

COHEN COMMISSION SPEAKING NOTES

September 16, 2010

Victoria, BC.

Mr. Commissioner:

My name is Paddy O'Reilly, of the Environmental Law Centre, representing the Veins of Life Watershed Society. My presentation is a follow-up to the documentary that you have just seen. My submissions will be based on this report –

“Re-inventing Rainwater Management: A Strategy to Protect Health and Restore Nature in the Capital Region.”

**[Report and documentary are available online:
<http://www.elc.uvic.ca/press/stormwater.html>]**

My youngest daughter recently made this fish, and told me that I could share this with you tonight. I brought it here as a symbol of how important salmon are to British Columbians.

For centuries salmon have sustained the life of people on our coast. But salmon are more than just food.

From the salmon on ancient totem poles to this young person's handiwork, British Columbia salmon have sparked our imagination, our art, our concept of who we are as British Columbians. They are a cultural icon of this Province. This fish is a reminder that what we are doing tonight is not just an academic or legal exercise.

Today, our children know what salmon are, and they can still stand in awe of the return of spawning salmon, one of God's great miracles. However, without vision, determination, and action on our part – one day they may not. And British Columbia would not be the same special place.

If we are to preserve Fraser sockeye salmon, the urban stormwater problem simply must be addressed. Yet many are unaware of the critical threat that rainwater management poses to the survival of salmon.

Rainwater management is not a topic that is foremost in many of our minds. The adage “Out of sight, out of mind” is largely true; it’s difficult to prioritize something that is not in plain view. And rainwater, as it is currently managed, is collected and piped away, removed from our everyday view. The real action is underground, out of sight.

But the result is destruction of salmon.

So let me give you some context for how our stormwater problems developed, and how they harm BC salmon.

First, we turned the landscape into hardscape. We scraped away the soil and plants, and covered them with streets, curbs, sidewalks, parking lots, and roofs.

Rainfall runs off those hard urban surfaces. The rain no longer infiltrates down into the ground. On urban lands, two thirds of all the rainfall now runs off of the land – instead of the mere one per cent that runs off from natural land.

To deal with the increased runoff, we have piped all that water away – directly to the nearest stream, lake or ocean.

As a result, when it rains now the water sweeps across the asphalt and cement hardscape. It rushes into storm gutters and sewers – and roars into the nearest salmon stream.

As it goes, the water picks up all the pollutants on the landscape -- oil, gas, metals, PCBs, grease, antifreeze, solvents, pesticides, herbicides, fertilizer, paint, detergents, road salt, and animal feces.

It also picks up human sewage because storm sewers and sewers are not properly separated.

What are the results?

Scientists have found that the bulk of toxins going into Puget Sound are from stormwater – 100,000 lbs of toxins a day. Every twenty four months stormwater delivers a volume of oil equal to the Exxon Valdez spill into the Sound and its watersheds.

These toxins are a threat to salmon. And our report cites new evidence of the grave threat that stormwater toxins pose to orcas.

Most importantly for the purposes of tonight’s inquiry, outdated stormwater management has killed our urban salmon streams. Studies have shown that once a watershed is just lightly developed – with only 10-15% impervious cover (that is, paving and roofs) – that conventional stormwater management devastates salmon habitat.

As a result, urban stormwater – along with logging and overfishing – has had a devastating effect on our Coho salmon. Since the 1950s the number of streams supporting Georgia Strait Coho runs has decreased from about 100 to about 20. Urban stormwater has been identified as one of the main causes of this decline.

All of the above problems are a result of our obsolete 19th century stormwater management system, one that fails to respect and understand the advantages of natural systems and water cycles – and the negative consequences of ignoring them.

Stormwater turns natural salmon streams into nothing more than drainage ditches, where stormwater toxins and habitat destruction consistently frustrate local salmon restoration efforts.

As you have seen in the film, inadequate rainwater management has contributed significantly to the destruction of salmon habitat. However, as our report documents, there are numerous practical, proven, and affordable solutions to these problems.

The modern approach to rainwater management recognizes that the old way didn’t work because it breaks the natural water cycles.

We can avoid many problems if we simply design a stormwater system that works with natural systems and not at cross purposes. Instead of just piping and conveying stormwater to the nearest stream, we can try to imitate nature.

We can do this by restoring the function of soil, trees, and open spaces to absorb, store, evaporate, and infiltrate rainwater. We can implement low impact development by the following techniques:

- Reduce impervious surfaces by constructing narrow streets and using cluster developments instead of sprawling ones
- Replace curbs and gutters with grassy boulevards and swales
- Replace pavement with porous pavement and brick pavers
- Improve soil on our lawns to absorb more water
- Install sidewalk planter boxes and plant trees
- Install rain gardens
- Construct stormwater retention ponds, infiltration trenches, basins, and green roofs

All these low impact development techniques have the overall effect of reducing the amount of stormwater and its toxins flowing into our salmon streams and rivers.

Many of these techniques are less expensive than traditional development. And they offer many times the social and environmental benefits, by adding urban green space, providing clean air and water, and making the community more attractive.

Because low impact development provides twenty three times the social, environmental, and economic benefits of conventional stormwater management, the City of Philadelphia has now implemented the most comprehensive low impact development plan in North America. It’s a plan to remove pavement and convert the city into an urban oasis.

Furthermore, low impact techniques are now required for **all new development** west of the Cascades within Washington State. It is important to note that the rules in Washington State were driven by concern for salmon.

IT’S TIME FOR BRITISH COLUMBIA TO MOVE IN THE SAME DIRECTION AS WASHINGTON STATE AND PHILADELPHIA.

As our report demonstrates, much green low impact development is already being done in our region, with the hearty endorsement of both provincial and federal environmental agencies.

21st Century Low Impact Rainwater management techniques are available NOW.

What is necessary is the will to implement them.

Part of effective implementation involves not only creating appropriate laws, but also economic incentives.

For example, cities such as Portland have successfully shifted stormwater financing from property taxes to a user pay system, where property owners must pay to have their rainwater piped away. But in return, they are paid if they disconnect downspouts, and infiltrate water on their property.

Revolutionizing rainwater management is possible.

Our report outlines a comprehensive strategy for doing so. Report recommendations include:

- 1) Reform policies and legislation in our cities to ensure low impact development throughout, so as to reduce the flow of contaminated stormwater into our fisheries
- 2) Collaborate with both the private and the NGO sector to achieve this goal
- 3) Utilize regulation, public education, and economic incentives to implement the plan

In conclusion, it is time for a change in the way we manage stormwater.

Implementing green methods of managing rainwater is essential to ensuring a comprehensive strategy for the sustainability of the Fraser Sockeye.

Without reform, salmon restoration and preservation efforts will continue to be consistently undermined and will ultimately fail.

With reform, we have the hope of seeing the Fraser River sockeye salmon running like this glorious -- but anomalous -- year for generations to come.