

Special Report: Plenty of demand puts stress on critical Island waterway

Cowichan River is the lifeblood of this part of Vancouver Island, but it has been diminished by six dry summers in 12 years

BY STEPHEN HUME, VANCOUVER SUN SEPTEMBER 21, 2015



Vancouver Sun columnist Stephen Hume on the banks of the Cowichan River,

Photograph by: Annie Mayse

Rodger Hunter leans on the rail of Greenslade Trestle and points to the glossy green river spilling across a broad outflow from Cowichan Lake before funnelling into narrows just upstream from the old railway crossing repurposed as a pedestrian bridge.

Beneath the trestle, a gaggle of laughing teenagers launch a flotilla of inflated inner tubes, kicking out into the current for a drift downstream. They are careful to ride high on their tubes. Fast water over shallows means a rock-bruised backside.

And the Cowichan River is troublingly shallow this summer. It's been closed to angling for months. Salmon that should be moving to spawning grounds are still holding at sea or hunkered down in a few deep, spring-fed pools.

Worries fester about water supply for the pulp mill and what falling levels might mean for municipal waste water discharges into the lower river.

The prospect of summers like this becoming the norm is of deep concern to Hunter, a consultant biologist who once worked for the B.C. Environment Ministry.

This is now the sixth dry summer to afflict the river since 2003, he notes, leading to “grave concerns about future salmon access to spawning beds at the Greenslade trestle, closure of Cowichan Tribes’ food fishery, worries that the paper mill might have to close for lack of water, and public health issues surrounding water quality and its effect on domestic and recreational users.”

Dry summers in 2006, 2009, 2010, 2012 and now 2015 suggest not only the emergence of a new “normal” climate, he says, they also point to either a lack of capacity or an unwillingness on the part of senior government to fulfil their stewardship mandate to ensure proper drought response planning, protect riparian zones and water sources and safeguard basic environmental flows to protect ecological systems.

Hence the Cowichan Valley Watershed Board, which brought together politicians from local governments, First Nations and volunteers to collaborate in developing a plan with clear targets. So far, it’s working in most respects.

“The bottom here,” he says, pointing to the narrows, “is actually at just about the same elevation as the weir across the river. So nature has provided the perfect structure for regulating the flow into the whole river system.”

The weir, installed almost 60 years ago at the river’s exit from the lake, holds back just enough water to assure adequate summer flows will meet both the requirements of the mill at Crofton and the migrating salmon and trout so important to both recreational anglers and the Cowichan Tribes on the lower river.

But dwindling winter snowpacks and hotter, drier summers are changing all expectations.

Hunter painstakingly explains how the hydraulics of this bottleneck in the channel, not the weir, is what determines the level of Cowichan Lake. In rainy winter months, for example, the natural level of the lake submerges the weir. Right now, it’s dry as a causeway.

It’s a point of controversy because the Cowichan Valley Watershed Board he co-ordinates advocates raising the weir 30 centimetres to accommodate dwindling summer flows crucial to migrating trout and salmon.

Six private owners of recreational waterfront property on the lake object. Raising the weir would raise the lake level and affect their beach front. But Hunter points out the naturally occurring average high water mark for Cowichan Lake is much higher than the proposed elevation of the weir.

The province’s Environmental Appeal Board agreed with the argument that any risk to properties is within the natural range of variability.

All that remains now is to find somebody prepared to invest \$10 million and raise the weir to secure future water flows in the beleaguered Cowichan for Catalyst Paper — which provides 500 well-paying jobs in the valley — downstream municipalities, the Cowichan Tribes, and the fish, which should probably come first instead of last on the premise that what’s good for fish will be good for humans.

It seems like a no-brainer that government should step up. The Cowichan is one of the province’s premier angling streams. Fresh water angling on Vancouver Island generates more than \$100 million a year in spending, wages and GDP. So far, though, nobody’s taking the lead.

If Vancouver Island and its adjacent 225 Gulf Islands provide a microcosm of British Columbia when it comes to climate and the impact of what appears to be a warmer, dryer trend, perhaps Cowichan Valley offers a microcosm of Vancouver Island.

The Island's outer coast is essentially largely uninhabited rainforest and shore bogs — the fog zone — where weather systems sweep in from the vast Pacific Ocean to dump moisture against the rugged, western side of a 2,200 metre high mountain range extending 460 kilometres down the island.

But the eastern side of the 32,000 square kilometre island — it's the largest Pacific island in the western hemisphere — falls under a rain shadow similar to that cast by the mainland's coastal mountain ranges upon the arid Interior grasslands and antelope brush deserts. To the south, this effect is compounded by an overlapping rain shadow cast by the towering, snow-clad mountain range that soars 2,400 metres above the Olympic Peninsula in the United States.

The Cowichan Valley has a precipitation range that varies from 5,000 millimetres a year in the west to 750 millimetres or less in the east.

Just as B.C. is a province of climatic extremes, so is Vancouver Island and the Gulf Islands. The wettest place on the continent is just west of Port Alberni at Henderson Lake. Annual rainfall there has been measured at almost 10 metres — almost 420 millimetres fell in one hour in 1926 — yet just 140 kilometres east are the semi-arid Southern Gulf Islands where cactus grows and as little as 22 millimetres of rain is normal for midsummer.

It's on the eastern side of the island, in the mild Mediterranean-type climate with largely snow-free winters, extended frost-free growing seasons and balmy summers that most of the region's roughly 726,000 people live, about 375,000 in the Capital Regional District which sprawls across close to 2,500 square kilometres of the island's southeast corner. Other population clusters occur at Nanaimo and in the Alberni, Cowichan and Comox Valleys.

Between Cowichan and Comox alone there are 1,700 farms, most of them small holdings. They produce more than 200 different products from wool for the famed sweaters traditionally knitted by Cowichan women to highly regarded cheeses. There are specialty meats, quality wines, organic vegetables and pasta that sells out as soon as it hits the shelves in urban markets.

And they all contribute their own water footprint to amplify that left by industrial and domestic users. Hunter likes to point out that humans have generated more change for the Cowichan River system in the last 50 years than in the previous 5,000, whether by clearcutting forests for fibre or for hayfields.

If industry and domestic users siphon off millions of litres from the river, another 530 licences have been issued to divert water from lakes and stream and more than 1,300 wells now tap the valley's aquifers.

This shouldn't surprise.

Vancouver Island and the Gulf Islands have been under intense settlement pressure since James Douglas stepped ashore at what's now the provincial capital of Victoria in 1843, searching for a congenial place to site a new West Coast headquarters for the Hudson's Bay Company. He declared

the grassy meadows of wildflowers and rocky outcrops clad in arbutus and Garry oaks to be “a perfect Eden.”

Who wouldn't want to live in Eden? So there's been a steady migration to the Island from elsewhere with the development pressures growth brings. Vancouver Island's population is expected to expand to nearly a million over the next 25 years which means — if current usage rates don't decline — finding an additional 100,000 litres of water a day from its 31 significant watersheds.

Loys Maingon, a biologist in the Comox Valley, says growing demand for water for domestic, industrial and agricultural users and the challenges posed by climate change means it's essential to start planning to manage the hydrological environment and water retention much more seriously.

That will require reconfiguring conventional thinking and objectively examining whether there's more economic value in leaving headwaters and riparian zones forested to enhance water quality and supply, for example, than there is in clearcutting them for timber or farming.

By logging old growth on steep slopes and around rivers and lakes, we've degraded the natural potential for water retention that will be important in a drier future, he says.

“We have to start managing reforestation much more responsibly. We have to start thinking about water retention and storage. We should end the artificial regulatory distinction between public and private forest lands and watersheds. We need to reforest the headwaters and deforestation of watersheds must be ended.”

In the Cowichan Valley, all these competing interests for water are present. There's the pulp mill with its licensed allotment, municipal and tribal requirements, viable fish habitat, a lucrative recreational fishery and the broader use of agriculture which includes everything from livestock and forage crops to vineyards, cheesemakers and craft breweries.

A major study of the region's agricultural potential concluded that secure access to water for field crop irrigation will be critical to stabilizing yields, increasing income per hectare and reducing risk, particularly when growing high-value crops.

Vancouver Island and the Gulf Islands farm production is dwarfed by that of the Fraser Valley, yet it's a remarkable success story. It produces about six per cent of provincial farm revenue from less than two per cent of the farmland in production.

Much of that production so far, just like the forest and other industries, has relied on cheap, abundant water that's been treated as a limitless resource, a circumstance that seems certain to change dramatically along with the climate.



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