From: hwbranch@aol.com
To: ECY RE WW SW Manual Comments
Subject: Stormwater
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Department of Ecology
State of Washington

Dear Department of Ecology,

Before any consideration of stormwater I believe there should be some clarification of the definition. Stormwater is generally thought of as water that originates from non-point surface runoff, the result of storms. Yet when we find persistent toxins, phthalates, dioxin, PCBs and metals, the source is not stormwater but groundwater or industrial discharges. These are not non-point runoff, they're point sources.

Nutrients are contained in non-point surface runoff. Nutrients have long been a part of the system. Millions of salmon used to die and rot in area streams. Every form of animal deposited their waste directly on the ground. Mixed stormwater and sewage in the days of prolific dray animal waste was pretty nasty stuff. Sometimes stormwater contained more nutrients than sewage. And yet birds and fish still flourished. Our obsession with TMDLs is overdone and diverts attention away from the loss of estuarine structure. Dredging, armoring and filling and other alterations have greatly reduced the ability of many estuaries to hold any kind of community of primary or secondary producers.

Purchasing and protecting important places will help preserve some genetic integrity and the importance of this should not be understated but it won't restore salmon to anything resembling their once great abundance or resilience. Salmon will still be at risk until we recognize that salmon live in an ecosystem and the ecosystem is damaged and continues to decline. Purchasing special places, creating rain gardens and critical areas ordinances and all the efforts at growth management aren't going to save salmon. But there is a way.

A few years ago the Center for Marine Conservation suggested that all of its members concentrate our efforts on the watershed in which we live. I live in the Schneider Creek Watershed a characteristic Puget Sound watershed.

Through most of its length Schneider Creek runs through a pipe under and alley between Cushing and Milroy. There are 300 feet of abandoned houses along Garfield and Cushing, there's a vacant lot on Madison, and there are other opportunities along its length to daylight the stream bed and restore some of the dynamic connectivity between the stream and adjoining shallow aquifer. We could even build a house straddling a stream, the effect in such a case being to mimic overhanging vegetation. The shade provided would be beneficial.

Less than ten years ago the headwaters of Schneider Creek were mixed wetlands and trees, one stand near Dickenson and Division and one near 9th and Decatur.

The first is now a park and the second a housing development. Large holes have been dug in the ground to dewater the sites.

Salmon are following their noses looking for a certain chemical fingerprint. Alterations in physical (water rock contact) and biological (plant life) parameters inevitably alter chemical parameters. The disconnected logic is: copper impacts salmon, salmon are being impacted, therefore copper is impacting salmon. It's not all about copper. Consider that a salmon attempting to find its natal island is following cues based on extremely small concentrations of things that normally vary little between streams. That they can do this is nothing short of miraculous. Changing physical or biological parameters is going to change chemical parameters.

I have some old photos of Boston. Late 19th early 20th century. Big houses. No pavement. No sidewalks. Just hardened tracks in the dirt where wagon wheels or car tires passed and pathways where people walked. The rest was a mix of plant life. It doesn't appear to be a muddy mess. The opposite in fact if you realize that much of what one sees in black and white was green. The same is true of the road leading to my parents home on Stretch Island or any of innumerable country roads in the area or any of a number of alleyways in Olympia. Compacted wheel tracks.

We seem to believe we have to engineer our way out of all our engineering messes. One fix would be to simply stop doing everything. Allow the big holes in the ground to become swamps. Allow the streets and sidewalks to crack up like they want to. The flip side of pavement is the environmental damage inherent in gravel mining and other aspects of its production. There is some damage inherent in anything we do with concrete.

After considering the first option, doing nothing, we should guarantee that anything we do anywhere should be ecologically invisible. My house is in what used to be a wetland. If I want to repair my foundation I should have one option. Pin piles. When work is already planned or necessary for maintenance, we should view this as an opportunity to fix things, not grandfather the worst designs into our future forever. If it takes a little public funding to get it right, that's what it's there for. When we have returned hydrogeologic function to something approximating a natural condition, I and my neighbors might decide to convert the entire neighborhood to a cranberry patch with houses dispersed among the cranberries, form a cooperative to market cranberries and divide the proceeds.

And then there's the estuary, the all important nexus between land and sea. Literature generally defines a stream or river by its source to its estuary or confluence with another stream. The estuary, looking from the landward side of things, is a singular body.

According to the Oxford English Dictionary, the first recorded use of the term was in 1538: "A greate sande with a shorte estuary into the land." This would indicate the area to the landward of the tide flats. Later references refer to an estuary as a tidal opening, inlet or creek. Most references are to the "tidal mouth of a stream or river".

We could make a case that Chesapeake Bay is a singular estuary because there is little separation between fresh water sources and the bay is nearly uniformly characterized by estuarine qualities. In Puget Sound, the numerous stream and river estuaries are separated by areas that are more fjord-like, deep water lying behind a shallow sill.

In fact, if we look to the central areas of Puget Sound and Chesapeake Bay, they are more opposite than similar. Saying they are the same thing, estuaries, has led to considerable confusion. What's good for Chesapeake Bay, shellfish enhancement, is good for Puget Sound, geoduck aquiculture. And of what importance is a place like the Schneider Creek estuary? It's not really an estuary, it's a very small part of a very big estuary. Not so.

Each estuary in Puget Sound is unique and each needs to be preserved or fixed. The estuary of Schneider Creek or any other creek cannot be ignored. No estuary, no matter how large or small, is too far gone or unimportant. How would we go about restoring the Schneider Creek estuary? The unfortunate reality is that when what was the estuary was re-developed ten years ago, the 470 foot long culvert that the estuary is confined into was grandfathered into the plan and that's what we have today, a 470 foot long culvert in which there is no estuarine structure or function. It would have been very easy to daylight and partially restore the estuary as part of the design. Regulations might have viewed the project as being on the seaward side of the shore because the tide emerges through the culvert to the landward side. But State law views any alterations to the shoreline to be the new shoreline and to remain so forever regardless of where the high tide reaches.

The first thing we should have done is attempt to determine what was once there. We might consult old maps, charts, letters, photos and surveyors records. We might also try to find people who were around a long time ago and interview them. In this last respect, we are fortunate. A local fellow named Ron Seacrist did grow up at the mouth of Schneider Creek in the 1930s and 40s and I have interviewed him at length. Combined with other sources, this is the picture I've gotten:

On the south side of the estuary, a finger of land or a spit protruded outward into the bay and bent around to the north. This is often what occurs in an estuary, the structure being shaped by currents and prevailing winds. Think Dungeness Spit. On the inside, northern and western sides of the spit where scouring was prevalent there was coarse gravel. In other places there was finer sand and mud. The area was rich with shellfish as evidenced by a large shell midden on the northern side of the estuary across from the spit. Chord grass grew in the inner estuary. There was lots of macro algae and some sea grasses though the latter may have drifted in from elsewhere. In deeper areas there was an assortment of flat fish and shiner perch. Diving ducks were thick as flies. Surf scoters were regularly hit by cars in town. The Smyth Landing development could have been part of a wonderful restoration. It still could be in fact. Just move part of the parking lot. The water could be right up against the building, the building in such a case mimicking a large boulder. The important question is ecological function, not setback from ecological function. A building can even provide ecological function.

Regulations limiting development are important because they are attempts to hold back the tide of destruction as long as possible. Setbacks and other rules will remain especially important as long as we refuse to, in a regulatory sense, view Puget Sound as an active ecosystem. But these efforts don't represent a solution. What's a critical area? Thirty feet, a hundred feet, there are no critical areas. It's all important and it all could be fixed and it could be done with our current human population abundance. The way to fix it is to require that everything we do is ecologically invisible, that physical, chemical and biological parameters are as near to natural as possible. Instead of thinking of special places of exceptional importance for some species we need to think of ourselves as the special species, living within a dynamic, albeit damaged, stumbling and declining ecosystem.

Thank you for considering my thoughts.

Harry Branch