water; bodies of water that are spawning grounds for Sockeye. Does DFO or the Gov have evidence that these toxic substances are not harmful to fish populations? Are data from studies available?

There are so many unanswered questions.

Reports We Pay For:

Why doesn't the public have ready access to the numerous historical scientific reports that our scientific community has prepared? Why were these reports produced when their utility has been reduced to serving as paper weights in the bottom drawers of bureaucrat's desks? Let the public examine the reports and draw some conclusions of its own, please.

Finally: Nothing regarding the fate of the Sockeye will change unless it is backed-up by legislation.

Reference: Dr David Schindler, research biologist originally at the Freshwater Institute at the University of Manitoba, coined the term “acid rain” following a study (toxicology) at an inland lakes project near Kenora, Ontario (1965-80).