

FY 2007 Superintendent's Annual Report

Glen Canyon National Recreation Area and Rainbow Bridge National Monument

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I. MANAGEMENT

Kitty Roberts continued as the superintendent, Nancie Ames served as deputy superintendent and Kevin Schneider completed his second year as management assistant. Susie Perkins continued as management's executive assistant.

Long-term drought conditions generally persisted in the Colorado River Basin in the winter of 2006-2007. Once again it appeared as though spring runoff would be sufficient to allow the Castle Rock Cut to open for the first time since 2003. However, spring proved to be dry, and Lake Powell filled to 3611.5 feet, 8-10 feet short of enough to open Castle Rock Cut. Nonetheless, all launch ramps remained open throughout the year, with the exception of Hite. Lake Powell has hovered around 3600 feet now since spring 2005, and park operations have become accustomed to operating at this water level.

The superintendent and deputy superintendent met regularly with both the Arizona and Utah delegations and their staffs and county representatives to update them on low water, business management concerns and other park issues. The park again hosted its annual NPS/4-county meeting in September 2007. The meeting was hosted at Wahweap by ARAMARK with a dinner held at Antelope Point Marina. Participants included Garfield, Kane, San Juan, and Coconino county commissioners, partners from our concessioners ARAMARK, Antelope Point Marina and Colorado River Discovery in addition to staff from local Congressional offices. These meetings continue to be a productive means for communicating park issues to stakeholders in government.

The city of Page continued exploring the prospect of annexing park lands, including the Wahweap and Antelope Point areas. However, after the spring 2007 election there was a change with a new mayor elected and annexation was no longer a priority for the city. It is anticipated the petition will fail due to lack of signatures.

Off-highway vehicles (OHVs) continued to be an area of focus. As a result of the lawsuit filed by Bluewater Network in November 2005, and the need to prepare a planning document to address the lawsuit Glen Canyon NRA hired Brian Sweatland to oversee the development of an Off-highway Vehicle Plan/ Environmental Impact Statement (EIS). The EIS will address the use of OHVs at Lone Rock, at the accessible shoreline areas. In addition, the EIS is addressing the use of ATVs on park roads, as Glen Canyon has never been through a planning process to determine if the use of ATVs on park roads is appropriate. Public scoping to identify the issues and alternatives in the EIS took place in July and August of 2007.

In November 2006, Nancie Ames attended the National Wilderness Stewardship training, hosted by the Arthur Carhart National Wilderness Training Center at Zion National Park.

The superintendent continued to actively participate in the Colorado River Steering Committee throughout FY2007.

A management team retreat was held in Escalante in March. The management team meeting was predominantly occupied by an ongoing discussion about core operations, safety issues and resource concerns.

All employees meetings were held in March and July of 2007, with the Centennial Challenge, zebra/quagga mussels, safety, grazing, OHV EIS and a core operations update as their main focus.

Throughout the summer of 2007, Kevin Schneider and members of our Interpretive staff presented weekly Glen Canyon NRA orientation programs to new ARAMARK employees. The purpose of these programs was to introduce these employees (many of whom hail from other nations) to the mission of the NPS and build support for the NPS among ARAMARK's staff.

Kevin Schneider attended the Arizona Governor's Conference on Tourism, in July. The park hosted an exhibit booth in partnership with ARAMARK and Antelope Point Holdings.

The management staff met with City of Page staff for a two day retreat in July to establish a better working relationship. Dr. Carl Moore facilitated the meeting which led to the park and city agreeing to meet on a bi-monthly basis to discuss issues which related to both entities. The first meeting was hosted by GLCA on August 14 with lunch and a tour of our curatorial facility. The meetings will rotate between the two locations with a specific topic of discussion to be shared at each meeting. During the retreat it was agreed upon that the Glen Canyon NRA and the City would also work together on specific projects which would have a positive impact on the local area. Development of a rim trail from Horseshoe Bend to the city's Rim Trail was a top priority along with implementing a recycling program in the area. Kevin Schneider and Len Cook are the leads for the NPS and City of Page. Both projects are currently underway.

In FY2007 the regional office reorganized a number of park units in Northern Arizona and established the Southern Four Corners Group. With this reorganization Glen Canyon no longer oversees Navajo National Monument.

CORE OPERATIONS ANALYSIS

The core operations analysis process continued in FY2007. The budget cost projection, a tool to analyze the park's spending over time, indicates that Glen Canyon and Rainbow Bridge will face a \$971,000 deficit in FY2010 with the current cost saving measures. A decision was made in 2005 to separate the true costs of managing Rainbow Bridge from Glen Canyon's budget, which allows reviewers to better understand this unique relationship. However, after two years of separate data bases it appears that this is not an efficient way in which to accurately reflect the relationship between the two park units and we anticipate combining them in FY2008.

Through the core operations analysis, the park's management team reviewed each operation's structure, looking at supervisory ratios, grades of positions, duty stations, and tenure of position (i.e., permanent full-time, subject-to-furlough, term, seasonal). The management team looked for opportunities to combine functions and whether or not core priorities were being met by the

organizational structure. The park also reviewed each vacancy and carefully evaluated the type of appointment that would best suit current needs.

Position management actions which occurred in FY2007 include:

- Administration: Two human resource positions were proposed for VISP/VERA in conjunction with the establishment of the SHRO's. Both were targeted for abolishment in the core plan.
- Facilities: Dangling Rope Maintenance Work leader- down grade and convert from a WL-9 to a STF WL-8; Hite Maintenance Worker downgrade and convert from PFT WG-9 to STF WG-8; Wahweap Maintenance Worker downgrade and convert from PFT WG-7 to STF WG-5; Wahweap Maintenance Worker downgrade and convert from PFT WG-8 to STF WG-5; and abolish Wahweap Maintenance Mechanic PFT WG-9.
- Management: Established a PFT GS-12 Safety and Occupational Health Specialist to address the need for a safety profession. This position was not addressed as part of the original core plan however it was supported by the regional office with the understanding that the park would receive an OFS increase to cover the increased costs.

As part of the cost savings strategies in the core operations process, a decision was made to convert Dangling Rope Marina to a seasonal operation, where it will be opened from March through November. This was implemented beginning with the winter of 2006-2007, and resulted in a savings of approximately \$40,000 to the park for the short term. These savings have since been absorbed in increased fuel costs in getting to Dangling Rope and the running of the generators for producing power at this remote location.

SAFETY

Safety was again a primary goal of all park staff for visitors and employees however we were without our safety manager for much of the year. In May 2006, Dave Johnson was hired to be a term safety manager for Glen Canyon, Zion, Bryce Canyon, Pipe Spring, Navajo, and Cedar Breaks. However, Dave accepted a full-time permanent position with the U.S. Army Corps of Engineers in Sacramento in October 2006. Upon Dave's transfer we reevaluated the idea of a shared position with our sister parks and determined Glen Canyon needed a full time safety manager due to the size of the NRA and the complexity of the park. With support from the regional office we advertised and filled the position in September 2007. Dave Goodin was hired as a permanent full time GS-12 Safety and Occupational Health Manager, coming to the park from the Department of Defense at Hill AFB, Utah.

A major safety effort during 2006 focused on a new recreational activity, called "Kite Tubing." Glen Canyon NRA took swift action to highlight the dangers of kite tubing and prohibited their use in early June 2006. As a result of the park's efforts, the Consumer Product Safety Commission announced in July 2006 that the manufacturer of the kite tubes was issuing a voluntary recall on them because of safety concerns. Glen Canyon NRA was recognized twice during 2007 for efforts in improving public safety. The NRA received the Andrew Clark Hecht

Memorial Public Safety Achievement Award for “Outstanding Public Safety Achievement in Preventing Water Sports Injuries Nationwide” and the Intermountain Regional Director’s Award in “Recognition for Outstanding Public Safety & Health Leadership in public safety awareness and subsequent prohibition of the use of kite tubes in Glen Canyon National Recreation Area.”

The park instituted an employee safety committee to provide a forum to assist Glen Canyon management in maintaining a safe and healthy work environment. Employees from all operations participated on the committee and actively involved park staff in looking at safety as something they wanted to do not just something they had to do.

Although the employee safety committee was a proactive influence the park continued to have work related injuries or illness which prevented staff from fully performing their jobs. We had 25 incidents during FY2007, of which 11 were recordable incidents and 5 were DART injuries. The injuries or illness reported this year includes: slips (5); exertion (2); stress (2); punctures (2); strain, lifting (3); falls (2); scratch/abrasion (1); crush (3); cut (1); struck (3); exposure (1); and bites (1).

EQUAL OPPORTUNITY

The Glen Canyon/Navajo EEO committee continued in 2007 with the committee chair, vice-chair, Accessibility Program Coordinator and the recorder positions vacant. The committee members were: Jacki Blais, Federal Women’s Special Emphasis Program (SEP) Coordinator; Stan White, Uplake EEO member; and Eileen Martinez, EEO Counselor. Kathie Gordon, human resource officer, and Nancie Ames, deputy superintendent, serve as ex-officio members on the committee. The committee focused on providing EEO support to the parks and was not able to obtain additional members. Although the committee is small they continue accomplish a fair amount in support of the parks EEO program.

Annual training in Prevention of Sexual Harassment and Equal Employment Opportunity law was provided for Glen Canyon NRA staff on June 6, 13 and August 6. This year we were able to hold three classes (two downlake and one uplake), which provided several opportunities for staff to participate. Separate trainings were offered for the fees and interpretation seasonal staffs. In addition, a TEL EEO course was made available to staff and a number of employees participated in that two-hour session. The entire staff was also kept up to date on EEO case law and special emphasis programs via regular email correspondence from the EEO counselor, provided by the Regional EEO office.

The committee has worked diligently to improve recruitment efforts for both park units. Park staff participated on March 3, 2007, at the Coconino Community College job fair in Page. The turn out was low but Glen Canyon employees provided job information to interested local applicants.

Jacki Blais, Federal Women’s SEP coordinator again provided information to park staff during Women’s History Month (March 2007) and encouraged staff to learn more about some women who have made a difference in the growth and development of the United States.

II. ADMINISTRATION

ACQUISITION AND PROPERTY MANAGEMENT

Contracting activity for Glen Canyon NRA during FY07 is shown in the table below:

Description	Award
Demolition of the LP Motel	\$223,649.60
Construct Orientation Facility at LF	\$467,731.00
Slurry Seal Select Roads Wahweap	\$393,111.00
Slurry Seal Select Roads Bullfrog	\$284,931.00
Upgrade Wahweap Well #3	\$369,397.00
Reroof Dangling Rope Buildings and 4 Page Housing Units	\$99,975.00
Boston Whaler for UL	\$89,703.00
Simplified Actions/Mary	\$149,407.00
Total	\$2,077,904.60

Individual procurement accomplishments included:

- Warrant maintenance training
- One member obtained a level 3 certification in contracting, this is the highest available contracting certification, and was the first level 3 issued outside of the Regional office
- Completed necessary year end reports for region.
- Coordinated a COR class for Glen Canyon NRA and surrounding parks

Individual property accomplishments included:

- Disposed of excess vehicles
- Completed Annual Inventory
- Completed FAST Vehicle Report

Glen Canyon NRA provided contracting support to BICA, GRCA, NNM, PEFO, CANY, and RABR. The GLCA Contracting Office provided contracting officer support to GRCA and CANY for contracts over the \$100K warrant limits of the personnel assigned to the GRCA and CANY Contracting Offices.

PARK AVIATION OPERATIONS

Glen Canyon operated its 5 passenger, single engine, Cessna 206, N2PS, for the full year accumulating 557 flight hours. The aircraft which has excellent ground visibility has in addition to the normal equipment several specialty systems including the following:

- PA/Siren which facilitates ground operations;
- Government radio which allows air to ground communication with virtually all Federal, State and local law enforcement agencies and also serves as an airborne repeater;
- Homer used for tracking downed aircraft plus locating watercraft transmitting on marine band emergency frequencies;

- IFF which allows real time satellite tracking of the aircraft when out of reach of other navigation/communications systems;
- Traffic/terrain advisory which alerts the pilot to approaching hazards while otherwise occupied in high intensity situations;
- Special tracking antennas used in tracking wildlife such as condors, mountain lions, etc.;
- Heavy duty landing gear allowing operation off of rough/unimproved airstrips and roads;
- Large cargo doors make the aircraft into an airborne pickup which can transport heavy and bulky loads including medical transport when necessary.

The aircraft is utilized by numerous other park units and agencies as available. These include Grand Canyon NP, Canyonlands NP, Capitol Reef NP, Petrified Forest NP, Zion NP, regional and national offices, USFWS, BLM, USFS, FBI and several Sheriff’s Departments. Some of the uses include search and rescue, tracking wildlife, fire work, prisoner transport, surveillance, transport of medical/clinic supplies, fee monies, persons and property.

The aircraft continues to be especially helpful in increasing operational efficiencies by allowing better use of limited park staff. The much reduced travel times coupled with the increased fuel efficiency of air versus water and land travel, all while allowing an aerial view of the park, continue to make the aircraft a valuable management tool.

The aircraft is kept in a government owned hangar at the Page municipal airport. This insures better security and allows the pilot, who is also a certified mechanic, to do the necessary required maintenance checks in our own shop. This arrangement serves to reduce down time, increase reliability and also utilize the facilities to accomplish the maintenance on the Big Bend NP and other park aircraft as time allows.

BUDGET, FISCAL, AND REMIT

In 2007, the Remit Office was moved from the division of Business Management to the Budget Branch of Administration. Sandy Baughman, a STF Remit employee resigned in the spring, and the position was filled with a seasonal, Marsha Dudley, for the summer.

The operational costs of collecting fees parkwide was 25.1%, the lowest in many years. GLCA’s deferred maintenance goal for Federal Lands Recreation Enhancement Act (FLREA) projects was \$1,015,280. We achieved 109% of that goal.

Following is an accounting of the various fund sources for Glen Canyon National Recreation Area and Rainbow Bridge National Monument.

GLEN CANYON NATIONAL RECREATION AREA

Park Base (Fund 01)

10,150,000	Operation of the National Park Service, Final 2006 Authorization
217,000	Pay Cost Increase; ICMS Decrease
10,367,000	2007 ENACTED BUDGET
(151,000)	EAP, Uniforms, 1% IMR Reprogramming.

10,216,000	Initial Allocation
5,300	Community Liaison
20,800	Structural Fire Training funding
15,000	IMR Assistance with Safety Officer move
27,883	Funding for lawyers fees, Great Old Broads lawsuit
10,284,983	FINAL GLCA ALLOCATION

Cyclic Maintenance (Fund 01)

73,800	Re-Roof 11 Dangling Rope Facilities
2,340	Cyclic Sign Replacement
97,823	Seal & Re-Stripe Wahweap Paved Areas
173,963	Total

Hazardous Waste (Fund 01)

39,201	Wahweap Wells Abandonment
69,500	Chains Cleanup
173,700	Hall's Crossing Corrective Action
282,401	Total

Vanishing Treasures (Fund 01)

58,400	Total (Cultural Cyclic Maintenance of 7 Sites)
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NRPP – Disturbed Land Restoration (Fund 01)

15,500	Total (Restore Springs at Navajo Point)
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Water Resources (Fund 01)

55,000	Total (Emergency Measures, Zebra/Quagga Mussels)
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CESU Funding (Fund 01)

3,000	Zebra Mussel Emergency
4,000	Taxonomic Status of the Navajo Sedge
15,000	Guide to Cyprinid Larvae
22,000	Total

Public Health (Fund 01)

10,000	Total (Water Quality/Health Safety Issues)
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Parks As Classrooms (Fund 01)

2,400	Total (Teacher to Ranger to Teacher)
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VIP Program (Fund 01)

3,900	Total for VIP Program
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ONPS Reimbursable Expenses (Fund 01)

3,690	Telecomm Rights of Way
17,168	Special Use Permits
650	Rights of Way

72,868	CUA Permits
58,777	Construction Set Aside
153,153	Total

Major Search and Rescue Incidents (Fund 01)

43,319	Total (20 SARs during the year)
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Equipment Replacement and Project Planning (Fund 05)

68,607	OHV/Primitive Roads Plan/EIS
38,345	Narrowband Radios
123,216	Replace Boston Whaler #253
14,600	Replace Boat #284 Sides
117,074	Replace Boat 320 (Nudgit #2)
163,763	Emergency Flood Damage Repairs
525,605	Total

Agreements & Miscellaneous Reimbursables (Fund 06)

3,752	Miscellaneous IPAC (Montezuma Well dive)
5,640	BOR Monitoring Program Agreement
9,334	BLM Dispatcher Agreement
34,035	Ambulance Account (Banner Agreement)
1,710	Maricopa County ROV Recovery
54,471	Total

Utility Reimbursable Accounts (Fund 06)

12,448	Water Income, non-Concessions
0	Electric Income, non-Concessions
707,697	Water Income, Concessions
506,185	Electric Income, Concessions
1,226,330	Total

Repair/Rehab, FY07-08 (Fund 07)

48,529	Total (Support FMSS Functions)
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National Park Pass 70% Projects (Fund 22)

39,415	Antelope Point Project Management (DSC)
6,992	Antelope Point Project Management (GLCA)
46,407	Total

FLREA 80% Projects (Fund 25): Deferred Maintenance Projects

15,747	Weaver Ranch Restoration
467,780	Replace Lees Ferry Whitewater Facility
223,901	Demolish Lake Powell Motel
106,187	Rehab and Refurbish Signs
439	Replace Exhibits at Bullfrog
2,842	Replace Lakeshore Drive Signs

34,572	Install Striping/Parking Lots
130,000	Paria river Bridge Stabilization
1,912	Replace Lees Ferry RV Dump Station
27,975	Replace Wahweap Fish Cleaning Station
47,124	Replace Decking at Dangling Rope
48,845	Repair/Rehab 11 Lees Ferry Historic Buildings
1,107,324	Total

FLREA 80% Projects (Fund 25): Visitor Service Projects

3,821	Develop Comprehensive Interpretive Plan
9,524	Ensure Visitors Receive Brochures
231	Livestock Fence for Bullfrog Area
14,188	Control Aquatic Nuisances
27,702	Control Exotic Ravenna Grass
42,651	Visitor Survey Project
727,343	FY07 Cost of Collection - Operations
24,687	FY07 Cost of Collection – Capital
822,444	Total

Donations and Grants (Fund 26)

618	Interp Donations
2,981	General Donations
4,740	Visitor Protection Donations
1,066	Search and Rescue Donations
1,845	Science Education Donations
9,539	NPF Grant – GRIT
20,789	Total

Quarters (Fund 34)

254,771	Permanent Housing Income
111,407	Seasonal Housing Income
366,178	Total

Federal Highways (Fund 44)

295,288	Seal and Re-Stripe Wahweap Paved Areas
284,931	Seal and Strip Bullfrog Paved Areas
6,850	Unpaved Road Inventory
587,069	Total

Wildland Fire (Fund 85)

5,772	Wildland Fire Preparedness
4,175	Emergency Suppression (6 wildland fires)
9,947	Total

Concession Franchise Fee 80% Projects (Fund 99)

2,995	Wahweap Prospectus Development, Visitor Services
8,488	Colorado River Trips Prospectus
373	Uplake Prospectus Development
9,950	Replace Dive Gear
2,478	Improve Safety Program
101,346	CAMP/CMSS/Antelope Point
22,080	Utilities Support
147,710	Total

Recreation Fees Deposited

228,420	Park Specific Pass
30	Golden Eagle Passport
1,095,033	Daily Admission/Entrance Fees
26,755	Interagency Senior Pass
211,088	Campground Fees
123,915	Commercial Vehicle Tour Fees
935,271	Boat Use Fees
24,779	National Park Pass
253,517	Park Interagency Annual Pass
-1,158	Adjustment for Credit Card Clearing Account
2,897,650	Total

Other Fees and Income Deposited

685,786	Concession Franchise Fees
3,849	Donations
8,000	NPF Grant – GRIT (3 rd and final grant; total grant was \$24,000)
3,690	Telecommunications Rights of Way
650	Rights of Way (all other)
17,168	Special Use Permits
72,868	CUA permits
12,932	Commercial Film Cost Recovery
58,777	Construction Set Aside
36,781	Banner Health (Ambulance Agreement)
9,247	BLM Dispatcher Agreement
1,219	Misc Receipts (unclaimed money & fee overages)
9,474	Misc Receipts (rights of way and misc income)
2,673	Court Ordered Restitution
264,297	Quarters Income, Permanent
93,263	Quarters Income, Shared Housing
11,017	Water Income (non-Concessioner)
716,328	Water Income (Concessioner)
435	Electric Income (non-Concessioner)
502,639	Electric Income (Concessioner)
2,511,093	Total

RAINBOW BRIDGE NATIONAL MONUMENT

Park Base (Fund 01)

103,000	Operation of the National park Service, Final 2006 Authorization
0	Pay Cost Increase; ICMS Decrease
103,000	2007 ENACTED BUDGET
(1,000)	EAP, Uniforms, 1% IMR Reprogramming.
102,000	Total

VIP Program (Fund 01)

900	Total (VIP Program)
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INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS

October 2006

- Over 140 computer work requests were completed.
- Installed numerous computer system software upgrades.
- Installed several new computer systems.
- Provided computer support to Canyon de Chelly both through onsite visits and by phone.
- Performed numerous radio installs on boats and programming of mobiles to correct issues.
- Installed repeater software upgrades and base station upgrades.
- Programmed portable radios in park for digital and analog operations.
- Audited pay telephones in the park.
- Attended PMIS project training.

November 2006

- Over 70 computer work requests were completed.
- Installed numerous computer system software upgrades.
- Continued to install new computers systems.
- Provided computer support to Canyon de Chelly both through onsite visits and by phone.
- Installed network monitoring, and web filtering software at the bullfrog location, and upgraded Headquarters versions.
- Continued to program portables and mobile radios in park.
- Installed repeater upgrades for Navajo National Monument.
- Installed repeater upgrades for the park at all repeater sites.
- Reconfigured dispatch center for analog voting of radio receivers.
- Consulted with BK Relm on radio lock-up issues.
- Converted all base stations attached to dispatch to 4 wire operation.
- Backed up all PBX telephone systems.
- Repaired displays in consoles in dispatch center.
- Backed up voicemail systems in park and at Navajo NM.

December 2006

- Over 50 computer work requests were completed.
- Provided computer support to Canyon de Chelly both through onsite visits and by phone.

Rewrote the work order program to support additional criteria.
Installed 2nd mobile radio in park ambulances.
Adjusted audio levels to recorder in dispatch and repaired spare T1 cards.
Continued to trouble shoot radio lock-up issues in mobiles.

January 2007

Over 85 computer work requests were completed.
Pushed out IE 7 to all park computer systems.
Provided computer support to Canyon de Chelly both through onsite visits and by phone.
BK Relm finally saw the problem; lock-up problem is software.
Entered all radios into DOI WIIDS property system.
Installed encryption in all Westel Base stations.
Checked radio programming in all boats and vehicles.
Installed audio voting system in dispatch and tone generators in base radios.

February 2007

Over 130 computer work requests were completed.
Upgraded all ArcGIS software versions to 9.2.
Performed maintenance on web cams throughout the park.
Checked software and programming in Bullfrog base radios.
Replaced batteries on telephone systems.
Installed audio compressor to balance audio in dispatch.
Worked with BK Rem engineers on site to check lock-up problem.
Repaired serial ports on HQ PBX telephone switch.
Repaired NOAA weather radio transmission to Navajo Mountain.

March 2007

Over 165 computer work requests were completed.
Installed and tested Microsoft Office 2007 within select user group.
Upgraded Park Utility program.
Repaired Display on radio console in dispatch.
Attended RF exposure safety training.
Repaired Marine 16 link to Navajo Mountain.
Repaired TEAC recorder in dispatch. Replaced hard-drives.
Attached Ethernet serial adapters to park telephone switches.
Repaired and programmed numerous portable and mobile radios.

April 2007

Over 130 computer work requests were completed.
Deployed Microsoft Office 2007 on 135+ computer systems throughout the park.
Installed video security servers with associated security cameras at North, and Lone Rock.
Repaired radio bases at Canyon De Chelly, reprogrammed and returned.
Assisted Chad and installed security cameras in fee booths.
Programmed system radio changes in park mobile and portable radios.

May 2007

- Over 180 computer work requests were completed.
- Tracked and certified all Glen Canyon NRA employees were in compliance with taking the DOI computer security, and had signed the Responsibilities for Computer Use.
- Upgraded all computer systems to latest Symantec Antivirus software.
- Continued to make radio program changes to park radios installing patches and upgrades to correct lock-up in digital mode. The system now works.
- Made helicopter trips to check repeater sites and replace bad equipment.
- Repaired Travel Info System at Navajo NM.
- Installed second voter system on GLCA 2 radio network.
- Wired and tested headsets on dispatch consoles.
- Delivered vehicles to Cedar City for LE package installs.
- Repaired Marine 16 to Navajo Mountain link.
- Radio programming for Canyon De Chelly and Flagstaff parks.

June 2007

- Over 100 computer work requests were completed.
- Upgraded video security cameras at headquarters.
- Converted all up lake computer systems to the 10.148.29... address.
- Installed IP Tube between Dangling Rope and Headquarters PBX telephone switches. If the link is reliable then the park will finally have telephone service into the Dangling Rope park offices.
- Researched upgrade for DR PBX to support T1 D Channel.
- Repaired audio voter on LHS system in dispatch.
- Changed compressor wiring.
- Attended aviation online training.
- Repaired dispatch console displays and replaced TEAC PC.

July 2007

- Over 95 computer work requests were completed.
- Installed video security servers with associated security cameras at Bullfrog.
- Researched PBX upgrade and voicemail for American Samoa park.
- Attended park aviation safety training.
- Repaired numerous portable and mobile radios.
- Corrected path alarms on microwave link from HQ to Wahweap.
- Conducted software audit of PBX switches in park.

August 2007

- Over 105 computer work requests were completed.
- Conducted property inventory of all Computer & Telecom property.
- Repaired radios and helmets for SAR work and Classic Lifeguard.
- Numerous radio checks and repairs.
- Received PBX switches from Redwood NP and associated telephones and software. This is the upgrade needed for Dangling Rope and the other equipment will be used as spares for the other sites in the park.

Backed-up voicemail for Navajo NM and installed replacement equipment while repairs are made to water damaged switch.

September 2007

Over 100 computer work requests were completed.

Again upgraded all computer systems to latest Symantec Antivirus software.

Programmed and installed radios for Hubbell Trading Post.

Upgraded LE radios at Canyon De Chelly to cover Hubbell Trading Post.

Re-installed repaired PBX telephone switch for Navajo NM.

Programmed upgrade switch and voicemail for Dangling Rope Marina.

During FY 2007, the IT/Telecommunications Office continued to provide the following for all government agencies:

- Technical assistance to agencies that do not have a Computer or Telecom Specialist on staff or an expert in a given field available. (Data, Radio, Telephone, Electrical Engineering and etc)
- Responded to numerous requests for emergency information following system failures.
- Provided technical guidance on request to other park computer specialists.
- Provided technical guidance on request to park radio coordinators.
- Programmed voice mail boxes and provided training as needed.
- Created, managed, and deleted scores of Notes, and network accounts needed by both permanent and seasonal employees.

Significant special projects or events which occurred in FY07 were:

- Work Request program configuration changes made this year helped 4 parks including Glen Canyon to track over 5000 work request for computer and telecom issues.
- Glen Canyon NRA had 1776 of the 5000 work requests tracked by the Work Request program. This accounted for over 2,593.75 man hours (324.22 days of work).
- Researched, purchased, and installed a video monitoring system for Canyon de Chelly.
- Provided computer support to Canyon de Chelly for the first part of the year.
- Deployed Microsoft Office 2007 on 135+ computer systems throughout the park.
- Presented training to all personnel as required on computer software, new radios, telephones and associated equipment.
- Completed transition from wideband to narrowband in the park radio system. Tested digital and equipped all radios to support encryption. Converted all surrounding parks as asked to digital narrowband.
- Obtained telephone switches from Redwood National Park for spares and upgrades. Savings to the park >\$60k.
- Tested VoIP equipment for radio and telephone services in the park. Dangling Rope is the site that will benefit the most because they do not have regular telephone service and the data link may provide that service as long as bandwidth and latency issues do not degrade the voice quality. Tests so far do not look promising.

HUMAN RESOURCES

The Human Resources (HR) staff includes the Human Resources Officer, a Human Resources Specialist, and three Human Resources Assistants. The HR program provides program management, equal employment, employee relations and performance management advice, classification and position management, staffing and recruitment services, OWCP case management, benefits services and advice, personnel action processing (physicals, drug testing and background investigations) employee development and payroll support. HR provides these services for 136 permanent employees, 10 term, 56 temporary/seasonal employees and 2 Building a Better Future (BABF) students at Glen Canyon NRA. This totals 204 employees served.

Equal Opportunity

The Glen Canyon EEO committee continued in 2007 with the committee chair, vice-chair, Accessibility Program Coordinator and the recorder positions still vacant. The committee members were: Jacki Blais, Federal Women's Special Emphasis Program (SEP) Coordinator; Stan White, Uplake EEO member; and Eileen Martinez, EEO Counselor. Kathie Gordon, Human Resource Officer, and Nancie Ames, Deputy Superintendent, serve as ex-officio members on the committee. The committee focused on providing EEO support to the parks and was not able to obtain additional members. Although the committee is small they continue accomplish a fair amount in support of the parks EEO program.

Training: Annual training in Prevention of Sexual Harassment and Equal Employment Opportunity law was provided for Glen Canyon NRA staff on June 6, 13 and August 6. This year we were able to hold three classes (two downlake and one uplake), which provided several opportunities for staff to participate. Separate trainings were offered for the fees and interpretation seasonal staffs. In addition, a TEL EEO course was made available to staff and a number of employees participated in that two-hour session. The entire staff was also kept up to date on EEO case law and special emphasis programs via regular email correspondence from the EEO counselor, provided by the Regional EEO office.

The committee has worked diligently to improve recruitment efforts for both park units. Park staff participated on March 3, 2007, at the Coconino Community College job fair in Page. The turn out was low but Glen Canyon employees provided job information to interested local applicants.

Jacki Blais, Federal Women's SEP coordinator again provided information to park staff during Women's History Month (March 2007) and encouraged staff to learn more about some women who have made a difference in the growth and development of the United States.

Retirements

Eight retirements were processed in FY07: Roger Drake, Jeanie Hockins, Ronald Hockins, Pat Quinn, Mark Law, Jim Bell, Fred Colburn, and Dan Gregory. This was 5 more than last year and we anticipate retirements will continue to grow each FY. We currently have 31 employees eligible for optional retirement in the next 5 years. Ongoing retirement work includes running

retirement estimates, advising employees on creditable service and buying back temporary or military time.

Office of Workers Compensation Program Office of Workers' Compensation Program (OWCP)

Twenty-six entries were submitted into SMIS for FY2007; the breakdown follows:

- -23 CA-1 Traumatic Injury claims were submitted in SMIS and forwarded to OWCP; 2 CA-1's were not forwarded to OWCP. Twenty-one injury claims were accepted by OWCP.
- 3 CA-2 Occupational Illness claims were submitted in SMIS and forwarded to OWCP; only 1 was denied
- among 5 cases, a total 280 hours of Continuation of Pay were used at a cost of \$5957.36.
- No new long-term cases were initiated in FY2007. Only one case from 2005 remains active.
- 4 Volunteers were injured while serving on the Trash Tracker or True Grit Houseboats. Medical costs of these injury claims totaled \$19,203.67.

Background Investigations Processed

Visitor Use Assistants – Total 20

ANACI – 6 SAC - 14

Visitor Protection (Dispatch/LE's) – Total 18

ANACI – 2 SAC – 10 LBI – 4 BI – 2

Facilities and Maintenance - Total 16

NACI - 7 SAC - 9

Interpretation and Resources Management – Total 8

NACI – 3 SAC – 5

Grand Total - 62 processed by Human Resources in FY 2007

ANACI – 8 SAC – 38 NACI – 10 LBI – 4 BI - 2

Incentive Awards

2 Above & Beyond Awards

2 Time Off Awards

18 Safety Time Off Awards

5 Safety Cash Awards

1 Performance Awards

51 Star Awards

118 Non-Monetary Awards

The incentive program grew from the previous year, especially in the areas of Safety (up from 0), Star Awards (up from 7), and the Non-Monetary Awards (up from 29).

Drug Testing

There are 34 Law Enforcement Ranger positions subject to both pre-employment and random drug testing; 37 Maintenance positions subject to both pre-employment and random testing for drug & alcohol for Commercial Driver's licensing, 15 additional permanent positions and 26 temporary positions require for drug testing for boat operations.

Employee Development

Training courses offered at Glen Canyon National Recreation Area this year included:

Mandatory Training Attended

EEO/Sexual Harassment	120 Attended
Supervisor Training – Human Resources Changes for Temporary Employment	18 Attended
Fire Extinguisher Training	41 Attended
Structural Fire & Fire Extinguisher Training	14 Attended
B-3 Basic Aviation Safety Training (6 hours)	22 Attended
M-3 Aviation Training for Supervisors (4 Hours)	14 Attended
DOIMOCC (3 sessions offered in 2007)	23 Attended

TEL Training courses offered at Glen Canyon National Recreation Area this year included:

10/20/2006	Introducing the NPS Interpretation & Education Renaissance
10/25/2006	PMIS III - Creating an Effective PMIS Entry
10/26/2006	National Interpretation & Ed Evaluation Summit - Keeping the National Parks Relevant in the
11/10/2006	Intro to the America the Beautiful-National Parks and Federal Recreational Lands Pass
11/14/2006	Project Management Information System (PMIS) Town Hall Meeting
11/29/2006	Hiring Flexibility: Navigating Through the Hiring Process
1/8/2007	Legal Update
01/11/2007	LE Refresher - Misc. 3 Hours
02/15/2007	Retirement Planning for New Employees
02/16/2007	LE Refresher - Misc. 3 Hours
02/20/2007	FTEP Update
4/19/2007	Managing Workers Compensation Cases: Finding Your Way Through the Maze - Part 1
4/24/2007	Interpretive Techniques
5/8/2007	Retirement Planning for New Employees
5/15/2007	Program Organization and Interpretive Themes
5/17/2007	A Supervisors Guide to Workers' Compensation: Fact and Fiction
5/22/2007	From Hugger to Harasser: The True Story Behind Sexual Harassment
5/23/2007	Communication: The Key to Performance Management
5/25/2007	Interpretive Talks, Walks and Tours
5/31/2007	Safety Responsibilities for First Line Supervisors
6/5/2007	Informal Visitor Contact
8/6/2007	Resolving Employee Performance Issues
8/7/2007	How to Write a Performance Improvement Plan
8/21/2007	Do We Have All the Pieces? Strengthening the NPS Through Civic Engagement
8/23/2007	Dealing with Misconduct
	TOTAL NUMBER OF TRAINING HOURS: 71.5 TOTAL ATTENDEES: 113

Recruitment and Staffing

44 Vacancy Announcements were posted:

30 under Delegated Examining Authority and 14 under Merit Promotion

13 permanent positions were filled during FY07:

<u>POSITION TITLE</u>	<u>SELECTEE</u>	<u>EOD</u>
Maintenance Worker, WG-4740-5 (Handicap Appt)	Kristine Cobb	03 04 07
Dispatcher, GS-2151-6	Carmen Certeza	03 18 07
Water Treatment Plant Operator, WG-5409-9	Joel Purtle	03 25 07
Engineering Equipment Operator, WG-5716-8	Paul Gilbert	03 18 07
Electrician (High Voltage), WG-2810-11 (VRA Appt)	Jeffrey Higgins	04 01 07
Park Ranger (P), GL-025-9	Carmen Barnard	05 06 07
Chief, Concessions & Business Mgmt, GS-1101-13	Lou Good	05 13 07
Administrative Support Assistant, GS-303-5/6	Lisa Hensen	05 27 07
Maintenance Worker Leader, WL-4749-8	Gary Heinz	07 08 07
Maintenance Worker, WG-4749-5	Ben Davis	07 22 07
Maintenance Worker, WG-4749-8	James Robinson	07 22 07
Facilities Operations Specialist, GS-1640-7/9/11	Maria Davis	07 22 07
Information Receptionist, GS-304-4	Carla Roberts	08 28 07

3 Term positions were filled during FY07:

Concessions Management Specialist, GS-1101-11 Julie Drugatz 09 03 06

Maintenance Worker, WG-4749-7 Scott Dolinar 02 01 07

Outdoor Recreation Planner, GS-023-11 Brian Sweatland 08 26 07

56 Temporary positions were filled during the FY07 season.

Position Classification:

Facilities Operations Specialist, GS-1640-11

Maintenance Worker Leader, WL-4749-8

Fire Protection Specialist (EMS), GS-081-9/11/12

Park Ranger (EMS), GS-025-9/11/12

Safety & Occupational Health Manager, GS-018-112/12

Supervisory Park Ranger, GS-025-13

Employee Relations:

3 conduct cases, 2 performance management cases and 1 administrative grievance.

Special Projects completed in FY07:

Office of Personnel Management Delegated Examining Authority Audit

Accounting Operations Center Audit

Outreach and Recruitment Projects:

Glen Canyon NRA participated in 3 outreach opportunities; 1 at NAU in conjunction with the Colorado Plateau Cluster Recruitment Team; one in Fredonia for the local community, and the Page/Lake Powell Career Fair at Coconino Community College.

III. BUSINESS MANAGEMENT

Lou Good was hired as the new division chief upon Pat Quinn's retirement. Lou EOD'd in late May moving from his previous position as the Management Assistant at Big Bend National Park in Texas.

Antelope Point Marina continued their development of new facilities on both NPS and Navajo Nation (NN) land. The Marina Village grand opening was held in June and marked the opening of their retail store, full service restaurant and snack bar. Development on NN land included expansion of the boat dry storage area as well as the construction of the waste-water ET beds. Construction began on the new sales and security building, and the water treatment facility. There were some management issues commonly associated with the opening of any new operation but most were resolved quickly. Longtime Lake Powell marina and concessions manager Steve Carothers was hired as their new GM during the summer and he did a very good job of organizing the operation.

A new concessioner was selected for the Colorado River rafting trips and Colorado River Discovery began operations in November, 2006. They did a very good job in their first full year of operations and increased the numbers of people taking river trips substantially with close to 50,000 people taking one of their trips. Their emphasis on "green" operations bore good results with one of the most important being a 23% decrease in annual fuel consumption even with the increase in business.

It was a year of transition for ARAMARK's operations both up and down lake. Longtime Vice President of Operations Gib Johnson retired in November. The uplake contract expired December 31st and both contracts were given three year extensions while prospectus development efforts are continued. The "Canyon King" paddle-wheel style tour boat was retired after a long career and replaced with the modern yacht style "Canyon Princess".

ARAMARK also continued their award winning PlanetEVERgreen program by remodeling rooms, recycling tons of waste and continuing their partnership with the NPS on the Trash Tracker program. The old Lake Powell Motel was finally razed and the site restored.

Both Antelope Point and ARAMARK worked proactively with the park to continue efforts to prevent quagga/zebra mussels from invading the lake. Special account funds were used to purchase two industrial decontamination units and they were placed at Bullfrog and Wahweap.

Strata Medical completed their first full year of operations at the Bullfrog Clinic uplake. The re-opening of the Ticaboo uranium mine outside the park impacted their operation as the only medical facility in the area but they handled that issue as well as some serious carbon monoxide incidents in a very professional, thorough manner.

The Commercial Use Authorization (CUA) program continued with a total of 110 CUAs operating at the end of the fiscal year with the majority of those dealing with boating operations. Vessel caretaking, minor vessel repair and launch & retrieve service CUAs took up 80 of the 110

issued. CUAs were issued for with an option for two years rather than one and that transition went smoothly.

Special Use Permits (SUP) were issued for a wide variety of activities including film permits, fishing tournaments, weddings, baptisms and First Amendment issues. There were no major motion picture productions for the year but many other commercial filming activities including automobile commercials and documentaries.

ARAMARK Sports and Entertainment Services, Inc., d.b.a. Lake Powell Resorts and Marinas, CC-GLCA003-69 (Downlake)

The concessioner continued with an off-season operating schedule for a second season to accommodate visitors during the fall and winter months. Breakfast, lunch and dinner selections were offered at the Java City Coffee Bar and in the Driftwood Lounge. All other locations were on winter hours and “on call” as needed. A joint decision between the concessioner and the National Park Service to close Dangling Rope Marina resulted in projects being completed off-season.

The concessioner, as part of ARAMARK’s PlanetEVERgreen program, completed work on two guest EcoRooms with more than three dozen environmental products that are recycled, biodegradable, waste reducing, non-toxic or energy and/or water efficient.



ARAMARK received recognition/awards for their continued efforts in environmental management. They were presented with the Governor’s Pride in Arizona “Environmental Leadership Award” and “Honorable Mention- Recycle” along with “2006 Pollution Prevention” award from the Utah Pollution Prevention Association.

ARAMARK recycled 783,441 pounds of recyclable waste in 2007. The Trash Tracker program in partnership with the National Park Service made 24 trips with 99 volunteers collecting trash on approximately 1,427 miles of shoreline resulting in 1,240 bags of trash weighing approximately 55, 946 pounds.



A new 96-foot yacht-style Canyon Princess tour boat was added to the concessioner's tour boat fleet replacing the retired Canyon King paddle-wheeler tour boat.



Another campground construction phase was completed adding 49 full hook-up sites bringing the total number of RV sites to 139.



The retired Lake Powell Motel buildings were removed this year. The area was then planted with native plant species to restore the natural landscape.



In an effort to continue being Zebra/Quagga mussel-free and/or introducing exotic species into Lake Powell new decontamination stations were installed at both ends of the lake to wash boats that have been in mussel infested waters prior to coming to Lake Powell. The concessioner operates these facilities.



Colorado River Discovery, LLC, CC-GLCA001-06

Colorado River Discovery began operating under a new 10-year contract in November 2006. The transition from Wilderness River Adventures, to Colorado River Discovery, LLC (CRD) required National Park Service Intermountain Region office involvement prior to CRD beginning float trip operations.



The new concessioner, in conjunction with the contract, began operating under a 5-year agreement with the Bureau of Reclamation that identifies/provides the security clearance needed to access the tunnel leading down to the dam and utilize the launching area/facilities where the rafts are stored prior to be boarded by passengers for the guided interpretive 15-mile Colorado River float trip.

A new Memorandum of Agreement between the U.S. Coast Guard and the NPS established a new vessel inspection and oversight program for the float trip vessels used by CRD. Under this cooperative program, passenger vessel safety will continue to be ensured. The concessioner hosted the on-site training along with providing the float trip vessels and equipment to be used by the Coast Guard to train and qualify float trip vessel inspectors with “hands on” dry dock and topside vessel inspections.



One of CRD’s first year operating goals was to reduce the amount of fossil fuels used in the float trip operations. After operating a full season the concessioner was able reduce the amount of fuels used in its operation by twenty-three percent (23%).

Continuing on with reducing the amount of fuel used in the float trip operations, the concessioner offered non-motorized trips during the shoulder seasons utilizing smaller oared/rowed boats to offer visitors an opportunity to experience the river at a slower, quieter pace. Many favorable visitor comments were received.





The following is a brief recap of the concessioner's 2007 float trip operations:

32,909 half day passengers, 16,630 specialty/full day passengers and 19 passengers took advantage of CRD's backhauling service bringing up a total of 49,730 visitors.

ANTELOPE POINT RESORT AND MARINA, CC-GLCA007-03

Antelope Point Marina continues the development of facilities on National Park Service and Navajo Nation land. The Marina Village Grand Opening was held in June of 2007. The Marina Village services consists of a retail marine store, Grandma Betty's ice cream and coffee bar, and the Jadi' Tooh Restaurant/Lounge ranging from Pizza service to fine dining. The waste water ET beds were completed in June 2007, with appropriate ADEQ compliance certificates.



Antelope Point Marina Village Jadi' Tooh Restaurant



Land based operations-April 07, ET Beds



Antelope Marina - August 07 Marina Village, New slip additions

Antelope Point Marina has grown through their fourth operating season to 120 completed private customer wet moorage slips, with the anticipation of additional shower and laundry area for 2008/2009 season. The boat rental operation has grown from 25 to 42 houseboats and from 18 powerboats to 29 with a July occupancy rate of 94% on houseboats and 100% on powerboats for July and August. This year APM introduced a new model houseboat (75' Silver Millennium) offering ADA facilities. The 2008 season plans construction of the Sales and Security facility, completion of the Water Treatment Facility, Courtesy and Private slips.

STRATA MEDICAL, LLC, CC-GLCA021-05

Strata Medical, LLC operated the Bullfrog Medical Clinic a full season in 2007.



Bullfrog Medical Clinic
Clinic



Main Entrance for Bullfrog Medical
Clinic

The staff in the Bullfrog Medical Clinic again extended the operating season by keeping the clinic open one day a week through the winter months for the convenience of winter visitors and local residents. The opening to Ticaboo Mine has kept the clinic very busy this season, and the anticipation of more demand going into 2008.

COMMERCIAL USE AUTHORIZATIONS

Continuity and consistency remain key elements of the successful Commercial Use Authorization (CUA) program. While personnel and paperwork remain unchanged for the most part, we still await official NPS guidance on the specifics of the CUA program.

In January, the program moved to issuing 2-year permits instead of 1-year permits. The transition went fairly smoothly for both staff and permittees as we worked to reduce, in particular, the amount of paperwork required for CUA permits.

Communication between the office and permittees continues to be frequent and constructive. Scheduled permittee meetings in the spring were well attended and perhaps the most meaningful and peaceful ones to date. In addition to the annual meetings, we also produce a CUA newsletter twice yearly to address specific concerns and to bring attention to more general issues occurring within the recreation area.

The busy summer season, as always, found both our permits coordinator and our division secretary performing much permit monitoring in the Wahweap Marina developed area as well as at Antelope Point Marina, Bullfrog Marina

Cost recovery for the fiscal year was \$65,221.25 for the processing and oversight of 111 permits. Additionally, 38 applications were sent out to prospective permittees who did not complete the process.

FY 2007 began with a total of 119 active CUAs and ended with a total of 110 as noted below:

<u>October 06</u>	<u>Permit Type</u>	<u>September 07</u>
21	Vessel Caretaking	20
34	Minor Vessel Repair	34
30	Vessel Launch & Retrieval	26
13	Fishing Guide Service(CR & LP)	12
11	Hiking Service (w/ and w/o packstock)	08
03	Hunting Guide Service	03
00	Waterski/Wakeboard Instruction	00
05	Kayak Instruction/Excursions	05
01	SCUBA Instruction/Excursions	01
01	Land Tour	00
<u>00</u>	Marine Salvage	<u>01</u>
119		110

SPECIAL PARK USES

It was a very busy year in terms of the number of permits issued under the Special Use Permit (SUP) program. Commercial film/photo permit numbers were down a bit from 37 issued in FY 2006 to 24 issued in FY 2007. However, the number of permits issued for other special use permits (included those for activities such as weddings, fishing tournaments, and 1st Amendment

activities) increased substantially from 35 in FY 2006 to 50 in FY 2007. In addition to the permits that were processed, additional initial requests for permits (but for which the applicants did not complete the process) totaled 13 for filming and 16 for other special uses.



IMAX camera – Lees Ferry

Television commercials, still advertisements, and travelogues/documentaries continue to generate the most filming at GLCA. Each year we typically entertain at least one major motion picture but not so in FY 2007. However, we were once visited by McGillivray Freeman Films for some follow-up shots for the just released IMAX film “Grand Canyon Adventure” (the same group filmed in GLCA under a permit in FY 2006). A few film/photo permits of note include:

- A segment for a documentary produced by The Weather Channel
- A 360 degree aerial shot of the Horseshoe Bend area for the opening scene of the feature film “Jumper”
- A nationally released commercial for Ameriprise featuring actor Dennis Hopper
- Automobile advertisements for Saab and Kia
- Various travelogues and documentaries particularly aimed at foreign audiences
- Numerous fashion and product shoots

Locations included the Wahweap developed area, Alstrom Point, various side canyons and bays on Lake Powell, Rainbow Bridge National Monument, the Colorado River, and Lees Ferry.

Special use permits were also issued for other activities including the following:

- 07 fishing tournament schedules
- 20 baptisms, memorial services, and weddings
- 10 community, youth, and school activities

Two permits of special note included the inaugural Powell 3 triathlon at Wahweap Marina and the CAST for Kids event which provides a wonderful fishing opportunity for disabled and disadvantaged children and their families.

Locations utilized included Wahweap developed area, Lone Rock Beach, Antelope Point, Lake Powell, Lees Ferry/Lonely Dell Ranch, and the Bullfrog area.

There were 54 permitted days (in addition to two year-long permits) as compared to 111 permitted days for filming in FY 2006. There were 156 permitted activity days (in addition to one year-long permit) for other special uses.

In FY 2007, cost recovery for commercial film/photo permits and other special use permits totaled \$27,770.84. Recovered location fees for commercial film/photo totaled \$5,800.00

RIGHTS-OF-WAY

While there is still a backlog of expired permits needing renewal, there were initial communications on several, there was only one Right-of-Way (ROW) permit (for a water well and line for Marble Canyon Company) completed in FY 2007. The Special Park Uses Coordinator continued to work in unison with the Administrative Officer who managed telecom ROW permits for GLCA. One such permit was issued to Comnet 4 Corners for cellular service in the downlake area.

In FY 2007, cost recovery for the ROW program totaled \$690.20.

IV. INTERPRETATION AND RESOURCE MANAGEMENT

AQUATIC RESOURCES MANAGEMENT

Public Health

The Beach Monitoring Program continued collaboration with the Utah and Arizona Departments of Environmental Quality per the 1996 Strategic Plan to Protect Water Quality at Lake Powell. The Aquatic Resources Management Branch participated in the Lake Powell Technical Advisory Committee (TAC), which evaluates field and laboratory procedures and provides technical guidance for the Beach Monitoring Program. The Glen Canyon NRA Beach Monitoring Program remains one of the most well established, largest, and most progressive beach monitoring programs in the world, providing public health protection for 2000 miles of Lake Powell shoreline.



Water Quality Sampling

The Quality Manual and Standard Operating Procedures for the Lake Powell Water Quality Laboratories were revised and approved prior to the 2007 sampling season. All new requirements under the National Environmental Laboratory Accreditation Program were fully incorporated into the laboratory quality systems. Laboratory Certification for Environmental Testing was maintained by both the Wahweap and Bullfrog Laboratories through the Utah Department of Health, Bureau of Laboratory Improvement.

Following a recommendation of the TAC and with approval from the states of Utah and Arizona, beginning in 2002, all fecal indicator testing at Glen Canyon NRA has been accomplished with *Escherichia coli* bacteria using the Colilert[®] System from IDEXX Inc. *E. coli* has been shown in numerous studies to be one of the best indicators of fecal pollution in fresh water and highly correlated with human illness from recreational contact.

Sanitary water quality of Lake Powell in 2007 was good with only a very small percentage of samples indicating any potential health risk. Twenty-one sites were on the routine sampling list at the beginning of the season, but six sites could not be sampled due to low water levels. Routine sites are determined by criteria established by the TAC and are sampled at least every other week. Lone Rock Beach is comprised of two routine sample sites that are sampled weekly due to high visitor use. Additional samples (584) were processed from randomly selected beaches throughout the lake and suspected problem areas. The total number of samples analyzed during 2007 was 738.

Sampling of randomly selected beaches and suspected problems is intended to locate sites that may require regular monitoring. Random sampling also maintains the high standards of public health protection set at Glen Canyon NRA by maintaining the current level of sampling as sampling sites are dropped from the routine list due to good water quality.



Swimming Advisory Sign

done to gain the scientific confidence needed for a swimming closure. In 2006 season, Beach Monitoring personnel deployed the very first swimming advisory at Glen Canyon NRA. No swimming advisories were required in 2007.

There were no swimming closures or beach advisories at Lake Powell in 2007.

The advisory, recommended by the TAC, is intended to alert swimmers in the immediate area when initial water quality sampling has indicated the need for further sampling to determine the potential health risks to swimmers. It is used while testing is being

Sanitary water quality in Lake Powell continues to be very good with greater than ninety-nine percent of all samples collected at swimming areas indicating safe conditions. The Glen Canyon Beach Monitoring Program continues to protect public health on more miles of shoreline than any other single program, and Lake Powell remains one of the cleanest reservoirs in the country.

Aquatic Nuisance Species

Zebra Mussels

In January of 2007, zebra mussels (*Dreissena* spp.) were found for the first time west of the 100th Meridian. Specifically, quagga mussels (*D. bugensis*) were discovered to have been in Lake Mead for 3 to 5 years. The mussels were found to have already spread downstream from Lake Mead into Lake Mohave, Lake Havasu, the Colorado River Aqueduct, and the Central Arizona Project Aqueduct. Later in 2007, *D. polymorpha* (common zebra mussels) were discovered in both Lake Pueblo Reservoir in Colorado and San Justo Reservoir in California.



Quagga Mussels

Glen Canyon NRA's Zebra Mussel Prevention Program began screening boats in 2000 and offering free decontaminations in response to scientists' prediction that Lake Powell would be the first western water body infested. The program was greatly expanded to meet the new threat level in 2007. Glen Canyon NRA lead interagency, regional, and national cooperation by

holding meetings and trainings involving Utah Division Wildlife Resources, Utah State Parks, Arizona Game and Fish, Park concessionaires (ARAMARK and Antelope Point Holdings), Commercial Use Authorization permit holders, and Grand Canyon River Guides Association, US Fish and Wildlife Service and Pacific States Marine Fisheries Commission.

In April, the National Park Service created a service-wide prevention and response guide through the All Risk Incident Command System (Western Quagga Response Team). The NPS Quagga/Zebra Mussel Infestation Prevention and Response Planning Guide (NPS Quagga/Zebra Plan) was created to be used by all NPS units with aquatic resources.

This guide was largely based on the rapid response/containment planning at Lake Mead NRA and the prevention actions of Glen Canyon NRA. Three Glen Canyon NRA employees were included on the incident team.



Ramp sign

Zebra mussel prevention was designated as the Park's top priority by the Superintendent in 2007. To accomplish the needed program expansions, the Glen Canyon NRA Zebra Mussel Prevention Interdisciplinary Team was developed. The team included representatives from each Division and major operation within the Park. This approach was required because many prevention activities are interdisciplinary or involve Divisions that previously had not focused on zebra mussel prevention. Efforts of the interdisciplinary team focused on establishing stronger regulations to prevent infestation, establishing a self-certification program for boaters, expanding education and public outreach, improving decontamination capabilities, and preparing funding requests.

The Superintendent's Compendium was updated in 2007 to require not only that all high-risk boats be decontaminated (required since 2003), but also that all vehicles towing trailers for vessels must display a certificate through their windshield indicating that the vessel does not pose a risk of spreading zebra mussels. The dashboard certification program was unique and independently conceived and developed at Glen Canyon NRA. This program is applicable to all aquatic nuisance species, not just zebra mussels. This type of program could be implemented by any park or management agency. Even without the ability to regulate, it is an excellent educational tool.

Glen Canyon NRA's on-going zebra mussel prevention educational efforts were expanded in 2007. Many of the education techniques used for years at Glen Canyon were continued and expanded including use of newspapers (the park paper and others), brochures, radio spots, television news interviews, the park website, and press releases. New techniques included a telephone hotline, new signs, new brochures (provided by Honda), and the self-certification program.

Screening of vessels at entrance stations continued with minor modifications to adjust for the new western infestations and to deal with the greatly increased number of high-risk boats expected in the summer of 2007. Entrance booth screening in 2007 resulted in 480 vessels being designated as high-risk and required decontamination. Of the high-risk vessels, 90% of them had recently been in waters of the Lower Colorado River. The number of high-risk vessels from the eastern U.S. remained similar to previous years. Of the vessels identified as high-risk, approximately 83% were decontaminated; however, there is great deal of uncertainty around this estimate due to difficulties in tracking compliance.



Entrance Booths

In 2007, decontaminations were not offered free by decontamination partners, as in previous years, due to the large volume of vessels needing decontamination. During 2007, a cost of \$50/hr was charged in 15-minute increments for the service. Most vessels took 15 to 30 minute to be decontaminated.

Specific protocols for decontamination were developed with a wide range of partners. The protocols involve a physical inspection that drives the decontamination requirements. All entities were eligible and encouraged to become Glen Canyon Decontamination Partners, but no partners outside of the park concessioners were found.

Specialized decontamination facilities were purchased with “set aside” funds for the Wahweap and Bullfrog Marinas. These new facilities are ideally designed and equipped to decontaminate boats. The rinse water is caught in a pad, treated, and recycled. Other marinas used portable hot water or steam washers for decontamination of high-risk vessels.

Monitoring for zebra mussels in Lake Powell was focused on artificial substrates in cooperation with Portland State University from 2002-2006. With 2007, additional techniques were employed including diver surveys, deep-water robot surveys, and plankton sampling for zebra mussel veligers (larvae).

Plankton sampling for veligers offers the best hope for early detection of zebra mussels. Veliger sampling was first used at Lake Powell in 2007 in cooperation with the Grand Canyon Monitoring and Research Center, Arizona Game and Fish, Utah Division of Wildlife Resources, and the Bureau of Reclamation (BOR). Sample processing was first accomplished through a BOR laboratory



Decontamination facility

in Denver. Early samples produced no veligers, but some “questionable organisms” were



Veliger sampling with UDWR

reported. Samples collected on July 19 near the Wahweap Marina were reported by the BOR laboratory to contain zebra mussel veligers.

Additional replicated sampling was conducted at four sites across the Wahweap Marina in an attempt to confirm the positive veliger reports. Replicate samples were analyzed by the BOR laboratory, Portland State University, and the Glen Canyon NRA Aquatic Resources Management Branch. For each site sampled the results were the same, Glen Canyon NRA and Portland State

University found no veligers but numerous seed shrimp and occasional Asian clams; the BOR laboratory reported numerous veligers with no mention of seed shrimp or Asian clams. The number of veligers reported by the BOR was similar to the number of seed shrimp detected in the other laboratories. The laboratory detection method makes the misidentification of seed shrimp as veligers an easy and common mistake. The simplest and most likely explanation for the discrepancy is that the BOR laboratory was misidentifying seed shrimp as veligers.

Plankton sampling for veligers is now Glen Canyon NRA’s primary tool for mussel detection. Emergency funding was used in the fall of 2007 to purchase a new microscope and accessories for veliger analysis of samples. Subsequent sampling throughout 2007 revealed no veligers in Lake Powell; the lake is believed to be zebra and quagga mussel free.

Immediately after the discovery of mussels in Lake Mead, NPS and concessioner divers checked under all marinas in Lake Powell without finding any mussels. Divers were used again, very intensively, inspecting vessels and dock structures underwater at the Wahweap Marina, in response to the false reports of veligers in plankton samples. During the intensive Wahweap Marina surveys, over 500 boats and the associated dock structures were examined for zebra mussels by divers in an attempt to locate the source of the supposed veligers. If an adult population had been found on a boat or portion of the dock, the substrate containing the mussels could have potentially been removed from the lake, maybe averting a larger infestation. No mussels were found during any diver surveys.



NPS divers in Wahweap Marina

Glen Canyon NRA’s remotely operated submarine was used to survey deep-water locations beneath the Wahweap Marina as a part of the search for adult mussels in response to the false veliger detection. Divers are limited to about 120 feet in maximum depth, but the channel below

Wahweap Marina is over 200 feet deep. No zebra mussels were found during the deep-water surveys.

The artificial substrates that had been used to monitor for zebra mussels in Lake Powell since 2002 were modified in 2007 to reach deeper depths and improve detection of quagga mussels, which exist in deeper water than common zebra mussels. In the fall of 2007, substrate management was largely turned over to Utah Division of Wildlife Resources so the park could focus on veliger sampling. Throughout the many years of substrate monitoring, including 2007, no mussels have ever been found on substrates.

Despite the discrepancy in laboratory results and the belief that Lake Powell remains zebra mussel free, permit conditions were developed in 2007 for Commercial Use Authorizations, requiring that any vessels moored on Lake Powell must be decontaminated before leaving the area. Most moored vessels are houseboats, typically transported by commercial boat haulers, which must have a permit to work in Glen Canyon NRA. Vessels being removed from slips for maintenance and then returned do not require decontamination. Also, boats going to dry storage or otherwise remaining under the control of the permitted boat hauler for at least 30 days do not require decontamination.

Glen Canyon's long history of zebra mussel prevention serves as an example of responsible management for water resource managers throughout the country. Few examples exist of such effective, proactive efforts. The program has already confounded the prediction that Lake Powell would be the first western water body to become infested. A decade after that prediction, there have been many changes in the zebra mussel infestation of the western hemisphere, but through Glen Canyon NRA's efforts, Lake Powell remains zebra mussel-free.

New Zealand Mudsnaails



New Zealand Mudsnaails

In April 2002, New Zealand mudsnails (NZMS) were detected in the Colorado River below the Glen Canyon Dam by Aquatic Resources Management staff. This invasive exotic species has been documented passing through the digestive system of trout undamaged. The NZMS also out-competes other aquatic invertebrates for food and space. The result is a greatly reduced invertebrate fauna that provides very little energy to higher trophic levels. Examination of voucher specimens from invertebrate monitoring by researchers contracted by the Grand Canyon

Monitoring and Research Center showed that the NZMS has existed in the Colorado River below Glen Canyon Dam since at least August of 1995. The snail had been misidentified for seven years. In 2000, NZMS density at Lees Ferry peaked at over 40,000 snails per square meter. Currently there are no feasible methods for removal. Impact of these snails to the rainbow trout fishery is unknown.

Limnology

Aquatic Resources Management, in cooperation with the Grand Canyon Monitoring and Research Center and the Bureau of Reclamation, has continued to collect limnological data on Lake Powell. In 2007, water quality profiles were measured at 20 to 25 established stations along the Escalante Arm, San Juan Arm, and the main stem of the Colorado River. Depth-specific water samples are collected for evaluation of nutrients and contaminants. Additional measurements and samples are collected from within and below the dam. The limnological functioning of Lake Powell proceeded in typical patterns that have been seen in previous years.



At Camp on a Lake Monitoring Trip

Fisheries

Sport fishery management at Glen Canyon NRA is accomplished through an integrated, interagency cooperative effort between the Utah Division of Wildlife Resource, Arizona Game and Fish Department, and the National Park Service.



Striped Bass



Threadfin Shad

Sport fishing in Lake Powell was outstanding during 2007. Since the 1980's, the striped bass population in Lake Powell has gone through cycles of boom and bust in a classic predator-prey interaction with threadfin shad. Peaks in the threadfin shad population cause the striper population to increase until the threadfin shad population is severely depleted, leaving the striped bass with insufficient forage. Low lake levels allow inflowing rivers to erode the sediment deltas of Lake Powell, releasing nutrients and contributing to productivity. Threadfin shad in 2007 were still present in open water, but their numbers were lower than the previous four years. Striped bass populations dropped from 2006 levels and condition also declined in 2007. Angler harvest is used as the primary tool for controlling the striped bass population. There is no creel limit on striped bass in Lake Powell, and all anglers are asked to keep all striped bass caught.

During recent years, the smallmouth bass size and condition has increased. Regulations imposed in 2002 increased the creel limit on smallmouth bass from 6 to 20 in possession to keep smallmouth populations at sustainable levels. With no limit of striped bass and the increased limit for smallmouth bass, Lake Powell has the most liberal creel limits in the U.S.



Smallmouth Bass

A gizzard shad was first collected from Lake Powell in the San Juan inflow area on June 6, 2000. No additional gizzard shad were found until August of 2002 when Utah Division of Wildlife Resources personnel collected six from the San Juan arm. By 2003, gizzard shad had moved into all areas of Lake Powell. The effects of this new exotic species in Lake Powell are unknown. Gizzard shad may improve the sport fishery by providing another forage source. They may also severely impact the threadfin shad population. Gizzard shad quickly grow beyond the prey size threshold for all but the largest of the predators. This could mean that gizzard shad will provide a more stable food source by virtue of maintaining a large brood stock to replenish forage for bass. Alternately, gizzard shad may become too large to serve as forage and may compete with other fish for the already limited food resources.



Gizzard Shad



Photo courtesy USFWS/Duane Raver

Rainbow Trout

The rainbow trout fishery in the Colorado River below Glen Canyon Dam has seen low production for the last several years. The population is large, but the size and condition of the fish are poor. The average trout size in the 1970s and 80s was over 16 inches; today the average size is less than 12 inches. The causes for poor growth in trout are uncertain.

The New Zealand mudsnail is expected to have negative impacts on the trout, but the actual effect is unknown. In 2002, Arizona Game and Fish adopted new regulations to reduce the population size in an attempt to increase trout condition. Water releases from the Glen Canyon Dam have been manipulated in a variety of ways in an attempt to help the trout fishery. The success of the fishing regulation changes and dam release manipulations are still uncertain.

Sedimentation Studies

The Aquatic Resources Management Branch participated in cooperative investigations with the Bureau of Reclamation, University of New Brunswick, and Duke University to map new sediment and measure turbidity currents in Lake Powell during 2001, 2004, and 2005. The processes governing sedimentation of Lake Powell are unique and have strong implications for management and development. Sediment accumulated in the inflow, now exposed by low lake levels, is being transported long distances down-lake. Biological and chemical oxygen demand and chemical contaminants released from re-suspended sediments play a large role in water quality, ecosystem health, and contaminate fate. A scientific paper based on the cooperative research at Lake Powell was accepted in 2007 for publication in the scientific journal *Geology*.



Mapping Sediment

Lake Powell Cooperators Group



The Lake Powell Cooperators group has met each year since 1990. The annual meetings create an opportunity for information exchange and fostering partnerships between agencies active on Lake Powell. Formalized by a Memorandum of Understanding in 1998, signatory agencies include the NPS, U.S. Geological Survey, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, Utah Division of Environmental Quality, Utah Division of Wildlife Resources, Arizona Division of Environmental Quality, Arizona Game and Fish, and Navajo Nation Environmental Protection Agency. Other participants include U.S. Bureau of Indian Affairs, U.S. Coast Guard Auxiliary, Utah Department of Health, Utah Parks and Recreation, Southwest Utah Public Health Department, Coconino County Department of Health, Grand Canyon Monitoring and Research Center, Northern Arizona University, Utah State University, University of Utah, Navaho Generating Station, and ARAMARK.

TERRESTRIAL PROGRAM

Grazing Management

Administration and Planning

Range ecologist, Steven Bekedam, took one furlough period (one pay period) during FY2006, one in June and one in September. Currently, due to workload requirements, Steven's furlough is being waived for FY2008.

FY2007 was the sixth year in which grazing fees were collected by Glen Canyon NRA. We collected \$3,000 in FY2002 and \$17,000 in FY2003. In FY2007, we received a total of \$21,500 from May through September. Approximately \$19,000 was used to support salary costs of the range ecologist; the remaining funds were spent on several pieces of field equipment and park administration needs.

We made progress with the lawsuit filed by several environmental groups against the Department of Interior in the summer of 2005. In September 2006, the court ruled against the NPS on a claim concerning inadequate NEPA and NHPA analysis and compliance for the park's 1999 Grazing Management Plan. To appease the court on the NHPA claim, the NPS entered into a Programmatic Memorandum of Understanding with the UT State Historic Preservation Officer (SHPO) to address compliance requirements. The NPS will work with SHPO to achieve full compliance on any upcoming projects and planning efforts. Park staff also made significant progress with redoing the cumulative impact analysis of the 1999 Grazing Management Plan EA. The resource division staff worked extensively with the park environmental specialist to develop a matrix of impacts. The environmental specialist also began working with the regional office staff to finalize the impact analysis in a reasonable timeframe.

All surrounding field offices of the Bureau of Land Management (BLM) continued to work up draft revisions of their existing Resource Management Plans. Final drafts are not expected until

fall of 2008. Glen Canyon NRA range ecologist continued to serve as primary contact for agency cooperation on this effort. Most comments being submitted by Glen Canyon NRA are centered on grazing and mineral administration across park lands.

The Grand Staircase-Escalante National Monument Office of the BLM has been preparing a Rangeland Health EIS since 2001. Draft chapters of this effort were reviewed with state and national BLM offices in November of 2005. Although a draft of the plan was to be released for public comment in February of 2006, it remained on hold until September of 2007. The Monument staff are currently scheduling additional cooperators meetings to finalize the document.

Inventory and Monitoring

Emily Palmquist, intern from the Chicago Botanic Gardens, assisted with ongoing grazing monitoring efforts in April of 2007. Adding to the field sites selected and sampled in FY2006, five additional sites were located in the Soda Allotment and sampled using similar protocols. Data included forage cover, density, and frequency and litter, bare ground, and cryptobiotic soil cover. The range ecologist is continuing to use this data to refine sampling techniques and study design for an upcoming region-funded monitoring effort in FY2008/09.

Annual Management of Livestock:

During the 2007 grazing year (June 2006 through May 2007), the Glen Canyon NRA region received close to average rainfall. Most livestock permittees continued similar numbers to the previous year, running approximately 75 to 85% of normal herd sizes on average. Allotment visits were made in the early spring primarily to those allotments along the Escalante River. We found vegetation trend stable at most locations. Utilization measurements read 40 to 50% for many grasses and 30% for browsing on shrubs, both generally within acceptable levels of forage use.

Because water levels again declined at Lake Powell from September to April, livestock were monitored to restrict their access to unauthorized areas. First, the Castle Rock fence was again extended in the Castle Rock area to prevent livestock from accessing Antelope Island. Second, cattle monitored so they did not access Halls Creek Bay area from lower elevations of the Waterpocket Allotment (by heading southwest from the Bullfrog North campground). Cattle are not authorized for Halls Creek.

Lake water levels then increased 25 feet from April to August of 2007. As a result, fencing constructed the previous winter in the Castle Rock area needed to be removed to prevent the fence from becoming a recreational hazard. The range ecologist actively monitored and removed fence sections when necessary from April through June.

The range ecologist made significant progress on a FLREA project to remove and exclude livestock from the Bullfrog developed area and marina (PMIS project #119565). A fence effectively excluding livestock near the Bullfrog school fell into disrepair in 2003. The range ecologist first attended Contracting Officer's Representative Course in February 2007. He then developed a detailed scope of work for the fence and cattleguard with the assistance of the park

facilities division and park engineer. Finally, he worked with the contracting officer to initiate simple acquisition procedures. A contractor was chosen in September. A preconstruction meeting is scheduled for October 2007 and the project is to be completed by January of 2008.

In November 2006, park staff became aware of maintenance activity at a well site along Hole in the Rock Road. Without prior park approval, we requested that work cease until a proposal was submitted and an assessment could be performed. In March, we received a proposal requesting solar panels, a new transmission line, and a water trough be installed at the site. Provisional use was granted in September prior to fall turnout. Placement of the panels and water catchment still need subsequent approval.

Three additional spring proposals were submitted to us in March for Lay Spring, Cave Spring, and Point Spring on Grand Bench. From August through September, natural and cultural resource assessments and surveys were performed (photos on next page). Water production



Figure 1. Glen Canyon NRA resource staff at Cave Spring, Grand Bench (25 September 2007).



Figure 2. Glen Canyon NRA resource staff measuring spring output from a livestock trough at Lay Spring, Grand Bench (25 September 2007). was also measured at both Cave and Lay Springs on two occasions. Water flow was on the order of five to 7 times less than what had been measured or predicted several years prior. A technical request was made to determine the extent and persistence of seemingly shallow aquifers at both Cave and Lay Spring. NPS staff continued to work with the BLM and permittees on Grand Bench to negotiate the repair of both springs and determine annual livestock use of the area based on water and forage availability.

TERRESTRIAL PROGRAM

Grazing Management

The botanist continued to supervise and direct the goals and objectives of the GLCA grazing management program, directly supervising the range ecologist Steven Bekedam.

Exotic Plant Control

In FY2006 the seasonal Escalante Sub district Ranger, William Wolverton, continued tamarisk and Russian olive control work in the Escalante region. He also led or co-led six exotic plant control trips. An additional 3.8 miles of the Escalante River corridor was cleared, for a total of 36 miles of the river corridor cleared. Work trips were conducted by the Wilderness Volunteers, the Sierra Club, and Utah Conservation Corps. Tamarisk and Russian olive have also been eradicated from Willow Gulch, Fort Mile Gulch, Davis Gulch, 1 mile in Harris Wash, and 6 miles in Choprock Canyon.

Overall, 2,140 hours of volunteer work was conducted in Glen Canyon NRA on the Escalante River and side canyons. This volunteer effort is equivalent to \$38,520 of in-kind support at \$18.00/hour.

On March 9-10, the Botanist coordinated an exotic plant control project at Lee's Ferry with volunteers from Grand Canyon NP, to eliminate African mustard, Russian Olive, and Ravenna grass. In all, >20,000 plants were removed.

Despite filling out application requests for help on Ravenna grass control around Lake Powell from the Exotic Plant Management Team at Petrified Forest NP, no EPMT-related work was accomplished in 2007.

Terrestrial Inventory and Monitoring

The Botanist, as a member of the Inventory & Monitoring technical steering committee, continued to provide assistance to the Southern Colorado Plateau Network (SCPN) on development of upland, riparian and water quality protocols and site selection in the NRA.

The 10th annual Glen Canyon Christmas Bird Count was held on January 3, 2007. Twenty enthusiastic birders attended, with 81 species and 15,872 individuals counted. Two species new to the count were recorded; short-eared owl and Virginia rail. The number of species seen on the CBC reached 136.

Restoration

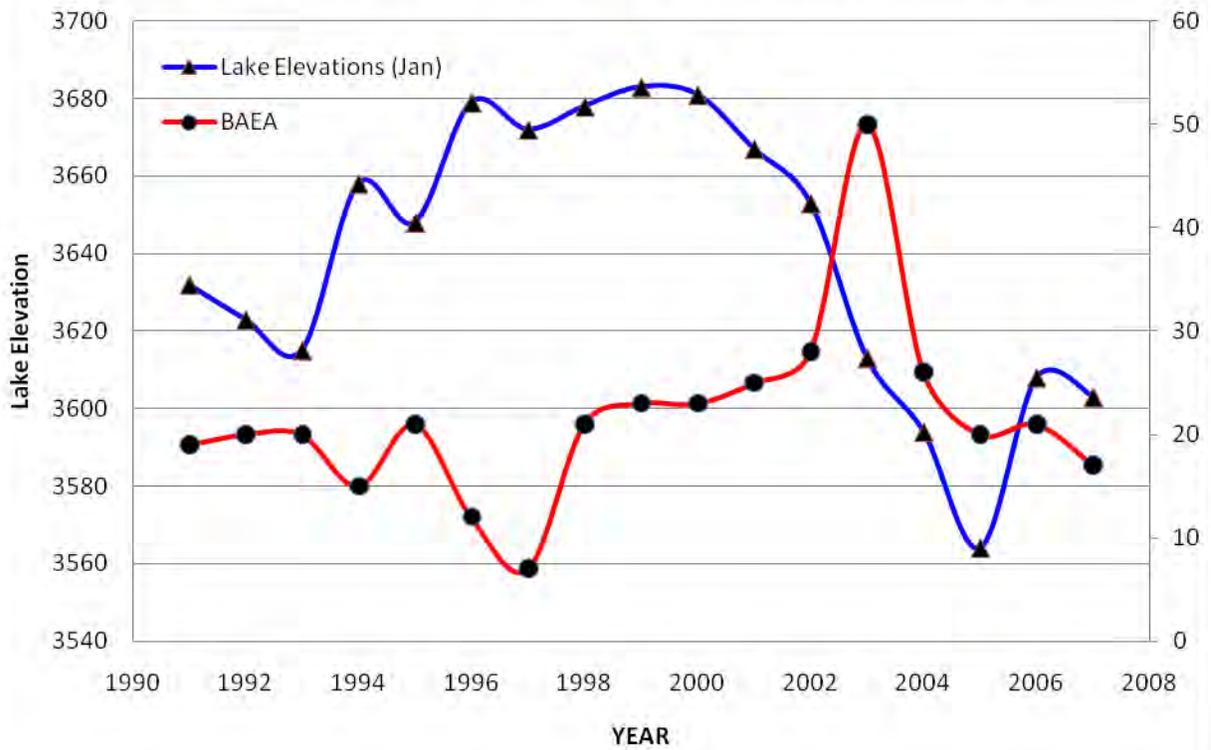
Resource Management obtained funding in 2005 through the NPS NRPP-Disturbed Lands Program to restore three springs damaged by livestock grazing activities in Glen Canyon NRA. In 2007 the springs were re-visited and monitoring transects read again. An intern, Emily Yost, was hired from the Tehabi Program to work on the project. Final field work and collection of monitoring data was accomplished in July at the three springs. The final project report is being prepared.

A seeding mix was prepared in coordination with Professional Services to restore the old hotel site at the junction of North Lake Powell entrance and Highway 89.

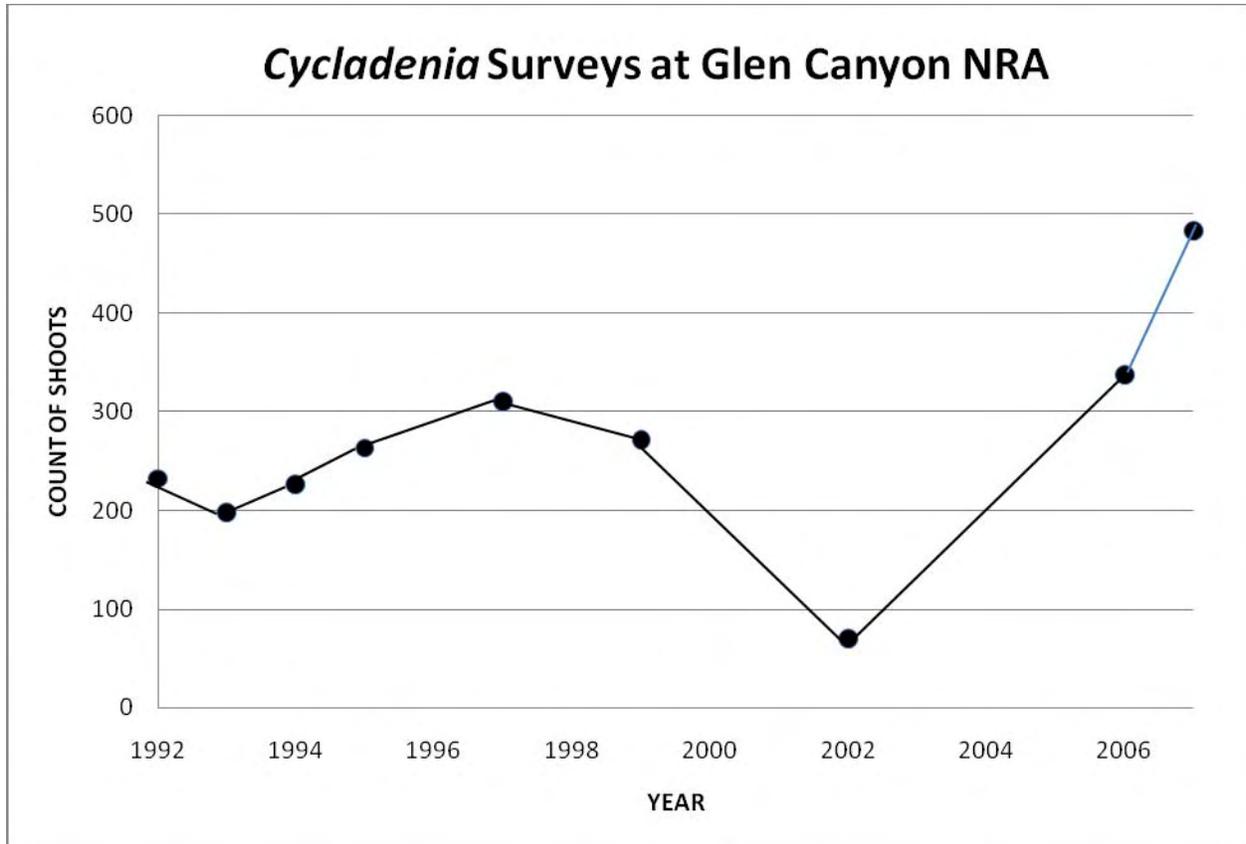
T&E and Sensitive Species

Aerial bald eagle monitoring was completed in January of 2007, with 17 bald eagles and three golden eagles counted. Although numbers remain low, the species is overall doing well in North America, and the drop in lake Powell may be related to reservoir declines and loss of prey species.

Bald Eagles and Lake Elevation in January



A draft monitoring plan for the listed threatened *Cycladenia humilis* var. *jonesii* was prepared and presented at an inter-agency meeting with the U.S. Fish & Wildlife Service. Numbers appear to be increasing after a long-term low of <100 shoots (ramets) in 2002.



Surveys were conducted for the G2 species *Camissonia atwoodii* in October of 2006. Several new populations were discovered in Rock Creek Canyon. Potential habitat was also seen on the south side of Lake Powell on Navajo Nations lands in Arizona.

Funding was obtained in 2007 to host a workshop on Southwestern rare plants. The workshop was completed in December at Northern Arizona University, Flagstaff, with 40 experts from throughout the Southwest attending. Participants included tribal representatives, state agencies, US Forest Service, the Bureau of Land Management, the National Park Service, the US Fish & Wildlife Service, the US Geological Survey, university academics, and private consultants. The workshop was well received, and a draft Southwestern Rare Plant Action Plan was drafted.

Glen Canyon NRA successfully competed to host an intern from the Chicago Botanic Gardens between October 2006 and April 2007 on a variety of rare plant data projects, including field surveys, support on the Southwestern Rare Plant Taskforce workshop, and field surveys. This collaboration was highly successful and will produce several important reports and papers currently in preparation.

NEPA/Planning

The botanist provided support on or was involved in:

NEPA Committee reviews
Integrated Pest Management Plan and EA
OHV Environmental Impact Statement and Plan
Avian Flu Coordinator for GLCA April-September 2007

External Agency and Interagency Research and Coordination

The botanist organized or was involved in the following:

Southwestern Rare Plant Taskforce Workshop; December 6-7, 2006.
U.S. Geological Survey workshop on grazing indicators research; January 20, 2007
US Fish & Wildlife Service status review of *Cycladenia humilis* var. *jonesii*
BLM Grand Staircase-Escalante NM rangeland health EIS
Arizona Important Bird Area Program scientific committee
Arizona Game & Fish Department-NPS project on recovery of northern leopard frogs in AZ.
Taught a 4-day short course at Northern Arizona University on “Introduction to Bryophytes”,
June 5-8, 2007.
NPS-Northern Arizona University Bryce Canyon NP forest inventory project June-August, 2007.
The Botanist continued floristic and taxonomic research on the Bryophyte Flora of North
America.

Training and Meetings

The botanist attended the following training and meetings:

Utah Ornithological Conference, September 7-9, 2007: presented a talk titled the “Birds of
Lake Powell”
Completed IT Awareness, IT Security, EEO and Sexual Harassment, NPS Focus, NPS
Records Management, PMIS 2

Selected Publications

Floyd, M.L., W.H. Romme, D.D. Hanna, M. Winterowd, D.Hanna, and J.R. Spence. Fire History
of Piñon-juniper Woodlands on Navajo Point, Glen Canyon National Recreation Area, USA.
Natural Areas Journal 28: 26-36.

Spence, J.R.. 2008. Monitoring the riparian breeding bird community along the Colorado River
in the Greater Grand Canyon Region: statistical power and lessons for long-term monitoring. Pp.
171-184. In van Riper, C. III and M.K Sogge. Colorado Plateau III. Biophysical, socioeconomic
and cultural research. Proceedings of the eighth biennial conference. University of Arizona
Press,
Tucson.

Research Coordination

The botanist was given Research Coordination as a collateral duty in May of 2007. There were 32 active permits during FY2007. A quarterly summary report to the Superintendent was instituted. The following concerns were documented, to be solved in FY2008:

Revised GLCA-specific special conditions on safety and dispatch contact.

Revised NEPA coordination process.

Placing active permits list on home page (see attached example below for 2008).

Determine how other NPS units with extensive research coordination and permitting experience deal with various permit issues.

CURRENT RESEARCH AT GLEN CANYON NATIONAL RECREATION AREA

Last Updated: February 15, 2008

PI Name	Research Title	PI Email	PI Affiliation
Skip Ambrose	<i>Acoustic Monitoring in Glen Canyon NRA</i>	skipambrose@frontiernet.net	Sandhill Consulting
Richard Barclay	<i>Deep time climate change in the Dakota Sandstone</i>	Barclay@earth.northwestern.edu	Northwestern University
Michael Berry	<i>Implementation of a mitigation plan for historic properties in Glen Canyon NRA and Grand Canyon NP</i>	mberry@uc.usbr.gov	Bureau of Reclamation
Anne Brasher	<i>Support of aquatic macro-invertebrate monitoring in Glen Canyon NRA</i>	abrasher@usgs.gov	U.S. Geological Survey
Michael Burney	<i>Soil Survey of Glen Canyon NRA</i>	mike.burney@az.usda.gov	Natural Resource Conservation Service
Robert Busby	<i>EarthScope/USArray transportable array seismic station</i>	busby@iris.edu	Earthscope Consulting
Marjorie Chan	<i>Anomalous Jurassic sandstone in southeastern Utah</i>	machan@mines.utah.edu	University of Utah
Charles Drost	<i>Population status and viability of <u>Rana pipiens</u> in Glen Canyon NRA and Grand Canyon NP</i>	charles_drost@usgs.gov	U.S. Geological Survey
James Enderson	<i>Peregrine falcon monitoring on Lake Powell</i>	jenderson@coloradocollege.edu	Colorado College
Elizabeth Fuller	<i>Monitoring organic drift using hydroacoustics</i>	aefuller@usgs.gov	U.S. Geological Survey
Phil Geib	<i>Radiocarbon dating of the Doughnut Alcove wooden tool cache</i>	phil.geib@nau.edu	Northern Arizona University
Kristin Haskins	<i>Ex situ conservation of populations of vulnerable plants on National Park Service lands</i>	kristin.haskins@nau.edu	Arboretum at Flagstaff
Kara Hilwig	<i>Evaluate the future effects of a high flow on adult rainbow trout distribution in Glen and Marble</i>	khilwig@usgs.gov	U.S. Geological Survey

	<i>Canyons</i>		
Rossman Irwin III	<i>Geomorphology of theater-headed valleys: process/form relationships in analogs to Martian valley networks</i>	irwinr@si.edu	Smithsonian Institution
Matthew Kaplinski	<i>Long-term monitoring of high elevation campsites and sandbar morphology in the Colorado River ecosystem in Glen and Grand Canyons</i>	mat.kaplinski@nau.edu	Northern Arizona University
Theodore Kennedy	<i>Linking whole-system carbon cycling to quantitative food webs in the Colorado River, Glen Canyon NRA</i>	tkennedy@usgs.gov	U.S. Geological Survey
Josh Korman	<i>Evaluation of fluctuating flows from Glen Canyon Dam on the early life-stage survival and recruitment of rainbow trout in the Colorado River</i>	jkorman@ecometric.com	Ecometrics Inc.
Adam Majeski	<i>Fluvial systems tied together through a common base level: the geomorphic response of the Dirty Devil River, North Wash Creek, and the Colorado River to the rapid base level drop of Lake Powell</i>	amajeski@gmail.com	Utah State University
Chuck McAda	<i>San Juan River main channel fish community monitoring</i>	chuck_mcada@fws.gov	U.S. Fish & Wildlife Service
Andrew Miall	<i>The paleohydrology and event significance of selected interdune deposits and soft-sediment deformation features in the Navajo Sandstone of the Glen Canyon region</i>	miall@geology.utoronto.ca	University of Toronto
Stephen Monroe	<i>Long-term monitoring of aquatic macro-invertebrate communities in streams of Glen Canyon NRA</i>	Stephen_Monroe@nps.gov	National Park Service
Susan MacVean	<i>Establishment of northern leopard frog refugium populations</i>	smacvean@azgfd.gov	Arizona Game & Fish Department
Greta Orris	<i>Investigation of the occurrence and distribution of naturally-produced perchlorate in areas of minimal anthropogenic impact</i>	greta@usgs.gov	U.S. Geological Survey
James Page	<i>Authentication and documentation of an inscription from the 1776 Dominguez-Escalante expedition</i>	leavenotrace2003@yahoo.com	National Park Service
Victor Parslow	<i>Soil survey of the Orange Cliffs, Canyonlands NP and Glen Canyon NRA</i>	Vic.Parslow@ut.usda.gov	Natural Resource Conservation Service
Joel Pederson	<i>Incision and geomorphic evolution of the Grand Canyon region</i>	bolo@cc.usu.edu	Utah State University

William Persons	<i>Monitoring the rainbow trout fishery of the Colorado River downstream from Glen Canyon Dam to the Paria River confluence in Glen Canyon NRA</i>	bpersons@gf.state.az	Arizona Game & Fish Department
Michael Scott	<i>Pilot studies to inform riparian monitoring protocols: refinement of site selection methods and field trials of proposed monitoring methods</i>	Mike_L_Scott@usgs.gov	U.S. Geological Survey
Juddson Sechrist	<i>Fisheries hydroacoustic surveys at Glen Canyon Dam</i>	jsechrist@do.usbr.gov	Bureau of Reclamation
Nike Stevens	<i>Bighorn sheep transplants onto the Navajo Nation adjacent to Glen Canyon NRA</i>	stevenswildlife@earthlink.net	Stevens Wildlife Consulting
Richard Webb	<i>Image analysis of historic photographs and repeat photography: integrating diverse Department of Interior interests</i>	rhwebb@usgs.gov	U.S. Geological Survey
Richard Wildman	<i>Effects of desiccation on sedimentary trace metal mobilization in Lake Powell</i>	Wildman@caltech.edu	Caltech Institute
Michael Wilson	<i>Annual forestland inventory of Arizona and Utah</i>	mjwilson@fs.fed.us	U.S. Forest Service

AMERICAN INDIAN LIAISON

Consultations:

- Planning documents; Lees Ferry Improvement Project, Colorado river Restoration, Navajo Mountain Radio Repeater /Transmitter Station, City of Page Water Intake, Salt River Project Water Intake improvement Project, and Castle Rock Cut Proposal. For each of the planning documents, consultation with Park affiliated tribes/nations including the Navajo Nation chapters was provided.
- The Rainbow Bridge National Monument's Native American Consultation Committee had their annual meeting along with trip to the Monument.

Ongoing projects:

- Language translation from Navajo to English for those people inquiring about jobs, and other park related issues (including plant and entrance fee collections) has been readily available.
- Ten tribal meetings were attended representing the Park Superintendent with an exception of the San Juan Southern Paiute Tribe (had internal problems) of the affiliated tribes/nations including the Navajo Nation chapters surrounding the park.
- NAGPRA Project-No major activity or inadvertent discovery during the year. However, meetings among the New Mexico Pueblo groups were attended. Those Pueblo groups included the San Juan Pueblo, Nambe Pueblo and Acoma Pueblo in regards to collection inventories.

- Pauline is often invited to other Native American Indian communities' activities and functions as a representative of Glen Canyon NRA and Rainbow Bridge National Monument.

Liaison assistance to other parks and agency:

- Navajo National Monument's inquiries about certain Navajo Indian ceremonial activities in the park and Shonto Chapter meetings.
- Capital Reef National Park assisted the Park Archeologist on Navajo Nation Chapter contacts in Oljato, Navajo Mountain Chapters.
- Department of Justice-Voters' Rights Program requested help from American Indians that are bilingual in Navajo/English languages. Implementation of Civil Rights Act required observations of ballot polling sites that area targeted with concerns and deficiencies and in 2007, assistance was provided through the Office of Personnel Management.

Other:

- Page Unified School District's Indian Education Program.
Tuba City Unified School District-Gap Preschool in Gap,

Branch of Interpretation

BUDGET

Glen Canyon ONPS	\$476,343
Rainbow Bridge ONPS	\$ 46,218
Total ONPS	\$522,561



STAFFING

6.4 Permanent FTEs
2.3 Temporary FTEs
8.7 Total FTEs

VISITOR CONTACTS

Carl Hayden Visitor Center	370,288
Navajo Bridge Interpretive Center	46,426
Bullfrog Visitor Center	3,499
Formal Interpretation	12,454
Informal Interpretation	51,866
Special Events	1,921
School Programs	1,733
Junior Ranger Programs	1,378
Total Interpretive Contacts	<u>489,565</u>

PARK-WIDE CHALLENGES AND ACCOMPLISHMENTS

This was the third year that Interpretation operated as a branch in the Interpretation & Resource Management Division. Staffing and budget were somewhat similar to 2005. Matrix scheduling was expanded from Wahweap to other districts and sub districts allowing us to maximize the use of our staff. Interpreters made over 64,000 contacts in Glen Canyon NRA and Rainbow Bridge NM in 2007.

Program Changes

We continued placing interpreters on concession-operated river trips and tour boats on Lake Powell. Because staffing was virtually the same, we spent about the same number of hours and contacted about the same number of visitors as in 2006.



In 2007, we also began to expand our Night Sky/Astronomy programs. The purchase of a solar scope for the Carl Hayden Visitor Center led to increased opportunities for astronomy-based programs during the day. We also purchased a good quality night sky telescope and began doing some night time star programs. Richard Blake, an astronomy VIP from Bryce Canyon spent a month in the park conducting programs both at

Wahweap and Bullfrog. He also provided training to Glen Canyon interpreters on night sky interpretation. The park also received a visit from Dan Duriscoe of the NPS Night Sky Team. Dan did a night sky assessment in some remote sections of the park, including Rainbow Bridge. He declared that Glen Canyon NRA has some of the most pristine night skies in the lower 48 states. The team will be making return visits in the future.



By virtue of a grant from the NPS Public Health Division, we were able to restore part of our water quality and safety education program. The branch received \$10,000 from this grant. The money was used to hire a seasonal interpreter who was dedicated to making educational and interpretive contacts with shore line campers. These contacts emphasized the park's portable toilet regulation, proper waste disposal methods, anti-graffiti messages, and recreational safety. Though complicated by boat problems, this position contacted over 500 camps in about 7 weeks. This was the only consistently scheduled ranger on the water.

The branch also completed its first Comprehensive Interpretive Plan. This plan allows for both short and long-range planning, provides new interpreters with a clear picture of goals and themes, and provides management with a detailed work plan for the year.

Both Glen Canyon and Rainbow Bridge were selected to participate in the Visitor Survey Project conducted by the University of Idaho. This survey provided an exhaustive look at park visitors, their demographics, expectations, likes and dislikes. A spring and summer survey were conducted for Glen Canyon and a summer survey was done for Rainbow Bridge. Interpreters and volunteers made up the majority of the surveyors. Results of the survey should be available in FY08.

Media Production

We continued our work on the park's web pages. Several new pages were added, while others were improved. Betsy Scroggs, Interpretive Specialist, spent many hours assisting Resource Management personnel in developing several new natural resource pages.

Major interpretive publications projects included the park newspaper, large-scale posters for special events, and a new set of revised waysides for Lakeshore Drive. Older site bulletins were revised and new ones added. For the first time, flyers for every interpretive program were produced ahead of the event to maximize the number of people attending these events. In all, over 50 publications were produced.

Employee Highlights

Long-time employee and Downlake District Interpreter Eileen Martinez accepted a position as Chief of Interpretation at the USS Arizona Memorial. This fulfilled a life-long ambition of Eileen's to work in Hawaii.

Two permanent employees were converted from subject-to-furlough to permanent full-time. Both employees were central to the operation of the Carl Hayden Visitor Center. This is a seven-

day, year-round operation. Conversion was made on the basis of improving employee morale, operational efficiency, and visitor service.

DOWNLAKE DISTRICT

Carl Hayden Visitor Center

Rangers provided short programs on a wide variety of natural and cultural topics with concentrations on endangered species (specifically endangered fish of the Colorado River), Western water issues, water conservation, water quality, and political, economic, and social influences of the drought and water use. Other major topics focus on the paleontology and fossils resources of Glen Canyon, geology, astronomy-night sky and solar, archeology of the region, and general geographic orientation. Programs were delivered through media presentations, talks and demonstrations.

The solar scope was set up 2-3 days per week in front of the Carl Hayden visitor center with crowds of people glimpsing at the prominences. Our Astronomy Volunteer, Richard Blake, conducted most of the programs. The solar scope will be a regular part of the interpretive programming as soon as all interpretive staff is trained on its use.



- Solar program-September 15 programs @ 25 people/program ~375
- 1 program 4 days/week October-March Total: 100 programs ~500 contacts
- 2 programs 6 days/week April-May approx. 48 programs ~480 contacts
- 2 programs 7 days/week June-September 120 programs ~ 1200 contacts

Wahweap Sub district

Once again, interpreters offered a variety of programs at several different locations. Interpreters expanded programs at Horseshoe Bend, Dam Overlook, tour boats and river trips.



The highlight of the summer for short programs was the **Kids Water Safety Kayak Program (KWSK)** in August. The Kid's Water Safety Kayak program was a huge success with kids and parents and was the first program offered in the park of this type. This program will be continued next season with more regularity per week. The KWSKP owes much of its success to the support from the concession interpretive specialist who helped provide free kayaks during the use of the programs and the location of program was within easy walking distance of the lodge.

- Kids Water Safety Kayak- August
5 programs @ 15 kids/program ~75 kids plus 30 parents=105 contacts

Informal talks at these trailhead locations consists of walking a ¾ mile long trail to the rim edge of the Colorado river and speaking with visitors about the historical and current uses of the river corridor, dam issues and endangered bird species-Condors and Eagles. The Dam overlook and Horseshoe Bend trails are visited by 100's of visitors per day so these locations maximize our contacts with more land based visitors.

- 3 days/week October-March 60 programs @ 10 people ~1200 contacts
- 5 days/week April-May 50 programs @ 10 people ~500 contacts
- 7 days/week June-September 120 program @ 50 people ~6000 contacts

Evening programs are delivered 3-4 nights per week on a variety of topics at the newly constructed outdoor amphitheater and the Wahweap lodge. The most attended programs were the Night Sky programs with 75-100 visitors each program. Some of our programs are conducted at the Wahweap Lodge for bus tour groups.

- 3-4 nights/week May-August 52 programs @ 20 people ~1000 contacts
- 2 nights/week September Night Sky 10 programs @ 70 people ~ 700 contacts.

Boat tours require close coordination with NPS business management and the Interpretive specialist of the concession. Rangers are scheduled to ride several different tour boats in the downlake portion of the Glen Canyon. Working closely with our concession's Interpretive Specialist helped in smoothing out the scheduling process. Rangers were put on the shorter boat tours to maximize effective use of our limited staff. Rangers work closely with the Captains when addressing the visitors. Rangers speak on a variety of topics, present Jr. Ranger programs, and share natural and cultural history stories. Visitor comments demonstrate that visitors appreciate rangers aboard these vessels. The hope is that we can continue to be involved in boat tours leading towards a more formal agreement with our concessionaire. This is a good venue to increase our contacts with visitors within the resource.

- 1-2 days/week April-May 10 trips @ 40 people @ 400 contacts
- 3-4 days/week June-August 40 trips @ 50 people @ 2000 contacts
- 1 day/week September 4 trips @ 50 people @ 200 contacts.

River trips require close coordination with NPS business management and the Interpretive specialist of the concession. This is a favorite assignment for every interpretive ranger since they are on the Colorado River for the entire day with large groups of visitors and expert concession river guides. Rangers work closely with the river guides on sharing the interpretive talks while in the raft and on land at the archeological site. Good interpretive skills and in-depth knowledge of the resource are extremely important on these trips. Rangers are required to



study and understand topics relating to the geology, botany, archeology and water issues of the river corridor. March and April are shoulder months for the trips with 3-4 rafts daily floating the river. Rangers get on the earliest morning float trip, stay at the petroglyph panel for several hours then ride back on a raft to where they started. Rangers may come in contact with as many 4 rafts

full of people per day. The River operation provides service March-November to about 40,000 visitors. With increased staff, rangers would be about to contact possibly as many as 20,000 visitors during the rafting season.

- 1-2 trips/week March-May 12 trips @ 100 people contacts per trip ~ 1200 people
- 3-4 trips/week June-Sept. 48 trips @ 150 people (more rafts daily) ~7200 contacts
- 1-2trips/week Oct-Nov. 6-8 trips @ 80 people ~ 640 contacts

Lees Ferry Sub district



Lees Ferry visitation increased 6.1% from 196,219 in 2006 to 208,188 in 2007. The Lees Ferry Sub district is staffed by one seasonal interpretive ranger. As the sole interpreter in the sub district, that employee managed the area and provided a complete interpretive program, which included a wide variety of personal and non-personal interpretive services for the visitors.

The Navajo Bridge Interpretive Center (NBIC) was open April 01 through October 21, 8 hours daily, 7 days a week. During that time 45,662 visitors came through the doors; of which 3,840 of those visitor arrived on 119 tour buses. The NBIC was staffed by two NHA employees with oversight by the NPS. The Lees Ferry interpretive ranger provided information desk coverage 4 to 5 days weekly, in addition to providing roving interpretation and 15 minute talks on the bridge. The bridge is a draw for visitors in search of the elusive and endangered California Condors. These birds frequent the bridge between March through June and September through November.



In 2007, Glen Canyon NRA became active in the Teacher-Ranger-Teacher (T-R-T) program. The T-R-T employee was stationed at Lees Ferry for 8 weeks, and assisted with staffing the Lees Ferry Sub district and the Navajo Bridge Interpretive

Center (NBIC). As with any position, there was time invested for training; however, it allowed

us to staff the bridge one day a week and provide lunch and desk coverage 7 days a week, and offer more talks at the NBIC in addition to those already scheduled. This position brought many new challenges to the sub district such as housing and vehicle issues. In Mrs. Marvin's own words, "There were so many enjoyable experiences. Getting the behind the scenes of the parks and the intimate involvement with one park were enjoyable and will be of immeasurable value to me as a private individual and as an educator."

The Lees Ferry area draws many visitors looking to trace the roots of their heritage along the Arizona Road and the Honeymoon Trail. Ranger Deanne Haut took the opportunity to collect information from those visitors in addition to disseminating and researching information to compile 11 historical packets/projects for the season. The acquired stories and photos have added greatly to the area's history and interpretive programs, guided walks and talks. This is a continuing project and the hope is to collect more histories to gain a better understanding of the area.

In addition to normal duties the interpretive ranger is also trained in emergency medical services at the EMT level, SAR, and is a Level II Fire Fighter; and, as such, has handled and/or assisted with medical responses, SAR's, and fatalities both inside the park and assisting other agencies that border the park. Due to limited staff size, the interpretation division assists LE, maintenance, resource and fees on those days they are not in the area.

In 2007, the river corridor tested positive for Whirling Disease. In conjunction with the NPS resource division and AZGF, the Lees Ferry staff assisted with developing handouts, signage and disseminating information to visitors.

The Lees Ferry ranger and the T-R-T ranger offered a variety of talks, guided walks and evening programs at the NBIC, the developed area and on the river corridor. Family reunions, school, church, Boy Scout, Girl Scout groups frequent the area requesting activities and programs. The resource division staffs a historical restoration maintenance employee at Lees Ferry. As this person is on site, he also provides interpretation as a part of his duties. Unfortunately, his contacts are not recorded as part of the interpretive statistics.



Colorado River Discovery Concession transports approximately 50,000 visitors annually down the river to Lees Ferry. Interpretive rangers made concerted efforts to meet the boats and welcome visitors to the area prior to their loading the buses. Many times this is the tour boat visitor's only opportunity to contact a ranger in GLCA. These visitors are not counted as visitor contacts due to the short time spent with any individual.

Total contacts for the Lees Ferry Interpretation: 3,895.

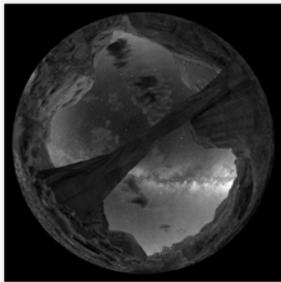
- Talks and Guided Walks: 66 visitors @ 2.5 hrs

- Informal Talks: 625 visitors @ 20.75 hrs
- Formal Talks: 289 visitors @ 12.0 hrs

Total WKS/TKS/PRO: 66 980 visitors @ 35.25 hrs

Dangling Rope/Rainbow Bridge Sub district

In 2006, Rainbow Bridge marked the 100 year anniversary of the Antiquities Act. There are other upcoming centennials to commemorate in the near future at Rainbow Bridge National Monument. Rainbow Bridge was discovered by the Douglas/Cummings Discovery Party on August 14, 1909. May 30, 2010 will mark the 100th anniversary of the proclamation by President William Howard Taft, utilizing the Antiquities Act that designated Rainbow Bridge as a National Monument. Strides were made in 2007 towards commemoration of the two upcoming centennials which included the formulation of interpretive projects such as podcasts, PowerPoint presentations, and compilation of historic photo archives.



Seasonal interpreter Jonathan Parker led members of the NPS Night Sky team to various up lake locations, including Wilson Mesa, Dangling Rope and Rainbow Bridge, to conduct night sky research. Parts of the park, including Rainbow Bridge, were found to have some of the lowest levels of artificial light recorded in the lower 48 United States to date.

Interpretive operations at Dangling Rope and Rainbow Bridge consisted of ongoing daily formal and informal programs offered to tour boat customers and the general public. Visitor safety remained a top priority.

In addition to normal interpretive operation at the bridge, Rainbow Bridge interpreters also participated in numerous medical and emergency responses.

UPLAKE DISTRICT

Bullfrog Sub district:

Visitor Services and Interpretation:

This year the Bullfrog Boat Rentals & Executive Marina were added as an attended station to the schedule. Coordination with the boat rentals manger on heavy departure days helped determine the best days to be down on the marinas. The boat rentals area proved tough at first, but turned out to be a great setting for engaging children about houseboat and powerboat safety. Junior Ranger programs where conducted on the covered courtyard with a focus on water safety. The programs generated a lot of interest and were an effective presence for the NPS. First time visitors also benefited from trip planning and safety tips.



The new ranger desk in boat rentals accomplished several objectives, it got the arrow head and NPS presence on the marinas in Bullfrog, it functions as a fall back station while roving and making contacts with visitors. It is a place for rangers to come back in between contacts and get a break from the mid summer heat. The new plexi-glass brochure holders showcased information on recreation opportunities within the park and adjacent areas.

From May 15 thru September 15 the Marina station was attended 34 days (49.5hrs) and recorded 720 visitor contacts. Limiting factors where the number of surveys conducted this season, which usually impacted the boat rentals and Hite attended stations first.

With reduced cooperating association support, the Bullfrog Visitor Center and bookstore was able to remain open with published core hours of 5 days a week – 7 hours a day. BFVC was open 105 days and received 3,273 visitors from May 15 thru the September 15 season.

Evening programs:

This year the seasonal evening program venue was changed to Defiance House Lodge from the visitor center. Both Tanya and Terry developed 20 minute programs – Tanya on burrowing owls and Terry on paleontology. Tanya’s Burrowing Owl program did not generate any interest, so we worked on a new program regarding the history of fishing here in Glen Canyon, that program was better received. Lessons learned: With a western exposure the back porch venue proved to be too hot.

We moved the venue to the lawn in front of the lodge and changed both Tanya and Terry’s programs to a “Table of Wonder” informal talk format. The combination of shade, informal setting, and the location where people were coming to the restaurant, the shuttle dropping people off and people checking in proved very successful.

We experimented with using the Table of Wonder as advertising for the formal talk as well, this helped Terry’s numbers.

Astronomy Program:

Far and away, the best-received programs were the night sky programs conducted in Bullfrog. Borrowing from the Bryce Canyon Night Sky Team Bullfrog had a three-night program in August and a two-night program in September. Attendance ranged between 20 and 30 plus people.



Projects:

- Designed, planned, and coordinated (with Dan Bishop) the construction of the Bullfrog Boat Rentals Ranger contact desk. Desk was completed and installed in the lobby April 16, 2007.
- Researched and found a volunteer trail crew (Texas Trail Tamers) to rehab the Bullfrog Campground nature trail and Pedestal Alley Trail. Planned and coordinated with the Crew Captain and trail planner over the winter in order to get the project set up for the spring. In April the crew came to Utah and built water bars and check dams on the Bullfrog Trail, reblazed and cairned the trail and built two new reroutes.
- They also re-cairned and re-blazed the pedestal Alley trail on the first ¾ mile part of the trail that follows the desert floor area. The group worked in the park for 5 days.
- Coordinated with maintenance and budget over the winter to get the new international hiking signage installed at both ends of the Bullfrog Nature Trail for the summer season.
- Managed and utilized Troop 99 from Pennsylvania to complete the Upper Bullfrog nature trail rehab and to help clean up the landscaping at the visitor center. In addition the group also was able to remove sand and clean up 8 campsites at loop C in the Bullfrog Developed Campground. The group contributed 4 days of their time to the efforts.
- The Stanton Creek information kiosk was redesigned and installed.
- The Bullfrog Campground and Launch ramp bulletin boards were freshened.
- Hosted a Salt Lake City High Adventure Scout Group in July. The group of 20 brought their own tools and worked on the visitor center landscaping. They cleaned up a great deal of debris and also freshened and installed new decorative landscaping rock in the planters.
- An inventory of all Uplake District Waysides was conducted and documented.

The Bullfrog Resource day was done the last week of the season and was a trip up the San Juan Arm and down to Dangling rope. The trip was a morale booster for all the staff and provided a positive end to the season.

Hite:

Visitor Services and Interpretation:

Hite Overlook as an attended station was added to the schedule this season.

The Hite Overlook was staffed 31 days from May 15 to September 15 with a total visitation of 1669 for the season it was attended. Information brochures about the Park were distributed and rangers were able to interact with visitors and answer questions about the park.

With the views of the Colorado river, Lake Powell and out towards White Canyon and the Orange Cliffs, the Hite Overlook turned out to be a perfect interpretive setting. Informal talks

and walks occurred and rangers were able to tell the Hite story as well as the function of the dam and how a reservoir works.

Hite roving included making contacts at the Hite Ranger station, the river take out, and intercepts with boaters at the Hite and Farley Canyon dirt launch areas.

Projects:

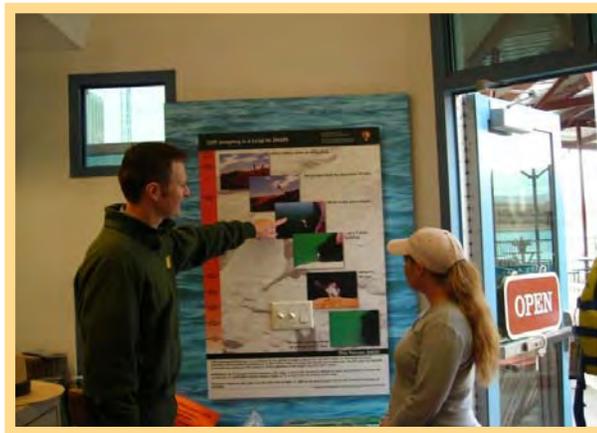
- The Farley Canyon and Dirty Devil information kiosks were completely redesigned and installed.
- The Hite Ranger Station lobby and contact area was completely cleaned and restocked and made ready for the season.
- Installed “Thank You for Visiting Glen Canyon” slicks in Hite restrooms, river take out restrooms and Dirty Devil primitive area Restroom.

The Resource day for Hite was a trip to Blue Notch Canyon and primitive camping area. Tanya and Terry had not been there and visiting the area was beneficial for questions regarding camping and kayaking that the Bullfrog Visitor Center receives.

Halls Crossing:

Visitor Services:

The Halls Crossing Contact station was staffed 68 days from May 15 – September 15, 2007 with a total visitation 3,705 for the season. The Halls Crossing Station proved the best venue for contacting the water-based visitor. The exhibits provided opportunities to give informal talks about safety and the park’s resources. In general the rangers’ time was split between the courtyard and being inside the contact station. Both settings typically blended together during the workday.



of

With the family demographic, the Jr. Ranger program was very successful. At least 227 Jr. Ranger programs and badges were awarded over the May 15 – September 15 season.

The “Table of Wonder” and informal talk format proved particularly successful when it was staged in the covered courtyard as opposed to it being inside the contact station.

The Clay Hills river take-out was intermittently included as part of the Halls rove schedule and offered an NPS presence for the river take out audience at Clay Hills.

The Ferry as attended station and rove duty was added to the schedule this season. The ferry was utilized as rove duty since that was our main form of transportation to get over to Halls. The Ferry was also incorporated as an attended station with the Rangers working two to four trips in a shift. With the Halls Crossing entrance station being closed this summer, the ferry was a great venue for providing visitors and pass through tourists with park brochures and trip planning information.

Projects:

- The Halls Crossing boat launch and ferry landing information kiosks were redesigned and installed.
- The Halls Crossing campground information kiosk was redesigned and installed.
- Halls Crossing Marina information board was redesigned and installed.
- Installed “Thank You for Visiting Glen Canyon” piece in the Clay Hills river take out restroom.

The Resource day for the Halls Crossing Sub district was the Clays Hills River Take Out and Clay Hills pass area and overlook.

Escalante Sub-district:

Increased contact with the Escalante Interagency visitor center was initiated to facilitate visitor information requests regarding that district and specifically to stay on top of road conditions.

The District Interpreter participated in a phone introduction / interview with Dan Fraser the Recreation Planner for Grand Staircase Escalante National Monument. This contact was made to better understand how our neighboring park manages their hiking and backcountry operations since we share a district.

The Resource Day for Escalante was the Hole-in-the-Rock Road and hiking the Hole- in-the-Rock trail down to the lake. This trip also was done in order to document and photograph the wayside exhibits at the bottom and top of the trail.

Other Projects:

An inventory of all the wayside exhibits in the Uplake district was conducted. A conditions assessment and photographic binder was completed and delivered in anticipation of starting the cyclic rehab in 2008.

EDUCATIONAL OUTREACH

Attendance at our educational programs was about 3% less than 2006, possibly due to budget shortages in many schools don't allow them to afford long bus trips. However, the Glen Canyon dam continues to attract schools from all over the world who appreciate the controversial

environmental and political issues surrounding the dam itself as well as drought and water issues of the southwest. We enjoy our ever growing relationship with the NHA/BOR tour staff that help steer teachers in the direction of the NPS Educational Coordinator for ranger programs.

- October -September 2007 Staff provided 81 educational programs, involving 3513 students, from 81 schools. Schools range from Pre-K-University, home school, religious and environmental schools, European and US schools. The majority of students come from Arizona, New Mexico, California.

COMMUNITY OUTREACH



Downlake Interpretive staff participates in several major community and regional events annually. Each event requires a significant investment of time in order to have positive outcomes. The decreased staff during the times when many of these special events take place can make for extremely disproportionate amount of work for few. More staff during the shoulder seasons will be required to bring these events up to their full potential and allow staff to participate in other events as well. Most of the events are

working with partners and other agencies.

- Earth Day/Page Attacks Trash-April 1 day, 2, VIPs', 2 staff, 60-80 staff preparation hours, 500 contacts, 3-4 activities
- Flagstaff County Fair September, 5 days, 3-4 staff, 1-2 VIP's 100 preparation hours, 1800-2000 contacts
- National Public Lands Day September, 1 day, 2 staff, 2 VIP's, 60 preparation hours, 5-10 contacts

VOLUNTEER PROGRAMS

Volunteers performed 12,602 hours of service for the park in 2007. This included over 3,000 hours each for interpretation and resource management. Local volunteers continue to support our interpretive and outreach programs, working primarily in the Carl Hayden Visitor Center.

Volunteers also provided invaluable assistance to our resource management programs, participating in bird counts, water quality assessment, and tamarisk removal in the Escalante region.

Trash Tracker

- 1,427 miles of shoreline cleaned
- 99 volunteers
- 3,328 volunteer hours
- 55,946 pounds of trash picked up

The most persistent problem from last year was the amount of human feces found on the shorelines. On the downlake trips, the volunteers were running into hundreds of contaminated beach sites on each trip. Volunteers are also quite frustrated with the



amount of fireworks they found. Our partnership with ARAMARK remains strong, and for the most part the volunteers were stellar. Season 16 of the Trash Tracker was a big success.

True GRIT

- 1620 square feet of graffiti removed
- 22 volunteers
- 907.35 volunteer hours

Although this season was plagued with mechanical problems leading to cancellations of nine trips, the volunteers that were able to go did an astonishing amount of work. Every day they would hike to the back of a canyon chock full of graffiti, scrub all day, and still take the time to drag all the trash they could carry on the way out. The program just completed its final year of the three-year grant awarded by the National Park Foundation with the generous support of the Tauk Foundation. Other sources for funding have been found due to the efforts of Glen Canyon Natural History Association. Money was tight, considering the amount of maintenance work needed on this older houseboat. Many repairs would not have happened if it were not for the generous donation of parts and services from Skipperliner of Page. Even though the houseboat belongs to Glen Canyon NRA, without our partners the trips would not be possible. We also revved up community awareness, especially with school groups. Despite the mechanical problems, True GRIT was a success in 2007.

GLEN CANYON NATURAL HISTORY ASSOCIATION

Though visitation numbers were nearly flat in 2007, Glen Canyon Natural History Association sales were up nearly 20% in Glen Canyon National Recreation Area visitor centers, and almost 18% overall after we overhauled our inventory tracking and management system. The biggest gains were seen at Carl Hayden Visitor Center with a sales increase of 23.21% on a visitation increase of 3.54% and at Navajo Bridge Interpretive Center, which set a sales record while posting a 27.69% increase on a visitation increase of 3.98%. With these sales increases and some budgetary belt tightening, Glen Canyon NHA was able to bring itself back into the black after five years of struggling since 9-11 and the tightening of security at our primary sales outlet at Carl Hayden Visitor Center at Glen Canyon Dam.

Navajo Bridge and California Condors

One draw to Navajo Bridge Interpretive Center that has become more widely known amongst the visitors to the area is the endangered California Condor; marble Canyon on the Colorado River and the historic Navajo Bridge draw as many as two dozen of these majestic birds at a time during the spring months, often throughout the summer as well. Navajo Bridge rivals Grand Canyon as one of the best opportunities for visitors to the region to observe the Condor in the wild. Wildlife Biologists from The Peregrine Fund, the organization responsible for the Condor release program in Arizona, are often on the bridge to track the birds and provide information to visitors.



Endangered California Condors soar over the Colorado River at Navajo Bridge, and put on a display for visitors to the region.

GRIT (Graffiti Removal & Intervention Team)

In 2007, Glen Canyon National Recreation Area’s Volunteers-in-Parks program GRIT (Graffiti Removal & Intervention Team) was faced with the last year of a three-year grant from the National Park Foundation that had been funding the program nearly since its inception. The GRIT program takes volunteers onto Lake Powell for five day trips to remove modern graffiti carved into the rocks of Glen Canyon NRA by boaters to the lake. This program is based off of the houseboat *True GRIT*, which was donated to the park expressly for this purpose.

With no new source of funds to operate the program identified, Glen Canyon Natural History Association established the GRIT Fund. With the lead of Board President Charlene Bone and Board Member, and *True GRIT* VIP Captain, James Page, Glen Canyon NHA raised \$9,500 in cash and helped secure in kind donations totaling \$18,600 a year from local Page, Arizona businesses to keep this valuable program funded through 2008 and beyond.



True GRIT VIP Houseboat



GRIT VIPs spend 5 days removing graffiti by hand with water and wire brush



GRIT VIPs get to work in an amazing landscape

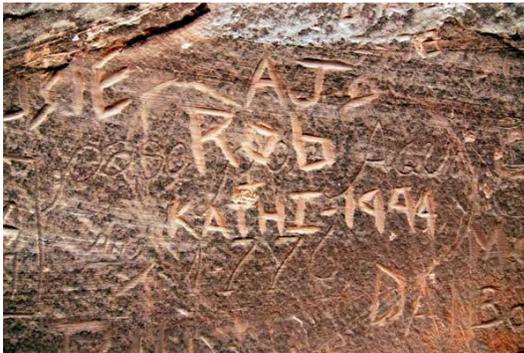


GRIT VIPs use techniques to remove graffiti that helps to match with the surrounding rock

Paso Por Aqui 1776

In September 2006, a GRIT VIP team led by Glen Canyon NHA Board Member James Page (also GRIT VIP Captain) discovered what appeared to be an historic inscription from the 1776 Dominguez-Escalante Expedition that read “Paso Por Aqui 1776”, which translated to Passed By Here 1776. Though the inscription has been seriously marred by graffiti, it is still an amazing sight.

In 2007, Glen Canyon NHA partnered with the local Armijo Chapter of the Old Spanish Trail Association to sponsor the authentication of this inscription. It has been determined that it is most likely authentic and the only inscription from this expedition known to still exist.



“Paso Por Aqui 1776” inscription under modern graffiti



Same photo digitally enhanced to remove modern graffiti and show just historic inscription (digital work by Christopher K. Eaton | Terra Photographica)



Surveying the inscription



Setting up for a night time laser scan of the inscription

Coconino Country Fair

Again in 2007, Glen Canyon Natural History Association partnered with Grand Canyon Association to provide a large booth at the Coconino County Fair in Flagstaff, Arizona for Glen Canyon National Recreation Area, Rainbow Bridge National Monument, and Grand Canyon National Park interpretive staff. This four day event was a great opportunity for the parks and its cooperating associations to interact with people from the local communities and promote our local resources.



Glen Canyon NRA and Grand Canyon NP Park Rangers ready for the crowds



Park Ranger Cynthia Adams playing a game a with school group



Park Ranger playing a game with school



What animal am I?

children



Park Ranger Cynthia Adams and GCA's Helen Thompson teach Leave No Trace ethics

Page Rim View Trail

In 2007, Glen Canyon NHA adopted the segment of the Page Rim View Trail that travels along the border of Page, Arizona and the boundary for Glen Canyon National Recreation Area. We kicked off the adoption with a clean up event that brought volunteers from the city and nearby Navajo Nation. Glen Canyon NHA will continue to host an annual event to help maintain the trail.



Volunteers sign up to participate in the Page Rim View Trail Cleanup event



A large pile of trash was hauled up from the trail including two abandoned bikes

Glen Canyon Lecture Series & Powell Symposium

Glen Canyon NHA continued its partnership with the Powell Museum and the Page Public Library in 2007 with both the Glen Canyon Lecture Series and the Third Annual Powell Symposium. This year's lecture series included *Volcanoes of Northern Arizona* by Geologist and

Guide Wayne Ranney, *Virtual Repeat Photography* by USGS Geologist Tom Hanks, *The Very Hard Way: Bert Loper ad the Colorado River* by River Guide Brad Dimock, *Sandstone Spine: Seeking the Anasazi on the First Traverse of Comb Ridge* by David Roberts, and *Blood and Thunder: An Epic of the American West* by Hampton Sides among others. The lecture series also played host to the worldwide premiere of *The Thin Green Line*, a film about park rangers throughout the world.

This year's theme for the Powell Symposium was *Digging Up Bones: Paleontology on the Colorado Plateau*. The three day event was kicked off with an evening overview lecture by Paleontologist and Geologist Christa Sadler that included a fossil display: *Life in Stone: the 1.2 Billion Year Fossil Record of the Colorado Plateau*.

We started the next day with a morning series of lectures that featured Mike Getty of the Utah Museum of Natural History with *The Kaiparowits Plateau of Grand Staircase-Escalante National Monument: A New and Critical Window into the World of the Dinosaurs*, Dr. Walter Joyce of the Peabody Museum at Yale University illuminating his recent work in *The Bipedal Running Crocodile and Other Vertebrates from the Triassic Period on the Colorado Plateau*, and Dr. Alan Titus and Dr. Barry Albright with their paper *Plesiosaurs and the Cretaceous Seaway of Glen Canyon National Recreation Area and Grand Staircase-Escalante National Monument*. Following these lectures, the group went on a field trip to a recently documented dinosaur trackway in Vermilion Cliffs National Monument led by Grand Staircase-Escalante National Monument Park Ranger Merle Graffam.

On the last day of the symposium, we started the day with a presentation by local amateur paleontologist David Rankin at the site of his Plesiosaur discover in the Tropic Shale of Glen Canyon NRA. Following this, Dr. Alan Titus, Paleontologist for Grand Staircase-Escalante National Monument, led the group on a backcountry road trip through time to the bone beds of Tibbits Bench; as the group crawled its way up Tibbits Canyon, Dr. Titus gave a running commentary on the layers of rock we passed through. Once on Tibbits Bench, Dr. Titus gave a presentation around an on-going dig into a Cretaceous bone bed. In the afternoon, we proceeded to fossil rich area near Big Water, Utah where Dr. Titus showed off an impressive oyster bed of the Dakota Formation and an area of the Tropic Shale rich in invertebrate fossils.



Paleontologists Mike Getty and Dr. Alan Titus discuss the size of the Super Croc



GSENM Park Ranger and amateur paleontologist Merle Graffam prepare the group for a walk to dinosaur tracks



The group listens intently to Park Ranger Merle Graffam's presentation



The group surround Park Ranger Merle Graffam and a dinosaur track



Amateur paleontologist David Rankin presents at the site of his Plesiosaur discovery



Dr. Alan Titus discussing Tropic Shale rocks



Dr. Alan Titus demonstrating the art of looking closely for fossils



Dr. Alan Titus shows off an invertebrate fossil in the Tropic Shale

V. RESOURCE AND VISITOR PROTECTION

VISITATION STATISTICAL INFORMATION:

Glen Canyon National Recreation Area

Month	Lake Elevation	2007	2006	2005	2004	2003	2002	2001
January	3,606	30,606	34,883	30,544	40,360	41,207	42,437	44,883
February	3,599	36,194	37,514	32,871	46,270	42,279	41,843	47,187
March	3,597	92,222	92,917	92,334	94,091	83,842	105,032	111,631
April	3,598	159,238	139,478	134,088	132,648	139,967	161,696	185,785
May	3,600	219,203	229,717	207,462	206,745	213,207	247,981	268,296
June	3,609	332,486	331,186	329,375	283,948	320,128	343,052	389,431
July	3,611	348,459	348,809	338,372	325,865	330,828	380,318	411,398
August	3,607	267,527	305,969	307,988	274,749	284,626	338,242	395,802
September	3,603	193,045	193,546	209,325	187,012	194,304	215,664	236,511
October	3,601	140,788	96,815	142,352	138,442	143,042	149,601	153,522
November	3,600	69,381	57,162	68,017	99,171	66,011	63,708	77,717
December	3,598	30,183	36,354	35,546	32,472	37,356	38,805	41,644
Annual		1,919,332	1,904,350	1,928,274	1,861,773	1,896,797	2,128,379	2,363,807

Visitation to Glen Canyon in 2007 totaled 1,919,332, as compared to 1,904,350 in 2006.

Visits in 2007 represent a 0.78% increase from 2006 statistics.

Rainbow Bridge National Monument

Month	2007	2006	2005	2004	2003	2002	2001
January	109	111	0	34	361	961	1,177
February	214	211	0	779	432	588	595
March	1,935	1,214	1,344	3,249	3,129	1,195	1,210
April	3,350	4,089	3,006	4,141	5,624	5,148	8,548
May	8,547	8,935	7,724	9,718	7,926	20,531	15,604
June	12,273	20,060	11,426	13,413	22,346	22,761	41,166
July	19,879	19,622	20,137	17,107	20,153	37,493	27,972
August	16,098	14,604	17,596	10,088	18,467	36,323	42,982
September	13,266	13,266	12,472	10,078	13,474	24,253	25,366
October	4,673	4,673	6,114	6,318	6,318	14,544	21,013
November	704	704	1,315	232	418	2,148	3,534
December	153	153	172	129	217	1,791	583
Annual	81,201	87,642	81,306	75,286	98,865	167,736	189,750

HEADQUARTERS:

During calendar year 2007 several staffing changes occurred in the Chief Ranger's Office. Mark Law, Law Enforcement Specialist, retired at the end of March. Lindy Mihata, Chief Ranger at Western Arctic National Parklands, transferred into the position. Mike Mayer served as the Chief Ranger until May. Mike transferred into a Management Assistant position for the summer and retired in October. Lindy Mihata served as the Acting Chief Ranger until October when Brent McGinn was selected as the park's Chief Ranger. Audrey Ashcraft served as the division's administrative assistant.

Chief Ranger, Mike Mayer, received Special Safety Award from the National Association of State Boating Administrators for Glen Canyon's work in initiating a nationwide recall on Kite Tubing.

CRIMINAL ACTIVITY (CALENDAR YEAR 2007)

	2007	2006	2005	2004	2003	2002	2001
Part I	101	82	54	45	35	78	102
Part II	3196	1029	2711	2584	3639	2588	4245
Arrests	92	142	161	129	120	113	163
Total Incidents	5175	5660	5472	4642	5843	4878	7276
Total Service Inc	1716	3553	2319	2013	2169	2207	2702

**Note that total incidents above include motor vehicle and boating violations, and non-service incidents.*

OFFENSES (CALENDAR YEAR 2007)

Calendar Yr	2007	2006	2005	2004	2003	2002	2001
Drugs	29	32	27	29	33	45	73
Alcohol	188	146	273	167	195	244	353
Weapons	24	42	43	23	18	36	38

A commissioned staff that numbered 25 permanent rangers (includes 1 SCEP), one special agent, and 10 seasonal employees handled these incidents. Six of the permanent rangers are subject to furlough. Six permanent and two seasonal dispatch personnel handled dispatch operations.

Magistrate System:

U.S. Magistrate Judge Mark Aspey continued to hold court monthly in the Wahweap District Ranger's Office. Special agent Jennifer Sypher continued to serve as a shared court officer for Glen Canyon National Recreation Area and Grand Canyon National Park during 2007. Warrants are retained within dispatch for suspects who live within 80 miles of the park; all other warrants are sent to the U.S. Marshall's Service in Flagstaff.

SEARCH AND RESCUE OPERATIONS (CALENDAR YEAR 2007)

2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
103	129	77	101	115	118	165	146	150	225

EMERGENCY MEDICAL SERVICES (CALENDAR YEAR 2007)

	2007	2006	2005	2004	2003	2002	2001	2000	1999
Total Medical	376	365	378	339	358	410	539	680	721
ALS	62	88	82	79	77	68	75	77	97
BLS	261	230	224	187	167	266	343	395	296
First Aid/EMD	53	47	72	73	114	76	121	208	267

Advanced Life Support (ALS)

Basic Life Support (BLS)

*First Aid/AMA/EMD**

** The first aid, against medical advice, and emergency medical dispatch category includes minor cases or cases in which the patient received assistance but refused or did not require transport to a medical facility.*

NPS STRUCTURAL FIRE PROGRAM:



- During 2007 Glen Canyon NRA was the host to an 80 hour certified structural fire fighter course.
- The park had 15 structural fire calls and 1 assist to Page Fire Department.
- The park had a structural fire review analysis performed that addressed all program functions. The analysis provided recommendations to the park for the program's future.
- The park announced the newly created Emergency Services Coordinator position. Position selection was made in 2008.

VISITOR FATALITIES (CALENDAR YEAR 2007):

Fatalities	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
Accidental	12	5	9	2	7	7	7	5	6	10
Natural	0	2	1	5	1	1	7	1	3	5
Suicide	1	0	2	0	1	0	0	1	1	2
Homicide	1	0	0	0	0	0	0	1	1	0
Undetermined	0	0	0	0	0	0	0	0	1	0
Total	13	7	12	7	9	8	14	8	12	17

FEE OPERATION:



The fee operation includes three downlake entrance stations and three uplake entrance points. Halls Crossing was staffed during April and May and infrequently staffed during the months of July, August and September. Hite was not staffed in 2007. Automated Fee Machines (AFM) are located at North, South, Lone Rock, Bullfrog, and Halls Crossing entrance stations, as well as Lees Ferry. Pipe safes (iron rangers) are located uplake at Hite, Stanton Creek, Dirty Devil, and Farley campgrounds for campers to self-register. Bullfrog North and South campgrounds were closed again this season, due to low water. Fees are also collected at park headquarters in Page.

Dates of operations:

North Entrance:	March 2 – Nov 4th
South Entrance:	March 2 – Nov 4th
Bullfrog:	March 2 – Oct 27th
Lone Rock:	April 19 - Oct 27th
Halls X:	April 29 - May 28 th (employee resigned)

Hours of operations:

Opening shifts typically began as early as 6am and closing shifts were as late as 10pm. Holiday coverage pushed the closing to 11pm lakewide.



Revenue:

	FY 2007 Field Collections		FY 2006 Field Collections	
	<u>Staffed</u>	<u>AFM</u>	<u>Staffed</u>	<u>AFM</u>
North	410,306	17,401	390,840	21,510
South	844,042	23,140	753,848	23,981
Lone Rock	259,968	19,485	240,746	20,609
Bullfrog	699,210	116,346	705,870	84,912
Lees Ferry	N/A	34,692	N/A	33,710
Lees Ferry VC	1,075	N/A	780	N/A
Halls X	13,219	41,041	N/A	32,630
HQ Reception	43,607	N/A	12,250	N/A
Hite	N/A	N/A	N/A	N/A
TOTALS:	2,271,427	252,105	\$2,127,024	\$217,352
<u>Self - Registration</u>				
Primitive Camping	29,557		24,598	
Lees Ferry CG	19,589		18,565	
GRAND TOTAL:	2,572,678		2,387,539	

Collected Revenue:

Field collections for FY07 reflected a 7.4% increase over FY06. The cost of collection for FY07 was 25.1%. This was the lowest cost of collection percentage since inception of the fee program at Glen Canyon NRA.

Fees:

The only entrance fee increase for 2007 was the individual rate from \$5 to \$7, which was effective on March 1.

2007 Entrance Fees were as follows:

7-day vehicle pass: \$15

7-day individual pass: \$7

GLCA Annual Pass: \$30
Interagency Annual Pass: \$80
Interagency Senior Pass: \$10
Interagency Access Pass: FREE
7-day Vessel Permit: \$16
Second Vessel Permit \$8
Annual Vessel Permit: \$30

2007 Camping Fees were as follows:

Lees Ferry \$10 per site/per night
Lone Rock \$10 per vehicle/per night (formerly \$8 in 2006)
Primitive Camping \$6 per vehicle/per night for 1 person and \$12 per vehicle/ per night for 2 or more persons

On January 1, 2007 the \$50 National Parks Pass was discontinued and replaced with the \$80 Interagency Annual Pass. This included discontinuing the Golden Age Passport and replacing it with the new Interagency Senior Pass (still \$10) and replacing the Golden Access Passport with the Interagency Access Pass (still free). Although revenue for the Interagency Annual Pass was up (due to the increased price), we did see a reduction in sales of approx. 2,500 passes.

The following increases in camping fees were approved for 2007 and were effective in May:

Lees Ferry	\$12 per site/per night (from \$10)
Lone Rock	\$10 per vehicle/per night (from \$8)
Primitive Camping	\$ 6 per person/per night, not to exceed \$12 per vehicle (from \$6 per vehicle/per night)

- Per guidance from the America the Beautiful-Interagency Pass SOP (“In order to establish consistency between agencies (and parks), the NPS will now consider a motorcycle to be a vehicle. In addition, a new mandatory motorcycle fee rate has been added to the entrance fee pricing structure”). Civic engagement has been completed and a request has been made to change GLCA motorcycle fees from \$7 per person to \$10 per motorcycle (per Level 2 pricing structure). All requests for changes to existing fees are currently on hold as directed by the Washington Office.
- A Third Party Agreement was established with the NHA for sales of the Interagency Annual Pass at Navajo Bridge Interpretive Center. In addition, staff at the NBIC would also have the ability to exchange AFM receipts for the IA Annual Pass.
- A Third Party Agreement was also established with Antelope Point for sales of the Interagency Annual Pass at their entrance station. Antelope Point purchases the IA Pass at HQ and then resells the pass to visitors who enter through the Antelope Point entrance station. In 2007 AP purchased 222 passes for a total of \$17,680.
- ARAMARK continues to bill the \$30 vessel fee for their customers who have vessels in slips, buoys, and dry storage. This program resulted in \$64,341 in fee revenue for 2007. In addition, a form is now included which requests payment of annual vessel fees for any

additional vessels housed on the main vessel (i.e. PWCs, runabouts). Vessel stickers for the additional vessels are processed and mailed from GLCA HQ. In order to maintain consistency and ensure that all vessels utilizing the lake are compliant with fees, Antelope Point was also asked to bill their slip customers. A copy of the letter provided to ARAMARK was also provided to Antelope Point for their editing and use. The final draft was park service approved.

- A need for a prepaid weekly pass was identified and we now have these passes available through the HQ Fee Office. The passes were printed at the IMR Fee Office and are available to ARAMARK, to wedding parties, persons holding/attending special events within the recreation area, etc.
- In conjunction with the new river concession contract, the river use fee increased from \$2 per person to \$6 per person. This was the first increase of river use fees in over 10 years. Revenue generated in 2006 was \$69,804 compared to \$219,189 in 2007. This reflects an increase of 214%.

Photo Contest:

The first annual “Discover Glen Canyon” photo contest was held in 2007. First, second, and third place photos were selected by a panel of judges from the local community and GLCA employees. The winning photo “Peaceful Reflection” taken by Sharon Simmons of New Boston, New Hampshire was used on the 2007 GLCA annual pass. All winners received a free annual GLCA entrance pass. The winning photos were also published in the summer newspaper with all photos displayed on the park web page.

Quagga Mussel Efforts:

In January of 2007 Quagga Mussels were discovered in Lake Mead. Since that time the entrance station staff has taken a very active role in questioning every visitor (pulling any type of vessel) who enters the recreation area. The fee employee asked a series of questions and then either issued a “Mussel Free” certificate or completed a questionnaire and issued a required boat wash coupon to visitors who needed to have their vessels decontaminated. Approximately 304 coupons were issued to visitors during 2007 with a compliance rate of approximately 86%.

Entrance Station Reconstruction Project:

In the summer of 2007 an interdisciplinary team was established (co-chaired by Liza Ermeling (Landscape Architect) and Pat Ludwick (Fee Specialist), and we began the planning stages for reconstruction of existing entrance stations. The current kiosks were purchased in 1997 and were only meant to be temporary fixes for the start up of the fee program at GLCA. Various needs have been identified and PMIS projects have been submitted for replacement of entrance stations parkwide. If all goes according to plan, the first replacement will be in 2009.

GLENN CANYON INTERAGENCY COMMUNICATIONS CENTER

The Glen Canyon Interagency Communication Center (GCICC) continues to provide the primary telecommunications and logistical support for the day-to-day and emergency operations for Glen Canyon National Recreation Area, Rainbow Bridge National Monument, Navajo National Monument, Bryce Canyon National Park, Canyon de Chelly National Monument and the Grand

Staircase Escalante National Monument. The dispatch center continues to provide support to Grand Canyon National Park, Natural Bridges and Hovenweep National Monuments. In 2007 GCICC began taking the after hour emergency lines for Zion National Park, taking calls and tracking law enforcement rangers on after hour callout assignments. In addition GCICC supports 42 additional officers from 13 state and local agencies working throughout northern Arizona and southern Utah.

The dispatch center continues to provide logistical support for homeland security call-outs by tracking law enforcement personnel available for national emergency situations. It continues to be the coordination center of the Colorado Plateau cluster of the Intermountain Region. There were no national security or national disaster call-outs during 2007.

Radio communication continued to be a challenge this year. Narrowband conversion combined with fluctuating water conditions at Glen Canyon continue to impact park wide radio communications. 2006 upgrades to repeaters located at Mt. Ellsworth, Warm Butte, and the installation of a dedicated telephonic link "virtual dispatch" to the Bullfrog and Halls Crossing areas have helped to relieve some of the weaknesses in the existing repeater system. Progress seems to have come to a halt in the effort to secure a new park-wide repeater site on Navajo Mountain, located within the lands of the Navajo Nation. The lack of clear, unbroken park-wide radio transmissions poses significant challenges for dispatchers and all field personnel and represents one of the most serious safety issues at Glen Canyon NRA.

Staffing Changes:

Throughout the year the dispatch center saw a big turnover in personnel. Veteran dispatcher Patrice Hutton (who left in 2006) was replaced by Carmen Certeza in March of 2007. Carmen left us in September for a position with the Department of Defense. The position was filled by Chad Hunter in November. Also in November, Tonya Splude left on maternity leave. Jonathan Parker was hired as an emergency hire on a 60 day assignment to cover this leave. Thru the summer season, the staff was supplemented by seasonal dispatchers Jennifer Boese and Mark Gustaveson.

Wildland Fire:

Dispatcher Orlynda Tsosie went out on an extended fire detail as a resource dispatcher.

Safety/Accidents:

Glen Canyon dispatch had one lost time accident. Carmen Certeza was injured during a down lake orientation trip. The vessel she was riding hit a boat wake causing her to fall to her knees inside the boat. She suffered severe bruising to the knees and missed 9 days of work.

DOWNLAKE DISTRICT VISITOR PROTECTION:

Summary:

During 2007, the Downlake District had several staffing changes all in the Wahweap Sub District. Eric Larson transferred to Grand Tetons NP, Kurt Rees transferred to the U.S. Forest Service, and Jeff Rhame transferred to Padre Island National Seashore.

Kean Mihata (vice Eric Larsen) and Scott Larson (vice Ben McKay who left in 2006) accepted lateral transfers to GLCA. Vice Jeff Rhame was backfilled by a seasonal position and filled permanently in 2008 (Chad Hunter). The position in which Kurt Rees held transitioned into a seasonal position and was filled for the 2007 summer.

Two Downlake rangers attended FLETC in 2007. While attending FLETC Kurt Rees accepted a position with the U.S. Forest Service and Jeff Rhame accepted a position at Padre Island National Seashore.

Fee Collection:

Downlake Rangers contributed 272 hours of time dedicated to fee collection operations. Of this Lees Ferry documented 53 hours. These figures are from **Fiscal Year 2007**. Fee collection hours includes: money transports, road audits, fee machine monitoring and repairs, security, and administrative functions. There were 21 road audits conducted at Wahweap for South, North, and Lone Rock Entrance Stations.

Emergency Medical Services:

There were 232 total emergency medical incidents in the Downlake District in 2007. These include ALS, BLS, and AMA responses. There were 42 ALS calls which required park medic or Classic Life Guard intervention.

- 52 Boating related injuries
- 4 Motor vehicle related injuries
- 124 Emergency/medical calls occurred on land at Wahweap, Lees Ferry, or the developed area at Dangling Rope.
- 4 patients treated for carbon monoxide poisoning (three incidents).

Search and Rescue:

There were a total of 63 search and rescue incidents in the Downlake District for 2007.

- Wahweap: 38
- Lees Ferry: 1
- Dangling Rope: 24

Of the 63 incidents, 2 of these SARs were technical (climbing/rope assistance required).

Structural Fire:

During 2007, there were 4 structural fire calls in the district. Wahweap Fire Brigade also responded to the City of Page for a fire at the Maverick Gas Station. The building was destroyed.

Wildland Fire:

There were 11 wildland fires in the district in 2007. Three occurred in the Wahweap Sub district, 7 fires occurred in the Dangling Rope Sub district and 1 in the Lees Ferry Sub district.

Wahweap seasonal ranger, Jake Olson, was sent on a wildland fire detail as a single resource (medical unit).

Fatalities:

- There were 5 fatalities in the district during 2007. All five of these incidents involved accidents. January 18 – Case Number 07-0045: 19-year old male was killed when he fell off of a cliff at the Scenic Overlook near Headquarters.
- March 28 – Case Number 07-0225: 41-year old female drowned after her kayak overturned during high winds in Padre Bay. She was wearing a life jacket.
- March 29 – Case Number 07-0229: 22-year old male was killed in a motor vehicle rollover accident on Lakeshore Drive
- July 7 – Case Number 07-2135: 6-year old female drowned while swimming in Padre Canyon due to carbon monoxide exposure. She was not wearing a life jacket.
- August 24 – Case Number 07-3627: 20-year old male was killed in a wake boarding accident on the San Juan River.

Safety/Accidents:

There was one employee lost time injury in the Downlake District in 2007. Park Ranger Jake Olson injured his back while lifting weights.

There was one accident involving a government patrol vessel where a Wahweap ranger was providing a tour of the local area to several dispatchers. Because of his inexperience on Lake Powell, he went over a tour boat wake near full speed, which caused one of the dispatchers to hurt her knee and shoulder. A review of boating training was conducted and implemented.

On 8/29/07, Ranger Chad Hunter accidentally discharged his Sig-Sauer service weapon while cleaning it at his residence in Page, AZ. No one was injured and Hunter promptly reported the incident to NPS and Page PD personnel. A root cause analysis was completed by supervisor Axelsen, identifying the causes of the accident and corrective actions. Safe weapons handling procedures were reviewed, and Hunter established a safe weapons handling area at his residence.



New Equipment/Vehicles:

- Three of the Ford Expeditions were exchanged for new ones in May.
- Wahweap acquired two new patrol boats from previously submitted PMIS requests. One was a 25' Boston Whaler Challenger, the other a 25' Safeboat.
- Wahweap purchased a new Thermal Imaging Camera, mounted in Engine 2.
- FLETC sent a remote controlled mobile range target robot.
- Wahweap replaced several sets of PBT's, digital cameras and hand held GPS units.

Water Operations:

- 145 Boat Safety Inspections
- 138 Water Quality contacts/camps
- 31 Voyages terminated due to safety violations
- 565 Boat contacts/ 1376 Visitor Contacts
- 56 Citations issued for water/safety violations
- 36 Personal Floatation device violations
- 21 Bowriding violations
- 120 Fishing contacts
- 17 Zebra mussel inspections
- 26 Wakeless speed violations
- 16 Underage vessel operation violations
- 143 Prohibited boating operations (reckless/speed in proximity etc.)
- 353 Boat patrol hours

Law Enforcement:

- 88 Arrests – of these;
 - 12 DUI
 - 43 UIA
 - 20 Warrants
 - 11 Drugs/Other
- 371 Citations: Of these;
 - 147 Traffic
 - 121 Alcohol/Drugs
 - 56 Boating
 - 2 Resource
 - 45 Other
- 33 Burglary Incidents
- 43 Trespass Incidents
- 28 Thefts
- 12 Larcenies
- 8 Littering
- 30 Off Road Travel
- 20 Open Container
- 14 Poss. Of Fireworks
- 43 Disorderly Conduct
- 50 Vehicle Impounds

- 206 Visitor Assists
- 75 Agency Assists
- 14 Cliff Jumping
- 55 Special Patrols
- Accidents:
 - 63 Boat Accidents/36 Injuries
 - 21 Motor vehicle accidents/ 4 injuries

Emergency Medical Services:

Total Wahweap EMS calls: **168** - Includes all ALS/BLS/ACLS/AMA responses

- 61 were Boating Related
- 4 were MVA
- 107 were on land

Search & Rescue:

There were **39** SAR's in the Wahweap area. Only **2** of these were technical in nature.

Structural Fire:

During 2007, there were several major structural fires in the Wahweap area or in Page where the park brigade assisted Page Fire Dept. The Maverick gas station was destroyed by fire and the park brigade assisted Page Fire with Chris Cook taking IC. The brigade also assisted Page with a trailer fire. The other significant fire was when an RV was totally destroyed on Hwy. 89 in the park. There were **9** boat fires and two other small structural fires in Wahweap.



All fire hydrants and fire hose were tested in 2007. Both of the Wahweap engines were pump tested and had their annual service. A number of fire extinguishers were replaced and a full inventory was done. Wahweap also purchased a new thermal imaging camera, which will greatly enhance the effectiveness for firefighting efforts, as well as help in search and rescue and law enforcement efforts.

The park hosted the two-week Basic Firefighter course sponsored by the Boise Inter-agency Fire Center.

Wildland Fire:

The sub-district only had 3 wildland fires this year, which was human caused. The suspects set tumble weeds on fire with gasoline and were cited into court. Wahweap sent only one person out

of park this year. Seasonal Jacob Olson was sent to two fires in Idaho where he served as an EMT.

Fatalities:

- January 18th - Case Number 07-0045: A 19 year old male died as a result of falling off a 700 foot cliff at the HQ Scenic Overlook. The individual had stated he was going to kill himself and was highly intoxicated. Rangers negotiated with him and were not able to secure him before he fell off the precarious cliff he was laying on. He died of severe trauma.
- March 27th – Case Number 07-0225: A 41 year old female became separated from her kayak during a big windstorm which produced large swells in the Narrows. The incident was reported the following day and Rangers found her body near Dominguez Butte. She had apparently died as a result of hypothermia/drowning.
- March 28th - Case Number 07-0229: A 22 year old male was killed in a rollover motor vehicle accident on Lakeshore Drive. The victim was intoxicated with a BAC of .217 and was doing 75+ mph when left the roadway and his vehicle rolled up to 7 times and vaulted at least once. He was not wearing a seatbelt. He died of multiple trauma.
- July 7th - Case Number 07-2135: A 7 year old female died from drowning subsequent to CO poisoning in Padre Bay after being exposed to CO from her families boat on the beach.



Details:

- 1/8-1/20: Grant Stolhand to Organ Pipe NM to assist with drug interdiction mission.
- Shawn McNally to NAU multiple times for firearms/OC instruction.
- 4/5-7: Eric Scott to Albuquerque for IMT Meeting.
- 4/18: Shawn McNally to Capitol Reef NP for Armorer's Training.
- 4/29/-5/1: Kean Mihata to Zion NP for First Lady visit.
- 8/16: Jared St. Clair escorted AZ Governor Janet Napolitano protection detail on Lake Powell.
- 9/16-27: Jacob Olson to Idaho as EMT on fires.

Major Incident Summary:

- A 19 year old Navajo male fell or jumped off the HQ Scenic Overlook in January while in negotiations with Rangers. His body was recovered the next day below the Dam Tunnel Road.
- A 41 year old female died of hypothermia after becoming separated from her kayak in the Narrows in March.
- One day later, a 22 year old male dies in a motor vehicle accident on lakeshore drive while DUI and speeding.
- Rangers intervened in a Resource dive operation to inspect vessels in the marina for Zebra mussels. The operation was stopped due to employee safety issues and ICS instituted.

- Throughout the summer, numerous vehicles were burglarized at Antelope Point ramp parking lot. As many as 33 were burglarized. Rangers conducted several surveillance operations in an attempt to apprehend the suspect(s), but were unsuccessful. The investigation is still open.



- Rangers assisted by Coconino County raided a private houseboat at Antelope Marina after receiving an anonymous tip. Huge amounts of heavy grade fireworks and some drugs were seized. A total of 41 cases of fireworks were seized from a hidden compartment on the boat. About ½ pound of marijuana was seized. Coconino County prosecuted the case.
- A 7 year old girl died after succumbing to CO poisoning and drowning near the

back of her parent's cabin cruiser in Padre Bay. Classic Lifeguard and Rangers responded and attempted to resuscitate her.

- A private helicopter owned by Robert Schwartz, crashed in Padre Bay while he was attempting to take off from the top of his helipad on his personal houseboat. The crash was caused by one of two restraining straps, which he failed to unbuckle prior to attempting to lift off. His passenger was injured and flown by Classic.



- An ARAMARK employee was injured near the Stateline pumpout dock, when the end of a 2" diameter steel cable struck him in the lower back while he and other ARAMARK employees were making repairs to the breakwater. The extrication and packaging of the victim was difficult due to his location and injuries. He was flown by Classic to Flagstaff.
- Rangers responded to a serious MVA on Hwy. 89 just South of the Lone Rock Access Road. A SUV towing a trailer lost control and rolled several times. The father, who was a passenger, and his two year old son were critically injured and flown to FMC in Flagstaff by Classic. The mother, who was driving and an infant in a car seat were not injured.
- Ranger Shawn McNally intervened in a apparent attempted homicide, where a local couple was driving down Lakeshore Dr. in front of him and stopped in the road. The wife, who was a passenger, escaped from the RV and tried to escape her husband who had severely beat her face and was still attacking her when Ranger McNally stopped him using a Taser. The husband had told the wife that he was trying to kill her by driving off the Glen Canyon Bridge into the lake. This was certainly a life saved.



- Rangers and Maintenance employees on the Wahweap Fire Brigade responded to the Maverick gas station in Page to assist Page Fire. The rear of the store was on fire. Chris Cook was asked to be initial IC by Page Fire Chief Clark.
- A motor home was totally destroyed by fire on Hwy. 89 near Lone Rock, after one of its tires caught fire. The Wahweap brigade responded and put out what was left of the RV.

DANGLING ROPE SUBDISTRICT:

Law Enforcement:

In addition to the sub-district ranger, there were two GS-5 seasonal i.e. rangers on staff summer 2007. They learned the sub-district's canyons quickly and demonstrated good boating skills. Everyone learned quickly and was kept busy responding to almost 500 incidents documented in the Dangling Rope sub-district. Dangling Rope rangers also spent a greater amount of time covering calls in the area from Padre Bay through the Narrows this summer. Those statistics are not included below, but included in the Wahweap summary.

Dangling Rope sub-district statistics:

- 2 DUI arrests
- 3 alcohol
- 21 citations (14 boating offenses, 4 fireworks, 3 other) DR rangers wrote additional VNs
- 26 vessel and jet ski accidents
- 183 boating contacts
- 70 visitor and agency assists
- 54 EMS incidents
- 29 SARs
- 13 sanitation/litter
- 2 carbon monoxide investigations
- 2 weapons
- 3 disorderly conduct
- 5 theft
- 1 hazardous condition – bomb

Rangers also responded to other safety, service and resource calls not itemized above.

The oldest Dangling Rope vessel, V251, blew a cylinder in late July, so the rangers were short a vessel until new vessel 244 came into service in the fall. Ranger Ashley Fortune suffered an off-duty injury and was detailed to dispatch in September. Ranger Chad Hunter, who was slated to start a permanent job in dispatch in September, was extended at Dangling Rope into October. Sub-district Ranger Laurie Axelsen was sent to two large body recoveries uplake during October, but thanks to the cooperation of the dispatch operation, Hunter was able to provide sub-district coverage for most of that time.

Water Operations :

Dangling Rope rangers logged 737 hours of boat patrol time. Sub-district ranger Laurie Axelsen was the only night certified boat operator, but seasonal ranger Chad Hunter started training to prepare for night certification. In addition to local canyon patrols (from Rock Creek Bay up to Oak Bay), rangers conducted 109 extended patrols ranging upstream to the San Juan Arm and

Escalante and downstream to Padre Bay and the Narrows. The number of extended patrols was much higher due to responses down to Padre Bay and Antelope Point areas of the Wahweap sub-district. These extended patrols do not include regular weekly patrols between Wahweap and Dangling Rope. Rangers took reports on 26 vessel and jet ski accidents in the sub-district and documented 183 contacts for boating violations. There were 42 incidents documented for water quality patrols, and several more for fishing and other resource issues.

For a second season, water quality patrols and contacts were greatly enhanced due to the presence of seasonal interpretative ranger Valerie Nelson, who conducted independent educational contacts and partnered with ranger staff to conduct campsite and lakeshore patrols. Water quality patrols have concentrated on tent camps and were conducted in more remote areas as well as the traditional well known beach sites adjacent to Dangling Rope. Recent water analyses indicate that houseboats and/or cabin cruisers illegally dumping black water tanks may pose a more significant threat than tent campers with cat holes on land. As a result, starting in 2008 shore contacts will be expanded to focus more on camps with on-board sanitation systems.

Significant Incidents:

- On 7/16/07, a patient at Dangling Rope Marina reported feeling sick after sleeping on their multi-owner houseboat in Last Chance Bay, stated others were sick and a child had vomited. Investigation revealed seven people had awoken with symptoms of possible carbon monoxide (CO) poisoning, two people and a dog had vomited, and all of the people had elevated CO concentrations. CO levels ranged from 5.7% in a male who had got up earlier than everyone else to go fishing, up to 15.6% in one of the juveniles. After initial EMS treatment was completed and the hazardous conditions mitigated, it was discovered that the Stardust houseboat had been recalled for an exhaust retrofit that had not taken place when ownership changed. This was one of four documented carbon monoxide cases this summer, and it occurred only nine days after a carbon monoxide fatality.
- On 7/18/07, park visitors reported possible explosives found near their camp in Rock Creek Canyon. Responding ranger verified that apparent explosives with blasting caps and power source were present. Scene was secured and technical assistance requested from an Explosives Ordinance Disposal Unit (EOD) that came in from St. George, UT. The EOD team determined explosives to be unstable and detonated them on scene.



EMS:

There were a total of four EMTs, one first responder and one park medic based out of Dangling Rope this summer. 54 medical incidents were documented in the sub-district, eight of which received advanced life support care. Dangling Rope rangers also responded to at least a dozen medicals in other sub-districts. Of a total 64 cases documented on the lake between Antelope

Point and the Escalante, approximately two thirds of them were traumas, often resulting from some kind of boat/jet ski accident, towing or wake injury. Lacerations and fish hook injuries were also common. The other one third of the EMS incidents were medicals. In the past couple years, the most common medicals had been allergic reactions and heat problems, but most of the medicals for summer 2007 were listed as unknown illness, abdominal pain and carbon monoxide poisoning. Litter evacuations to the helipad at the top of the hill at Dangling Rope are now accomplished via Kubota utility vehicle except when the water level is too low and the Kubota can't make it from the dock access bridge onto the concrete ramp (due to angle and/or sand). The Kubota is too heavy to go to the end of the Dangling Rope dock (dock surface is not as heavy duty and collapses beyond pump out area), so the ATV litter is still in use to transport patients from the end of the fuel dock back toward the ranger station and Kubota transport. The sub-district ranger continues to schedule shifts to coincide with work projects during the off-season to help ensure medical assistance is available on-site as much as possible.

SAR:

Dangling Rope rangers responded to 35 search and rescue incidents. 29 SARs occurred in the Dangling Rope sub-district. The 29 incidents in the sub-district don't include 70 NPS visitor and agency assists and 18 documented chase boat responses where a concession chase boat was called to resolve situations with visitors stranded on the lake, usually due to some kind of equipment or weather problem. Over half of the SAR incidents were related to EMS responses for injuries or illness. Most of the remainder were reported as disabled vessels or stranded persons in unsafe conditions. On at least two occasions there were two SARs occurring at the same time in different parts of the sub-district, spreading thin the available resources. There was a significant carryout in the San Juan Arm off the upper portion of the Peek-a-boo arches for a heat/diabetic medical. The sub-district maintains a litter carryout cache at Rainbow Bridge NM, a technical rescue cache at the Dangling Rope ranger station, and a small helicopter operations cache at the Dangling Rope helipad.

Fatalities:

- Dangling Rope rangers responded to two fatalities this summer. As a park diver, Ranger Axelsen also participated in two underwater searches in the Uplake District.
- On 7/7/07, rangers responded to a call of a child pulled from the water and a second child missing from a camp in the Padre Canyon area. The first patient had fallen from a stern swim platform and was initially treated by the campers as a head injury patient until the rangers arrived and suspected carbon monoxide poisoning. This patient survived. Her COHb concentration was recorded as 24.3% approximately two hours after the fall. The second patient had been playing with the first, was recovered from the water about 15-30 minutes later, and did not survive.
- The evening of 8/24/07, dispatch reported a 20 year old seizure patient in the San Juan Arm of Lake Powell. Colton Dixon had been wakeboarding with friends when he struck his face on the water while trying to land a flip. They went to a houseboat for help and Classic helicopter was requested. Dixon stopped breathing and was resuscitated in the field. He was transported to Flagstaff Medical Center and later declared brain dead.

Dixon had a history of prior significant frontal head injury, which could have potentiated the effects of the subsequent fatal head injury.

Fire:

Dangling Rope Rangers responded to nine reported wildland fires, seven in the sub-district. Investigations showed that most of these 2007 fires were human-caused, either started by fireworks or apparently intentionally set to burn off tumbleweeds or brush and limited by visitor-dug fire lines. There was a documented lightning strike fire that spread to about 80 acres on top of the Kaparowits plateau in an area of old growth pinion juniper and surface archeological sites. After aerial monitoring and consultation with resource management and a fire officer, it was determined that the weather conditions and fire behavior did not warrant active suppression efforts for the Kaparowits fire. No structural fires occurred at the marina or in the developed area. The portable ATV-drawn fire pump was damaged in the winter when maintenance left it outside in cold weather while working on another project. It was repaired and sent back up to Dangling Rope. Ranger Axelsen requisitioned a custom cover to protect the hard suction hose and other parts from sun damage. Since there are no longer ATVs to pull the pump, it is less mobile, but it has been kept as a separate water source in case the pump building or area behind the store catches fire. Another major repair was made to the Dangling Rope Marina fire suppression system underneath the main dock, where the motion of the dock flexes the supply line. Fire extinguisher inventories were completed and a large scale extinguisher replacement project took place in the fall. The Dangling Rope helipad still needs a helicopter extrication kit, which has been requested before and would cost around \$500.

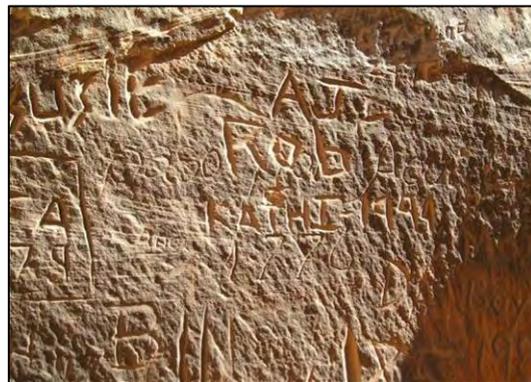
Resource management:

Special resource patrols were conducted throughout the Dangling Rope sub-district and in adjoining areas. Law enforcement staff went out with a water quality seasonal on several extended patrols to monitor shore camps and help identify/enforce water quality violations. Details on two of the more significant ARPA site patrols are listed below.

Paso Por Aqui –

Ranger Axelsen assisted resource management and the Old Spanish trail Association and implemented monitoring trips to the Paso Por Aqui inscription site. A possibly historic Spanish inscription was discovered during a True Grit graffiti removal trip in 2006.

Inscription consists of the words “Paso Por Aqui ano / 1776” and has now been attributed to the Dominguez and Escalante expedition. This inscription was discovered in an area of concentrated graffiti in part of Gunsight Canyon. February through August of 2007, researchers visited to analyze the style and depth of the inscription, composition of rock varnish and lichen and test lead levels to authenticate the site. Rangers documented 11 monitoring trips to the site in 2007, and discovered new graffiti about 15 yards from the site after spring break in March. Long range plans are still being developed to assist with site management and protection.



Three Roof Ruin:

Ranger Chad Hunter assisted the cultural resources staff with a detailed survey of the Three Roof Ruin site in June. In prior spring patrols to the Escalante, Dangling Rope rangers had observed evidence that visitors had repeatedly entered the closed site, caused graffiti and structural damage and left what appeared to be fake artifacts. Axelsen notified resource management and a trip was arranged for when the water level would allow for safer access to the site. Hunter completed a thorough report documenting resource damage which was later sent out of park as the briefing document for the contractors hired to complete re-stabilization of the site's structures.

Rainbow Bridge NM:

In the fall of 2006, there were severe flash floods resulting in significant trail damage. GLCA maintenance roads and trail crew used heavy equipment and reconstructed part of the trail. They completed the work in spring of 2007 and did a great job. This is the best the Rainbow Bridge trail has looked in over two years. There was a rock fall blocking the trail within sight of the Bridge in April, and the roads and trails crew cleared this in a short time, too. There have been discussions about whether the trail should be paved or improved more. But due to flashfloods and other erosion factors, it has been determined best to make repairs as needed to the rocky trail, rather than develop it further and have it still wash out.



Also in April, Sub-district Ranger Laurie Axelsen took new ranger Ashley Fortune on an orientation backcountry trip, following the Rainbow Bridge Trail outside the monument boundary and stopping at adjacent camp sites on the popular hiking trail around Navajo Mtn. Rainbow Bridge receives a fair amount of foot traffic from the boundary in the spring and fall from visitors hiking the 32 mile route alongside Navajo Mtn. Glen Canyon rangers are usually the first to respond to medical and SAR emergencies in this part of the Navajo reservation.

There were no major SARs in the monument this summer and only a few medicals. Interpretation put up a new safe hiking display at the restrooms on the dock. There was no new graffiti observed on the Bridge itself or in the nearby alcove, but Dangling Rope interpretive and law enforcement staff did a group clean up project to remove paint graffiti from the designated view area downstream of Rainbow Bridge.

On-going concerns: Similar to prior years, there continues to be some illegal camping/overnight mooring at the docks, illegal pets and livestock on the trail, and logistical problems with maintaining the dock and shoreline access. There was less observed livestock traffic and damage on the trail from the posted monument boundary to Rainbow Bridge, in part because the Navajo Nation increased the permit cost for outfitters conducting llama or horse trips in the spring and fall. In early October, high winds caused the spare dock extension break free of its moorings and pinned two boats against the dock, causing significant damage to one cabin cruiser. Dangling

Rope maintenance and the roads and trails crew spend a lot of time moving the dock and adjusting anchors as the water level changes, and the sub-district ranger assists with tightening cables, monitoring access and clearing small rockfalls and other obstructions with hand tools. The tribal consultation committee visited Rainbow Bridge and met at headquarters in the fall. Many issues were discussed including approval to add a shade structure lower on the trail to disperse the crowds and offer shade. Two researchers had informally requested to conduct studies at Rainbow Bridge that would require the use of helicopters and heavy instruments. The council indicated they would not support invasive research at this spiritual site. Several members mentioned concerns about the spread of tamarisk from the lake level up the drainages of Navajo Mtn. and asked for efforts to limit the spread.

Technology came to Rainbow Bridge this year in a couple different forms. The NPS Night Sky Team came to Glen Canyon (the Rincon) and Rainbow Bridge to evaluate ambient light and light pollution at night in NPS skies. Out of the park sites visited so far, initial measurements concluded that the night sky over Glen Canyon and Rainbow Bridge is the darkest to the naked eye, and second only to Big Bend National Park when measured with instruments. Also, interpretive rangers Chuck Smith and Jonathan Parker filmed several podcasts at Rainbow Bridge this summer. Podcasts are audio and/or video presentations that are available by demand via computer, TV or mobile devices. This emerging technology is being adopted by the NPS. If completed and released on schedule, Rainbow Bridge will be the first national monument to produce a podcast. The Rainbow Bridge podcasts are also the first to be filmed in high definition and the first to use aerial footage. Ranger Axelsen contributed some of the photos used in one of the podcasts.

Safety/accidents:

On 8/29/07, Ranger Chad Hunter accidentally discharged his Sig-Sauer service weapon while cleaning it at his residence in Page, AZ. No one was injured and Hunter promptly reported the incident to proper NPS and Page PD personnel. A root cause analysis was completed by supervisor Axelsen, identifying the causes of the accident and corrective actions. Safe weapons handling procedures were reviewed, and Hunter established a safe weapons handling area at his residence.

2007 LEES FERRY ANNUAL REPORT



PERSONNEL

There were no changes in personnel in the Sub-District this year. Staffing levels remained at last year's level, with one Sub-District ranger and one STF area ranger. The area ranger worked at Lees Ferry for the resource management division during his furlough period this year, whereas the previous two years he was detailed to Dangling Rope. For FY2008, the STF position has been split on a trial basis, so that the incumbent will work several pay periods in the fall and several pay periods in the spring. This should better cover the peak visitation periods in the spring and the fall. On a related note, Grand Canyon NP added a seasonal law enforcement ranger to their staffing to assist with river trip launches. Interpretation also added a position, albeit temporarily, as a result of their Teacher-Ranger-Teacher program. These additions to staffing utilized all available housing in the area.

VISITATION

Visitation increased from 196,219 in 2006 to 208,188 in 2007, an increase of 6.1%.

INCIDENTS

There were 81 incidents at Lees Ferry in 2007; 15 of those incidents were EMS calls. Sub-District personnel were also involved with four fatalities, three of which were out of the park. The in-park fatality was an 18 year suicidal male that fell from the dam overlook. The out-of-park fatalities included a 55 year old male (driver-MVA), a 58 year old male (driver-MVA), and a 55 year old male that died of a self-inflicted gunshot wound to the head. Responses to law enforcement and medical calls outside the park continue to be a significant portion of the area workload.



River view of Dam Overlook

Sub-District personnel, along with Coconino County Sheriff's Officers and the Kane County Sheriff's Office drug dog, conducted an operation

based on intelligence that a Grand Canyon river trip would be launching with drugs and firearms. Five individuals were cited, and their drugs and firearms were confiscated. This was the second operation of this nature in 2007.

GRAND CANYON OPERATIONS

The Memorandum of Understanding with Grand Canyon NP was renewed in July. The new Grand Canyon River Operation building was completed in the fall. Sub-District personnel continued to assist with river trip checkouts/orientations when GRCA personnel were unavailable.



GLCA/GRCA rangers on air evac at
GRCA river mile 4



Shuttle bus parked in raft loading zone

CONCESSIONS

Colorado River Discovery was awarded the concession rights on the Colorado River below Glen Canyon Dam in 2007. Tourists on those trips between the dam and Lees Ferry increased 12.4%, from 44,202 in 2006 to 49,703 in 2007. This increase impacted parking issues at the launch ramp. Heat related injuries associated with those trips were significantly reduced this year.

RESOURCE MANAGEMENT

Laboratory results for trout routinely sampled at Lees Ferry by the Arizona Game and Fish Department came back positive for whirling disease in June. This is the first time this disease has been documented in fish in Arizona public waters. To date, no clinical symptoms have been observed in the Lees Ferry fishery. An extensive coordinated effort between Sub-District personnel, the park's resource management division and Arizona Game and Fish Department to control the spread of the disease to other waters was undertaken.

FEES

Sub-District personnel continue to conduct virtually all fee operations at Lees Ferry. The frequency and duration of road audits was increased substantially this fall. Compliance was over 90% by the end of fall.

FIRE

The Lees Ferry pre-fire plan was completed this spring. Subsequently, the SFRA concluded that the structural response at Lees Ferry would be abolished. No fires occurred this year.

COLLATERAL DUTIES

The Sub-District Ranger continued his duties as the park EMS Coordinator. Routine billing issues, along with a subsequent change in Banner's billing procedures, consumed a significant

amount of time this year. Notable effort was also devoted to negotiations for renewal of the contract with Banner Health, which was completed in August.

Another collateral duty of the SDR, Defensive Driving training coordinator/instructor, was not as involved as in years past. It appears that with the advent of the training online, this duty will not require the previous commitment.

UPLAKE DISTRICT

Summary:

During 2007, the Uplake District had several staffing changes. Bullfrog rangers Derek Dalrymple and Cathy Burns transferred to Sequoia National Park. Bullfrog ranger Jason Lux transferred to Hawaii Volcanoes National Park and Halls Crossing ranger Matt Stark transferred to Yosemite National Park.

Chris Valdez (vice Jason Lux) and Bryan Yetter (vice Matt Stark) accepted lateral transfers to GLCA. Carmen Barnard was hired into vice Cathy Burn's position and Jennifer VanDragt was hired as a SCEP student in the vice Derek Dalrymple position.

Two Uplake rangers attended FLETC in 2007. Scott Sample returned from field training at Yosemite National Park in August and Carmen Barnard left for FLETC in December.

Fee Collection:

Bullfrog Sub-District rangers assisted the Fee Division with security, money transports, and numerous other fee related activities.

Hours contributed	805
Audits	74
Road Audits	9
AFM Audits	3
Campground Audits	47
Water Audits	15
Fee Violations Encountered	211

Water Operations:

- **Bullfrog Boat Patrols** **260**

Although seasonal WQ positions were cut from the Uplake LE Division, rangers conducted 23 shoreline vessel sanitation patrols.

Backcountry:

Over **160** hiking LE resource protection patrols were conducted in the Uplake District with LE rangers spending **68** nights in the backcountry. Over half of these patrols involved archeological site monitoring and at least 40% of the patrols ARPA vandalism violations were discovered. Rangers continued to research and remove Geocaches from the Recreation Area with over 20 caches removed. An area containing numerous previously unknown archeological sites was discovered during a multi day backcountry patrol into Hite sub district Bull Basin area. Also evidence of unknown and unexplored cavern was discovered, these discoveries will require

additional research and documentation. All the Uplake Rangers received recognition awards from the Park's Resource Management Division for their assistance in archeological site monitoring, without the Uplake ranger's involvement GLCA would not have met its ARPA GRPA goals.

Law Enforcement:

Arrests:	30	Processed through Bullfrog Holding Facility
	17	Bullfrog arrests
	8	Halls/Hite arrests
	5	Kane/Garfield Co arrests

Emergency Medical Services:

Total Bullfrog Responses:	104
ALS	11
BLS	86
Bullfrog NPS Ambulance Transports	32
Air evacuations, NPS patients, by Bullfrog rangers:	14

EMT Skills:

Currently personnel skill levels are as follows:

3	(Plus 1 VIP)	Park medic Rangers
9		EMT-B Certified Rangers

The Bullfrog Clinic:

Treated	1373 Patients
Airvaced	14 Patients
Rangers assisted Clinic	~150 Patients

(7.2 patients per day an increase of 35% over previous year. This was the first year Bullfrog Clinic was opened one day a week in the off season (November to April).

Search and Rescue:

There were a total of 16 SAR incidents in the Bullfrog Sub-District.

Water Related	30 SAR-related incidents.
Diving Operations	2
High Angle Technical Rescues	1
Required aircraft support/response	5
Assisted Other Agencies outside of Park	1
Major SARs requiring Regional funding	6

Structural Fire:

The Uplake District responded to 11 structural fire calls in 2007. Three Halls Crossing Concession employees, three Bullfrog rangers and the Fee supervisor were trained as NFPA certified firefighters. Three Halls Crossing Concession employees, three Bullfrog rangers and the Fee supervisor were trained as NFPA certified firefighters.

Boat Fires:

Three concession rental boat fires were electrical fires involving outboard motors. Investigation disclosed over 100 unreported electrical fires aboard concession rental vessels in recent years. *GLCA's investigation into the above boat fires resulted in a USCG nationwide recall on Mercuriser outboard motors. Cause of the fire(s), improper size wire gauge and lack of a*

fuseable link in the engines battery charging system. Charging wires were routed with fuel line, wire would over heat and melt hole in fuel line and cause fire.

Wildland Fire:

There were 7 wildland fires in the district. The reports of wildland fires received in the Uplake District were all located in the Bullfrog and Halls Crossing Sub districts. Jeff Kracht continued to manage the Park FMO program. Bullfrog seasonal ranger, Brooke Henthorne, was sent on a Wildland fire detail as a single resource (security).

Fatalities:

There were 8 fatalities in the Uplake District in 2007. Four occurred in the Bullfrog Sub district.

- January 27 – Case Number 07-0063: 66-year old male (citizen of Republic of China) and 26- year old female (citizen of Japan) were killed when the male drove their car off Muley Point.
- April 6 – Case Number 07-0270: 37-year old male was killed in a motor vehicle roll-over accident on Highway 276.
- August 25 – Case Number 07-3642: 20-year old female was killed when the vessel she was a passenger in struck a rock wall.
- September 12 – Case Number 07-3935: 64-year old male drowned while swimming after suffering a cardiac event.
- September 28 – Case Number 07-4086: 64-year old male and 59- year female were killed when a rock slab fell onto their pontoon boat.
- October 8 – Case Number 07-4162: 3-year old female drowned after falling into the water off the Bullfrog Marina Slips. She was not wearing a life jacket.

Safety/Accidents:

OWPC Claims

There were 4 lost time employee accidents in the Uplake-District this year. While picking liter out of the lake a V+RP ranger claimed she exacerbated a preexisting elbow condition resulting in 4 months of light duty. Same employee stepped into cow track and sprained her ankle also resulting in an additional light duty detail. Wind slammed vehicle door on V+RP ranger's thumb, resulting in light duty assignment. Two employees received minor abrasions during the recovery of a body and were exposed to body fluids from the deceased's while administering CPR. There was 3 recorded accidents with government vehicles. There were 5 recorded equipment accidents with resulting government property damage.

Special Details:

- **Scott Ryan** - Two week detail to Nicaragua and El Salvador under DOI International Technical Assistance Program to assess the countries' with their archeological resource protection programs.
- **Jeff Kracht** - Assisted the Office of the Inspector General's by joining a International SAR Team in Bolivia to search for clues in the disappearance of a Peace Corp volunteer.
- **Brooke Henthorne** - 2-week detail to wildland fires in Idaho, as a Security Specialist
- **Brett Timm** - Assigned to assist GLCA Resource Management Division with their GRPA Goals in conducting backcountry archeological sites surveys. Brett Timm continued to support backcountry operations in the Escalante and Bullfrog Sub-Districts.
- **Steve Luckesen** - Accompanied and assisted Special Agent O'Dea in the scene investigation and was instrumental in identifying the suspects and recovering nearly \$90,000 in stolen Navajo rugs from the Hubbell Trading Post burglary. Assisted USCG Tiger Team in reviewing the investigation of a mass CO poisoning death of a family aboard a vessel on the Snake River in Idaho.
- **Chris Valdez** - Detailed Downlake as a DOIMOCC instructor to teach two week long DOIMOCC classes.
- **Amy Mowat and Chris Valdez** - As trainers in FTO Program the above rangers were detailed to train three FLETC students in the Uplake District

Training:

Uplake rangers hosted and conducted a law enforcement hunting patrol seminar with rangers from neighboring parks attended.

Notable Incidences:

- **Bullfrog** - A local juvenile male sexually assaulted by several other juvenile males. Mass Casualty Incident: 30 people aboard a houseboat became victims of CO-poisoning. Cathedral in the Desert sustained massive charcoal graffiti vandalism. A VIP group cleaned off the graffiti.

A 15 lb terrier pet on a houseboat in Halls Creek Bay was carried off and eaten by another animal during one night. An ATV and motorcycle were stolen from Trailer Village. The suspect, a Ticaboo resident and mine worker, was apprehended. The pickup used to transport the ATV was seized, and dynamite was found inside. The ATV and motorcycle, along with another ATV stolen from Wane County, were found and recovered by rangers. Chief Ranger received Special Safety Award from the National Association of State Boating Administrators for Glen Canyon's work in initiating a nationwide recall on Kite Tubing.

- **Halls Crossing/Hite** - About 300 lbs of petrified wood was collected by a crewmember of Trash Trackers during a fall cleanup run Uplake. Special agents went to the suspect house near Tucson and retrieved the fossil wood and a confession.
- **Escalante** - Ranger Kracht continued to serve as a voting member of the Garfield County Trails Committee and attended monthly meetings. Jeff served as the only LE backup for BLM rangers with their day to day patrol operations within GSENM. He also assisted the BLM employees at the information desk at the Grand Staircase Escalante National Monument visitor center. Escalante staff and BLM rangers spent approximately over 120 man hours repairing and rebuilding fences in Coyote Gulch, Hurricane and Harris wash.

BULLFROG SUBDISTRICT REPORT

Fee Collection:

Bullfrog Sub-district rangers assisted the Fee Division with security, money transports, and numerous other fee related activities.

- Hours contributed **805**
- Audits **74**
 - Road Audits 9
 - AFM Audits 3
 - Campground Audits 47
 - Water Audits 15
- Fee Violations Encountered **211**

Water Operations:

- **Boat Voyages** **260**
 - Vessel 257 142
 - Vessel 262 118
 - Vessel 290 16
- **Vessel operation hours** **500**
 - Vessel 257 257
 - Vessel 262 217
 - Vessel 290 26
- **Boat Inspections** **32**
- **WQ Contacts (Vessels/Camps)** **23**

Backcountry:

Bullfrog staff conducted the following single day and multi-day 47 Backcountry patrols, including:

- 6 ranger-nights in the backcountry
- 30 Archeology monitorings

From these, 13 ARPA violations were documented, and 9 non-ARPA (trespassing, damage, vandalism, etc) were documented

Law Enforcement:

Total Bullfrog LE Incidents: 1756 (2006:2006)

Bullfrog Criminal Incidents: 1247 (2006:1572)

Uses of Force - 3 displays of firearms against suspects
(Handcuffing due to arrests are not included)

Arrests: 30 Processed through Bullfrog Holding Facility
17 Bullfrog arrests
8 Halls/Hite arrests
5 Kane/Garfield Co arrests
9 DUI
9 BUI
9 Suspended/Revoked DL (2 associated with DUIs)
6 Possession of Controlled Substances (3 assoc. with DUIs)
3 Firearms violation (2 assoc. with a DUI arrest)
2 Suicidal / Endangerment
1 Assault

Citations: 163 citations (Includes only violations where citations were issued)
73 Traffic Related (which includes 9 DUI).
45 Boating Related (which includes 1 BUI)
28 Alcohol Related (incl. the DUI/BUI citations above)
2 Drug Possession
4 Disorderly Conduct
4 Interfering
2 Hazardous Conditions
2 Weapons Violations
3 Resource Violations
1 arch
1 resource vandalism
1 destruction of plants
5 Littering
0 Sanitation Violations
3 Fires
2 Off Road
1 Camping
4 Fireworks
4 Closure Violations
1 Commercial Ops
1 Permit violation
1 Misappropriation of Property/Services
1 Trespass
3 Fee
1 Pet

Incidents: (Includes total incidents by category, including citations, warnings or incidents with no identified suspect)

Drugs and Alcohol:

Alcohol	42
Drugs and Paraphernalia	4

Theft / Disturbance / Potential Violence :

Assault/Sex Offense	1
Disorderly Conduct / Interf. / Haz Cond.	36
Audio Disturbances	9
Larceny / Theft / Tampering / Stolen Prop	12
Vandalism	6
Weapons Violations	7
Burglary	1
Trespass	13
Alarms	3

Resource Incidents:

Littering	29
Camping	46
ARPA	13
Wildfire Arson/Illegal fires	4
Off Road Travel	17
Possess, Take Natural / Cultural Features	7
Sanitation	14
Graffiti / Vandalism	5
Domestic Livestock	6
Wildlife	3
Zebra Mussels	500 approx
Fishing	2
Metal Detecting/Mining	1

Vehicle and Boat Operations:

Vehicle Impounds	20
DUI (Driving Under Infl. of Alcohol)	8
Traffic, other than DUI, alcohol or MVA	379
BUI (Boating Under Infl. of Alcohol)	13
Boating, other than BUI, alcohol or accident	396

Death Investigations:

3

Assistance:

Assist to Citizens	150
Assist to other L.E. agencies	25

<i>Accident Investigations</i>	
Motor Vehicle Accidents	12
Boating Accidents	40
Aircraft Accident	0
 <i>Park Safety and Operations</i>	
Cliff Jumping	6
Prohibited Operations	42
Commercial Ops	2
Permit Violations	1
Fee Violations	211
Fireworks/Explosives	6
Pets	13
Damage (gvt property)	5
Damage (other)	3

Emergency Medical Services:

Bullfrog rangers responded to 104 medical calls.

Total Bullfrog Responses:	104
ALS	11
BLS	86
Boat/PWC-Related	17
Kite Tube	0
Cliff Jumping	0
Bullfrog Boat Responses:	10
Bullfrog NPS Ambulance Transports	32 (Incl tx of Bullfrog and Halls patient to Clinic)
Air evacuations, NPS patients, from Bullfrog: Clinic	14 (Does not include air taxi of patients)

Search and Rescue:

There were a total of 16 SAR incidents at Bullfrog Sub-District, officially listed through Dispatch.

- Water Related 13
(though boat logs indicate 30 launches for 30 separate SAR-related incidents. The discrepancy is most likely EMS water responses and tows to nearest harbor that were not officially tallied as SARs.)
- Diving Operations 1
- High Angle Technical Rescues 1
- Required aircraft support/response 5
- Assisted Other Agencies outside of Park 1
- Major SARs requiring Regional funding 6

Wildland Fire:

Wildland Fires: 5

Three wildland fires were caused by either careless use of campfires, or deliberate sets to clear beaches of vegetation for easier camping. One was likely caused by illegal use of fireworks. All were an acre or less in size. One wildland fire was set from sparks released during a permitted ARAMARK fireworks display for the 4th of July. Suppression was immediate with less than 1/8th acre burned.

Two responses involved on-scene wildland fire suppression from NPS personnel:

- the 4th of July set where firefighters were standing by for the event, and
- a campfire-caused set in Halls Creek Bay, where again less than 1/8 acre was burned.

Structural Fire:

Bullfrog personnel responded to a total of 7 structural/vessel fires and calls;

- **Structural Fires** 1

The electrical main serving the Bullfrog Marina caught fire. It was put out with an extinguisher. ARAMARK was to investigate the cause of the fire but as of yet has not submitted a report.

- **Boat Fires** 3

All three boat fires were electrical-set fires at or near the engines. One of these was a private vessel, two were ARAMARK rentals. All of these fires were put out by vessel occupants with fire extinguishers before NPS response arrived.

- **Vehicle Fires** 2

A camper mounted on the back of a parked pickup truck caught fire due to an interior propane leak. Bystanders first observed the flame, and knocked the fire down with extinguishers. The Bullfrog Fire Brigade responded and controlled residual smoking. The contents of the bed of a moving pickup truck caught fire when metal jostled against a spare vehicle battery and made connection between the exposed terminals. Owner and members of his party knocked down the flames with extinguishers. The Bullfrog Fire Brigade responded and controlled the residual smoking.

- **HazMat Response** 2

A 10 to 15 gallon gasoline spill occurred at the Bullfrog Gas Station. ARAMARK contained the spill before NPS personnel arrived. ARAMARK cleaned up the spill. A visitor at the Defiance House Lodge found an OC pepper spray canister on the floor of the lodge hallway, and discharged it, not knowing what it was. NPS personnel responded and evacuated

- **Other Fire Response** 1

The NPS Structural Fire Brigade provided standby support during the 4th of July Fireworks display. The fireworks created a brush fire extinguished by the Fire Brigade.

Fatalities:

There were 3 fatalities in the Bullfrog Sub-District this past year.

- In Hanson Creek a group of young adults drove their runabout head-on into a rock wall at speed of around 30 mph. Two victims sustained immediately life threatening injuries, with one dying on scene, possibly from a ruptured aorta, and the other being saved. Other victims sustained serious injuries.



- In Hall’s Creek Bay, a 60 year-old male attempted to swim several hundred feet from a houseboat to an island. He went unconscious and lost pulse. Resuscitation efforts were not successful and he was pronounced dead on scene. The medical examiner found death caused by drowning with cardiac complications.
- At Bullfrog Marina, a 3 year-old girl was running and fell off the docks while unobserved. 3 ½ days of search and recovery efforts ended with the girl’s body found on the lake bottom at a depth of about 110 feet beneath the marina.



Safety/Accidents:

There were 2 lost time employee accidents in the Bullfrog Sub-District this year.

- While on a backcountry hunting enforcement patrol, a V+RP ranger was moving through a rock gap using a “chimneying” method, which exacerbated a preexisting elbow condition. This resulted in about 2 months of light duty, though actual time of light duty is unknown as the condition is ongoing as of this writing.
- A V+RP ranger had a thumb pinched between a vehicle door and door frame. The vehicle was parked at a sideways angle along the shoulder of a road, while the employee opened the door to retrieve something. While pulling her arm out of the vehicle, the door closed onto the thumb due to gravity of the sideward lean of the vehicle. This resulted in 2 days of light duty.

There was 1 recorded accident with government vehicle/vessels:

- **Patrol Vehicle Accident:**
A V+RP ranger drove a patrol vehicle down a highly rutted dirt road on BLM land north of Bullfrog. To avoid sliding into a ditch, employee steered away from the ditch and scraped the body along a roadside tree limb, causing a 3 foot long dent.

There were 3 recorded equipment accidents with resulting property damage.

- A V+RP ranger working on a boat, leaned out over the boat, resulting in the handheld radio falling out of its clip holster and into the water.
- A V+RP ranger filled the Bullfrog Fire Boat with diesel rather than the required gasoline, resulting in engine failure. The vessel engine system was repaired by cleaning and flushing, resulting in about 150 gallons of waste gas/diesel that was treated as hazardous waste.

Notable Incidents:

An intoxicated individual brought a handgun into the Bullfrog Boat Store and tried to buy beer. Upon refusal he became agitated. The store operators saw the gun, and decided then to sell him the beer, and then called for rangers. Traffic stop of the vehicle yielded a semi-automatic rifle and two handguns, and white powder that field-tested positive for cocaine. The case was turned over to the County.

Cathedral in the Desert sustained massive charcoal graffiti vandalism. A VIP group cleaned off the graffiti.

About 300 lbs of petrified wood was collected by a crewmember of Trash Trackers during a fall cleanup run Uplake. Special agents went to the suspect house near Tucson and retrieved the fossil wood and a confession.

An ATV and motorcycle were stolen from Trailer Village. The suspect, a Ticaboo resident and mine worker, was apprehended. The pickup used to transport the ATV was seized, and dynamite was found inside. The ATV and motorcycle, along with another ATV stolen from Wane County, were found and recovered by rangers.

HALLS CROSSING/HITE SUBDISTRICT:



Major Incident Summary

07-0063 Halls Crossing rangers worked a homicide/suicide. A 66 year old male (citizen of Republic of China) and a 26 year old female (citizen of Japan) were killed when the male drove their car off of a 50 foot cliff at Muley Point.

07-0120 Three people were treated for hypothermia after their small plane crashed and sank into the water in Good Hope bay the previous evening. The plane was recovered on April 3rd.

07-0270 Halls Crossing rangers responded to a motor vehicle rollover with fatality on highway 276 just inside the park.

07-4086 Mary Simmons was killed and her husband Donald is missing presumed drowned in Lake Canyon after a large slab of rock came down on their vessel.

Law Enforcement:

BUI/DUI	9
Alcohol related	12
Citations	41
Burglary	2
Larceny	2
Weapons	2
Traffic	39
Homicide	1
ARPA	6
Air Accident	1
Motor Vehicle Accident	2
Cliff Jumping	1

Assistance	
Assist of Agencies	7
Visitor Assistance	25
Boating	
Boating Incidents	161
Fire	
Boat Fire	3
Wildland Fire	4
EMS	28
SAR	12
Fatalities	5
ESCALANTE SUBDISTRICT:	
Motor Vehicle Accidents	3
ARPA	1
Visitor Assist	5
Agency Assist	2
EMS ALS	4
SAR	4
Special Patrol	32

VI. FACILITIES OPERATIONS AND MAINTENANCE

SPECIAL PROJECT FUNDING

Repair/Rehab/Cycle/FeeNPS

- | | |
|--|-----------|
| • Wahweap Fish Cleaning Station | Completed |
| • Dangling Rope Electrical Line Replacement | Completed |
| • Rehab/Refurbish Signs Lake Wide | Ongoing |
| • Upgrade Lake Wide boat pump outs | Ongoing |
| • Parking Area Maintenance Lake Wide | Ongoing |
| • Seal and Stripe Bullfrog Paved Areas | Completed |
| • Repair Well #3 Wahweap | Ongoing |
| • Replace Decking Dangling Rope | Ongoing |
| • Equipment Replacement Overhaul Boat 320 Nudgit | Ongoing |
| • Replace LF White water Facility | Completed |

CONCESSION SPECIAL ACCOUNTS PROJECTS

	<u>Collected</u>	<u>Expenditures</u>
Capital Improvement Account (CIA):	\$1,791,019	\$1,666,880
Campground Improvement Fund (CIF):	\$35,315	\$4,355
Construction Set-aside (CSA):	\$2,838,912	\$3,629,869
Government Improvement Fund (GIA):	\$80,000	\$27,416

Projects Completed in FY07

- CIA29 Uplake DCP
- CIA34 Boat Wash Facilities – Zebra Mussels
- CSA47IV Wahweap Campground Phase 4
- GIA05 Dangling Rope Battery Test
- CSA99 Hazardous Tree Removal/Trimming

Projects Underway in FY07

- CIF16 Halls Crossing Campground Improvements
- CIA31 Replace Wahweap Fuel Dock
- CIA32 Lake-wide Breakwater
- CIA33 Marina Access Bridges Halls Crossing and Bullfrog
- CSA100 Halls Crossing Marina Sewer Force Main/Road

HEADQUARTERS: FACILITIES

Headquarters Personnel Changes

Maria Davis, Facilities Management Assist FMSS, Glacier Bay NP

Kaylene Jaeger Facilities Management Assist from THRO

Karen Bennett (term FMSS clerk) extended for another one year period

GENERAL FACILITIES ADMINISTRATION INFORMATION

- Received \$50,000 FMSS funding to continue to term employee FMSS Clerk Karen Bennett.
- Weekly safety meetings were held with uplake facilities staff, and bi-weekly meetings took place with the downlake personnel. This process has remained consistent and is showing signs of improving safety in the workplace in both locations.
- Completed construction of the Grand Canyon NP whitewater orientation facility at Lees Ferry.
- Completed demolition and disposal of the former Lake Powell Motel and reclamation of the building site by contour grading and seeding.
- Initiated an Interagency Acquisition Agreement with the Federal Highway Administration (FHWA) for a hydraulic analysis of the Paria River in the vicinity of the Paria River Bridge and the Lonely Dell Ranch Road and bank protection to stabilize these infrastructure elements.

Support to Other Parks, Park Divisions, and Local Support Requirements:

- Completed structural evaluation and contract plans and specifications for the rehabilitation of the Pipe Springs N.M. Winsor Castle. Consulted IMR historical architect in the project development for conformance to NPS standards.

GENERAL FACILITIES ADMINISTRATION INFORMATION

- Two headquarters staff attended the Facility Manager/Chief of Maintenance Conference and Workshop in Denver, Colorado in December. In conjunction with this, they attended the 9 hour training course on cost estimating of construction projects, using RS MEANS estimating guides. The park received 2 sets of RS MEANS 2007 guides free of charge for use in estimating park projects and costs of maintenance tasks.

FMSS

- Completed FRP deadlines
- Annual and Comprehensive condition assessments completed for all NPS owned assets
- Completed Road inventory with Federal Highways-RIP Route ID
- Work Orders:
 - PMIS Project: Children and Parents Generated in FY07 118 –Children in COSTED Status and Parents in WAPPR (Waiting Approval)
 - 1276 Total Standing Work Orders Created in FY07 and Closed in early FY08
 - 168 Road Standing Work Orders
 - 5 Trail standing work orders
 - 18 Grounds standing work Orders
 - 198 Housing/Buildings standing work orders
 - 51 Utilities standing work orders
 - 42 Marina standing work orders
 - 203 Service Items-i.e. Fleet standing work orders

- Total labor hours by asset type:
 - Roads and bridges: 7038 hours
 - Trails and Walks: 8.25 hours
 - Grounds: 2447 hours
 - Buildings: 18857.30 hours
 - Utilities: 19063.15 hours
 - Marina and Waterways: 7436 hours
 - Special Features: 1159.
 - Support and miscellaneous: 7402.30
 - Administration and overhead: 49743.52

DOWNLAKE DISTRICT

Note: The enclosed list of accomplishments are above and beyond normal maintenance, checks, and services as well as minor repairs (i.e., work orders) to facilities, components, and systems for the Fiscal Year 2007.

1. **Housing Improvements:**

a. **Major Housing Rehabilitations:**

- | | |
|---|-----------|
| • Interior and Exterior Remodel: PG-1, PG-6, WW 114 B, C, D | Completed |
| • Interior Remodel: PG-3 | Completed |

b. **Minor Housing Improvements / Accomplishments:**

- | | |
|--|-----------|
| • Hazard tree removal: PG-1 | Completed |
| • Paint Interior: PG-5 and WW 119 A&B | Completed |
| • Rebuilt all NPS Dangling Rope Housing Porches (DR 421, DR 422, and DR 423) | Completed |
| • Poured new concrete driveway at PG-1 | Completed |
| • Repaired asphalt shingles at WW 119 | Completed |
| • Installed new mattresses in all seasonal housing | Completed |
| • Installation of a sewage check valve at PG-1 to prevent flooding | Completed |
| • Replaced lateral wastewater service to PG-12. | Completed |

2. **Buildings and Facilities Improvements / Accomplishments:**

- Installed micro-flush toilet at Swim Beach.
- Moved Lone Rock micro-flush toilet units to meet ever changing lake level conditions.
- Installation of Tri-Lock erosion control materials around the DR Battery Building (On-Going).
- Continual relocation of courtesy docks, marinas, and boat pump-outs throughout the Downlake district throughout the year.
- Repair of Dangling Rope Propane Leaks.

3. **Water and Wastewater System(s) Upgrades / Accomplishments:**

- Low Water Impacts. Low water impacts created continuous relocation and extension/retraction of floating facilities and utility services (Water Sewer, and electrical). The

B&U crew continual experienced increased work loads in all areas due to low water during FY 07. All visitor services and utilities were maintained operational throughout the year. Low water impacts also increased barging operations and barging times between Wahweap and Dangling Rope for propane runs, garbage barges, and hauling of materials for Contractor projects at Dangling Rope.

- Upgrade of Main Ramp and Stateline Boat Pump-out systems (on-going). Wastewater holding tanks at 68% completed.
- Upgraded Main Ramp and Stateline BPO electrical, water lines, and suction hoses.
- Upgraded and replaced sewage pumper truck piping.
- Repaired and/or replaced various water valves and water meter boxes and lids in Wahweap.
- Installed cleanouts and valves in the Swim Beach Lift Station force main.
- Replaced wastewater lift station pumps and lift station controls at Lone Rock.
- Performed all backflow and water testing, meter readings, and compliance reports to ADEQ and UDEQ in accordance with current regulatory requirements. This is a major time consumer.
- Preventative Maintenance Issues:
 - Root-X all housing units (Wahweap, Page, and Lees Ferry).
 - Daily checks and services as well as monthly services of Lift Stations.
 - Cleaning of Gateway to Transfer Station at Transfer manhole to accommodate system outages.

4. **Major Electrical System Upgrades:**

- Completed cyclic Dangling Rope Inverter and cable repairs, software upgrades, and service of equipment and components.
- Diagnosed and Identified Dangling Rope battery system shortfalls for the photovoltaic power system.
- Repair of Dangling Rope Photovoltaic System Batteries and Battery Cells.
- Re-piped propane at Dangling Rope from tank farm to propane generators as a dedicated line to the generators. Repaired all propane line leakage.
- Repaired and Upgraded Well #4 motor starter(s) and control(s). Variable Frequency Drives and Soft start capabilities were added.

5. **Contract / Project Support:**

a. **Construction Project Support:**

- | | |
|--|-----------|
| • Re-shingled PG-3, PG-4, PG-5, and PG-9 | Completed |
| • Metal roofing installed on all NPS facilities at Dangling Rope | Completed |
| • Dangling Rope Propane Fired Generators overhauled (2 Each) | Completed |
| • Construct Wahweap Fish Cleaning Station | Completed |
| • Wahweap Campground Phase IV | Completed |
| • LF Recreational Dump Facility Improvements | Completed |
| • Upgrade Dangling Rope Electrical Line (Emergency Repairs) | Completed |
| • Force Main To Page | Completed |
| • Upgrade Dangling Rope Electrical Line (Emergency Repairs) | Completed |
| • Force Main To Page | Completed |

- Repair of system deficiencies (warranty work) such as leaking pipe couplers.
- Repair of Bridge alarm systems.
- Diagnosis and repair of Lift Station 7 Ozone equipment.
- Lagoon (Transfer Station) Sewage manhole repairs to maintain sewage plug.
- Clean and repair air relief units due to failures.
- Supported construction of Lees Ferry Contact Station Completed
- Lake-wide Boat Pump Out Upgrades On-going
(Completion and installation of two uplake sewage holding tanks remaining)

Note: Construction project support included performance of COR/COTR/Inspector Duties, performing line locates, execution of Government supplied goods, and services, and general Contractor support requirements.

6. Support to Other Parks, Park Divisions, and Local Support Requirements:

a. Support to Other Park Divisions:

- Assisted Ranger Division with Fire, EMS, and SAR operations.
- Assisted with “Trash Tracker” operations.

b. Support to Concessionaire:

- Assisted in water and sewer line breaks and emergencies.
- Shutdown of Dangling Rope for winter.

7. Significant Personnel Changes and Issues:

a. Personnel Changes:

- Ron Hockins, Dangling Rope Work Leader (WS-4749-08), retired FEB 07.
- Fred Colburn, Maintenance Worker (WG-4749-05), retired SEP 07.
- Jesse Higgins, Downlake Electrician (WG-5710-11), transferred to BOR effective APR 07.
- Jeff Wilson, Downlake Electrician (WG-5710-08), hired (VRA) JUN 07.
- Gary Heinze, DR Work Leader (WL-4749-10), hired JUL 07.
- Ben Davis, Maintenance Worker (WG-4749-05), hired JUL 07.
- Kristine Cobb, Maintenance Worker (WG-4749-05) hired MAR 07.
- Scott Dolinar, Maintenance Worker (WG-4749-07) hired FEB 07.

8. General Training:

- Contracting Officer’s Representative (COR/COTR) Boese, Jensen,
Heinze, Cook
- Budget Training Boese, Jensen,
Heinze, Cook
- PMIS Training Boese, Jensen, Cook
- Fire Fighting Training(2 Times) Cook, Wilson
- OWCP Training Boese, Jensen
- HAZMAT, 40 Hour Skeet
- HAZWOPER Refresher (8-Hours) All Employees
- Sexual Harassment (EEO) Training All Employees
- 2007 Credit Card Training All Employees

- Federal Information Security Systems Training All Employees
- Orientation to the Privacy Act All Employees
- Records Management Training All Employees
- Blue Stake (Call before you dig) Cook
- Facilities Manager's Conference (CESS Training) Cook

9. **Operator Certification Program:**

- DOIMOCC Heinze, Skeet, Dolinar
- Wastewater Collection I Dugas, Heinze, Skeet

Roads and Trails

The roads and trails crew continued to experience increased work loads in all areas due to low water during FY07. *Lake access and visitor services were maintained throughout the year.*

Antelope Point:

- Antelope Point Docks required repair this summer, as the bolts that hold them together started breaking. We replaced all bolts and installed new cleats.
- Installed float tubes in the Breakwater.

Lees Ferry:

- Cold patch pot holes in roads and parking areas. (March 2007)
- Road striping was performed on the main entrance road and parking areas. (May 2007)
- Competed river trip inspection of restrooms, campgrounds, trails, and fire rings for FMSS, CAC, and CAAs.
- Repairs to roads and the cleaning of all culverts had to be under taken after large rain.

Rainbow Bridge Trail and Marina:

- Tribal consultation meeting. (Oct. 2007).
- Major Rainbow Bridge trail storm damage occurred in October 2007. Most of trail was washed away and docks were stuck in mud. Worked thru Nov on this
- Storm damage again in April caused us to do repair of trail and to move the docks. This time we had a large rock slide to move.
- Condition assessment of trail and docks for FMSS, and CAC. (Aug. 2007)

Dangling Rope Ramp and Marina:

- Barged 16 truck loads of propane, 40,000 gal.
- Barged 2 loads for Gas Company to replace regulators.
- Barged 4 loads for contractor to rebuild generators.
- Barged 2 loads with load bank and new batteries.
- Barged backhoe to do electric line upgrade with elec. supplies.
- Finished replacing all anchor cables with new ones and drilling in new anchor points.
- Moved marina 2 times due to low water.
- Barged trash due to heavy use on 4th of July week end.

- Barged 16 barge loads of equip, tools and supplies to rehab Boat Repair Dock and to do a general clean up and Haz-Mat removal.
- *Closed Dangling Rope Marina for winter and reopened it in the spring.*
- *Installed Fence at the demolition site of the Lake Powell Motel.*
- *Set precast vault for new fish cleaning station, Performed all the dirt work and the landscaping of the area when finished and demo old fish cleaning station*
- *Harden lift station road and turn around at the lagoons.*

Wahweap:

- Completed Rehab of government docks, replace all decking with new Fiber Grate non-skid panels. Replaced all bang board with new plastic 2x12. Replaced all hardware and wenches. (Oct. 2006 – Feb. 2007)
- Completed Crack seal Lake Shore Dr. boat repair parking lot, boat rental parking lot, 14-day overflow parking lot, Stateline parking lot, Bullfrog main entrance, the Hite Airstrip and Wahweap Lodge Parking.
- Measured all parking lots at Wahweap for FMSS. (March 2007)
- Blade all gravel roads and parking areas 5 times and add 4 inches of Base Course Material to the Chains Road and to Wahweap overlook Road.
- Stripe Lake Shore Dr., boat rental parking, 14-day parking lot, boat repair parking lot (July 2007) and stripe Navajo Nat. Mon. roads and parking area.
- Relocate main ramp boat pumpout due to low water. (April 2007)
- Remove Stateline boat pumpout from the breakwater and put it back in service. (May 2007) and took back out of service in Nov.
- Storm damage, Cleaned mud from Lake Shore Dr., the visitor center parking lots, both ramps at Wahweap, Lone Rock road and parking.
- MSDS, cleaned and organized all of our Haz-Mat storage areas. Entered all materials in our storage into a computerized database. (ongoing)
- Remove all tumbleweed from Lone Rock beach. (March 2007)
- Assist the City of Page with a fire training structure.
- Lone Rock project to remove invasive weeds.
- Assist the City of Page to build a fire training center.

Sign Shop:

- Fabricated and installed 952 signs.
- Fabricated and installed Zebra Mussel Signs Lake wide.
- Assisted in crack seal Projects Lake wide.
- Assisted in rehab of Government Docks and the Boat Repair Dock at Dangling Rope.
- Cleaned and refurbished all entrance signs.(June 2007)

Auto Shop:

- Serviced and made repairs to 80 pieces of equipment and vehicles.
- Cleaned out tub on Crafcro crack seal machine and install new product pump and applicator hose. (April 2007)
- Service and make repairs to 5 ea. Propane fueled backup generators for our lift stations.

Boat Shop:

- Serviced and made repairs to 31 boats and 5 barges.
- Replaced lower unit on boat 450.
- Stripped out 252 for survey.
- Sand blasted and painted barge 463 and 461.
- Repacked cylinders on barge 465.
- Repowered boat 210.
- Put new boat 252 in service.
- Repaired hull damage to boat 263.
- Transport boat 258 from Washington State.
- Rebuilt 273 outdrive.
- Delivered 285 to Wing Inflatable and picked up a new boat 244 from North River.

LAKEWIDE AIDS TO NAVIGATION PROGRAM

- Installed new tubes in Antelope Point's breakwater. (March 2007)
- Week-long meeting with US Coast Guard. (Aug 2007)
- Rainbow Bridge: 2 major moves, trail repair, and removal of old cable.
- Dangling Rope dock: 2 major moves, repaired storm damage, replaced anchor points, removed old cable and installed new anchor cables.
- Rebuild government dock: 8 crew days spent assisting roads and trails with this project.
- Search and recovery: 4 SAR Incidents managed.
- DOIMOC: 4 boat operator classes held.
- Uplake ATON repair and maintenance of Uplake navigational aids.
- Downlake ATON Repair and maintenance of Downlake navigational aids.
- Annual repair and painting of vessel 450
- Arizona Boat Show: Provided 25 1-hour programs on water safety.
- Completed 2007 Dive Report.
- Performed Zebra Mussel dive to search for any sign of them.
- Dive at Montezuma wells project.

LAKE ELEVATIONS

- | | |
|-------------|---------|
| • 10/2/2006 | 3601.73 |
| • 11/1/2006 | 3607.96 |
| • 12/1/2006 | 3606.85 |
| • 1/2/2007 | 3603.17 |
| • 2/1/2007 | 3599.51 |
| • 3/1/2007 | 3597.91 |
| • 4/2/2007 | 3598.88 |
| • 5/1/2007 | 3600.35 |
| • 6/4/2007 | 3609.97 |
| • 7/2/2007 | 3611.48 |
| • 8/1/2007 | 3607.35 |
| • 9/4/2007 | 3603.30 |

Training:

- Contracting Officers Representative Training, 4 employees
- Budget Training, 2 employees
- PMIS Training, 4 employees
- Zebra Mussel Training, 4 employees
- Fire Training, 1 employee, 2 times
- IT Training, 13 employees
- Instruct 4 DOI-MOCC classes, 2 employees
- OWCP Training, 1 employee
- EEO Training, 13 employees
- Haz. Mat Training, 13 employees
- Dive Training, 2 employees
- Records Management Training, 13 employees
- Orientation to the Privacy Act, 13 employees
- NPS Responsibilities for Computer Use, 13 employees
- Federal Information Systems Security Awareness, 13 employees
- Credit Card Training, 13 employees
- Credit Card Approving Official Training, 1 employee

UPLAKE DISTRICT

The Uplake Facilities crew had a successful FY-07 despite many unforeseen challenges relating to low water, staff shortages and equipment failures. There were no lost time accidents in the U lake Facilities Division during FY-07. Below is a list of significant accomplishments that are in addition to the normal day to day operational accomplishments of FY-07.

- Retired 3 FTE's
- Hired new Work Leader, Equipment Operator

Significant Housing Accomplishments:

- Rehab plumbing, Exterior siding, and drywall ,paint, texture interior of BF713
- Complete replacement of windows in 9 of the housing units
- Complete replacement of carpet in 6 housing units.
- Construction Support for various contractors Hite, Halls, Bullfrog
- Complete removal of dead non native trees in housing area
- Assist Kane County School district in construction design repairs of new school building for water proofing

Significant Building, Facility and Road Accomplishments:

- Identified, procured, and installed materials to sustain floating structures and lake access as water levels dropped, and then its rise
- Improved road to Hobie Cat beach and moved ferry operations to that area, then worked in Partnership with UDOT to relocate Ferry wedge on many occasions.

- Removal of multiple truckloads of debris and large amounts of trash in conjunction with ARAMARK personnel at Bullfrog launch ramp and beach areas during Beach Cleanups.
- Multiple relocations of micro-flush facilities for use at Main ramp, Hobie Cat, Stanton Creek, Covered Slips, Dry Storage Areas and Hite West Rafter Takeout.
- Recurring repairs to Campground Loops after rainstorms
- On going Construction of Hite West Access for river take-outs in response to ever eroding river banks and changing shorelines
- Provide crew to paint stripe roads for uplake areas
- Crack Seal all Bullfrog Roads

Major Water System Accomplishments:

- Install new well pump at Well for Hite
- Support for Contractors in completion of replacement of Lagoon Liners at Bullfrog
- Daily hauling of potable water from Bullfrog to Hite due to treatment plant shutdown ; approximately 20,000 gallons per month, year round
- Two new Personnel trained in Cross Connection Control, two others sent for recertification
- Three personnel trained and re-certified in water distribution operation through in house training in conjunction with Division of Water Quality personnel.

Major Wastewater System Accomplishments:

- Design planning with engineers for installation of 2 new above ground lift stations project
- Rehab of Halls Crossing Boat pump-out dock, decking ,Bumper board
- Installation of 2 new manholes and 800 feet of sewer main serving Defiance House Lodge and Restaurant
- Install deodorant / Degreaser systems on Lift Stations
- Rehabbed Bullfrog and Halls Pumpout Control systems

Electrical System Accomplishments:

Project proposals for rebuild of Halls Gensets

Contract/Project Support:

- Performed COR and/or inspector duties as well as general maintenance support to include utility line locates on the following projects:
 - Design and development of on going Rehab of Hite well and RO systems
 - FMSS CACs, CAAs, support
 - Federal Highways Road inventory
 - Bullfrog and Hite Marina roads Parking Lots, Airstrips with Slurry seal and stripping contractors

Support to other parks, divisions, and local areas:

- Moved ferry operations from Hobie Cat Beach on Bullfrog dedicated ramp in conjunction with UDOT
- Commitment of personnel to the Glen Canyon NRA Fire, EMS, and SAR functions

- Work in coordination with Canyon lands on the clearing of the Flint Trail, multiple times
- Two new hire personnel trained and certified in structural Fire operations

PLANNING, ENVIRONMENTAL AND COMPLIANCE PROJECT HIGHLIGHTS

Environmental Activities:

Park wide Environmental and Safety Audit was completed during July, 2007. Significant Environmental or Safety findings were minimal, and have been addressed through an action plan. Many were remedied within a few weeks of audit. Funding has been requested for the remaining few needing purchase of costly equipment. Environmental staff received exemplary praise for Environmental Management System Management Plan.

Environmental Specialist, Ms. Barbara Wilson, attended and successfully completed a Train the Trainer course for Hazardous Waste Operations and Emergency Response 8 Hour Refresher in Atlanta Georgia. She subsequently provided both 8 hour refresher training and introduction to hazardous waste operation and emergency response training to uplake and downlake staff. Staff included those rangers and maintenance personnel assigned to the emergency response team as well as seasonal rangers, maintenance and fee takers.

She also taught an environmental course for the LE Refresher Training and provided training to ranger, resources and maintenance staff on Hazardous Communications and worked with each division to create chemical inventories and update chemical purchasing and labeling practices.

Other accomplishments included completion of annual Hazardous Waste Assessment Reports for State of Utah and Arizona, including completion of EPA Form R as required by EPCRA Title III.

Entered into discussions with the State of Utah, Division of Radiation Control on their proposal to grant license to re-open Shootaring Uranium Mill, which is located in Ticaboo, Utah, about 3 miles from the Bullfrog entrance of the Park.

Planning and NEPA Compliance:

Environmental Impact Statement and Plan Development to Manage Off Road Vehicles At Glen Canyon National Recreation Area. The purpose of this planning effort is to evaluate a range of alternatives to manage recreational ORV use at Glen Canyon's vehicle-accessible shoreline locations, and at the Lone Rock Beach area. In addition, this planning effort will evaluate alternatives to manage All-Terrain Vehicle (ATV) travel on Glen Canyon's 388-mile road network. The goal is to ensure protection of Glen Canyon's resources, to protect public safety, and to provide a range of appropriate recreational opportunities to the public. This evaluation of recreational ORV use is needed to evaluate ORV impacts on park resources, to address the changing visitor use conditions associated with fluctuating lake levels, and to address changes in Arizona and Utah state traffic codes. The ORV Management Plan/EIS is also required under 36 CFR 4.10, which prohibits all off-road travel except on routes and areas designated by special regulation as open to ORV use. Upon completion of this planning process, Glen Canyon may adopt a special regulation to authorize ORV use. Public scoping brochures were mailed out to a

variety of federal, state and local governmental offices, all Native American Tribes professing interest in the park region, as well as general members of the public. The Public Scoping brochure was also posted on PEPC. Additionally, 3 public scoping meetings were held, one in Page, Arizona, one in Escalante, Utah and one in Monticello, Utah. We received approximately 1700 responses. Currently the interdisciplinary team is reviewing the comments and gathering data in support of the development of the project alternatives.

Rim Trail Development Plan and Environmental Assessment

The purpose of this planning effort is to consider a proposal to construct a recreational trail along the southeast rim of Glen Canyon, a spectacular 1,200-foot deep canyon of the Colorado River, just below the Glen Canyon Dam. The National Park Service and the city of Page are partnering in the planning and development of the trail, as it would be located on lands owned by both entities. The proposed trail, tentatively called the Glen Canyon Rim Trail, would be approximately 7.5 miles in length and would link the Horseshoe Bend trail with the city of Page's existing Rim Trail and may accommodate non motorized users, including hikers, mountain bikers, and horseback riders. An interdisciplinary team has been created and includes the NPS Office of Rivers, Trails and Conservation Assistance. Additionally, an MOU was signed with the City of Page. Public scoping brochures were mailed out to a variety of federal, state and local governmental offices, all Native American Tribes professing interest in the park region, as well as general members of the public. The Public Scoping brochure was also posted on PEPC. Additionally, 1 public scoping meeting was held in Page, Arizona. We received approximately 5 responses. Currently the interdisciplinary team is reviewing the comments and gathering data in support of the development of the project alternatives.

Castle Rock Cut Environmental Assessment

The purpose of this planning effort is to consider a proposal to excavate a watercraft channel near Castle Rock on Lake Powell (Castle Rock Cut). When completed, this project would allow quick transit of water craft from the launch ramps at Wahweap and Stateline, directly to Warm Creek Bay and points uplake. It would shorten the uplake trip by approximately one hour, thereby saving both time and fuel resources for visitors, concessioners, permit holders, and NPS maintenance and law enforcement staff. This project would help decrease turbulence around Antelope Point and extend the life span of the floating facilities at Antelope Point Marina. As currently proposed, the project would create an 80-foot by 2300-foot channel that would be available to users as soon as the water level rose above the excavation level. This project would entail the removal of about 150,000 cubic yards of sandstone, which would be spread on the north side of the cut below the high water level of the lake (3700 ft). This project has progressed through the internal scoping, external scoping and public release of the Environmental Assessment. Approximately 1630 comments were received during the public scoping period. 301 comments were received during the public review period for the EA. Currently this project is undergoing extended Native American Consultation related to perceived impacts to Traditional Cultural Properties of the Hopi Tribe.

Colorado River Revegetation Management Plan and Environmental Assessment

The purpose of this planning effort is to consider a proposal for revegetation of the banks of the Colorado River between Glen Canyon Dam and Lees Ferry.

The project is designed to meet two primary goals; the first is to develop a 20-year master plan for restoring riparian vegetation along this stretch of the Colorado River and the second to restore an initial 6-acre site (Hidden Sloughs), located at river mile 6.5 on the north bank of the river. The plan (and the initial project) would include removal of non-native tamarisk and the installation of a variety of native upland and riparian species at selected sites along both sides of the river corridor. The project has been reviewed and approved by the NEPA compliance Group and the Master Plan and Environmental Assessment are currently underway. Public scoping has been completed and public responses were minimal. Consultation has been completed with the US Fish and Wildlife Service has been completed and consultation with the Arizona State Historic Preservation Office is currently underway.

Integrated Pest Management Plan and Environmental Assessment

The purpose of this planning effort is to consider to initiated a park-wide Integrated Pest Management (IPM) Plan and complete an Environmental Assessment (EA).

An IPM Plan will reduce risks to the public, park resources, and the environment from pests and pest-related management strategies. IPM is a science-based, decision making process that coordinates knowledge of pest biology, the environment, and available technology to prevent unacceptable levels of pest damage, by cost-effective means, while posing the least possible risk to people, resources, and the environment. The concept of IPM was incorporated into the National Park Service through a Presidential Directive on August 9, 1979. NPS policy has implemented IPM practices in the management of all resources on NPS lands including concessions and leased properties. This plan is designed to be a “living document” with the ability to add new pests and new management actions as needed. The plan and EA are currently in draft format. Public Scoping has occurred and input was minimal. Consultation with the USFWS and Arizona and Utah SHPO’s is the next activity planned.

NEPA

The NEPA compliance group completed review of 37 categorical exclusions and worked on the 12 environmental assessments listed below:

ADOT De-Icer Building EA for Right of Way Request
Castle Rock Cut
Repeater at Navajo Mountain EA for NPS Right of Way Request
Glen Canyon Rim Trail
SRP Intake EA for Right of Way Request
Telecommunications Plan
Beehive Telephone EA for Right of Way Request
City of Page Water Intake EA for Right of Way Request
Greenehaven Development Sewer Line EA for Right of Way Request
Paleontological Plan and EA
Colorado River Revegetation Management Plan and EA
Glen Canyon Grazing Management Plan EA Remand
Integrated Pest Management Plan and EA
Park wide Fee Booth Development Plans and EA
Fish Management Plan and EA