

Hoover Dam (Near Las Vegas, Nevada)

This is Bob Doughty. And this is Steve Ember with EXPLORATIONS in VOA Special English.

Today we tell about Hoover Dam. It was the largest and most difficult structure of its kind ever built when work started in 1931. Our report today about Hoover Dam must begin with the Colorado River. This river made the dam necessary. The Colorado River begins high in the Rocky Mountains. It begins slowly, during the dark months of winter. Heavy snow falls on the Rocky Mountains.

The snow is so deep in some areas that it will stay on the ground well into the hot days of summer. But the snow does melt. Ice cold water travels down the mountains and forms several rivers -- the Gila River, the Green River, the Little Colorado, the San Juan, the Virgin and the Gunnison rivers.

These rivers link together and form the beginnings of the Colorado River. The Colorado River flows through, or provides water for, the states of Wyoming, Colorado, Utah, New Mexico, Arizona, Nevada and California. Then it crosses the border into Mexico.

The Colorado River has always been extremely powerful. The river created the huge Grand Canyon. The violent water cut hundreds of meters deep into the desert floor of Arizona. The Grand Canyon is proof of the power of this great river.

The Grand Canyon was cut into the desert floor beginning thousands of years ago. But the power of this river has been demonstrated in more modern times.

Between 1905 and 1907, the Colorado River caused great amounts of flooding in parts of Arizona and California. Huge amounts of water ran into a low area in the dry, waterless desert that had once been an ancient lake. In two years of flooding, the Colorado River filled the ancient lake. That lake is called the Salton Sea. Today, it is about 56 kilometers long by 25 kilometers wide. It is even larger in years of heavy rain.

The flooding that created the Salton Sea also flooded homes, towns and farming areas. Many people were forced to flee their homes. Government leaders knew they had to do something to prevent such floods in the future.

In 1918, a man named Arthur Davis proposed building a dam to control the Colorado River. Mr. Davis was a government engineer. He said the dam should be built in an area called Boulder Canyon on the border between the states of Arizona and Nevada

Building the dam would not be a simple matter. The people of seven states and the people of Mexico needed and used the water of the Colorado River. Much of that area is desert land. Water is extremely important. Without water from the Colorado River, farming is not possible. Without water, life in the desert is not possible.

On November 24, 1922, officials signed a document in Santa Fe, New Mexico. That document is called the Colorado River Compact. The document tells how the seven states would share the water of the Colorado River. It was agreed this could be more easily done with the aid of a dam. Later an agreement was signed with Mexico to supply it with water from the Colorado River. The area chosen for the dam was called Black Canyon. The walls of Black Canyon rise

almost 243 meters above the river. An ancient volcano formed the rock in Black Canyon.

Engineers decided the rock would provide a good strong support for the proposed dam.

However, the area also presented problems. The nearest railroad was 60 kilometers away.

There was no electric power. And, in the summer, the temperature in the desert in Black

Canyon could reach as high as 48 degrees Celsius.

A great deal of work was done before operations started on the dam. Workers built a town called Boulder City to house employees working on the dam. They built a large road from Boulder City to the area of the dam. They built a railroad from a main line in Las Vegas, Nevada, to Boulder City. They built another railroad from Boulder City to the dam area. And they built a 350 kilometer power line from San Bernadino, California. This provided electric power to the area where the dam was being built.

The work on the dam began in April of 1931. Workers called "high scalers" were some of the first to begin building the dam. They were suspended from ropes as they used heavy air-powered hammers to break any loose rock away from the face of the canyon walls. When they could not use hammers, they used dynamite. One high scaler became very famous. His name was Arnold Parks. He caught another worker who had fallen off the top of the canyon.

Mr. Parks held the worker to the wall of the canyon until others came to help. Today, visitors can see a statue of the men who worked as high scalers to build Hoover Dam.

The high scalers worked on the sides of the canyon. Other workers dug huge tunnels deep in the floor of the canyon. This was done to permit the Colorado River to flow away from the construction area. This had to be done so the floor of the dam could be built.

On June 6, 1933, workers poured the first load of a building material called concrete. Men in two special factories worked day and night to make the concrete building material for the dam.

Huge equipment moved millions of tons of rock and sand. In the summer months, the terrible desert heat slowed the work but did not stop it. Men who worked at night on the dam suffered less, but the heat was still as high as 30 degrees Celsius.

Slowly the great dam began to rise from the floor of the canyon. From the canyon floor it reaches 221 meters high. Workers poured the last of the concrete on May 29, 1935. They had used almost four million cubic meters of concrete in the dam. Workers also used more than 20 million kilograms of steel to strengthen the concrete in the dam.

The work was dangerous for the more than 5,000 men who worked on the structure. The extreme temperatures, falling objects and heavy equipment caused accidents. The workers were provided with medical care and two emergency vehicles to take them to a new hospital in Boulder City. However, 96 men lost their lives during the building of the great dam.

The companies building the dam had been given seven years to complete the work. They did it in only five. The dam was finished on March 1, 1936.

Other work now began. This work would make the dam into one of the largest producers of electric power ever built. The dam was built to control the powerful Colorado River. But it was also meant to use the river to produce large amounts of electric power.

Today, 17 huge machines use the river's power to produce electric power. The states of Arizona and Nevada share the power. So do many cities in California, including Los Angeles, Burbank and Pasadena. When the Hoover Dam was finished in 1936, it was the largest dam in the world. It was also the tallest. And it was the largest power producer that used water power to make electricity. Today this is no longer true. Taller dams, larger dams and a few that produce more power have been created. But Hoover Dam is still a huge and interesting place.

Visitors to Hoover Dam drive on a small road that passes Lake Mead. They enter a special visitors' center to learn about the dam and the men who built it. They ride high-speed elevators that go deep inside the dam. They see the huge machines that produce electric power.

Many visitors say they thought the name of the huge structure was Boulder Dam. They are told that Hoover Dam is often called Boulder Dam. However, it is named after former President Herbert Hoover.

Before he was president, Mr. Hoover worked for many years to make the construction of the dam possible. It was officially named to honor him in 1947.

Visitors leave the great dam with an understanding of how difficult the project was. They learn that it still safely controls the great Colorado River. And it also provides water and electric power to millions of people in the American southwest. This program was written by Paul Thompson. It

was produced by Mario Ritter. This is Steve Ember. And this is Bob Doughty. Join us again next week for another EXPLORATIONS program in VOA Special English.

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