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RAMBLINGS

ISLANDER

# The source of (Victoria's) power

By John Newcomb

**M**ANY VICTORIANS DRIVE THE West Coast Road, crossing over Jordan River on their way to go surfing, fishing, or hiking, but they don't know that just off the highway is a well-hidden energy source for our city — B.C. Hydro's Jordan River power plant.

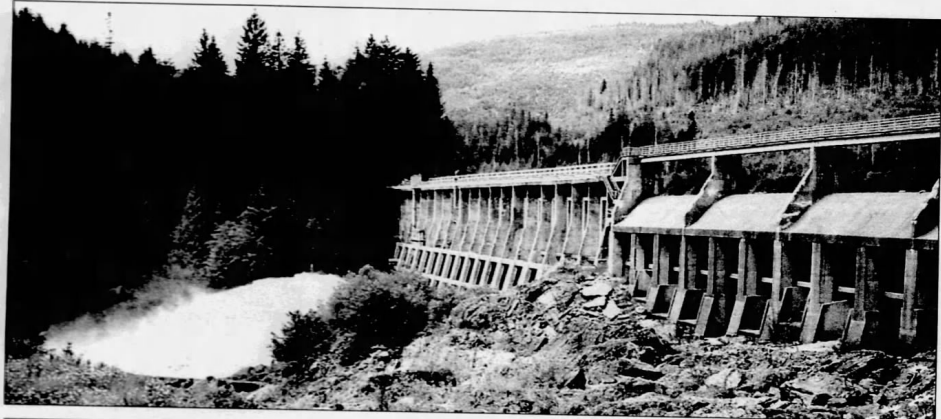
Vancouver Island Power Company completed the original Jordan River power development in 1911, after an amazingly short construction period, considering the isolation of Jordan River at that time — all workers and material came in by boat and barge, and then had to be taken by horse-cart up the steep-sloped trail to the construction sites. Prior to its construction, power had come to Victoria from a small hydro plant built in 1898 at Goldstream.

Jordan River's Diversion Dam sent water by a nine-kilometre-long wooden flume to a small equalizing reservoir, and then through steel pipes down 340 metres to the original Jordan River power house at the river mouth.

Diversion Dam, at 38 metres from top to bottom, was the highest dam in Canada at the time and the electrical power generated by the plant was so vital to Victoria that, on its coming into service, a *Colonist* editorial announced that, "the amount of new power is exceedingly gratifying and we believe that it will have an important bearing on the industrial development of Victoria ... there should be a considerable increase in the number of enterprises in the city."

More generators were added and improvements made to the Jordan River plant between 1912 and 1930, bringing its capacity to 26,000 kilowatts — a significant addition to Victoria's home-grown energy production that at that time was also served with a steam-generation plant at Brentwood and supplies of coal, coal gas and wood.

On the occasion of Premier Patullo's visit to the Jordan River generator in 1934, a *Colonist* reporter noted that the premier and several cabinet members, "were high in praise, expressing their amazement at the wonders performed by man in that wild country." Patullo went on to toast A. T. Goward, vice-president of B.C. Electric Railway Company, as one of the men working there in whom "is entrusted the duty of always providing energy for the operation of industry and comforts of home."



*Jordan River blasts a plume of water through B.C. Hydro's dam above, while, at left, a photo from the 1920s shows the spillway and powerhouse built by Vancouver Island Power Company.*

However, by the late '60s, Victoria's growth began to show how inadequate power supplies were becoming and B.C. Hydro announced an upgrade to the Jordan River plant in 1968, after "brown-outs" in Victoria homes had only been averted the previous winter by carefully managing power going to up-Island pulp mills and saw mills.

Between 1969 to 1971, much of the system was renovated, with the flume being replaced by a tunnel, connected to a pipe leading down to a new power house. The old generator was replaced by a 170 megawatt Japanese-built turbine and a new reservoir and dam were added to the system just below Diversion Dam.

While the river was harnessed to serve up electric power for generations of Victorians, other resource industries, including

logging and mining, were also active near Jordan River. While the logging continues today, copper mining ended about 20 years ago. A landslip of toxic material into Jordan River finished off any fish still spawning in the lower river, but a small run of salmon continued to spawn in the 250-metre-long "tailrace" channel between the old power plant and the river.

Incredibly, these fish survived because the generator's water supply was brought down in the flume and pipes from the reservoir above the mine site, and thus had bypassed toxic leachates from the area near the mine. However, when the powerplant was shifted to the east bank 30 years ago, this unique salmon run was lost.

Today, the Jordan River generation system is a key part of B.C.'s electrical power grid, providing 35 per cent of Vancouver

Island's generating capacity, and performing valuable service with "peaking" power and load balancing of the transmission system.

In 1996, the provincial government initiated a Water Use Planning (WUP) program, demanding that B.C.'s water licence holders show how they can manage conflicting environmental, social and economic values of water resource demands.

The Jordan River "WUP" is now well under way, and restoration of fish habitat has been a top issue. After so many years of serving the power needs of Victoria, the Jordan River system may again provide salmon for local anglers.

However, Jordan River energy generation also has an exciting opportunity for linking new windpower opportunities high-up on Jordan Ridge with small, "micro-hydro" dams generating "green power" into the Jordan River transmission system. Dated predictions of foreseeing nuclear plants near Victoria by 1975 have so far been unfulfilled, but finding new sources of "clean" power may be realized.

What began early in the 20 century with a project that promised new energy for Victoria's electrical age enters our new century with more sustainable energy promises.

*John Newcomb is a Uvic Geography lab instructor who is participating on B.C. Hydro's Water Use Planning meetings for Jordan River.*