

Shuswap water powered the Okanagan

A *Shuswap Passion* column for the Shuswap Market News

By Jim Cooperman

One thing that differentiates the U.S. from Canada is that most Canadian rivers run free while most of the rivers in the U.S. have dams for hydro power or irrigation. Here in the Shuswap, only one of our eight rivers, the Shuswap River, is dammed. While the Wilsey Dam was originally constructed to produce power, its major benefit today other than its now relatively small power output is to control the river to reduce flooding and provide greater flows in the fall and winter.

The Shuswap Falls location for the dam is also a significant First Nation historical site, where legend has it that a treaty was made here between the Okanagan and the Secwepemc people that allowed each tribe to fish on opposite shorelines. There is also a legend for the falls that was narrated by elders of the Okanagan tribe and translated from the Okanagan dialect by Mrs. William Brent for the 1948 Okanagan Historical Society Report.

According to the legend, Coyote made a big kettle out of stone with legs under it and hung it over the water fall. Over this he constructed a fish trap, also out of stone where he could catch many salmon and boil them in the kettle. Then Coyote made a seat for himself out of stone beside the falls where he could watch the fish being caught and being cooked, and also where he could talk with his old cronies and at the same time see the sports and watch the feasting.

Plans for hydroelectric power at Shuswap Falls were first developed by a Vancouver company prior to 1912, but the first construction attempt failed after the coffer dams blew out during high water. The November, 1927 Vernon News front page story was the announcement by the West Canadian Hydro Electric Corporation Ltd. to commence construction immediately, using as many local workers as possible.

Construction details included an 800 foot long pipe, over eight feet in diameter, made from wooden staves to be laid on the rocky ledges along the side of the cliff. Plans also called for a log chute and a fish ladder, as at that time the salmon managed to swim up the series of low falls and spawn all the way to Sugar Lake.

As to be expected, the project took longer than promised, but when the Wilsey Dam opened in 1929, it provided ample electricity, enough to power most of the growing North Okanagan region until 1951. The dam was named after R.E. Wilsey, a Chicago industrialist and president of the company that financed and oversaw its construction.

Over the years, the dam has seen many improvements. At one time, there was a crew that lived there year round to operate the equipment while now most everything is done remotely from BC Hydro offices in Vernon, Revelstoke and the Fraser Valley. In 1942, the Peers dam, named after Ross Peers the company president at that time, was built at Sugar Lake, turning it into a reservoir and thus doubling power generation. This added

storage also provided more water for the river in the fall for recreation and salmon spawning and incubation needs. Currently the Wilsey Dam produces 6 megawatts, enough to power 4,000 homes.

Over the years, operation of the dam has been fraught with problems. As with many dams, the major difficulty is the build up of sediment, which has increased due in part to logging and roadbuilding. To get rid of the sediment, the reservoir was often flushed using the low level outlet, but often this resulted in flooding of farms and the sediment damaged fish habitat. Thanks to an order by the Ministry of Environment, these outlets were bolted shut in 1991 and since then the sediment is dredged out every few years.

Other problems with the dams include the loss of coarse wood debris and coarse gravels, both critically important for fish; loss of riparian habitat at Sugar Lake; and regulated flows that have diminished habitat productivity. Also, uncontrolled flow disruptions that reduced the downstream flow to a trickle, occurred during power outages. However, this problem was rectified a few years ago with the installation of a new by-pass valve mechanism.

By far the greatest impact of the dam has been the complete blockage of the upper Shuswap River to salmon for over 70 years as the promised fish ladder was never built. In 2005, a study done by the Whitevalley Community Resource Centre Society in Lumby in conjunction with DFO, local First Nations and the BC Hydro Bridge Coastal Fish and Habitat Restoration Program developed a design for a 440 metre long, 30 metre high vertical slot fish ladder. Hopefully, the Restoration Program will soon determine that the proposed \$1.8-million project is worthwhile and one day soon the salmon will be allowed to return to spawn in the upper Shuswap River.

The Wilsey Dam at Shuswap Falls is also a recreation area, with picnic tables, interpretive signs and hiking trails. There is also a viewing platform that overhangs the spillway offering a 'bird's-eye-view' of the falls, which provides a loud and dramatic roar during high water.