Stormwater – Does it have to run away?

We were down at the river this past week, observing the rush of water. It is a powerful sight - trees standing in the middle of swirling water and large woody debris surfing by on the waves. As I stood listening to the roar, I thought about the volume of water and wondered if it has to be so high.

Healthy riparian areas, that zone between the river and the forest, can absorb a lot of water and manage it naturally. Permeable surfaces anywhere permit rainwater to soak into the soil and refill our groundwater system. On the other hand, paving our driveways and roads, and directing storm water into culverts creates an impermeable surface which rushes the potential groundwater out to the ocean where it is removed from the freshwater system.

That groundwater that moves so slowly yet fills our aquifers, replenishes our rivers and streams, and supports our estuaries needs to be recharged. It is generally understood that if impermeable area exceeds 8-10%, there is not enough water flowing along underground to provide a baseflow in streams. At this rate, greater than 80% of fish populations will be lost. These fish are an indicator of overall health of the rivers and streams. A loss this significant would also mean that the rest of the natural system is in decline.

The Regional District found that those areas with the highest percentage of impervious surfaces are, not surprisingly, within Nanaimo, Parksville and Qualicum Beach. Overall however, approximately 9.5% of the RDN is impervious.

Though it might appear that we can do nothing about this in certain areas, given the level of development, there are options and some work has begun. The Town of Qualicum Beach partnered with the Qualicum Beach Streamkeepers, MVIHES, and the students at KSS to create a model raingarden including pervious paving stones. You can find it at the corner of the high school parking lot and Village Way. Forty people attended an MVIHES workshop last year to learn how to build their own raingardens. The City of Parksville is also working with the waterway at Mark's Nature Park to try to slow the stormwater down and increase infiltration into the ground.

A new idea here, but other municipalities are embracing the concepts. The City of Toronto recently passed a law making it mandatory to disconnect the downspout on eavestroughs, so that rainwater will have to soak into the ground. The City of Portland offers residents and businesses a significant tax reduction for having a small impervious footprint (less than 1,000 square feet), creating or maintaining tree coverage, disconnecting downspouts, installing rain gardens and other low impact development ideas. Portland has also retrofitted a number of streets with landscaped curb extensions,

swales, planter strips, pervious pavement, and street trees to intercept and infiltrate stormwater.

Here in Oceanside we suspect we have issues with our groundwater, we know it needs to be recharged or will dry up. We have a growth rate that is fairly high. Part of the solution seems to be to follow in the footsteps of others, like the City of Portland. By avoiding impervious pavement in new construction, and retrofitting existing locations we can reduce the amount of stormwater rushing in our rivers, increase the amount of groundwater in our system, and benefit both nature and people.

Water Limited explores what we know and don't know about our water supply. It is funded by the Georgia Basin Living Rivers Program and Mid Vancouver Island Habitat Enhancement Society (MVIHES). Articles are written by Michele Deakin. MVIHES coordinates the Englishman River Watershed Recovery Plan, and conducts education, restoration and monitoring projects throughout the mid island area. MVIHES also work to support healthy watersheds and shorelines, and continuity of our biodiversity as a way to contribute to protection and conservation of salmon habitat.

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