Update on Core Monitoring Plan

Prepared for the AMWG

March, 2005

U.S. Department of the Interior
U.S. Geological Survey
History

- Concept discussed - October 2003-March 2004
- Core Monitoring Ad Hoc formed by TWG - March 30, 2004
- Core Monitoring Team 1st meeting Flagstaff - April 9, 2004
- Position statement to AMWG and TWG - April
- Core Monitoring Team 2nd meeting, Phoenix - May 4, 2004
- Second update memo to AMWG and TWG – May, 2004
History (cont.)

- Science Advisors review first draft - June, 2004
- GCMRC revises based on comments from SAB
- Second draft presented to AMWG/TWG - Aug, 2004
- Core Monitoring Team 3rd meeting – Sep, 2004
- GCMRC revises plan to address team comments
- Third draft presented to AMWG – Oct, 2004 (on time)
- Comments and responses compiled – Jan, 2005
- CMT meeting to discuss process leading to revision and recommendation to AMWG – Feb, 2005
Process and assumptions established by the CMT April 9

- Collaborative - This is a fully cooperative venture involving GCMRC, TWG ad hoc members, with review by SAB
- Decision points
- Memos
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.
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
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?)
What did we get?

- A plan that accommodated everyone’s issues of concern
- A projected budget of over $5.6 million
- Concern that the TWG had inadequate time to comment on the plan
Format of plan changed in response to early comments

- Current core monitoring capabilities

- Future core monitoring programs (R&D)
Current capabilities

- Lake Powell
- GCD releases
- GCD power and revenue
- Surface water measurements
- QW
- Fisheries (LFT, HBC)
R&D elements

- QW (R&D): nutrients, major ions, C budgets, etc.
- Fine sediment
- Coarse sediment
- Aquatic food web
- Downstream fishes in main stem (HBC aggregations, below Diamond Creek, etc.)

- Fine sediment (terrestrial)
- Coarse sediment (terrestrial)
- Terrestrial veg.
- KAS
- SWFL
- Register & non-register eligible HP’s
- Recreational resources (experience, campsites, economics)
Written comments received during an extended comment period

- NPS
- FWS
- GCWC
- CREDA
- SAB
- BOR
Comments received (cont.)

- Comments compiled
- Draft responses provided to CMT
Green category

- Lake Powell Quality of Water
- Downstream Integrated Quality-of-Water
- Streamflow & Suspended-Sediment Transport
- Rainbow Trout in the Lees Ferry Reach
- Humpback Chub in the Little Colorado River
- Airborne Remote Sensing (Digital, Orthorectified Imagery)
- DBMS - Storing New Core-Monitoring Data
- Geographic Information System - Support Fieldwork & Overflights
Yellow category

- Impacts of Coarse-Grained Inputs
- Fine-Sediment Storage
- Terrestrial Ecosystem
- T&E Wildlife - Kanab Ambersnail
- T&E Wildlife - Southwest Willow Flycatcher
- High Resolution LiDAR & Very High Resolution LIDAR for arch sites)
Red category

- Food Web (Research Toward Development of a Monitoring Plan)
- Downstream Fishes in the Main Channel
- Cultural Resources Monitoring - Archaeological Sites (TBD)
- Tribal Monitoring of TCPs and culturally important resources (TBD)
- Recreational Monitoring - visitor use & experiential attributes TBD)
- Recreational Monitoring - campsites (TBD)
Process

- Evaluate green list against:
  - responses to written comments
  - AMWG priorities
  - MO’s
  - accuracy, precision, and desired future conditions
  - fiscal limitations
What’s next?

1. CMT meeting Mar 10-11
2. April 1 mailout of draft 4 to SAB
3. April 10 review finished
4. CMT meeting Apr 11-12
5. Revise draft 5 to mail to TWG May 3
6. Proposed TWG meeting week May 16
7. Final CMP proposal to AMWG June 1
8. Proposed AMWG meeting after July 1
Does the AMWG support this new process and schedule?