

Cave Run Lake and Dam:

Cave Run Lake was created by the construction of an earth and rock-fill dam across the Licking River. The Louisville District of the U.S. Army Corps of Engineers built the dam. Construction of the Dam and Outlet Works began in 1965 and was completed in 1973. The dam has a maximum height of 148 feet and measures about a half-mile in length. The lake has an 8,270-acre surface area and is about 48 miles in length during the summer months. The lake is located within the scenic Eastern Highlands Region of Kentucky and is almost completely surrounded by the northernmost section of the Daniel Boone National Forest.

Why was Cave Run Dam Built?

Cave Run Lake is most widely known for its recreation opportunities and scenic beauty. However, the lake project was constructed primarily for the purpose of reducing flood damage. The dam reduces flood stages along the Licking River Valley below the dam, and serves as a unit of the flood protection plan for the Ohio River Basin. In addition to flood control, the lake project provides a wide variety of public recreation opportunities, serves as a water supply and offers habitat for many species of fish and wildlife. It also enhances water quality along the lower Licking River by increasing the flow of water during dry periods.

Flood Reduction Operations:

Cave Run Dam controls water from all the rivers and streams within an 826 square mile drainage area upstream from the dam. Following rains that could cause flooding, the water passing through the dam is reduced. Floodwater from the drainage area is then captured behind the dam and stored in the lake. This action lowers the level of the river downstream from the dam, thus reducing flood damage. The floodwater is stored in the lake until downstream rivers and streams have receded enough to safely begin releasing the stored water. When the stored floodwater is released, it is released at a rate that will not endanger lives or property. Cave Run Lake was designed to store a large amount of water. If the lake should ever reach its maximum storage capacity, it would have a surface area of 14,870 acres and its length would increase to over 66 miles.

How Does Cave Run Dam Work?

Below is a cross-section of the dam and outlet works. The "outlet works" are all the structures and equipment used to control the release of water from the dam. The outlet works act much like a drain in a bathtub. The 167-foot high control tower on the lakeside of the dam is attached to a tunnel called a "conduit." The 15-foot wide conduit carries lake water underneath the dam to the river channel on the other side. At the bottom of the control tower are two large "service gates," located at the entrance to the conduit. These gates can be raised or lowered to control the amount of lake water passing through the dam. In addition to the service gates, the control tower has two 24-inch diameter discharge pipes called "bypass pipes." The bypass pipes are used to release smaller amounts of water. The bypass pipes have gate-controlled intake openings at three different levels in the lake, allowing the dam to release lake water of various temperatures and qualities. This feature provides downstream aquatic life and water users with a more suitable water supply. As water exits the conduit, it flows into a concrete depression called a "stilling basin." The purpose of the stilling basin is to calm the water before it enters the river channel.

Operating Levels:

Operating levels refer to specific target elevations for the lake's surface, expressed in feet above mean sea level (m.s.l.). The operating level of the lake depends upon the time of the year. During the period May through mid-September, an effort is made to maintain the lake's surface at the "summer pool" level. The summer pool elevation is the optimal level for water-based recreation activities. In the winter and early spring, an attempt is made to keep the lake at the "winter pool" elevation, which is six feet lower than summer pool. Maintaining the lake at this lower level provides additional flood storage capacity during the time of year when flooding is most likely. Following flood events, the lake level is gradually returned to the normal operating level for that time of year.



The Cave Run Lake Partnership:

The U.S. Army Corps of Engineers, the U.S.D.A. Forest Service and the Kentucky Department of Fish and Wildlife Resources have important roles in the operation and management of Cave Run Lake. In addition to operating the dam for flood reduction and other authorized purposes, the **U.S. Army Corps of Engineers** operates an office and three day-use recreation areas near the dam. The Corps also has resource management responsibilities on the land and water areas under its jurisdiction. The **U.S.D.A. Forest Service** manages the resources on the majority of the land and water areas in the vicinity of Cave Run Lake. These resources are managed under a multiple use/sustained yield concept. The products of this concept include wood, water, recreation, forage, and wildlife habitat. The Forest Service also operates (or administers through concession agreements and use permits) the other recreation areas at Cave Run Lake. Working closely with the other two agencies, the **Kentucky Department of Fish and Wildlife Resources** manages a variety of fish and wildlife programs and is responsible for the enforcement of Kentucky's fish, game and boating regulations in the Cave Run Lake area.

