

Glen Canyon Dam Adaptive Management Work Group
Agenda Item Information
May 18, 2011

Agenda Item

Grand Canyon Monitoring and Research Center Updates

Action Requested

This is an information item.

Presenters

Ted Melis, Acting Chief, Grand Canyon Monitoring and Research Center

Paul Grams, Physical Science Program Manager, Grand Canyon Monitoring and Research Center

Previous Action Taken

N/A

Relevant Science

See below.

Background Information

2011 Knowledge Assessment II – Ted Melis

Knowledge Assessment is a two-fold process that entails identifying key questions that resource managers need to answer to achieve management goals, followed by an evaluation of the questions relative to available monitoring and research (including experimental results) information. The knowledge assessment typically includes updating status and trends of resources of interest as well as an attempt to document causal mechanisms associated with various flow and non flow policies as they are known to influence resources.

Attached are slides presented to TWG in March 2011 about the 2011 Knowledge Assessment II (the second KA of the program). At the time, they were intended only to summarize the conceptual proposed steps for conducting the second assessment in collaboration with TWG and cooperating scientists.

Since the March TWG meeting, two conference calls have been conducted with the TWG to discuss the upcoming steps (2-4) in the assessment. A meeting with Federal agency managers also occurred to get a clearer perspective about how the Knowledge Assessment II might best be conducted to meet the needs associated with achieving resource management goals.

Expert workshops intended to evaluate knowledge related to strategic science questions from the 2007-11 Monitoring and Research Plan and about causal mechanisms associated with flow and non-flow treatments and resource responses of interest are scheduled for early June through mid-July. Additional updated information on the process will be shared with TWG at the June meeting and with AMWG in August. A joint workshop with scientists and stakeholders is being planned for fall

2011 with the objectives of summarily reporting results of the expert workshops and allowing stakeholders to provide further input about the type of report that will best serve the needs of resource managers and the GCDAMP. The outcome of this second Knowledge Assessment will inform the next phase of planning for the 2012-16 Monitoring and Research Plan, and will also hopefully serve to inform the LTEMP EIS in 2012-13.

GCMRC contact: Ted Melis (tmelis@usgs.gov, 928-556-7282)

Sediment Update – Paul Grams

Following the March 2008 HFE, tributary sediment inputs were minimal until late summer and fall 2010. These inputs caused the sand budget in upper Marble Canyon (RM 0 to 30) to go from negative to positive relative to March 2008 (after the 2008 high flow). For the sand budgeting period from the end of the 2008 HFE to January 7, 2011, the sand budget was significantly positive in upper Marble Canyon (+1.0 to +1.8 million metric tons), slightly positive in central and western Grand Canyon (RM 87 to 225, 0.0 to +0.7 million metric tons), and slightly negative in lower Marble Canyon (RM 30 to 61, 0.0 to -0.2 million metric tons) and eastern Grand Canyon (RM 61 to 87, 0.0 to -0.7 million metric tons). The transition to greater release volumes that occurred on January 10 resulted in increased sand export rates in winter and spring 2011. Updated computations that show the status of the sand budget for Marble Canyon through April 2011 will be presented at the May 18 AMWG meeting.

GCMRC contact: Paul Grams (pgrams@usgs.gov, 928-556-7092)

Attachment: Knowledge Assessment Slides

PROPOSED Knowledge Assessment II STEPS (WORKSHOPS) DURING FY 2011

Presented by: Ted Melis, USGS,
Grand Canyon Monitoring and
Research Center
March 8, 2011



STEP I – TWG reviews the 2006 draft Knowledge Assessment I report & participates in GCRM WebEx – proposed dates: week of March 28th – 2-3 hour long session (please respond to Doodle Query from Linda Whetton the week of March 14th)

OBJECTIVES:

Review the GCDAMP resource goals - relative to AMWG's recently developed "*Desired Future Conditions*" 1) Colorado River Ecosystem, 2) Recreation, 3) Hydropower and 4) Cultural

Review Experimental Treatments – flow or non-flow treatments that *have been conducted* and for which data/models exist. Questions: Are there any new treatments that have been implemented since 2005? Should any treatments evaluated in 2005 be eliminated?

Review 2005 KA I Questions – also included in the 2007-11 Monitoring & Research Plan (Draft Final KA report, 2006, with particular attention to pages 59-64)



TASK for TWG WebEx: Are there any new questions that need to be considered in the KA II during 2011?

- Presumably new questions would then also be integrated into development of the new 5-Year Monitoring & Research Plan in FY 2012 (FY 2012-16).
- Can questions be removed from the 2005 list?



Step II – Convene Expert Workshops

GCMRC will solicit “expert” opinions on the questions in the various resource matrices and develop a more quantitative summary of “certainty” or “uncertainty” on basis of existing data and models that exist which might predict the direction of a given resource in response to various experimental treatments that have been previously tested, as well as the “magnitude” of that response if the direction can be predicted.



Step III – Convene Stakeholder Workshop

GCMRC proposes to convene a workshop with TWG in fall 2011 (early November) to review the “expert” input on the questions and discuss the next steps to reporting that update of the Knowledge Assessment and integrating the new information into the 5-Year MRP, 2012-16) and other efforts, such as the LTEMP EIS, etc. to support the GCDAMP program.

STEP IV – FY 2012, finalize report on KA II

GCMRC would complete and distribute final report to TWG and AMWG in late summer/fall 2012.



FACILITATION AND LEADERS IN KA II

Lead Facilitators: Josh Korman (Ecometric Research, Inc. [existing science cooperator]) & Ted Melis (GCMRC)

KA II Resource Leaders: Cooperating scientists and GCMRC staff who will convene “expert” panels and solicit quantified opinions on the ability of existing information to answer the questions specific to the resources, as grouped into the 4 recently developed DFCs.



Colorado River Ecosystem:

- Aquatics (Fish and Food, Goals 1-4), Walters, Korman, Persons, Kennedy
- Terrestrial Spring Habitats & Riparian Vegetation (Goals 5-6), Ralston
- Sediment and Quality-of-Water + including Lake Powell (Goals 7-8), Grams

Recreation:

- Lees Ferry Sport Fishery, rafting, camping & related activities in GCNRA & GCNP (Goal 9), Fairley

Hydropower:

- Glen Canyon Dam electrical generating capacity (Goal 10), Fairley

Cultural Resources:

- TCPs, arch sites, etc. (Goal 11), Fairley

Relating to Goal 12 (maintain quality adaptive management program), there may be additional KA II efforts to evaluate the past performance of the GCDAMP through questions that may be offered by DOI leadership, etc. The KA II would make every effort to incorporate the recent guidance on priorities for the GCDAMP.

