

United States Department of the Interior



BUREAU OF RECLAMATION
Upper Colorado Regional Office
125 South State Street
Salt Lake City, UT 84138



NATIONAL PARK SERVICE
Intermountain Region Office
12795 Alameda Parkway
Denver, CO 80225

August 15, 2012

VIA ELECTRONIC MAIL ONLY

Shane Capron
Chair, Technical Work Group
Glen Canyon Dam Adaptive Management Work Group

Dear Mr. Capron:

The Glen Canyon Dam Long Term Experimental and Management Plan Environmental Impact Statement (LTEMP EIS) team was directed by the Secretary of the Interior in a memo dated April 30, 2012 to reply to the Socioeconomic Ad Hoc Group (SEAHG) regarding its proposed list of socioeconomic studies (referred to as Table 2) from its February recommendation to the Secretary. The Secretary directed the LTEMP team to review the list and communicate to the Adaptive Management Work Group (AMWG) which of the studies have been prioritized for intended completion as part of the LTEMP EIS.

This list was comprehensive and thoughtful and the LTEMP team found this list very helpful to this EIS project. The LTEMP team thoroughly reviewed the list in consultation with Grand Canyon Monitoring and Research Center (GCMRC) staff as well as experts with the NPS and Reclamation such as Dr. Bruce Peacock and Dr. David Harpman and Argonne National Laboratories modeling and economics staff. Based on this review we are attaching a list on the following pages that identifies which studies we are planning to complete as part of the LTEMP EIS effort and which may remain to be pursued by the AMWG or GCMRC.

Several studies are planned such as an updated recreation analysis to be lead by Dr. David Harpman from Reclamation and a non-use survey for resources and recreation that will be completed as part of the previously planned NPS study under the leadership of Dr. Bruce Peacock, in close cooperation with Reclamation and USGS. Several of the hydroelectric market impact studies that were proposed will be completed by Argonne National Laboratories, with input from cooperating agencies with special expertise such as Western Area Power Administration. There are a few studies that the team envisions a role for in the EIS such as a non-use survey for hydropower that may be best completed through the AMWG with assistance from Western Area Power Administration. There were also a few studies that proposed to evaluate impacts to water delivery, which the LTEMP EIS team does not intend to use in the course of the EIS analysis because the purpose and need of the LTEMP EIS ensure that any action taken by the action agencies is not intended to change annual water deliveries between Lake Powell and Lake Mead. The LTEMP EIS team would like to extend sincere thanks to the SEAHG group for all of its hard work on these issues.

The Technical Work Group had also requested additional information as to the role of the Science Advisors in LTEMP. We have been working on an Information Quality Plan that will ensure that the quality of scientific information used in the EIS conforms to the standards of the scientific and technical community, although that plan is not yet final. Generally speaking, however, environmental impact

statements and records of decision do not require formal peer review, although some products such as models that might be relied on could require such review. As TWG is aware, USGS' Ted Melis is the LTEMP science manager. In this capacity, Ted will be advising the joint leads with regard to which products might require external expert review. That input could come from an independent group with expertise, such as the Science Advisors, or from other experts. At this point, however, the team does not foresee a need for significant involvement by the Science Advisors in the LTEMP.

We are happy to answer any questions regarding the work that is being planned on the LTEMP EIS. Please call us with any questions: Glen Knowles, 801-524-3781 and Rob Billerbeck 303-987-6789.

Sincerely,



Beverley C. Heffernan
Manager
Environmental Resources Division
Upper Colorado Region
Bureau of Reclamation



Rob Billerbeck
Colorado River Coordinator
Resource Stewardship and Science
Intermountain Region
National Park Service

cc: Jane Lyder, Department of the Interior
Lori Caramanian, Department of the Interior
Bob Snow, Department of the Interior
Rodney Smith, Department of the Interior
Justin Tade, Department of the Interior
Larry Walkoviak, Bureau of Reclamation
David Harpman, Bureau of Reclamation
John Wessels, National Park Service
Dave Uberuaga, National Park Service
Bruce Peacock, National Park Service

Information Needs	Draft Comment for Response to AMWG
<p>CRIN 1. What are the market, non-market and non-use values for CRE resources valued by tribes as affected by dam operations?</p>	<p>The LTEMP EIS team is planning to conduct meetings with the seven tribal cooperating agency representatives and invite conversations with other interested tribes. Through these meetings we will discuss whether the proposed recreation, non-use and hydropower impact studies detailed below will address socioeconomic concerns or whether there are quantitative or qualitative approaches beyond these that need to be pursued. The NPS socioeconomic study will address non-use values for the overall population and is targeted for completion between spring 2013 and fall 2013.</p>
<p>GIN 1. What are merits of market, non-market, non-use and existence values being proposed for development, i.e., reliability of information gained, costs, area of proposed use in program..</p>	<p>A discussion of the reliability of non-use studies will be part of the NPS study.</p>
<p>GIN 2. Define how socioeconomic research information should be used by AMP</p>	<p>The LTEMP EIS team will explain through updates/ presentations, as requested, how socioeconomic research is being addressed in the EIS.</p>
<p>GIN 3. Determine methods to assist more real time assessments of resource impacts of alternative management activities.</p>	<p>The LTEMP EIS team has the understanding that this could not be addressed until after the rest of the socioeconomic studies were complete, so the expectation is that this would be more useful after the LTEMP EIS, than during the timeline of the LTEMP EIS. In the EIS analysis its likely we will update existing models and that work could inform better assessments of real time assessments.</p>
<p>GIN 4. Evaluate, as needed, market, non- market, and non-use values for other resources also found to have impacts from dam operations and deemed important to the AMP</p>	<p>The LTEMP socioeconomic analyses and impact analyses are expected to cover all major potential impacts.</p>
<p>HIN 1. What are the impacts to federal hydropower customers from implementation of Record of Decision (ROD) dam operations and various other flow regimes and segregate those effects from other causes such as changes in the power market.</p>	<p>The MLFF and baseline will be performed as part of the LTEMP EIS analyses and it is expected that Argonne will be the primary entity conducting modeling. Comparisons of MLFF operations to pre-ROD are being discussed in relationship to which type of model will be used to estimate revenue and ratepayer impacts to hydropower. These discussions are targeted for a decision in August 2012.</p>
<p>HIN 2. What would be the market impacts on marketable capacity and energy of: 1. Increasing the daily fluctuation limit Increasing up-ramp and down-ramp limits 2. · Raising maximum power plant flow limit above 25,000 cfs · 3. Lowering the minimum flow limit below 5,000 cfs</p>	<p>As part of the LTEMP EIS, Argonne will be conducting analysis of market impacts to some aspects mentioned here if they are part of LTEMP draft alternatives agreed upon in August. Some aspects may not be covered depending on how the draft alternatives are resolved in August of 2012.</p>

Information Needs	Draft Comment for Response to AMWG
<p>HIN 3. What are the total market, non- market and non-use impacts on upper and lower basin water users from proposed alternative dam operations?</p>	<p>The LTEMP EIS alternatives will not impact or modify annual water delivery by design and by description of Purpose & Need. Therefore no analysis of annual changes to water delivery is appropriate or necessary. Any impacts to water delivery will be limited to intra-year variations and modifications. Effects from monthly changes to water volumes on recreation and hydropower will be evaluated in those categories.</p>
<p>HIN 4. What are the socioeconomic impacts of Glen Canyon Dam operations and experiments to tribal communities, including market, non-market and non- use?</p>	<p>The LTEMP EIS team is planning to conduct meetings with the seven tribal cooperating agency representatives and invite conversations with other interested tribes. Through these meetings we will discuss whether the proposed recreation, non-use and hydropower impact studies detailed below will address socioeconomic concerns or whether there are quantitative or qualitative approaches beyond these that need to be pursued. The NPS socioeconomic study will address non-use values for the overall population and is targeted for completion between spring 2013 and fall 2013.</p>
<p>HIN 5. What are the market, non-market and non-use values associated with Glen Canyon electrical power, and determine these values.</p>	<p>The LTEMP EIS will thoroughly evaluate market and non-market hydroelectric impacts, but it is anticipated that the non-use study for hydropower would not be performed through the LTEMP EIS process, but it is our understanding that Western Area Power Administration is proposing to pursue this independently. To be considered in the LTEMP EIS, involvement with LTEMP EIS experts on the design will be necessary for validity and consistency with other studies.</p>
<p>HIN 6. What are the market, non-market and non-use values associated with water released through Glen Canyon Dam, and determine these values.</p>	<p>The LTEMP EIS alternatives will not impact or modify annual water delivery by design and by description of Purpose & Need. Therefore no analysis of annual changes to water delivery is appropriate or necessary. Any impacts to water delivery will be limited to intra-year variations and modifications. Effects from monthly changes to water volumes on recreation and hydropower will be evaluated in those categories.</p>
<p>RIN 1. What are the total market, non-market, and non-use values for the following recreational uses of the Colorado River Ecosystem downstream from Glen Canyon Dam, including pre-ROD and post-ROD demand and economic assessments: 1) Glen Canyon boating and walk-in trout fishery and related components 2) Glen Canyon recreational boating industry 3) CRE day hiking and overnight camping 4) Grand Canyon private and commercial rafting operations including Native American enterprises</p>	<p>The NPS study will conduct a new survey for non-use values. For market and non-market recreational values, there are discussions about resurveying some of the recreational information but for most of it update existing information on recreation uses and regional economic impacts based on current numbers of users. The baseline to which the LTEMP EIS alternatives will be compared would be the MLFF no-action baseline. The NPS socioeconomic study is targeted for completion between spring 2013 and fall 2013.</p>

Information Needs	Draft Comment for Response to AMWG
<p>RIN 2. Define and value key attributes and key benefits that affect the Grand Canyon wilderness and Glen Canyon recreation experiences: 1) How do they affect market values for these different CRE recreation activities? 2) How do they affect non-market and non-use values for these different CRE recreation activities? 3) How do they differ under differing flow regimes and events such as HFEs, Low Steady Flows and other experiments? 4) How do they differ under differing management actions?</p>	<p>The NPS study will address portions of this, but some aspects are beyond the scope of the analyses required for the LTEMP EIS.</p>
<p>Develop Core Monitoring Information Needs (CMINs) - Develop a Core Monitoring plan - every 2 years for socioeconomic</p>	<p>The LTEMP EIS will inform the GCMRC and the AMP of future monitoring needs.</p>
<p>RIN=Recreation Info Needs, HIN=Hydropower Info Needs, GIN=General Info Needs, CRIN=Cultural Resources/Tribal Info Needs</p>	