



Socioeconomic Workshop: Final Report and Next Steps

Helen Fairley (USGS)
TWG Meeting, Phoenix, AZ
March 15, 2010

U.S. Department of the Interior
U.S. Geological Survey

Workshop Prospectus

- Proposed a two-phase approach to plan and conduct future socioeconomic studies:
 - Phase I (first 3-5 years):
 - Focus initially on updating market-based value studies
 - Plan for more expansive socioeconomic studies in future years
 - Phase II (next 4-10 years)
 - Build additional capacity to conduct trade-off analyses
 - Update information on non-use values



SE Workshop Objectives

Consistent with this phased approach, the objectives of the workshop were to:

1. Clarify overall socioeconomic program information needs in a general sense – studies to be conducted within a ten-year timeframe
2. Identify specific information needs to be addressed in Phase I (next 3-5 years)
3. Prioritize Phase I research



SE Workshop (Dec. 2-3, 2009)

- Workshop attended by ~ 40 Participants:
 - ~16 TWG members
 - several other AMWG members and DOI/DOE agency staff
 - 7 socioeconomic researchers
 - 4 independent experts
 - 3 GCMRC staff
 - SA Executive Director
- Facilitated by Mary Orton Company, with assistance from Strategic Initiatives Inc. (Chuck Anders)



Workshop Outline

- Part 1: Presentations on past socioeconomic studies relevant to AMP
- Part 2: Facilitated discussion with AMP members (using decision support technology)
 - identify priority socioeconomic needs
 - distinguish/prioritize Phase 1 and Phase 2 studies
- Part 3: Independent panel reviewed program needs; provided recommendations on next steps
- Part 4: Panel provides written report



List of Presenters and Topics

- Dr. Michael Welsh, Christensen and Associates, Madison: [GCES Non-Use Value Study](#)
- Dr. John Duffield, University of Montana, Missoula: [Economic Values for National Park System Resources within the Colorado River Basin](#)
- Mr. Clayton Palmer, Western Area Power Administration, Salt Lake City: [The Alchemy of Power Economics: Converting Watts to Dollars](#)
- Dr. Thomas Veselka, Argonne National Laboratories, Chicago: [Estimating Colorado River Storage Project Power Economics with the GTMax Model](#)
- Mr. David Marcus, independent consultant, Berkeley: [Glen Canyon Dam Releases – Economic Considerations](#)
- Dr. David Harpman, Bureau of Reclamation, Denver: [Integrative Recreation Economics Tool](#)
- Dr. Yeon-Su Kim, Northern Arizona University, Flagstaff: [Assessing Impacts of the LSSF Experiment on Regional Recreation Economics](#)



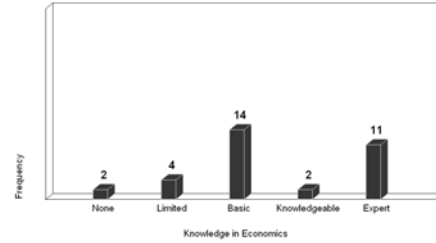
Independent Panel Members

- Dr. Michael Hanemann, University of California, Berkeley
- Dr. Joel Hamilton, University of Idaho (Emeritus), Moscow
- Dr. John Loomis, Colorado State University, Fort Collins
- Dr. Lon Peters, Northwest Economic Research Inc., Portland



Economic Knowledge of Participants

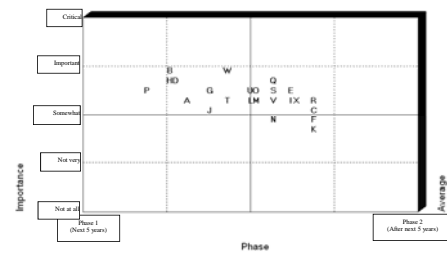
B- How would you characterize your knowledge / expertise in economics?



Importance and Timing of Socioeconomic Questions All Participants – December 2, 2009



Importance and Timing of Socioeconomic Questions Official TWG Members – December 2, 2009



Highest Priority Questions/Needs

- B.** How do high flow and other experiments affect recreation (river rafting fishing guides and other associated businesses, including tribes)?
- H.** Having heard two distinct views, what is the value of hydropower capacity of GCD?
- D.** What are the points of disagreement on methodologies and assumptions in regard to power analysis?
- W.** Determine impacts on marketed hydropower and recreation values of alternative flow scenarios in real time to support decision making.



Recommendations from the Independent Panel (Final Report, February 26, 2010)

Phase I

- Power flow modeling & studies (both economic & financial impacts)
- Surveys of recreational users
- Surveys of tribal interests
- Economic impact & economic benefit analysis for hydro & recreation
- Addresses questions: H, W (part), D, E, U, M, G (part), V, S, I, C (part)
- Start work on Identifying issues and questions for non-use value surveys



Recommendations from the Independent Panel (Final Report, February 26, 2010)

Phase II

- Develop and test non-use surveys
- Conduct non-use surveys
- Focus on marginal non-use values due to changes in flows
- Addresses questions: T, Q, G (part), C (part), N
- Rationale:
 - Non-use survey too expensive for Phase I budget
 - Non-use survey needs more precise scenarios



Phase 1: Recommendation Details

Hydropower Analyses

Date	Task(s)	Responsible Parties
FY2010	Define GCD operational base case and change cases	GCMRC, with cooperation from WAPA
	Solicit firms for WECC analysis (RFQ for engineering, financial, and economic analyses)	GCMRC, with cooperation from WAPA
FY2011	Model WAPA's system with changes in GCD operations; check flowgates between WAPA and rest of WECC; establish framework for economic and financial analyses	Consultant, with cooperation from WAPA
FY2012- FY2013	Conduct economic and financial analyses, for WAPA and its customers and, if needed, WECC	Consultant, WAPA, GCMRC



Phase 1: Recommendations, cont.

Economic Effects of Resource Use

Date	Task(s)	Responsible Parties
FY2011	Define Economic Benefits and Use Preferences of Glen Canyon Anglers	GCMRC, with cooperation from AZGF
FY2011	Define Economic Benefits and Use Preferences of Day Rafters	GCMRC, with cooperation from NPS
FY2012	Define Economic Benefits and Use Preferences of White Water Rafters in Grand Canyon National Park	GCMRC, with cooperation from NPS and GROA
FY2012	Define Economic Benefits and Use Preferences of Rafters below DC	GCMRC, with cooperation from NPS and Hualapai



Recommendations, cont.

Tribal Values and Non-use Values

Date	Task(s)	Responsible Parties
FY2013	Survey tribal populations to assess social and economic impacts of changing dam operations	GCMRC, with cooperation from Tribes
FY2012	Begin scoping for Non-Use survey, initiate focus groups, design survey, seek OMB clearance	GCMRC, working with consultant
FY2013	Conduct Non-use survey	GCMRC, working with consultant



Timelines and Estimated Costs

- Fiscal Year 2010:
 - Initiate RFQs for power models (consultants, universities).
 - No additional budget required if done by existing staff.
 - May be worthwhile for GCMRC to consider enlisting some additional socio-economic expertise to support this activity
- Fiscal Year 2011
 - Initiate recreation surveys of Glen Canyon anglers and day-use rafters \$50,000 - \$100,000
 - Identify tribes for specific surveys of preferences and attitudes \$5,000
 - Offer "Nonuse Values 101" to educate AMP on topic
 - Power modeling. Cost depends on whether there is a non-proprietary model of WECC; if not, cost to access to a proprietary model should be factored in.



Timelines and Estimated Costs

- Fiscal Year 2012
 - Conduct power flow studies that show the financial and economic consequences of Glen Canyon management alternatives on WAPA, WAPA customers, and the Upper Basin Fund. \$50,000
 - Recreation surveys continue - white water users including Diamond Creek to Mead rafters \$100,000 - \$150,000
 - Prepare surveys of tribal preferences and attitudes \$20,000
 - Conduct focus groups and piloting of Non Use Value survey, and initiate OMB clearance. (\$200,000)
 - Power modeling. Cost to be determined



Timelines and Estimated Costs

- **Fiscal Year 2013**
 - Expand power flow studies to include financial and economic consequences of Glen Canyon management alternatives for the entire WECC. \$100,000
 - Recreation surveys continue – repeat coverage of Glen Canyon and day-use \$150,000
 - Conduct tribal surveys. \$60,000
 - Conduct full nonuse value survey. \$500,000
- **Fiscal Year 2014**
 - Develop "real-time decision-making spreadsheet" (\$50,000 - \$100,000)
 - Recreation surveys continue, repeating coverage of white water users \$150,000
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 - Recreation surveys continue, repeating coverage of white water users \$150,000



Next Step

- **TWG/AMWG guidance on prioritizing socioeconomic research in future budget cycles:**

"[The need for additional economic analysis capacity] has been clearly identified as a priority by the Science Advisors and by previous NAS/NRC reviews of the program. However, it is currently not reflected in the AMWG priority questions or called for in the Monitoring and Research Plan." (TWG 2010-11 budget notes)

