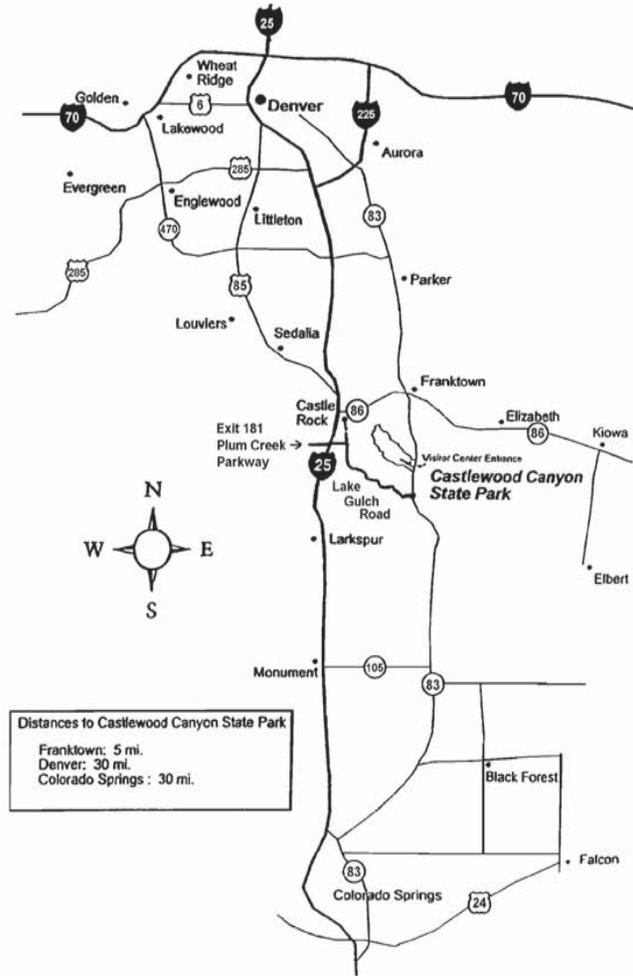


To Get There



The Bridge That Was

There was no modern machinery in 1889, so the Castlewood Dam was built by man, mule, and horse power alone – and was considered quite an engineering achievement. The dam had two walls set several feet apart. The wall facing the reservoir was masonry laid up with cement. The downstream wall, acting as a brace, was angled at 45 degrees, creating a pleasing “step” appearance. The space between the walls was filled with large stones laid in place by hand. Broken rock and dirt were hammered into spaces between the big stones. At its base, the dam was 83 feet thick. Eight valves in the center of the wall could be opened to release water for irrigation, or to relieve pressure on the dam when the reservoir was full.

The dam is located about halfway between the Canyon Point parking lot and the Falls parking lot of Castlewood Canyon State Park. It is approximately one mile from either lot. You can see the dam if you drive along Castlewood Canyon Road (Douglas County Highway 51). There is no parking on the road at the dam.



Colorado State Parks

Castlewood Canyon State Park

2989 S. State Highway 83

Franktown, CO 80116

303-688-5242

Email: castlewood.canyon@state.co.us

www.parks.state.co.us

CSP-CAST-200-4/07

Castlewood Canyon State Park

The Castlewood Dam

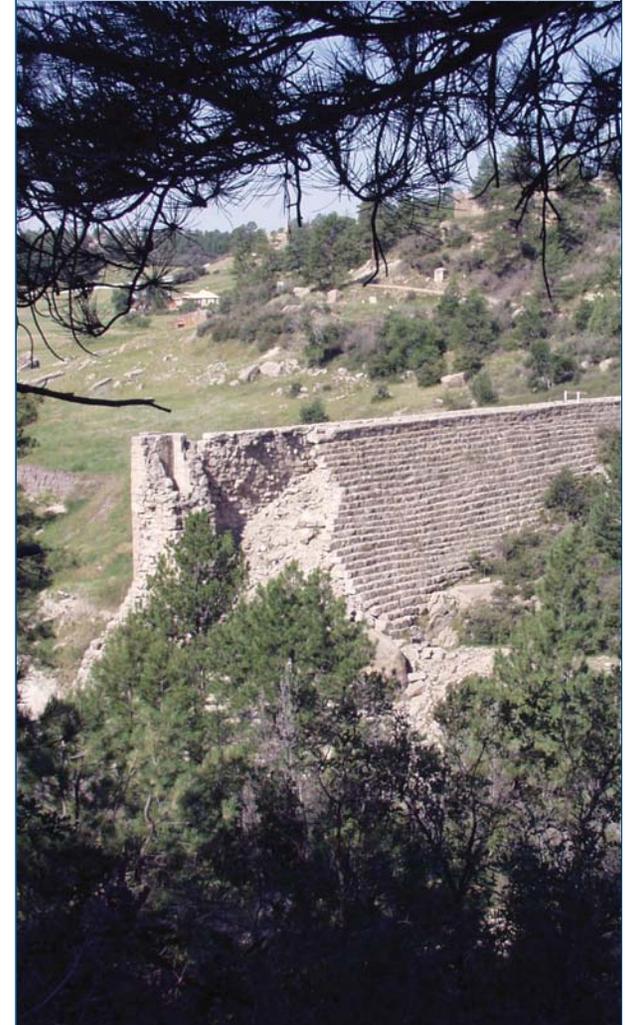




Image Courtesy of Colorado Historical Society

Luring Settlers With Water

Imagine yourself a land owner in the late 1880s. Your land lies on the high plains east of the Rocky Mountains and south of the city of Denver. What would you do to attract buyers for your land?

You know that the most likely buyers are farmers and ranchers because Denver needs nearby sources of food supplies for its growing population. But there was something very important missing from your land – enough water to grow the crops and water the livestock of all the new settlers. You can't make more water flow in Cherry Creek and the many springs that feed it, but you could store the water... in a big reservoir, behind a big dam.

So you get together with other land owners, form the Denver Water Storage Company, and build the Castlewood Dam. Even with 1880s knowledge and technology, it only took 11 months to build the 600-foot-long dam, which was 70 feet high and eight feet wide at the top. An estimated 85 men and many teams of horses and mules wrestled the rocks into place according to the design of Chief Engineer AM. Welles. Total cost: \$350,000.

George Engle had homesteaded a ranch south of the dam site in 1860. His wife Louisa cooked and delivered two meals a day to the men building the dam. Some stories say the reservoir behind the dam was named Lake Louisa in her honor.

It Leaked from the Beginning

The dam, completed in October of 1890, began to leak almost immediately. Denver citizens worried the dam would break, sending flood waters rushing downstream to their city. Ominously, heavy rains in 1897 washed out about 100 feet of the dam, but it was repaired. After severe rainfall in spring 1900, Chief Engineer Welles responded to rumors that the dam was about to break by writing a letter to the *Denver Times* newspaper, which read: "The Castlewood Dam will never, in the life of any person now living or in generations to come, break to an extent that will do any great damage either to itself or others from the volume of water impounded, and never in all time to the city of Denver."

Ownership of the dam changed eight times between 1890 and 1933. Each new owner tried different financial schemes to attract buyers to downstream properties and different ways to shore up confidence in the dam, but every one failed.

The dam continued to leak. From the photo below, it's clear there was a large leak on the west side of the dam. But look closely at the very bottom of the dam. See that small stream of water? Look at the dam ruins in the park today. The west side of the dam still stands. It was the middle that collapsed. Could that small leak have weakened the



Images Courtesy of Colorado Historical Society

footings of the dam enough to fail? Walk below the dam ruins and look for the type of rock it was built on. Would you have built a dam on that rock?

The Night the Dam Failed

It rained hard the first two days of August in 1933. The reservoir was full and water poured over the top of the dam. Dam caretaker, Hugh Paine, was uneasy the night of August 2. Lightning crackled, thunder rumbled, and rain fell in buckets. At 1:20 a.m. on August 3, Paine heard the first rumbling of the flood loosened by the broken dam. An estimated 1.7 BILLION gallons of water was released in a raging torrent that scoured the canyon walls and headed for Denver. Hugh Paine made it to Castle Rock and called the Parker phone exchange. Telephone operator Nettie Driskill's efforts to alert people downstream no doubt saved many lives that night.

The wall of water grew higher as it approached Denver and reached the city about 7:00 a.m. It traveled down the concrete canal that follows Speer Boulevard. Reports vary about the depth of the water, but aerial photos show that much of the lowlands along Cherry Creek and the South Platte River were submerged. Damage was extensive, but only two people died.



Looking down Speer Boulevard