

Hoover Dam (border of Nevada and Arizona, USA)

A masterpiece of engineering from the era of the Great Depression



The building of the Hoover Dam was one of the most extraordinary feats of twentieth-century engineering; a feat made all the more remarkable considering the dam was constructed during the Great Depression. The immensely powerful Colorado River had periodically burst its banks, perhaps most devastatingly in 1905 when it flooded Imperial Valley and created a 150-square-mile (388-sq-km) inland sea. This, combined with the need for power and a water supply, contributed to the plans to harness the river.

Before the project could begin, a fair agreement had to be arranged between Arizona, Nevada, California, Utah, Colorado, New Mexico, and Wyoming so that all would benefit. With the Hoover Compromise, construction began. First the river had to be diverted from the proposed site of Black Canyon, which involved blasting four huge tunnels through the canyon walls. More than 8,000 workers then had to clear the now-dry canyon floor of rock before concrete could be poured. The structure itself is a curved gravity dam, with the enormously thick concrete wall shaped like a gentle horseshoe across the canyon. Behind the dam lies Lake Mead, and the force of the lake water pushes against the dam, creating compressive forces that travel the length of the curved concrete wall and into the sides of the canyon, which counteract the forces and effectively “push back.” This system creates an immensely strong and rigid structure. The original plans for the facade of the dam were deemed too simple for a structure of such magnitude and importance, so architect Gordon B. Kauffman was enlisted. He designed the elegant and streamlined Art Deco finish.

Hoover Dam is of immense importance both on its critical functional levels, and as an example of the vast scale of the U.S. engineering and architectural achievements of the early twentieth century. **TP**

“This morning I came, I saw, and I was conquered . . . [by] this great feat of mankind.”

President Franklin D. Roosevelt, September 30, 1935

- ☒ With the Colorado River diverted through tunnels, the floor of the Black Canyon was prepared for the dam.
- ☒ The dam is also called the Boulder Dam because originally its intended site was the Boulder Canyon.

