

# Living

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## How it should Be

**T**here is a ground swell occurring, a renewed interest in the Tsolum River Watershed. It is coming not so much from politicians, or from organized environmental groups, but from the people themselves who live and work in the watershed. And this is how it should be. For unless a movement springs from a grassroots level, it can very easily get bogged down in bureaucratic wrangling.

By **FATHER CHARLES  
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Special to the C-I

In the 1950s, the Tsolum boasted great runs of salmonids: runs of pink salmon in excess of 150,000; coho runs in the 30 thousand; chums and cutthroat in the lower regions of the river; and steelhead trout in the 17 to 23 pound range. The river was rich in small invertebrate life, mostly free from silt, and ran through a splendid forest of fir, hemlock and cedar.

The decline of this fabulous river — as with many of our Island rivers — began in the mid-'50s with the clear-cut logging that occurred along almost its entire length and breadth. The logging eventually brought flooding to the river, movement of gravel, silting and smothering of eggs and invertebrate life, and finally with extremely low flows in the late summer months, the consequent depletion of oxygen and increased temperatures. Coupled with the disaster of clear cut logging, was the lowering of the water levels due to extraction by irrigation and household use. As well, toxic farm fertilizers have left their impact on the river. When the airbase was constructed at Comox, vast quantities of spawning gravel were removed directly from the streambed to construct the concrete runways. The river fast became a resource for every purpose other than that which nature originally intended.

And then to cap it all, Mt. Washington Copper moved into the upper watershed, just to the east of Mt. Washington Ski area and along side of McKay Lake, and in 1964 commenced its open-pit mining of copper and precious metals. Excitingly short-lived, the company went into receivership in 1966, leaving in its trail the unreclaimed pits where pyrite ores lay exposed to water and oxygen. This ore, with a high content of sulphur, quickly formed sulphuric acid by coming in contact with the oxygen and water. The acid released the copper (with the assistance of certain bacteria which thrive on this acid habitat). From the exposed ore (overburden) copper leachate formed and moved into the watershed via Pyrrhotite Creek, McKay and Murex Creeks until finally it reached the Tsolum River, and eventually the Puntledge where together they form the Courtenay River, and so on into the great Courtenay Estuary.



**FATHER**  
Charles  
Brandt in-  
spects the  
Tsolum  
River during  
1988 visit to  
minesite.

## Hope for the Tsolum River springs from grassroot level

Copper is the dreaded enemy of young salmonids (coho fry and smolts, along with pink and chum, steelhead and cutthroat fry), and it is a scientific fact that the amount of copper that finds its way yearly into the Tsolum watershed kills young salmon and deters adult salmon escaping back to the river to spawn.

For 10 years the government(s) has attempted a cure of this acid mine drainage (AMD), costing the taxpayers of the province one and half million dollars to date. The cure has been illusive. Today, there is as much copper in the river as there was 10 years ago. When the government began its remedial action in 1988, it followed the number one option recommended by SRK (Steffen Robertson & Kirsten, of Vancouver) and gathered all of the overburden into one great pile (referred to as the East pan of the North Dump), mixed it with lime and then covered it with one meter of till (a glacial deposit consisting of gravel and clay). It was a beautiful piece of work and formed a giant raincoat over the ore pile. And although the experiment attracted

worldwide attention, it has not worked. Overlooked at the time was the effect ground water had in producing leachate as it moved through the fractured pit floor. The hope was that the acid mine drainage could be cured at its source.

SRK had several other options, which were not looked at seriously at the time. One of these options was "Treatment." That is how most mine operations deal with their leachate. For example, Westmin. They simply treat the leachate with lime which precipitates the copper. They deposit the sludge formed from this operation down an abandoned mineshaft. So there is no problem. But the remoteness of Mt. Washington and the winter conditions make the construction and maintenance of a treatment plant impractical and extremely expensive. And besides, there are no vacant mineshafts.

But it appears now that a treatment plant will be the ultimate solution to the Mt. Washington problem. Engineers talk of locating the treatment plant lower

down the mountain, say in the vicinity of the dryland sort near the Duncan Main, not far from Wolfe Lake. The leachate would have to be piped down the mountain to this site. We are looking at a cost of approximately \$6 million. That may seem like a lot, but SRK estimated that the community is losing approximately \$2 million a year from the Tsolum River resource (fish plus jobs plus recreational value).

So with the Tsolum River. If only we had listened to the earth. We thought we knew best what was good for the river and for ourselves. But it is not too late. The river will never again be what it was intended to be. But with our new insights, and by working together as a community, we can allow the river to once again flow clean and sweet to the estuary and become the rightful home to those creatures

*Father Brandt is chair of the Tsolum River Enhancement Committee and Comox Valley Chapter of the Steelhead Society.*