

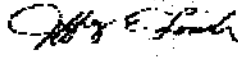


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April 21, 2004

MEMORANDUM

To: Glen Canyon Dam Adaptive Management Work Group
Glen Canyon Dam Technical Work Group

From: Jeff Lovich,  Chief

Subject: Long-term Core Monitoring Plan

The first meeting of the Core Monitoring Team was held in Flagstaff on April 9, 2004. A copy of our agenda is shown in Attachment 1. The Core Monitoring Ad Hoc Group of the TWG was well represented (see list, Attachment 2). Considerable effort was invested in creating goal statements, defining roles and responsibilities, agreeing upon definitions, identifying resources of concern, formulating questions to guide the process, and developing a timeline for completing the document.

At each significant juncture in our discussions I called for a "decision point" to make sure the group agreed with a particular choice or conclusion. Those decisions are summarized in the Position Statement on Core Monitoring from the Core Monitoring Team (Attachment 3). Last week, I distributed a copy of the draft Position Statement giving Core Monitoring Team members until COB yesterday to provide feedback. I received two responses, both affirming the accuracy of the statement with respect to our consensus on the issues covered.

Our timetable is very ambitious. We plan on having a first draft available for review at the August 2004 AMWG meeting, with the final draft completed by September 30, 2004. I intend to provide updates to you after each of the Core Monitoring Team meetings. If you are an AMWG member with a representative on the Ad Hoc, I encourage you to talk to your representative. Of course, you are welcome to bring questions to my attention regardless of your connection to the Team. My goal is to make the production of the Long-term Core Monitoring Plan an open and fully collaborative process, driven by the needs of the AMP, and using the best science available.

Attachments (3)

Position Statement on Core Monitoring From the Core Monitoring Team¹

9 April, 2004

The first meeting to develop a Long-term Core Monitoring Plan (LTCMP) for the Glen Canyon Dam Adaptive Management Group was held in Flagstaff, Arizona on the date above. Participants included the Core Monitoring Ad Hoc Committee of the Technical Work Group of the Adaptive Management Work Group and staff of the USGS, Grand Canyon Monitoring and Research Center (GCMRC). Participants will henceforth be referred to as the Core Monitoring Team (CMT). The purpose of this Position Statement is to articulate the decisions, roles and responsibilities, definitions, and basic principles that the group endorsed related to the process for how the LTCMP will be developed.

The Chair of the CMT is Jeff Lovich, Chief of the GCMRC. The role of GCMRC is to provide the science foundation for the document. The role of the TWG is to provide technical assistance related to the needs of their constituencies relative to core monitoring, and to maintain a strong linkage to the needs of their AMWG member during the process. The role of the Science Advisors is to provide independent review of the draft and final documents. If additional expertise is required, the group will solicit outside assistance on an as needed basis. Timely completion of writing assignments will be a regular responsibility of the group.

The ultimate goal of the CMT is *“Completion of a high quality, long-term core monitoring plan by 30 September, 2004 that has a high probability of acceptance by the full TWG and AMWG.”* The more proximate goal is, *“To provide a consistent, long-term (10+ years) measure of the effects of Glen Canyon Dam operations on key resources in the Colorado River Ecosystem as defined in the GCDAMP Strategic Plan.”*

The CMT defines core monitoring as, *“Consistent, long-term, repeated measurements using scientifically accepted protocols to measure status and trends of key resources to answer specific management questions. Core monitoring is implemented on a fixed schedule regardless of budget or other circumstances (e.g., water year, experimental flows, temperature control, stocking strategy, non-native control, etc.) affecting target resources.”* Development of the LTCMP will require acceptance of the following assumptions: 1) use available technology, as appropriate, 2) adopt a minimalist framework (e.g., no ornaments on the Christmas tree), 3) meet the needs of stakeholders and answer their specific management questions, 4) strive for automated techniques that are less invasive and more efficient, 5) the budget needs to support the plan (e.g., 40-60% of our budget for core), 6) build for consistency, 7) build for longevity, 8) incorporate flexibility to adopt new technologies, 9) the plan will be reviewed and accepted by

¹ Includes the TWG Ad Hoc group for Core Monitoring and GCMRC staff

SAB/TWG/AMWG/GCMRC staff, and 10) the results of monitoring will be regularly reported

The resource categories of concern that will be covered in the LTCMP include the following: 1) sediment, 2) wildlife/vegetation, 3) fish, 4) food base, 5) cultural resources, 6) register-eligible historic properties, 7) hydrology, 8) water quality, 9) recreation, 10) threatened and endangered species, 11) power, and 12) non-native species. There is recognition that the driving force of monitoring will be related to questions that arise out of the AMP strategic plan. Relevant fundamental questions include the following: 1) what and why do managers need to know, 2) where do they want to know it, 3) how frequently do they need to know, 4) what are the general methods to obtain this information, 5) what is the level of precision/accuracy needed, 6) how will the monitoring data be presented, 7) is it answering the managers questions, and 8) what are the metrics of success?

The CMT decided that the development process for the LTCMP would be driven by questions, available funds and other constraints on the AMP including the need to conduct long-term experiments and research activities in support of adaptive management. Furthermore, we will use all available resources including the AMP strategic plan, associated Goals, MOs, and INs, recommendations from the Protocol Evaluation Panels, existing components of GCMRC's monitoring efforts, and recommendations from the Science Advisors. The National Park Service will provide additional clarification to the CMT on the core monitoring needs of the recreation program in the GCDAMP. Where information is not yet available to guide development of a core monitoring program for specific resources, we will insert placeholders in the plan until such modules are developed. This situation is exemplified by the socio-cultural program Protocol Evaluation Panels that are scheduled for FY05. At the completion of those PEP's, the recommendations related to core monitoring activities will be incorporated into the CMP.