History of the Dam

In 1942 surveying for what became Chief Joseph Dam began. In 1943 a dam at Foster Creek was recommended by the Bureau of Reclamation, and the geographical final studies report for the dam was completed in 1945. Studies indicated that although the left bank was solid, the right shore was composed of glacially deposited gravel. A concrete cutoff wall was initially proposed for the right bank, but this plan was replaced with an "impervious blanket structure" and interceptor relief tunnel saving $6.5 million.

The dam was authorized as Foster Creek Dam and Powerhouse for power generation and irrigation by the River and Harbor Act of 1946. The River and Harbor Act of 1948 renamed the project Chief Joseph Dam in honor of the Nez Perce chief who spent his last years in exile on the Colville Indian Reservation.

In 1948 the Columbia River endured its second greatest flood of record, and legislators were quick to fund the McNary and Chief Joseph dams on the Columbia. Construction began in 1949, with the main dam and intake structure completed in 1955. Turbine units 1-16 were placed in service between 1955 and 1958.

Stories abound about the construction of this huge project. It is said that during construction the contractor had a gold riffle in the aggregate area where he collected gold and sold it to the

government. Engineers at the initial pool raise tell of a floating hay bale alive with snakes that washed downstream from newly inundated upstream property and smacked against the dam.

The reservoir created by the dam was designated Rufus Woods Lake in 1952, in honor of the editor/owner of the Wenatchee World newspaper, who used his paper as a means of publicity for the cause of developing the Columbia River basin.

Along with the dam, the Seattle District built family housing, a highway across the Columbia and from the Okanogan River to the dam, helped build schools at Bridgeport, and improved water and sewer service.

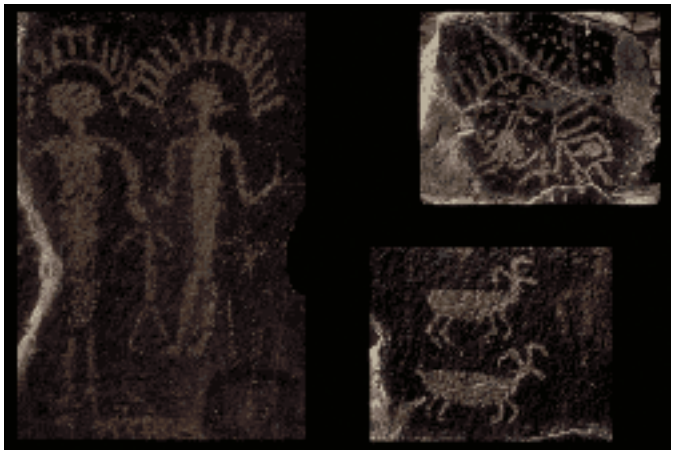
Initially an ambitious plan for a visitor center on the right abutment at the dam even included a tramway to transport visitors to and from the entrance area and the center. In 1988 a new visitor facility was completed, featuring exhibits on hydropower production, wildlife and more.

During construction, when the Corps removed spillway cofferdams, the river ran through low concrete sections of the spillway across the stilling basin. Gravel and rock began eroding the concrete spillway, stilling basin floor and energy dissipaters. Erosion was progressive and the main structure was at risk of being undermined. Traditional repair would have meant an expensive two-stage dewatering of the stilling basin, reducing operation of Chief Joseph and Grand Coulee dams. However, in 1959, district engineers developed a unique underwater system to repair flat surfaces, and two engineers became Navy hard hat divers to facilitate and inspect underwater activities. Engineers came from around the world to learn the technique. The work was completed at a fraction of the cost of traditional methods.

The project was dedicated in 1956. Eleven additional turbines were installed between 1973 and 1979, and the dam and lake were raised 10 feet, making Chief Joseph Dam the second largest

hydropower producer in the U.S.

In February 1981, the waters behind Chief Joseph Dam were raised to 956 mean sea level. Combined with powerhouse and dam modifications completed in 1979, the pool raise was the culmination of a $300 million project allowing total power generation capability of the dam to increase to 2,481,750 kilowatts. In addition to Corps visitor facilities and a visitor center, Seattle District developed, in cooperation with Washington state, Bridgeport State Park, a 583-acre park including trails, camping and a nine-hole golf course.



Before the pool was raised, the district did extensive work to ensure cultural and natural resources were preserved where possible and mitigated when necessary. The district contracted with the state Department of Fish and Game in 1977 to evaluate mitigation sites and worked with the tribes and U.S. Fish and Wildlife Service to develop 16 mitigation sites - 2,672 acres in total. Mitigation included creation of goose habitat, planting trees and shrubs, and erecting raptor poles and goose nesting structures.

An original cultural resources plan in a recreation planning document for the dam was budgeted at $9,800, but a reconnaissance study identified 235 sites estimated at $2-3 million for investigation and remediation. Work was to be managed by the National Park Service but, when the scope expanded, the Corps

received the authority. The district has done its own archaeology ever since.

In 1994 a five-year turbine efficiency upgrade project was completed on the 11 turbines added in the 1970s, which had been found to be running below required efficiency. The efficiency upgrade produced a net gain in efficiency of 6.83 percent at minimal cost to the government.

Point of Contact: Natural Resource Manager	Phone: 509-686-2225	Email: LAURA.M.BEAUREGARD@USACE.ARMY.MIL