

POWER PROJECTS

POSSIBLE

on

ARKANSAS RIVER IN COLORADO.
Lake, Chaffee & Fremont Counties.

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By

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POWER PROJECTS POSSIBLE ON ARKANSAS RIVER IN COLORADO.

Manuscript report made available by Department of Interior, Geological Survey.

Nineteen power projects are possible on Arkansas River in Colorado, according to a report prepared by an engineer of the Department of the Interior, Geological Survey. These projects will represent a total potential power of 44,000 horsepower for 50 per cent of the time and 24,000 horsepower for 90 per cent of the time.

The use of the water for power, however, is secondary to its use for irrigation. The total adjudicated and decreed water rights in three irrigation districts below Canon City amount to six times the mean annual flow at Canon City, but as the storage reservoirs for irrigation are in the lower part of the river, the natural flow in the upper part is available for the generation of electric power. The cost of developing power will be relatively high because of the low heads and the small flow and because the flow can not be regulated for the generation of power owing to the requirements for irrigation.

Six reservoir sites were found, but owing to the high cost of construction only two are considered feasible at present. One of these sites is on East Fork of Arkansas River near Leadville, where a dam 100 feet high would create a reservoir having a capacity of 10,000 acre-feet; the other site is at Twin Lakes, where a 75-foot dam would create a reservoir having a capacity of 130,000 acre-feet. The Twin Lakes reservoir could supply water for both power and irrigation.

Between Leadville and Buena Vista there are three good power sites the development of which would require three low diversion dams and 12 miles of conduit, having a capacity of 300 second-feet. The development of these sites would make available 9,200 horsepower for 50 per cent of the time and 3,800 horsepower for 90 per cent of the time. Between Buena Vista and Salida there are four power sites. A dam is already built at one of these sites and a low diversion dam at each of the others and 18 miles of conduit of 350 second-feet capacity would make available a total of 14,800 horsepower for 50 per cent of the time and 8,500 horsepower for 90 per cent of the time. Between Salida and Pleasanton there are three power sites, where three low diversion dams and 13 miles of conduit of 425 second-feet capacity would make available 7,900 horsepower for 50 per cent of the time and 4,900 horsepower for 90 per cent of the time. Between Pleasanton and Canon City there are four power sites where four low diversion dams and 9 miles of conduit of 450 second-feet capacity would make available 7,800 horsepower for 50 per cent of the time and 5,400 horsepower for 90 per cent of the time.

The conduits for all power projects between Leadville and Canon City would be constructed mainly in soft earth, except near Salida, where a mile of flume would be required.

A manuscript copy of the report, which describes more fully the power possibilities of Arkansas River above Canon City, Colo., may be consulted at the office of the Geological Survey in the Interior Department Building at Washington, D. C., or at the district office of the Survey at Denver, 403 Federal Building. A copy of the report will be sent to other district offices of the Geological Survey for consultation on application to the Director, Geological Survey, Washington, D. C.