

PROJECT LOCATION, FACILITIES, AND OPERATIONS

PROJECT LOCATION AND OVERVIEW

The Kern River No. 3 (KR3) Hydroelectric Project (Project) is located in the foothills along the western slope of the Sierra Nevada Mountains within the upper Kern River Basin, in the Counties of Kern and Tulare, California. The Project is approximately 40 miles northeast of Bakersfield, California along the North Fork Kern River and on Salmon and Corral Creeks. The closest communities to the Project are the small towns of Kernville and Lake Isabella.

The Project was placed into service by Southern California Edison (SCE) in the spring of 1921 and operated under a permit from the Department of Agriculture until 1964. On August 7, 1964, the Federal Energy Regulatory Commission (FERC) issued a 25-year operating license to SCE under FERC Project No. 2290. The Project currently operates under a 30-year FERC license issued on December 24, 1996, and expires on November 30, 2026.

The KR3 Hydroelectric Project is a run-of-river project, and essentially has no water storage. Water from the North Fork Kern River is diverted at the Kern River No. 3 Diversion Dam (also known as Fairview Dam), and directed through a concrete sandbox structure where sediment is allowed to settle out of the water before entering the Projects conveyance system. From the sandbox, water flows into a conveyance system comprised of 60,270 feet of tunnels and 4,600 feet of concrete flumes that run along the eastern hillside above the North Fork Kern River. The Project also captures flows from two intermediate tributaries, Salmon Creek and Corral Creek. Diverted water within the conveyance system is directed to a forebay, penstocks, and then through a two-unit powerhouse. There are no transmission lines associated with this Project; however, power is delivered to a non-Project transmission system.

The conveyance system bypasses an approximate 16-mile reach of the river between Fairview Dam and the powerhouse tailrace. The southern end of the Project, KR3 Powerhouse, is located approximately 2 miles north of Kernville, in Kern County. The Project also includes approximately 18 miles of Project-related roads that are used by SCE to access Project facilities and to conduct ongoing operations and maintenance activities. The total installed capacity of the Project is 40.175 megawatts (MW).

The majority of Project facilities are located on public lands within the Sequoia National Forest (SNF) and private lands, including SCE owned land. In 1987, Congress designated 78.5 continuous miles of the North Fork Kern River from the Kern/Tulare County Line up to the headwaters in Sequoia National Park as "Wild and Scenic River" (Public Law No. 100-174, 101 Stat. 924 [1987]). Some portions of the water conveyance system and Project access roads fall within the Wild and Scenic River corridor quarter-mile buffer. The Project powerhouse, siphon, and penstocks are not located within the designated river corridor.

PROJECT OPERATIONS

Water for power is diverted primarily from the North Fork Kern River; however the Project is operated as a run-of-river facility. Therefore, the amount and timing of flow diverted for power at Fairview Dam is a function of inflow (runoff), FERC License requirements for instream flows, seasonal whitewater flow releases, flowline capacities, and other operational agreements. The KR3 Powerhouse operates when sufficient water is available at the primary intake (Fairview Dam), as well as from two small diversions that supply additional water to the water conveyance system (Salmon Creek and Corral Creek Diversions). Under optimum conditions, the water conduit is designed to carry approximately 620 cfs.

SCE is required to maintain continuous minimum flows, or natural flows, whichever is less in the North Fork Kern River below Fairview Dam (bypass reach). Depending upon the time of year, flows range from 40 cfs in the winter months (November through February) up to 130 cfs in the summer months (July and August), as specified in License Article 406 (and Forest Service 4(e) Condition No. 4). SCE is also required to maintain minimum instream flows below Salmon Creek and Corral Creek Diversions.

Additionally, SCE provides 35 cfs year-round to California Department of Fish and Wildlife (CDFW)'s Kern River Planting Base Hatchery via the Project conveyance system and the KR3 Powerhouse tailrace. However, if the natural flow is not available to meet both the hatchery needs and the minimum instream flows, the hatchery flows takes precedence over the instream flows below the dam (License Article 406).

During peak runoff in the spring and summer, a flow schedule was designed to enhance whitewater recreation opportunities in the bypass reach (Table 1). License Article 422 (amended 1/30/2019) states:

"Beginning no later than 10 a.m. and ending no earlier than 5 p.m. of each day that whitewater flows are scheduled, the Licensee must release the minimum whitewater flows described below (Table 1) into the Project bypass reach. The use of water under the regime below must be based on the previous day's average inflow to the project, from April 1 through July 31, measured by adding the preliminary canal gauge 11185500 data below the diversion to the preliminary river gauge 11186000 data below Fairview Dam. In the event that actual inflows to the Project on a whitewater release day are insufficient to both allow the continuous 300-cfs diversion to the Project powerhouse and meet the minimum whitewater release, then the whitewater release may be reduced in order to allow the continuous 300-cfs diversion to the Project powerhouse."

Table 1 Whitewater Recreation Flow Releases Schedule

Dates	Boating Days	River Flow Fairview Dam (cfs)	Minimum Whitewater Release (cfs)
April 1 up to the weekend prior to Memorial Day Weekend	Fridays and Weekends	1,000 to 1,300 More than 1,700	700 1,400
Weekend prior to Memorial Day Weekend until July 4	Daily	1,000 to 1,300 More than 1,700	700 1,400
July 5 up to July 31	Weekends	1,000 to 1,300 More than 1,700	700 1,400