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GLEN CANYON DAM

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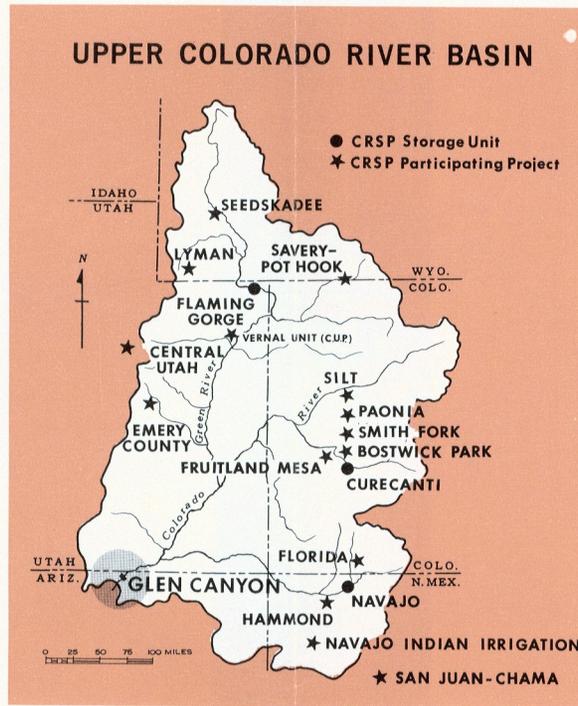
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Glen Canyon Dam and the Colorado River Storage Project



Irrigation in the Upper Basin

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Paonia Dam—A participating project

Glen Canyon Dam is the biggest—and the most important—dam in the Colorado River Storage Project. A concrete-arch dam, it stores water in Lake Powell, the reservoir created by the dam, to meet downstream commitments. Controlled releases of water through the giant turbines generate great amounts of hydroelectric power, which is then used by cities and industries in the Intermountain West. The revenue from CRSP hydropower not only repays the cost of Glen Canyon Dam, but also helps pay for the many Federal Reclamation projects in the Upper Basin of the Colorado River. These water projects, which irrigate the land and supply municipal water and other benefits, are called participating projects.

The Bureau of Reclamation's Colorado River Storage Project is one of the most far-reaching examples of regionwide water development programs in the United States. Since it was authorized in 1956, 3 major storage dams—Glen Canyon, Flaming Gorge, and Navajo—have been completed. The 3 dams of the Curecanti Unit are now under construction.

By 1964, farmers and ranchers were receiving water from 5 completed participating projects, and 6 more were under construction. Additional participating projects have been authorized and others are in various stages of investigation to determine their feasibility.

Presently authorized features of the CRSP will cost about \$1 billion. Roughly, 92 percent of the Bureau of Reclamation cost will be repaid to the Federal Treasury, principally through the sale of CRSP power produced at Glen Canyon Dam and at the other CRSP hydroplants.

The large water storage capacity of Lake Powell (27 million acre-feet) permits long-term, cyclical storage and also can be used to meet downstream water commitments. This regulation will permit better utilization of water in the upstream basin.

Glen Canyon Dam was built as a benefit to all Americans. Whether you live in the city or on the farm, using water made available by the CRSP, or whether you come to fish, to go boating, or just to sightsee, the Colorado River Storage Project belongs to you and can be enjoyed by you. It is an investment in the future of America.

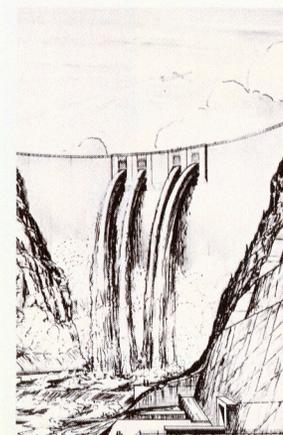
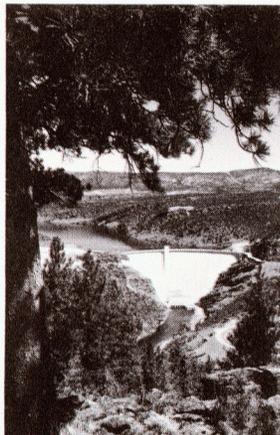
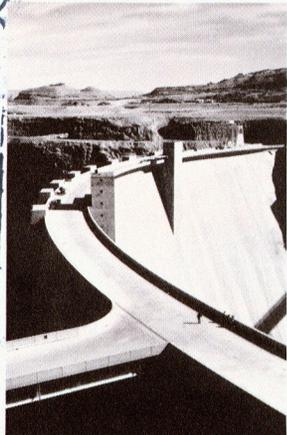
THE STORAGE UNITS

Glen Canyon Dam

Flaming Gorge Dam

Navajo Dam

Curecanti Unit Dam



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Building the Dam and Bridge, 1956-64

HOW MUCH? HOW LONG? HOW BIG?

EXCAVATION (To prepare damsite and powerplant):

Total: 5,509,484 cubic yards of rock and sand, including:
18,000 feet of tunnels.
127 feet (maximum) below original river channel.

DAM AND POWERPLANT (The materials):

592,000 tons of cement (12,595,745 sacks).
204,360 tons of pozzolan.
9,502,000 tons of rock and sand (concrete aggregates).

GLEN CANYON BRIDGE (The world's highest steel arch bridge):

Height above river.....	700 feet
Span of bridge arch.....	1,028 feet
Length of deck.....	1,271 feet
Vertical rise of arch.....	165 feet
Width of roadway.....	30 feet

GLEN CANYON DAM (The statistics):

Height above bedrock.....	710 feet
Height above original river channel.....	583 feet
Thickness at foundation (at lowest point).....	300 feet
Maximum thickness (at right abutment).....	350 feet
Thickness at crest.....	25 feet
Crest length (arc length at axis of dam).....	1,560 feet
Volume of concrete:	
Dam only.....	4,901,000 cubic yards
Powerplant and miscellaneous.....	469,000 cubic yards
Total concrete.....	5,370,000 cubic yards

Shaping the damsite, 1957



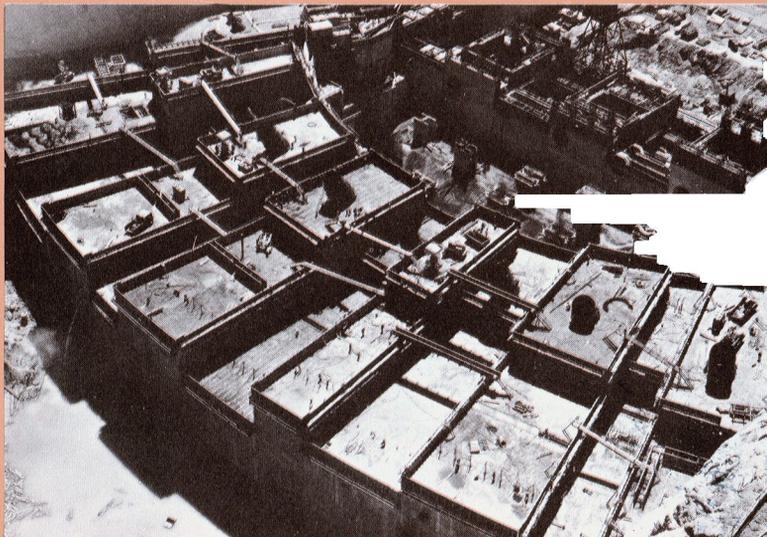
Glen Canyon Bridge grows, 1958



The foundation—ready for concrete, 1960



The dam rises from the canyon floor, 1961

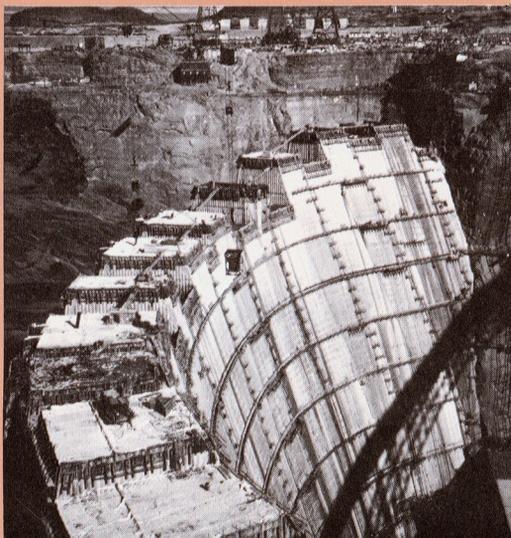


Highscalers anchor the canyon wall with rock bolts

Nearing the top, 1963



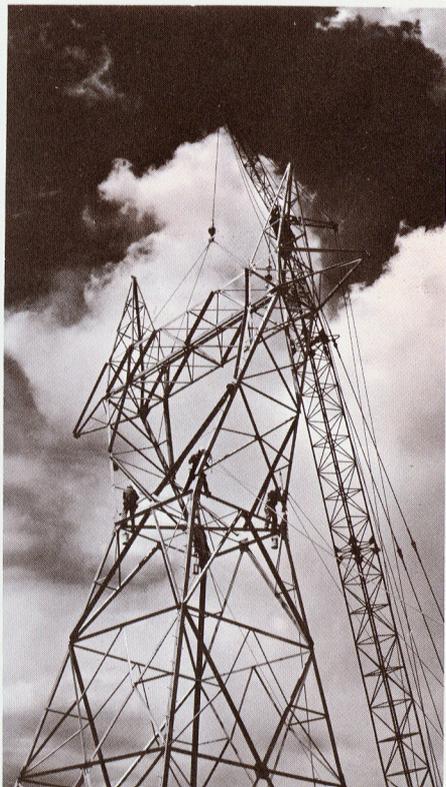
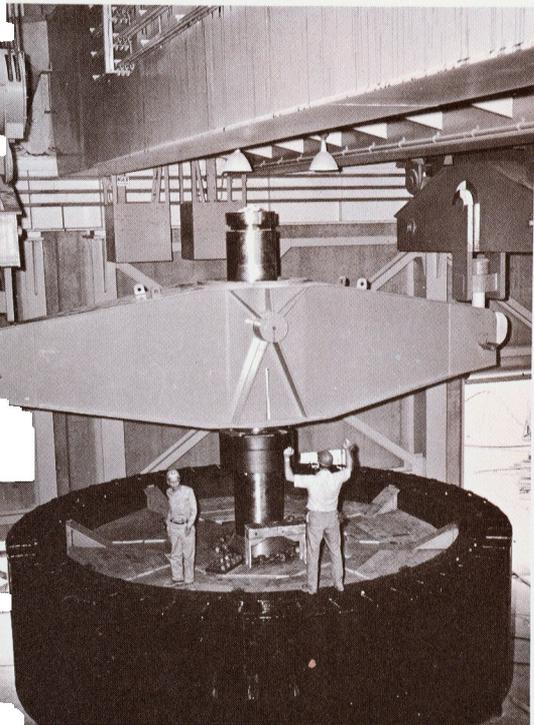
Another 24 tons of concrete for the rising dam



Hydro Electric Power

Unseen by the visitor, but vitally important, is the installation of turbines and generators now underway in the Glen Canyon Powerplant. The 8 generators have a total capacity of 900,000 kilowatts—enough electricity for a city of 1 million people. When ordered, the generators were the largest ever to be installed in a Bureau of Reclamation powerplant. Some of the units were already producing hydroelectric power in 1964. The eighth and last generator is scheduled to be "put on the line" in the spring of 1966.

Electrical energy means transmission lines, with high steel towers to carry the long aluminum conductors, which measure up to about $1\frac{1}{3}$ inches in diameter. Glen Canyon power (900,000 kilowatts) is tied in with powerplants at Flaming Gorge Dam, the Curecanti Unit dams, and with other smaller CRSP powerplants which, when completed, will produce a combined total of 1,351,500 kilowatts for the system. Total length of the Federal "backbone" transmission line approaches 2,100 miles. Interconnecting lines, both private and public, total many thousands of miles in length and carry CRSP power to major metropolitan areas and to rural areas of the Intermountain West.



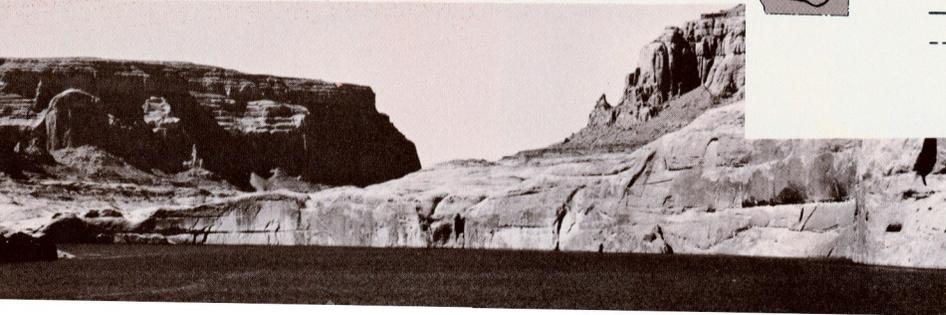
ES Lake Powell

"Lake Powell is an indescribably green body of water of labyrinthine proportions completely surrounded by a continent of red sand and rock. It is the only instance on record wherein a sizeable portion of this planet has been improved on by the coming of man."

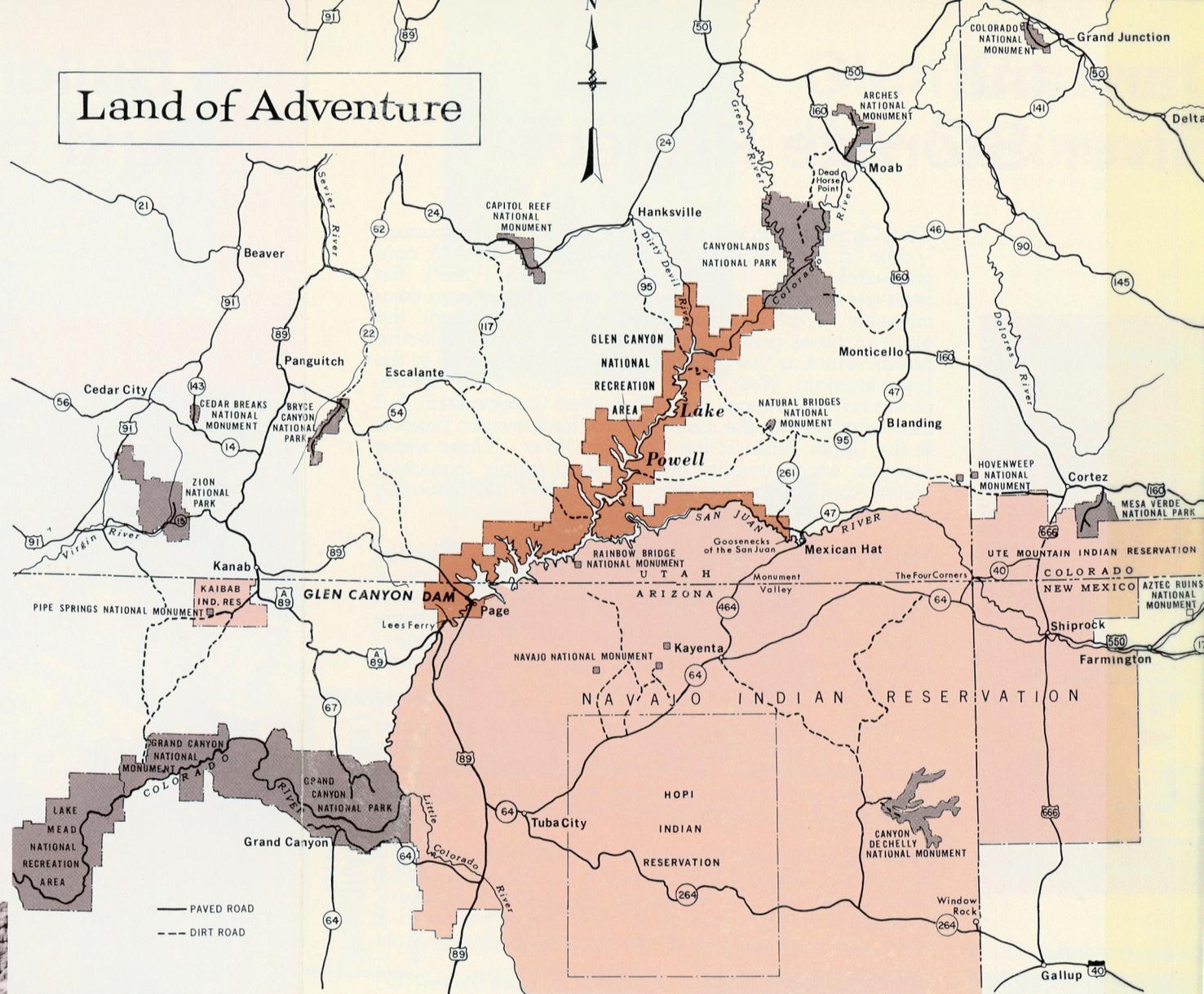
This statement, made by the editor of a regional newspaper, may or may not be fully accurate. But it is representative of public reaction to Lake Powell, whose beauty must be seen to be believed. For those who are statistically minded, Lake Powell, when full, will contain 27 million acre-feet of water. The lake covers 186 miles of the Colorado River upstream from Glen Canyon Dam. There will be 1,900 miles of shoreline to explore!

Many agencies are helping develop the recreation potential of this vast, manmade lake. The Fish and Wildlife Service of the Department of the Interior, working with the States of Utah and Arizona, has planted millions of trout and bass in the lake. The National Park Service, also in this Department, administers the lake and nearby area as the Glen Canyon National Recreation Area. At the main access points, recreation facilities—marinas, swimming beaches, boat ramps, and the like—have been developed.

For further information on recreation opportunities, contact the Superintendent, Glen Canyon National Recreation Area, National Park Service, P.O. Box 1507, Page, Ariz.



Land of Adventure



Motion pictures in 16-mm. color, with sound, on the subjects of Glen Canyon Dam and the CRSP are available for loan. Send your requests to: Chief Engineer, Bureau of Reclamation, Building 53, Denver Federal Center, Denver, Colo., 80225. Film catalogs are also available.

In its assigned function as the Nation's principal natural resource agency, the Department of the Interior bears a special obligation to assure that our expendable resources are conserved, that renewable resources are managed to produce optimum yields, and that all resources contribute their full measure to the progress, prosperity, and security of America, now and in the future.