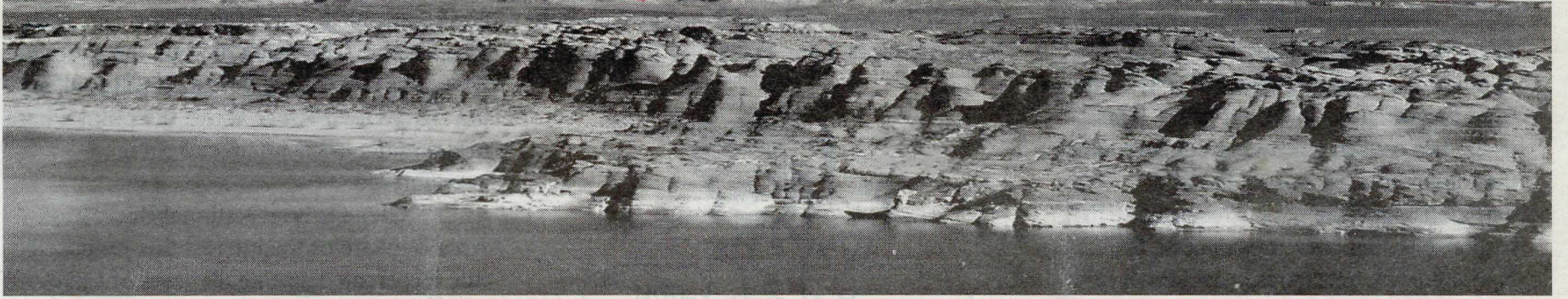


# Glen Canyon Reflections



GLEN CANYON NATIONAL RECREATION AREA

1999

## Glen Canyon--More Than Lake Powell

In 1972, Glen Canyon National Recreation Area was set aside by Congress "to provide for public outdoor recreation use and enjoyment of Lake Powell and lands adjacent...and to preserve the scenic, scientific, and historic features...."

Lake Powell is the most obvious feature of the recreation area. But did you know that Lake Powell--186 miles (344 k) long, with 1,960 miles (3,630 k) of shoreline--comprises only 13 percent of Glen Canyon NRA? The other 87 percent hosts an array of geological features, dynamic plant and animal communities, and evidence of 10,000 years of human cultures.

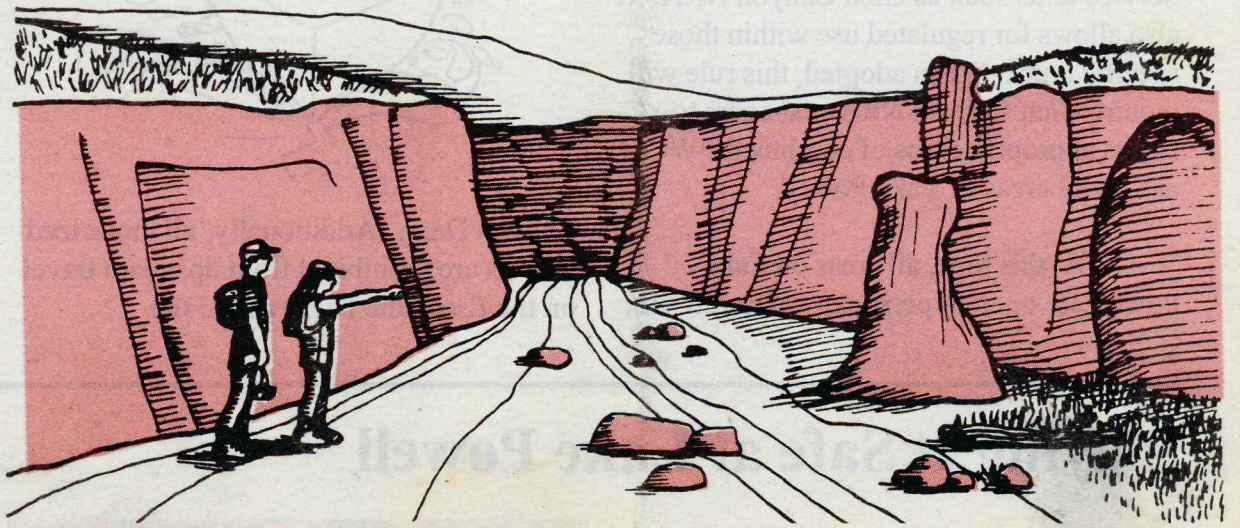
As you explore, seek the surprises and stories preserved and protected in this national park site!

### Water--the Absent Artist

Looks can be deceiving. Despite the presence of Lake Powell, water is actually scarce in this desert--only 7 inches (18 cm) of precipitation fall yearly. Yet WATER shaped--and continues to shape--this landscape. Whether by raging summer flash floods or by expanding winter ice crystals, the alcoves, arches, bridges, buttes, and canyons of this terrain are carved by water. Please remember that all features, including rocks, are protected by law. Refrain from carving or removing them.

### Ice Age Survivors

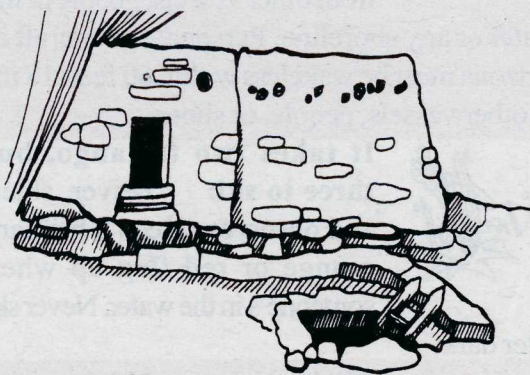
Although woolly mammoths and mastodons became extinct in the region about 12,000 years ago, several plants from the ice age--including Douglas Fir and Bigtooth Maple--linger in moist, shady, side canyons. Hanging



gardens lush with mosses, maidenhair ferns, monkey flowers, orchids, and poison ivy occupy wet alcoves. These habitats are very fragile and should be enjoyed from a distance. Over 750 plant species grow here!

### 10,000 Years of Footprints

Humans have called Glen Canyon home for at least 10,000 years. Prehistoric, ancestral and modern Indian cultures, explorers, miners, ranchers, and settlers all left their mark in this region. Don't be tempted to deface or remove a piece of this history. All archeological and historic items are protected by law.



### Sand Tracks

Bighorn sheep and mule deer are among the largest mammals seen, but more frequently viewed are rodents--like mice and chipmunks--and jackrabbits, coyotes, reptiles, and birds. Among the 275 species of birds found in Glen Canyon is the peregrine falcon. In fact, the world's largest population of breeding peregrine falcons thrives in Glen Canyon. Report unusual wildlife sightings to park rangers.

### Glen Canyon Dam Created a Lake--and a Movement

The Glen Canyon Dam changed forever the ecology of the Colorado River and people's relationship with it. The dam's construction allowed water storage for irrigation, clean power production, and new forms of recreation. The loss of wild Glen Canyon sparked a debate over land values which ultimately halted construction of two dams in Grand Canyon and contributed to the birth of the modern environmental movement. Tours of Glen Canyon Dam are offered daily.





# Personal Watercraft at Lake Powell

The National Park Service has been faced with a dramatic increase in the number of personal watercraft (PWC) being used in park areas in recent years. This usage has caused a growing concern about the impact this use has on the park experience and the park's resources. In response to this growing concern, the National Park Service is proposing a rule under the Code of Federal Regulations. This proposed rule would limit use of personal watercraft to specific National Park Service units such as Glen Canyon NRA. It also allows for regulated use within those specific units. When adopted, this rule will require Glen Canyon NRA managers to assess appropriateness of continued PWC use on all areas of Lake Powell.

At this time, all areas on Lake Powell are open to personal watercraft use,

but PWCs are prohibited from the Colorado River between Lees Ferry and the Glen



Canyon Dam. Additionally, all motorized vessels are prohibited from upstream travel on the Escalante River above the

confluence of Coyote Creek, the San Juan River above Clay Hills pullout, the Colorado River above the base of Imperial Rapid, and the Dirty Devil River above the point where measurable downstream current is encountered.

Glen Canyon National Recreation Area is aware of the interest this proposed rule has created among all users of Lake Powell and will ensure the public is kept informed on any progress. This rule-making process may take over a year or more to complete. Prior to any changes in the current use pattern, a comprehensive public review will be initiated to solicit public comments. For information on future planning/public scoping meetings dealing with this issue, visit the Glen Canyon NRA web site at <http://www.nps.gov/glca/>.

## Playing It Safe at Lake Powell

“Child Wearing Lifejacket Rescued After Being Thrown From Bow of Boat”

“22 Year Old Man Breaks Neck While Cliff Diving At Lake Powell”

“Family Nearly Killed by Carbon Monoxide Poisoning While on Houseboat”

“Man Buried in Sand Cave Dies at Lake Powell”

“Elderly Woman Nearly Succumbs to Heat Exhaustion at Rainbow Bridge”

Every year people die, injure themselves and others, and cause property damage while recreating on Lake Powell. By following a few simple rules you can avoid the heartache and suffering experienced when you become a headline.

**Personal Watercraft are not toys.** They are powerful vessels. Make sure you're legally old enough to operate one. In Utah, you must be 18 years old (unless you comply with Utah personal watercraft operator conditions); in Arizona, you must be at least 12 years old.



**PFDs mean Personal Flotation Devices and ensure Protection From Drowning.** Kids 12 years of age and younger and non-swimmers *must* wear a PFD while on boats.



**Don't be a hood ornament.** Bow-riding is dangerous and illegal; so is riding on a boat's transom or gunwales. While underway, make sure hands and feet remain inside the boat.



**Are you too close for comfort?** Slow down and make no waves when 150 feet (46 m) from other vessels, people in the water or any shoreline. Personal water craft in Arizona must be wakeless within 60 feet (18 m) of other vessels, people, or shore.



**It takes two to tango, but three to ski:** Driver, skier, and observer. Keep a brilliant orange or red flag up when someone's in the water. Never ski after dark.



**High winds equal high waves.** Seek shelter when storms threaten. Don't attempt to outrun a storm or cross a bay when high waves are present. Wear PFD's.



**Improve your odds.** Alcohol is involved in many boating accidents. Operating a vessel while under the influence of alcohol or drugs is illegal *and* dangerous.



**Go jump in the lake?** No way! Cliff jumping and diving can be deadly. Landing on underwater obstructions or other people can injure or kill you and them.



**Look out below!** Watch for underwater hazards. The lake level changes daily and seasonally. Only Lake Powell's main channel is marked with navigational aids.



**Who's your buddy?** Lake Powell has no lifeguards. Swim at your own risk and always with a partner. Keep an eye on others in the water, especially children.



**Be careful what you breathe.** Boat engines, generators, and gas appliances produce deadly carbon monoxide gases. Ensure proper ventilation. Don't swim, sit, or work near exhaust.



**Glen Canyon is no rain forest.** It's a desert. Keep your body protected, and drink lots of WATER. Let friends know your exploration plans.





## Welcome

On behalf of the staff of Glen Canyon National Recreation Area and Rainbow Bridge National Monument, I would like to welcome you to these unique units of the National Park Service. I encourage you to take advantage of our outstanding combination of developed recreational areas and opportunities for primitive recreation. We truly offer something for everyone.

We are excited about our expanding partnership with the Navajo Nation, beginning with the opening of Antelope Point Launch Area in summer 1999. In the next few years we plan to continue working with the Navajo Nation in developing a marina and other visitor support facilities at Antelope Point as well.

Emphasizing our Water Quality Program in the past few years has payed wonderful dividends with a cleaner lake and cleaner shorelines. In 1998, with your cooperation, 83% of the camps that our water quality patrol rangers contacted were in compliance with water quality regulations. The increased presence of park rangers performing water quality patrol not only assured that Lake Powell will continue to remain pure, but also expanded our visitors' appreciation of the area, and provided more efficient response to emergencies.

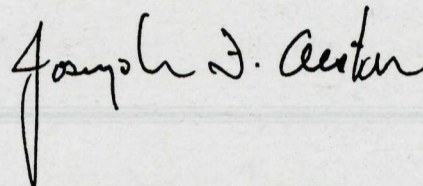
Funding received through our Fee Demonstration Program has enhanced Glen Canyon by facilitating repair and rehabilitation of the historic sites including the Lonely Dell Ranch,

facilitating those park ranger water quality patrols on Lake Powell, funding the installation of portable toilet facilities at some of the road-accessible beaches and supporting the placement of eight floating restrooms/dump station/pumpout on the lake.

Our many successes would not have been possible without the cooperation and commitment of each park visitor. We greatly appreciate your efforts in keeping Lake Powell pure and conserving it for future generations.

While exploring Glen Canyon, keep in mind that safety should be on everyone's mind while on vacation. Risks associated with recreational activities will always exist but can be greatly reduced through proper planning and common sense.

Please feel free to share your observations and concerns with me. Have a safe and enjoyable visit.



Joe Alston, Superintendent  
Glen Canyon National Recreation Area  
P.O. Box 1507, Page, AZ 86040

## Lake Powell Pure - Now and Forever

Think of Lake Powell as a large city with no sewage or water treatment facilities and with no garbage pickup services. Now imagine two million people spending the night each year on Lake Powell beaches. The same beaches are used over and over again by different boaters. How do Lake Powell and surrounding lands stay clean? With your help, keeping **Lake Powell Pure** is as easy as one..two..three!

### ONE... Know Regulations

Anyone camping in Glen Canyon National Recreation Area within 1/4 mile (.5 km) of Lake Powell is required to have and use a device for containing solid human wastes, unless NPS toilets are furnished on the beach. Use of plastic bags as receptacles for human waste is prohibited. Further, all containerized wastes must be disposed of properly--at approved dump/pumpout stations only. Any vessel equipped with a marine sanitation device (toilet) capable of overboard discharge must be sealed in a way that makes overboard discharge into Lake Powell impossible [36CFR 7.70 (c)].

### TWO... Carry and Use Portable Toilets.

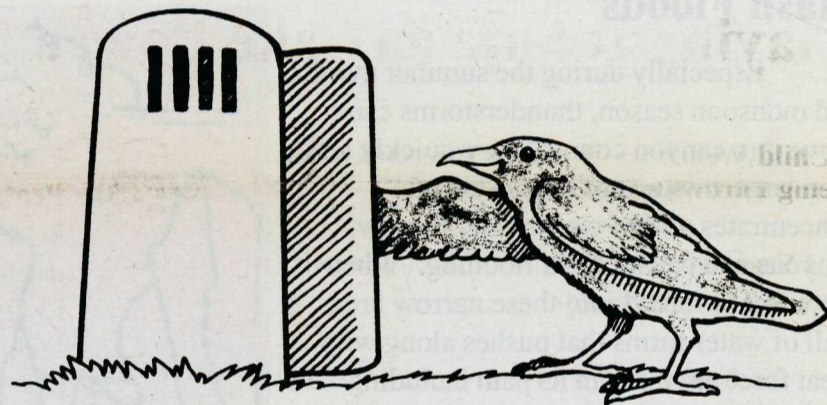
Most who camp on Lake Powell

shores enjoy quiet, isolated, clean beaches. In the past, people often buried human wastes in shallow holes along Lake Powell's shoreline. But since the lake can rise as much as 60 vertical feet (18 m) in one year, the holes and their contents were inundated, allowing solid human waste to contaminate Lake Powell.

Using portable toilets keeps beaches and waters clean. Portable toilets are available locally and from marina stores. Boaters may prefer to devise their own solid human waste containers. Either solution is acceptable as long as plastic bags, which clog and incapacitate portable toilet dump stations, are not used and the collected human waste is disposed of properly in approved facilities.

### THREE... Dispose of All Waste Properly.

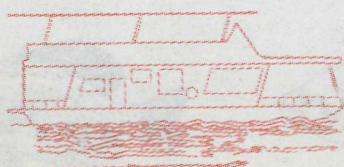
Dumping ANYTHING--including solid human or pet wastes--on the shores or in the waters of Lake Powell is illegal and unsanitary! Vessels with sewage macerator discharge ports **must** seal them to preclude any discharge. Dispose of human and pet containerized wastes at dump and pumpout stations, not in toilets.



### Water Quality Monitoring

Since 1988, the National Park Service has monitored Lake Powell for fecal coliform bacteria (FC) found in the digestive tracts of warm-blooded animals; FC may indicate the presence of fecal matter and related pathogens.

Biologists sample water at numerous lake locations. When a water sample exceeds 200 fecal coliform colonies, usually at crowded campsites with warm shallow water, the site is resampled and recommended for closure to swimming as long as rates remain high. Signs and bright yellow buoys mark closed areas. Once an area is closed, water samples are taken every day until the FC counts fall and remain at safe levels.





## LAKE POWELL RESTROOM FACILITIES

Bullfrog--marina, launch ramp (boat ready area)  
Bullfrog Bay beaches on roads 532 & 533, and Stanton Creek  
Dangling Rope--marina  
Halls Crossing--launch ramp, ranger station  
Hite--marina, launch ramp, Farley Canyon, Dirty Devil  
Lone Rock--beach  
Rainbow Bridge--courtesy dock  
Wahweap--marina, boat rental dock, Stateline and Main launch ramps, Picnic Beach, the Coves, and summers only at the Chains



## Human Waste Disposal Sites

### Floating Restrooms/Dump/Pumpout Stations (Closed During The Winter)

Warm Creek  
Face Canyon, near Dominguez Butte  
Rock Creek  
Oak Canyon  
Escalante River Arm  
The Rincon  
Halls Creek Bay, near the mouth  
Forgotten Canyon

### Boat Pumpout Stations:

Bullfrog--near launch ramp  
Dangling Rope--marina  
Halls Crossing--marina  
Hite--near launch ramp  
Wahweap--Stateline launch ramp, Wahweap marina

### Vehicle-Accessible Dump Stations:

Bullfrog--campgrounds  
Halls Crossing--campgrounds  
Hite--gas station  
Wahweap--campgrounds  
Lone Rock--Memorial Day through September 27th only, free pumpout service (part of camping fee)

### Portable Toilet Dump Stations:

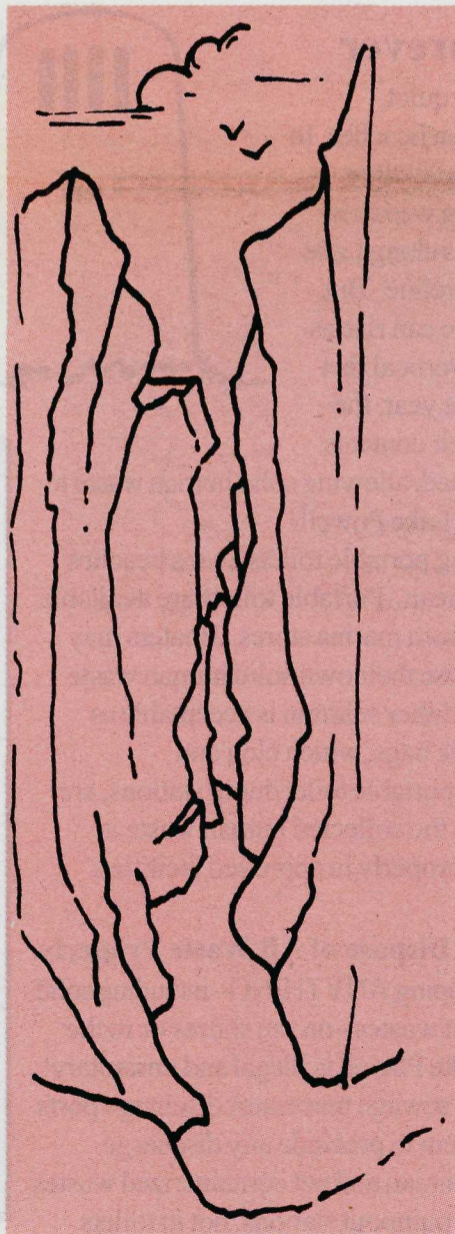
Bullfrog--boat pumpout station, boat ready area  
Dangling Rope--boat pumpout station  
Halls Crossing--boat pumpout station, near launch ramp  
Hite--gas station and boat pumpout station  
Wahweap--Stateline and Main launch ramp restrooms, and Stateline and Wahweap boat pumpout stations

## Flash Floods

Especially during the summer months and monsoon season, thunderstorms can move into canyon country very quickly and drop large amounts of rain. This rain concentrates within washes and narrow canyons and causes flash flooding. When the water is forced into these narrow areas, a wall of water forms that pushes along with great force anything in its path including sand, dirt, rocks, boulders, shrubs, and trees. Water, along with the erosional agents it carries, has formed many tall, very narrow, and beautiful "slot" canyons that attract visitors from around the world. Slot canyons are a work in progress. Flash floods that created what you see today will alter these same canyons in the future.

When hiking, pay attention! If you see rain -- even far, far away -- avoid washes and canyon bottoms for several *hours* afterwards. Flash floods have been reported to sound like freight trains. If you believe that a flash flood may be approaching, climb immediately out of the canyon bottom and to high ground. If you are on the lake, do not moor at the backs of canyons or below cliffs where waterfalls may form.

Since 1997, flash floods in nearby Antelope Canyon and in Grand Canyon's Phantom Creek killed more than 13 people.





## Looking for Something to Do?

■ **Carl Hayden Visitor Center** at Glen Canyon Dam is open daily 8-7 Mountain Standard Time from May through September and daily 8-5 the remainder of the year. Exhibits, video programs, bookstore, gift shop, and free guided tours of the Glen Canyon Dam are available.

■ **Bullfrog Visitor Center** is open daily 8-5 Mountain Time April through October; 8-5 weekends only in March and closed November through February, except for the Parade of Lights weekend at the end of November. Exhibits, including a slot canyon model, and a bookstore are available.

■ **Navajo Bridge Interpretive Center** is open daily 9-5 Mountain Standard Time, April-October and features outdoor exhibits, a pedestrian bridge over the Colorado River, and bookstore.

■ **Ranger programs** are offered on summer evenings at the Wahweap Campground Amphitheater. Topics and times vary. Check schedules at Carl Hayden Visitor Center, Wahweap Lodge, Wahweap Campground, or posted on bulletin boards in Wahweap and at various locations in Page.

■ **Concession services offered within the park include** boat tours, raft trips, boat rentals, lodging, and boat repair which are provided lakewide by ARAMARK, Inc.

■ **Fishing and hiking guides and other commercial services** are available. A list of authorized business services may be obtained from park headquarters.



New Wahweap Fishing Dock

### Park Concession Services

ARAMARK reservations

(800) 528-6154

Wahweap Lodge & Marina

(520) 645-2433

Bullfrog Resort & Marina

(435) 684-3000

Halls Crossing Marina

(435) 684-7000

Hite Marina

(435) 684-2278

Lake Powell Ferry

(Bullfrog-Halls Crossing)

(435) 684-3000

High Desert Adventures

(800) 673-1733

Bullfrog Medical Clinic

(435) 684-2288

### Attention Boaters!

Anyone other than concessioners providing commercial services, i.e., boat repair or boat caretaking within Glen Canyon National Recreation Area, must have a current Incidental Business Permit (IBP) from the National Park Service. Only ARAMARK and IBP holders are authorized to provide these services within the Recreation Area. If you need these services, please contact any marina office or the Glen Canyon National Recreation Area Headquarters to obtain a list of authorized IBP's.

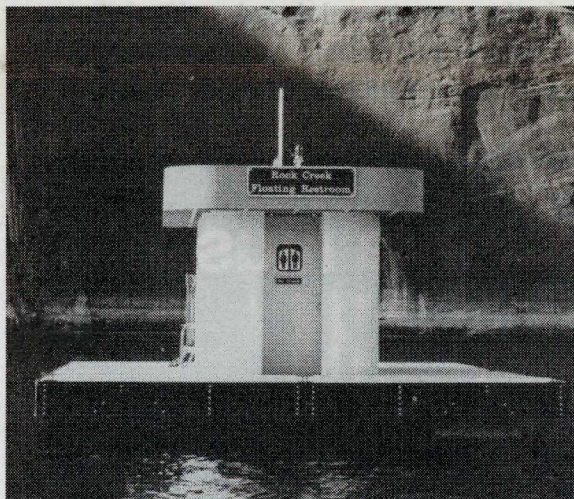
## Glen Canyon Fees - Where Does The Money Go?

For a third year, Lake Powell can boast of cleaner beaches, cleaner water, and more ranger patrols, thanks to the fee demonstration program that began in April 1997.

Glen Canyon receives 80 percent of each fee dollar collected, thanks to the fee demonstration program established by Congress. This program provides additional funding for parks from the people who actually use them. If legislation establishing the program permanently is not passed within a three-year period, Glen Canyon will only retain 15 percent of revenue collected.

"Just what the doctor ordered," said a visitor to the Lone Rock Beach entrance of the new fees. "We were very glad to see the extra ranger patrols, more bathrooms, beach cleaning, and holding tank service."

One important change implemented with fee revenues was the Water Quality Program. Additional rangers were hired at Wahweap and Bullfrog to conduct water quality patrols. Park rangers spent the night out on the lake, contacting visitors to educate them on the importance of proper human waste disposal. During the 1998 summer season, rangers contacted 14,456



Some fees collected in 1998 helped keep Lake Powell Pure. ARAMARK assisted in this effort by building, placing, and maintaining floating restroom and dump/pumpout stations like this one in Rock Creek

people at 2,275 camps and determined that 83 percent of these camps were in compliance with the new regulations for containment of solid human waste. Only one beach was closed last year as a result of high fecal coliform counts.

"Having funds to provide additional facilities to make it more convenient for boaters and lakeshore campers to dispose of human waste and to hire park rangers for regular water quality patrols has attributed greatly to the success we are seeing here today," said

Superintendent Joseph F. Alston. "Without fee collection, this would not have been possible."

Revenue collected from the fee demonstration program has provided for:

- \* **Rangers, boats, and equipment for water quality patrols.**
- \* **Start-up costs for fee stations at Wahweap, Lone Rock, Bullfrog, Halls Crossing, Hite, and Lees Ferry.**
- \* **Mobile pumpout service and additional toilet facilities at Lone Rock Beach.**
- \* **Rehabilitation and stabilization of historic structures like the Lonely Dell Ranch Site near Lees Ferry.**
- \* **Additional toilet facilities at other uplake beaches, including Bullfrog North and South and the Dirty Devil.**
- \* **Maintenance staff to conduct regular beach cleanup patrols at Lone Rock and the Bullfrog area and to staff the pumpouts.**

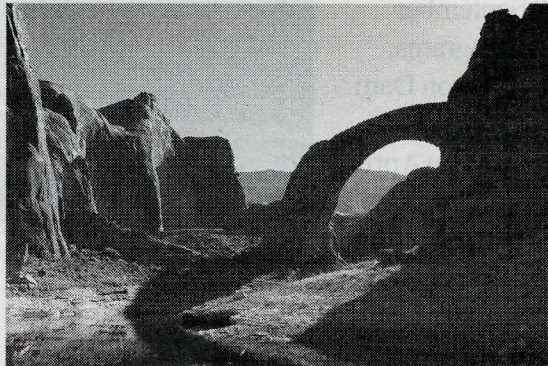
These first years of the fee program have been a resounding success and with proper management it should continue to be an asset to Glen Canyon National Recreation Area and our visitors for years to come.





## Rainbow Bridge National Monument

Once known only to the native peoples who made the canyons at the base of Navajo Mountain their home, Rainbow Bridge now welcomes people from all over the world. Accessible by boat and trail, one must still make a concerted effort to experience the wonder of this special place. This, the world's largest natural bridge, was carved from a massive sandstone wall by the action of water and ice. It is still seen by relatively few, but is sacred to many. The National Park Service requests that you respect these varied beliefs and voluntarily refrain from approaching or walking under the bridge.



Rainbow Bridge may be accessed by tour boat, private watercraft, or strenuous hike (contact the Navajo Nation in Window Rock, AZ for hiking permits). NPS Rangers are on duty at the Bridge during the summer season, with restroom facilities available year round.

Plan to take a day and experience the magic of Rainbow Bridge National Monument.

## Zebra Mussel Watch

Did you wonder why the Rangers at the Entrance Stations asked you where your boat had been? They are at the frontline of our battle to keep zebra mussels from invading Lake Powell.

Zebra mussels are fingernail-size clams with yellowish or brownish shells marked with wavy bands. They came to North American waters from Europe in international shipping ballast water and have spread rapidly throughout the Great Lakes and the Arkansas, Cumberland, Hudson, Illinois, Mississippi, Mohawk, Niagara, Ohio, St. Lawrence, and Tennessee Rivers. The mussel is expected to spread to other fresh water bodies and waterways throughout North America in the next several decades. Their larvae are too small to be seen, but live for weeks in any water left in boats. As zebra mussels grow, they form clumps that damage boats, kill native clams, foul beaches with stinky razor-sharp shells, and clog water intake pipes. The zebra mussel is clogging power plant, industrial and public drinking water intakes, fouling boat hulls, and disrupting aquatic ecosystems. Economic impacts of the zebra mussel in North America over the next decade are expected to be in the billions of dollars.

**If you have boated recently in a zebra mussel infested area, please follow these suggestions:**

\* Before you leave an infested body of water, drain all bilge water, live wells, bait buckets, and any other water from your boat and equipment.

\* Thoroughly inspect your boat's hull, drive unit, trim plates, trolling plates, prop guards, transducer, anchor and anchor rope, and trailer. Scrape off and trash any suspected mussels, however small, before leaving the infested area.

\* When you get home, before launching your boat into uninfested waters, thoroughly flush the hull, drive unit, live wells (and live well pumping system), bilge, trailer, bait buckets, and engine cooling system with a hard spray from a garden hose.

\* Boats and trailers should be allowed to dry thoroughly in the sun for 2 to 4 days before being launched into uninfested waters.

Zebra mussels are on the move; please assist us in stopping them.



## Assistance For Disabled Boats

If your boat becomes disabled on the lake contact the marina nearest your location to obtain a tow (marine band CH 16). Hourly towing charges vary depending on vessel size. Tows after dark and in adverse weather conditions are charged double.

When calling for a tow please provide the following information:

- ✓ Name of person accepting charges
- ✓ Location of vessel
- ✓ Size & description of vessel
- ✓ Radio or cellular phone
- ✓ Nature of problem

## Fee Schedule

Entrance Fee:  
\$3 individual/1-7 days  
\$5 per vehicle/1-7 days  
\$15/annual

Boating Fee:  
\$10/1-7 days  
\$20/annual

Lees Ferry, camping:  
\$10/night per site

Lone Rock, Bullfrog  
North and South,  
Farley Canyon, Hite,  
and Stanton Canyon  
camping:  
\$6/night per vehicle

Golden Eagle / Golden Access / Golden Age  
Accepted





## IMPORTANT NUMBERS

### EMERGENCIES:

800-582-4351

520-608-6300

911

**Marine Band CH. 16** (In an emergency, if you do not have a communications device, hail another boater who can call for help.)

**Non-emergencies:** 520-608-6301

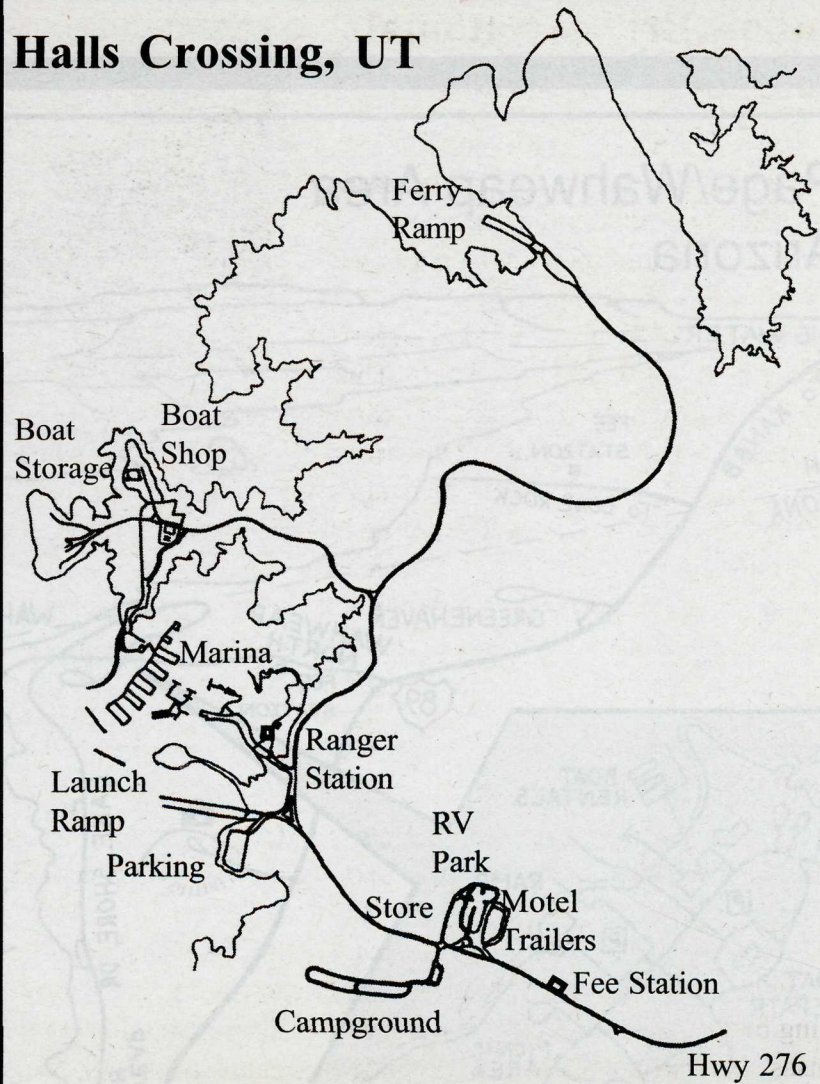
Visitor information: 520-608-6404

Park Watch: 800-582-4351

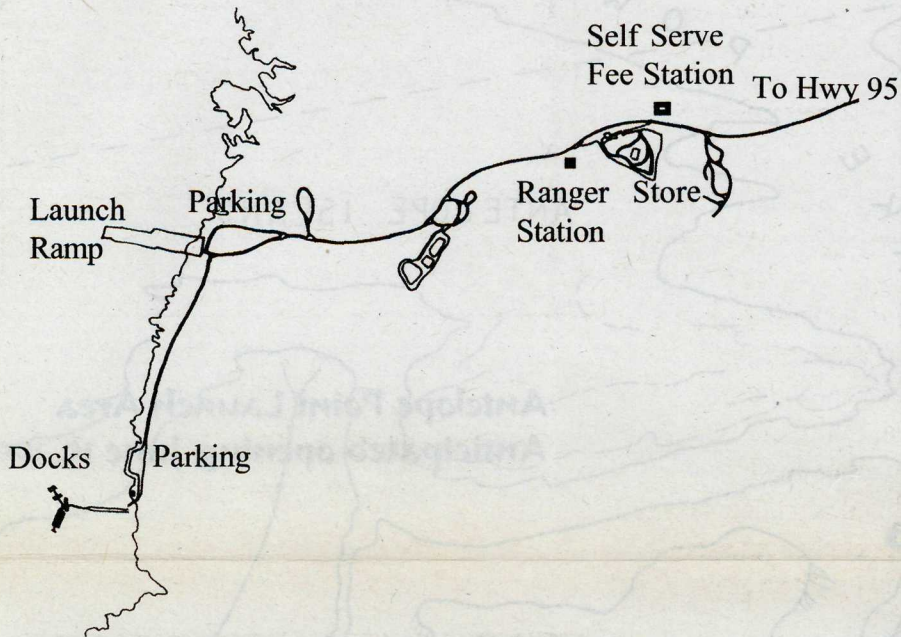
Archeological crimes: 800-227-7286

<http://www.nps.gov/glca>

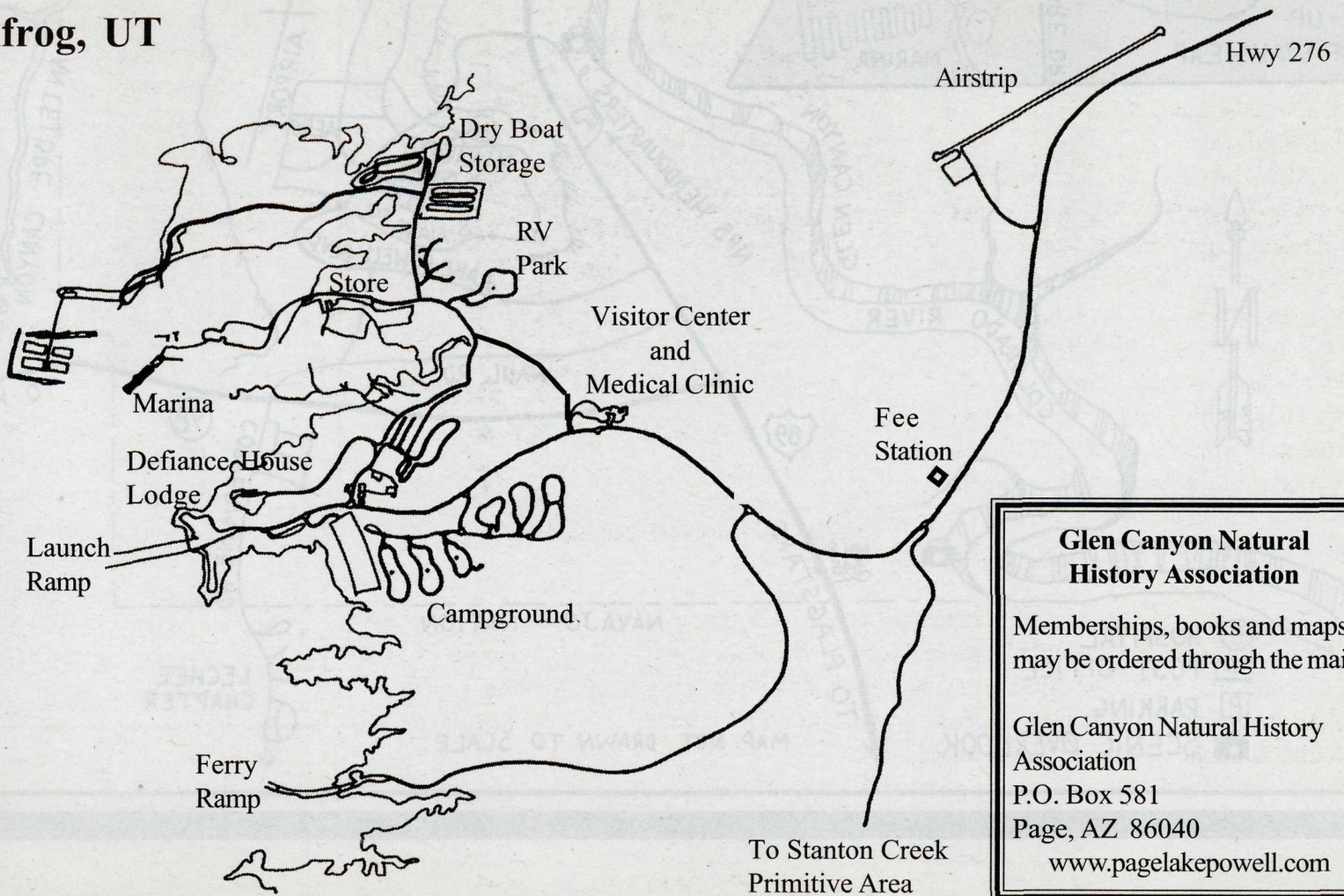
## Halls Crossing, UT



## Hite, UT



## Bullfrog, UT



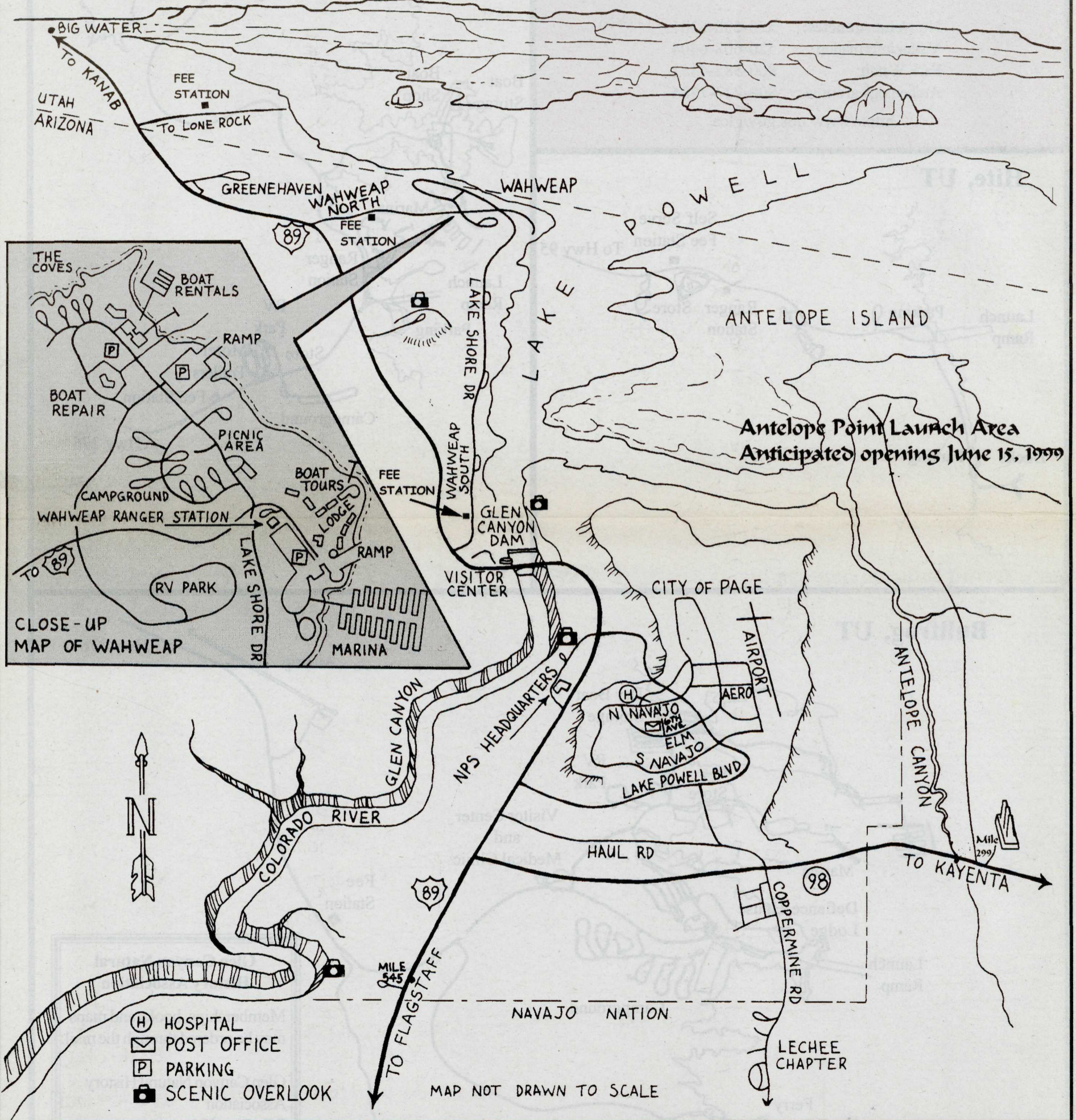
### Glen Canyon Natural History Association

Memberships, books and maps may be ordered through the mail:

Glen Canyon Natural History Association  
 P.O. Box 581  
 Page, AZ 86040  
[www.pagelakepowell.com](http://www.pagelakepowell.com)



# Page/Wahweap Area Arizona



**Antelope Point Launch Area**  
Anticipated opening June 15, 1999

CLOSE-UP  
MAP OF WAHWEAP

