Attachment 3

Position Statement on Core Monitoring From the Core Monitoring Team[1]

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

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

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.

Update on Core Monitoring Plan

Presented to AMWG Aug. 9, 2004

History

- Concept discussed from October-March
- Core Monitoring Ad Hoc formed by TWG
- Core Monitoring Team 1st meeting Flagstaff, April 9, 2004
- Position statement to AMWG and TWG
- Core Monitoring Team 2nd meeting, Phoenix, May 4, 2004
- Second update memo to AMWG and TWG

Process established April 9

- Collaborative
- Decision points
- Memos

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Roles and responsibilities

- Role of the Chair
- Role of the TWG ad hoc
- Role of GCMRC
- Role of SAB
- Participation

Ultimate Goal

- 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.

More-proximate Goal

- The goal of the core monitoring program 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.

Definitions and Assumptions

Core

- 1, the central or innermost part of anything: 2, the most important part as of a matter, discussion, etc.; essence; pith

No ornaments or frills!

Core monitoring

- Core monitoring is 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.

Assumptions

- Use available technology, as appropriate
- Minimalist framework
- Meet the needs of stakeholders and answers their specific management questions
- Strive for automated techniques that are less invasive and more efficient
- The budget needs to support the plan (e.g., 40-60% of our budget for core?)
- Build for consistency
- Build for longevity
- Flexibility to incorporate new technologies
- The plan will be reviewed and accepted by SAB/TWG/AMWG, as appropriate
- The results of monitoring will be regularly reported

Resource categories

- A. Sediment
- B. Wildlife/Vegetation
- C. Fish
- D. Food base
- E1. Cultural Resources
- Traditional cultural properties
- E2. Register eligible historic properties
- F. Hydrology
- G. Water Quality
- H. Recreation
- I. Threatened and endangered species
- J. Power
- K. Economics
- L. Non-native species

Attributes:
Sediment

- Camping beaches
- Nutrients
- Aeolian sources for cultural sites
- Coarse sediment for trout spawning
- Backwaters
- Intrinsic contribution to geomorphic landscape

Relevant questions

- What and why do managers and others need to know?
- Where do they want to know it?
- How frequently do they need to know?
- What are the general methods to obtain this information?
- What is the level of precision/accuracy needed
- How will the monitoring data be presented and is it answering the managers questions (what are the metrics of success?

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- Development, decision, prioritization process
- Budget
- Scheduling/Implementation
- Flexibility/consistency (PEP)
- Accuracy and precision
- Data management
- Inter-relationships/integration/core metric
- Logistics, permitting, compliance
- Relationship to score report

Position statement

Writing assignments

- Larry Stevens – history of core monitoring efforts
- Dennis Kubly – fundamental mandates/obligations (GCPA, EIS/ROD)
- NPS – recreation core monitoring needs
- Each stakeholder – list of core monitoring priorities

Timeline* and deliverables

- Writing must be completed in May (done)
- June 9 draft (done)
- June 23 review completed by SAB, TWG (done)
- August 9 presentation to AMWG (doing)
- AMWG draft October

**No margin for error, no room for ornaments*

What's next

- We are revising the document with SAB comments
- We will reengage the CMT to review and finalize the draft for the AMWG October meeting