

DRAFT – Update to the Recommended Information Needs and Program Elements for a Proposed AMP Socioeconomics Program (approved by the AMWG February 23, 2012) – GCMRC update 12/16/2014

Table 1: Proposed Information Needs and Program Elements

PROPOSED SEAHG INS	PROPOSED PROGRAM ELEMENTS	PROPOSED/ONGOING RESEARCH (added by GCMRC 12/16/2014)
Recreation Information Needs		
<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</p> <ul style="list-style-type: none"> • Glen Canyon boating and walk-in trout fishery and related components • Glen Canyon recreational boating industry • CRE day hiking and overnight camping • Grand Canyon Private and commercial rafting operations including Native American enterprises <p><i>*It is assumed that ‘total market’ refers to regional expenditures by recreationist in the Colorado River Ecosystem (CRE) – GCMRC 12/16/2014.</i></p>	<p>Conduct recreation expenditure analysis of Lees Ferry anglers and boaters, and Grand Canyon boaters. (Note: Some of this may be covered by the NPS economic study being carried out by University of Montana in 2012)</p> <p>Initiate and conduct recreation non-market and non-use assessments (Note: Some aspects of this program element may be covered by the NPS economic study.)</p>	<p>GCMRC is leading Project 13.1 in the 2015–2017 TWP which will update estimates of regional expenditures (‘total market’) and non-market direct use economic values of recreational angling in GCNRA below GCD and whitewater floating in GCNP. This is an update of the research by Bishop et al. (1987).</p> <p>Project 13.1 will not update estimates of regional expenditures (‘total market’) or non-market direct use economic values for commercial or private GCNRA whitewater floating below GCD, whitewater floating launching at Diamond Creek, or Colorado River Ecosystem (CRE) day hiking and overnight camping.</p> <p>The LTEMP EIS recreation economic analysis will use <u>indexed</u> Bishop et al. (1987) results to estimate impacts of alternatives in the EIS to non-market direct use economic values. The LTEMP EIS recreation economic analysis will not update the <u>dated</u> Bishop et al. (1987) results. The Bureau of Reclamation is leading the analysis.</p> <p>The LTEMP EIS regional economic analysis will use <u>indexed</u> per capita expenditure data from <u>dated</u> literature to estimate impacts of alternatives in the EIS to regional recreational expenditures. The LTEMP EIS regional economic analysis will not update data from existing literature. Argonne National Laboratory is leading the</p>

		<p>analysis.</p> <p>The NPS is leading a “Total Use Value” survey to estimate non-market economic values held by the American public for Grand Canyon riparian resources (OMB Control Number 1024 -0270). The study will estimate passive use (non-use) economic values for riparian resource (e.g., beaches, native and non-native fish). While “total use values” <u>may</u> include direct use value, <u>the emphasis is to estimate passive use (non-use) economic values only. The study results are intended to be used in the LTEMP EIS.</u></p>
<p>RIN2. Define and value key attributes and key benefits that affect the Grand Canyon wilderness and Glen Canyon recreation experiences</p> <ul style="list-style-type: none"> • How do they affect market values for these different CRE recreation activities? • How do they affect non-market for these different CRE recreation activities? • How do they differ under alternative flow regimes and events such as HFEs, low steady flows and other experiments? • How do they differ under alternative management actions? 	<p>Conduct focus groups and pilot non-market surveys</p> <p>Conduct full non-market value surveys</p>	<p>GCMRC is leading Project 13.1 in the 2015–2017 TWP which will identify how attributes (e.g., flow regimes, crowding, safety) affect angling in GCNRA below GCD and whitewater floating in GCNP. This is an update of the research by Bishop et al. (1987). This research will allow for inference to be made between key attributes and non-market direct use economic values.</p> <p>Project 13.1 will not include attribute research for commercial or private GCNRA whitewater floating below GCD, whitewater floating launching at Diamond Creek, or CRE day hiking and overnight camping.</p>
<p>Tribal Information Needs</p>		
<p>CRIN1. What are the market*, non-market and non-use values for CRE resources valued by tribes as affected by dam operations?</p> <p><i>* It is assumed that ‘market’ refers to regional expenditures from ‘activities’ in the CRE. – added by GCRMC 12/1/2014.</i></p>	<p>Scoping; identify tribes for specific surveys. Determine if separate tribal studies are needed.</p> <p>Conduct tribal market, non-market, non-use scoping and value assessments</p>	<p>GCMRC is leading Project 13.2 in the 2015–2017 TWP, with planned implementation in fiscal year 2017. Project 13.2 will, through survey methods, identify tribal preferences for and non-market, both direct and passive use, economic values of CRE resources affected by dam operations.</p> <p>Tribal non-market direct use economic values for angling in GCNRA below GCD and whitewater floating in GCNP will be included in Project 13.1 in the 2015–2017 TWP.</p>

Dele
value

		No Tribal specific regional economic impact (e.g., recreation expenditure) research is proposed.
Hydropower Information Needs		
<p>HIN1. What are the impacts to federal hydropower customers from implementation of Record of Decision dam operations and various other flow regimes and segregate those effects from other causes such as changes in the power market.</p> <p>HIN2. What would be the market impacts on marketable capacity and energy of:</p> <ul style="list-style-type: none"> • Increasing the daily fluctuation limit • Increasing up-ramp and down-ramp limits • Raising maximum power plant flow limit above 25,000 cfs • Lowering the minimum flow limit below 5,000 cfs <p>HIN3. 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>HIN4. What are the socioeconomic impacts of Glen Canyon Dam operations and experiments to tribal communities, including market, non-market and non-use?</p> <p>HIN5. What are the market, non-market and non-use values associated with Glen Canyon electrical power, and determine these values.</p> <p>HIN6. What are the market, non-market and non-use values associated with water released through Glen Canyon Dam, and determine these values.</p>	<p>Define GCD operational base cases and change cases. Base cases proposed: MLFF and pre-ROD.</p> <p>WAPA will conduct base case analysis with GT Max and analyze spillover effect with WECC.</p> <p>Develop market, non-market and non-use values for power and water resources</p>	<p>HIN1: The LTEMP EIS will identify the power system economic impact and impact to rate payers from alternatives in the EIS. Argonne National Laboratory is leading this effort.</p> <p><u>Limited analysis has been conducted to evaluate the impacts of the ROD (post ROD final report). No further analysis is planned.</u></p> <p>HIN2: As part of the LTEMP EIS Argonne National Laboratory will conduct a power system regional economic impact analysis of affected regions, by state. Changes in energy prices and capacity costs as a result of each EIS alternative will be evaluated. <u>Impacts will address operational changes specified in HIN2 as included in the LTEMP EIS alternatives. No additional analysis is planned.</u></p> <p>HIN4: GCMRC is leading Project 13.2 in the 2015–2017 TWP, with planned implementation in fiscal year 2017. Project 13.2 may, through survey methods, identify tribal non-market direct use and passive use (‘non-use’) values of CRE resources affected by dam operations, including hydropower.</p> <p>No research is proposed of Tribal specific regional economic impacts from changes in the power system due to Glen Canyon Dam operations and experiments.</p> <p>HIN5: The LTEMP EIS will identify the power system regional economic impact (“market”) and non-market economic impacts from alternatives in the EIS. Argonne</p>

Dele
there
of the

Dele
HIN2
mode
of the
HIN3
status
mode

		<p>National Laboratory is leading this effort.</p> <p><u>HIN3/HIN6: Western Area Power Administration, the Colorado River Distributors Association and the Upper Colorado River Commission are sponsoring research to estimate the non-market economic value of hydropower generated at Glen Canyon Dam and the market and non-market values of Colorado River water. A literature search and theoretical foundations document has been prepared and an initial analysis is complete.</u></p>
<p>General Information Needs</p>		
<p>GIN1. 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, etc.).</p> <p>GIN 2. Define how socioeconomic research information should be used by AMP</p> <p>GIN3. Determine methods to assist more real-time assessments of resource impacts of alternative management activities.</p> <p>GIN4. 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>Develop workshop to inform TWG/AMWG of various socioeconomic information types and their utility. (Note: some of this work completed during previous workshops)</p> <p>Conduct workshop on appropriate socioeconomic research information use.</p> <p>Develop real time model capability to evaluate biophysical and socioeconomic resource impacts and tradeoffs under differing flow and non-flow alternatives.</p> <p>Develop general program capability to evaluate market, non-market and non-use values for resource impacts not yet defined by the AMP</p>	<p>GIN1: A discussion of the reliability of the non-use studies will be part of the NPS <u>“Total Use Value”</u> study.</p> <p>GIN2: GCMRC, in coordination with other federal agencies, will identify opportunities to provide presentations of the practical application of socioeconomic research at TWG meetings and other venues.</p> <p>GIN3: GCMRC is leading Project 13.3 in the 2015–2017 TWP which will develop modeling capabilities to evaluate biophysical and socioeconomic resource economic impacts and tradeoffs under differing flow and non-flow alternatives.</p> <p>GIN4: GCRMC will pursue, with direction from the AMP, additional economic evaluation of resource impacts from dam operations. Additional research will potentially be funded through future GCDAMP budgets, federal agencies and other outside organizations.</p>

Dele
Dele
Dele
HIN6
resear
Dele