

Lake Roosevelt - A Wet 'n' Wild History

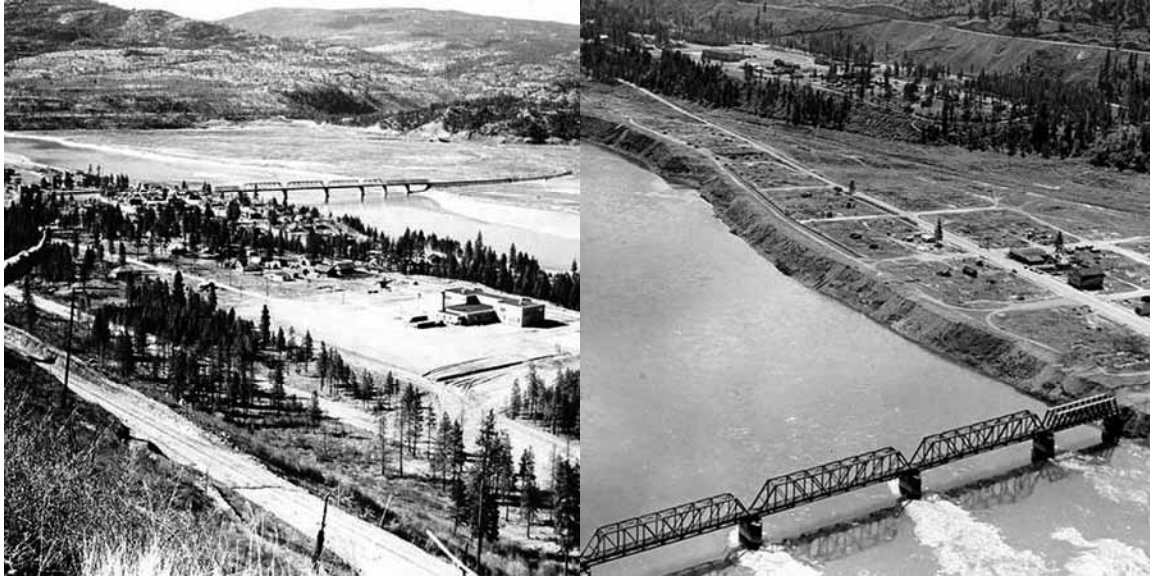
Compiled by David Bull

Many living in this region are just used to seeing a large expanse of water and the fluctuations in water levels each year. As an Australian now living in the U.S. and not knowing that much of the country's history, let alone the region's, curiosity got the better of me. The Internet allows me the opportunity to discover the rich history of this region, which in turn has revealed much about the development and strengths of the United States. Last month, I included an article on The Kettle Falls, a natural wonder now lost to the waters of Lake Roosevelt. But what about the Grand Coulee dam and the resulting reservoir created by the dam known to us as Lake Roosevelt.

The idea for damming the Columbia River was first proposed by Ephrata attorney William M. Clapp in the spring of 1917. The idea gained rapid support from the citizens of Ephrata and the surrounding area. Eventually the state government took an interest in the project as well. Preliminary feasibility studies were carried out in the 1920s. Initially the primary purpose of the dam was to provide irrigation water. Although the dam idea had a great deal of support there were also other irrigation proposals in the works. In particular, a plan to build a long canal to carry water down from the Pend Oreille River in Northern Idaho was under serious consideration.



In the 1930's, America could be seen from two very different perspectives. One perspective is that of a relatively youthful nation coming of age in the world. Over the previous 130 years America had grown from an agrarian society to one which used its wealth of natural resources and labor to embrace the industrial revolution. Westward expansion had brought America to the Pacific Ocean, the Civil War assured the union of the states, and World War I further established America as an international power. A second perspective is one of poverty and uncertainty. With the stock market crash of 1929, droughts never experienced before and high unemployment, the 1930s were a time of crisis. In the Columbia Basin area 40 percent of those that had come to till the soil had fled.



A variety of studies were conducted in the 1920s; some supported the canal plan and others the dam. Lobbying was fierce, as supporters of the two proposals sought to win members of Congress to their sides. There were public events — pro-canal or pro-dam rallies — and quieter behind-the-scenes lobbying. Washington Water Power tried to kill the pumping project by proposing to build its own dam at Kettle Falls. In 1922 the Federal Power Commission granted a preliminary permit. If the dam had been built, it would have limited the size of the dam at Grand Coulee 110 miles downriver, effectively killing the pumping proposal. The dam at Coulee had to be high enough to make pumping feasible. In response to Water Power's ploy, Woods editorialized that the Spokane utility was a "soulless corporation."

The Bureau of Reclamation, envisioning success with Hoover Dam, was partial to big irrigation projects. O'Sullivan personally lobbied Arthur Powell Davis, the Commissioner of Reclamation, to support the dam.

A final report favoring the construction of the dam was produced by the (Army) Corp. of Engineers in late 1931 and presented to the 73rd Congress of the United States as House Document #103. This was supplemented in January of 1932 by a report from the Bureau of Reclamation outlining the details of a dam-based irrigation project. In 1933, the State of Washington committed \$377,000 to the project and this was soon followed by a promise from President Franklin D. Roosevelt to provide 63 million dollars to begin work on the dam as a project, under the Public Works Administration.

An interesting little side line was the fact that not wanting to back up water into Canada, it was decided that the Canadian border would be the ultimate limiting factor as to how high the dam could be built. However, at the time there was a surplus of electric power in the Northwest and no major increase predicted for the foreseeable future. For this reason the original proposal called for a LOW dam. This dam would be 200 feet lower than the maximum height allowed by the Canadian border restriction. It would provide irrigation and flood control with the possibility of a reduced amount of power generation. However, it was decided to design the structure in such a way that it could be raised to

its full height providing a corresponding increase in generation capacity if the need ever presented itself.

Initial excavation of the dam site began in December of 1933 with work toward improving the local infrastructure proceeding in parallel. On August 30, 1935 congress authorized the construction of the full high dam and no low dam version was ever completed. By 1941 the main dam was essentially finished with construction of the powerhouses and pumping plant underway. After seven years of construction the dam began operation on March 22, 1941. Its completion at the beginning of World War II quieted its many critics, who had derided it as a colossal dam in the near-wilderness of a remote state, and whose only customers, according to one detractor in Congress, would be “sage brush and jackrabbits.”

Ironically, because of the Second World War and the importance of the Northwest's aluminum industry to that effort, the production of electricity became the overriding priority for the dam. Irrigation was deferred until later. During the war six Grand Coulee generators were brought on line as well as two generators borrowed from the yet to be completed Shasta dam. After the war an emphasis was put back on irrigation. Construction was resumed on the pumping plant in 1946. By 1951 the plant and its six 65,000 horsepower pumps were ready for operation.

The result was a large hydroelectric dam located on the Columbia River in Central Washington. Made from twelve million cubic yards of concrete, Grand Coulee Dam became the largest concrete structure in the United States and the third largest hydroelectric facility in the world. Sharing the river with ten other U.S. dams, Grand Coulee is the first dam encountered on the Columbia after the river enters the U.S from Canada.

Lake Roosevelt is the reservoir created by the dam. The reservoir can reach upriver 150 miles, back to the border, depending on full it is at any given time. It averages 4,000 feet in width and 375 feet in depth. When full (elevation 1,290 feet above sea level at the dam), Lake Roosevelt impounds 9 million acre-feet (11.1 billion cubic meters) of water. That amount would cover a land mass the size of the state of Washington (71,303 square miles, or 184,674 square kilometers) with 2.3 inches of water. The lake level can fluctuate by 82 vertical feet (25 meters). In most years, the lake is drawn down in the fall and winter in anticipation of the spring and early-summer runoff, and allowed to refill to full, or within about 10 feet of full, by the end of June.

The economic benefits of the Grand Coulee and Lake Roosevelt are breathtaking. Grand Coulee Dam fills three primary rolls. First, with its 24 generators providing up to 6.5 million kilowatts of power, it is a major provider of electrical power to the Northwest. Over 600,000 acres of irrigated land yielding crops valued at \$400 million annually; 6,800 megawatts of power capacity meets the needs of over four million residential customers annually; flood control saves billions of dollars in damage to downstream communities like Portland; and a National Recreation Area serving up to 1.5 million visitors a year.