



## The History of *Fontana Dam*

Fontana Dam is a hydroelectric dam located on the Little Tennessee River in Swain and Graham counties, in Western North Carolina.

**The dam is operated by the Tennessee Valley Authority**, which built the dam in the early 1940s to serve the growing electricity demands in the Tennessee Valley at the height of World War II. At 480 feet high, Fontana is the tallest dam in the Eastern United States, and at the time of its construction, it was the fourth tallest dam in the world.

**The dam impounds the 29 mile long Fontana Lake**, which spreads across a scenic stretch of the Little Tennessee river along the southwestern boundary of the Great Smoky Mountains National Park. The Appalachian Trail crosses the top of the dam. Fontana is named for the now-inundated town of Fontana, a lumber and copper-mining hub once located at the mouth of Eagle Creek. The town's name was derived from the Italian word for 'fountain'.

### **The building of Fontana Dam began on January 1, 1942.**

Its reservoir required the purchase of 68,292 acres of land, 5,125 acres of which were forested and had to be cleared. 1,311 families, 1,047 graves, and over 60 miles of roads had to be relocated.



**One of those roads**, NC highway 288 connecting Bryson City to Deals Gap, was never relocated. The new road would have followed the north shore of the lake through the Great Smoky Mountains National Park. But environmental concerns and funding issues completely halted the road's progress, and locals nicknamed the unfinished 6-mile road **The Road to Nowhere**. Swain County eventually received \$52 million from the US Department of Interior in lieu of building the road.

**The towns of Fontana, Bushnell, Forney, and Judson were completely inundated.** The village of Welch Cove (later renamed Fontana Village) was constructed just south of the dam to house the project's workers, whose numbers had reached 5,000 by 1943 in spite of nationwide manpower shortages. Fontana Village is now a summer resort and still retains some of the original buildings.

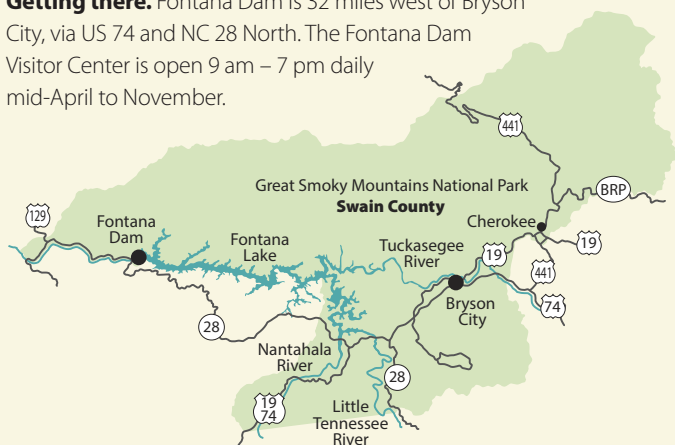
**The design of the dam was unusual for TVA at the time.** It was feared that the 2,818,000 yards of concrete required for the dam would create a structure so massive, that heat released during its setting would be trapped for years, and would eventually cause cracks to form. To aid the release of this heat, engineers divided the dam into contraction joints and outfitted them with grout pipes and cooling coils.

**The dam's spillway presented yet another challenge,** as engineers were worried that the water's 400 foot drop would eventually cause erosion issues at the dam's foundation. A special spillway was designed that allows water to drain out through two 34-foot diameter spill pipes into a diversion tunnel equipped with a deflection system.

**Fontana Dam was completed at a cost of \$70,420,688.48 and the gates closed on November 11, 1944.** Two generating units were placed in operation on January 20, 1945, just in time to provide crucial energy for aluminum production in the closing months of World War II.

**Over 40,000 acres along the lake's north shore** were soon transferred to the Great Smoky Mountains National Park, and several thousand acres along the south shore were transferred to the U.S. Forest Service.

**Getting there.** Fontana Dam is 32 miles west of Bryson City, via US 74 and NC 28 North. The Fontana Dam Visitor Center is open 9 am – 7 pm daily mid-April to November.



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