

**GENERAL CORE MONITORING PLAN**  
**LIST OF MAJOR TWG ISSUES TO BEGIN CONSIDERATION**  
**November 30, 2009**

**GENERAL PROCESS**

1. Roles and responsibilities of GCMRC, TWG, AMWG, and DOI should be directly discussed, who is responsible for what in this process and what are the sideboards?
2. The strategy discussion needs to be a greater focus of the document describing the two strategies (science and management; Chapter 2)
3. Need for more discussion about other monitoring programs and monitoring in general (LTER, literature) background, lessons learned, approaches, sampling design
4. Section 2 should be rewritten to describe in more detail the process for the development of the individual plans in greater detail (i.e., expanded discussion of Step 4). This should include an adaptive management component with sideboards on the process to allow forward movement of the plan.
5. Large gulf between science and management in the program, exemplified by KA, what are the implications of uncertainty in science and management?

**CRITERIA FOR ELEMENTS OF INDIVIDUAL PLANS (DESCRIPTION OF STEP 4)**

6. Full integration of CMINs/SSQs into the strategy for each goal.
7. Risk assessment for critical choices (qualitative or quantitative based on available resources).  
Examples:
  - o Discussion of trade-offs between statistical precision, sampling intensity/extent, cost, and effectiveness and how the program should look at the scientific implications of these trade offs
  - o This includes recommendations on design and statistical analysis, including the use of power analysis to develop designs and set sampling levels to achieve desired precision
  - o Frequency/extent: a series of options might be given which show how the power is reduced, or other effect including cost, by either reducing or increasing sampling rate or extent
8. Describe criteria for activity inclusion in core monitoring proposals. Examples:
  - o Core monitoring proposal should be based on priority: high priority items should be included, some elements of core monitoring will be higher priority than others and should be identified
  - o Confidence: include only those activities with high confidence of relating to the eventual DFCs
  - o CMIN: activity is essential to address the minimalist view point for the CMIN (is everything core?). April 9, 2004 CMT memo: in this document, the CMT suggests that the long term plan “adopt a minimalist framework (e.g., no ornaments on the Christmas tree)”
9. To what extent have PEP recommendations been implemented including design and statistical analysis, including the use of power analysis to develop sampling designs and set sampling levels to achieve desired precision
10. More integration of tribal monitoring in each CMP/goal, critical lack of tribal integration now with emphasis on other areas which may be a responsibility of the NPS. Better integrate tribal values in ecosystem management (Figure 4), TCPs

## **OVERALL COST**

11. Missing is concerns of CMT and others to avoid the “Christmas tree” approach and to keep the budget in the 40-60% range of the science budget. Support a process which allows for core monitoring choices which use less of the budget.
12. Budget should be divided into core monitoring, research and development with monitoring, and experimental components (e.g., Knowledge Assessment color approach)
13. GCMRC has grown beyond the scope of the 1996 ROD, and could be replaced in part by a consortium of academics for core monitoring. Costs don’t appear to be competitive with what could be achieved through other routes
14. We lack information on trade-offs between statistical precision and sampling intensity that will drive costs, these analyses should drive our decision making
15. The description of the present staffing plan should include how many individuals are employed in what capacity, why some positions are or are not filled, and more detail on how well the program involves outside collaborators, and how many students are supported by the program. A justification should be provided about how the present staffing varies from the original concept for GCMRC in the ROD. How does the plan for 26 FTEs fit with budgetary constraints we know are coming? Higher staff levels inevitably mean increasing costs greater than CPI. Relate staffing needs with org chart.

## **DFCs**

16. How can we accurately determine which of the core monitoring proposals meets our needs, or perhaps is beyond our needs without specified DFCs for the MOs? Can we proceed without DFCs, and if so how and what does it mean to the program? Many of the elements may not need DFCs, others might really need them, how do we move forward and advise AMWG?

## **SCOPE OF MONITORING**

17. Geographic scope is defined as CRE, which discusses tribes, tribes should be included
18. GCMRC seems to have constrained the scope of monitoring beyond the language identified in the plan
19. CMP should be focused on monitoring for dam operations
20. Lack of a strong species inventory limits our ability to understand ecosystem processes, greater emphasis on inventory programs is needed
21. Need to identify how other agency monitoring programs will be integrated (e.g., NPS I&M program)