

Water management paints Okanagan green from brown



By Kelowna Capital News

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From the 1880s on, water in the Okanagan Valley has been a limited resource under increasing pressure, but early on, the advent of irrigation turned this valley from brown to green.

"To the Edwardian mind green was more civilized, so there was a huge mental impact to the greening of the valley," explained Wayne Wilson, geographer and historian, speaking to the November meeting of the Okanagan Water Stewardship Council on the valley's changing landscape from 1880 to 1920.

He provided the technical advisory committee to the Okanagan Basin Water Board with background on how irrigation and farming evolved in this valley historically and how land-use and water management decisions changed the landscape of the Okanagan.

That provides some context for the council's current discussions about planning water management for the future in the valley, explained Nelson Jatel, water stewardship director for the OBWB.

Wilson explained that although the British common law principle of riparian rights to water—where only those adjacent to water had access to it—were never implemented here.

In the 1890s, the Okanagan became the agricultural driver in B.C. to have a Water Act that viewed water as a public good rather than a private resource.

From cattle ranching and grain fields, the Okanagan's landscape moved to intensive agriculture between 1904 and 1914 as land development companies got going and 30,000 to 40,000 acres shifted from growing hay to becoming orchard lands.

At that time, there was little control exercised over the use of water, likely because there wasn't much money being made on it, Wilson commented.

However, that began to change, and the Water Rights Branch was formed by the provincial government as the 'gatekeeper' of water.

In the early days, fields were flood-irrigated with a system of ditches along each planted crop row, taking water from a flume that carried it from higher elevations.

Dubbed 'Starvation Flats' and 'Dry Valley', what is now the Glenmore Valley sounded unattractive to land developers and land purchasers, but once reliable water arrived on a year-round basis in the bottom of the valley, it became much more attractive.

In 1910 and 1912, monumental flume systems were built throughout the Okanagan, including in the Glenmore Valley. Miles of canals were built along the hillsides of the Okanagan and flume inspectors were hired to regularly walk the flumes and make sure everything was working as it should.

"We don't see water movement on the landscape any more because it's all pressurized and buried now, but at one time there were irrigation canals on both sides of the Glenmore Valley, right to where the Kelowna Golf and Country Club is today," said Wilson.

Those canals were still flowing above ground in 1968, with any unused water running into Brandt Creek.

Cattle would get into them and kids would paddle in them, and the water would be taken off in furrows all along the valley to water farmers' crops. Farmers would have to check the system regularly to ensure no gophers had interrupted the flow of water

and that every plant was still getting its fair share of the precious liquid.

Fruit trees were planted far apart to allow teams of horses and wagons to turn around in the rows, so during the first few years of the young trees' growth, that space was inter-planted with strawberries and onions until the trees began to produce fruit.

That gave farmers an income in the meantime, while the young trees were getting established.

It was an entirely different sight from the walls of densely-planted fruit trees of today facilitated by modern tractors that are small enough to move efficiently between narrow rows.

In 1911, every water licence was reviewed by the provincial government and water rights became attached to the land, as there was a shift to public irrigation. Water law put access to water in legislation, instead of geography; public instead of private.

Water became a public good—for fish and trees as well as for people.

With more people, there was more pressure on water and it became apparent that what was done at one end of a watershed affected the user at the other end, so from individual users, management moved to corporate users.

To allocate it equitably, it was necessary to know how much there was and after World War I there was a demand for more data.

Because Kelowna only gets about 14 inches of water in a year, and most of that comes in the winter, it became clear that augmentation was needed in the other seasons of the year.

In 1910, the Postill Lake Dam was built. "It was a huge construction project and real engineers were needed to design the wooden log rock crib dam," said Wilson.

Water had to be stored in upland dams to provide a flow of water when it was needed in the valley below, rather than at the whim of Mother Nature.

A 1915-1916 study resulted in the decision that public irrigation was needed.

By 1920 the current irrigation models in the Okanagan were cast, with public irrigation companies formed to supply water to different areas of the valley.

It was almost all gravity-fed irrigation, from such reservoirs as Postill Lake, Beaver Lake, McCulloch Lake, Belgo Dam, Bear Lake, Peachland Lake and Rose Valley Reservoir.

They were built and operated by irrigation districts formed by the farmers who needed the water and those same districts were responsible for maintenance of the flow as well as construction of the infrastructure.

Many of those districts still exist today, although the infrastructure has become much more sophisticated, and the users are only occasionally farmers, with domestic users making up the bulk of a district's customers.

"There'll always be a place for history in how you use the water," Wilson advised council members.

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