

### Several Agencies, Many Benefits

Reclamation, the U.S. Army Corps of Engineers, Boise Project Board of Control, and the Payette Division irrigation districts coordinate reservoir releases for irrigation, power generation, flood protection, municipal and industrial water use, recreation, water quality, and a healthy fishery.

**What's the Yearly Value?**  
Irrigated crops: \$581 million  
Livestock industry: \$600 million  
Power generated: \$13 million  
Flood damage prevented: \$170.5 million  
Recreation: 830,000 visits - \$30.7 million



The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

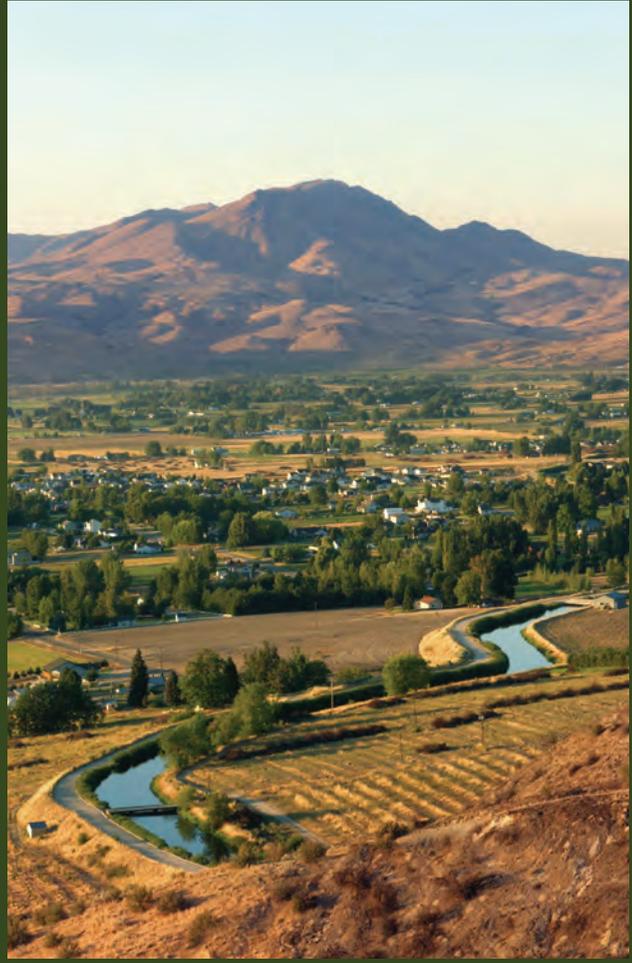
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# RECLAMATION

*Managing Water in the West*

## The Story of the Boise Project

IDAHO-OREGON



U.S. Department of the Interior  
Bureau of Reclamation

## The Pioneers

The discovery of gold in the early 1860s brought both miners and enterprising farmers to Idaho. The climate and soils of the Boise and Payette River valleys were ideal for farming. Early farmers quickly developed fertile lands along the rivers, but could not get water to the desert without irrigation systems.



Landscape before irrigation

Local developers worked in the 1880s toward a diversion dam and huge canal system to irrigate lands south of the Boise River. They built a few miles of the canal before financing from New York investors ran out, and the task was abandoned. Similar stories repeated throughout the West.

## How It All Started

Congress passed the Reclamation Act in 1902 to boost development of the arid West. Those who receive irrigation water and power from Reclamation projects pay part of the construction costs and ongoing operation and maintenance costs.

Reclamation acquired property rights in 1906 that made it possible for the agency to manage and enlarge previously private canals near Boise. Reclamation began its task of creating water storage and irrigation networks by building some of its earliest structures on the Arrowrock Division of the Boise Project. The New York Canal was extended 40 miles to carry water from Boise River Diversion Dam to Lake Lowell, a reservoir formed by Deer Flat Dam.



Farmers rely on Reclamation water

## Boise Project Evolves

Boise River flows varied from raging spring floods to late-summer trickles. A consistent reservoir water supply would improve the farming successes. The Arrowrock site was chosen as the most suitable reservoir location, and Reclamation began construction in 1911. One of the first tasks was to build a housing camp for about 1,400 workers.



Arrowrock camp

## A Short-Lived Short Line!

To build Arrowrock Dam, Reclamation joined forces with the Boise and Arrowrock Railroad. The train carried 89,500 passengers and 14 million tons of freight over its 17-mile-long line in the 4½ years it ran. Congress took the railroad out of service in 1916.

A 1,500 kilowatt powerplant at Boise River Diversion Dam provided electricity for the camp and construction of Arrowrock Dam, which began operating in 1915.

People in the growing Boise valley needed more water for irrigation and electricity by the late 1930s. Ways to reduce flooding were also needed. A new dam on the South Fork Boise River, Anderson Ranch Dam, was authorized in 1940, but material and manpower shortages during World War II caused significant delays in its construction. The dam and powerplant finally became operational in 1950.

Delays in developing irrigation for the Payette Division left early settlers on their own; few succeeded. Completion of Black Canyon Diversion Dam in 1924 finally made it possible to divert water from the Payette River. Over time, silt settled in Black Canyon Reservoir, causing frequent flooding of the Montour area. Reclamation purchased the flood plain lands, assisted in moving the residents, and developed wetland areas.

Diverting water and producing electricity from inconsistent Payette River flows was not always possible. Reclamation completed Deadwood Reservoir in 1931 to store water upstream. World War II delayed the completion of Cascade Dam until 1948.

## The Boise Project Today

The Boise Project, in southwest Idaho and eastern Oregon, consists of the Arrowrock and Payette Divisions. It includes 6 reservoirs, 2 diversion dams, 3 powerplants, 7 pumping plants, 720 miles of main canals, more than 1,300 miles of smaller canals, and 650 miles of drains. Boise Project Board of Control and Payette Division irrigation districts operate many of the project's facilities.



### Producing Electricity

Anderson Ranch Dam, Black Canyon Diversion Dam, and Boise River Diversion Dam include powerplants that generate about 225 million kilowatts of electricity a year. Three Reclamation projects use this generated power, and Bonneville Power Administration sells the rest to its customers.

The Boise Project supplies water to three private powerplants to produce more than 127,000 kilowatts of electricity. The powerplants are located at Cascade, Arrowrock, and Lucky Peak Dams.

### Anderson Ranch Dam

Constructed: 1941 1950  
 Height: 456 ft  
 Crest Length: 1,350 ft  
 Total Water Storage: 474,900 acre feet

### Arrowrock Dam

Constructed: 1911 1915  
 Height: 350 ft  
 Crest Length: 1,150 ft  
 Total Water Storage: 272,200 acre feet

### Boise River Diversion Dam

Constructed: 1906 1908  
 Height: 68 ft  
 Crest Length: 500 ft

### Deer Flat Dams

Constructed: 1906 1911  
 Total Water Storage: 173,100 acre feet

### Black Canyon Diversion Dam

Constructed: 1922 1924  
 Height: 183 ft  
 Crest Length: 1,040 ft

### Cascade Dam

Constructed: 1946 1948  
 Height: 107 ft  
 Crest Length: 785 ft  
 Total Water Storage: 693,000 acre feet

### Deadwood Dam

Constructed: 1929 1931  
 Height: 165 ft  
 Crest Length: 749 ft  
 Total Water Storage: 162,000 acre feet

1 acre foot of water is enough water to cover 1 acre of land 1 foot deep in water, or 325,850 gallons.

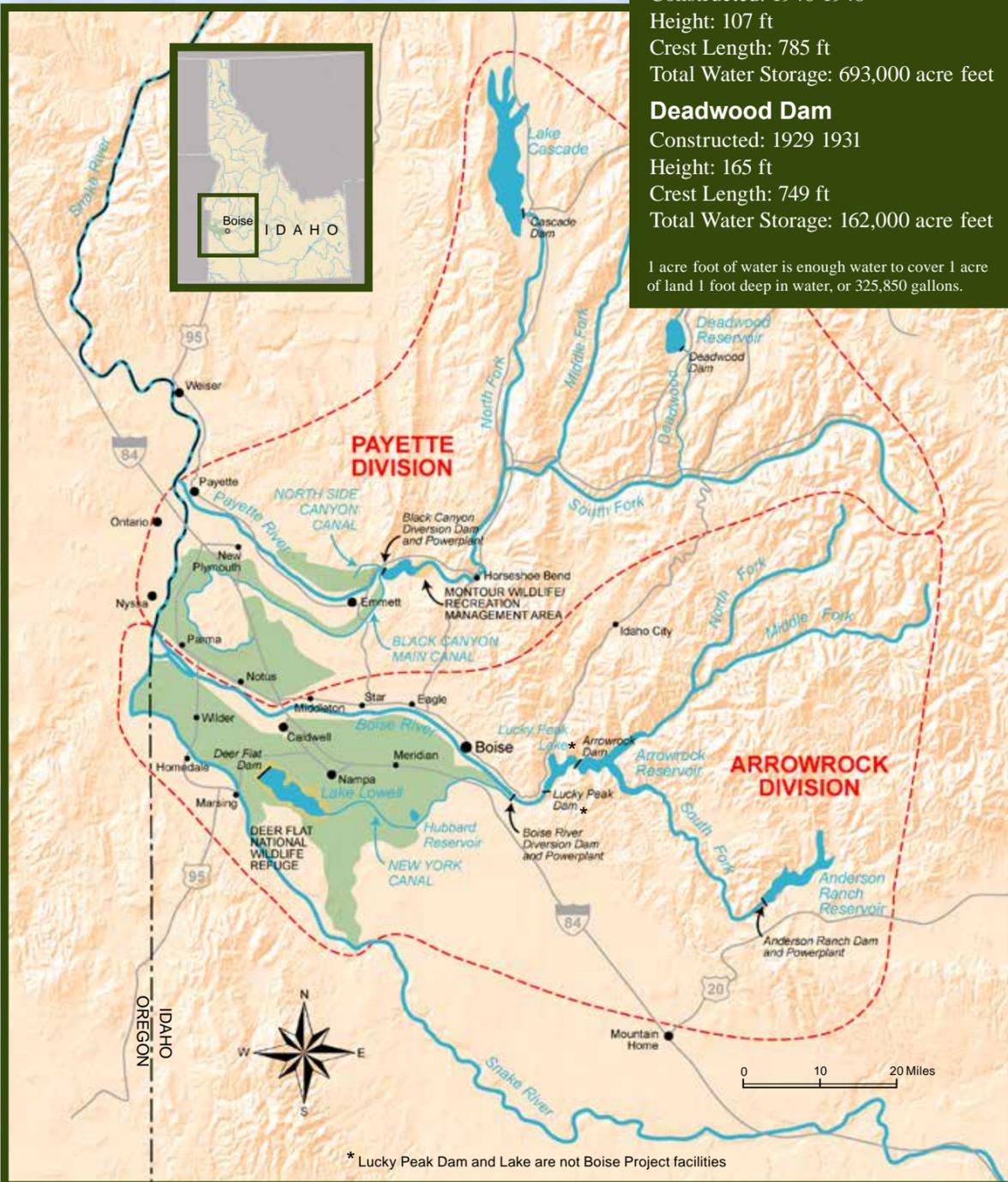
### Controlling Floods

Cooperation among agencies to operate and release water on the Boise River system protects the Boise valley from historic and frequent flooding. The U.S. Army Corps of Engineers built Lucky Peak Dam in the 1950s to give the Boise valley more flood protection.

### Getting Water to Project Lands

The New York Canal carries water from Boise River Diversion Dam to two offstream reservoirs in the Arrowrock Division: Hubbard Reservoir and Lake Lowell. Deer Flat Dam releases water to project lands.

Black Canyon Main Canal diverts water at Black Canyon Diversion Dam to Payette Division lands north and south of the Payette River. North Side Canyon Canal carries water to lands north of the Payette River.



### Setting World Records

Arrowrock Dam, a 350 foot high structure, was the highest concrete dam in the world when it was completed in 1915.

Anderson Ranch Dam towers 456 feet above the streambed and was the tallest earthfill dam in the world when it was completed in 1950.



Idaho Potato Commission

### Feeding People and Livestock

Farmers using Boise Project facilities turned about 390,000 acres into one of the West's most productive farming regions. The project carries water to only 7 percent of Idaho's total irrigated lands, but produces the majority of the State's total profits from agricultural income. Project farmers grow much of the Nation's sweet corn seed, potatoes, other row crops, and fruit. Hay and forage crops support cattle and even some domestic buffalo and elk.

### A Historic Place

Boise River Diversion Dam and powerplant are on the National Register of Historic Places because of their important historic and technological contribution in developing the Boise Valley.



### Water for Cities and Industry

Boise Project provides water from Anderson Ranch Reservoir for residential and industrial use in the Boise valley.

### Enhancing Fish and Wildlife

Lake Cascade, Deadwood Reservoir, Anderson Ranch Reservoir, and Lucky Peak Lake provide water to enhance fish and wildlife in the Boise and Payette Rivers. Water levels in Deadwood Reservoir and Lake Cascade are maintained to protect water quality and fish resources that support bald eagles, osprey, and other wildlife.

Reclamation's Idaho projects face the significant challenge of managing water for endangered species while delivering irrigation water. Reclamation complies with the Endangered Species Act and State water law in operating and maintaining its facilities.



### Fun in the Great Outdoors

Boise Project offers 78 square miles of reservoir water surface used for recreation, fish, and wildlife.

Camping facilities are available at or near all the project reservoirs. Excellent fishing for trout, smallmouth bass, and kokanee salmon draws visitors to the reservoirs. Lake Cascade and Deadwood Reservoir have both produced State fishery records. Ice fishing is a popular wintertime activity.

Lake Cascade is the largest Reclamation reservoir in western Idaho and receives more than 300,000 visitors annually.

### Enjoying the Rivers

Each summer, thousands of river enthusiasts enjoy rivers within the project. The Payette River offers world class kayaking and great rafting. A leisurely summer pastime in the Boise valley is to float a 6 mile section of the lower Boise River.

