

Glen Canyon National Recreation Area: 2005 Visitor Study



Technical Report

Prepared for

**Glen Canyon National Recreation Area
National Park Service**

by

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INTRODUCTION

Glen Canyon National Recreation Area (Glen Canyon NRA) is located in northern Arizona and southern Utah along the Colorado River. The centerpiece of Glen Canyon NRA is Lake Powell, a 186-mile long reservoir created when the Colorado River was dammed near Page, Arizona. The Glen Canyon Dam creates hydroelectric power and stores water as part of the Colorado River Compact, an agreement on the division of the water in the Colorado River among the states of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming. The dam itself is a major attraction of Glen Canyon NRA. Lake Powell has more than 1,800 miles of shoreline because of the many side canyons off the main canyon. A variety of recreational opportunities exist on and around the Lake. For example, kayaking, riding a tour boat, power boating, sailing, using personal watercraft, water skiing, and fishing are among the many water sports visitors enjoy. Opportunities also exist for hiking in the surrounding canyon areas. Visitors can enjoy a range of camping opportunities from remote and undeveloped campsites to fully developed campgrounds. Finally, visitors to the area can see archeologically and culturally significant sites such as Rainbow Bridge, a site of spiritual importance for American Indians, and the tallest natural bridge in the United States.

Between 1999 and 2004 water levels at Glen Canyon NRA dropped 100 vertical feet. The drop was caused primarily by the occurrence of drought in the desert southwest. This drop in water level changes the surface area of Lake Powell. One consequence of this change is that the physical carrying capacity of Lake Powell for recreational boating decreases. Moreover, the social carrying capacity and quality of the visitor experience may also change as a result of the drop in water level.

The National Park Service is the managing authority for Glen Canyon NRA and is charged with providing high quality recreation experience opportunities for Glen Canyon NRA visitors. The current recreation management plan for recreational boating was written and implemented before the drought occurred. The physical and social carrying capacities outlined in the current management plan are based on conditions that existed prior to the drought. Glen Canyon NRA staff asked NPS staff and University of Minnesota researchers associated with the Cooperative Park Studies Program (CPSP) and the Great Lakes Northern Forest Cooperative Ecosystem Studies Unit (GLNF CESU) to conduct a study of visitor use at Glen Canyon NRA. The CPSP was asked to conduct the study because it had conducted the visitor study that was used to establish social carrying capacity for Lake Powell prior to the drought. The research team at the University of Minnesota collaborated with e²M, a consulting firm in Denver, Colorado with a long history of developing physical carrying capacity models for the NPS, and with Glen Canyon NRA park staff to develop and administer the visitor survey instrument. Glen Canyon NRA staff will use the study results to determine physical and social carrying capacities for recreational use, especially boating use, at Glen Canyon NRA.

PURPOSE OF THE STUDY

Lower water levels change the surface area of Lake Powell with subsequent changes in amount of shoreline, number of access points to enter and exit Lake Powell, number of quality shoreline camping opportunities, and number of overnight anchoring sites for recreational boaters. However, visitor demand for access and quality boating and camping experiences may not change as a result of lower water levels. Changes in facilities and condition of facilities impacts visitor expectations and experiences. Specifically, the net effect of lower water levels may be an increase in visitor competition for recreational space and resources resulting in increased visitor crowding and conflicts.

Specific topics addressed in this survey included:

- Characteristics of respondents' visits (e.g., activities engaged in and type of boat used at Glen Canyon NRA),
- Respondents' socioeconomic background (e.g., age, gender, education, income, ethnicity and race, residence, past experience at Glen Canyon NRA),
- Respondents' desired experiences and benefits they attain as a result of visiting Glen Canyon NRA,
- Respondents' preferences for seeing and hearing other visitors at Glen Canyon NRA,
- Respondents' perceptions of problems such as crowding and use conflicts at specific locations on Lake Powell,
- Respondents' preferences for management actions to solve visitor problems resulting from lower water levels, and
- Respondents' satisfaction with the quality of service at Glen Canyon NRA.

These data will allow Glen Canyon NRA planners and managers to determine if changes in physical and social carrying capacities are needed, where changes might be appropriate, and how the recreating public will respond to changes made as a result of lower water levels.

STUDY METHODS

A mailback survey was used to gather study data. Glen Canyon NRA staff and e²M consultants worked with GLNF CESU researchers to develop the survey instrument. Once the survey instrument was designed and approved by all parties, University of Minnesota researchers prepared and submitted the survey and survey documentation to the Office of Management and Budget (OMB) for their approval. NPS staff at Glen Canyon NRA gathered names and mailing addresses of past visitors to Glen Canyon NRA. The names and addresses came from various mailing lists maintained by the park. Specifically, the mailing lists represented the following groups: a) boaters who rent slips, dry boat storage space or buoys at Glen Canyon NRA, b) individuals on NPS and concessioner marina mailing lists, c) independent business partners with the park, and d) public information lists used for mailing information notices on past park planning efforts. These lists represented a total of 2,922 names and addresses. The names and addresses were sent to e²M where their consultants checked the lists for duplicate names and incomplete addresses. Once duplicates or incomplete addresses were removed, e²M drew a random sample of 500 names for the study. Dillman's Tailored Design Method (2000) was followed so that each person in the sample received a prenotice postcard, mailed questionnaire with cover letter explaining the purpose of the study, and follow-up reminder postcards and re-mailings of questionnaires as needed. The survey is included in Appendix B and copies of each piece of survey correspondence is included in Appendix C of this report. The survey packet included a self-addressed, stamped envelope for respondents to mail their completed questionnaire back to University of Minnesota researchers who were responsible for raw data retrieval, data entry, data analysis, and report writing. The survey mailings took place during May and June 2005. Four questionnaires were undeliverable resulting in a total sample size of 496. A total of 332 usable questionnaires were returned resulting in a response rate of 66 percent [(332)/(500-4)].

Study Limitations

A purpose of this study is to look at how visitor characteristics, use patterns, expectations, and perceptions have changed since the 1999-2000 visitor use studies were conducted. This study is being conducted because of the significant change in water levels at Lake Powell since 2000. The study population for the 2005 study represents a convenience sample from which names were randomly selected. It does not represent a random selection of visitors using Lake Powell during any particular season. It also is not representative of visitor use by access point. Caution should be exercised when comparing this study's results to results of the 1999-2000 visitor use studies. Those studies represented a random sample of visitors by access point to Lake Powell and the degree of confidence in generalizing the study sample responses to the entire Lake Powell recreational visitor population is high compared to the ability to generalize this study's findings to the larger population.

Compared to the 1999-2000 study respondents, the 2005 study respondents are:

- More likely to be male (83 percent in 2005 vs. 60 percent in 1999-2000),
- More likely older (average age of 54 vs. 42),
- More likely to have a college education (55 percents vs. 49 percent),
- More likely to have a significantly higher income (75 percent > \$75,000 vs. 75 percent > \$40,000),
- More likely to have visited the area more times (96 percent > 10 visits vs. 58 percent > 5 visits),
- More likely to spend fewer nights in the area (5 nights vs. 5.7 nights), and
- More likely to use a houseboat on the lake (58 percent vs. 20 percent).

STUDY RESULTS

A. Respondent Demographics

The mail-back questionnaire asked visitors a number of questions regarding socio-demographic characteristics including gender, age, ethnicity, race, highest level of education, and annual household income (Table A1). A majority of respondents were male (84 percent), 50 years or older (70 percent), not Hispanic or Latino (99 percent), and white (99 percent). Respondents were well-educated in that 89 percent reported having at least some form of higher education beyond high school. Respondents also tended to have incomes higher than the national average. Fifty-six percent reported annual household incomes of \$100,000 or more.

Table A1. Socio-Demographic Characteristics Of Respondents

Variable	N	Percent	
Gender	Male	265	83.6
	Female	52	16.4
	Total	317	100.0
Age (mean age = 54)	20-29	5	1.5
	30-39	17	5.2
	40-49	76	23.4
	50-59	126	38.8
	60-69	79	24.3
	70-79	19	5.8
	80-89	3	0.9
	Total	325	100.0
Ethnicity	Not Hispanic or Latino	158	98.8
	Hispanic or Latino	2	1.2
	Total	160	100.0
Race	American Indian or Alaska Native	0	0
	Asian	1	0.3
	Black or African American	0	0
	Native Hawaiian or Pacific Islander	1	0.3
	White	305	99.4
	Total	307	100.0
Education	Some high school	4	1.2
	High school graduate or GED	30	9.3
	Some college, business or trade school	108	33.4
	College degree	105	32.5
	Post graduate	76	23.5
	Total	323	100.0
Income	Less than \$25,000	8	2.6
	\$25,000 to \$49,999	18	5.8
	\$50,000 to \$74,999	52	16.9
	\$75,000 to \$99,999	57	18.5
	\$100,000 or more	173	56.2
	Total	308	100.0

Source: Questions 22-26.

Past visitation

Most of the respondents have a long history of park visitation. A majority of respondents (97 percent) reported visiting Glen Canyon NRA more than ten times (Table A2). About two percent have visited six to ten times and only one percent has visited two to five times.

Table A2. Total Number Of Visits To Glen Canyon National Recreation Area

Number of Visits	Number of Respondents	Percent
Never	0	0
One time	0	0
2-5 times	4	1.2
6-10 times	7	2.1
More than 10 times	317	96.6
Total	328	100.0

Source: Question 1.

For the most part respondents have a long history of visitation to the park (Table A3). Nearly 15 percent have been coming to the park for 36 or more years. Another 27 percent first visited the park 26-35 years ago and about 34 percent first visited 16-25 years ago. Eighteen percent have a 6 to 15 year history in the park. Very few respondents (5 percent) are first time visitors since 2000.

When asked about their last visit to the park, 49 percent of respondents indicated that they had visited Glen Canyon NRA since March 2005 (Table A4). All respondents had visited the park within the last four years. Data were aggregated to look at the distribution of use for each season. Seasons were defined as follows: spring (March, April, and May); summer (June, July, and August); fall (September, October, and November); and winter (December, January, and February) (Table A5). A closer look at each season of visitation indicates that spring was the most popular time to visit Glen Canyon NRA with nearly 44 percent of respondents indicating they visited during this season. About an equal number of respondents visited during summer and fall seasons with very little visitation occurring during the winter months.

Table A3. Year Of First Visit To Glen Canyon National Recreation Area/Lake Powell

Year	Number	Percent	Aggregated Years	Cumulative Percent for Aggregated Years
1962	1	0.3		
1963	4	1.3		
1964	10	3.1		
1965	7	2.2		
1966	4	1.3		
1967	6	1.9		
1968	11	3.4		
1969	5	1.6		
			36 or more years since 1 st visit	15.1
1970	12	3.8		
1971	1	0.3		
1972	10	3.1		
1973	8	2.5		
1974	9	2.8		
1975	14	4.4		
1976	7	2.2		
1977	6	1.9		
1978	11	3.4		
1979	9	2.8		
			26 to 35 years since 1 st visit	27.2
1980	24	7.5		
1981	4	1.3		
1982	8	2.5		
1983	10	3.1		
1984	13	4.1		
1985	13	4.1		
1986	12	3.8		
1987	7	2.2		
1988	7	2.2		
1989	10	3.1		
			16 to 25 years since 1 st visit	33.9
1990	18	5.6		
1991	7	2.2		
1992	2	0.6		
1993	7	2.2		
1994	4	1.3		
1995	3	0.9		
1996	6	1.9		
1997	3	0.9		
1998	6	1.9		
1999	3	0.9		
			6 to 15 years since 1 st visit	18.4
2000	8	2.5		
2001	4	1.3		
2002	1	0.3		
2003	2	0.6		
2004	2	0.6		
			5 or fewer years since 1 st visit	5.3
Total	319	100.0		100.0

Source: Question 3.

Table A4. Month And Year Of Last Visit To Glen Canyon National Recreation Area/Lake Powell

Month and Year of Last Visit	Number of Respondents	Percent
May 2001	1	0.3
September 2001	2	0.6
April 2002	1	0.3
June 2002	1	0.3
August 2002	2	0.6
May 2003	1	0.3
August 2003	1	0.3
September 2003	3	0.9
October 2003	1	0.3
November 2003	1	0.3
April 2004	1	0.3
May 2004	2	0.6
June 2004	9	2.8
July 2004	19	6.0
August 2004	26	8.2
September 2004	44	13.8
October 2004	29	9.1
November 2004	12	3.8
December 2004	1	0.3
February 2005	6	1.9
March 2005	16	5.0
April 2005	49	15.4
May 2005	69	21.6
June 2005	19	6.0
July 2005	3	0.9
Total	319	100.0

Source: Question 2.

Table A5. Season Of Last Visit To Glen Canyon NRA

Number	Number of Respondents	Percent
Spring (March, April, and May)	141	43.9
Summer (June, July, and August)	80	24.9
Fall (September, October, November)	93	29.0
Winter (December, January, February)	7	2.2
Total	321	100.0

Source: Question 2.

B. Trip Characteristics

Respondents were asked a variety of questions regarding their most recent trip to Glen Canyon NRA. These questions included the size and type of group with whom they traveled, where they went within Glen Canyon NRA, the type of watercraft they used, and the activities they engaged in while at Glen Canyon NRA. The questions are designed to give managers a better understanding of how use is distributed within and across Glen Canyon NRA.

Size and Type of Group

About half of the respondents indicated their group size was five or fewer people and the other half of the respondents indicated their group size was anywhere from six to more than 20 individuals. The most popular group size ranged from six to 10 individuals (Table B1). The mean number of people per group was six, and the median was four. Nearly all respondents (99 percent) indicated that they were not part of a larger tour group (Table B2). Most respondents (94 percent) indicated that their group was comprised of family and / or friends while very few respondents indicated that they were traveling alone or traveling on business (Table B3).

Table B1. Size Of Group Traveled With

Size of Group	Number of Respondents	Percent
1	11	3.4
2	68	20.9
3	35	10.7
4	55	16.9
5	22	6.7
6-10	93	28.5
11-15	22	6.7
16-20	13	4.0
More than 20	7	2.1
Total	326	100.0

Source: Question 5a.

Mean: 6.2 Median: 4.0

Table B2. Number Of Respondents Traveling As Part Of A Group Tour

Traveled with Tour Group	Number of Respondents	Percent
No	318	99.1
Yes	3	0.9
Total	321	100.0

Source: Question 5b.

Table B3. Type Of Group Respondents Were With On Their Most Recent Visit

Type of Group	Number of Responses N=339	Percent of Respondents ¹ N=128
Family and/or friends	310	94.5
No one. I traveled alone	11	3.4
Business	11	3.4
Tour	1	0.3
Other	6	1.8

Source: Question 4.

¹ Percentages based on the number of respondents (N=128). Respondents could give more than one response.

Use Distribution

Respondents were asked the total number of nights they spent at Glen Canyon NRA and the type of location where they spent those nights on their most recent visit to the area. A majority of respondents (96 percent or 327 respondents) spent one or more nights on Lake Powell. The most popular ways to spend the night on Lake Powell included anchoring one's boat on Lake Powell, shoreline boat camping, or in one of the marina facilities. On average, respondents who anchor on Lake Powell or camp in a developed campground at Lake Powell spend 5 nights in these types of locations. The next most popular locations for overnight stays are shoreline boat camping or shoreline vehicle camping (Table B4). Overall, about two-thirds (66 percent) of the respondents spent one to five nights at Lake Powell (Table B5). Another 30 percent of respondents spent six to ten nights at Lake Powell.

Table B4. Mean Number Of Nights Spent At Each Location

Location	Number of Responses ¹ N=445	Mean
I did not spend any nights at Lake Powell	18	---
Anchored on the lake	131	5.0
Shoreline boat camping	127	4.3
In marina facilities (covered slips, etc.)	104	2.7
In a lodge or housekeeping unit at Lake Powell	28	2.5
In a developed campground at Lake Powell	14	5.0
Shoreline vehicle camping	9	3.8
Backcountry camping using the lake to access	2	2.0
In other locations	12	3.8

Source: Question 9.

¹ Respondents could give more than one response.

Table B5. Total Number Of Nights Spent At Lake Powell

Number of Nights Spent in GLCA	Number of Respondents	Percent	Cumulative Percent
1	10	3.3	3.3
2	42	13.7	17.0
3	51	16.7	33.7
4	64	20.9	54.6
5	35	11.4	66.0
6	37	12.1	78.1
7	24	7.8	85.9
8	15	4.9	90.8
9	9	2.9	93.7
10	7	2.3	96.0
11	1	0.3	96.3
12	2	0.7	97.0
13	1	0.3	97.3
14	2	0.7	98.0
20	1	0.3	98.3
30	2	0.7	99.0
32	1	0.3	99.3
70	1	0.3	99.6
100	1	0.3	99.9
Total	306	100.0	

Source: Question 9.

Accessing Lake Powell

Respondents could enter Lake Powell from a variety of access points (Table B6). Since water levels have dropped, some of the traditional access points have been available intermittently or are non-existent, which can change how use is distributed across the system. The five most popular access points include Wahweap/Stateline and Antelope Point at the southern end of Lake Powell; Bullfrog and Halls Crossing at the midpoint of Lake Powell; and Hite at the northern end of Lake Powell. Hite has been especially problematic as an access point during low water levels with instances where the Park has been forced to close it. On their most recent visit to Glen Canyon NRA, most respondents accessed Lake Powell via Wahweap/Stateline (42 percent) or Bullfrog (38 percent). In the past, these two access points have been the most popular access points on Lake Powell. Use at Hite is somewhat lower than use reported in the 1999-2000 studies. During that time, about 13 percent of visitors entered Lake Powell using the Hite access. (James et al 2001a, 2001b, 2001c).

Table B6. Location Where Respondents Accessed The Lake During Most Recent Visit

Location	Number of Responses N=354	Percent of Respondents ¹ N=328
Wahweap/Stateline	139	42.4
Bullfrog	125	38.1
Halls Crossing	59	18.0
Hite	13	4.0
Antelope Point	8	2.4
Other	10	3.0

Source: Question 6.

¹Respondents could give more than one response.

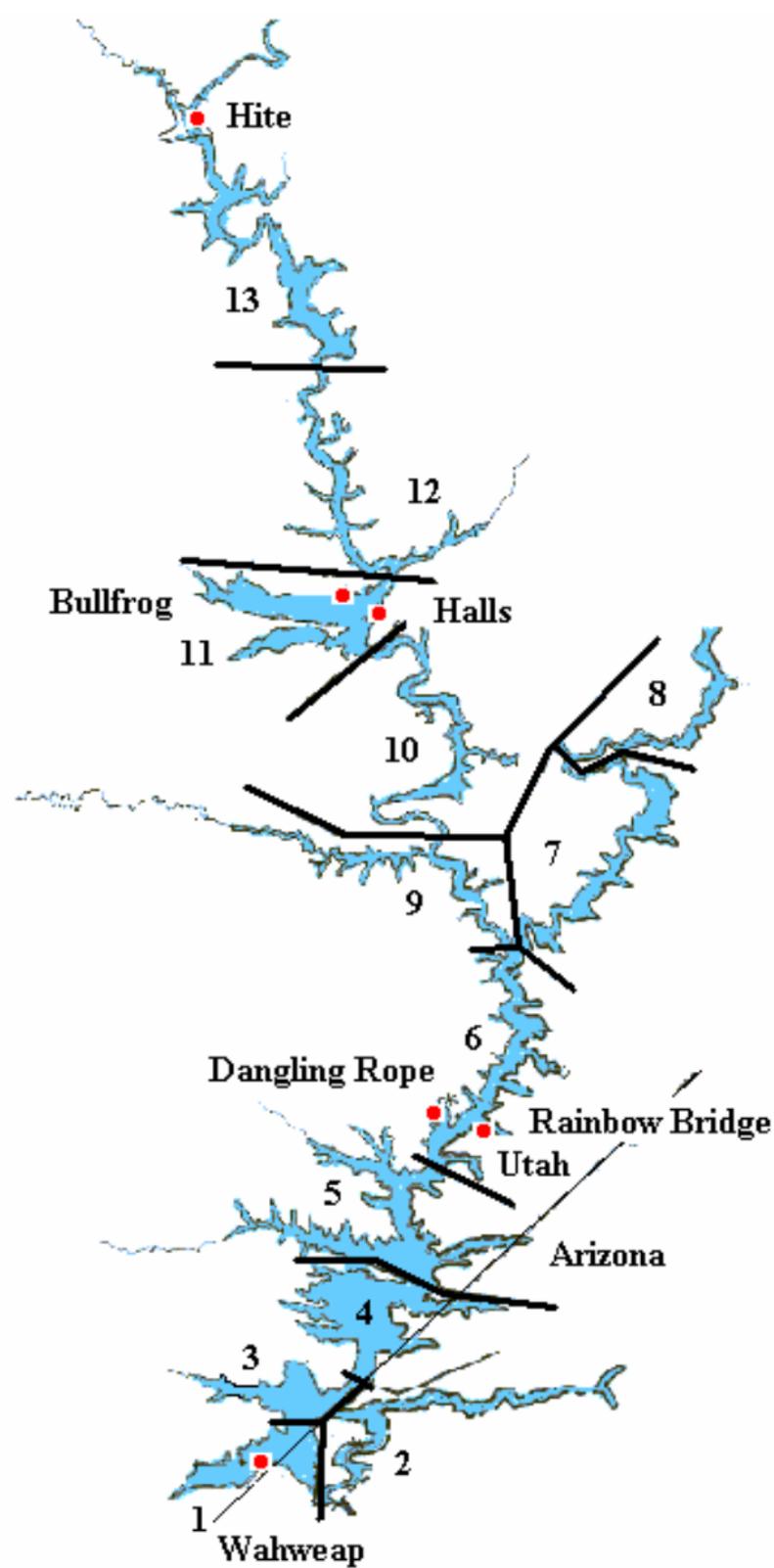


Table B7. Zones Where Respondents Spend Most Of Their Time During Most Recent Visit

Zone	Number of Responses N=670	Percent of Respondents ¹ N=324
1 Wahweap Bay, Wahweap Marina, Lone Rock	87	26.9
2 Glen Canyon Dam, Carl Hayden Visitor Center, Antelope Point Marina	37	11.4
3 Crosby Canyon, Warm Creek Bay, Castle Rock	46	14.2
4 Padre Bay, Gunsight Butte, Crossing of the Fathers	41	12.7
5 Last Chance Bay, Rock Creek Bay, Gregory Butte	48	14.8
6 Dangling Rope Marina, Rainbow Bridge, Cathedral Canyon	30	9.3
7 San Juan Arm, Bald Rock Canyon, Piute Canyon	22	6.8
8 Nokai Canyon, Copper Canyon	9	2.8
9 Cottonwood Canyon, Hole-in-the-Rock, Escalante River	48	14.8
10 The Rincon, Iceberg Canyon, Slick Rock Canyon	78	24.1
11 Bullfrog Marina, Halls Crossing Marina, Stanton Creek	137	42.3
12 Defiance House Ruin, Forgotten Canyon, Knowles Canyon	65	20.1
13 Hite Marina, Farley Canyon, Dirty Devil River, Colorado River	22	6.8

Source: Question 7a.

¹ Respondents could give more than one response.

Distribution of Use by Access Point Used

Tables B8 through B12 look at how use is distributed across zones by the access point used. The first column of each table provides a list of the zones and zone names. The next set of columns shows the zones respondents indicate they most frequently visit given where they accessed Lake Powell. Columns 4 and 5 show which zones respondents are most likely to shoreline camp in given where they accessed Lake Powell. The last two columns show shoreline camping across all zones regardless of access point used. These columns are here to provide a point of comparison for each access point.

Wahweap Marina and access is located in Zone 1. Respondents who enter Lake Powell using the Wahweap access point are most likely to spend most of their time in Zones 1 through 5 (Table B8). Zone 6, which contains Rainbow Bridge appears to get a moderate number of people spending time in it. If respondents indicated they shoreline camped and used the Wahweap access point, Zones 1, 5, 4, and 3 were the zones they most frequently shoreline camped. The distribution of camping across these zones indicates that about 30 percent of the Wahweap respondents stay within Zone 1 for most of the visit and most of their camping. Looking at the other three zones where camping is most likely to occur with this group of respondents, Zone 5 is the next most popular shoreline camping zone followed by Zones 4 and 3. Of these three zones, Zone 5 is the farthest away from Zone 1 followed by Zones 4 and 3 (Figure 1).

Antelope Point access is located in Zone 2. Respondents entering Lake Powell using this access spend most of their time in Zones 5, 4, and 2 (Table B9). These respondents indicated that they were most likely to shoreline camp in Zones 1, 2, 4, or 5. The sample size is small for Antelope Point so it is difficult to suggest a pattern of use but it seems to follow a pattern where respondents spend most of their time and shoreline camp in the zone they entered, in adjacent zones, or in the zones that mark the farthest they are willing to travel.

Table B8. Distribution Of Use Across Zones By Respondents Accessing Lake Powell At Wahweap/Stateline

Zone	Distribution of Use					
	Zones most frequently visited by access point used		Shoreline camping by zone by access point used		Overall shoreline camping by zone across all access points	
	N = 276	% ¹	N=58	% ²	N=167	% ³
1 Wahweap Bay, Wahweap Marina, Lone Rock	78	60.9	15	29.4	18	12.8
2 Glen Canyon Dam, Carl Hayden Visitor Center, Antelope Point Marina	30	23.4	2	3.9	3	2.1
3 Crosby Canyon, Warm Creek Bay, Castle Rock	41	32.0	8	15.7	10	7.1
4 Padre Bay, Gunsight Butte, Crossing of the Fathers	35	27.3	10	19.6	12	8.5
5 Last Chance Bay, Rock Creek Bay, Gregory Butte	40	31.3	13	25.5	16	11.3
6 Dangling Rope Marina, Rainbow Bridge, Cathedral Canyon	20	15.6	2	3.9	4	2.8
7 San Juan Arm, Bald Rock Canyon, Piute Canyon	11	8.6	3	5.9	5	3.5
8 Nokai Canyon, Copper Canyon	5	3.9	0	0	0	0
9 Cottonwood Canyon, Hole-in-the-Rock, Escalante River	9	7.0	4	7.8	14	9.9
10 The Rincon, Iceberg Canyon, Slick Rock Canyon	3	2.3	1	2.0	26	18.4
11 Bullfrog Marina, Halls Crossing Marina, Stanton Creek	4	3.1	0	0	31	22.0
12 Defiance House Ruin, Forgotten Canyon, Knowles Canyon	0	0	0	0	22	15.6
13 Hite Marina, Farley Canyon, Dirty Devil River, Colorado River	0	0	0	0	6	4.3

Source: Questions 7a and 7b.

¹ Percentages based on the number of respondents (N=128). Respondents could give more than one response.

² Percentages based on the number of respondents (N=51). Respondents could give more than one response.

³ Percentages based on the number of respondents (N=141). Respondents could give more than one response.

Table B9. Distribution Of Use Across Zones By Respondents Accessing Lake Powell At Antelope Point

Zone	Distribution of Use					
	Zones most frequently visited by access point used		Shoreline camping by zone by access point used		Overall shoreline camping by zone across all access points	
	N = 23	% ¹	N=4	% ²	N=167	% ³
1 Wahweap Bay, Wahweap Marina, Lone Rock	2	28.6	1	33.3	18	12.8
2 Glen Canyon Dam, Carl Hayden Visitor Center, Antelope Point Marina	4	57.1	1	33.3	3	2.1
3 Crosby Canyon, Warm Creek Bay, Castle Rock	1	14.3	0	0	10	7.1
4 Padre Bay, Gunsight Butte, Crossing of the Fathers	4	57.1	1	33.3	12	8.5
5 Last Chance Bay, Rock Creek Bay, Gregory Butte	5	71.4	1	33.3	16	11.3
6 Dangling Rope Marina, Rainbow Bridge, Cathedral Canyon	2	28.6	0	0	4	2.8
7 San Juan Arm, Bald Rock Canyon, Piute Canyon	1	14.3	0	0	5	3.5
8 Nokai Canyon, Copper Canyon	1	14.3	0	0	0	0
9 Cottonwood Canyon, Hole-in-the-Rock, Escalante River	2	28.6	0	0	14	9.9
10 The Rincon, Iceberg Canyon, Slick Rock Canyon	0	0	0	0	26	18.4
11 Bullfrog Marina, Halls Crossing Marina, Stanton Creek	1	14.3	0	0	31	22.0
12 Defiance House Ruin, Forgotten Canyon, Knowles Canyon	0	0	0	0	22	15.6
13 Hite Marina, Farley Canyon, Dirty Devil River, Colorado River	0	0	0	0	6	4.3

Source: Questions 7a and 7b.

¹ Percentages based on the number of respondents (N=7). Respondents could give more than one response.

² Percentages based on the number of respondents (N=3). Respondents could give more than one response.

³ Percentages based on the number of respondents (N=141). Respondents could give more than one response.

Bullfrog Marina and access is located in Zone 11 (Figure 1). Eighty percent of the respondents who entered Lake Powell at this access point indicated they spend most of their time in this Zone or in Zones 10 and 12 which are adjacent to and located south and north of Zone 11, respectively (Table B10). Of those respondents who reported shoreline camping, they were most likely to shoreline camp in Zone 11 or its adjacent Zones 10 and 12. Respondents entering at Bullfrog appear to be very unlikely to travel farther south than Zone 6 on Lake Powell.

Hall Crossing is located in Zone 11 (Figure 1). A little more than 80 percent of respondents who entered Lake Powell using this access point report that they spend most of their time in this Zone or in adjacent Zones 10 and 12 (Table B11). Very few of these respondents indicated they shoreline camped. Those who did appear to favor Zone 11 or Zone 12. Similar to respondents who enter at Bullfrog, these respondents do not appear likely to travel any further south on Lake Powell than Zone 6.

Hite access point is in Zone 13 and is the farthest north of any of the access points. Hite has been severely affected by the low water levels on Lake Powell. Very few respondents (14) indicated entering Lake Powell using this access point (Table B12). It is difficult to suggest patterns of use based on such a small sample. However, the table suggests that people who enter at Hite are typical of respondents who enter using one of the other major access points; they tend to use the access point zone and the adjacent zones more heavily than other zones. The table also shows that the few respondents entering at Hite were unlikely to travel farther south on Lake Powell than Zone 10.

Table B10. Distribution of Use Across Zone By Respondents Accessing Lake Powell at Bullfrog

Zone	Distribution of Use					
	Zones most frequently visited by access point used		Shoreline camping by zone by access point used		Overall shoreline camping by zone across all access points	
	N = 205	% ¹	N=66	% ²	N=167	% ³
1 Wahweap Bay, Wahweap Marina, Lone Rock	1	0.9	1	1.9	18	12.8
2 Glen Canyon Dam, Carl Hayden Visitor Center, Antelope Point Marina	0	0	0	0	3	2.1
3 Crosby Canyon, Warm Creek Bay, Castle Rock	0	0	0	0	10	7.1
4 Padre Bay, Gunsight Butte, Crossing of the Fathers	0	0	0	0	12	8.5
5 Last Chance Bay, Rock Creek Bay, Gregory Butte	0	0	0	0	16	11.3
6 Dangling Rope Marina, Rainbow Bridge, Cathedral Canyon	4	3.7	1	1.9	4	2.8
7 San Juan Arm, Bald Rock Canyon, Piute Canyon	5	4.6	2	3.7	5	3.5
8 Nokai Canyon, Copper Canyon	2	1.9	0	0	0	0
9 Cottonwood Canyon, Hole-in-the-Rock, Escalante River	22	20.4	7	13.0	14	9.9
10 The Rincon, Iceberg Canyon, Slick Rock Canyon	45	41.7	19	35.2	26	18.4
11 Bullfrog Marina, Halls Crossing Marina, Stanton Creek	77	71.3	18	33.3	31	22.0
12 Defiance House Ruin, Forgotten Canyon, Knowles Canyon	38	35.2	16	29.6	22	15.6
13 Hite Marina, Farley Canyon, Dirty Devil River, Colorado River	11	10.2	2	3.7	6	4.3

Source: Questions 7a and 7b.

¹ Percentages based on the number of respondents (N=108). Respondents could give more than one response.

² Percentages based on the number of respondents (N=54). Respondents could give more than one response.

³ Percentages based on the number of respondents (N=141). Respondents could give more than one response.

Table B11. Distribution Of Use Across Zones By Respondents Accessing Lake Powell At Halls Crossing

Zone	Distribution of Use					
	Zones most frequently visited by access point used		Shoreline camping by zone by access point used		Overall shoreline camping by zone across all access points	
	N=89	% ¹	N=18	% ²	N=167	% ³
1 Wahweap Bay, Wahweap Marina, Lone Rock	0	0	0	0	18	12.8
2 Glen Canyon Dam, Carl Hayden Visitor Center, Antelope Point Marina	0	0	0	0	3	2.1
3 Crosby Canyon, Warm Creek Bay, Castle Rock	0	0	0	0	10	7.1
4 Padre Bay, Gunsight Butte, Crossing of the Fathers	0	0	0	0	12	8.5
5 Last Chance Bay, Rock Creek Bay, Gregory Butte	0	0	0	0	16	11.3
6 Dangling Rope Marina, Rainbow Bridge, Cathedral Canyon	1	1.1	1	6.7	4	2.8
7 San Juan Arm, Bald Rock Canyon, Piute Canyon	1	1.1	0	0	5	3.5
8 Nokai Canyon, Copper Canyon	1	1.1	0	0	0	0
9 Cottonwood Canyon, Hole-in-the-Rock, Escalante River	5	5.6	2	13.3	14	9.9
10 The Rincon, Iceberg Canyon, Slick Rock Canyon	19	21.3	2	13.3	26	18.4
11 Bullfrog Marina, Halls Crossing Marina, Stanton Creek	36	40.4	6	40.0	31	22.0
12 Defiance House Ruin, Forgotten Canyon, Knowles Canyon	20	22.5	5	33.3	22	15.6
13 Hite Marina, Farley Canyon, Dirty Devil River, Colorado River	6	6.7	2	13.3	6	4.3

Source: Questions 7a and 7b.

¹ Percentages based on the number of respondents (N=44). Respondents could give more than one response.

² Percentages based on the number of respondents (N=15). Respondents could give more than one response.

³ Percentages based on the number of respondents (N=141). Respondents could give more than one response.

Table B12. Distribution Of Use Across Zones By Respondents Accessing Lake Powell At Hite

Zone	Distribution of Use					
	Zones most frequently visited by access point used		Shoreline camping by zone by access point used		Overall shoreline camping by zone across all access points	
	N =14	% ¹	N=5	% ²	N=167	% ³
1 Wahweap Bay, Wahweap Marina, Lone Rock	0	0	0	0	18	12.8
2 Glen Canyon Dam, Carl Hayden Visitor Center, Antelope Point Marina	0	0	0	0	3	2.1
3 Crosby Canyon, Warm Creek Bay, Castle Rock	0	0	0	0	10	7.1
4 Padre Bay, Gunsight Butte, Crossing of the Fathers	0	0	0	0	12	8.5
5 Last Chance Bay, Rock Creek Bay, Gregory Butte	1	10.0	0	0	16	11.3
6 Dangling Rope Marina, Rainbow Bridge, Cathedral Canyon	0	0	0	0	4	2.8
7 San Juan Arm, Bald Rock Canyon, Piute Canyon	0	0	0	0	5	3.5
8 Nokai Canyon, Copper Canyon	0	0	0	0	0	0
9 Cottonwood Canyon, Hole-in-the-Rock, Escalante River	0	0	0	0	14	9.9
10 The Rincon, Iceberg Canyon, Slick Rock Canyon	1	10.0	0	0	26	18.4
11 Bullfrog Marina, Halls Crossing Marina, Stanton Creek	5	50.0	3	60.0	31	22.0
12 Defiance House Ruin, Forgotten Canyon, Knowles Canyon	3	30.0	1	20.0	22	15.6
13 Hite Marina, Farley Canyon, Dirty Devil River, Colorado River	4	40.0	1	20.0	6	4.3

Source: Questions 7a and 7b.

¹ Percentages based on the number of respondents (N=10). Respondents could give more than one response.

² Percentages based on the number of respondents (N=5). Respondents could give more than one response.

³ Percentages based on the number of respondents (N=141). Respondents could give more than one response.

Exclusive zone use and uplake use

Although most respondents indicated they traveled in more than one zone, there were two zones a substantial number of respondents reported visiting exclusively. Thirteen percent of respondents to Zone 1 (includes Wahweap Marina) and 18 percent of respondents to Zone 11 (includes Bullfrog Marina and Halls Crossing Marina) reported that they did not leave the zone in which they entered Lake Powell. The number of nights spent in Glen Canyon NRA and the type of lodging accommodation these respondents used were considered when determining the demand for overnight accommodations in these zones. These two variables were also considered when determining how demand during low water conditions may impact the physical carrying capacity, especially camp site capacity, on Lake Powell or its shoreline.

Of the respondents who exclusively visited Zone 1 during their most recent visit to Glen Canyon NRA, a little more than half of them stayed overnight. Among these respondents, the most popular type of overnight accommodation was staying in the marina facility, anchoring on the lake, or camping along the shoreline. For people who stayed at the marina, their average length of stay was four nights. For those who anchored their boat on the water or camped along the shoreline, the average number of overnights was three (Table B13).

Nearly all of the respondents who visited Zone 11 exclusively were likely to stay overnight. The most popular areas where respondents spent the night included camping along the shoreline, staying at the marina facilities or anchoring on Lake Powell. Those respondents who shoreline camped spent an average of five nights. Those who anchored on the lake or at a marina facility averaged four and three nights, respectively (Table B13).

Table B13. Number Of Nights Spent At Each Location In Zones 1 And 11

Location	Zone 1 Wahweap			Zone 11 Bullfrog and Halls Crossing		
	N	Percent ¹	Mean # of nights	N	Percent ²	Mean # of nights
I did not spend any nights at Lake Powell	9	21	----	2	3	----
Anchored on the lake	9	21	3.00	19	32	4.00
Shoreline vehicle camping	0	0	0	1	2	2.00
Shoreline boat camping	7	16	3.00	20	34	5.00
Backcountry camping using the lake to access	0	0	0	0	0	0
In a developed campground at Lake Powell	0	0	0	2	3	4.00
In a lodge or housekeeping unit at Lake Powell	1	2	1.00	9	15	3.00
In marina facilities (covered slips, etc.)	23	52	4.00	19	32	3.00
In other locations	0	0	0	3	5	2.00

¹ Percentages based on the total number of respondents (n=44) spending their time exclusively in Zone 1. Respondents could give more than one response.

² Percentages based on the total number of respondents (n=59) spending their time exclusively in Zone 11. Respondents could give more than one response.

Zones 6 through 13 are considered uplake zones on Lake Powell. Generally, respondents who access Lake Powell at Hite, Bullfrog, or Hall’s Crossing spend all of their time in one or more of these zones. Low water conditions impact visitors’ ability to access and use these zones. Nearly all of the respondents recreating in the uplake zones spend most of their nights in Zones 9, 10, 11, and 12. The average number of nights respondents camp in Zones 10 through 12 is about four nights, whereas the average number of nights spent in Zones 6 and 9 is about five nights (Table B14). These data suggest that respondents who travel the farthest from an entry point are more likely to spend slightly more time in the area.

Table B14. Length of Stay for Uplake Zones (6-13)

Zone	Number of Respondents	Total number of nights	Mean number of nights
6 Dangling Rope Marina, Rainbow Bridge, Cathedral Canyon	2	9	4.50
7 San Juan Arm, Bald Rock Canyon, Piute Canyon	2	8	4.00
8 Nokai Canyon, Copper Canyon	0	0	0
9 Cottonwood Canyon, Hole-in-the-Rock, Escalante River	10	47	4.70
10 The Rincon, Iceberg Canyon, Slick Rock Canyon	18	79	4.39
11 Bullfrog Marina, Halls Crossing Marina, Stanton Creek	21	80	3.81
12 Defiance House Ruin, Forgotten Canyon, Knowles Canyon	15	61	4.07
13 Hite Marina, Farley Canyon, Dirty Devil River, Colorado River	2	8	4.00

Source: Questions 7a and 9.

Number and Type of Watercraft Used

The number and type of watercraft visitors use can impact overall physical carrying capacity of the lake surface and the social carrying capacity of the area. Social carrying capacity is impacted by size of boats, proximity of boats, noise level of different types of boats, and so on. Respondents were asked the number and type of watercraft they used during their last visit to Glen Canyon NRA. The most popular type of boat used on Lake Powell is a runabout or powerboat with nearly 72 percent of respondents indicating they used this type of watercraft (Table B15). Houseboats were also popular with 178 respondents (58 percent) indicating they used a houseboat on their last visit. Approximately 38 percent of the respondents indicated they owned one or more water toys. The average number of water toys a respondent owns is three.

Almost all respondents (93 percent or greater) reported owning or co-owning the watercraft they used on their most recent visit to Glen Canyon NRA (Table B16). Personal watercraft and canoes or kayaks are most likely to be rented.

Table B15. Number And Type Of Watercraft Used On The Lake During Most Recent Visit

Type of Watercraft	Number of Responses N=781	Percent of Respondents N=305	Mean Number of Watercraft / Respondent
Runabout/Powerboat	222	73	1.17
Houseboat	178	58	1.01
Water toys (skis, wakeboards, tubes, etc.)	116	38	3.03
Personal watercraft (PWC)	113	37	1.86
Cabin cruiser	102	33	1.08
Non-motorized watercraft (kayak, canoe, etc.)	42	14	1.45
Other	8	3	1.00

Source: Question 10.

¹ Based on the number of respondents (N=305). Respondents could give more than one response.

Table B16. Type Of Watercraft Used On Most Recent Visit And Whether Respondents Owned Or Rented The Watercraft

Type of Watercraft	Number of Responses N=682	Percent owned or co-owned	Percent rented
Runabout/Powerboat	200	99.0	1.0
Houseboat	154	97.4	2.6
Water toys (skis, wakeboards, tubes, etc.)	104	99.0	1.0
Personal watercraft (PWC)	97	95.9	4.1
Cabin cruiser	90	98.9	1.1
Non-motorized watercraft (kayak, canoe, etc.)	30	93.3	6.7
Other	7	100.0	0

Source: Question 10.

¹ Based on the number of respondents (N=305). Respondents could give more than one response.

Number and Type of Watercraft Used by Zone

Physical and social carrying capacity may change from one zone to another depending on the experience opportunities managed for within a given zone and depending on the size of the zone. Table B17 describes the distribution of the number and type of watercraft used in each zone. The table was compiled by assigning specific watercraft types to all zones that the respondents indicated they spent the most time in on their most recent trip to Glen Canyon NRA. The assumption is that respondents took every type of watercraft to every zone where they said they spent most of their time. Data presented in the table should be used cautiously because respondents may not take all of their watercraft with them to every zone they visit.

Houseboat, runabout/powerboat, and cabin cruiser use is most popular in Zones 1, 3, 4, 5, and 6 and again in Zones 9, 10, 11, and 12. This distribution appears logical as Zones 1 and 11 have the three largest marinas. Further, respondents who enter Lake Powell through these access points tend to visit the zones nearest to them (Bullfrog and Halls Crossing accesses) or tend to travel no farther north than Zone 5 (Wahweap access). Personal watercraft use seems to be heaviest at Zones 1 and 11 and fairly moderate through Zones 3, 4, 5, 10, and 12. Zones 2, 7, 8, and 13 appear to experience the lightest use.

Multiple Watercraft Use

Nearly 75 percent of respondents bring with them and use more than one type of watercraft when they recreate on Lake Powell. About 14 percent own and use a houseboat and a runabout or powerboat when they visit Lake Powell (Table B18). Another 28 percent own these two types of watercraft plus at least one other type of watercraft and/or other water toys. Only about 25 percent bring and use only one type of watercraft when they visit Lake Powell.

Table B17. Number And Type Of Watercraft By Zone

Zone	Watercraft	N	Percent
1 Wahweap Bay, Wahweap Marina, Lone Rock	Houseboat	37	47.4
	Runabout/powerboat	47	60.3
	Cabin cruiser	32	41.0
	Personal watercraft (PWC)	12	15.4
	Non-motorized watercraft (kayak, canoe, etc.)	11	14.1
	Water toys (skis, wakeboards, tubes, etc.)	14	17.9
	Other	0	0
2 Glen Canyon Dam, Carl Hayden Visitor Center, Antelope Point Marina	Houseboat	10	30.3
	Runabout/powerboat	19	57.6
	Cabin cruiser	14	42.4
	Personal watercraft (PWC)	4	12.1
	Non-motorized watercraft (kayak, canoe, etc.)	3	9.1
	Water toys (skis, wakeboards, tubes, etc.)	7	21.2
	Other	0	0
3 Crosby Canyon, Warm Creek Bay, Castle Rock	Houseboat	22	50.0
	Runabout/powerboat	30	68.2
	Cabin cruiser	15	34.1
	Personal watercraft (PWC)	8	18.2
	Non-motorized watercraft (kayak, canoe, etc.)	5	11.4
	Water toys (skis, wakeboards, tubes, etc.)	8	18.2
	Other	0	0
4 Padre Bay, Gunsight Butte, Crossing of the Fathers	Houseboat	18	47.4
	Runabout/powerboat	24	63.2
	Cabin cruiser	15	39.5
	Personal watercraft (PWC)	6	15.8
	Non-motorized watercraft (kayak, canoe, etc.)	3	7.9
	Water toys (skis, wakeboards, tubes, etc.)	9	23.7
	Other	0	0
5 Last Chance Bay, Rock Creek Bay, Gregory Butte	Houseboat	22	50.0
	Runabout/powerboat	27	61.4
	Cabin cruiser	15	34.1
	Personal watercraft (PWC)	8	18.2
	Non-motorized watercraft (kayak, canoe, etc.)	3	6.8
	Water toys (skis, wakeboards, tubes, etc.)	9	20.5
	Other	1	2.3

Table B17. continued

Zone	Watercraft	N	Percent
6 Dangling Rope Marina, Rainbow Bridge, Cathedral Canyon	Houseboat	12	44.4
	Runabout/powerboat	18	66.7
	Cabin cruiser	8	29.6
	Personal watercraft (PWC)	4	14.8
	Non-motorized watercraft (kayak, canoe, etc.)	2	7.4
	Water toys (skis, wakeboards, tubes, etc.)	3	11.1
	Other	2	7.4
7 San Juan Arm, Bald Rock Canyon, Piute Canyon	Houseboat	14	70.0
	Runabout/powerboat	13	65.0
	Cabin cruiser	2	10.0
	Personal watercraft (PWC)	0	0
	Non-motorized watercraft (kayak, canoe, etc.)	1	5.0
	Water toys (skis, wakeboards, tubes, etc.)	2	10.0
	Other	2	10.0
8 Nokai Canyon, Copper Canyon	Houseboat	5	62.5
	Runabout/powerboat	5	62.5
	Cabin cruiser	1	12.5
	Personal watercraft (PWC)	0	0
	Non-motorized watercraft (kayak, canoe, etc.)	0	0
	Water toys (skis, wakeboards, tubes, etc.)	1	12.5
	Other	0	0
9 Cottonwood Canyon, Hole-in-the-Rock, Escalante River	Houseboat	24	58.5
	Runabout/powerboat	27	68.9
	Cabin cruiser	13	31.7
	Personal watercraft (PWC)	1	2.4
	Non-motorized watercraft (kayak, canoe, etc.)	3	7.3
	Water toys (skis, wakeboards, tubes, etc.)	6	14.6
	Other	3	7.3
10 The Rincon, Iceberg Canyon, Slick Rock Canyon	Houseboat	43	57.3
	Runabout/powerboat	44	58.7
	Cabin cruiser	27	36.0
	Personal watercraft (PWC)	6	8.0
	Non-motorized watercraft (kayak, canoe, etc.)	8	10.7
	Water toys (skis, wakeboards, tubes, etc.)	11	14.7
	Other	4	5.3

Table B17. continued

Zone	Watercraft	N	Percent
11 Bullfrog Marina, Halls Crossing Marina, Stanton Creek	Houseboat	79	62.2
	Runabout/powerboat	81	63.8
	Cabin cruiser	34	26.8
	Personal watercraft (PWC)	12	9.4
	Non-motorized watercraft (kayak, canoe, etc.)	8	6.3
	Water toys (skis, wakeboards, tubes, etc.)	14	11.0
	Other	5	3.9
12 Defiance House Ruin, Forgotten Canyon, Knowles Canyon	Houseboat	40	62.5
	Runabout/powerboat	41	64.1
	Cabin cruiser	16	25.0
	Personal watercraft (PWC)	8	12.5
	Non-motorized watercraft (kayak, canoe, etc.)	8	12.5
	Water toys (skis, wakeboards, tubes, etc.)	12	18.8
	Other	2	3.1
13 Hite Marina, Farley Canyon, Dirty Devil River, Colorado River	Houseboat	7	35.0
	Runabout/powerboat	10	50.0
	Cabin cruiser	7	35.0
	Personal watercraft (PWC)	3	15.0
	Non-motorized watercraft (kayak, canoe, etc.)	2	10.0
	Water toys (skis, wakeboards, tubes, etc.)	4	20.0
	Other	0	0

Source: Questions 7a and 10.

Table B18. Watercraft Used In Combination Or Singly Across All Zones

Watercraft Combinations	Number of Respondents	Percent
Houseboat and runabout/powerboat	42	13.5
Houseboat, runabout/powerboat, PWC, and water toys	34	10.9
Houseboat, runabout/powerboat, and PWC	21	6.7
Houseboat, runabout/powerboat, and water toys	17	5.4
Runabout/powerboat and cabin cruiser	14	4.5
Houseboat, runabout/powerboat, PWC, non-motorized watercraft, and water toys	13	4.2
Cabin cruiser and PWC	10	3.2
Runabout/powerboat and water toys	10	3.2
Cabin cruiser, PWC, and water toys	7	2.2
Houseboat, runabout/powerboat, non-motorized watercraft, and water toys	6	1.9
Cabin cruiser and water toys	5	1.6
Houseboat and PWC	4	1.3
Houseboat, runabout/powerboat, and non-motorized watercraft	4	1.3
Cabin cruiser and non-motorized watercraft	3	1.0
Runabout/powerboat, cabin cruiser, and water toys	3	1.0
Runabout/powerboat, cabin cruiser, PWC, and water toys	3	1.0
Houseboat, cabin cruiser, PWC, and water toys	3	1.0
Houseboat, runabout/powerboat, PWC, and non-motorized watercraft	3	1.0
Runabout/powerboat, cabin cruiser, non-motorized watercraft, and water toys	3	1.0
Houseboat, runabout/powerboat, and cabin cruiser	2	0.6
Houseboat, runabout/powerboat, and other watercraft	2	0.6
Runabout/powerboat, PWC, and non-motorized watercraft	2	0.6
Houseboat, PWC, non-motorized watercraft, and water toys	2	0.6
Houseboat, runabout/powerboat, cabin cruiser, and PWC	2	0.6
Houseboat, runabout/powerboat, cabin cruiser, PWC, non-motorized watercraft, and water toys	2	0.6
PWC and water toys	1	0.3
Houseboat and cabin cruiser	1	0.3
Cabin cruiser and other watercraft	1	0.3
Runabout/powerboat, and PWC	1	0.3
Runabout, PWC, and water toys	1	0.3
Houseboat, cabin cruiser, and PWC	1	0.3
Houseboat, cabin cruiser, and non-motorized watercraft	1	0.3
Cabin cruiser, water toys, and other watercraft	1	0.3
Cabin cruiser, non-motorized watercraft, and water toys	1	0.3
Houseboat, runabout/powerboat, cabin cruiser, and water toys	1	0.3
Houseboat, runabout/powerboat, cabin cruiser, and other watercraft	1	0.3
Houseboat, runabout/powerboat, non-motorized watercraft, and other watercraft	1	0.3
Houseboat, runabout/powerboat, PWC, water toys, and other watercraft	1	0.3
Houseboat, runabout/powerboat, cabin cruiser, PWC, and non-motorized watercraft	1	0.3
Single Watercraft		
Cabin cruiser only	34	10.9
Runabout/powerboat only	32	10.3
Houseboat only	11	3.5
PWC only	1	0.3
Only another type of watercraft	1	0.3
Total	312	100.0

Source: Question 9.

C. Respondent Behavior, Experiences, and On-site Benefits

This section of the report discusses the recreational activities respondents engaged in as well as their experiences during their most recent visit to Glen Canyon NRA. Respondents were asked to rate both the importance of various recreational experiences and to indicate the level to which they were able to attain them. These data are useful to park staff in understanding why visitors come to Glen Canyon NRA, the activities they engage in, and how they benefit from their experiences. Further, park managers can use this data to determine social carrying capacity limits along with the kinds of resource protection actions necessary to sustain appropriate activity levels and provide positive experience opportunities.

Activities

Respondents were asked to indicate which of 15 different activities they participated in during their most recent visit to Glen Canyon NRA (Table C1). Ninety-five percent of all respondents spent time motor boating on Lake Powell. Along with motor boating, other popular water based activities included fishing and water sports. Nearly two-thirds of respondents enjoyed hiking and 42 percent indicated they camped in Glen Canyon NRA. Wildlife watching and visiting archaeological sites were enjoyed by about 30 percent and 25 percent of the respondents, respectively.

Table C1. Activities That Respondents Participated In During Most Recent Visit

Activity	Number of Responses N=1419	Percent of Respondents ¹ N=305
Motor boating	288	94.4
Hiking	198	65.0
Fishing	173	56.7
Participating in water sports	155	50.8
Camping	127	41.6
Using a personal watercraft (PWC)	120	39.3
Wildlife watching	88	28.9
Visiting archaeological sites	75	24.6
Rock climbing	52	17.0
Bird watching	42	13.8
Paddling (canoe or kayak)	30	9.8
Tour boat ride	12	3.9
Driving (Burr Trail, Hole in the Rock Road, etc.)	9	3.0
Mountain biking	3	1.0
Hunting	0	0
Other	47	15.4

Source: Question 8.

¹ Percentages based on the total number of respondents (N=305). Respondents could give more than one response.

Important visitor experiences and on-site benefits attained

To determine why visitors recreate at Glen Canyon NRA, respondents were asked to look over a list of 29 possible experiences they may have had during their most recent visit to Glen Canyon NRA. For each experience they were asked to rate how important it was to their visit. Importance was measured along a five-point Likert type scale where the midpoint is neutral and the end points are very important to very unimportant. The most important experiences for respondents at Glen Canyon NRA are related to social affiliation with their family or friends, resting, enjoying nature and using their equipment (Table C2). Respondents placed the least amount of importance on participating in interpretive and educational activities, meeting new people, sketching, painting, or taking photographs, and experiences related to challenging oneself.

If respondents rated experiences as either important or very important, they were asked to indicate their level of attainment for those experiences (Table C3). Attainment was measured along on a four-point scale from one (totally attained) to four (did not attain). For the most part, respondents attained the experiences they reported as either important or very important to them. The less important the experience the less they appeared to attain it.

Some important experiences were less likely to be attained by respondents. To identify these experiences, the difference between the importance and attainment ranking for each experience was computed (Table C3). A negative value means that the item was ranked higher in importance than in attainment. The three experiences with the greatest negative differences were experiencing solitude (-8), being away from other people (-9), and experiencing natural quiet (-12). For park staff negative values may indicate that visitors are looking for experience opportunities the park is not providing because they are not appropriate for the area the visitor is recreating in. Or, it may be that park staff is inadequately providing some experience opportunities in some areas. A positive value means that the item was ranked lower in importance than in attainment. The four experiences with the greatest positive difference were thinking about personal values (+9), testing skills and abilities (+9), challenging oneself (+13), and sketching, painting, or taking photographs (+14).

Table C2. Importance Of Experiences And Attainment Benefits Derived From Experiences

Experiences and Benefits	Importance						Attainment						
	N	Mean ^a	Med.	Percent of respondents by response category ¹			N	Mean ^b	Med.	Percent of respondents by response category ²			
				I	II	III				1	2	3	4
To enjoy the scenery of Lake Powell	320	1.30	1	98.1	1.3	0.6	135	1.26	1	77.9	19.1	2.6	0.4
To do something with my family	309	1.42	1	94.8	2.6	2.6	221	1.17	1	85.5	13.1	0.5	0.9
To use my equipment	309	1.55	1	90.9	7.8	1.3	217	1.29	1	74.2	22.6	2.8	0.5
To get away from the usual demands of life	314	1.65	2	89.8	7.3	2.9	210	1.48	1	57.6	37.6	3.8	1.0
To be with members of my group	302	1.63	1	87.4	8.6	4.0	204	1.16	1	87.3	10.3	1.5	1.0
To relax physically	315	1.72	2	87.3	8.9	3.8	209	1.50	1	56.0	38.8	4.3	1.0
To be with people who enjoy the same things I do	303	1.81	2	82.5	11.9	5.6	193	1.26	1	78.2	18.7	1.6	1.6
To experience nature	296	2.00	2	78.0	13.5	8.4	175	1.49	1	59.4	33.1	6.3	1.1
To be close to nature	305	2.01	2	76.1	18.7	5.2	117	1.49	1	58.8	36.2	2.8	2.3
To experience natural quiet	302	2.15	2	73.8	16.9	9.3	172	1.87	2	36.0	44.2	16.3	3.5
To stargaze	307	2.12	2	73.3	17.9	8.8	175	1.37	1	68.6	27.4	2.3	1.7
To participate in recreational activities	308	2.07	2	72.1	16.6	11.4	173	1.42	1	65.9	28.3	3.5	2.3
To be on my own	302	2.24	2	65.6	22.8	11.6	158	1.73	2	44.3	41.1	12.0	2.5
To experience solitude	301	2.26	2	65.1	22.6	12.3	151	1.81	2	41.7	41.7	10.6	6.0
To feel healthier	305	2.24	2	61.6	28.5	9.8	131	1.62	2	47.3	45.0	6.1	1.5
To be away from other people	302	2.41	2	56.3	29.5	14.2	135	1.90	2	34.8	45.2	14.8	5.2
To get exercise	300	2.53	2	54.7	31.7	13.7	123	1.58	1	53.7	37.4	6.5	2.4
To think about my personal values	301	2.46	2	52.2	34.2	13.6	113	1.48	1	61.1	31.9	5.3	1.8
To experience an undeveloped lake	293	2.58	2	50.5	26.6	22.9	113	1.78	2	43.4	39.8	12.4	4.4
To have thrills and excitement	301	2.50	3	49.2	36.5	14.3	120	1.63	2	46.7	45.8	5.8	1.7
To experience new and different things	295	2.64	3	49.2	33.2	17.6	110	1.97	2	32.7	41.8	20.9	4.5
To learn about the natural history of the area	302	2.62	3	48.7	34.8	16.6	116	1.97	2	34.5	39.7	19.8	6.0
To learn about the cultural history of the area	301	2.69	3	46.5	35.2	18.3	115	2.03	2	34.8	37.4	17.4	10.4
To test my skills and abilities	301	2.77	3	39.5	41.2	19.3	84	1.60	2	50.0	42.9	4.8	2.4
To share my skill and knowledge with others	302	2.76	3	38.4	41.1	20.5	89	1.66	1	51.7	36.0	6.7	5.6
To sketch, paint or take photographs	299	3.08	3	35.1	32.4	32.4	83	1.58	1	51.8	41.0	4.8	2.4
To challenge myself	298	2.83	3	34.9	42.6	22.5	74	1.58	1	59.5	27.0	9.5	4.1
To meet new people	303	3.52	3	14.9	36.3	48.8	34	1.76	1	55.9	20.6	14.7	8.8
To participate in interpretive and educational activities	296	3.49	3	12.2	43.9	43.9	29	2.00	2	37.9	34.5	17.2	10.3

Source: Question 17.

^a Responses based on a five-point scale from 1 (very important) to 5 (very unimportant).

^b Responses based on a four-point scale from 1 (totally attained) to 4 (did not attain).

¹ Responses are reported in groups where I = very important and important, II = neither important nor unimportant, and III = unimportant and very unimportant.

² Includes only respondents who rated an experience as 1 (very important) or 2 (important)

Table C3. Importance Of Experiences And Attainment Of Benefits Derived From Experiences

Experiences and Benefits	Importance ^a				Attainment ^b				
	N	Mean	SD	R ¹	N	Mean	SD	R	RD ²
To enjoy the scenery of Lake Powell	320	1.30	0.56	1	135	1.26	0.52	3	-2
To do something with my family	309	1.42	0.72	2	221	1.17	0.45	2	0
To use my equipment	309	1.55	0.72	3	217	1.29	0.54	5	-2
To be with members of my group	302	1.63	0.83	4	204	1.16	0.47	1	3
To get away from the usual demands of life	314	1.65	0.77	5	210	1.48	0.62	8	-3
To relax physically	315	1.72	0.81	6	209	1.50	0.63	12	-6
To be with people who enjoy the same things I do	303	1.81	0.90	7	193	1.26	0.57	3	4
To experience nature	296	2.00	0.96	8	175	1.49	0.67	10	-2
To be close to nature	305	2.01	0.91	9	117	1.49	0.67	10	-1
To participate in recreational activities	308	2.07	1.10	10	173	1.42	0.67	7	3
To stargaze	307	2.12	1.00	11	175	1.37	0.62	6	5
To experience natural quiet	302	2.15	0.92	12	172	1.87	0.81	24	-12
To be on my own	302	2.24	1.07	13	158	1.73	0.77	20	-7
To feel healthier	305	2.24	1.02	14	131	1.62	0.67	17	-3
To experience solitude	301	2.26	1.04	15	151	1.81	0.85	23	-8
To be away from other people	302	2.41	1.03	16	135	1.90	0.84	25	-9
To think about my personal values	301	2.46	1.09	17	113	1.48	0.68	8	9
To have thrills and excitement	301	2.50	1.01	18	120	1.63	0.67	18	0
To get exercise	300	2.53	1.00	19	123	1.58	0.72	13	6
To experience an undeveloped lake	293	2.58	1.19	20	113	1.78	0.83	22	-2
To learn about the natural history of the area	302	2.62	1.01	21	116	1.97	0.89	26	-5
To experience new and different things	295	2.64	1.07	22	110	1.97	0.85	26	-4
To learn about the cultural history of the area	301	2.69	1.00	23	115	2.03	0.97	29	-6
To share my skill and knowledge with others	302	2.76	1.05	24	89	1.66	0.84	19	5
To test my skills and abilities	301	2.77	1.03	25	84	1.60	0.70	16	9
To challenge myself	298	2.83	1.09	26	74	1.58	0.83	13	13
To sketch, paint or take photographs	299	3.08	1.18	27	83	1.58	0.70	13	14
To participate in interpretive and educational activities	296	3.49	1.00	28	29	2.00	1.00	28	0
To meet new people	303	3.52	1.07	29	34	1.76	1.01	21	8

Source: Question 17.

^a Responses based on a five-point scale from 1 (very important) to 5 (very unimportant).

^b Responses based on a four-point scale from 1 (totally attained) to 4 (did not attain).

¹ Ranked by means.

² Rank differences between importance and attainment means.

D. Expectations and Perceptions of Crowding

Since 1999, the drop in water level may have impacted visitor perceptions and experiences of crowding at Glen Canyon NRA. Visitor expectations regarding the number of people they expect to see while on the water may have changed as a result of less surface area. Moreover, visitor willingness to accept different levels of human activity on the water may have changed as a result in changes in water level.

Respondents were asked to indicate how many people and watercraft they expected to see on the water (Table D1). About two-thirds of the respondents said the number of people they saw and the number of watercraft they saw was about what they expected to see. Twenty-eight percent and 30 percent said they saw fewer people and watercraft than they expected. Less than seven percent of the respondents reported seeing more people and watercraft than expected.

Table D1. Expectations About The Number Of People And Watercraft Seen On The Lake

Expectations	Number of Respondents	Percent
People		
About what I expected	211	65.1
Fewer than expected	91	28.1
More than I expected	21	6.5
Don't know	1	0.3
Total	324	100.0
Watercraft		
About what I expected	180	62.1
Fewer than expected	88	30.3
More than I expected	20	6.9
Don't know	2	0.7
Total	290	100.0

Source: Question 11.

Visitor perceptions of crowding often differ from one visitor to the next. Differences are often a factor of the different types of experiences visitors seek. Unwanted crowding is often linked to changes in the recreation environment and often produces low quality visitor experiences and may displace visitors from a resource area or from using the resource area at particular times of the year, season, or day. Due to lower water levels on Lake Powell, surface area has decreased for recreational boating and other water based activities. As a result visitor perceptions of crowding may have increased even though the actual number and type of visitors may not have changed.

To determine visitor perceptions of crowding, respondents were asked to indicate if crowding levels were less, about the same, or are more crowded than in the past. Most respondents (48 percent) felt that the level of crowding on the lake was less during their most recent visit than it had been in the past. Thirty-four percent indicated the crowding levels stayed about the same while sixteen percent felt that Lake Powell was more crowded than in the past (Table D2).

Table D2. Perceptions Of Crowding On Lake Powell

Perceptions of Crowding	Number of Respondents	Percent
Less crowded than in the past	155	47.8
About the same level of crowding as in the past	111	34.3
More crowded than in the past	52	16.0
Don't know	6	1.9
Total	324	100.0

Source: Question 12.

Respondents who reported increased levels of crowding on Lake Powell were asked to indicate what they believed was causing crowded conditions. Most believe Lake Powell is more crowded because of lower water levels, which decreases surface lake area which means the same number of boats on the water will be closer together (Table D3). Lower water levels also means shoreline camping will be reduced which can result in visitor groups being closer to one another than they might be if water levels were normal. Very few respondents thought crowding was related to more types of recreational use in the area.

Table D3. Reasons Respondents Believed Lake Powell Is More Crowded Than In The Past

Reasons for Crowding	Number of Responses N=96	Percent of Respondents ¹ N=52
Lower water levels in the lake than in the past	33	63.5
More people and/or boats on the lake near me on the water than in the past	29	55.8
Camping closer together on the shoreline	18	34.6
More recreational activities occurring in the area	4	7.7
Other reason	12	23.1

Source: Question 13.

¹ Percentages based on the total number of respondents (N=52). Respondents could give more than one response.

To address crowding, park staff need to know what crowding means to respondents. For most people crowding is related to seeing or hearing other people, the location where other people are seen or heard, and/or seeing evidence of others (Lime, 1996; Manning and Lime 2000). Tables D4, D5, and D6 look at respondents overall preferences for seeing and hearing other people on Lake Powell and respondent preferences for seeing and hearing other people at specific locations within the area. In Table D4 respondents were asked to check the statement that best represented their overall preferences for encountering other visitors in the area. In Table D5 respondents were asked if they had visited one of the locations listed to indicate how acceptable the level of human activity they encountered was at that location. Acceptability was measured on a scale ranging from very acceptable (value of 1) to very unacceptable (value of 7). At locations they thought conditions were unacceptable (values of 5 or greater), they were asked if conditions were unacceptable because of the number of people or watercraft they saw or if it was due to some other condition. Those results are summarized in Table D6.

Respondents were asked to indicate their overall preferences for seeing and hearing other visitors during their visit. About a quarter of the respondents indicated they did not want to hear or see anyone during their visit. These people are looking for isolation and an experience of solitude (Table D4). The remainder of the respondents did not mind seeing other people, to some extent they welcomed the opportunity to hear and see others but they did not want to be camped or anchored in close proximity to a lot of other visitors.

Table D4. Respondent Preferences For Seeing And Hearing Other Visitors During Their Visit

Preferences for Seeing and Hearing Others	Number of Respondents	Percent
I prefer seeing or hearing others, but not total isolation	117	36.2
I prefer seeing or hearing a moderate number of others, but not right next to my campsite or lake space	113	35.0
I prefer seeing or hearing as few others as possible, total isolation	80	24.8
I prefer seeing or hearing a lot of other visitors and enjoy social interaction with individuals not in my group	13	4.0
Total	323	100.0

Source: Question 14a.

When asked how acceptable the amount of human activity they saw or heard at specific locations was, 70 percent or more of the respondents thought that the number of people and watercraft they saw was acceptable on the lake shore, on the lake surface, at the marinas, fueling docks, and no wake zones, and along the shoreline while they were camped (Table D5). Fewer respondents thought the number of people seen and heard at the launch ramps was acceptable. If access points are limited due to low water levels, crowding at launch sites could have a significant impact on visitor experiences and become a significant problem for park staff trying to quickly disperse people away from the launch sites.

Respondents who reported they found levels of human activity at specific locations to be unacceptable were asked to indicate the reasons they felt the way they did (Table D6). Too many watercraft and too many people were the major factors to why respondents felt crowded. Generally the number of other watercraft is more likely to be unacceptable for on-water conditions (at marinas, on the lake surface, and at the launch ramp) and the number of other people seen or heard is more likely to be related to shoreline conditions (on the lake shore, camping at the shoreline). A number of respondents listed human activity unrelated to seeing or hearing too many other people and watercraft.

Table D5. Acceptability Of The Level Of Human Activity Seen

Location	Total Sample							
	Percent of respondents by response category							
	N	Mean ^a	Med.	SD	Acceptable	Neither acceptable nor unacceptable	Unacceptable	Don't know
On the lake shore	278	2.46	2	1.42	77.2	13.2	8.5	1.1
On the lake surface, excluding no wake zone	306	2.53	2	1.39	75.2	14.0	10.4	0.3
At marina, fueling docks and no wake zones	310	2.60	3	1.38	72.5	18.8	7.7	1.0
While camping at shoreline	194	2.70	3	1.47	70.3	15.9	13.3	0.5
At the launch ramp	281	3.22	3	1.72	59.0	18.0	22.3	0.7
Other	23	4.83	5	2.25	20.8	4.2	70.8	4.2

Source: Question 15.

^a Responses based on a seven-point scale from 1 (very acceptable) to 7 (very unacceptable).

Table D6. Reasons Why Respondents Felt The Level Of Human Activity Was Unacceptable

Locations where Crowding Perceived	Reason	Number of Responses	Percent of Respondents ¹
At marina, fueling docks and no wake zones	Too few watercraft	2	8.0
	Too many watercraft	14	56.0
	Too few people	1	4.0
	Too many people	10	40.0
	Something else	10	40.0
	subtotal	37	
On the lake surface, excluding no wake zone	Too few watercraft	1	3.0
	Too many watercraft	24	72.7
	Too few people	1	3.0
	Too many people	15	45.5
	Something else	9	27.3
	subtotal	50	
On the lake shore	Too few watercraft	1	4.5
	Too many watercraft	11	50.0
	Too few people	1	4.5
	Too many people	14	63.6
	Something else	6	27.3
	subtotal	33	
While camping at shoreline	Too few watercraft	1	3.8
	Too many watercraft	14	53.8
	Too few people	2	7.7
	Too many people	15	57.7
	Something else	6	23.1
	subtotal	38	
At the launch ramp	Too few watercraft	2	3.3
	Too many watercraft	31	51.7
	Too few people	2	3.3
	Too many people	25	41.7
	Something else	26	43.3
	subtotal	86	
Other	Too few watercraft	1	5.3
	Too many watercraft	7	36.8
	Too few people	1	5.3
	Too many people	4	21.1
	Something else	13	68.4
	subtotal	26	

Source: Question 15.

¹ Percentages based on the number of respondents. Respondents could give more than one response for each location.

If water levels on Lake Powell continue at low levels for the near future allowing fewer access points, and demand and use stay the same, then the number of visitors that are seen and heard may also increase at other locations on the lake in addition to launch sites. Park staff need to know if visitors are willing to accept more encounters with other visitors. Table D7 looks at respondent willingness to accept more encounters in the area during their visit if access to Lake Powell is limited. Nearly 75 percent of all respondents indicated they would be willing to accept seeing and/or hearing more people on Lake Powell if lake access is limited. But just over 25 percent indicated they did not want to see or hear more people.

Table D7. Willingness To Accept Seeing /Hearing Greater Numbers Of Visitors If Lake Access Is Limited

Willingness to Accept Seeing/Hearing Greater Number of Visitors	Number of Respondents	Percent
I would accept seeing or hearing any number of visitors to continue to have lake access	95	29.5
I would accept seeing or hearing a moderate number of others	75	23.3
I would accept seeing or hearing some others; I would not require total isolation	65	20.2
Not Willing to Accept Seeing/ Hearing Greater Number of Visitors		
My preference would remain unchanged	81	25.2
I would only accept seeing or hearing as few others as possible, total isolation	6	1.9
Total	322	100.0

Source: Question 14b.

E. Perceived problems and potential management actions

In the 1999 and 2000 Glen Canyon NRA visitor use studies, virtually no significant problems were identified by respondents (James et al 2001a, 2001b, 2001c). Lower water levels, potential changes in the way respondents perceive the number of people and watercraft they see and hear, competition for fewer shoreline camping spots, and the same or increased demand for recreation on Lake Powell may result in greater numbers of visitors perceiving problems and / or in respondents perceiving a problem is currently more significant than it was in the past.

Perceived problems

Respondents were asked to look at a list of 32 possible problems. For each one they were asked to rate it along a 5-point scale from 'no problem' to 'very serious problem'. If they had no idea about the seriousness of a problem, they could check 'don't know'. Table E1 rank orders the list of potential problems by the overall average score of the respondents for the problem. The top five potential problems with the highest average scores are the same five problems noted in the 1999-2000 studies (James et al 2001a, 2001b, 2001c). The difference is that in this study, respondents rated all of these problems slightly more serious than they were rated in the earlier studies. In the earlier studies, only 'finding a beach campsite' had a mean score higher than 2.0. Eleven of the 32 potential problems listed have mean scores greater than 2.0. Moreover, 11 of the top 15 potential problems respondents rated are directly related to social and physical carrying capacity and crowding issues. In the 1999-2000 study only 7 of the top 15 were related to these issues and their mean scores were lower.

In particular, respondents were more likely to consider conditions related to camping, launching their watercraft, and general boating as problems. With respect to camping, over half of the respondents rated their ability to find campsites as a moderate problem and 12 percent said it was a serious problem. Related to finding a campsite, 53 percent of respondents indicated a moderate problem with finding an unoccupied campsite and 51 percent indicated a moderate problem with the need to travel farther to find a shoreline campsite. When looking at boat launching conditions, the amount of time waiting in line to launch a boat was considered a moderate problem by 53 percent of respondents and a serious problem by 13 percent. Related to boat launching, the amount of time it took to park the boat trailer and tow vehicle was a moderate problem for 43 percent and a serious problem for 15 percent of the respondents. Another 37 percent indicated that the time it took to shuttle back to the marina was also a moderate problem. Once on the water, unsafe boating was considered a moderate problem by 58 percent and a serious problem by 15 percent of the respondents. Fifty-three percent thought boats closer to their boat than they would like was a moderate problem and 18 percent thought it was a serious problem. About 44 percent of the respondents reported experiencing too many boats on the water a moderate problem.

Table E1. Possible Problems Experienced While Visiting Glen Canyon National Recreation Area/Lake Powell

Potential Problems	Total Sample							
	N	Mean ¹	Med.	SD	Percent of respondents by response category ²			
					No problem	Moderate problem	Serious problem	Don't know
Finding a beach campsite	284	2.38	2	1.06	24.0	56.2	12.0	7.8
Unsafe operation of motorized watercraft	309	2.35	2	1.17	25.7	57.5	14.9	1.9
Finding an unoccupied campsite	274	2.26	2	1.04	25.8	52.5	8.9	12.7
Litter on beaches and shoreline	304	2.27	2	1.06	26.1	58.9	11.8	3.2
People being inconsiderate	318	2.28	2	1.11	26.4	58.4	14.0	1.2
Boats closer to my boat than I like	313	2.34	2	1.21	28.2	52.8	18.0	0.9
Amount of time spent waiting in line to launch boat	308	2.26	2	1.15	31.0	52.7	12.9	3.4
Travel farther on the lake to find shoreline campsite	293	2.15	2	1.12	32.7	51.3	9.9	6.1
Amount of time spent to park trailer and tow vehicle	295	2.24	2	1.25	34.0	43.4	15.4	7.2
Travel farther on the lake to find solitude	307	2.09	2	1.11	36.9	51.3	9.6	2.2
Evidence of pets and their droppings	308	2.03	2	1.17	41.4	43.9	12.7	1.9
Amount of time spent to shuttle back to marina	276	1.90	2	1.12	43.6	37.2	7.7	11.5
Management of visitor activity on the lake	259	1.73	1	1.01	47.4	32.2	5.6	14.8
Too many motorized watercraft on the lake	310	1.86	2	1.03	47.9	43.5	7.7	1.0
Poor water quality	298	1.79	1	0.98	48.9	40.3	6.1	4.8
Adequate floating toilet facilities on the lake	295	1.80	1	1.07	50.3	32.8	9.1	7.8
The level of noise on the lake	314	1.75	1	0.95	51.6	42.1	5.0	1.3
Conflicts with watercraft operators on the lake	305	1.71	1	0.95	52.4	40.2	5.5	1.9
Conflicts with others for beach space	303	1.76	1	1.03	52.7	36.5	7.0	3.8
Human waste on lake shore or in water	297	1.76	1	1.12	54.3	30.8	9.2	5.7
Travel farther on the lake to find fuel	306	1.77	1	1.07	54.3	35.6	7.3	2.9
The number of commercial tour boats	305	1.85	1	1.19	55.8	29.7	10.7	3.8
Confusion about rules and regulations	306	1.73	1	1.07	57.6	30.9	8.9	2.5
Sufficient navigational aids on Lake Powell	308	1.72	1	1.06	58.5	31.6	7.3	2.5
Adequate toilet facilities at landings	311	1.66	1	1.05	61.8	28.1	8.2	1.9
Availability of National Park Service presence on the lake	311	1.60	1	1.05	65.8	23.5	8.2	2.5
Availability of interpretive and educational opportunities	266	1.33	1	0.72	66.9	17.0	1.6	14.5
Amount of light at the marinas at night	302	1.32	1	0.70	73.3	19.8	1.9	5.0
Amount of light on the lake at night	303	1.31	1	0.73	77.5	16.5	2.2	3.8
Evidence of livestock	306	1.31	1	0.79	78.9	14.2	3.1	3.8
Noise from airplanes	307	1.21	1	0.57	82.0	13.9	1.3	2.8
Evidence of mining operations	298	1.10	1	0.46	89.2	4.8	0.6	5.4

Source: Question 18.

¹ Responses based on a five-point scale from 1 (no problem) to 5 (very serious problem).

² Responses are reported in groups where moderate problem includes both slight problem and moderate problem categories, and serious problem includes both serious problem and very serious problem categories.

The perception and extent of unsafe boating practices on Lake Powell is especially important to park staff. Unsafe boating practices can lead to accidents and death in the worst cases. Respondents were asked to indicate the kind of unsafe boating practices, if any, they observed on their most recent visit to Lake Powell. Forty-two percent did not observe any unsafe boating practices (Table E2). Of those who observed unsafe boating practices, the most commonly observed unsafe practice was non-adherence to wakeless zones. About a quarter of the respondents noted that the proximity of other boats to them was a problem. Unsafe speed was the least observed unsafe practice.

Table E2. Unsafe Boating Practices Observed On Most Recent Visit

Unsafe Boating Practice	Number of Responses N=459	Percent of Respondents ¹ N=324
Non-adherence to wakeless zones	129	39.8
Proximity of other boats	79	24.4
Unsafe speeds	62	19.1
Other	52	16.0
Did Not Observe		
I did not observe any unsafe boating practices	137	42.3

Source: Question 16.

¹Percentages based on the number of responses. Respondents could give more than one response.

Exclusive Zone Use and Perceived Problems

As noted earlier, Zones 1 and 11, which include Wahweap and Bullfrog and Halls Crossing respectively, were the only zones to have significant numbers of respondents who entered those zones and spent all of their time in those zones. These two zones are large and include the heaviest used access points to Lake Powell. According to the 1999-2000 visitor use studies, these two zones are also the most heavily used on Lake Powell. Park staff want to know how visitors who use one zone exclusively perceive problems. Tables E3 and E4 summarize the perception of problems that respondents who only visited Zone 1 or Zone 11 had. Table E5 compares the rank order of perceived problems for Zones 1 and 11.

Respondents who exclusively visited Zone 1 (Wahweap) rated 12 of the potential problems as moderate to serious problems (mean scores greater than 2.0) (Table E3). For this group of respondents the greatest problem was other boats too close to their boat. Almost 28 percent said it was a serious problem. Other problems they ranked in the top 12 included problems related to finding campsites and launching their boats. They also listed inconsiderate people and litter along the shoreline as moderate to serious problems. For respondents using Zone 11 exclusively, 14 potential problems were rated as moderate to serious (Table E4). Even though they also rated finding campsites and problems related to proximity of other boats, they also listed problems related to litter, inconsiderate people, toilet facilities, water quality, and pet droppings as moderate to serious problems. For all other zones, including Zone 1, problems related to toilets, water quality and pet droppings were not reported as moderate or serious problems (Table E5).

Table E3. Possible Problems Experienced While Visiting Zone 1 Exclusively

Potential Problems	Respondents Visiting Zone 1 (Wahweap) Exclusively							
	N	Mean ^a	Med.	SD	Percent of respondents by response category ^b			
					No problem	Moderate problem	Serious problem	Don't know
Boats closer to my boat than I like	38	2.66	2	1.36	22.5	45.0	27.5	5.0
Amount of time spent to park trailer and tow vehicle	34	2.62	3	1.30	19.5	43.9	19.5	17.1
Unsafe operation of motorized watercraft	39	2.59	2	1.45	29.3	43.9	22.0	4.9
Travel farther on the lake to find solitude	37	2.46	3	1.10	22.5	60.0	10.0	7.5
People being inconsiderate	40	2.38	2	1.23	26.2	54.8	14.3	4.8
Finding a beach campsite	36	2.36	3	0.99	24.4	56.1	7.3	12.2
The number of commercial tour boats	39	2.23	1	1.53	48.8	24.4	22.0	4.8
Travel farther on the lake to find shoreline campsite	36	2.22	2	0.99	22.5	60.0	7.5	10.0
Amount of time spent to shuttle back to marina	35	2.20	2	1.16	29.3	46.3	9.8	14.6
Amount of time spent waiting in line to launch boat	38	2.18	2	1.21	33.3	47.6	9.5	9.5
Litter on beaches and shoreline	38	2.08	2	0.94	24.4	61.0	7.3	7.3
Finding an unoccupied campsite	33	2.06	2	1.03	33.3	40.5	4.8	21.4
Conflicts with watercraft operators on the lake	39	1.97	2	1.25	46.3	36.6	12.2	4.9
Travel farther on the lake to find fuel	37	1.92	2	1.06	41.5	41.5	7.3	9.8
Too many motorized watercraft on the lake	39	1.90	2	1.10	46.3	39.0	9.8	4.9
Sufficient navigational aids on Lake Powell	39	1.87	1	1.15	50.0	35.7	7.1	7.1
Evidence of pets and their droppings	39	1.85	1	1.20	51.2	34.1	9.8	4.9
Management of visitor activity on the lake	33	1.85	1	1.09	43.6	33.3	7.7	15.4
Conflicts with others for beach space	37	1.84	1	1.17	48.8	31.7	9.8	9.8
The level of noise on the lake	38	1.79	2	1.02	47.5	40.0	7.5	5.0
Confusion about rules and regulations	38	1.76	2	0.97	47.5	42.5	5.0	5.0
Poor water quality	35	1.74	2	0.98	42.5	37.5	7.5	12.5
Availability of National Park Service presence on the lake	41	1.71	1	1.06	59.5	31.0	7.1	2.4
Adequate floating toilet facilities on the lake	36	1.69	1	1.09	54.8	23.8	7.1	14.3
Human waste on lake shore or in water	37	1.59	1	1.14	63.4	17.1	9.8	9.8
Amount of light at the marinas at night	39	1.44	1	0.91	70.7	19.5	4.9	4.9
Amount of light on the lake at night	38	1.37	1	0.88	75.0	15.0	5.0	5.0
Adequate toilet facilities at landings	40	1.33	1	0.80	78.6	11.9	4.8	4.8
Evidence of livestock	37	1.27	1	0.61	75.0	17.5	0	7.5
Noise from airplanes	36	1.22	1	0.64	79.5	10.3	2.6	7.7
Availability of interpretive and educational opportunities	31	1.16	1	0.52	71.8	7.7	0	20.5
Evidence of mining operations	36	1.06	1	0.33	87.5	2.5	0	10.0

Source: Question 18.

^a Responses based on a five-point scale from 1 (no problem) to 5 (very serious problem).

^b Responses are reported in groups where moderate problem includes both slight problem and moderate problem categories, and serious problem includes both serious problem and very serious problem categories.

Table E4. Possible Problems Experienced While Visiting Zone 11 Exclusively

Potential Problems	Respondents Visiting Zone 11 (Bullfrog and Halls Crossing) Exclusively							
	N	Mean ^a	Med.	SD	Percent of respondents by response category ^b			
					No problem	Moderate problem	Serious problem	Don't know
Finding a beach campsite	52	2.63	3	1.05	14.0	59.6	17.5	8.8
Unsafe operation of motorized watercraft	58	2.53	2	0.98	11.9	71.2	15.3	1.7
Litter on beaches and shoreline	54	2.52	3	0.77	7.0	78.9	8.8	5.3
Amount of time spent waiting in line to launch boat	57	2.51	2	1.20	23.7	50.8	22.0	3.4
Finding an unoccupied campsite	50	2.48	3	1.02	15.8	61.4	10.5	12.3
Evidence of pets and their droppings	56	2.45	2	1.14	19.3	61.4	17.5	1.8
Amount of time spent to park trailer and tow vehicle	55	2.35	2	1.25	27.1	45.8	20.3	6.8
Boats closer to my boat than I like	58	2.34	2	1.10	24.1	58.6	17.2	0
People being inconsiderate	58	2.31	2	1.06	23.7	61.0	13.6	1.7
Adequate floating toilet facilities on the lake	57	2.21	2	1.11	33.9	49.2	13.6	3.4
Travel farther on the lake to find shoreline campsite	55	2.20	2	1.10	31.0	53.4	10.3	5.2
Travel farther on the lake to find solitude	57	2.05	2	0.97	31.0	58.6	8.6	1.7
Adequate toilet facilities at landings	58	2.05	2	1.19	40.7	45.8	11.9	1.7
Poor water quality	54	2.04	2	0.93	31.6	56.1	7.0	5.3
Human waste on lake shore or in water	55	1.93	2	1.00	35.6	50.8	6.8	6.8
Travel farther on the lake to find fuel	57	1.93	2	1.12	45.8	40.7	10.2	3.4
Sufficient navigational aids on Lake Powell	57	1.93	1	1.15	50.0	37.9	10.3	1.7
Too many motorized watercraft on the lake	59	1.92	2	0.82	33.9	62.7	3.4	0
The level of noise on the lake	59	1.88	2	0.79	35.6	62.7	1.7	0
Amount of time spent to shuttle back to marina	54	1.87	2	0.99	42.4	44.1	5.1	8.5
Confusion about rules and regulations	57	1.86	1	1.14	50.8	33.9	11.9	3.4
Management of visitor activity on the lake	53	1.85	1	1.10	46.6	36.2	8.6	8.6
Conflicts with others for beach space	55	1.76	1	0.94	48.3	43.1	3.4	5.2
Conflicts with watercraft operators on the lake	56	1.73	2	0.84	47.4	47.4	3.5	1.8
Availability of National Park Service presence on the lake	58	1.69	1	1.17	67.8	18.6	11.9	1.7
The number of commercial tour boats	54	1.54	1	0.88	62.1	29.3	1.7	6.9
Availability of interpretive and educational opportunities	51	1.49	1	0.81	57.6	25.4	3.4	13.6
Amount of light at the marinas at night	57	1.37	1	0.59	66.1	30.5	0	3.4
Amount of light on the lake at night	58	1.34	1	0.66	74.6	23.7	0	1.7
Evidence of livestock	55	1.22	1	0.53	78.0	15.3	0	6.8
Noise from airplanes	58	1.21	1	0.52	83.1	15.3	0	1.7
Evidence of mining operations	55	1.05	1	0.23	88.1	5.1	0	6.8

Source: Question 18.

^a Responses based on a five-point scale from 1 (no problem) to 5 (very serious problem).^b Responses are reported in groups where moderate problem includes both slight problem and moderate problem categories, and serious problem includes both serious problem and very serious problem categories.

Table E5. Comparison Of Rank Ordering Of Problems By Respondents Visiting Zone 1 Or Zone 11 Exclusively

Potential Problems	Comparison of Rank Order of Problems by Respondents Visiting Zones 1 and 11 Exclusively							
	Zone 1 (Wahweap)				Zone 11 (Bullfrog and Halls Crossing)			
	N	Mean ^a	SD	Rank	N	Mean ^a	SD	Rank
Boats closer to my boat than I like	38	2.66	1.36	1	58	2.34	1.10	8
Amount of time spent to park trailer and tow vehicle	34	2.62	1.30	2	55	2.35	1.25	7
Unsafe operation of motorized watercraft	39	2.59	1.45	3	58	2.53	0.98	2
Travel farther on the lake to find solitude	37	2.46	1.10	4	57	2.05	0.97	12
People being inconsiderate	40	2.38	1.23	5	58	2.31	1.06	9
Finding a beach campsite	36	2.36	0.99	6	52	2.63	1.05	1
The number of commercial tour boats	39	2.23	1.53	7	54	1.54	0.88	26
Travel farther on the lake to find shoreline campsite	36	2.22	0.99	8	55	2.20	1.10	11
Amount of time spent to shuttle back to marina	35	2.20	1.16	9	54	1.87	0.99	20
Amount of time spent waiting in line to launch boat	38	2.18	1.21	10	57	2.51	1.20	4
Litter on beaches and shoreline	38	2.08	0.94	11	54	2.52	0.77	3
Finding an unoccupied campsite	33	2.06	1.03	12	50	2.48	1.02	5
Conflicts with watercraft operators on the lake	39	1.97	1.25	13	56	1.73	0.84	24
Travel farther on the lake to find fuel	37	1.92	1.06	14	57	1.93	1.12	15
Too many motorized watercraft on the lake	39	1.90	1.10	15	59	1.92	0.82	18
Sufficient navigational aids on Lake Powell	39	1.87	1.15	16	57	1.93	1.15	16
Evidence of pets and their droppings	39	1.85	1.20	17	56	2.45	1.14	6
Management of visitor activity on the lake	33	1.85	1.09	18	53	1.85	1.10	22
Conflicts with others for beach space	37	1.84	1.17	19	55	1.76	0.94	23
The level of noise on the lake	38	1.79	1.02	20	59	1.88	0.79	19
Confusion about rules and regulations	38	1.76	0.97	21	57	1.86	1.14	21
Poor water quality	35	1.74	0.98	22	54	2.04	0.93	14
Availability of National Park Service presence on the lake	41	1.71	1.06	23	58	1.69	1.17	25
Adequate floating toilet facilities on the lake	36	1.69	1.09	24	57	2.21	1.11	10
Human waste on lake shore or in water	37	1.59	1.14	25	55	1.93	1.00	17
Amount of light at the marinas at night	39	1.44	0.91	26	57	1.37	0.59	28
Amount of light on the lake at night	38	1.37	0.88	27	58	1.34	0.66	29
Adequate toilet facilities at landings	40	1.33	0.80	28	58	2.05	1.19	13
Evidence of livestock	37	1.27	0.61	29	55	1.22	0.53	30
Noise from airplanes	36	1.22	0.64	30	58	1.21	0.52	31
Availability of interpretive and educational opportunities	31	1.16	0.52	31	51	1.49	0.81	27
Evidence of mining operations	36	1.06	0.33	32	55	1.05	0.23	32

Source: Question 18.

^a Responses based on a five-point scale from 1 (no problem) to 5 (very serious problem).

Park staff requested that three specific potential problems be looked at across all zones. The problems were: litter on beaches and shoreline, evidence of pets and their droppings, and human waste on the lakeshore or in the water (Table E6). Although a few people in every zone mentioned each of these as a problem, with the exception of Zone 11 (Bullfrog and Halls Crossing) they were never more than a slight problem. For Zone 11, litter, pets and their droppings, and human waste are more likely to be problem. As noted in the previous section, respondents who spent all of their time in Zone 11 rated problems related to availability of toilet facilities as a moderate to serious problem (Table E5).

Table E6. Selected Potential Problems For All Zones

Zone	Litter on Beaches and Shoreline		Pets and Their Droppings		Human Waste on Lake Shore or in Water	
	Number Responses N=435	Percent of Respondents ¹ N=216	Number Responses N=378	Percent of Respondents ¹ N=174	Number Responses N=247	Percent of Respondents ¹ N=120
1 Wahweap Bay, Wahweap Marina, Lone Rock	53	24.5	42	24.1	26	21.7
2 Glen Canyon Dam, Carl Hayden Visitor Center, Antelope Point Marina	19	8.8	21	12.1	14	11.7
3 Crosby Canyon, Warm Creek Bay, Castle Rock	24	11.1	25	14.4	16	13.3
4 Padre Bay, Gunsight Butte, Crossing of the Fathers	27	12.5	25	15.5	16	13.3
5 Last Chance Bay, Rock Creek Bay, Gregory Butte	27	12.5	27	14.4	16	13.3
6 Dangling Rope Marina, Rainbow Bridge, Cathedral Canyon	10	9.3	17	9.8	12	10.0
7 San Juan Arm, Bald Rock Canyon, Piute Canyon	11	5.1	13	7.5	9	7.5
8 Nokai Canyon, Copper Canyon	5	2.3	7	4.0	6	5.0
9 Cottonwood Canyon, Hole-in-the-Rock, Escalante River	31	14.4	28	16.1	18	15.0
10 The Rincon, Iceberg Canyon, Slick Rock Canyon	54	25.0	42	24.1	28	23.3
11 Bullfrog Marina, Halls Crossing Marina, Stanton Creek	105	48.6	87	50.0	59	49.2
12 Defiance House Ruin, Forgotten Canyon, Knowles Canyon	45	20.8	31	17.8	21	17.5
13 Hite Marina, Farley Canyon, Dirty Devil River, Colorado River	14	6.5	13	7.5	6	5.0

Source: Question 7a.

¹ Respondents could give more than one response.

F. Support for general management actions

Understanding visitor preferences for management actions is important if park managers are to solve or mitigate biophysical resource impacts due to visitor use and provide quality recreation experience opportunities. To be effective, management actions not only need to be appropriate for the resource problem they are designed to address but they must also be understood and accepted by visitors. Respondents level of support or opposition for 24 specific management actions at Glen Canyon NRA was determined by examining their responses to each action along a five-point Likert type scale where 1 = strongly opposed the action, 3 was a neutral point and 5 = strongly support the action. Respondents were also asked to look over the entire list of 24 management actions and indicate the five that they believe are the most important for park staff to consider implementing.

Table F1 and F2 summarize overall respondent support for the 24 management actions listed on the questionnaire. In general, respondents were highly supportive of actions related to providing information, providing more or expanding existing facilities and services, improving access, and enforcing existing rules and regulations (Table F1). Respondents were mostly neutral about support or opposition for actions related to zoning—whether for sensitive resources or recreational uses, creating management rules to prevent user conflicts, and disallowing pets. Respondents generally opposed any actions that would limit the number of people or watercraft on the lake, put in place rules to govern where visitors can or cannot go, and regulate the number of people, group size, or watercraft on the lake.

When asked what they thought were the five most important actions the park could take, respondents listed increasing facilities and services on the shoreline, providing more information about appropriate behaviors, enforcing the existing rules and regulations on the lake, and improving access to the lake (Table F2).

Management Actions Supported for Specific Problems

Park staff needs to know specifically what types of management actions visitors support to solve specific problems visitors identified. The list of potential problems presented earlier and the list of management actions were analyzed using the chi-square statistic to see if differences existed between visitors who perceive a specific problem exists and visitors who did not perceive the problem exists and the management actions they support or oppose to solve specific problems. Tables F3, F4, and F5 display the results of this analysis. Complete breakdowns of the data presented in these tables can be found in Appendix A.

For each of the problems and management solutions presented in tables F3, F4 and F5, a statistically significant difference at the $p < 0.05$ level or greater existed on whether or not respondents perceived a specific situation as a problem. However in some cases, the differences identified between groups was in the level of support given for a specific action.

In Table F3 all respondents supported the management actions listed even though they differed significantly in how much of a problem they thought a specific situation was. In general, the level of support for each of the management actions is higher for those who thought the situation listed was a problem than for those who thought it was not a problem. In Table F4 neither group of respondents (those who perceived the situations listed as problems and those who did not perceive the situations as problems) supported the management actions listed as a way to solve the problems. Those who were opposed to management actions and did not see a problem were more likely to register higher levels of opposition to the management action than those who saw the problem but overall do not support the management action listed to solve the problem. The data in Table F5 shows management actions that are supported by respondents who see the situation listed as a problem. The actions are not supported by respondents who do not perceive the problems listed exist.

Table F1. Respondent Support For Potential Management Actions

Management Action	Total Sample						
	N	Mean ^a	Med.	SD	Percent of Respondents by Response Category		
					Support	Neither support nor oppose	Oppose
Increase facilities on the shoreline (launch ramps, parking, etc.)	298	1.97	2	0.99	78.2	14.4	7.4
Provide more information to visitors about appropriate behavior	298	1.90	2	0.90	77.5	18.1	4.4
Increase services on the shoreline (fueling stations, slips, buoys, etc.)	295	2.11	2	1.06	69.8	21.0	9.2
Improve boater education and orientation	295	2.16	2	0.90	69.8	25.1	5.1
Provide more toilet facilities on the water	296	2.19	2	0.89	67.2	28.0	4.7
Improve public access to the lake	294	2.26	2	1.17	64.3	21.8	13.8
Use management controls to prevent damage to the environment by visitors	293	2.35	2	1.06	64.2	23.5	12.3
Expand existing facility development	298	2.23	2	1.05	62.4	27.5	10.1
Require visitors to learn about appropriate behavior on the lake	295	2.27	2	1.07	60.3	28.8	10.8
More aggressively enforce safety rules and regulations on lake	300	2.35	2	1.13	57.0	29.3	13.7
Provide visitors with more educational information about the area	295	2.39	2	0.83	56.3	38.6	5.1
Provide more park rangers on the lake to educate visitors about appropriate behavior	298	2.44	2	1.13	51.3	34.2	14.4
Establish zones to protect sensitive resources	293	2.82	3	1.23	48.1	23.9	28.0
Expand the number of marina slips	295	2.63	3	1.18	45.1	33.6	21.4
Designate some areas for specific types of watercraft use	299	3.01	3	1.44	40.5	19.7	39.8
Use management controls to prevent conflicts between lake users	288	2.90	3	1.09	37.8	37.5	24.7
Close area to pets	296	3.13	3	1.37	32.1	24.0	43.9
Establish specific use zones	299	3.19	3	1.32	32.1	25.1	42.8
More rules governing the types of recreation that can take place at various locations	294	3.44	3	1.16	22.4	28.9	48.6
Limit number of motorized watercraft allowed on lake at any one time	296	3.76	4	1.11	14.5	22.3	63.2
Limit number of boats allowed on lake	296	3.78	4	1.07	13.2	23.0	63.9
Regulate the number of people per group allowed on lake	295	3.95	4	1.08	11.2	15.9	72.9
Regulate the number of people using lake at any one time	295	3.79	4	0.98	8.1	18.3	73.6
Limit number of non-motorized watercraft allowed on lake at any one time	293	4.00	4	0.92	3.8	25.6	70.6
Other things	57	1.42	1	1.00	89.5	5.3	5.2

Source: Question 19.

^a Responses based on a five-point scale from 1 (strongly support) to 5 (strongly oppose).

^b Responses are reported in groups where support includes both strongly support and support categories, and oppose includes both oppose and strongly oppose categories.

Table F2 . Respondent Rank Ordering Of Importance Of Management Actions

Management Action	Number of Respondents	Rank order of actions from most important to implement to least important
Increase facilities on the shoreline (launch ramps, parking, etc.)	298	1
Increase services on the shoreline (fueling stations, slips, buoys, etc.)	295	2
Provide more information to visitors about appropriate behavior	298	3
More aggressively enforce safety rules and regulations on lake	300	4
Improve public access to the lake	294	5
Require visitors to learn about appropriate behavior on the lake	295	6
Provide more toilet facilities on the water	296	7
Improve boater education and orientation	295	8
Expand existing facility development	298	9
Provide more park rangers on the lake to educate visitors about appropriate behavior	298	10
Close area to pets	296	11
Designate some areas for specific types of watercraft use	299	12
Expand the number of marina slips	295	13
Use management controls to prevent damage to the environment by visitors	293	14
Establish specific use zones	299	15
Establish zones to protect sensitive resources	293	16
Provide visitors with more educational information about the area	295	17
Limit number of boats allowed on lake	296	18
Limit number of motorized watercraft allowed on lake at any one time	296	19
Regulate the number of people using lake at any one time	295	20
Regulate the number of people per group allowed on lake	295	21
Use management controls to prevent conflicts between lake users	288	22
More rules governing the types of recreation that can take place at various locations	294	23
Limit number of non-motorized watercraft allowed on lake at any one time	293	24

Source: Question 19.

Eleven potential problems are listed in Table F3. The problems range from visitor impacts on the resource and other visitors, information and education needs of visitors, to level of facilities and services provided by park management. Solutions for these types of problems include providing more and better information and education to visitors, having more National Park Service presence on the lake, more aggressively enforcing existing regulations, and providing more facilities and better access to the area. Seven of the management actions supported work toward resolving more than one problem and allow park staff some flexibility in choosing how to manage these potential problems. If park staff is interested in addressing any of these potential problems at this time, it appears that visitors to Glen Canyon NRA would be supportive of any of the management actions listed in the table.

Table F4 summarizes data for those respondents who think one or more of the nine problems listed *is* a problem and for those respondents who do not think these are problems. Both groups of respondents oppose the management actions listed that could be used to solve these problems. These problems range from visitor behavior and conflicts, campsite availability, number of watercraft on the lake, to poor water quality. Solutions presented for these types are all related to limiting use and visitors, regulating use and visitors, and creating more rules to govern what visitors can and cannot do while at Glen Canyon NRA. These types of management actions directly impact visitors and their perceived level of freedoms (Anderson, et al, 1998; Lime et. al, 2004). When respondents were asked to rate the seriousness of these and other potential problems none of the potential problems were rated overall as serious problems. Past research has shown that visitors are not likely to support more limits, rules or regulations on their behavior if they do not believe a serious problem exists (Stankey and Baden 1977; Cole 1995). Two of the problems listed in Table F4 are also listed in Table F5. For these two problems it would appear that the most appropriate way to begin to address them is by using the management actions noted in Table F3 that are supported by respondents. If park staff believe one or more of these problems are serious, then they will need to either find a solution that is acceptable to visitors and is effective at solving the problem; or, work with visitors to get them to understand why a specific management action listed is the best solution for a given problem (McCool and Christensen 1993; Leung and Marion, 2000).

In Table F5 the management actions listed are supported only by those who think the problems listed are occurring at this time. These actions are opposed by respondents who do not think the problems currently exist. The problems listed are generally related to visitor behavior or visitor's pets and one is related to the number of watercraft on the lake. The management actions listed would require designating or zoning the lake for different uses/users, creating and putting in place management controls that would do such things as not allowing visitors to bring their pets with them, or requiring visitors to learn how to behave appropriately. In this case the heavy handed approach (rules, restrictions, and regulations) is supported by those who perceive a problem exists but not supported by those who do not perceive the problem exists. Also, some of the problems listed in this table are listed in Table F3. For example, 'too many motorized watercraft on Lake Powell' is listed in both Table F3 and F5. In this case respondents who do not see a problem in too many watercraft on the lake would support the idea of 'expanding marina size' but would not support limiting the number of boats or regulating the number of people on the lake as a way to address this type of problem. The solutions in Table F3 are supported by both groups of respondents and may be a more effective way to begin to address the problems listed in Table F5.

Table F3. Management Actions Supported By Respondents Perceiving The Problem And Supported By Respondents Not Perceiving The Problem

Management Actions Supported by Both Groups	Potential Problem ¹										
	Litter on beaches and shoreline	Sufficient navigational aids on Lake Powell	Too many motorized watercraft on Lake Powell	People being inconsiderate	Unsafe operation of motorized watercraft on the lake	Adequate toilet facilities at landings	Adequate toilet facilities on the lake	Human waste on lakeshore or in the water	Confusion about rules and regulations	Availability of National Park Service presence on the lake	Amount of time spent waiting in line to launch boat
Provide more park rangers on lake to educate visitors about appropriate behaviors	X			X	X				X	X	
Provide more information to visitors about appropriate behaviors	X			X	X				X		
Improve boater education and orientation		X			X				X		
More aggressively enforce safety rules and regulations on lake				X	X						
Increase facilities on shoreline (launch ramps, parking, etc.)						X					X
Provide more toilet facilities on the water							X	X			
Provide visitors with more educational information about the area		X									
Require visitors to learn about appropriate behavior on the lake								X			
Improve public access to the lake											X
Expand the number of marina slips			X								

Source: Questions 18a and 19.

¹ Only problems with statistically significant difference at the $p \leq 0.05$ level or higher are included.

Table F4. Management Actions Opposed By Respondents Perceiving The Problem And Opposed By Respondents Not Perceiving The Problem

Management Actions Opposed by both Groups	Potential Problem ¹								
	Finding a beach campsite	Poor water quality	Too many motorized watercraft on Lake Powell	People being inconsiderate	The level of noise on the lake	Conflicts with others for beach space	Conflicts with watercraft operators on the lake	Problems with traveling farther on the lake to find solitude	Problems with traveling farther on the lake to find shoreline campsite
Limit number of boats allowed on the lake	X	X	X		X	X	X	X	
Limit number of motorized watercraft allowed on the lake at any one time	X	X			X	X	X		
Regulate the number of people using the lake at any one time	X		X	X	X	X	X	X	X
Regulate the number of people per group allowed on the lake	X			X				X	
More rules governing the types of recreation that can take place at various locations				X					

Source: Questions 18a and 19.

¹ Only problems with statistically significant difference at the $p \leq 0.05$ or higher level are included.

Table F5. Management Actions Supported By Respondents Perceiving The Problem And Opposed By Respondents Not Perceiving The Problem

Management Actions Supported by Respondents Who See A Problem and Opposed by Those Who Do NOT See A Problem	Potential Problem¹				
	Too many motorized watercraft on Lake Powell	People being inconsiderate	The level of noise on the lake	Conflicts with watercraft operators on the lake	Evidence of pets and their droppings
Designate some areas for specific types of watercraft use	X	X			
Require visitors to learn about appropriate behavior on the lake		X			
Use management controls to prevent conflicts between lake users		X	X	X	
Close area to pets					X

Source: Questions 18a and 19.

¹Only problems with statistically significant difference at the $p \leq 0.05$ level or higher are included.

G. Satisfaction with services

Respondent feedback regarding satisfaction with the services provided to them by park staff and the concessioners operating in the park is important as it plays a significant role in the quality of the visitor recreation experience opportunities provided. Poor service can significantly impact visitors making it less likely that their recreational needs will be met. Good service, on the other hand, is likely to impact visitors in a positive way making it more likely that the visitor will attain the experiences and on-site benefits that brought them to the area (James et al, 2000). Data about service quality is also important to park staff as these data serve as a type of 'report card' giving staff an indication of how well visitors perceive they do their jobs and how well the concessioners perform with respect to visitor needs.

Respondents were asked to rate 12 items along a five-point Likert type scale with a 1 indicating they were very satisfied with the service, a 3 indicating they were neutral toward the service and a 5 indicating they were very dissatisfied with the service. The mean score for each of the service items was less than 3.0 meaning that overall respondents were satisfied with the service they received (Table G1). Respondents appeared to be slightly more satisfied with the services they receive from National Park Service employees than from concessioners. Visitor information provided and exhibits and educational materials are especially of high quality to the respondents.

Table G1. Satisfaction With The Quality Of Services Provided At Glen Canyon National Recreation Area/Lake Powell

Service	Total Sample							
	N	Mean ^a	Med.	SD	Percent of respondents by response category ^b			
					Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Don't know
Visitor information	273	1.85	2	0.92	63.6	17.4	4.0	15.0
Exhibits and other educational materials	256	2.03	2	0.99	52.7	22.6	5.0	19.7
Land based visitor facilities (e.g., lodge, visitor center, etc.)	235	2.22	2	1.01	45.0	21.6	6.9	26.6
Overall quality of services	308	2.32	2	1.03	63.7	19.4	15.0	1.9
National Park Service employee assistance	263	2.37	2	1.09	43.3	27.6	10.5	18.6
Concessioner lodging	231	2.42	2	1.13	38.2	22.6	11.6	27.6
Concessioner retail stores	296	2.47	2	1.06	49.7	28.0	14.3	8.1
Water based visitor facilities (e.g., marina, pump outs, etc.)	308	2.54	2	1.24	56.2	14.2	26.8	2.8
Concessioner employee assistance	286	2.55	2	1.25	49.2	18.8	21.6	10.3
Concessioner food service	286	2.55	2	1.13	47.4	22.7	19.0	10.9
Interpretive and educational activities	215	2.56	3	0.89	27.2	34.8	6.7	31.3
Concessioner boat rentals	171	2.63	3	1.10	20.1	26.1	7.5	46.2

Source: Question 20.

^a Responses based on a five-point scale from 1 (very satisfied) to 5 (very dissatisfied).

^b Responses are reported in groups where satisfied includes both very satisfied and somewhat satisfied categories, and dissatisfied includes both somewhat dissatisfied and very dissatisfied categories.

H. Comparisons between downlake and uplake users

Major access points on the southern end of Lake Powell include Wahweap and Antelope Point. Other major access points include Bullfrog and Halls Crossing, both located about midway between the north and south ends of the lake and Hite located at the north end. Generally, visitors who enter the lake using one of the southern access points travel no farther than Zone 5 (Figure 1). These visitors are considered 'downlake' visitors. Visitors entering Lake Powell from Bullfrog, Halls Crossing, or Hite typically travel no farther than Zone 6. These visitors are considered 'uplake' visitors. Park staff want to know if downlake visitors are different from uplake visitors.

To determine if differences exist between these two groups, respondents were sorted into one of two groups, downlake or uplake visitors. Downlake visitors included those who only visited Zones 1-5 (N=104) and uplake visitors included those who only visited Zones 6-13 (N=181). If a respondent visited zones in both the downlake and uplake regions, that respondent was not included in the analysis. Differences between the groups were tested for using difference of means t-test or chi-square test whichever was appropriate for the data being analyzed. The two groups were compared on all variables in the questionnaire. Only differences that were statistically different are reported in this section. Table H1 summarizes the differences between downlake and uplake visitors.

Downlake and uplake visitors differ on:

- Activities engaged in while recreating at Glen Canyon NRA
 - Uplake visitors are more likely to engage in hiking, wildlife watching, visiting archaeological sites, and birdwatching.
- Acceptable levels of human activity at specific locations
 - Downlake visitors found the level of human activity at launch ramps and marinas, fueling docks, and no wake zones slightly less acceptable. Neither group thought the level of activity caused conditions of crowding.
- Important experiences
 - Uplake visitors rated interpretive and educational experiences, experiences related to learning about the cultural and natural history of the area, and being able to stargaze slightly higher.
- Attainment of on-site beneficial experiences
 - Uplake visitors were slightly more likely to attain and benefit from testing their skills and abilities.
- Perception of problems
 - Uplake visitors were more likely to think that the amount of time waiting in line to launch a boat, seeing evidence of pets and their droppings, having to travel farther to find fuel, having adequate toilet facilities on the lake and at landings were slightly more serious problems.
 - Downlake visitors were more likely to think the number of commercial tour boats encountered was a more serious problem.
- Support for management actions
 - Uplake visitors were slightly more likely to support expanding the number of marina slips.
 - Downlake visitors were slightly more likely to support providing more information about appropriate behaviors, improving boater education and orientation, requiring visitors to learn appropriate behaviors, and enforcing existing rules and regulations.
- Quality service
 - Downlake visitors were slightly more likely to rate their satisfaction with water based visitor facilities and interpretive and educational materials more highly.

Table H1. Variables On Which Downlake And Uplake Respondents Differ

Variable	Downlake Respondents		Uplake Respondents	
	N	Percent	N	Percent
Activity				
Hiking*	59	33.0	120	67.0
Wildlife watching*	19	25.3	56	74.7
Visiting archeological sites***	10	15.6	54	84.4
Bird watching*	8	20.0	32	80.0
Crowding (scale: 1=very acceptable to 7=very unacceptable)	N	Mean	N	Mean
At marina, fueling docks and no wake zones**	107	2.33	172	2.77
At the launch ramp***	94	2.77	159	3.52
Experience (scale: 1=very important to 5=very unimportant)	N	Mean	N	Mean
To participate in interpretive and educational activities*	98	3.66	169	3.41
To learn about the cultural history of the area**	98	2.95	172	2.58
To learn about the natural history of the area**	99	2.85	172	2.51
To stargaze*	99	2.35	177	2.02
Benefits (scale: 1=totally attained to 4=did not attain)	N	Mean	N	Mean
To test my skills and abilities***	27	2.00	50	1.40
Perceived Problem (scale: 1=no problem to 5=serious problem)	N	Mean	N	Mean
Amount of time spent waiting in line to launch boat**	102	2.04	177	2.40
The number of commercial tour boats***	104	2.30	171	1.56
Evidence of pets and their droppings*	103	1.84	176	2.13
Travel farther on the lake to find fuel*	100	1.61	176	1.89
Adequate floating toilet facilities on lake**	95	1.56	173	1.94
Adequate toilet facilities at landings***	101	1.33	181	1.84
Management Action (scale: 1=strongly support to 5=strongly oppose)	N	Mean	N	Mean
Provide more information to Respondents about appropriate behavior*	94	1.73	175	2.01
Improve boater education and orientation**	94	1.94	174	2.25
Require Respondents to learn about appropriate behavior on the lake**	93	2.02	174	2.40
More aggressively enforce safety rules and regulations on the lake**	96	2.09	175	2.48
Expand the number of marina slips*	90	2.87	174	2.51
Service (scale: 1=very satisfied to 5=very dissatisfied)	N	Mean	N	Mean
Water based visitor facilities (e.g., marina, pump outs, etc.)*	106	2.34	173	2.69
Interpretive and educational materials*	70	2.41	125	2.67

*p≤.05, **p≤0.01, ***p≤0.001

I. Comparisons between small and large groups

Park staff is interested in knowing whether visitors who travel in smaller groups differ from visitors who travel with larger groups of people in the experiences that are important to them, the benefits they attain, their perceptions of crowding, problems experienced, their support for management actions and their satisfaction with services provided at Glen Canyon NRA. Respondents were placed into one of two groups: large group size or small size group. Large group size included respondents who reported visiting Glen Canyon NRA in a group of six or more people (N=135). Small group size included respondents who reported visiting Glen Canyon NRA in a group of one to five people (N=191). Differences between the groups were tested for using difference of means t-test or chi-square test whichever was appropriate for the data being analyzed. The two groups were compared on all variables in the questionnaire. Only differences that were statistically different are reported in this section. Table I1 summarizes the statistically significant differences found between these small groups and large groups.

Small and large groups differ on:

- Important experiences
 - Large groups are more likely to place greater importance on experiences that relate to being with family and friends.
 - Large groups are more likely to place greater importance on having thrills and excitement while visiting Lake Powell.
 - Small groups are more likely to place greater importance on being away from other people and meeting new people.
 - Small groups are more likely to place greater importance on learning about the natural and cultural history of the area.
- Attainment of on-site beneficial experiences
 - Large groups are more likely to attain benefits related to being with other people, experiencing the area's natural quiet, and stargazing.
- Perception of problems
 - Small groups are more likely to perceive problems to be slightly more serious than large groups. In particular they are more likely to think boats close to their boats, unsafe boating, inconsiderate people, litter, conflicts for beach space, commercial boat tours, navigational aids, confusion about rules, and not enough National Park Service presence on the water are all likely to be slightly more of a problem.
- Support for management actions
 - Small groups are slightly more supportive of providing more park rangers on the lake to educate visitors.
 - Small groups support the use of management controls to prevent user conflicts and they support designating some parts of the lake for specific kinds of watercraft. Large groups oppose these actions.
 - Small groups oppose closing the area to pets. Large groups support this action.
 - Large groups oppose establishing specific use zones. Small groups are neutral on this action.
 - Large groups are slightly more likely to oppose limiting any type of watercraft on the lake, limiting the number of boats, and regulating the number of people and the size of one's group.
- Quality service
 - Large groups were slightly more likely to be satisfied with the concessioner retail stores.

Table 11. Variables On Which Small And Large Groups Differ

	Small group		Large group	
	N	Mean	N	Mean
Experience (scale: 1=very important to 5=very unimportant)				
To do something with my family***	176	1.57	129	1.24
To be with members of my group***	167	1.77	131	1.46
To be with people who enjoy the same things I do**	171	1.94	128	1.65
To be away from other people*	170	2.30	128	2.56
To learn about the natural history of the area**	172	2.48	126	2.80
To learn about the cultural history of the area*	172	2.57	125	2.68
To have thrills and excitement**	170	2.64	127	2.31
To meet new people*	172	3.40	127	3.69
Benefits (scale: 1=totally attained to 4=did not attain)				
To be with members of my group*	98	1.24	103	1.09
To be with people who enjoy the same things I do*	93	1.37	97	1.16
To stargaze*	95	1.45	78	1.27
To experience natural quiet*	91	2.00	79	1.73
Perceived Problem (scale: 1=no problem to 5=serious problem)				
Boats closer to my boat than I like**	181	2.50	128	2.13
Unsafe operation of motorized watercraft**	178	2.49	127	2.14
People being inconsiderate**	183	2.42	130	2.08
Litter on beaches and shoreline*	174	2.41	126	2.10
The number of commercial tour boats*	175	1.96	125	1.68
Sufficient navigational aids on Lake Powell***	175	1.90	128	1.45
Conflicts with others for beach space*	173	1.87	126	1.60
Confusion about rules and regulations*	174	1.83	128	1.59
Availability of National Park Service presence on the lake*	178	1.71	128	1.45
Management Action (scale: 1=strongly support to 5=strongly oppose)				
Provide more park rangers on the lake to educate visitors about appropriate behavior*	177	2.32	118	2.64
Use management controls to prevent conflicts between lake users**	169	2.75	116	3.10
Designate some areas for specific types of watercraft use***	175	2.77	121	3.36
Establish specific use zones*	176	3.04	119	3.40
Close area to pets**	175	3.33	118	2.81
Limit number of motorized watercraft allowed on lake at any one time***	174	3.57	119	4.02
Limit number of boats allowed on the lake*	173	3.65	119	3.96
Regulate the number of people per group allowed on the lake**	173	3.79	118	4.15
Regulate the number of people using the lake at any one time**	173	3.84	118	4.15
Limit number of non-motorized watercraft allowed on lake at any one time*	172	3.90	117	4.15
Service (scale: 1=very satisfied to 5=very dissatisfied)				
Concessioner retail stores*	166	2.60	126	2.29

*p≤ 0.05, **p≤ 0.01, ***p≤ 0.001

DISCUSSION

This study was conducted because water levels in Lake Powell have dropped dramatically due to drought conditions. The change in water level creates changes in lake characteristics such as amount of surface area available for recreational use, the location of shoreline camping options and the number of shoreline campsites available, travel distances by water to specific points on Lake Powell, and the number of usable access points to the lake. When lake characteristics change, recreational behaviors, experiences and on-site benefits related to experiences and perceptions of resource conditions may also change. In particular, crowding and conflicts among recreational user groups may increase causing lower levels of visitor attainment of on-site beneficial experiences. Visitor impacts to the resource area especially beaches and shoreline camping areas may increase. Visitor perceptions of the kinds and seriousness of problems present in the resource area may become greater. Finally, visitor preferences for management actions to resolve problems may change.

The type of changes noted above relate to the physical carrying capacity and social carrying capacity of Lake Powell. The physical carrying capacity is the ability of the resource to accommodate a specified number of watercraft on the lake surface without causing unacceptable resource impact to water quality and lake shoreline. The social carrying capacity is the ability of the resource to sustain a given level of use over a specified time period without causing unacceptable damage to the resource area and the quality of the visitor experience. The most recent visitor use studies conducted at Glen Canyon NRA occurred in 1999 and 2000 (James, et al, 2001a, 2001b, and 2001c). Data from these studies was used in setting physical and social carrying capacities for Lake Powell. With the dramatic drop in water levels at Glen Canyon NRA over the past few years, appropriate levels of use based on capacity figures for non-drought conditions may need to be adjusted.

When looking at study results relevant to carrying capacity, the data suggest that respondents are aware that lake levels have dropped and may have adjusted their expectations about crowding or the acceptability of the number of watercraft and people they see on Lake Powell. In the 1999-2000 study the overall mean scores for the number of watercraft and people on the lake surface, on the lake shore, at shoreline campsites, at fueling docks and at landings were all rated as slightly unacceptable. In the 2005 study the overall mean scores for these same locations were rated in the acceptable range.

Data displaying respondent ratings of potential problems and the seriousness of them, though, shows an increase in mean scores over the 1999-2000 data. In the earlier studies, the only potential problem to be rated as slightly serious was finding a beach campsite. The 2005 data show 11 potential problems were given scores that show them to be slight to moderate problems. The kinds of problems rated in this way are associated with problems that are likely to be related to low water levels, which suggests that even though respondents may have adjusted their expectations about crowding, crowding is playing a role in their ability to get away from other boats on the lake surface and to find beach and shoreline campsites. The decrease in the surface area of the lake may also be responsible for the higher ratings they gave to problems such as the amount of litter they see on beaches and the shoreline, the number of inconsiderate people they encounter, and the number of people they see operating their boats unsafely.

Potential problems may also be related to the lake area shrinking and the impact that has on respondents' ability to travel to other parts of Lake Powell. If demand for recreational use on Lake Powell has not changed from 1999-2000, then less surface area means people and their watercraft will be in closer proximity to one another. In the 1999-2000 studies the heaviest used zones were Zones 1, 6, 9, 11, and 12. Zones 1, 11, and 12 continue to experience high use but Zones 1 and 11 are the major access points for Lake Powell so their continued high number of users is to be expected. Zones 6 and 9, though, experienced significantly less use in 2005 than in the earlier studies. Low water levels are probably the cause of fewer respondents traveling to these zones. As a result, the distribution of use and travel patterns on Lake Powell has changed and might be impacting visitors' experiences and perceptions of problems. Both Zones 6 and 9 are considered uplake zones. Uplake respondents rated problems such as the amount of time waiting to launch a boat, seeing evidence of pets and

their droppings, having to travel farther to find fuel, and having adequate toilet facilities on the lake and at landings as more serious problems than downlake respondents. They may have perceived some of these problems as more serious because of the constraints low water levels place on their ability to move around the lake.

Respondent preferences for ways to address problems do not vary significantly from the earlier studies to the 2005 study. In both studies, respondents prefer indirect management tactics such as visitor education and information as a way to persuade visitors to change their behavior or use of the area. Persuasive tactics, though, can be problematic in that managers can develop the materials but it is the visitor choice whether to take advantage of and use the education and/or information materials (McCool and Braithwaite, 1992; Cole et al, 1997a). Time may also be a factor in persuading people to behave differently. It is also common for visitors to prefer more facilities and services to address perceived problems. If wait times are longer than visitors like at launch points or if toilet facilities are inadequate on the lake and at other points along the lake shore, the assumption is that more of these things will solve the problem. But research in a variety of disciplines has shown that this approach is not always successful. Increasing launch areas may increase traffic to the lake creating greater congestion and crowding at access points, on the water, and at shoreline camping spots.

Limits and regulations are generally more effective at setting physical and social carrying capacities. They are viewed as fair from a distributive justice point of view because they apply equally to everyone (Frost and McCool 1988). However, recent research suggests that from a visitor's point of view fairness is more related to how the limit or regulation was developed and less to whom it might apply (Davenport, and Anderson, 2005). If visitors view the process of establishing limits or regulations as fair they are far more likely to agree with them. If park staff believes that new physical and social carrying capacities are necessary at this time and that they must use limits or new regulations to maintain quality resource conditions and visitor experiences during low water conditions, they should seek to make sure the process they use to set limits or regulations is transparent to the public and if possible has public involvement as a part of the process. Public involvement in the process leading up to implementing of use limits can be a positive factor in whether use limits become an accepted part of the management plan for a given area. In general, acceptance of use limits increases when stakeholders and the public understand that maintaining acceptable biophysical or social conditions depends upon implementing use limits (McCool and Christensen 1993; Cole et al. 1997b). Moreover, most visitors support use limits to reduce crowding and protect resources (Anderson and Manfredi 1986; Shelby et al. 1992). It might also be possible for park staff to set a time limit on how long the limits or regulations are in effect. In other words, establish limits or regulations that only apply to low water levels and when water levels come back to some acceptable level either remove the limits or regulations or review whether their continued use is necessary.

Finally, park staff should carefully look at the respondent management preferences for solving potential problems related to recreational use. For many of the problems there are a variety of solutions proposed. But not all of the solutions are supported by respondents. Some solutions are opposed by all respondents and some are only opposed by respondents who do not see a particular problem. Other solutions to address a particular problem are supported by all respondents regardless of whether they think a particular problem exists or not. Also, since many of the solutions can be used to address more than one problem, park staff should look at the most efficient suite of actions to address any of the problems listed. A useful source to help park staff decide which actions to pursue can be found at: http://www.cnr.umn.edu/CPSP/publications/revtactics_handbook.pdf (Anderson et al. 1998). This handbook was developed with National Park Service managers and outlines a strategy and process for selecting management actions that are most likely to be successful in resolving visitor caused problems to the resource and / or visitor experiences (Wang et al. 2000).

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APPENDIX A: ADDITIONAL TABLES

Table 1. Problems finding a beach campsite and support for specific management actions

Management Action	Finding a beach campsite			
	No Problem		Problem	
	N	%	N	%
Limit number of boats allowed on lake				
Support	4	6	30	16
Neither support nor oppose	12	18	47	25
Oppose	50	76	115	60
Total^a	66	100	192	101
Limit number of motorized watercraft on lake at any one time				
Support	5	7	33	17
Neither support nor oppose	12	18	45	24
Oppose	51	75	112	59
Total	68	100	190	100
Regulate the number of people using lake at any one time				
Support	3	4	19	10
Neither support nor oppose	5	7	39	21
Oppose	60	88	131	69
Total^a	68	99	189	100
Regulate the number of people per group allowed on lake				
Support	4	6	23	12
Neither support nor oppose	5	8	34	18
Oppose	58	87	133	70
Total^a	67	101	190	100

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 2. Problems with litter on beaches and shoreline and support for specific management actions

Management Action	Litter on beaches and shoreline			
	No Problem		Problem	
	N	%	N	%
Provide more information to visitors about appropriate behavior				
Support	52	72	165	80
Neither support or oppose	12	17	36	18
Oppose	8	11	5	2
Total	72	100	206	100
Provide more park rangers on lake to educate visitors on appropriate behavior				
Support	27	38	115	56
Neither support or oppose	28	39	67	33
Oppose	17	24	24	12
Total^a	72	101	206	101

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 3. Poor water quality problems and support for specific management actions

Management Action	Poor water quality			
	No Problem		Problem	
	N	%	N	%
Limit number of boats allowed on lake				
Support	10	7	24	19
Neither support or oppose	28	19	28	22
Oppose	106	74	77	60
Total ^a	144	100	129	101
Limit number of motorized watercraft allowed on lake at any one time				
Support	14	10	26	20
Neither support or oppose	28	19	28	22
Oppose	103	71	75	58
Total	145	100	129	100

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 4. Problems with sufficient navigational guides and support for specific management actions

Management Action	Sufficient navigational guides on the lake			
	No Problem		Problem	
	N	%	N	%
Provide visitors with more educational information about the area				
Support	87	52	71	63
Neither support or oppose	67	40	40	36
Oppose	14	8	1	1
Total	168	100	112	100
Improve boater education and orientation				
Support	113	67	83	75
Neither support or oppose	42	25	27	24
Oppose	14	8	1	1
Total ^a	169	101	111	100

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 5. Problems with too many motorized watercraft on Lake Powell and support for specific management actions

Management Action	Too many motorized watercraft on the lake			
	No Problem		Problem	
	N	%	N	%
Limit number of boats allowed on lake				
Support	5	4	31	22
Neither support or oppose	26	19	35	24
Oppose	108	78	78	54
Total ^a	139	101	144	100
Limit number of non-motorized watercraft allowed on lake at any one time				
Support	7	5	33	23
Neither support or oppose	25	18	34	24
Oppose	108	77	76	53
Total	140	100	143	100
Expand the number of marina slips				
Support	69	50	57	40
Neither support or oppose	49	35	48	33
Oppose	21	15	39	27
Total	139	100	144	100
Designate some areas for specific types of watercraft use				
Support	36	26	74	50
Neither support or oppose	27	20	29	20
Oppose	75	54	44	30
Total	138	100	147	100

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 6. Problem with people being inconsiderate and support for specific management actions

Management Action	People being inconsiderate			
	No Problem		Problem	
	N	%	N	%
Regulate the number of people using the lake at any one time				
Support	2	3	21	10
Neither support or oppose	10	13	40	19
Oppose	65	84	150	71
Total	77	100	211	100
Provide more information to visitors about appropriate behavior				
Support	45	59	180	84
Neither support or oppose	23	30	29	14
Oppose	8	11	5	2
Total	76	100	214	100
Provide more park rangers on the lake to educate visitors about appropriate behavior				
Support	21	28	128	60
Neither support or oppose	38	51	61	28
Oppose	16	21	26	12
Total	75	100	215	100
Require visitors to learn about appropriate behavior on lake				
Support	31	42	140	66
Neither support or oppose	30	41	54	25
Oppose	13	48	19	9
Total^a	74	101	213	100
More aggressively enforce safety rules and regulations				
Support	27	35	140	65
Neither support or oppose	37	48	49	23
Oppose	13	17	27	13
Total^a	77	100	216	101
Designate some areas for specific types of watercraft use				
Support	17	22	98	45
Neither support or oppose	14	18	44	20
Oppose	45	59	74	34
Total^a	76	99	216	99
Use management controls to prevent conflicts between lake users				
Support	14	19	91	44
Neither support or oppose	34	46	72	35
Oppose	26	35	44	21
Total	74	100	207	100
More rules governing the types of recreation that can take place at various locations				
Support	6	8	57	27
Neither support or oppose	19	25	64	30
Oppose	50	67	91	43
Total	75	100	212	100

Source: Questions 18 and 19. ^a Totals do not add up to 100 percent due to rounding error.

Table 7. Problem with unsafe operation of motorized watercraft on the lake and support for specific management actions

Management Action	Unsafe operation of motorized watercraft			
	No Problem		Problem	
	N	%	N	%
Provide more information to visitors about appropriate behavior				
Support	41	56	180	85
Neither support or oppose	24	33	26	12
Oppose	8	11	5	2
Total ^a	73	100	211	99
Provide more park rangers on the lake to educate visitors about appropriate behavior				
Support	20	28	127	60
Neither support or oppose	33	46	63	30
Oppose	19	26	22	10
Total	72	100	212	100
More aggressively enforce safety rules and regulations				
Support	24	33	140	65
Neither support or oppose	29	40	54	25
Oppose	20	27	20	9
Total ^a	73	100	214	99
Improve boater education and orientation				
Support	29	41	166	79
Neither support or oppose	34	48	38	18
Oppose	8	11	7	3
Total	71	100	211	100

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 8. Problem with the level of noise on the lake and support for specific management actions

Management Action	Level of noise on the lake			
	No Problem		Problem	
	N	%	N	%
Limit number of boats allowed on lake				
Support	10	7	26	19
Neither support or oppose	27	18	37	26
Oppose	111	75	77	55
Total	148	100	140	100
Limit number of motorized watercraft allowed on lake at any one time				
Support	10	7	31	22
Neither support or oppose	26	18	35	25
Oppose	112	76	74	53
Total ^a	148	101	140	100
Regulate the number of people using lake at any one time				
Support	5	3	18	13
Neither support or oppose	16	11	33	24
Oppose	126	86	89	64
Total ^a	147	100	140	101
Regulate the number of people per group allowed on lake				
Support	11	7	19	14
Neither support or oppose	18	12	26	19
Oppose	119	80	94	68
Total ^a	148	99	139	101
Use management controls to prevent conflicts between users				
Support	37	26	68	50
Neither support or oppose	58	41	46	34
Oppose	48	34	23	17
Total ^a	143	101	137	101

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 9. Conflicts with others for beach space and support for specific management actions

Management Action	Conflicts with others for beach space			
	No Problem		Problem	
	N	%	N	%
Limit number of boats allowed on lake				
Support	11	7	25	20
Neither support or oppose	29	19	32	26
Oppose	113	74	67	54
Total	153	100	124	100
Limit number of motorized watercraft allowed on lake at any one time				
Support	11	7	30	25
Neither support or oppose	32	21	26	22
Oppose	113	72	65	54
Total ^a	156	100	121	101
Regulate the number of people using lake at any one time				
Support	8	5	15	13
Neither support or oppose	19	42	28	23
Oppose	129	83	77	64
Total	156	100	120	100

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 10. Conflicts with watercraft operators on lake and support for specific management actions

Management Action	Conflicts with watercraft operators on lake			
	No Problem		Problem	
	N	%	N	%
Limit number of boats allowed on lake				
Support	13	9	21	17
Neither support or oppose	30	20	31	24
Oppose	110	72	75	59
Total ^a	153	101	127	100
Limit number of motorized watercraft allowed on lake at any one time				
Support	11	7	28	22
Neither support or oppose	33	22	25	20
Oppose	108	71	75	59
Total ^a	152	100	128	101
Regulate the number of people using lake at any one time				
Support	5	3	16	13
Neither support or oppose	21	14	27	21
Oppose	126	83	84	66
Total	152	100	127	100
Use management controls to prevent conflicts between lake users				
Support	36	25	64	51
Neither support or oppose	61	42	42	34
Oppose	50	34	19	15
Total ^a	147	101	125	100

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 11. Problem of evidence of pets and their droppings and support for closing areas to pets

Management Action	Evidence of pets and their droppings			
	No Problem		Problem	
	N	%	N	%
Close area to pets				
Support	18	16	69	42
Neither support or oppose	26	22	39	24
Oppose	72	62	58	35
Total ^a	116	100	166	101

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 12. Problem with adequate toilet facilities at landings and support for increasing facilities on the shoreline

Management Action	Adequate toilet facilities at landings			
	No Problem		Problem	
	N	%	N	%
Increase facilities on the shoreline				
Support	131	74	93	87
Neither support or oppose	27	15	12	11
Oppose	19	11	2	2
Total	177	100	107	100

Source: Questions 18 and 19.

Table 13. Problem with adequate toilet facilities on lake and support for providing more toilet facilities on the water

Management Action	Adequate toilet facilities on lake			
	No Problem		Problem	
	N	%	N	%
Provide more toilet facilities on water				
Support	74	52	110	87
Neither support or oppose	58	41	14	11
Oppose	11	8	2	2
Total ^a	143	101	126	100

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 14. Problem with human waste on lake shore or in water and support for providing more toilet facilities on water

Management Action	Human waste on lake shore or in water			
	No Problem		Problem	
	N	%	N	%
Provide more toilet facilities on water				
Support	97	61	87	77
Neither support or oppose	54	34	20	18
Oppose	8	5	5	5
Total	159	100	112	100

Source: Questions 18 and 19.

Table 15. Problems with confusion about rules and regulations and support for specific management actions

Management Action	Confusion about rules and regulations			
	No Problem		Problem	
	N	%	N	%
Provide more information to visitors about appropriate behavior				
Support	121	73	99	85
Neither support or oppose	36	22	13	11
Oppose	9	5	4	3
Total ^a	166	100	116	99
Provide more park rangers on the lake to educate visitors about appropriate behavior				
Support	74	45	70	59
Neither support or oppose	67	41	30	25
Oppose	23	14	18	15
Total ^a	164	100	118	99
Require visitors to learn about appropriate behavior on the lake				
Support	84	51	83	73
Neither support or oppose	58	35	22	19
Oppose	23	14	9	8
Total	165	100	114	100
Improve boater education and orientation				
Support	103	62	92	80
Neither support or oppose	52	32	18	16
Oppose	10	6	5	4
Total	165	100	115	100

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 16. Problem with the availability of National Park Service presence on the lake and support for providing more park rangers on the lake to educate visitors about appropriate behavior

Management Action	Availability of National Park Service presence on the lake			
	No Problem		Problem	
	N	%	N	%
Provide more park rangers on the lake to educate visitors about appropriate behavior				
Support	69	36	76	80
Neither support or oppose	86	45	13	14
Oppose	36	19	6	6
Total	191	100	95	100

Source: Questions 18 and 19.

Table 17. Problem with the amount of time spent waiting in line to launch boat and support for specific management actions

Management Action	Amount of time spent waiting in line to launch boat			
	No Problem		Problem	
	N	%	N	%
Improve public access to the lake				
Support	48	55	132	70
Neither support or oppose	22	25	37	19
Oppose	18	21	22	12
Total ^a	88	101	191	101
Increase facilities on the shoreline				
Support	60	69	162	83
Neither support or oppose	15	17	24	12
Oppose	12	14	9	5
Total	87	100	195	100

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 18. Problems with traveling further on lake to find solitude and support for specific management actions

Management Action	Travel further on lake to find solitude			
	No Problem		Problem	
	N	%	N	%
Limit number of boats allowed on lake				
Support	6	6	60	17
Neither support or oppose	20	19	42	24
Oppose	79	75	103	59
Total	105	100	175	100
Regulate the number of people using lake at any one time				
Support	4	4	18	10
Neither support or oppose	11	10	37	21
Oppose	91	86	118	68
Total ^a	106	100	173	99
Regulate the number of people per group allowed on the lake				
Support	7	7	22	13
Neither support or oppose	11	10	30	17
Oppose	88	83	121	70
Total	106	100	173	100

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 19. Problems with traveling further on lake to find shoreline campsite and support for regulating the number of people using the lake at any one time

Management Action	Travel further on lake to find shoreline campsite			
	No Problem		Problem	
	N	%	N	%
Regulate the number of people using lake at any one time				
Support	5	6	17	10
Neither support or oppose	10	11	36	21
Oppose	76	84	122	70
Total ^a	91	101	175	101

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

Table 20. Problems with amount of time spent to park trailer and tow vehicle and support for increasing facilities on the shoreline

Management Action	Amount of time spent to park trailer and tow vehicle			
	No Problem		Problem	
	N	%	N	%
Increase facilities on the shoreline				
Support	64	66	145	84
Neither support or oppose	21	22	19	11
Oppose	12	12	8	5
Total	97	100	172	100

Source: Questions 18 and 19.

Table 21. Problems with amount of time spent to shuttle back to marina and support for various management actions

Management Action	Amount of time spent to shuttle back to marina			
	No Problem		Problem	
	N	%	N	%
Increase facilities on the shoreline				
Support	89	71	112	88
Neither support or oppose	25	20	11	8
Oppose	12	10	4	3
Total ^a	126	101	127	99
Increase services on the shoreline				
Support	79	65	101	80
Neither support or oppose	30	25	19	15
Oppose	13	11	7	6
Total ^a	122	101	127	101

Source: Questions 18 and 19.

^a Totals do not add up to 100 percent due to rounding error.

APPENDIX B: MAIL BACK QUESTIONNAIRE

OMB # 1024-0224 (NPS # 05-018)
Expires: 03/31/2006

Survey # _____



**Glen Canyon National Recreation Area
2005 Visitor Survey**



Your feedback is important. The survey results will assist us in managing visitor services, improving facilities, and protecting our resources. Please note when questions refer to Glen Canyon National Recreational Area/Lake Powell, it is in reference to the overall park. When questions refer to “the lake”, it is specific to Lake Powell.

About Your Previous Visits to the Glen Canyon National Recreation Area/Lake Powell

1. Approximately how many times (*ever*) have you visited Glen Canyon National Recreation Area/Lake Powell?

- Never (SKIP TO QUESTION 22)
- ONE time
- 2 - 5 times
- 6 - 10 times
- more than 10 times

2. In what month and year did you LAST visit Glen Canyon National Recreation Area/Lake Powell?

Month: _____ Year: _____

3. In what month and year did you FIRST visit Glen Canyon National Recreation Area/Lake Powell?

Month: _____ Year: _____

About Your Most Recent Visit to the Glen Canyon National Recreation Area/Lake Powell

Think about the YOUR MOST RECENT VISIT to Glen Canyon National Recreation Area/ Lake Powell. Share your opinions about that visit when you answer the following questions.

4. During your MOST RECENT visit to the Glen Canyon National Recreation Area/Lake Powell, who was with you? *Please check all that apply.*

- No one. I traveled alone
- Family and/or friends
- Business
- Tour
- Other (please specify): _____

5a. During your MOST RECENT visit to Glen Canyon National Recreation Area/Lake Powell, how many people were in your personal group? _____

5b. Was your personal group part of a tour group? Yes No

6. Where did you access the lake the last time you visited? *Please check all that apply.*

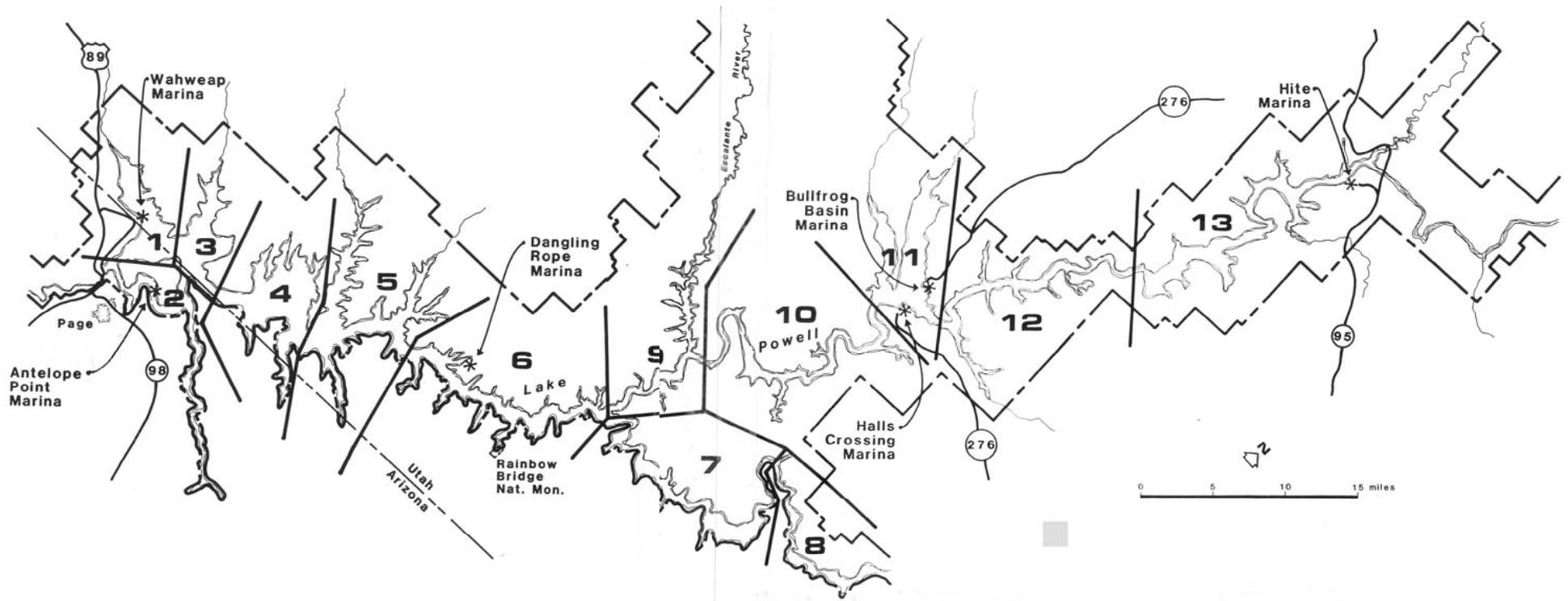
- Wahweap /Stateline Bullfrog Halls Crossing Hite Antelope Point
- Other (please specify, e.g., Lone Rock, Farley Canyon): _____

7a. Please refer to the map of Glen Canyon/ Lake Powell on the following page. Please circle the ZONE or ZONES below indicating where you spent most of your time on the lake during your most recent visit:

1 2 3 4 5 6 7 8 9 10 11 12 13

7b. If you shoreline camped during your most recent visit, put an "X" on the map to show your approximate camp location(s).

If you did not shoreline camp, please check here: _____



- Zone 1:** Wahweap Bay, Wahweap Marina, Lone Rock
- Zone 2:** Glen Canyon Dam, Carl Hayden Visitor Center, Antelope Point Marina
- Zone 3:** Crosby Canyon, Warm Creek Bay, Castle Rock
- Zone 4:** Padre bay, Gunsight Butte, Crossing of the Fathers
- Zone 5:** Last Chance Bay, Rock Creek Bay, Gregory Butte
- Zone 6:** Dangling Rope Marina, Rainbow Bridge, Cathedral Canyon
- Zone 7:** San Juan Arm, Bald Rock Canyon, Piute Canyon

- Zone 8:** Nokai Canyon, Copper Canyon
- Zone 9:** Cottonwood Canyon, Hole-in-the-Rock, Escalante River
- Zone 10:** The Rincon, Iceberg Canyon, Slick Rock Canyon
- Zone 11:** Bullfrog Marina, Halls Crossing Marina, Stanton Creek
- Zone 12:** Defiance House Ruin, Forgotten Canyon, Knowles Canyon
- Zone 13:** Hite Marina, Farley Canyon, Dirty Devil River, Colorado River

8. Please look at the list of activities below. Please check *all* the activities you spent time participating in during your most recent visit to Glen Canyon National Recreation Area/ Lake Powell.

- | | | |
|---|--|--|
| <input type="checkbox"/> Hiking | <input type="checkbox"/> Motor boating | <input type="checkbox"/> Driving (Burr Trail, Hole in the Rock Road, etc.) |
| <input type="checkbox"/> Fishing | <input type="checkbox"/> Paddling (canoe or kayak) | <input type="checkbox"/> Visiting archaeological sites |
| <input type="checkbox"/> Hunting | <input type="checkbox"/> Using a personal watercraft (PWC) | <input type="checkbox"/> Bird watching |
| <input type="checkbox"/> Rock Climbing | <input type="checkbox"/> Participating in water sports | <input type="checkbox"/> Other (please list): _____ |
| <input type="checkbox"/> Tour boat ride | <input type="checkbox"/> Mountain biking | |
| <input type="checkbox"/> Camping | <input type="checkbox"/> Wildlife watching | |

9. During your most recent visit to the lake, how many nights did you spend at each location listed below? Please write the number of nights spent at each location.

- | | |
|--|--|
| <input type="checkbox"/> I did not spend any nights at Lake Powell | <input type="checkbox"/> # nights backcountry camping using the lake to access |
| <input type="checkbox"/> # nights anchored on the lake | <input type="checkbox"/> # nights in a developed campground at Lake Powell |
| <input type="checkbox"/> # nights shoreline vehicle camping | <input type="checkbox"/> # nights in a lodge or housekeeping unit at Lake Powell |
| <input type="checkbox"/> # nights shoreline boat camping | <input type="checkbox"/> # nights overnight in marina facilities (covered slips, etc.) |
| | <input type="checkbox"/> # nights camping in other locations (please specify): |

About your Watercraft Use on the Lake

10. How many of each type of watercraft did you use on the lake during your most recent visit? Please indicate whether you owned or rented it.

If you did not use any watercraft, please check here: _____.

Total number of watercraft	Type of watercraft	Number owned or co-owned	Number rented from onsite concessioner	Number rented from somewhere else
_____	Houseboat	_____	_____	_____
_____	Runabout / Powerboat	_____	_____	_____
_____	Cabin cruiser	_____	_____	_____
_____	Personal watercraft (PWC)	_____	_____	_____
_____	Non-motorized watercraft (kayak, canoe, etc)	_____	_____	_____
_____	Water toys (skis, wakeboards, tubes, etc)	_____	_____	_____
_____	Other (please specify):	_____	_____	_____

Your Preferences Regarding the Level of Human Activity at Glen Canyon/Lake Powell

11. During your MOST RECENT visit to Lake Powell, how did you feel about the number of people and watercraft you saw on the lake? Please check one statement in each column.

- | | |
|--|--|
| <u>People</u> | <u>Watercraft</u> |
| <input type="checkbox"/> Fewer than expected | <input type="checkbox"/> Fewer than expected |
| <input type="checkbox"/> About what I expected | <input type="checkbox"/> About what I expected |
| <input type="checkbox"/> More than expected | <input type="checkbox"/> More than expected |
| <input type="checkbox"/> Don't know | <input type="checkbox"/> Don't know |

****If you have only visited Glen Canyon/ Lake Powell one time, please skip to question 14.****

12. During your MOST RECENT visit to the Glen Canyon National Recreation Area/Lake Powell, how did you feel about the level of crowding on the lake? Please check one statement that best explains how you felt.

- Less crowded than in the past
- About the same level of crowding as in the past
- More crowded than in the past
- Don't know
- > } Skip to Q-14
- > } Continue to Q-13

13. If you felt the lake was more crowded than in the past, what was the reason? Please check all that apply.

- More people and/or boats on the lake near me on the water than in the past
- Lower water levels in the lake than in the past
- More recreational activities occurring in an area
- Camping closer together on the shoreline
- Other reason (please specify): _____

14a. Excluding marinas, fueling docks, and no wake zones, which *one* statement below best describes your preference for seeing and hearing other visitors during the majority of your visit to the lake?

- I prefer seeing or hearing a lot of other visitors and enjoy social interaction with individuals not in my group
- I prefer seeing or hearing a moderate number of others, but not right next to my campsite or lake space
- I prefer seeing or hearing some others, but not total isolation
- I prefer seeing or hearing as few others as possible, total isolation

14b. Lower lake levels result in less lake surface area and potentially require management strategies that limit lake access to maintain similar levels of crowding on the lake. These management strategies could limit your ability to access the lake.

If lake access was limited because of low water levels, which *one* statement below best describes the maximum human activity level you would be willing to accept to ensure you continue to have lake access

- My preference would remain unchanged
- I would accept seeing or hearing any number of visitors to continue to have lake access
- I would accept seeing or hearing a moderate number of others
- I would accept seeing or hearing some others; I would not require total isolation
- I would only accept seeing or hearing as few others as possible, total isolation

15. We would like to know how you felt about seeing different levels of human activity at various locations during your most recent visit to the lake. Complete columns A, B and C for each location on the lake. If you did not visit the location, circle “no” in column A, and go to the next location. If you don’t recall how you felt, circle “9” in column B.

LOCATION	COLUMN A	COLUMN B							Don't Recall	COLUMN C
	Did you visit the location? (circle one)	In general, how acceptable was the level of human activity you saw?								If you circled 5, 6, or 7 in Column B, what made you feel this way? (Please check all that apply)
		Very Acceptable					Very Unacceptable			
15a: At marina, fueling docks and no wake zones	yes no (go to 15b)	1	2	3	4	5	6	7	DR	<input type="checkbox"/> too few watercraft <input type="checkbox"/> too many watercraft <input type="checkbox"/> too few people <input type="checkbox"/> too many people <input type="checkbox"/> something else (specify):
15b: On the lake surface, excluding no wake zone	yes no (go to 15c)	1	2	3	4	5	6	7	DR	<input type="checkbox"/> too few watercraft <input type="checkbox"/> too many watercraft <input type="checkbox"/> too few people <input type="checkbox"/> too many people <input type="checkbox"/> something else (specify):
15c: On the lake shore	yes no (go to 15d)	1	2	3	4	5	6	7	DR	<input type="checkbox"/> too few watercraft <input type="checkbox"/> too many watercraft <input type="checkbox"/> too few people <input type="checkbox"/> too many people <input type="checkbox"/> something else (specify):
15d: While camping at shoreline	yes no (go to 15e)	1	2	3	4	5	6	7	DR	<input type="checkbox"/> too few watercraft <input type="checkbox"/> too many watercraft <input type="checkbox"/> too few people <input type="checkbox"/> too many people <input type="checkbox"/> something else (specify):
15e: At the launch ramp	yes no (go to 15f)	1	2	3	4	5	6	7	DR	<input type="checkbox"/> too few watercraft <input type="checkbox"/> too many watercraft <input type="checkbox"/> too few people <input type="checkbox"/> too many people <input type="checkbox"/> something else (specify):
15f: Other (specify):		1	2	3	4	5	6	7	DR	<input type="checkbox"/> too few watercraft <input type="checkbox"/> too many watercraft <input type="checkbox"/> too few people <input type="checkbox"/> too many people <input type="checkbox"/> something else (specify):

16. Which of the following unsafe boating practices did you observe on your most recent visit to the lake? Please check all that apply.

- I did not observe any unsafe boating practices during my most recent visit to the lake.
- proximity of boats
- unsafe speeds
- nonadherence to wakeless zones
- other (please describe the unsafe activity and where it occurred):

Reasons for Your Visit to Glen Canyon National Recreation Area

17. Below is a list of possible experiences visitors may have while visiting Glen Canyon/ Lake Powell. Please indicate how important each experience was to you *on your most recent visit*. Then, for each experience for which you circled either a 1 or 2, please indicate how much you were able to attain each of those experiences.

<u>Experience:</u>	Very Important	Important	Neither Important nor Unimportant	Unimportant	Very unimportant	Totally Attained	Moderately Attained	Somewhat Attained	Did Not Attain
To be on my own	1	2	3	4	5	1	2	3	4
To use my equipment	1	2	3	4	5	1	2	3	4
To experience an undeveloped lake	1	2	3	4	5	1	2	3	4
To experience nature	1	2	3	4	5	1	2	3	4
To experience natural quiet	1	2	3	4	5	1	2	3	4
To do something with my family	1	2	3	4	5	1	2	3	4
To be with members of my group	1	2	3	4	5	1	2	3	4
To be with people who enjoy the same things I do	1	2	3	4	5	1	2	3	4
To meet new people	1	2	3	4	5	1	2	3	4
To participate in recreational activities	1	2	3	4	5	1	2	3	4
To learn about the cultural history of the area	1	2	3	4	5	1	2	3	4
To learn about the natural history of the area	1	2	3	4	5	1	2	3	4
To participate in interpretive and educational activities	1	2	3	4	5	1	2	3	4
To experience new and different things	1	2	3	4	5	1	2	3	4
To test my skills and abilities	1	2	3	4	5	1	2	3	4
To stargaze	1	2	3	4	5	1	2	3	4
To enjoy the scenery of Lake Powell	1	2	3	4	5	1	2	3	4
To think about my personal values	1	2	3	4	5	1	2	3	4
To be close to nature	1	2	3	4	5	1	2	3	4
To challenge myself	1	2	3	4	5	1	2	3	4
To sketch, paint or take photographs	1	2	3	4	5	1	2	3	4
To get exercise	1	2	3	4	5	1	2	3	4
To be away from other people	1	2	3	4	5	1	2	3	4
To relax physically	1	2	3	4	5	1	2	3	4
To experience solitude	1	2	3	4	5	1	2	3	4
To get away from the usual demands of life	1	2	3	4	5	1	2	3	4
To have thrills and excitement	1	2	3	4	5	1	2	3	4
To share my skill and knowledge with others	1	2	3	4	5	1	2	3	4
To feel healthier	1	2	3	4	5	1	2	3	4

Other (Please specify): _____

Situations Experienced While Visiting Glen Canyon/Lake Powell

18a. This question concerns possible situations you may have experienced while visiting the Glen Canyon National Recreation Area/Lake Powell. Please indicate the problem level for each situation below. *Circle one number that best describes how much of a problem, if any, you found each to be.*

Situation:	No Problem	Slight Problem	Moderate Problem	Serious Problem	Very Serious Problem	Don't Know
Finding an unoccupied campsite	1	2	3	4	5	DK
Finding a beach campsite	1	2	3	4	5	DK
Litter on beaches and shoreline	1	2	3	4	5	DK
Poor water quality	1	2	3	4	5	DK
Sufficient navigational aids on Lake Powell	1	2	3	4	5	DK
People being inconsiderate	1	2	3	4	5	DK
Too many motorized watercraft on the lake	1	2	3	4	5	DK
The number of commercial tour boats	1	2	3	4	5	DK
Unsafe operation of motorized watercraft	1	2	3	4	5	DK
Boats closer to my boat than I like	1	2	3	4	5	DK
The level of noise on the lake	1	2	3	4	5	DK
Conflicts with others for beach space	1	2	3	4	5	DK
Conflicts with watercraft operators on lake	1	2	3	4	5	DK
Evidence of pets and their droppings	1	2	3	4	5	DK
Adequate toilet facilities at landings	1	2	3	4	5	DK
Adequate floating toilet facilities on lake	1	2	3	4	5	DK
Human waste on lake shore or in water	1	2	3	4	5	DK
Confusion about rules and regulations	1	2	3	4	5	DK
Amount of light on the lake at night	1	2	3	4	5	DK
Amount of light at the marinas at night	1	2	3	4	5	DK
Evidence of livestock	1	2	3	4	5	DK
Evidence of mining operations	1	2	3	4	5	DK
Availability of National Park Service presence on the lake	1	2	3	4	5	DK
Availability of interpretive and educational opportunities	1	2	3	4	5	DK
Noise from airplanes	1	2	3	4	5	DK
Amount of time spent waiting in line to launch boat	1	2	3	4	5	DK
Travel farther on the lake to find solitude	1	2	3	4	5	DK
Travel farther on the lake to find fuel	1	2	3	4	5	DK
Travel farther on the lake to find shoreline campsite	1	2	3	4	5	DK
Amount of time spent to park trailer & tow vehicle	1	2	3	4	5	DK
Amount of time spent to shuttle back to marina	1	2	3	4	5	DK
Management of visitor activity on the lake	1	2	3	4	5	DK
Other things (please specify) _____						

18b. If you circled 4 or 5 for any of the situations, please describe the problems you encountered:

Management Actions at the Glen Canyon National Recreation Area/Lake Powell

19. Given the conditions in the Glen Canyon National Recreation Area, to what extent do you ‘support’ or ‘oppose’ each of the following possible management actions? *Circle one number for each action.*

After you have looked over the list, please rank the TOP FIVE management actions that you feel the most strongly about. *(Rank the actions that you believe are the most important for the National Park Service to consider, with a “1” being the most important, by putting a 1, 2, 3, 4, or 5 in front of the management actions.)*

<u>Rank</u>	<u>Management Action:</u>	Strongly Support	Support	Neither Support nor Oppose	Oppose	Strongly Oppose
_____	Establish specific use zones	1	2	3	4	5
_____	Establish zones to protect sensitive resources	1	2	3	4	5
_____	Limit number of boats allowed on lake	1	2	3	4	5
_____	Limit number of motorized watercraft allowed on lake at any one time	1	2	3	4	5
_____	Limit number of non-motorized watercraft allowed on lake at any one time	1	2	3	4	5
_____	Regulate the number of people using lake at any one time	1	2	3	4	5
_____	Regulate the number of people <i>per group</i> allowed on lake	1	2	3	4	5
_____	Improve public access to the lake	1	2	3	4	5
_____	Expand the number of marina slips	1	2	3	4	5
_____	Expand existing facility development	1	2	3	4	5
_____	Provide more information to visitors about appropriate behavior	1	2	3	4	5
_____	Provide more park rangers on the lake to educate visitors about appropriate behavior	1	2	3	4	5
_____	Require visitors to learn about appropriate behavior on the lake	1	2	3	4	5
_____	More aggressively enforce safety rules and regulations on lake	1	2	3	4	5
_____	Provide visitors with more educational information about the area	1	2	3	4	5
_____	Designate some areas for specific types of watercraft use	1	2	3	4	5
_____	Use management controls to prevent conflicts between lake users	1	2	3	4	5
_____	Use management controls to prevent damage to the environment by visitors	1	2	3	4	5
_____	Provide more toilet facilities on the water	1	2	3	4	5
_____	Close area to pets	1	2	3	4	5
_____	More rules governing the types of recreation that can take place at various locations	1	2	3	4	5
_____	Improve boater education and orientation	1	2	3	4	5
_____	Increase facilities on the shoreline (launch ramps, parking, etc)	1	2	3	4	5
_____	Increase services on the shoreline (fueling stations, slips, buoys, etc)	1	2	3	4	5
_____	Other things (please specify):	1	2	3	4	5

Service Quality and Visitor Satisfaction While Visiting Glen Canyon/Lake Powell

20. How satisfied were you with the quality of the services provided for you at Glen Canyon National Recreation Area/ Lake Powell? Circle one number for each item.

<u>Service</u>	Very Satisfied	Somewhat Satisfied	Neither Satisfied nor Dissatisfied	Somewhat Dissatisfied	Very Dissatisfied	Did not Use/Don't know
Visitor information	1	2	3	4	5	DK
Exhibits and other educational materials	1	2	3	4	5	DK
Concessioner food service	1	2	3	4	5	DK
Concessioner lodging	1	2	3	4	5	DK
Concessioner retail stores	1	2	3	4	5	DK
Concessioner boat rentals	1	2	3	4	5	DK
Land based visitor facilities (e.g., lodge, visitor center, etc.)	1	2	3	4	5	DK
Water based visitor facilities (e.g., marina, pump outs, etc.)	1	2	3	4	5	DK
Interpretive and educational activities	1	2	3	4	5	DK
National Park Service employee assistance	1	2	3	4	5	DK
Concessioner employee assistance	1	2	3	4	5	DK
Overall quality of services	1	2	3	4	5	DK

21. Please describe any activities or services you think should be offered at Lake Powell that currently are not offered?

About You

22. What is your gender? ___ Female ___ Male

23. What is your age? ___ years

24. What is the highest level of education you have completed? (Check one)

- ___ Some high school
- ___ High school graduate or GED
- ___ Some college, business or trade school
- ___ College graduate
- ___ Post Graduate

25. What was your total household income (before taxes) in 2004? (check one):

- Less than \$25,000
- \$25,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 or more

26. In what ethnicity and race would you place yourself?

Ethnicity

- Hispanic or Latino
- Not Hispanic or Latino

Race. Please check all that apply.

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or other Pacific Islander
- White

27. Please share any additional comments about your visit to the Glen Canyon National Recreation Area or any suggestions you may have about managing the area.

Thank you for your help!

Please return this questionnaire using the prepaid, self-addressed envelope provided.

If you want more information about this study, contact the University of Minnesota Cooperative Park Studies Program, 115 Green Hall, 1530 Cleveland Avenue North, St. Paul, MN 55108-1027, 612-624-2721.

16 U.S.C. 1a-7 authorizes collection of this information. This information will be used by the National Park Service to improve resource management and planning and better serve the public. Response to this request is voluntary. No action may be taken against you for refusing to supply the information requested. The information you provide will be anonymous. Please do not put your name or that of any member of your group on the questionnaire. Public reporting burden for this form is estimated to average 20 minutes per respondent. Direct comments regarding the burden estimate or any other aspect of this form to the Attention Desk Officer for the Interior Department, Paperwork Reduction Project 1024-0224 (NPS99-024), and to the Information Collection Clearance Officer, WASO APC, Accountability and Audits Team, National Park Service, 1849 C Street, N.W., Washington, D.C. 20240. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

APPENDIX C: PRE-NOTICE POSTCARDS, COVER LETTER, AND FOLLOW-UP POSTCARD AND LETTER

- 1) Initial Postcard alerting participants that survey is coming (weeds out bad addresses)
- 2) Cover letter and survey
- 3) Follow up Post Card in 2 weeks after initial mailing
- 4) 2nd letter and survey in 4 weeks after initial mailing

INITIAL POSTCARD TEXT

<Date>

Dear Friend of Glen Canyon National Recreation Area,

The National Park Service is interested in gathering data about the types of use at Glen Canyon National Recreation Area (GCNRA). What we learn from this data will assist the National Park Service in managing visitor services, improving facilities, and protecting our resources.

In a few days, you will receive in the mail a visitor survey about your experiences at GCNRA. This questionnaire has been developed in partnership with the University of Minnesota. Survey responses will be compiled and analyzed this summer and will be available for review on the GCNRA planning website at <http://www.nps.gov/glca/plan.htm>

Please understand by completing this voluntary survey you will be helping the National Park Service better understand visitor perceptions and experiences. The questions may take about 20 minutes to complete. Your specific survey responses are confidential and will be used in statistical analysis.

If you have any questions, please contact our survey coordinator, Dr. Dorothy Anderson at 612-624-2721 or dha@umn.edu at the University of Minnesota. Thank you for your time and consideration.

Kitty Roberts,
Superintendent
Glen Canyon National Recreation Area

INITIAL LETTER TEXT

<Date>

Dear Friend of Glen Canyon National Recreation Area,

We need your help! The National Park Service is gathering data about types of use at Glen Canyon National Recreation Area. What they learn from this data will be used to provide for your future needs. Your name was obtained from a list of people that have expressed interest in the future of Lake Powell and the Glen Canyon National Recreation Area during past and current planning efforts.

Your feedback as a concerned citizen and visitor to Glen Canyon will provide park managers valuable information that will influence the future of visitor services, improvement of facilities, and the protection of our resources particularly as they relate to low water conditions at Lake Powell.

Enclosed is the questionnaire we said we would be sending you in a previous postcard. Please complete and return this questionnaire in the pre-paid, self-addressed envelope provided as soon as possible.

Your participation is important and may take approximately 20 minutes of your time. This is your opportunity to offer your opinions and comments about your experience at Glen Canyon National Recreation Area. Of course, this survey is voluntary and your confidentiality will be maintained.

If you have any questions about the questionnaire, please feel free to contact our survey coordinator, Dr. Dorothy Anderson at 612-624-2721 or dha@umn.edu at the University of Minnesota.

Thank you for your help!

(signed)

Kitty Roberts,
Superintendent
Glen Canyon National Recreation Area

Reminder Postcard
(Sent out 2 weeks after initial mailing)

<Date>

Dear Glen Canyon National Recreation Area Visitor,

About two weeks ago, you were sent a questionnaire regarding your experiences visiting Glen Canyon National Recreation Area (NRA). If you have completed the questionnaire and returned it, we would like to thank you for your participation. If not, we would like to remind you that your opinions are very important to the National Park Service and we encourage you to fill out and return the questionnaire in the pre-paid self-addressed envelope provided. Your feedback will influence the future management at Lake Powell and Glen Canyon NRA.

This study is a cooperative effort between the National Park Service and the University of Minnesota. If you have misplaced the questionnaire or have any questions about the survey, please contact our survey coordinator, Dr. Dorothy Anderson at 612-624-2721 or dha@umn.edu at the University of Minnesota.

Thank you for your participation!

Kitty Roberts,
Superintendent
Glen Canyon National Recreation Area

REPLACEMENT QUESTIONNAIRE COVER LETTER
(Sent out 4 weeks after initial mailing)

<Date>

Dear Glen Canyon National Recreation Area Visitor,

About four weeks ago, we sent you a questionnaire asking about your experiences, preferences and expectations regarding your visits to Glen Canyon National Recreation Area. To the best of our knowledge, it has not yet been returned to us yet.

We are writing again because your feedback is important to us. The data collected from this questionnaire will provide park managers valuable information to effectively manage visitor services, improve facilities, and protect our resources particularly as they relate to low water conditions at Lake Powell.

The questionnaire that you were mailed is identified with a survey identification number. This number is only used to remove your name from our mailing list once you return the survey. The answers provided in the questionnaire are confidential and only summaries of the survey data will be reported.

We hope that you will fill out and return the survey as soon as possible. However, if for any reason you prefer not to answer it, please let us know by returning a note or blank questionnaire in the enclosed stamped envelope. If you have any questions about the survey, please contact our survey coordinator, Dr. Dorothy Anderson at 612-624-2721 or dha@umn.edu at the University of Minnesota. As always, your participation is greatly appreciated.

Sincerely,

Kitty L. Roberts
Superintendent
Glen Canyon National Recreation Area

APPENDIX D: ADDITIONAL COMMENTS

Q4. During your MOST RECENT visit to the Glen Canyon National Recreation Area/Lake Powell, who was with you?

Spouse to work on boat

Clients

Fishing trip

Employees

Coast Guard Auxiliary

Q6. Where did you access the lake the last time you visited?

Lone Rock (3)

Escalante (2)

Escalante Canyon via Hole in the Rock

Slick Rock, Rincon

Before Farley Canyon

Warm Creek

Dangling Rope--several canyons

Did not access lake

Q8. Other activities

Houseboating (10)

Boat service/repair (5)

Houseboat service/repair (2)

Working on houseboat outside of park boundary

Cleaning boat for sale

Winterize houseboat

Prep houseboat for summer

Relaxing (2)

Rest and relaxation

Swimming (3)

Water ski

Playing in water

Exploring the shoreline and canyons in the boat

Exploring from boat, cliff diving, scuba diving

Exploring on water

Site-seeing

Stargazing

Painting and photography

Photography

Day camping

RV Camping

Rainbow Bridge visit, houseboat trip

Dam Tour

Drinking

Having fun with friends

Just sat in my slip

Business

Working - launching houseboats and pleasure boats in port of Glen Canyon

Trash Tracker

US Coast Guard Aux. Patrol

Q9. Other location

- On boat in dry storage
- Dry storage
- My slip
- Marina
- Friends house-Tikaboo
- Tikaboo
- Lee's Ferry Campground
- Lodging in Page
- Greenehaven-relatives home
- Off-shore parking lot
- Backcountry camping using land access

Q10. Other watercraft

- Pontoon
- Yacht
- Raft+ 3 HP Motor
- Motorized inflatable (Zodiac - 11ft)
- Water trampoline
- Bass boat
- Dingy

Q13. Why it felt more crowded

- Launch ramp crowded.
- Very crowded launch ramps.
- Parking and ramp use.
- Less shoreline means more people in smaller area.
- Fewer beaches.
- Not enough places to camp.

- Holiday visit.
- Memorial Day holiday/weekend (it was nuts!).
- Short weekend: had to move up river short time span.
- Good weather.
- We visit in winter mostly.
- More fishing competitions going on.

Q15a. At marina, fueling docks and no wake zones

- Low water.
- Low water - smaller area.
- Low level.
- Everything seems too close together.
- People don't obey no wake rules.
- No common courtesy by people; the numbers are good. The attitudes are not.
- Bad boating behavior.
- No wake buoys too close to buoy field. Edge right next to buoyed houseboats. Wakes are smashing houseboats.
- Too many law enforcement boats tied up at and monopolizing courtesy docks.
- National Park Service.

Q15b. On the lake surface, excluding no wake zone

- Too many houseboats (2).
- Too many people who don't know boating rules.
- Not often, but it does happen again some people are very rude.
- Bad boating behavior, too few rangers.
- Too many boaters and PWC riders ignore no wake zones.

Low level.

Excessive chop in canyon moorings.

Q15c. On the lake shore

It was hard to find shoreline to park on.

Water too low in Bullfrog to find a beach.

Fewer anchorages.

Toilet paper all over beach.

Too many houseboats.

National Park Service.

Q15d. While camping at shoreline

Too many houseboats (2).

People have no regard for privacy and park next to you.

People will pull in and camp at your spot.

It was hard to find shoreline to park on.

Fewer anchorages.

No ramp.

Trash, firecrackers, fire pits, guns, too few rangers.

Q15e. At the launch ramp

Ramp needs concrete extended.

Ramps not taken care of.

No paved ramp.

Only one ramp open.

Launch ramp too narrow at low water at Hall's Crossing with ferry!

Halls Crossing, not enough ramp space.

Aramark blocking ramp.

Poor ramp management.

Better controls at ramp.

No ramp, mud, unfriendly Park Service.

Launch ramp insufficient.

Lack of access to good ramp.

Rocky. Low water level launch ramp.

Had to load and unload on the rocks.

Low water access.

Low water--poor launching.

Low water - ramp too narrow.

Low water, had to launch off dirt.

Water too low.

Long waiting - limited access to launch.

People being really stupid getting boats off water in low water level.

Impatient people.

Rude people.

Overcrowded dump-out station.

Tar in water made cleaning watercrafts impossible because of tar spots.

Too many law enforcement boats monopolizing courtesy docks making it very difficult to access courtesy dock.

Q15f. Other, Something else

The narrows: Water too rough because of four boats!!

Antelope Point Marina: Very congested as lake level drops.

General area of Wahweap marina.

Antelope Point Marina.

Lone Rock area: Lone Rock area is just crowded, and the people there at the time were ignorant of the "unspoken" rule about pulling their boat right next to ours, or paddling

up to our campsite to relieve themselves on the beach in full view of a dozen teenagers.

Backcountry.

Waste pump out. Halls and Bullfrog; not reliable to work.

Parking too far from ramp. Need shuttle or other transportation.

Parking: cars parked in boat parking, trailer w/ no cars therefore taking two spaces.

Ferry from Halls/Bullfrog - this is a great convenience for us.

NPS has NO shuttle bus to take people from parking lot to dock/visa versa - totally unacceptable/with the money they bring in at gates you would think they could provide that service!

Store was not open at Wahweap dry storage: Maybe because Aramark doesn't have a contract.

Facilities were closed. Restaurant, hotel, stores, what a joke!

The National Park Service cannot find a way to build and maintain public restrooms and public pump out waste facilities that are not constantly out of order and closed for public use. We have never seen this level of inefficiency at any other National Park or Recreation Area, even those with much greater levels of visitation. WHY?

Too many houseboats.

Proliferation of houseboats = rough water in main channel.

Park Rangers.

Got stopped by game and fish personnel at marina--was told they saw me going fast through wakeless zone. He said there was a reason for wakeless zones including to reduce shoreline erosion! How dumb--its for safety. Plus tour boat made bigger wave than I did. They had me confused with another boat.

You should have to pass some kind of a test in order to drive a boat.

Too much unsafe boating activities, including contract and park personnel in no wake zones.

Water too low.

Long line.

Rental dock.

Q16. Other unsafe boating practices observed

Bow riding (2).

Bow riding in channel, water balloon launchers hitting our boat, deliberate buzzing of boats at anchor. (PWC was NOT BAD this year) mostly large power boats and big wakes.

Bow riding in channel.

Bow Riding- Bull Frog Marina.

Bow riding in marina.

Bow riding (Wahweap Bay).

Riding on bow of a decked boat.

Tour boats being allowed to operate in a known hazard area for sinking boats being towed - in the narrows.

Tour boat wakes, "narrows".

Tour boat wakes - especially in channel to Antelope.

Wave runners not watching out for other craft.

PWC running too close to boat (beached or moving).

Unsafe PWC operation! All boat registration should require boating safety course.

Wave runners too close to my boat and high speed with 10-16 yr. olds driving.

PWC operators not being courteous - many young children allowed to operate. What happened to the PWC ban enacted in 2003?

Personal watercraft at high speeds in narrow canyons.

Unsafe use of PWC - too close to each other and too close to my boat (jumping wake, coming too close to water skier).

PWC-Jet Ski-Being rude.

Boaters do not know the rule about how close they can come to you if you are not under power. Also, if you are under power, they will come as close as 20'.

Number of boats that know little or nothing about boating regulations.

Inexperienced operators; non-adherences to wakeless zones a huge problem in the covered slips.

Other boaters (low or high water) do not respect wakeless speed or distance from other boats.

Overloading; Rules of the road: some boaters clearly had no knowledge of rules; others, ignored; a few were knowledgeable.

People unfamiliar with boat operation.

Very limited knowledge of safe boating practices (example: driving skills, knowledge of boats, rules of boating).

Stupid, unsafe behavior (speeding in confined areas) in Hall's Creek Bay.

Not understanding rules of the road or channel markers.

Renters not knowing lake rules.

Drinking and boating.

Drinking and driving.

Boats cruising fast just outside zones and through houseboat fields.

Boats going too fast in Moki Canyon swamped us at our campsite.

Many boaters do not adhere to wakeless speed within 150 feet of another vessel.

Boat operation at high speed very close to shore.

Speeding by camp--causing big wakes at campsites. NO manners.

Watercraft too close many, many times.

Houseboats traveling on the wrong side of channels.

People at fuel docks (Employees) plug the gas fills with rags while they fuel boats to prevent gas spills. This practice creates high risk of un-vented gas explosion when boats start after fueling.

Park Service boat going very fast in wakeless zones.

Law enforcement boat at launch ramp throttled up both engines; the prop wash pushed an 18 foot fishing boat into

rocks next to shoreline. Boat owner checked prop and had "dings" that were fresh. The throttle up procedure was unnecessary; just showing off!

When access is limited ramp and dump station use is more congested. The use of Rangers to patrol and control traffic would increase safety.

Launch Ramp.

Ramp - loading/unloading/rudeness of people, pets, and kids in the area, not enough patrol/control.

Underage operators using PWC at sundown and after dark at high speeds in close proximity to moored and docked boats.

Kids hanging off the back of the platform (stern) - not sure of the term. We also witnessed "surfing" on a 10' rope numerous times. Boaters pulling small children in/around marinas on tubes 50' behind the boat. Number and speed of tour boats. Their failure to give way to houseboats.

No life jackets on Seadoos and children under age.

Kids operating watercraft w/o supervision; drunks.

Small children without life jackets. People on jet skis being very inconsiderate.

Kids on PWCs in various side canyons. [This] is the worst hazard in marinas and on the lake to themselves and others!!!

I would like to see a speed limit in the narrow canyons.

Skiing/water toy usage in main channel extensive (other than PWC).

Not watching shallows.

Crossing in path of boat in close proximity.

Q17. Other experiences

Work on houseboat (2).

My last trip was just a work trip to get the houseboat ready for the season.

Perform seasonal equipment maintenance.

To fish.

To catch fish.

Catch striped bass.

Better fishing.

Stop politically "correct" draining of Lake Powell; this does NOT help the fish; storing water at higher elevations means less evaporation.

To Have a Blast!

Have fun!

Primary reason: to get away from stress of everyday and relax.

To enjoy the beauty of Lake Powell with Family and Friends. We have spent every summer there since 1976.

A good place to raise my children.

Reconnect with family members.

To suntan and chase the shade and swim.

To boat on a large body of water.

To make a difference - trash tracker.

Business.

I was at Lake Powell for business and was at a NPS inspection at Antelope Point on my most recent visit.

Just being able to enjoy the beauty of Lake Powell, and the piece of mind knowing the water is there when we need it is very important.

Experiencing Lake Powell is a totally wonderful experience.

No other lake like Lake Powell.

It appears that you are asking questions in such a way as to solicit responses which allow you to justify restrictions on the number of visitors. I am totally opposed to that concept. The Lake is large enough so that anyone seeking solitude can certainly find it!!

Q18a. Other situations

Need shuttles to and from parking lots.

Could use a shuttle on launch ramps a very steep and long ramps.

Disability access.

Disabled parking - 6 spaces!

Too many tour boats.

Too many PWC.

Pump out.

Need more pump outs.

Time to marina to get ice when close in beach sites are already taken for camping.

Buoy rent too high.

ARA employees not willing to help (don't care about you).

Stores not open.

Fireworks, guns, water balloons, fire pits.

Quiet times 10:00 pm to 9:00 am not followed.

Needs more water.

NPS rules and regulations.

Q18b. Problems encountered

Lodge/ramp closed - lake access not to disability standards - couldn't use.

It seems the foreigners who rent the power boats and houseboats are very inconsiderate at the fuel docks and wakeless zones. The tour boats travel too close to other boats and put out large wake that damage other boats and shoreline. Pet owners do not clean up droppings at marina or shoreline.

Tour boat wake sank a boat in tow behind our houseboat. Cattle poop along shoreline. Parking lots with trailers are always full, need more lots close by. NPS management is either stupid or corrupt - [name withheld]. There is no justice at Glen Canyon, public input doesn't matter.

Pets do not belong at Lake Powell. It is impossible to be so secluded that pets can be kept away from intruding on neighbors and droppings are intolerable.

With the lake water lower it appears that in the canyons the water quality is poor. The navigational buoys in years past [illegible] at the mouth of canyons and at the opening of

lake bodies of water because now they are in poor condition. Like I indicated anyone can drive a boat and most are clueless to the rules. Alcohol is a huge problem. I witnessed a Park Ranger at Halls Marina talking to two guys drinking beer in a boat. They concluded their conversation and drove off. The Park Service is more concerned about collecting fees and water quality than unsafe boaters.

Occasionally see people w/PWC-ski boat with obviously no idea of "rules of the road." Need a few more pump outs.

Too numerous to do so.

Available beach campsites always crowded. Time to launch or retrieve sometimes hour plus. Parking for trailer and tow vehicle long distance from ramp.

Animals running loose on beach.

Teenagers playing loud music in parking lot next to campground at Bullfrog all through the night. Security did nothing. Very hard to find beach area to camp or park boat, but it was Memorial weekend.

Inconsiderate people with litter. PWC very inconsiderate about no wake zones. Dog droppings all around marinas.

Too much activity and speed through buoy field.

I believe that a Coast Guard or boating operations and safety course should be required by anyone who operates a boat. I would also like to see a little competition when it comes to concessionaires on the lake.

Raising the lake should take care of most of these problems except for launching.

Campsites can't be helped much, but confusion about rules and regs is a serious concern. Things change from time to time. Rules are often a bigger problem than the original problem. They are often poorly communicated to the public and are often counter-productive. Time lost waiting to launch or load boats is frustrating and chronic.

Tour boats travel at unsafe speeds in wakeless and narrow channels causing boats to dangerously [illegible] and roll, throwing occupants and contents.

Dirty shoreline with small boat campers. Parking PWC and boats in a line so houseboats can't park. Rules for small kids not enforced and cutting close to houseboats to make wakes. Pet and human droppings with wipe papers showing in the sand. Park Service spends too much time in their offices.

Personal watercraft noisy and disrespectful with distance they are from boats. They should be limited to where they can go and how fast in certain areas.

Light is insufficient around floating marinas/docks. Launch ramps are too small - sometimes takes two hours to launch boat. With low water levels (and high gas prices) most people are staying close to marinas to save money which causes massive crowding. We travel farther so we have room to breathe. Parking is ok with low water but during high water years parking is very limited.

Race/speed boats without mufflers that you can hear for miles.

Low water, many new hazards not marked. Dangerous boating.

Long lines.

Hard to find campsites for motor yachts.

Human waste on shore - check camps better - personal watercraft around camps and beached houseboats are a problem - people inconsiderate about their speed and wakes.

Water too low, some very rude people, some boat operators are very unsafe, we get cut off a lot by other boats. I don't think many people have a clue about boating rules and regulations. As the water level drops the good campsites are much further away.

Should have more ranger presence/enforcement.

We have a 64 ft hall houseboat so our campsites are more limited than the pontoon houseboats. We had a very hard time finding a place last year. We also had several experiences with power boaters and jet skiers coming too close to our boat while we were camped. Many people don't seem to understand/care about the damage their wake can do.

We bought a houseboat at Hite Marina for the seclusion and undeveloped area, yet the store was available for ice and fuel. With the water level lowering and moving to Halls the adjustment to the crowds has been difficult. Lack of shoreline to park houseboat on is difficult.

Half the channel markers are missing. Need more toilet facilities on the lake.

Pets on lake not appropriate. Livestock near lake not appropriate - desert landscape does not seem conducive to feeding livestock. Livestock waste not good for the lake and surrounding area. Airplanes refueling not appropriate.

War planes buzzing lake not appreciated. Waste of US tax dollars for war mongers.

Litter and debris left on shoreline campsites now floating in lake due to increased water levels, poor quality water. Many boaters do not stay at IDLE speed in no wake zones and operate motorized watercraft at HIGH SPEED very close to others. RELIABLE toilet/pump out facilities at Upper Lake facilities non-existent - constantly closed for maintenance and broken down. Between Upper Lake and Dangling Rope marinas - 50 miles of no fuel availability or services.

Boaters coming way too close to swimmers and/or other boats. Not observe wakeless in buoy field.

Lower lake no beach area.

People being inconsiderate at pump outs and fuel docks. More trash [illegible] - fines for littering enforced! Need more pump outs and need to be MAINTAINED.

More toilet facilities are needed to prevent waste issues.

Hot Dog operation of watercraft.

Just like it says not enough floating toilets! Ferry at launching ramp!

These boats put off very dangerous wakes causing life and personal property threatening conditions. I have experienced it many times in wakeless and channel operations. They don't own the lake!

Other houseboats traveling both in the same direction and opposite direction have left not enough room for stops or turns out of the ordinary.

Houseboats take up boat ramps for hours when being loaded or unloaded and no Park Service presence to make them move along.

In on July 4th weekend we had people trying to set up camp in our dock yard while we had gone sightseeing for a while.

Pet dropping issue pretty self-evident. Based on #5 pulling skiers/tubes in main channel is strong indicator of lack of NPS presence.

In the summer long lines at the ramp area. This year maybe it won't be quite as long since state line is open. I wish the Park Service would open up the Castle Rock opening.

Unable to locate an adequate campsite. Let us drill holes in the sandstone so we can have more campsites.

Due to lake levels and Castle Rock cut above water, we didn't have enough time to houseboat uplake going around "Maytag Straights" so we were forced to stay at Lone Rock. Unfortunately, it's just a different crowd who camp out/recreate on Lone Rock beach. We actually had a small beach on LR that people would try to run us off of by literally trying up their boat to our anchor! Had a couple of kayakers paddle to LR, get out and relieve themselves on the beach right in front of our group of kids, allowing their dogs to leave their droppings also. Things that have NEVER happened to us anywhere else on the lake before. Lone Rock beach just needs more attention by rangers and an increase of educational materials.

Too many tour boats. Sorry to be so redundant; a family on a houseboat pulled in virtually on our anchor lines, while we recognize it was a holiday weekend, perhaps rental houseboat users and regular users should have proximity guidelines, or even rules; distance is a function of water level but also number of boats, perhaps a moratorium should be issued until further impact is considered.

Too many people, too many boats. The majority of lake users simply want to "party", an attitude that invades the use of the lake for quiet, solitude and the enjoyment of nature. There are numerous other lakes/rivers to accommodate the urban party goers.

Too many - waves are tremendous even when tour boats slow down - dangerous situation.

Only one ramp open in 2004 (July). Park Service not organized.

The wakes about sunk us. Confused about where PWC could operate.

Boat and trailer parking.

[Amount of time spent to shuttle back to marina] Very crowded and takes lots of time going Wahweap past and then out to lake - Would like to see opening dredged straight out form Wahweap.

Dirty water. Dumb people, stupid people, crazy people, dumb crazy stupid people, stupid people, all of the above and more.

Beach campsite - water too low for cruisers to find. Boat ramp - that's a joke!

Lots of dog poop at Bullfrog slips at entrance to slips.

1.) Changes in lake level leaves many problems with rocks.
2.) Bathrooms locked at Stanton Creek. I pay for entrance I expect to have toilet facilities available for my money.

Too numerous to recount! Too many boaters are rude with no or little regard for the pleasure and safety of others. The lake is overwhelmed by too many houseboats and PWCs. The low water level has exacerbated the problem to the point where boating at Lake Powell is like sleeping in Times Square!!!

People partying all night (drinking, etc.), littering campsites.

Closed facilities, not enough facilities, getting more crowded every year every season, nothing north, I miss Hite.

The large rock area in Bullfrog Bay just before Halls could be better marked as the rock stretches between the markers - more markers needed.

Long wait to launch. Long wait to gas. Long wait for marina to pick up boat. Too many wave runners.

Limited boat launch space at Halls Crossing. When the ferry docks it's a total mess!

There were people parking in non-parking spots. Spent a lot of time to find a parking space.

Hard to find clean water with nice shoreline to camp.

Many watercraft (PWC) who ride close to others' campsites or speed past other vessels or chase boats to jump their wakes. Operators not educated in boat rules and regulations. People using beaches and alcoves as toilets and leaving human waste and paper on shores. Livestock waste near water levels that fluctuate and pollute beaches and water.

Low water reduces ramp space.

Unsafe speeds. Disregard of requirements to keep distance away of 100' or more.

Pets should be leashed at all times. Also: pet waste on docks, marinas, etc. The concessioner is not responsive to problems or service needs.

Irritating wave runner (PWC) too close to campsites!

Long walk up and down launch ramp.

Sight seeing airplanes are a problem.

It was Memorial Day weekend - I will not go on lake during Memorial Day, 4th of July, and Labor Day weekends again - too crowded.

Tour boats cause too many waves with low water levels. Some of the markers have no lights - or lights burned out. Need a shuttle from bottom of ramp to top - ramps are long and the parking is a long way off.

Lots of fuel in the water, oil, gas!

Low water parking lots - [illegible] Wahweap have to go to state line, if good shuttle system - more would go and state line lots or launch there.

With hundreds or thousands of boats in dry storage, and the campground - why wouldn't the store be open for ice and basic groceries - why lose the revenue?

People getting too close while you are camped. Speed creating wakes that damage boat while camped. Most inconsiderate is jet skis. Too fast for conditions and some enjoy buzzing your camp. Also, some do not observe no wakes zones.

Too much litter, navigational aids missing, people not knowledgeable, operators often unsafe, pets/droppings, NPS personnel almost non-existent and not responsible, lake level, and parking areas.

PWC should be restricted to one area.

Latrine pits, disposable diaper piles, toilet paper at shoreline camps, frequent disregard of boating and safety rules. On Navajo Reservation shoreline (Dungeon down to Labyrinth), serious manure problems. Park Service is stretched really thin.

Litter - inconsiderate people. Inconsiderate - late evening loud voices, music at high level; running generators all night - especially when moored within 50-feet of each other. Gets bad in canyons. Also, people are unaware of ramp etiquette. Couldn't locate NPS at Halls! Power failure at Dangling Rope was poorly handled by NPS and contractor. NPS missing an opportunity to promote boating safety as people enter GCNRA and while on the lake.

Campfire - no campfire really dumb. Campfires should be allowed. Don't try to regulate everything. Can't be done! Rangers on water sometimes are too full of themselves - creating problems where none exist.

Didn't find any.

Unsafe boating, rude people, personal watercraft unsafe use, noise, trash on shore, people not being polite but rude

as if they owned the lake and shoreline, not [illegible] fishing from the shoreline.

I feel to conserve quality on lake the houseboats need to be limited. Too many people on each boat and therefore too many people in one camp. The renters seem to disregard the beauty of the lake.

Too long in line for retrieval ready to go home. Burn too much fuel to get to the fuel and ice.

Too many jet skis - Bullfrog has always had a problem. Halls Crossing ramp and Bullfrog ramp is a long ways to walk.

Beach Campsite: lot of people close to marina, had to travel far for a good campsite. Navigational aids: lack of shallow water or hazard buoys. Boats too close: people not respecting private and safe boating distance.

Too many pets at private slips/ Too much noise from PWC on the lake.

Crowding makes it more difficult to find campsites; boat operator don't go wakeless behind beached houseboats.

Dog droppings on shoreline.

Low water. Inadequate ramps at Bullfrog for last few years.

Working the Trash Tracker we find huge amounts of unnecessary litter, have almost been run into by huge houseboats cutting us off and endangering our volunteers and fear for safety for them.

Non-native salt cedar have infested the lake in the last 20 years taking away beaches, landing spots, providing habitat for insects previously non-existent and draining the water supply as they drink excessive and massive quantities of water per plant.

Pet and human waste is at every campsite no porta-potty enforcement. I have camped on shore 10 years and no ranger has checked site for a porta-potty. Bullfrog marina should have a shuttle bus for the long walk up and down ramp and to all parking areas when temps get above 90 people suffer from the long walk older and very young seems to suffer more.

All of these problems (except pets and their droppings) could be solved with higher lake water levels. Pet owners should have to carry clean up bags for their pets! And use them!

Late night noise - parties, music, generators. Inconsiderate PWC riders. Lack of fuel middle of Lake.

Very seldom seen on the lake not helpful [Availability of National Park Service presence on the lake]. Takes too long to walk up and down the ramps [Amount of time spent to park trailer and tow vehicle].

Halls Crossing canyon beach very crowded. Long wait at Bullfrog.

Two Problem Areas: 1) No flyer identifying closures such as Hite marina and [illegible] house access; 2) Markers in prominent waterways are too near submerged outcroppings.

With low water levels, parking at Bullfrog is a long way from the water. Provide toilet facilities at all courtesy docks.

The most disheartening thing is to find your beach but you have to do a poop patrol to the area before you can settle in. We took our dog on every trip and we frequented the lake about 12 times a year. We always thought it was ok just to bury it well, but through education we realized it needed to be carried out because feces does not break down in the dry desert air. That with rising and falling lake levels the feces would go back into the water. We loved the high quality complimentary white plastic garbage bags we got from Dangling Rope but always wondered why those weren't available at the other marinas. We always cleaned up after our dog. I feel people need to be educated.

Channel markers not being maintained.

Aramark keeps raising the buoy rent. They do little for buoy renters. The slip renters get parking, new ramp, store and loading slip. Buoy renters get to use the public ramp.

1.) Need a shuttle service from parking lots to bottom of ramp. 2.) Need more reliable waste pump-outs. 3.) Need more of NPS ranger presence in the canyons to slow down fast boats in tight areas. Need enforcement of wakeless areas and around campsites.

Too many people not obeying safe boating procedures, no respect for others safety. Three days on lake in main channel and many canyons and never saw a NPS boat! Observed several underage individuals operating jet skis in an illegal and unsafe manner!

Up at Bullfrog area navigational aids are on beaches (not all but some). On slips dog droppings are left by the owners. Thanks for the pick up bags at Bullfrog!! Too bad owners don't use them! Park Service will not answer the marina radio channel #16 when called - EVER...DAY OR NIGHT. I've seen boat sinking...fuel in water calling for help from Park Service in Bullfrog Bay. Not until they said they were losing fuel into the lake did Park Service answer.

They just don't answer. Check it out please! With Halls closed and Dangling Rope closed it is hard to get to Wahweap, then home, Bullfrog.

Already mentioned in Question #16. [stupid, unsafe behavior (speeding in confined areas) in Hall's Creek Bay].

Parking areas at marina dangerous because of no lighting of walkways.

Ramps for boat launching should be extended during winter low level areas. Lower parking areas should be expanded. Water hazard, i.e. rocks and shoals should be adequately marked and continually updated.

Being on patrol, and as part of Coast Guard we notice more.

Parking too far from ramp for us old guys.

These are not new problems, some improvements have been made. Need more marinas on Lake and keep the size of Halls Crossing. Add competition of concessioners. Stop restriction of boat sales and provide or allow more housing for employees.

People not being quiet after 10:00 pm.

Got lost...ran out of gas/changing store and marina closing times/people being inconsiderate.

Not enough NPS law enforcement at launch ramp and boat trailer parking areas. Pets and small kids in launch areas unsupervised or on PWC in water. Trash. Tour companies plugging up ramp area.

Jet skis (PWCs).

Inconsiderate boaters, unsafe ops, pets cleanup on beach, longer trip upriver to find campsite and away from crowds. Long launch lines.

People drive too fast in the wakeless areas not passing wakeless within 50 feet of another boat, drunkenness, loud music, exposing themselves, not following boating rules, not being able to read/speak English, not following radio rules.

Fewer good anchorage, crossing anchor lines. Many unmarked rocks, poor parking, poor enforcement, unpleasant park officers, lame park service help during sever storms.

Tour boats are a problem I don't think can go away.

Distance to walk back to water after parking trailer.

First time or otherwise inexperienced boaters ignorant of inland waterway regulations represent large problem. Enforcement by NPS personnel essentially non-existent. Wake/wave action from tour boats is at an absolutely disgusting level. Safety hazards and property damage result. During summer months, trailer/tow vehicle parking is problematic.

There are too many rental houseboats on the lake. These people don't know rules, camp too close to others, and are disrespectful of others. There are too many boats on the lake!

Biggest problem is people in rented motor boats that don't know the laws and speed past very close and don't know the wakeless zones. Parking with boat trailers at Wahweap is becoming more difficult to find.

Is there any visitor management? The Lake has become very crowded. Problem predates low water and is caused by NPS and concessionaire drive to maximize income. No real enforcement of law on lake. Large vessels traveling at high displacement speed fail to minimize wake in vicinity of smaller craft. Tour boats are worst offenders. Park Service and concessionaire do not monitor radio frequencies consistently. No NPS response in situations of danger after dark.

The NPS seems to have less presence on the lake than officers of other agencies. People operating rental boats should be given more instruction on safe boat operations when in close proximity to other boats.

The biggest problem is jet skis. I own two but would welcome a ban.

Campsites a problem only due to low water level.

Since lake level has dropped there is tremendous amount of litter on beaches, poor quality of water in remote campsites, need more light on lake, no wake zones need policing.

In high season, beach campsites are hard to find. Shuttle to/from town and airport not frequent enough.

Personal watercraft are a big problem - jumping wakes, etc. in main channels - waterskiing.

Access to marina from parking lot is not good.

Finding parking for trailers. Going further up lake to find anchorage. PWC and local concessions going too fast in wakeless areas.

Inadequate vehicle and trailer parking spaces within reasonable walking distance to ramp.

Lake coming up so fast - shoreline changes too fast.

Human/pet waste in Lone Rock and Warm Creek.

Commercial tour boats - huge and dangerous wakes. No enforcement of no wake zones except at Navajo. Fireworks and firearms. NPS needs to have larger enforcement profile.

Boaters parking in slips and using electricity that others pay for.

Way too many inconsiderate people on the Lauren ramp and lake during the summer season.

As water has dropped serious debris is evident. Filled three garbage sacks of clutter from site. Tour boats cause serious problems going from Wahweap to Navajo through small channel. Not near enough parking.

Have encountered litter on beach due to trash. Some people cut too close and too fast to pass. PWC are a nuisance and loud. We have encountered lots of wakes from tour boats. Beach - people try to save spaces. Pets - have noticed occurrences. Beach closures are a reoccurrence.

Navigational aids placed close to hazards; tour boats every hour - don't slow down in narrow areas; boats that are too close.

Litter - we find quite a bit and pick up all we find. People can be very careless and operate their boats and PWCs. Watercraft too fast, too close, and unsafe. Pets and their droppings are atrocious, especially at Wahweap.

Really miss the pass at Castle Rock being closed because of low water. We don't go up lake anymore. Too long a trip and too far for gas.

People driving boats too fast in wakeless and congested areas. People operating boats in careless manner.

Pet waste at marina and on shore. Human waste on shore and trash. Pets should be banned from Lake Powell and all the marinas, and strict enforcement applied!!!

With the low water level, 3570 - there are fewer beaches and a lot less canyons.

People are burying their garbage. Worried about bacteria in the water - saw some evidence close to shore. Some areas

need more hazard markers (Gregory Butte South Side). Pet droppings - see bacteria.

Pet waste on shore. Have seen human waste in water. When a car parks in a trailer stall where three cars could park.

People are leaving waste at campsites. Low water level made launches very slow; but it's something to be expected. Keep jet skis out of launch area.

We have a handicapped person in a wheelchair and often tour boats won't slow for our houseboat, their wakes literally throw my son out of his chair. Also they generally screw up the lake for water sports.

Commercial boat wake is HUGE! Beaches are scarce! Long, long walk from trailer parking. All shuttles area always too infrequent.

Human waste being dumped in lake by Aramark personnel.

Too long to get launched - way too much time to get back into the marina.

People that rent boats and do know the proper way to operate boats.

Q19. Other management actions

More pump out stations

Pump out stations (additional) discharge docks.

Pump outs - add.

Repair and improve pump stations (poop dock).

Install boat pump outs in campgrounds and dry storage areas to help crowding at the marina.

Better job with pump out facilities.

Increase maintenance and inspections and assistance with pump-outs for smooth, efficient use.

Improve mechanic facilities and service.

Customer service at existing facilities to make a user friendly system, that makes the visitor the number one priority.

Increase choices for services on the lake - I do not like the monopoly the Park has for services, the prices are high

and the wait long. They need to allow other businesses to provide services.

Get out of bed with Aramark.

New concessionaire and park management.

Outlaw Jet Ski/PWC use on lake, especially two stroke engines, especially off main channel.

Ban on personal watercraft.

Eliminate PWC; Limit the number of houseboats.

Regulate number of wave runners per group.

Limitation of jet ski areas.

Restrict PWC.

Have jet skis use different loading ramp-or not allow them to be running in and out of loading area.

More enforcement of PWC use in marina areas and keep kids off of them in Marinas. Enforcement overall is lax at best and I've been on the Lake annually since 1968.

Limit or exclude personal watercraft, jet ski's, etc.

Add water to the lake - it's too low!

Raise the lake level because most facilities are negatively affected by low water levels, such as launch ramps and number of campsites and beach areas.

Protect lake level Powell versus Mead.

Refill the lake.

Restrict speeds and areas where tour boats are allowed to go. Their waves make it almost impossible to (navigate) maneuver through some areas (like narrow canyon). Does damage to other boats and people.

[illegible] tour boats.

Less houseboats (or at least a moratorium).

Limit number of houseboats on lake.

Separate the time share boats from private boat owners. In other words separate marina.

Open Castle Rock cut to a deeper level than it is now, at the price of fuel it would help.

Reopen Hite.

Reopen/relocate upper lake marine (Hite).

Ramp-parking lot shuttle.

Shuttle bus Bullfrog - Halls.

Closer parking.

Handicapped parking close to launch are. Great parking spots now, but too far away and uphill for one who pushes his/her wheelchair. Liberal enforcement for handicapped folks who get parking tickets. I use to be able to park off to the side of the ramp because there was handicapped parking designated there.

Parking of one vehicle in larger parking stalls!! Need designated parking.

Clean restrooms and campgrounds; replace BBQ grills at campgrounds.

Improve restroom facilities. Add a small, reasonably priced restaurant at Halls Crossing marina.

Remove the limit to the number owners to houseboats that lease slips. Private ownership of a houseboat should remain private. The NPS is practicing invasion of privacy and that's wrong.

Have consistent services. If the contracted vendor can't provide adequate services then other vendors should be allowed to offer services. Do a survey like this to rate Aramark and I bet it would be very negative.

More docking space.

I would like to see padding on existing docks at marinas, fuel docks, etc...

Put fuel between bullfrog and Dangling Rope - portable.

I don't like the idea of the Park Service regulating or governing any of the above stated action or activities.

Too much noise at night in the slips. People are not sensitive to keep quiet when others are trying to sleep on their house boat. Need to enforce this.

Enforce DUI laws.

Require only minimal water to go downstream, maintaining 80%+ capacity of lake.

Tendency of NPS, NFS, & BLM to practice policing rather than diplomacy (tact) when contacting the public in the field. Also, use of marine radio needs to be improved. Both the public and base operators need to be familiar with basic operation procedures.

We have visited Lake Powell since 1965. Have made over 50 trips. We have been as far as 20 miles above Bullfrog up San Juan and Escalante. In our opinion management of the Lake has been satisfactory except for the stupidity of planting stripers which ruined the fishing.

Medical facilities.

1.) Salt cedar eradication; 2.) private houseboat restrictions; 3.) Adequate and functioning/reachable pump out sewage stations; 4.) Ban PWCs (Jet skis). Be reasonable with restrictions on houseboat ownership. Current 18 owner maximum rules and prohibiting re-sales on wks of more than 18 owners is too restrictive and hampers management of boats that have been on the lake for many years.

More security at nights on slips, parking lots.

Develop modest boat launching access (e.g., gravel ramps, gravel roads) into Farley's and White Canyons, redevelop Hite Marina. Restrict wave runners to specific areas. They are a dangerous nuisance.

Stop micro-managing boat sales.

Limit size of single hull boats in tight main channel and small side canyon areas. Too many large cabin cruiser type boats producing large wakes that are dangerous to smaller boats and cause damage to boats moored at shore.

Improve existing facilities.

Have existing facilities open and in good operating conditions.

Consider breakwater protection from wake/wave action at Wahweap Buoy Field

Better weather reports for Lake Powell specifically.

Power plants should be used for peak power use instead of constant flow.

Q21. Activities and services that should be offered

Don't over-manage. Don't over-regulate.

On-water eatery.

Allow leasing of houseboat slips to anyone, not just the rich! Antelope restricts houseboats to have a maximum of only 12 owners which is unfair to less wealthy citizens, discriminatory to citizens that are not as rich. This is wrong! Dah!

Better emergency response/health care.

Emergency cell phone reception.

I feel that there should be some competition on at least some shore based facilities.

There needs to be more options for boat/maintenance and service. Currently Aramark has a monopoly and will only service their boats. Having to go through off-shore marina is very time consuming. Allow other vendors to provide service at the lake.

Cellular service. Additional marinas.

No additional - minimize so less people.

Overall quality of services ok with the exception of ARA boat repair service. We feel the need for an explanation. For the past 12-13 years we have owned our own houseboat that sits on a buoy in Bullfrog Bay. We get much better service at Halls Crossing for service and repairs etc. The service at Bullfrog (repairs) has gotten so bad that if we can't repair it ourselves, we take the houseboat out of the water and take it elsewhere.

Do not create a monopoly at the lake...this makes it less friendly.

It isn't more services but the quality and levels of services performed.

1.) Bullfrog: a lack of qualified mechanical services (ex: refrigeration (air conditioning) service offers none at all). 2.) A service withdrawn by Aramark to allow me to market my boat myself without their monopolistic control this is my right, not Aramark's.

I think there should be competition on the lake. The monopoly that exists is driving prices to an unbearable levels.

The last 3 months I have been upgrading my houseboat adding a 2nd outboard and moving them to the pontoons; building motor mounts, extending decks, and building rails. I have to tow my houseboat outside the park to work on it. I

think an area should be designated to work on upgrade projects. The concessioner recently took over one full parking lot to do the same type of work that I have to take my houseboat outside of the park to do.

The lake is beautiful as is don't screw it up by limiting access or segregating different users. We are adults expect us to act as such.

I did get a bad batch of gas at Halls Crossing last November and cost me \$680 to clean out my fuel tank and replace it.

More marinas by independent people.

1.) Satisfied with activities and services at lake but would like to see boat repair enhanced. 2.) Would like to see more Park Service presence/enforcement on alcohol, unsafe operation, and rules and procedures.

Real estate sales availability is lacking. Trying to buy or sell a houseboat is restricted to Aramark services only - yet they don't try very hard to assist in the matter of purchase or selling.

Need a public area for working on boats. Better hazard signage. Needs another concessioner, competition works.

Better grocery sales choices at Halls Crossing and Bullfrog. Restaurant availability at Halls Crossing marina. Some level of executive services (i.e. - boat cleaning/detailing) at Halls Crossing - only available on limited basis at Bullfrog marina.

Wider ramps. Separate docking for John Burr.

Better boat repair services.

More often than not pump out facilities are either broken, down, or not enough staff to maintain them. Educate people on HOW TO USE pump outs and read a vacuum meter. Take Turns.

More pump outs. More assistance at pump outs for the uneducated.

Golf carts down to marina and ramp to boat trailer parking lot. Shave ice. Dredge Warm Creek passage, have a one time fee of \$20 for ski boats and \$100 for houseboats to pay for it. The channel is causing damage to all boats.

More assistance in directing us to sites where campsites are available.

More food places.

Dig a cut through at Castle Rock.

A parking lot shuttle - more hand carts. Easier access to boats to cars.

Easy access to mechanics "on water".

I reserved two family units in November 2004. I requested #8 and #7. I have six people in my group I wanted 2 family units together. I ended up with #2 and #4. We all shared food costs and had to transport food two family units away instead of walking 30 feet to the next unit.

More tie-up docks at the launch ramps. It takes at least 30 minutes plus to launch or retrieve a boat. A shuttle bus or some means of transportation to and from the parking lot. Particularly at Bullfrog area.

Pizza Delivery; Fuel Delivery.

Boater education specifically rules inherent to Lake Powell and Utah/AZ.

More variety of groceries.

Fill the lake back up!

More toilet services and pump outs. More fuel - marina [illegible].

Halls Crossing needs enough boat mechanics to provide adequate service to boat owners and visitors.

At the toll booths - provide more information about lake or where to find the information concerning the lake and its facilities. Times information center is open, times marinas close/open, restaurant hours, store hours, etc. Provide training about lake - movies, Q and A sessions...

Aramark refuses to allow mechanics on the lake even when Aramark does not have the personnel to fix your boat for weeks. Why should my vacation be ruined by Aramark's greed if they can't supply the mechanic? Aramark has overstepped on the slip rental with a bizarre insurance requirement and unearned "brokerage" fee.

They need much better billing services for buoy and dry storage customers.

Bullfrog consumer goods very limited - food, hardware, staples.

Compressed air.

Portable pump out service.

Shuttle service docks to parking lot and visa-versa.

The help is young - rude; need to work on customer service.

You need to open Antelope launch ramp for all year round use. Also open Castle Rock cut for use all year round.

More recreation type activities at Lone Rock. Maybe a food/drink stand, cabanas, more of a resort type place.

More independent servicing to support the concessioner during the busy season June-Oct. More on-lake repair services June-Oct.

More flexible rules regarding fishing and guided fishing trips. Allowing night fishing, allowing launch for guides at Antelope Point.

Need to stay open 12 months – pump outs at campground/dry storage.

More assistance at docks - fueling, pump out, repairs.

Focus on bettering service, both NPS and contractor with emphasis on improving boating safety, handling, and etiquette. Apply best management practices.

Gas at San Juan Arm.

A restaurant at Halls Crossing.

Better ice service. Better repair of boats on lake.

You need more service. When you need to have your boat fixed, you have to wait too long to have a mechanic look at your boat.

On lake eating establishments, boat parking at a snack bar or restaurant. Facilities near Rincon, San Juan, Escalante area.

With the lake level so low it would be nice to have a shuttle to take you from launch ramp to your car.

Car/Boat wash - launch ramp shuttles to and from your vehicle.

I think there could be more interpretation of the natural and anthropological history. Perhaps it was available, and I missed it.

At Bullfrog the Lodge should have swimming pool and better facilities as Wahweap does. Widen the roads from state land to marina's. Way too narrow in spots.

Beer, soda, and food service available on lake to fill phone or radio orders.

Ice vending machines near floating toilets and elsewhere on the lake.

Cellular service towers for providers. Better inventory for repair shop. Emergency call stations along channel.

Ramp to parking lot shuttle service. \$5.00/person and include a water bottle if needed? Would be great seasonal job.

I feel we have no choice to services for boat repair or needed to maintain your boat (Lg) on the water. If we pull the boat it's about \$1,000.00 round trip plus service.

No wake zones for fishing. No PWC in some areas.

Allow independent contractors to "easily" provide services for houseboats, etc., both on the lake and off-lake. It takes months to even get weak service. Aramark need to hire more mechanics at Halls and Bullfrog even if they have to pay their employees more or allow others to serve the public.

A short term loading/unloading dock not related to a boat ramp at Bullfrog.

More lakeside restaurants and lodging. More lakeside facilities. Better marking of all water hazards. Expand launch ramp for low water level. Quit sending water downstream that's not allocated. Do not worry about the Humpback!!

Parking at Halls Crossing closer to ramp or shuttle or at least Handicap parking.

Competition of concessioners, employees housing. Boat repairs and parts is a joke. Aramark is incapable of providing boat repair parts, qualified personnel, facilities. All repair and service personnel have gone to smile school, but nothing ever happens. Nothing can ever be done without long waits (over a year) and they have to order almost every part you may need. Even bolts and nuts.

Gas barge to fill covered slip houseboats to help with safety and crowding problems at gas dock.

Non-motorized areas - i.e. paddle only areas.

Hite - place to eat, sleep, etc.

Develop/build a launch ramp at Blue Notch or Red Canyon.

Electrical hookups at Bullfrog Campground.

Wahweap: need a service that pumps out your houseboat (like Bullfrog) that you can pay for.

Dredge area between Castle Rock and Antelope Island for easier access to upper lake. Charge to use this access in order to pay for dredging. This would save fuel and make it safer than driving through the narrows.

Easier access to competitive businesses with going through ARA. Ability to sell/advertise your boat without interference by ARA or Park Service. Eliminate "ungodly" high selling commissions for doing absolutely nothing. Eliminate ability to say your boat is overpriced and not allow slip transfer.

Improvements on slips - covered. T.V. [illegible] hook-up.

Free entry to those with boat moorage in lake.

Launch ramp-to-parking shuttle service during peak season. Allow non-concessioner on-water boat repair/maintenance. NPS presence to monitor launch/retrieval activity and wakeless operation at marinas during peak season. Courtesy dock night lighting (solar powered). Additional or extended courtesy docks.

The gas docks at Wahweap is very poor.

Designated parking for buoy/slip owners. Boat safety checks at ramps and education.

The monopoly given to the concessioners makes service horrible. Boat repair is extremely bad and has been for years.

Closed for 3 months! [Concessioner food service]

The marina services are in conflict with both the users and goals of the park. Services more expensive than nearly all other facilities (locations) that provide better service.

Electric carts to unload and load at Wahweap marina. We own a houseboat it is different to carry to our boat with the changing of the water levels.

Better airport to marina shuttle service.

I don't feel the concessioner provides anything but basic services for slip renters. Docks are in need of repair fees are increased each year with no amenities - never a dock cart in site - showers installed down by houseboats! The marina seems to only have the houseboaters in mind.

Better reservation control at RV Park. Sites are not marked as reserved.

Clothes washer and dryer at marina in Wahweap.

Concessioner needs to improve food service and slip conditions. Boat renters are not qualified to be operating the watercraft. Very dangerous on the water!

Dry storage needs a dump out facility. ATMs at stores/marinas.

More pump outs on the water.

More educational opportunities - schedules posted in common areas.

More food selections at Wahweap Marina Café.

Shuttle service from auto parking lots to slips.

Dry storage need pavement and covered/indoor storage. Be able to have more overnight slips.

Gasoline at a reasonable price!

Professional superintendent.

I enjoy the lake.

None that immediately come to mind.

None, leave it alone.

Q27. Additional comments

This year we moved to Antelope Marina, paid a premium for what we thought was going to be a better service. The Marina is extremely disorganized and difficult to work with. The executive services are not to standard and I refuse to use them, due to their incompetency. I feel that having IBP on the dock providing VIP services is essential to achieving the ultimate satisfaction of the customers on the lake. The other thing that was frustrating was that the dam was not regulated to increase the lake level this spring. The moisture this year should have been used to raise the level for future storage.

I've been spending 2-4 weeks a year at Lake Powell since 1965. I love this place. It is the greatest place in the world to vacation. Hawaii is a distant 2nd place. Don't drain it, don't over-regulate. Take care of the abusers and mis-users and let the rest of us enjoy it. Thanks.

ARA should take a lesson from Antelope - they treat their customers like customers! It's a huge lake - even with low

water - don't blame the number of visitors - blame your facilities. I question - why did no one take advantage of the low water and dredge out Castle Rock - what a missed opportunity that is.

Encourage water conservancy on behalf of the Lower Colorado River water users; i.e. Arizona, Nevada, California!

When the Warm Creek Pass is closed due to low water, all tour boat operation should be shut down for safety sake. The narrows around Antelope Island get too rough with tour boats and barges plow through the narrows. Since barge operation must continue to support Dangling Rope, at least stop the tour boats to help minimize waves in the narrows during peak season (June through September). There needs to be a marina built in Padre Bay on the west side. Ideally it would be a location that a road could be paved to bring in supplies, no launching should be allowed, nor any public traffic on the road. NPS rangers should reside at the marina. This would reduce the traffic at Wahweap and through the narrows. The federal government should require a cell phone providers to install cell towers up and down the lake for safety purposes and visitor convenience. With millions of visitors each year it's time somebody wakes up and makes this happen. It will save lives! Somebody should investigate [name withheld] and check her bank deposits! The things she is doing is not in the best interest of the people, and she is suppose to be a servant to the people. Since her actions make no sense at all, she must be on the take, that's the only explanation the folks in Page can imagine. The US Government should be ashamed of her actions, but I assume they are distracted with more important matters, lucky for [name withheld].

The lake seems to be best at 50 feet low.

Greatest place in the world to spend time with family.

We love our Lake Powell. The ramps could use some TLC.

Our buoy fee has gone up 54% in the last 8 years. During the same time inflation as measured by the consumer price index (CPI) is up only 17.7%. When is this going to stop? There should be a rollback to a reasonable amount. We are now paying over \$3,000/year to hook our boat to a ball in the water!

Boat maintenance at the Bullfrog shop could not be any worse. Eight weeks wait for service.

Sole management has got to end! Services (repairs) and guest services are HORRIBLE! Repairs, if you can get them done are three times what they OUGHT TO BE. Cost of goods is too high. Houseboat management is nothing

short of Blackmail! Do it OUR WAY, pay OUR costs, Don't Complain, OR we'll kick your butt off the lake! We must get competition on the lake to force a more client oriented manager. Right now it's put up with it, or leave!

Gas docks need to be expanded at Halls and Bullfrog. Getting propane has now become a real problem. I know the lake level created a real problem at Halls but last year that marina for total service was real bad. For houseboat owners service is a joke. The boat stop gets [illegible] behind and off shore marina has some problems. In other words service for houseboat problems is a joke.

Educate campers to clean up campsite before leaving. Prohibit use of beach areas for toilets. Provide more toilets on the lake. Educate users to remove solid waste (pack it out). Enforce no drinking and driving.

Fill up the lake. We need water.

My main objections are: dog droppings around slip, marina, and parking areas - this includes the beaches around slip areas; PWC speeds in slip areas; powerboat speeds in no wake zones.

1.) Make fuel dock more accessible, thus shorten lines in summer. 2.) Better enforcement of the porta-potty requirement - it's common to see groups of people tent camping and using trees etc., for restroom. 3.) Enforce the distance to boat requirement to keep PWCs away from anchored boats, beaches. 4.) Create more courtesy parking for boats on the water - so you could go out at lodge, etc.

This past winter (off season) Aramark provided little or no service. Gates at marinas were wide open with no personnel visible. At Bullfrog, restroom facilities were locked. I have been to Lake Mead and the difference in services provided are superior to those at Lake Powell. Thank you for the opportunity to participate in this survey.

Dealing with Aramark on slip issues and their attempt to govern houseboat ownership is a major pain and the reason I will no longer go to Lake Powell. Their activities regarding houseboat ownership and limits on sale and transfer are illegal but I gave up fighting and am going away mad.

We love Lake Powell. The personal watercraft are noisy and disrespectful. They should be limited in their use. Restricted!

More no wake zones. Please inform people that no wake zones mean your boat should not have a wake! Expand the zones so a sensitive area does not receive the wake of someone speeding outside the no wake zone.

1.) Enforce current rules - not make additional ones. 2.) Require boat driver training. 3.) No drinking then driving boats/watercraft. 4.) Fix boat ramps!

We're sorry you ask us about the last trip to Lake Powell, because it was a disaster - our answers to your questions were very negative. The water was so low we could not launch or retrieve our 16ft fishing boat (Aug. 2004). We tried to find a place to park our houseboat out of the mud with no avail - one disaster after another. For 35 years we have enjoyed Lake Powell to the fullest with our family and friends. It was always our favorite vacation place. We have enjoyed it every month of the year. The first 20 years we shore camped with tents, etc., then graduated to a houseboat. We hope we can enjoy it again, but not until the water rises 50 to 75 ft. Boat to marina radio service is very bad - need more operators.

Allow boat owners to broker their own boat! Cost of slip rent is very high with very poor service! I will pay the price if I get service/security in exchange.

I would like to see better management of the slips and the rules surrounding buying and selling boats. I would like to be able to buy a boat or sell my boat without Aramark demanding a percent of the sale. Especially when they do absolutely nothing for the commission they demand. It is important that as many people as possible experience this unique place. We have brought probably 300 or 400 people to the lake in the last 10 years. Everyone left changed and actually aware of how valuable our parks and natural resources are. The more people visit the more environmentally friendly they become.

The confusing language and some questions duplicated in your survey did leave us a bit frustrated. The explanation for procedure to the questions was quite ambiguous. In answer to "Other things" we felt that the surveyors did not quite understand the complexity of the topography of Lake Powell. The narrow canyons along with the larger vessels going in and out, some at very slow speed, some smaller vessels at breakneck speed, we feel the Park Rangers should have the responsibility of education others regarding safety and consideration of each vessel on the water. Discourtesy of operators of wave runner type toys are the absolute rudest, uncaring, dangerous part of boating Lake Powell. It ought to be mandatory for each person to have taken some kind of educational course on boating safety and courtesy before given access to the lake. Park Service could have the authority to do for the safety of others. Heavy fines should be placed on the person, boats that leave and bury their refuse and create bathrooms especially if they have been told before launching. We need more Park Service help to try to control these items mentioned but are also are happy to

have the ones we have. We have boated Lake Powell since the beginning and have seen the beauty and detriment of the area. That is 45 and we are 77, still enjoying what we can.

Too much water being released downstream. Sometimes the water that is supposed to supply the Imperial Valley goes unused and goes to the ocean. Need to make sure that the Colorado River water is being utilized properly by states. The amount being allotted to the states is more water than the Colorado produces. The government has to lower the amount allotted to each state. This would keep the lake at a more stable level and allow concessioners to concentrate on existing facilities rather than building new. I was cleaning my boat because it was sold and going to be moved from the lake. These questions mentioning "my most recent visit" do not apply to what I was doing. I have been to the lake for over 360 days in my life and this was the worst one. I will continue to go to the lake but not with a cabin cruiser. I will shore camp.

I have been vacationing at Lake Powell for many years...boat camping on shore, renting a houseboat, and camping in the campgrounds. Each time I see something that I missed before or the level of the lake creates a different view. I bought a houseboat that is in the dry storage at Bullfrog. I plan to spend a lot more time on the Lake when I retire in 20 months. The spring and fall are my favorite times at Lake Powell. The improvements to the campgrounds, the lake toilets and pump outs have been great improvements.

In 20 years I haven't had an experiences that would stop me from visiting again. I think things work very well.

So many times waiting in line at the fuel dock or toilet/pump out dock another boater will cut us off because they are in a hurry or some reason, where are the enforcement staff when this happens? Yet they have time to fine boats away from everyone for some silly banner or noise or other issue. People are so used to letting someone else think for them. Use your heads and when it is a safety problem do something when it isn't then don't. Where are you when the jerk is cruising through the private slips causing a huge wake?

Lake Powell and especially Bullfrog is the most wonderful place on earth. I really have no desire to travel to any other place and I would go to no other place other than my slip at Bullfrog. My wife does have a somewhat different agenda.

We had our own houseboat at Hite until the marina was closed. It would really be nice to see that marina opened again someday.

Should allow boat owners to display for sale signs on boats, regulate the sign if you must. We have owned two houseboats at the lake for three years. If we would have been allowed to place a sign on our boat it would have sold three years ago. But repair services are in serious state of chaos - it takes forever to get things done and most of the time it is hit or miss.

We recently had a bad experience repairing our boat at the Bullfrog Marina. We would suggest that you open another marina close to the Hite/Good Hope Bay area of the lake. We really enjoyed the Hite Marina while it was open.

Restricting boat access after one drives for six hours to get there does not make sense. Better control on use of fireworks. Credit card gas pumps at Halls. Support Cal Black Airport - wonderful facility for us pilots.

Remove livestock grazing in area. Remove PWC from the lake. DO NOT allow pets to lake. Safely clean up mining tailings. Remove water from the lake and let the river run the canyon as nature had intended. Energy conservation and alternative energy production explored.

National Park regulations have created an impossible situation for those Lake Powell boat owners who wish to sell their boats moored on the water. Owners are not permitted to post "for sale" signs on their boats to notify potential buyers. Aramark brokerage services at Upper Lake facilities are virtually non-existent. Calls are not promptly returned by Page sales office, knowledge of boats poor, no advertising locally or nationally, only posted on website. No office or rep available on the docks, no notices, signs, bulletin boards, or any printed information on boats available for sale. Large houseboats and cruisers cannot be easily moved to another location, so usually must be sold where moored or docked. Park Service refuses to recognize that developed marinas need efficient services that are available at almost all private marinas, which charge same rates and fees of Lake Powell marinas, but are kept in "Dark Ages" as far as modern methods of boat brokerage. Thank you for reading and considering these opinions and thoughts.

The concessioner is terrible in respect to qualified people. Knowledgeable boat mechanics are 1 in 50. The service takes forever. Aramark never accepts responsibility. Trying to get in touch with them takes many calls. And then the person quits so you start over. High prices I can accept, the poor service is hard.

One of the finest recreation areas this country has. Should be kept (not drained) and accessible for as many people to enjoy as possible.

Need to have better access to boat repair or mechanics on the lake.

Two points: 1.) Most survey questions specify "most recent visit." My most recent visit was for inspection and maintenance of my houseboat so my answers, mostly, do not apply or are meaningless. 2.) I notice a definite absence of questions as to whether or not I am satisfied with current management contractor Aramark. I AM NOT! I see, in my opinion, a monopolist. Greedy, draconian, colusive, and more, approach to operating the facilities on Lake Powell. For more information contact the Lake Powell Yacht Club.

My family has been visiting Lake Powell since the mid-70s. We have seen the concessions managed by private sector, Dell Webb and Aramark. Since private sector, the quality of service has steadily declined to the point that we are currently in the process of selling our houseboat. I highly suggest that you consider a different concessions manager or return to the private sector!

Thanks for letting us spear fish.

The single biggest problem is Warm Creek passage it needs to be dug out and opened. Damage to every boat that goes up the lake could be eliminated. One time fees could pay for this. Everyone I talk to would be happy to pay to have this done. The low lake level makes the lake seem crowded because Warm Creek passage is closed, making all boats have to go up the narrow channel.

Would support restrictions on 2/3 stroke type motor usage as long as it includes all such motors and not just PWC.

Open up Castle Rock.

Any possibility of dredging out a canal at Castle Rock next winter? I'm in the process of selling my cabin cruiser and slip due to the increased cost of getting uplake via the old channel. It now runs \$150 in gas just to get to Dangling Rope/back due to the extra distance - fuel costs. Not worth it in my book, so we're going to motel it and use the ski boat for daytrips only. We've dropped the idea of owning a houseboat until the water levels come up for that reason.

The most beautiful place on earth. We should be deliberate in our use and administration of it. My hat is off to you for attempting to balance public access against abuse.

My family, friends, and fellow Lake Powell users (the ones I am acquainted with) all agree the one key factor that influences the quality of the lake experience is the number of people and watercraft. The concessionaires and business community of Page all OVER ADVERTISE and over promote the area which brings the type of people that

don't appreciate or respect the area. There is no lakeshore etiquette. Boaters looking for campsites no longer respect the privacy of others already using a beach campsite, i.e., potential campers (beach) smash right up on an existing campsite with no regard for maintaining adequate space separation.

I have been using GCNRA for over 20 years. Over that time I have noticed the increasing "stupidity" of the boaters and water users. I firmly believe that the NPS should REQUIRE ALL BOATERS to have proof of taking a US Coast Guard Boating safety course BEFORE they are allowed on the water. Your ability to buy a watercraft is NO indication you know how to USE it SAFELY.

Don't over-regulate. Keep adequate water level for boating. Thanks!

1.) Please raise the water level. 2.) Get law enforcement to lighten up. Relax - no more Gestapo!! 3.) Dig out the channel past Castle Rock - save fuel - less pollution = happy boaters. I have been at Wahweap for 10 years - a 6 hour drive - it needs to be worth it - time price of fuel and cost of goods.

The lower water and the price of gas will take care of any increase in number of people. Leave it alone!

Water management seems to need consideration, i.e. 1922 Colorado River Pact.

We need more water in lake! - Marina's and etc., seem to be too close or too hard to get into. More boat ramps! Management has been most excellent. Thank you for the last 20 years!

We love the lake - we want a 30' slip at Bullfrog please!

Operating small vessels too close to large boats continues to be a concern. While operating a mid-sized cruiser I've noticed wake jumping. Teenagers seem to be the most common offenders.

Too many concessioner's houseboats are allowed on the lake. This is the single most important factor that has degraded boating on Lake Powell over the last 30 years!

Let the lake fill!!

More toilet facilities open year round. Northern based marina services, fuel and food (below Hite for obvious reasons). Better low water level laundry facilities. Keep more water in the lake.

Allow airplane pilots to leave cars at the airport! They are not in anyone's way and the pilots and their families and

friends bring a lot of business to Glen Canyon. And if the Forest Service continues to hassle the pilots about their vehicles, a private plane owned by a top park executive should also be limited to 5 day parking rule - this plane is left year round! Makes no sense, the Park Service should use their time more wisely than for ticketing vehicles.

Need more lodging. Need more food service. Need more marinas. Need more boat ramps. We do not need more management control on the lake. Let's not make it like Interstate 70. Too many rules, too many cops, etc, etc!! Lower the price of gas! Get a real grocery store!

The concessioner employees try to help people, but they are always short handed.

Please fill up the lake. Our family has enjoyed this wonderful vacation for over 27 years. Thank you.

Services for boat repair and availability need to be dramatically improved.

1.) It has been a concern and time consuming to launch, clean out and return boat. The fuel docks and launch ramps are lengthy waits. Too far to get fuel on lake. 2.) The ability to find nice spots to park and enjoy lake is more difficult. Dirty, murky water too.

We feel that raising the water level at Lake Powell is very important for recreational purposes as well as water storage. The recent decision by Secretary of Interior Norton to not fill Lake Powell this spring while snow pack is available is foolish and irresponsible. It would also help if the staff were increased so there are enough boat mechanics and people to keep the pump out facilities operating properly at all times. We spend several months at Lake Powell every year and enjoy it immensely.

Work with Department of Interior to limit outflows in low water years, especially if Lake Mead is at a higher capacity. Provide an annual report showing what improvements were made with user fees. Take advantage of low water to extend the ramp at Bullfrog. Biggest problem is rental houseboats and runabouts - people who have never been on a boat get a rental and act/drive like morons - the problem is I do not trust the NPS to do the right thing - they will over act and force everyone to be "better educated", when they should limit the number of houseboats ONLY and require renters (no prior boat experience) to take a 15-30 minute safety course/rules of the road. My concern is you give the NPS an inch and they take a mile.

Both my wife and myself have worked at the lake, lived in Bullfrog and now enjoy recreating there at least three times per year with family and friends.

[illegible] facilities too soon.

See 21. [Aramark refuses to allow mechanics on the lake even when Aramark does not have the personnel to fix your boat for weeks. Why should my vacation be ruined by Aramark's greed if they can't supply the mechanic? Aramark has overstepped on the slip rental with a bizarre insurance requirement and unearned "brokerage" fee.] Our biggest complaints arise with the monopoly enjoyed by Aramark. With no competition there is no incentive to provide good service. And they don't.

They need better navigational markers on the main channel and entry signs for the canyons.

I love the lake and enjoy 10-15 visits/year. If we want isolation we know where to go. If we want to be around lots of people we know where to go.

Need to maintain water level at sufficient level to access land based facilities and keep access to current launching area to prevent boat damage.

It is obvious that the lake and the facilities offered have gone through many changes over the years. The employees at the marinas have always been great. Our experiences at Hite marina were great while they lasted. [Name withheld] has always been wonderful to work with and paid attention to the needs and requests of everyone using the lake. [Name withheld] does a very responsible job of taking care of the Halls Crossing fuel dock. I don't know what we would do without him. We love Lake Powell for many reasons. Thank you for keeping it a healthy place for our family to be together.

Sorry I cannot be more helpful. I was in the backcountry access via land. I haven't spent time on the lake in years. We walked down to the lake and looked at the H2O. So, I am not qualified to comment on lake-based issues. In general, I think NPS should educate not regulate; it is a more effective way to built partnerships with visitors.

Dangling Rope Marina, in April 2005 ropes too short on dock, no help to catch foot in wind, gas pumps didn't work, oil pumps didn't work, and computer down, and it wasn't an electrical failure. Plus credit card machine wouldn't work.

Dangling Rope was out of electricity for a couple of days last year and could not provide fuel or other services. Many boats were stranded. Park Service would not allow other businesses to take fuel to the stranded boaters while they remedied the situation. Neither did they alert people at the entrance stations when they came in. It is too large of an area for one concessioner to handle.

Lake Powell is beautiful all year round me and my family enjoy it very much.

Why does everything with Glen Canyon have to do with boats and the lake...what about all the hiking?

The concessioner is overwhelmed in June-Sept - open up more work opportunities to IBPs in June - Sept to help lighten load on concessioners just June-Oct - the consumer will be the one to benefit with more service providers.

Much more should be allowed to promote tourism - boat races, water ski competitions, bike riding restriction removed.

For those who want solitude, quiet, and to be alone - they should probably go somewhere besides a "public place", which by definition I would say is a "National Park."

We visit the lake several times each year. Typically the more crowded months (July/Aug) are when most of the problems occur. Jet skiers and skiers seem to create the most unsafe conditions. Those include speed in small canyons, wakes, intrusion into camp spaces, noise and general bad behavior. We would support limitation on jet ski areas, and possibly "no wake" canyons. Enforcement would be a problem however. Also would ask that Park Service be more demanding of Aramark. Facilities need maintenance, people are some times not too client friendly and Aramark seems to have free reign in setting fees and making rules that are not client friendly.

Maintain a higher lake level. We love being at Lake Powell and have wonderful time.

Park needs more auto parking lots closer to ramps.

Highest possible water level is most important to me. Noise and pollution standards on all watercraft should be monitored and controlled. Banning or limiting personal watercraft is unreasonable.

Strongly feel that the proposed NPS limit of 6 owners per boat should be enforced. Timeshare boats use a lot of resources without paying a commensurate share of the bills. Also, timeshares (and occasionally rentals) with excessively large groups pose serious safety and environmental issues. We have dealt with accidents and fouled beaches from a number of those.

Don't lose sight of what GCNRA is all about. Contracting is great as long as profit does not override why we enjoy GCNRA.

Every two years the marinas raise their rates for slips and buoys. We have had a buoy or slip for 20 years and we are

being priced out. Soon only the rich and multiple boat ownership boats can afford a slip or buoy. Services at Halls marina (and others) have been reduced during the off season (gas dock closed, marina store closed, difficult to get propane). Reduced services should reduce our monthly slip charges!

Publicity regarding the low water level has had a negative effect. The Lake Powell, Glen Canyon Dam area is beautiful at any water level. The scenery is always breathtaking and people should be encouraged to visit. The tone of this questionnaire seems to indicate limiting usage of this huge natural wonder because of the low water level. It would be a major error in judgment.

Please don't over-regulate! I realize there is a fine line you must adhere to, but too many regulations will create additional problems. Reminder to people about being courteous and how to achieve that would be helpful especially at docks, fuel, and launch ramps.

My biggest gripe over the years I have been coming to Lake Powell is the pump out station. Fifty percent of the time there are problems pumping out the holding tank on my houseboat.

This survey looks like it's set up to produce a report which will limit access to Lake Powell. Until the water is much lower, at best mid lake at Halls, Bullfrog, this should not happen anytime soon.

Jet skis are the most aggravating watercraft on the lake. Too many youngsters turned loose on them - coming too close to anchored houseboats and they are too noisy along with some of the boats that are way too noisy.

You need to keep the lake levels up so that more people can see the beauty of Lake Powell. This beauty can only be seen from the water (for old, young, and handicapped). Anyone can go on Lake Powell from as little as a 15 foot runabout to a large houseboat or cabin cruiser to taking a tour boat and enjoying themselves. It is a great place to take kids every year for safe fun and vacation. I brought up 4 children on the lake and now we are bringing up our 5 grandchildren, so I hope it will go on for centuries.

We have been on the lake for 27 years. We enjoy every visit we make. We have a houseboat on a bay. We have owned four houseboats on the lake in the past, and many water toys and I feel opening the lake so everyone can enjoy it is very important. I do feel we need to take care of it in order to have it down the road.

I would like to have Hite Marina open if possible - for gas, water, launching, lake shore camping, stove, ice, like before.

Don't limit our use. We will put up with crowds or we'll stop going if it got to be too bad. It will take care of itself.

The new lady that has been hired to run the dry storage lot at Halls Crossing has a bad attitude and she should be replaced.

Halls Crossing Marina needs more wake breaks. The house boats in the slips move so much when the lake gets busy with it being on the main channel now. Also needed are better entrances and a lot more signage. Slips are getting way too much marina traffic. Aramark is monopolizing. We've had a work order on our boat for two years now - they basically said one excuse after another. And told us that we really had no choice since we don't own our own trailer.

We have always enjoyed our visits to GCNRA. We particularly enjoy the Anasazi ruins such as defiance house.

Improve launch ramps and accessibility to marinas. Stop bad publicity about the lake (the last few years it has been continuously reported you can't launch at Bullfrog). It hasn't been the best but it can happen. Houseboats are still being pulled everyday at Bullfrog. The lake is still here, even if its low. We need the visitors to come and come often. The lake is just a little different. This is a great place and should be promoted more, even if there are problems with low lake levels. The great experience is still here and always will be. With a message that improvements are trying to be made visitors will come. Pay attention to the businesses trying to promote visitation. We want people to come and use the lake they've grown up going to. We don't want them to be afraid to come here.

Enforce and educate: guns, fireworks, water balloons launchers, picking up pet poop, adhere to toilet restrictions, enforce age of kids on PWCs, no glass containers, Recycle More! Big signs saying: No Guns, No Fireworks, Fire Pans in Fire pits, No Weapons.

I love Lake Powell. Lets fill it back to full pool and enjoy for many more years to come!

1.) Should make it easier to obtain a reserved houseboat. Our group was supposed to get our houseboat 4:00 Saturday and be on it Saturday night. It was not ready and they told us to come back at 6:00 so we went to eat. When we went back a little after 6:00, the office was closed and we thought we were out of luck. Luckily, we found a lady that worked at the office and she got everything straightened out, even though she was on her way home. This problem should not have happened in the first place.
2.) With the low water level, obstacles should be marked

better so they can be avoided. 3.) Rental houseboats need a better anchor system when anchored on shore at night. With the wind storms that come up, one anchor line on each side of the boat is NOT enough. A minimum of 2 lines per side of the boat is necessary. Everyone we talked to had this problem, including ourselves.

Is there an attempt to force out private houseboats by the new rules? Our houseboat has been on the lake since about 1981 and had 26 weeks, some with more than one family owning the week. Now they have come up with a rule saying private houseboats can have maximum of 18 owners. This has about bankrupted our boat and has resulted in the weeks going to zero resale value. We don't have a problem with making the owners reduce their number per week at sale time but getting to total of 18 owners is a real problem. Our boat has only 12 weeks occupied to get to 18 owners, meaning the maintenance fees per week are [illegible] costly, the boat will probably disband. This is a bunch of lake users who will no longer come to Lake Powell and produce revenues. Many other private boats are going through the same thing. We've been going to Lake Powell every year since 1984 (we've missed two trips) and would be more than happy to discuss any issue further, either by phone or e-mail. We aren't worried about confidentiality. You need to call New Mexico State University about salt cedars and their water consumption. Thanks.

We have been boating and camping at Lake Powell for the last 18 years, and even though there are more people now than when we first started, when the Lake is full of water there is plenty of room for everyone. (The farther you get from the marinas the better it is). There needs to be better control over the amount let out of the dam! We would like to see better education about the early (Indian) cultural activities in the area.

After coming there since 1995 I think your prices for servicing boats, etc., very high. I don't mind paying but work is not very good. I'm not sure wait list for slip is accurate. This is from others I'm told.

I have personally rented a slip at Bullfrog and maintained a boat in same since 1972. It is my impression we have some of the highest fees in the US and the condition of the docks, services offered, security, and amenities are terrible.

It seems that there should eventually be houseboats parked shoulder to shoulder along every good section of beach. There seems to be more loud parties and multiple PWCs. I would like to see at least a concessioner limitation on houseboats as these renters are the least experienced, biggest partiers, and have the least long term concern for the Lake.

We have been coming to Powell since the early '70s. With increased usage of wave runners has come annoyance with noise and churned up water just for the sake of making figure 8s in camping areas. The wakeless area was nice in Forgotten Canyon. Most people complied. We see less fecal deposits and toilet paper areas since the port-a-potty rules, but seldom is anyone at the check through stations at Halls to enforce/educate. It was a campsite visit from Rangers that really gave us the most impressive information on sheer numbers of visitors and the need for rules and compliance. There are now sandy campsites that aren't good because of black, yucky stuff that comes up out of the sand. Is that from gasoline pollution? Powell is still our favorite place.

For the past five years I have been a resident of Page. Prior to moving here, we rented a houseboat every year since 1980, departing from Halls Crossing. So enjoyable were those experiences that we relocated to Page from Summit County, Colorado after hanging up our skis with 40 years of skiing behind us. The most recent houseboat trip referred to in this questionnaire was last week -- a Christmas gift to my kids and grandkids, who all went wakeboarding.

Should not limit access to any areas of the lake. Add more floating restrooms. Ice facilities along the lake. Better marking of water hazards. We love visiting the lake with our family and friends.

Aramark services are marginal. Park Service is basically non-existent but un-needed. Lack of hoses and adapters at pump out stations. Failure to run up [illegible] flags at pump outs when situation exists. Failure to relocate channel markers when storm displaced. Should be a "current update" flyer box at each launch ramp. Less "management" is better!

Better notification when pump-outs, fuel docks, ferry operations, etc., are non-operational.

Access and lack of carts at Hall's Crossing marina makes loading the houseboat difficult. The boat repair service at Lake Powell needs to be improved or let private contractors work on the boats on the water.

Get the water level up and try to maintain if possible. Powell is a great place!

I would like to see a parking lot for the buoy field renter and a houseboat loading area for buoy renters. If I am going to be paying so much for buoy rent, I think I should get something for the money.

How about steel grating in water to back boat trailers into on dirt ramps - would eliminate getting stuck and churning up mud with vehicles??

Your concessioner (Aramark) is one of the (if not the highest) highest priced in the Nation. Is the Park Service really looking at the fees of the concessioner to the service they are providing? The slips at Bullfrog were severely damaged in Fall of 2004 and as of April 23, 2005 they still were not repaired. Thank you again for the doggie bags (pick up) and the new carts at Bullfrog. We sure needed both. A service for the concessioner at Bullfrog to offer with a fee would be a motorized cart to pull supplies up the ramp to the parking lot. There are many seniors at Bullfrog slips, not the majority but a lot. Thanks for the survey!!

Developing modest/primitive access to upper lake (where there is now none since Hite closed) would provide great benefit to fisherman segment of lake users and remove them from potential conflicts with wave-runners and other unsafe, alcohol-fueled idiots that seem to congregate near major marinas such as Bullfrog and Wahweap.

Use science, not emotional politics to make decisions. I.e., storing water at Powell vs. Mead - less evaporation at Powell. Consider electrical generation: should be maximized for the benefits of American families and revenue generation for the benefit of American taxpayers. + Web Cameras.

I think the water level and fuel cost scares are effectively reducing lake usage as the lake has become smaller. I don't find abusive boaters to be a large problem at Lake Powell. I think to create more regulation and control would be worse than the current problem level. Most State Parks are far over regulated and patrolled. There is very little temporary docking space at Bullfrog to load and unload gear. The shorelines available for this are flat and irregular at most water levels, creating water hazards, not very safe for loading/unloading. I would like to see a dock for this purpose, not related to a boat ramp.

Would be nice to understand your employees when they speak. Most have hard time understanding and speaking English.

Fisherman only. Month of September 20th thru October 20th. April or May - 2 week trip. Live near Delta, CO - 250 miles. Stay at Halls Crossing or Bullfrog. Do something about shuttle to parking of pickup and trailer...or add parking spaces closer - otherwise I like most everything just like it is. Thanks.

Allow more concessioners on the lake and do not micro-manage them. Enforce the laws and rules you have then remove offenders and have significant fines for offences.

Post rules and consequences then enforce them. Put offenders in jail and let them sit until they can be assained, post bail and return for trial. The State of Nebraska did this at Lake Mac it took a year of hell to enforce, but it returned to a peaceful lake with a lot of people enjoying the lake.

As the lake level drops and the surface area and shoreline decreases accordingly, the proximity of watercraft to one another in the side canyons of the lake is becoming more of a problem. Many boaters do not understand the wakeless rules in regard to their proximity with other boats. This is a serious safety issue that needs to be addressed in the way of education and enforcement. I feel that education and enforcement of existing boating laws will solve many of the problems we face on the lake today. It may be beneficial to temporarily restrict some of the narrower waterways to wakeless zones until lake levels approach normal. I spend approximately 25 days on the lake annually and usually try to avoid high traffic weekends and holidays. From my perspective it seems that the number of people using the lake has been self-regulating to some extent. It is my hope that a solution or compromise to many of the issues facing the NPS can be reached without limiting use of the lake. Thank you for the opportunity to express my views.

Please get and keep the water level at or near full pool.

I realize that this is impossible but to have others considerate of others would be wonderful. The NP Service employees are excellent and I always enjoyed my encounters with them. Do need new areas to camp around the Hite area of the lake. I must go on. I believe in individual freedom but that freedom has a cost. The cost to the individual is a constant awareness of others. Having respect for what God has done (the area) and respect for each other. Therefore if one is fishing, then you don't zoom by them, a little consideration. Noise as far as loud music at the campgrounds is another problem. How about an agreement that is signed when you pay for camping that states the rules and you sign you will abide by the rules?

More NPS law enforcement at launch ramps, boat parking trailer areas, and on water.

Increase number of pump out stations and have some signage or better source of info when a pump out station is out of order. This has been a problem on nearly every other trip we take during the summer. We are usually down 6-8 trips a year. Don't let all the water go! We enjoy the diversity of employees at the lake, but please have people who speak English well working the cash registers etc., at the marinas. This would cut down on a lot of frustration. We love Lake Powell! Happy Boating!

Would like to see a size/length limit placed on single hull cabin cruiser type boats (28-0' max). These boats produce an extremely large wake that can swamp and/or damage smaller boats and boats moored at shore. These type boats belong on the ocean and not on a narrow canyon type reservoir. Also needs to be more enforcement in the developed and primitive campground areas at night for drunk, loud, and profane behavior.

Channel from Wahweap Bay --> Warm Creek should be deepened now while dry to save money on this improvement (deepening) and improve access and safety to access uplake areas (by eliminating the trip around Antelope Island).

Educate visitors to proper use of boats including consideration for others.

Suggestions: control exhaust noise and size of boats, make it easier to get up and down the lake, i.e., excavate the area at Castle Rock cut-out, like was done in the past. Note: Over the course of the past twenty years our family (numbering 22+) has had the opportunity to meet numerous individuals (from many backgrounds and many states) who have had the opportunity to visit Lake Powell. To a person, these individuals have expressed a profound enjoyment of their "Lake Powell Experiences"...most simply stated...they like Lake Powell as it is. Our family (and we believe many like us) are not interested in change for Lake Powell. It works the way it currently exists.

More slips are needed. There is a long waiting list for houseboat slips even though a new marina has been built and is almost full.

In the past 25 years the lake has become increasingly over managed and micromanaged. A bureaucracy has developed where people in charge create more and useless regulations to justify their jobs and future promotions. Their careers and agendas are put in front of "common sense." God save us from the next 25 years.

Maintenance of slips poor.

I have been houseboating since 1989 and loved every moment of time spent there. The only problem I have had was with Rangers. That has made me wish I could sell boat and not return.

Pass out inland waterway rules/regulations pamphlets at entry stations. Require waterway rules/regulations educational orientation for all rental boat operators.

The marina management (supported by NPS) is arrogant and not helpful. Nothing is provided to assist the slip users, they are simply viewed as a constant source of cash.

Wahweap is the poorest facility I've visited and with the least supportive management. The cost certainly is not commensurate with the quality (or it would be free).

I feel that the Park Service "rubber stamps" any decision by Aramark. I do not feel that the visitors or boat owners have any say in the operation of Lake Powell, but are expected to accept any decision made by Aramark or the Park Service. I feel that there should be a meeting of the minds between Aramark, the Park Service, and boat owners prior to any major changes.

There should be more detailed weather reports made available to boaters. The weather channel is not specific enough to Lake Powell. Wind and summer storms can be very dangerous to boaters. They need specific bulletins announced on Channel 16 to give boaters fair warning of approaching storms or strong winds. I think many accidents and injuries would be avoided had boaters known weather conditions.

Management has made great strides in the last year. Good job!

My responses are heavily critical in the area of regulation and enforcement. Wakeless zones in main channel are frequently ignored, and no enforcement is present. Pump out docks are often crowded with boat management personnel who ignore time limits on docking. Again, there is no enforcement present, ever! Persons renting boats should be required to show proof that they have passed a boating safety course - USCG, US Power Squadron, etc. PWC should be restricted to specific use areas. Tour Boats should be wakeless wherever channel is restricted - i.e. less than a mile wide!!

This "park" designated as a "national recreation area" should be designated as a National Park. The lake and backcountry resources of GLCA are of full National Park significance and [illegible] of all units of the National Park system I have had the good fortune to visit. GLCA is our family's favorite!

1.) Water level - water level should be increased by more closely monitoring drought conditions and reducing outflow from 8.23 maf. 2.) Uplake access from Wahweap marina dangerous conditions in Narrows and passing Antelope marina (dredge Castle Rock cut). 3.) Designated parking and access for marina slip buoy owners. 4.) Closing of services (gas, stores, storage) prohibits off-season use. 5.) Not enough carts at marina.

Work on getting cut through Warm Creek open to take some of the traffic out of main channel.

The lake level should be maintained at a level that would always allow for the use of the cut to Warm Creek to Wahweap so that fuel consumption can be less and time up the lake takes less time. The new marina in the narrows is a pain and takes too much time to pass. I feel the cut should be deepened to allow traffic to flow safer and more economical.

Use of lake at low water levels have reduced numbers of people but also less campsites as it turns out. Over the years of use increase in numbers has increased problems with access to launch ramps, parking, dockside services and all services in general. In the future all these could become problems. #1 item of importance now - open access to uplake at Castle Rock pass.

The NPS management has gone to pot since [name withheld] took over at GLCA. The quality of service - management - personnel is poor at best. Please send a copy of 2005 concessioner contract.

There are too many drunks at Lake Powell. They are noisy and dangerous.

Please read the LPYC [Lake Powell Yacht Club] newsletter to consider the ideas of those who use the lake. The political use of the lake management stinks.

Do not allow further release of water that is unnecessary. We had seen the abundance of water being held at Lake Mead, yet we continue to pass water down stream. Protect Lake Powell water resources.

I and my family have been enjoying Lake Powell at all its levels over the years. We are looking forward to using the lake with the 4th generation (the great-grandkids).

Our family loves Lake Powell and we enjoy the lake immensely but - the whole situation with Aramark is intolerable. The fact that you can't sell your boat, hire a mechanic or pilot, etc., without their permission is nothing short of extortion. Even if they have nothing to do with the transaction, they want to be paid. I thought that the Park Service regulates concessioners on the lake and not the other way around. It appears that the Park Service has become Aramark's pawn at Glen Canyon. It's too bad, since the Park Service can do some good things at GCNRA but Aramark is getting in the way.

Improve parking at marina and the access to slips.

Very dissatisfied with the Wahweap marina and concessioner. Unfair practices continue!!

This survey seems slanted towards somebody (NPS?) having more control of the lake and the recreation area.

We have been visiting the lake for more than 35 years and have never really had any problems with anything. If copies of the results are available please accept this as my written request for a copy. Thanks. (I assume that you will know who I am by my survey number).

1.) The Antelope Point Marina location is poor. The resulting no wake zone is a travesty. Enforcement is overly aggressive. Would you build a High School accessing a freeway and then enforce school zone speed limits on the freeway? Of course not. The marina developers should be required to create alternate access for all of us trying to access our lake. 2.) Anarchy on Wahweap ramp. Commercial houseboat launch and retrieve cut in line at will and foul it up for the rest of us. In past Park Service put nice young lady to direct traffic on high use days. Worked great.

Better buoy markings. Closer together so easier for visitors to follow and not get lost out of main channel. More parking. Supervised launching during busy times.

Some concern over new development on lake near dam that requires wakeless. Higher lake levels will reduce concern.

Too many houseboats. Noise control on powerboats. Powerboat renters don't know safety rules.

I feel Aramark does not provide very good service to the boat owners at Lake Powell. I have not had a very good experience with getting problems with their accounting for buoy rentals resolved. They do not return phone calls and they are not consistent or helpful over the phone.

Monitor wakeless are more. Renters should take 1/2 hour boat safety course. Must have someone in the boat that speaks English.

Overall I believe the National Park Service does a respectable job when considering the many responsibilities they have. I do believe the Park Service could use more employees but they need to be used to educate visitors and continue to display a positive, friendly attitude. I have been a lake user for over 40 years and have seen many changes in both water levels and management styles. This is one of the most beautiful areas on earth and the facilities need to be top notch to continue to attract people who will appreciate and respect it. The concessionaire and the way they convey the facility, its upkeep, and amenities are probably the biggest contributor to its success or failure. The biggest area for improvement would be keeping better abreast of the Concessionaire's activities. The Wahweap restaurant was finally starting to improve after several years of being stocked with poor quality food and then it was closed along with the Hotel and store. The Wahweap

slip area, waterfront store and some docks are a disgrace. The dock workers are the only redeeming quality, they are courteous and friendly. This does not continue to the management level. The Bullfrog restaurant is much better in both food and staff but could still improve. The area is clean and well kept. It is the popular perception that the current concessionaire simply does as it pleases without regard for the National Park Service or visitors.

Please don't over-regulate this wonderful family area.

I would like to see [name withheld] removed as superintendent of the Recreation Area, and ARA management group forced to improve their base of operations.

Open the cut at Castle Rock to allow for faster up lake access and less fuel usage, or open a line or two at the Antelope Point no wake zone.

Better marking for canyons, etc. Wahweap marina must improve isle markings at end of every entrance. It is almost impossible to see the A, B, C, etc., markings when entering from the water!

Pray for rain so that pass by Castle Rock can open as soon as possible or dig a trench. After over 25 years of spending our summers on the lake it is amazing how much we miss that pass being open.

Keep the lake clean and full.

Limit amount of houseboats. Outlaw pets on shore. Pet droppings on shore is a big problem.

With lake levels as low as they are supply shuttle service at launch ramps to parking lot so people don't have to walk so far to either park or retrieve their trailers.

The last thing needed at Lake Powell is more rules and regulations. The current rules and regulations are quite adequate, albeit not enforced. Promulgating rules and regulations that are not enforced or are unenforceable promotes behavior that is potentially dangerous and destructive for individuals, resources, and the environment.

Please keep more water in the lake.

We need better customer service from the concessionaire. Its monopoly has jaded its attitude toward the visitor and the customer. Now that Antelope Point has opened Aramark is being forced to compete and treat customers respectfully. However, they have a long way to go! Remember, the customer is "King."

Please raise the water level to a reasonable height i.e., 3630. Thanks.

I find generators running all night very annoying. We like to go to the lake for peace and quiet, "large" houseboats come and park so close and then run their generator all night.

Fine those who don't have toilets with them on Boats! Ban all human waste and garbage.

Almost every time we are on the lake we have to stop and help someone who has rented a boat for the day and are lost. Many of them have no idea what they are doing or just how vast the lake is - they don't stay in the right areas of the channel and hit rocks. Sending people off without proper instruction is an accident waiting to happen.

Love the lake, however, I have had some problems with concessionaires, its like they have a license to steal, especially for repairs and maintenance matters. Labor charges are high, especially for a "right to work" state like AZ. If their help was better paid I would not quibble about such matters.

Bring back a professional superintendent. Get rid of [name withheld] and Aramark now.

Raise the water level!!!

Question 26 should not be on this questionnaire.