

Long-term Experimental Planning Timeline and Steps

The development and recommendation of a Long-term Experimental Plan for the Glen Canyon Dam Adaptive Management Program requires identification of sideboards to determine the scope of experimental design, assessment of knowledge with respect to either past or pending treatments on resources, and an assessment of experimental design approaches relative to state-of-the-art adaptive management practices. These elements require the integration of science and policy eventually, but separate tracks can be pursued as a means to accomplish the task at hand. GCMRC recommends:

- An initial knowledge assessment be done at regularly-scheduled TWG Meetings (May, July meetings 2 hour time slots in each meeting) where participation is required. Initial assessment will be provided by GCMRC staff, second meeting may include outside scientists. The SCORE report would contribute to the knowledge assessment when published in the summer of 2005.
- Development of sideboards to determine the scope of experimental design including range of treatments, time frames etc., to be determined by the established LTEP ad hoc committee.
- Assessment of experimental approaches relative to state-of-the-art adaptive management practices be included in October Science Symposium as a special session with invited speakers from other ecosystems to discuss experimental design within an ecosystem framework.

Incorporation of these steps into a long-term plan for implementation in WY2007 would require a draft experimental plan submitted to TWG by GCMRC in winter (November/December, 2005) for approval by AMWG early in 2006. Time would be needed for compliance following approval. The timing of this effort would coincide with FY07-08 work plan approval.



Long Term Experimental Planning

March 2-3, 2005, AMWG meeting

Steps toward Integration of Science and Policy for Adaptive Management

- **Assessment of knowledge regarding resources**
 - General knowledge
 - Effect of Past & pending treatments on resources (1996, 2000, 2002, 2004)
 - Ability to identify risk of treatment vs. potential benefit for resource
- **Identification of Policy Constraints**
 - Define stakeholder sideboards
 - Length of experiment
 - Range of treatments
 - Dam operations
 - Outside of operations (e.g., augmentation, removal)
- **Review of approaches relative to State-of-the-Art Adaptive Management Practices**

Step 1. Assessment of knowledge regarding resources

- Utilize TWG meetings for assessment presentations
 - Required attendance
 - Cost savings
 - Education of stakeholder
- **May and July Meetings**
 - 2 hours per meeting
 - Presentations by GCMRC staff and possibly invited scientists

Step 1, continued

- When released in summer, 2005 the SCORE report would contribute to the efforts of the Center to communicate the knowledge assessment

Step 2. Identification of Policy Constraints

- **Ad hoc group task**
 - Meet in parallel timeframe of knowledge assessment
 - Meet independently of GCMRC to establish constraints
- **Presentation of constraints to TWG in July**

Step 3. Review of experimental approaches relative to State of Art Adaptive Management Practices

- Provide special session at Science Symposium on Experimental Design with ecosystems.
 - Invited speakers
 - Provide a perspective of GCD AMP approach relative to other programs
 - Utilize assessment to develop/refine sideboards/experimental design

Step 4. Plan submission/review/approval

- **Submit experimental plan to TWG (December)**
- **AMWG approval & recommendation (January)**
- **Completion of compliance prior to WY2007 (started 6 months before).**
- **Timing coincides with FY07-08 work planning & budget process.**

TASKS	LONG-TERM EXPERIMENTAL PLAN TIMELINE																							
Develop conceptual exp design	Done (LTEP, GCMRC, SA)																							
Develop actions/treatments	Blue	Blue		(GCMRC, CS, LTEP, SA)																				
Develop criteria	Red	Red	Red	(GCMRC, LTEP, CS, SA)																				
Complete knowledge assessment	Blue	Blue	Blue	Blue	Blue	(GCMRC, CS, SA)																		
Convene workshop						Red	(GCMRC)																	
TWG update and input						Blue	(GCMRC, TWG)																	
Produce draft exp plan						Red	Red	Red	(GCMRC)															
AMWG review draft exp plan											Blue	(AMWG)												
Science Advisors risk assessment											Red	Red	Red	(SA)										
Second draft exp plan											Blue	Blue	Blue	(GCMRC)										
TWG review											Red	(TWG)												
Final draft exp plan											Blue	(GCMRC)												
AMWG/TWG/SA review											Red	(AMWG/TWG/SA)												
Recommendation to SOI											Blue	(AMWG)												
Complete compliance											Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	(AA)
GCMRC begin implementation																								Blue
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J		
	2004			2005												2006								

LTEP = LTEP Ad Hoc; SA = Science Advisors; CS = Cooperating Scientists; AA = Action Agencies

TASKS	LONG-TERM EXPERIMENTAL PLAN TIMELINE																								
Develop conceptual exp design	Done (LTEP, GCMRC, SA)																								
Develop actions/treatments	Blue	Blue																							
Develop criteria-Establish sideboards	Red	Red	Red	Red	Red	Red	Red	Red																	
Complete Knowledge assessment Part 1	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue																	
Convene workshop								Red																	
TWG update and input								Blue																	
Knowledge assessment II/Produce draft exp plan										White	Red	Red													
AMWG review draft exp plan												Blue													
Science Advisors risk assessment												Red	Red	Red											
Second draft exp plan												Blue	Blue	Blue											
TWG review and included in discussion at Exp design Session at Science Symposium														Red											
Final draft exp plan																						Blue			
AMWG/TWG/SA review																						Red			
Recommendation to SOI																							Blue		
Complete compliance																							Red	Red	Red
GCMRC begin implementation																									Blue
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J			
	2004			2005												2006									

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