Review of the General Core Monitoring Plan for the Glen Canyon Dam Adaptive Management Program

GCDAMP Science Advisors

September 2009
Review Schedule and Procedure

- August, SAs receive CMP for review
- September, complete review
  - Executive Summary, General Comments, Specific Comments, Recommendations
- November, CMP workshop documents to TWG
- December 1 CMP workshop
Historical Perspectives

1968  NAS; Water Crisis in Colorado River Basin
1987  NRC Review; River and Dam Management
1991  NRC; Symposium on Colorado River and Dam Management
1991  NRC; Review of Phase II Draft Integrated Research Plan
1992  NRC; GCES Long Term Monitoring Workshop
1994  NRC; Review of Draft EIS
1994  NRC; Review of Draft Federal Long Term Monitoring Plan
1996  NAS; River Resource Management in Grand Canyon
1998  NRC; GCDAMP Strategic and Annual Plans
1999  NRC; Downstream; A Review of GCDAMP Programs
1999  Downstream: Review of GCDAMP

- Long term data sets absent due to absence of LTMP
- Excellent concepts of monitoring but limited detail on actual plan activities and procedures
- Clarity needed on how to accomplish integration
- Need improved designs for system approaches
Historical Perspectives con’t

- Programs must evaluate different scales
- Identify candidate core variables early on using ecosystem level multi-species perspectives
- Design overall plan in stages
- Design to minimize impacts from new proposed approaches or budget shifts
Maximize cost effectiveness and flexibility through external contracts

Program management independent of any specific management agency

Should not have blanket delegation of monitoring programs to collaborating agencies. Scientists should design protocols, sampling designs, write assessments etc.

Annual costs could exceed current budget. Should insure available budget for research studies
SAs General Comments

- DFCs are not appropriately included to guide plan; and are necessary
- Clean Water Act guidelines not explicitly referenced. Not clear if considered or addressed
- Other than in one or two monitoring areas, not clear how managers and stakeholder groups will explicitly collaborate and integrate programs
- Past monitoring/science information mentioned but not in a manner to specifically guide or support explicit designs
SAs General Comments con’t

- Goals need to be more specific to assign appropriate indicators and protocols
- Strategic science questions need to be included. They are the vehicle to link Goals/Ins to science programs
- Adaptive management process for continued annual involvement of managers in goal prioritization, program integration and general program guidance not clear
- Simplistic qualitative conceptual models absent from process; yet are excellent tools to bridge manager/scientist understanding
SAs General Comments con’t

- System approaches with integrated science programs need more clarity, i.e. physical, biotic, cultural project integration is critical to gain time and space data dependence
- Integrating ongoing science and new management program efforts are necessary
- Development of new remote sensing technology and remotely sensed data is critical to advancing the monitoring program. Clarify how remotely sensed data development is tied to priority needs of managers
- Use of PEPs and new protocol overlap with old is strongly supported
SAs General Comments con’t

- Development of general monitoring program with phased development of individual resource programs is preferred process
- Need to clearly articulate in first chapter, “general” and “specific” CMP designs; provide clear definition of differences
- Greater clarity needed on how differing modeling approaches will be used, i.e. conceptual, predictive, etc