Glen Canyon

Dam and National Recreation Area

The Canyon and the Lake

Where once the Colorado River rushed seaward carving deeply into soft sedimentary rock, broad lake waters now mirror the sky in comparative stillness. This is Lake Powell, a sparkling surface of blue, twisted and branched into the ancient shape of Glen Canyon. Visitors today seek outdoor fun and refreshment across a landscape greatly changed by man for his need of water and power, but a landscape where nature's brilliant colors and marvelous architecture still dominate. For most visitors, Lake Powell is more than just a place for recreation. Awesome in its dimensions and complexity, it is an experience never to be forgotten.

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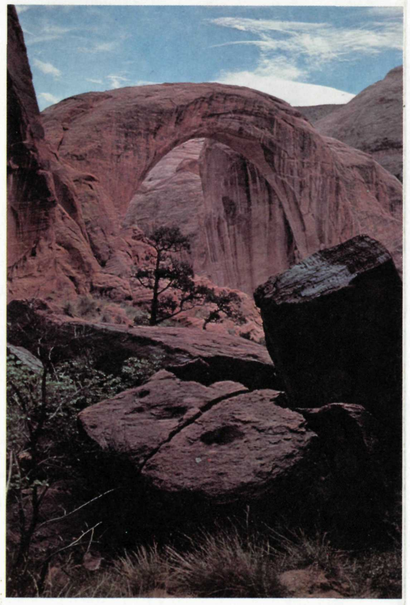


Administration

Glen Canyon Dam is operated by the Bureau of Reclamation, and the National Recreation Area is administered by the National Park Service. Both are agencies of the U.S. Department of the Interior.

The address of the Chief of the Glen Canyon Field Divisions is Bureau of Reclamation, Box 1477, Page, AZ 86040; and the regional director's address is Bureau of Reclamation, Box 11568, Salt Lake City, UT 84147.

The address of the superintendent of Glen Canyon National Recreation Area is Box 1507, Page, AZ 86040.

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

U.S. Department of the Interior
Bureau of Reclamation
National Park Service

Glen Canyon Dam and the Colorado River Storage Project

Glen Canyon Dam, set between high cliffs of red sandstone, was built by the Bureau of Reclamation to harness the turbulent waters of the Colorado River. Behind this white concrete monolith, Lake Powell stretches more than 290 kilometers (180 miles) to the northeast. Glen Canyon Dam and Lake Powell are the principal features of the Colorado River Storage Project (CRSP).

The concrete arch dam stores water in Lake Powell to meet downstream commitments which permits the use of a greater volume of water in upstream valleys; Lake Powell's large storage capacity permits long-term cyclical storage and maximum utilization of water. Controlled releases of water through the giant turbines of the powerplant generate more than one million kilowatts at full capacity, or enough to meet the electric energy needs of a city with a population of 1.5 million. The hydroelectric power is used by cities and industries throughout the West.

Glen Canyon Dam, built between 1956 and 1964, contains 3.8 million cubic meters (5 million cubic yards) of concrete poured to a height of 217 meters (710 feet) above bedrock and 178 meters (583 feet) above the original river channel. The crest of the dam is 475 meters (1,560 feet) long. The first two generating units were put on the line in September 1964, and the eighth and final unit began generating power in February 1966.

Revenue from the sale of CRSP hydropower will repay the cost of Glen Canyon Dam and also help pay for other Federal reclamation projects in the upper basin of the Colorado River. These participating projects, as they are called, supply irrigation water for the land and drinking water for municipalities. Presently authorized CRSP projects and features will cost nearly $1.5 billion. Roughly 95 percent of this investment will be repaid to the Federal Treasury, principally through the sale of power produced at Glen Canyon and other CRSP hydroplants.

Visitors can take self-guiding tours of the dam daily throughout the year. The tour begins and ends at the Visitor Center on the rim of the canyon above the dam.

Two films about the Glen Canyon Dam and Lake Powell are loaned out to interested groups. "Adventure in Glen Canyon" is a 16mm color film about the dam and the lake; "Operation Glen Canyon" shows the construction of the dam. Requests for these films should be sent to Film Management Center, Bureau of Reclamation, Building 67, Denver Federal Center, Denver, CO 80225.

Places to See

The surfaced roads to Lake Powell are open all year. Lodging and boating services are provided year round at developed areas on the lake.

Glen Canyon Dam—at the southern end of the lake near Page, Ariz.—is open for self-guiding tours beginning at the visitor center.

Nearby is **Wahweap** on Lake Powell, and below the dam is **Lees Ferry,** a historic crossing place on the river. A pioneer fort and trading post can still be seen here along with relics of former mining activity.

Rugged scenery at the northern end of Glen Canyon can be seen from Utah 95. Roads to **Hite, Bullfrog Basin,** and **Halls Crossing** connect with Utah 95.

On the water, boaters soon discover that Lake Powell's colorful and fjordlike side canyons are its chief distinction. With names inspired by nature, or taken from Indian lore and pioneer history, these narrow, crooked passageways are often cast in the shadows of high walls and overhangs.

A long cruise takes boaters to **Rainbow Bridge National Monument.** In Bridge Canyon, you leave your boat for a short walk to the largest known natural stone bridge.

Another boat trip idea is to go up the river from **Lees Ferry** between towering, rust-colored sandstone walls. You'll meet plenty of fishermen working the cold, crystal clear water for trout.

Two views reveal some of the color and intrigue of Glen Canyon: (top) dramatic shapes that play in the evening light on distant rocks as boaters stop for the night; (bottom) the smooth texture inside a passageway of red sandstone scoured by erosion.

Regulations and Safety

While every effort has been made to provide for your safety, there are still hazards which require your alertness. Please use common sense and caution and follow these regulations:

Driving. Before you start out, inquire locally about the condition of improved dirt or primitive roads. Usually primitive roads are passable only by 4-wheel-drive vehicles. Off-road driving, except on designated trails, is prohibited because it is dangerous to you and it ruins the enjoyment of the environment for others; please help us protect this valuable national resource by driving only on designated roads at Glen Canyon.

Hiking. Traveling on foot, you can become absorbed in Glen Canyon's world of plants and animals. Rangers can suggest good routes; they should definitely be notified before you take long cross-country trips.

Camping. The only places where you should camp at the developed areas are in the designated campgrounds. Camping at roadside pullouts, in picnic areas, or on posted beaches in the vicinity of developed areas is prohibited.

Camping from your boat at other places around the lake is limited to 14 days in any one location and no more than 45 days per calendar year. Be careful to pick a campsite on flat or gently sloping terrain, not on talus slopes or underneath ledges where you can see that rock has fallen. Leave a clean campsite,

carrying your trash and litter with you.

Fishing. Check with rangers for certain "closed areas" within harbors where fishing is prohibited.

Water skiing. At least two persons must be in the boat—one the operator and the other observing the person being towed. The skier must wear a floatation device.

Water sanitation. Draining, dumping, or discharging of wastes or refuse, including human waste, into the water from any vessel is prohibited. Sanitary stations for emptying holding tanks are at each marina. You should purify lake water before using it.

Firearms. Carrying or discharging loaded firearms or explosives in developed or concentrated public-use areas is prohibited.

Pets. In the vicinity of developed areas, pets must be leashed or caged.

We're Joining the Metric World

Metric measurements are being used in this and other publications to help Americans become acquainted with the metric system and to make interpretation more meaningful for park visitors from other nations.

Indians and Pioneers

The rough canyon country of the Colorado Plateau has been occupied at various times by Indian tribes for at least 2,000 years. At first they lived here sporadically. Then, during a period of agricultural expansion between A.D. 900 and 1100, the land was farmed by people of the Pueblo culture. About 1200, these people began to leave the Glen Canyon region and, after almost a century of drought, the land was abandoned.

Ruins of Pueblo settlements and artifacts such as stone and bone tools, basketry and pottery indicate to archeologists that farming and hunting people once lived in the rich canyon bottoms.

The first written record of Glen Canyon is found in the journal of Father Escalante, a Spanish Franciscan missionary whose exploring party floundered for several days at the edge of this forbidding barrier. Father Escalante, Father Dominguez, and their party set out from Santa Fe, N. Mex., in July 1776 to pioneer a route to California. After three months, having bypassed the canyon country, the party reached the vicinity of Milford, Utah, where they reluctantly decided to turn back to Santa Fe before the onset of winter. Homeward bound they ran into difficulty and hardship.

On October 26, the party reached the Colorado River at Lees Ferry, but near-disaster marked attempts to get across. Laboriously, the explorers climbed cliffs and walked through deep sand, scouting for a ford. On the night of November 2, they camped along Wahweap Creek, near the present location of Wahweap Lodge.

Four more days they struggled on, sustained by horsemeat and "toasted leaves of small cactus plants." On the morning of November 7, they chopped steps in the sandstone wall at Padre Creek and safely led their pack stock to the bank of the Colorado. Without a guide, they had located an old Indian crossing. The crossing was wide but safe, and by 5 o'clock all were over, "praising God our Lord and firing off a few muskets as a sign of great joy." The party arrived in Santa Fe on January 2, 1777, and the place at which they crossed the Colorado became known as the "Crossing of the Fathers."

The name "Glen Canyon" we owe to John Wesley Powell who observed numerous wooded "glens" along the banks of the Colorado River. Since Powell mapped the area and named many of the geographic features based on his explorations of the canyon country in 1869 and in 1871-72, and since he became an early advocate of water reclamation, his name is appropriate for the lake that now fills Glen Canyon.

The Navajo Indians, whose reservation adjoins Glen Canyon on the south, are newcomers compared with the Hopi and Rio Grande Pueblo peoples. When the Navajos moved into the area about 1860, they acquired some of the crafts of the earlier Pueblo people, such as pottery making and silverwork. More recently, they have become noted for their handsome and durable rugs and distinctive paintings.

Boating Safety

Before getting underway, be sure you know your boat and its operation. Make certain you understand and comply with State, U.S. Coast Guard, and National Park Service boating regulations.

DIAMOND shape warns of danger.

DIAMOND shape with cross. Boats keep out.

DIVERS FLAG means divers are submerged. Stay clear.

3 — CAN BUOYS Black color—Odd Numbers—Indicates left side of safe channel when headed up-lake *away* from dam.

MID-CHANNEL Black and white—No Numbers—Pass these buoys safely to either side.

2 — NUN BUOYS Red color—Even Numbers—Indicates right side of safe channel when headed up-lake *away* from dam.

5 — DAYMARK Green Square—Odd Numbers—On left shore when headed up-lake *away* from dam.

Caution—not all daymarks and buoys are lighted at night.

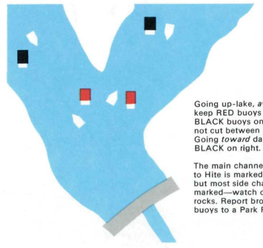
6 — DAYMARK Red Triangle—Even Numbers—On right shore when headed up-lake *away* from dam.

ROCK — SQUARE or RECTANGLE gives information, names, distances.

5 MPH — CIRCLES mark controlled areas.

These items should be included on your pre-sailing checklist:

1. Check the weather; when the water is rough, stay ashore. If you are on the lake when the water becomes rough, seek a sheltered cove and wait for calm water.
2. Make sure fuel vapors are dispersed before starting your engine.
3. Make sure a U.S.C.G.-approved floatation device is carried for each person in the boat; in Utah, children under 12 years old are required to wear them.
4. Know the standard distress signals; carry simple signaling equipment.
5. Remember, when a boat is loaded, its stability is affected. Keep the load deep in the boat.
6. Do not stand up in a small boat. Riding on the bow of the boat is prohibited unless it is fitted with an adequate bow railing.
7. Be familiar with the boating "Rules of the Road" and the local use of navigational aids, such as buoys and lights.



Going up-lake, *away* from dam, keep RED buoys on right side, BLACK buoys on left side. Do not cut between buoys and shore. Going *toward* dam, RED on left, BLACK on right.

The main channel from Wahweap to Hite is marked with buoys, but most side channels are not marked—watch out for submerged rocks. Report broken or damaged buoys to a Park Ranger.

Natural History

Dominating the Glen Canyon spectacle are mountains and vertical cliffs of rock which originated as deposits of sediment. Wind-blown sediments reveal themselves in the brick-red, Navajo sandstone shaped into cliffs near the dam. These are the slopes of one-time sand dunes. Examples of sea-deposited sedimentary rocks are exposed at Wahweap. There the red Carmel formation overlies the Navajo sandstone. Other formations contain fossils of marine animals that lived millions of years ago.

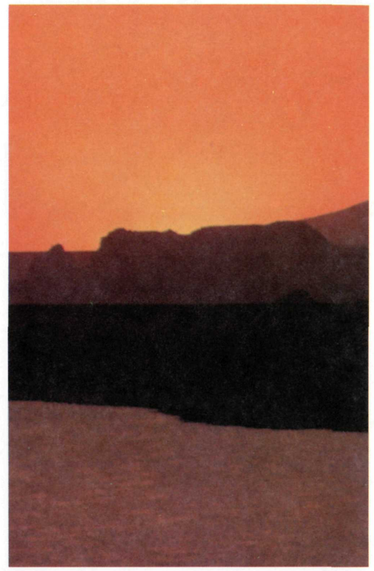
The last volcanic uplift of the region began about 60 million years ago. As the uplift progressed, meandering streams of the ancient low-lying Colorado Basin ran faster, cutting the labyrinth of canyons that you can explore today on the waters of Lake Powell.

Sweeping vistas of rock and sky are scaled so large here that Glen Canyon's plantlife at first glance might escape notice. But a surprising amount of vegetation can be found. Lichens on the canyon walls show up as streaks of color. Cactus and the bayonet-tipped yucca grow widely. In spring, wildflowers spread their brilliance upon mesas, over dunes, and along streambeds; yet another blossoming season may occur if the summer rainfall is unusually heavy. Cottonwoods, willows, and tamarisks grow near streams, and Utah junipers and pinyons live at higher elevations.

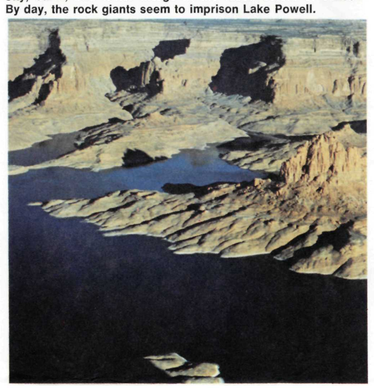
The desert animals you may see in the beam of your headlights do their hunting and feeding at night. Next day look for their tracks in the sand or in the wet soil by lakeshore. Doglike tracks are made by coyotes and foxes; small tracks by rats, mice, and lizards. Sharp-pointed hoof prints of deer can be found in many of the longer side canyons.

Lizards are seen frequently. The chuckwalla, the largest of them, feeds entirely upon plants, while the rest hunt insects and other small animals. There are some snakes, of course, and occasionally a rattlesnake, though you might hike in this area for a year and not see one. Still you should be watchful for this poisonous snake as you walk about, especially at night.

Many species of birds live in and around the cliffs of Glen Canyon and, now that the lake is filled, many species of waterfowl use the water as a resting place. Sandpipers resting on sandbars are a common sight.



Sky, earth, and water merge in the fused colors of sunset. By day, the rock giants seem to imprison Lake Powell.



Water Sports

Boating. Of all water sports, *boating is supreme on Lake* Powell. Powerboats, canoes, kayaks, and sailboats—all have their place here. Small boats and rough water, however, do not go together; prudent boatmen remain ashore when this condition prevails.

Not all the beaches at Glen Canyon National Recreation Area are as broad and sandy as this one at Wahweap, but everywhere the water is clear and cool—a welcome relief from the intense sunshine and heat of summer days.

For sailing craft, *Wahweap, Padre,* and *Bullfrog Bays* provide more room to maneuver and more consistent winds than other places.

Canoes, kayaks, and other small craft have an advantage in the narrow side canyons. Small craft especially should be careful of powerboat wake.

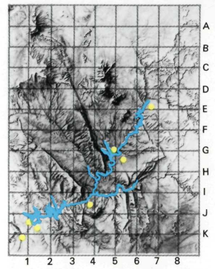
Swimming. Water surface temperatures are pleasant for swimming in summer and early fall. Swimmers are attracted to the beaches and sandy coves throughout Lake Powell.

Fishing. Largemouth bass, rainbow trout, striped bass, and crappie have been planted in *Lake Powell.* Below the dam, the clear cold water of the river is making *Lees Ferry* famous for trout fishing. Check fishing regulations at park ranger stations and at the National Park Service administrative offices at *Page.* Appropriate State fishing licenses are available locally.

Water Skiing. Wahweap, Padre, Last Chance, and *Bullfrog Bays* provide plenty of room and beautiful surroundings for water skiing. Please stay out of marked channels.

Catches of largemouth bass often include specimens weighing over 4.5 kilograms (10 pounds). This popular game fish feeds near the surface at dawn and twilight and lurks in deeper water during the day.

Water skiers cut the blue water into long, neat wakes making good use of the wider channels and bays of Lake Powell.



Marina
Launching Ramp
Swimming
Campground
Trailer Village
Grocery
Restaurant
Lodging
Ranger Station
Airstrip

Facilities—A Quick Reference

To find developed areas on the lake, use map grids here and on the other side. Facilities are listed below.

Page (K-1)
Page, Ariz., has motels, restaurants, stores, and scenic airplane rides from Page Airport. Write to the Chamber of Commerce, Box 727, Page, AZ 86040.

Wahweap (J-1)
This area has a ranger station, information desk, campgrounds, picnic shelters, launching ramp, and swimming beach. Wahweap Campground, about 7.2 kilometers (4.5 miles) via Lakeshore Drive, has 178 campsites for tents and trailers (no utility hookups) with charcoal grills (firewood unavailable) and picnic tables, restrooms, and drinking water.

Canyon Tours, Inc., Box 1597, Page, AZ 86040, operates a boat rental, boat tours, a marina with boating supplies and repairs, restaurant, motel, trailer village with utility hookups, and a service station.

Lees Ferry (K-1)
This area has a ranger station, launching ramp, and campground. Other services and facilities, including a restaurant, service station, and store, are located 5.6 kilometers (3.5 miles) away at Marble Canyon.

Rainbow Floating Marina. (J-4)
This area can be reached only by boat. It has a ranger station, restrooms, emergency communications, boat-fuel station, and camp supply store. This marina will be moved to Dangling Rope Canyon.

Bullfrog (G-5)
This area has a ranger station, launching ramp, campground, picnic area, and landing strip. Bullfrog Resort and Marina, Inc., Bullfrog Basin, Hanksville, UT 84734, operates boat rental, service station, restaurant, lodging, camp store, marina, and a trailer village with utility hookups.

Halls Crossing (G-5)
This area has a launching ramp, campground, landing strip, and a ranger on duty. Halls Crossing Resort and Marina, Inc., Blanding, UT 84511, operates lodging, boat rental, marina, boat trips, boating and camping supplies, and a trailer village with utility hookups.

Hite (E-7)
Limited camping facilities. Ranger on duty. Hite Marina, Inc., Box 1, Hanksville, UT 84734, operates a marina, camp store, boat rental, and service station.

GLEN CANYON NATIONAL RECREATION AREA

This map is not recommended for navigation. Detail maps for navigational purposes are sold at the marinas.

PAGE (K-1): motels, restaurants, stores, scenic airplane rides.

WAHWEAP (J-1): ranger station, information desk, campgrounds, picnic shelters, launch ramp. Marina concession includes boat rentals, tours, supplies, and repairs; restaurant, motel, trailer village with hookups, and *service station.*

LEES FERRY (K-1): ranger station, launch ramp, campground.

RAINBOW MARINA (J-4): ranger station, restrooms, emergency communications. Concession-operated boat-fuel station and camp store will be moved to Dangling Rope Canyon.

BULLFROG (G-5): ranger station, launch ramp, campground, picnic area, and landing strip. Marina concession includes boat rentals, service station, restaurant, lodging, camp store, and trailer village with hookups.

HALLS CROSSING (G-5): launching ramp, campground, landing strip, and ranger on duty. Concession-operated lodging, boat rental, boat trips, boating and camping supplies, and trailer village with hookups.

HITE (E-7): ranger on duty, and primitive camping. Concession-operated boat rental, camp store, service station.

Note: Sanitary dump stations for boats and trailers are located at all Lake Powell marinas except for Rainbow.

Max. Lake Elevation 1,128 m (3,700 ft)

Min. Lake Elevation 1,082 m (3,550 ft)

Paved Road

Dirt Road

Hiking Trail

Approximate Mileage from the dam (60)

Other National Park System areas:

Capitol Reef National Park (D-3)
Canyonlands National Park (A-8)
Natural Bridges National Monument (F-8)
Rainbow Bridge National Monument (J-4)

Kilometers 0 5 10 20

Miles 0 5 10