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### **Is Koocanusa an Indian Name?**

Surprisingly, Koocanusa is not an Indian name. Mrs. Alice Beers from Rexford, Montana won a contest in 1971 to name the reservoir that was formed by Libby Dam. She combined the first three letters from **KOO**tenai River, the first three letters of **CAN**ada and **USA** to make up the name Koocanusa.

### **How Many People Work at Libby Dam?**

There are 31 full-time employees at Libby Dam. These employees are civilians who work for the [US Army Corps of Engineers](#). In addition, a number of temporary employees assist the natural resource and powerhouse sections during the busy summer months.

### **How Much Did it Cost to Build Libby Dam?**

Construction of the dam and powerhouse cost \$183 million (1973 dollars). However, the plan included many other construction projects such as highways, schools, railroad relocation, and wildlife habitat enhancement. These other items brought the total project cost to approximately \$388 million (1973 dollars).

### **What was the Impact of the Construction on the Area?**

Libby Dam was built in its present location because a large amount of water could effectively be stored. Any other site in the area would have required a longer, more costly structure and may have flooded more land.

At the peak of construction, the project employed over 2,000 workers. To off set this burden on the local communities, the Corps of Engineers built three new schools, additions to several other schools, and the Libby airport. The town of Rexford was moved to higher ground, where a new school, water system, sewage system, fire station, post office and road were built. State Highway 37 was also relocated to higher ground on the east side of the reservoir. A forest development road was established along the west side of the reservoir. Kooconusa Bridge, Montana's longest (2,437 feet) and highest (270 feet) bridge, was built to provide additional access across the north end of the reservoir. Relocating the Great Northern Railroad line was one of the most complex of all the projects. Relocation cost more than \$100.6 million dollars, nearly 30 percent of the total dam construction budget - and included a seven-mile railroad tunnel through Elk Mountain.

## **Is the Dam Safe?**

Libby Dam's architectural design is the strongest and most massive type of dam built today. The structure is designed to use its weight to hold back the force of the water. It is heavy, functional and safe. Libby Dam is made up of 47 monolith sections which are basically individual dams. Each monolith is designed to stand by itself. Dam safety experts consider structural failure of one of these monoliths to be highly unlikely. However, if one did fail, the other 46 would remain standing.

Libby Dam was built to withstand an earthquake of up to 6.5 on the Richter scale with no structural damage. Experts believe this is the maximum for this region. The dam is carefully monitored for movement and structural integrity through one of the most thorough instrumentation systems in the United States.

## **Does Libby Dam Leak?**

Yes, Libby Dam does leak. All dams leak. Water seeping through the fine cracks in the concrete carries lime and calcium particles along with it. As the water seeps through the cracks, the minerals create a calcite deposit. These deposits eventually build up, filling the crack and sealing the leak. If a leak is too large, special holes are sometimes drilled into the crack. Drill holes reduce the water pressure and allow the crack to close.

## **How Deep is Lake Kooconusa?**

At full pool, Lake Kooconusa is 370 feet deep. Normally the reservoir is lowered during the winter months for power production and to make room for the spring run-off. According to the terms of the [Columbia River Treaty](#), the reservoir may be drawn down as much as 172 feet. As the spring run-off enters the reservoir,

the lake fills. As winter approaches, the cycle is repeated.

## **Is the Water in Lake Koochanusa Valuable?**

The water, in terms of energy, is very valuable. The higher the water level, the more energy there is available for power production. At an average value of \$35 per megawatt hour, the hydropower potential of the top foot of water at full pool (water elevation 2,459 feet above sea level), is worth about \$1.5 million. At midpool (2,373 feet) the top foot of water is worth about \$900,000. At the top of the penstocks (2,287 feet), the top foot of water is worth about \$400,000. Lake Koochanusa holds 13 percent of the total water stored in the Columbia River system, just slightly less than Grand Coulee Dam's storage. The value of this water is multiplied because it will be used to produce power sixteen times before it reaches the Pacific Ocean. Water also has value for recreation, fish and wildlife production, and stream flows when water levels are low.

## **How Much Does a Generator Cost?**

When units one through four were installed, each unit cost \$3.6 million. If installed today, it would cost \$6 million for a complete unit.

## **How Big is the Shaft Inside a Generator?**

The shaft is 40 inches in diameter with a 14 inch hollow core.

## **What is a Transformer?**

A transformer is a device used to step-up or step-down electrical current (almost like increasing the pressure if electricity were water). At Libby Dam, the transformers step-up the voltage from 13.8 kV to 240 kV.

## **What Path does the Kootenai River Follow?**

Beyond Libby Dam, the Kootenai River passes through Libby, Montana and heads east towards Bonners Ferry, Idaho. At this point, it heads north into Canada where it enters the Columbia River near Castle Gar, British Columbia.

## **How Many Dams does Libby Dam Release Water To?**

Libby Dam releases water to 16 dams on the Kootenai and Columbia River.

## **How did Canada benefit from the Columbia River Treaty?**

Flood control, power and recreation. Canada also received revenue from the United States which they used to build three dams operated by B.C. Hydro.

If you cannot find the answer to your question, please [e-mail the Libby Dam Visitor Center](#).

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Point of Contact: Franklin  
Fifield

Phone: 406-293-7751  
x208

Email:  
FRANKLIN.G.FIFIELD@USACE.ARMY.MIL