US Army Corps of Engineers ®
Walla Walla District

FACT SHEET
LUCKY PEAK DAM AND LAKE
BOISE • Idaho

Authorization
The project was authorized by the Flood Control Act of 1946.

Progress
Construction of Lucky Peak Dam began in 1949. It was dedicated June 23, 1955.

Project
The project includes the dam, Lucky Peak Lake, federally owned lands managed by the U.S. Army Corps of Engineers (USACE), and operational and recreational facilities. The project provides flood risk management, fish and wildlife habitat, irrigation and recreation. Since 1961, more than $2.37 billion in potential flood damages have been prevented.

Lucky Peak Dam
The dam is a rolled earthfill dam about 250 feet above the streambed and 2,340 feet long at the crest. The spillway, located on the left abutment, has a 600 foot long, free-overflow concrete ogee crest. The outlet works, located in the left abutment, consist of a 23-foot diameter tunnel with six slide gates and one hollow jet valve. There are two 10-foot by 23-foot Broome-type emergency gates located in the intake tower.

Reservoir
Upstream of Lucky Peak Dam is a storage reservoir, Lucky Peak Lake. At normal full pool - elevation 3,055 feet above mean sea level (MSL) - the lake is 12 miles long, has 45 miles of shoreline, and 3,019 acres of surface area. The reservoir provides a total storage capacity of 264,400 acre-feet. Flood risk management and irrigation storage is jointly coordinated between USACE and the Bureau of Reclamation, which operates two upstream dams, Arrowrock Dam (opened in 1915) and Anderson Ranch Dam (opened in 1950). Together, this three-dam system stores approximately 1,000,000 acre-feet when full.

Hydropower

The Federal Power Act of 1920 authorized the use of federal lands by non-federal entities to construct hydropower facilities. The Federal Energy Regulatory Commission issued a license to the Boise-Kuna Irrigation District to construct a 100-megawatt facility in June, 1980. After reconstruction of the primary outlet and construction a of new secondary outlet, the plant went online in 1988. The power purchaser, Seattle City Light, operates and maintains the facility.

Public Lands

There are 4,288 acres of public lands surrounding Lucky Peak Lake. These include lands that are federally owned and managed by USACE, as well as easement lands to which USACE has specific rights to flood.

There are 4,079 acres of USACE-managed lands that are used for public recreation, wildlife habitat and operations purposes. Lucky Peak Lake bisects Idaho Fish and Game's Boise River Wildlife Management Area, a major winter range in the state for deer and elk. The Idaho State Parks operates Lucky Peak State Park Units at three locations on Lucky Peak Lake. Ada County Parks and Waterways provides over 500 public-use floating dock sections. USACE recreation facilities at Lucky Peak Lake consist of seven park areas, four boat launch ramps, and 80 dispersed recreation sites accessible only by boat. The fiscal year 2020 public visitation to all areas was approximately 950,000 visits.

People

10 full-time Walla Walla District employees work at Lucky Peak Dam and Lake. They serve as park rangers, natural resource specialists, administrative staff and maintenance workers. Temporary employees augment the staff during high-visitation months. Together, they manage the safe and continuous operation of the dam and its facilities. The staff also manages a volunteer program to help operate park areas and make improvements to Lucky Peak Lake's numerous public recreation facilities.

U.S. ARMY CORPS OF ENGINEERS – WALLA WALLA DISTRICT
201 North 3rd Avenue; Walla Walla, WA 99362
509-527-7020 cenww-pa@usace.army.mil
www.nww.usace.army.mil
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U.S. ARMY
US Army Corps of Engineers

Lucky Peak Dam and Lake: The Rooster Tail

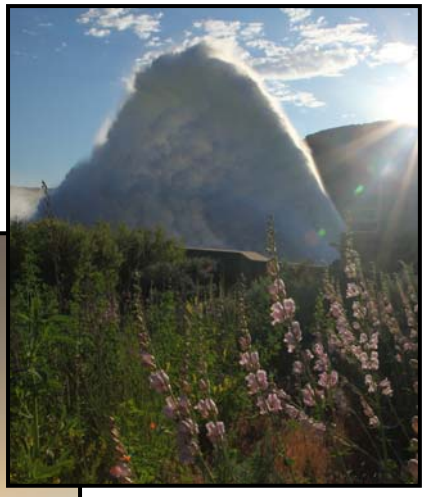
U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

Welcome to Lucky Peak Dam and Lake!

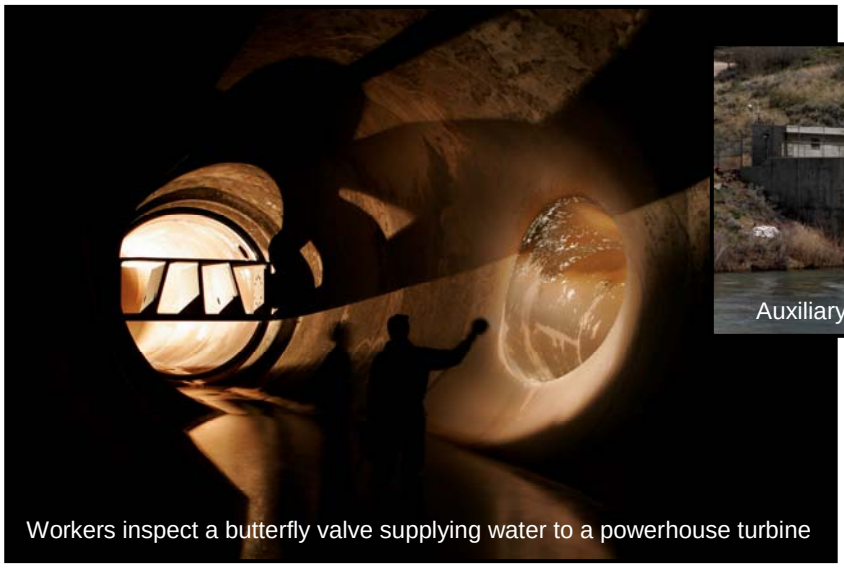
Named after a successful gold mining camp three miles to the north, Lucky Peak Dam has provided flood risk management of the Boise River for Idaho's Treasure Valley since 1954, preventing about $1.3 billion in flood damages.

About one million people visit Lucky Peak each year to enjoy lakeside outdoor recreation activities. Lucky Peak Lake provides habitat for deer and elk herds of the Boise River Wildlife Management Area, managed by Idaho Department of Fish and Game. From irrigation water to wintering elk to water skiing, Lucky Peak is one of many economic drivers in the region.

A popular springtime attraction is the "Rooster Tail" which results from the discharge of water through the original release structures of the dam under pressure from the lake above. Using a "flip bucket" to direct the spray high into the air, the erosive, scouring force of the water is greatly dissipated as it rises, rests and slowly falls back to the stream channel.



The Rooster Tail only uses water from large releases required for flood risk management that exceed powerhouse capacity, thus no water is wasted for the display. It occurred daily until 1986 when construction of the Lucky Peak Power Plant Project started.



Workers inspect a butterfly valve supplying water to a powerhouse turbine

Auxiliary tunnel release structure

The powerhouse, owned and operated by four irrigation districts within the Boise Project Board of Control, began generating power in October 1988. At peak generation, the powerhouse on Lucky Peak Dam produces 101 megawatts of electricity – enough power for about 100,000 homes.

The amount of water passing through Lucky Peak Dam is determined by the U.S. Army Corps of Engineers, the Bureau of Reclamation and the Boise River Watermaster. Together, they manage releases to maintain flood storage space and meet Southwest Idaho's irrigation needs.

A second auxiliary tunnel was built to manage water during the construction of the powerhouse. This tunnel, opening directly across from Discovery Park, now routinely handles all releases in excess of powerhouse capacity, and is often confused with the Rooster Tail.

To reduce wear and tear on the original release structures, the Rooster Tail is briefly conducted as a public attraction, generally in May during the springtime runoff season. The Rooster Tail flow is typically 1,500 to 2,500 cubic feet of water per second (cfs) escaping from a single 6-foot gate opened 3 to 5 feet. Visualize the same number of basketballs escaping the tunnel each second – a mere fraction of the 39,000 cfs total controlled release capacity of Lucky Peak Dam facilities.

The Corps of Engineers, Lucky Peak Power Plant Project, Idaho Department of Parks and Recreation, and other partnering agencies work together to share a small piece of Treasure Valley history by providing Rooster Tail viewing opportunities to the public.

U.S. ARMY CORPS OF ENGINEERS – WALLA WALLA DISTRICT
LUCKY PEAK DAM AND LAKE
9723 East Highway 21; Boise, Idaho 83716
(208) 343-0671 LuckyPeakLake@usace.army.mil
www.nww.usace.army.mil