

GCMRC Recreation Research Overview

TWG Meeting
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Research Abstract

Title: A Recreation Opportunity Spectrum for the Colorado River Ecosystem in Grand Canyon

Principle Investigators: Bill Stewart, University of Illinois
Jonathan Taylor, USGS, Ft. Collins
Bob Manning, University of Vermont
David Cole, USDA Leopold Institute

Start / End Dates: April 1998 / September 1999

Project Cost: \$69,933

- Objectives:**
1. Determine current attitudes and preferences of Colorado River users toward setting attributes related to river flows.
 2. Evaluate changing attitude and preferences of Colorado River users. This evaluation characterizes trends through a review of previous literature of recreation use of Colorado River ecosystem, and also develops benchmarks from new parameters assessed during the data collection.
 3. Evaluate commonality and disparity of current user attitudes and preferences regarding proposed management directions of NPS and other agencies. The two-phase research design insures a valid comparison between managerial and user-based information.

Study Description:

The proposed research involves two phases of data collection. The first phase assesses current perspectives of stakeholders regarding release flows and recreational opportunities. The second phase of data collection will be to survey users to obtain attitudes and preferences regarding desirable attributes (linked to river flow levels). Each phase is discussed in turn.

The first phase of data collection is associated with stakeholders of the Colorado River ecosystem. Along with the policy directions of Glen Canyon National Recreation Area and Grand Canyon National Park, other agencies and interested parties relevant to long-term planning of the Colorado River ecosystem include: other federal agencies, state agencies, regional power organizations, environmental groups, commercial recreation interests, and Native American tribes. Each of the several stakeholders has the potential to either affect, or be affected by, management directives for the Colorado River, and are essential to consider in the development of adaptive management strategies.

The focus group discussions are concerned with stakeholder perspectives for flow management of the Colorado River and relationships between flows and recreational use. Stakeholders may have thoughts regarding linkages between recreation opportunities and their relationship to river flows. In addition, stakeholders will be asked to comment upon various photographs and their ability to represent flows levels and beach (sandbar) types. (These photographs, and the information obtained in the focus groups, serve as a partial basis for the assessment of the second phase of data collection.)

The major task of the second phase will be to survey users associated with recreational opportunities of the Colorado River ecosystem, including anglers upstream from Lees Ferry, day-use rafters between the Dam and Lees Ferry, commercial river raft patrons, private raft trip leaders, and river guides. Along with assessing preferences for flow levels that rafters experienced while on the river, *this study also assesses preferences for beaches or beach types*. Beaches (i.e., sandbars) are formed and maintained due to spike flows that occur occasionally from Glen Canyon Dam. The type of beach resulting from a spike flow depends on many factors, some of which include manageable parameters (e.g., spike release levels, seasonal timing of spike flow, downramp time,). The numbers of beaches, their size, and vegetative covering are related to management of release flows, and considered relevant factors in recreation use of the Colorado River ecosystem.

Regardless of user type, questionnaires will contain at least three sections of items. The *first* section is associated with preferences for setting attributes related to flow level, which may include delays at rapids, speed of travel while on river, time spent floating, time spent at attractions, arrival time at campsites, size and number of beaches, and perceptions of safety. A *second* section of the questionnaire adapts a relatively new technology of photographic imagery to assess user preferences for flow-related parameters, particularly directed at beach types. There has been an accumulation of studies that support the validity of responses to photographs as representative of responses to actual conditions. The *third* section of items is drawn directly from the previous study of user attitudes and preferences conducted in the 1980s (Bishop et al., 1987). Employment of items used in this previous assessment ensures the validity of interpreting changes in attitudes and preferences of recreationists.

As a time frame, the focus group discussions and questionnaire development will be conducted during Fall 1998. The mailback questionnaire administration will occur during Spring 1999. Data analysis and report writing occurs during Summer 1999, with a draft final report scheduled for August 1999.