

FINAL PROJECT REPORT

RM-CESU Cooperative Agreement Number: J1445060008/H1200040001/USURM-28
USU Proposal/Grant Code: 061723

TITLE OF PROJECT: Tehabi Internships – Interns for Glen Canyon NRA for summer 2006

NAME OF PARK/NPS UNIT: Glen Canyon National Recreation Area

PROJECT SCHEDULE AND FINAL PRODUCTS:

Project Initiation: March 24, 2006

Final Products include: Final presentation and summary report of the internship

Final Project date: December 30, 2007

PROJECT SUMMARY:

This project supported two Tehabi internships stationed at Glen Canyon National Recreation Area (GLCA) in Arizona. This year Tehabi had 19 students from eight universities participate with the internship program. These interns worked with the NPS and BLM in five states at seven offices. The internship began with a field course held from May 20-27, 2006 at Grant-Kohrs Ranch National Historic Site (GRKO) in Deer Lodge, Montana. At the conclusion of the field course interns traveled to their sponsoring office to work under the direct supervisor of the agency. Over 12 weeks the interns developed and completed a performance plan and individual project and completed other duties as assigned by their supervisors. In addition to their work duties, the interns participated in a three-credit course that continued with topics from the field course. After 12 weeks all of the interns returned for a final meeting held August 13-16, 2007 at the USU Bear Lake Training Center. The interns discussed their internship experiences and gave individual presentations on their summer internships and final projects.

PROJECT DESCRIPTIONS:

Glen Canyon National Recreation Area (GLCA)

Tehabi coordinator: John Spence

At GLCA there were two interns. The Tehabi program is coordinated at GLCA by John Spence, who also serves as an individual supervisor. Each intern has an individual supervisor that handles the day-to-day activities and duties.

Restoration Ecology

Supervisor: John Spence

Intern: Angie Roberts (Utah State University)

Angie Roberts was a Restoration Ecology intern with Glen Canyon NRA. One of Angie's primary duties was to participate in an ongoing spring restoration project, concerning the health of three springs affected by grazing. Angie was responsible for the collection of the baseline hydrologic data at all three springs. She prepared a team to participate in the monitoring efforts of two springs located on the Kaiparowits Plateau. She also prepared a small group to visit one spring in the Hans Flat area of Glen Canyon. Upon completion of this project, Angie provided the NPS with 2006 baseline hydrologic data, a 2006 progress report and 2006 monitoring data.

Angie also participated with the aquatics program at Glen Canyon. She was involved with water sampling along beaches and marinas, as well as sediment sampling in high traffic areas. She also monitored the Zebra Mussel substrates for possible contamination. Angie was also involved in the design of an aquatic invasive species interpretation sign that will be constructed and placed in the park by the end of 2006. Some other projects Angie participated in were range field inventories, grazed and ungrazed soil and crust sampling, hanging garden analysis, and cultural resource surveys. For her final project Angie presented her results from the spring restoration to her office. Angie completed her project and achieved all critical results on her Employee Performance Plan and Results Report.



**Left – John Spence and Angie Roberts collect data at a spring.
Right – Angie collects rangeland health data.**



Range Ecology

Supervisor: Steven Bekedam

Intern: Shawn Gerrity (Penn State University)

Shawn Gerrity worked at Glen Canyon NRA with Range Ecologist Steven Bekedam. Together, they devised a plan to sample and analyze the area's seed bank. A "seed bank" is simply the collection of seeds on or in the soil of an environment. Seed banks have extensive biological, genetic, and ecological importance to desert ecosystems. By sampling and assessing a seed bank researchers can gain information on the makeup of the local plant community and project future trends in composition. Shawn spent the summer sampling various grazed and non-grazed range sites within the recreation area. This involved traveling to remote locations via helicopter and hiking across the searing desert to various study areas. At each of the 26 sample sites the crew collected soil samples, gathered extensive data on the above-ground vegetation, measured soil stability, and assessed biotic crust cover and development.

The second part of the study was to perform a series of germination trials within a local greenhouse. This method of seed bank analysis involves providing the collected soil samples with optimal environments for seed germination. Each of the 204 samples were placed on a bed of fertilized soil in a flat and watered daily in the greenhouse. As seeds germinated and sprouts grew Shawn counted and identified each individual, allowing an estimate of seed density and species composition within each site. Grazed and non-grazed sites were then compared with the intention of identifying possible impacts that grazing may have on the future health of Glen Canyon rangelands. Shawn completed his project and achieved all the critical results on his EPPR.

The final reports, summaries and any intern individual project products were approved by and left with their NPS supervisor at the conclusion of the internship. Additional pictures of interns at work are available from Ben Baldwin (Ben.Baldwin@usu.edu).

PROJECT SUMMARY AND RECOMMENDATIONS:

This project provided excellent educational opportunities for the students. The internships allow students to work with their agency supervisors to engage in their discipline and gain first-hand experience of the job. In most cases the supervisor also acted as mentor and provided the interns with additional support, advice and challenges. The interns learned numerous lessons, many of which were not intended but appreciated. Overall, internships, and Tehabi internships in particular, provide students with good experiences with agencies. In turn, the offices get good seasonal employees and completed projects that they need done.

Challenges to the internship program include:

- Funding. Funding provides the greatest challenges to this program. The funding issues can be broken down into several main categories:
 - Inconsistent funding – each year the offices that have available funds for interns changes. This makes position development difficult. In essence, there is not “internship” funding available but rather funds from projects or seasonal hires.
 - Lack of funding – Offices just don’t have money in their budgets for internships (as well as many other things). Even if offices have willing supervisors and good projects often they simply don’t have funds available for the intern.
 - Late funding – offices don’t have their final budgets or are not allowed to spend until late into the recruiting season. This makes getting qualified candidates harder.
- Housing – Due to the remote location of many of the offices we work with and the short duration of the internships, housing becomes an important factor. In some locations there is not available housing and in others it becomes cost-prohibitive. Offices that are more successful in providing housing or helping interns find affordable housing are usually more successful at finding qualified interns.
- Challenging positions – Most students are looking for challenging positions within their discipline. The goal is to find positions that challenge the student and allow them to apply their educational background. This usually means finding a supervisor that can modify existing projects to fit the skill set of the student and help them when they are having difficulties. In addition, the short duration of the summer internships makes it hard to give the interns a full experience that introduces them to their job and agency.

Additional comments (student and supervisor feedback and evaluations) are available from Ben Baldwin (Ben.baldwin@usu.edu).