

FISCAL YEAR 2010 PROJECT REPORT FOR THE GLEN CANYON DAM ADAPTIVE MANAGEMENT PROGRAM

(1.) PROJECT NUMBER/TITLE: <i>(From Final FY09 Annual Work Plan)</i>		ADM 12.A4.08 Executive Coordinator of Science Advisors	
(2.) PRINCIPAL INVESTIGATOR INFORMATION:			
Program Manager	Theodore Melis	Principal Investigator:	Lawrence D. Garrett
E-mail:	tmelis@usgs.gov	E-mail	M3research@starband.net
Telephone:	928-556-7094	Telephone:	970-323-9511
(3.) STUDY OVERVIEW: <i>(Briefly summarize need for project, study goals, objectives, etc., from Final FY2009 AWP)</i>			
<p>The Science Advisors (SAs) contribute to the overall science needs of the GCDAMP as one of the Independent Review Panels (IRPs). They serve special functions not provided by other IRPs. SAs service is enlisted to increase the efficiency and quality of the science and management being developed by the Grand Canyon Monitoring and Research Center (GCMRC) and used by the Adaptive Management Work Group (AMWG) and the Secretary. SAs provide independent scientific oversight and technical advice to insure that GCMRC science programs are efficient, unbiased, objective, and scientifically sound. The SAs are comprised of six to eight interdisciplinary senior scientists, primarily from universities supporting extensive research and provide review of scientific and technical planning documents of GCMRC, Technical Working Group (TWG), and AMWG, including multiyear and annual strategic and operational plans, budgets, and special projects, i.e., Environmental Impact Statement, High Flow Experiment, Low Summer Steady Flow (LSSF) test synthesis, Humpback Chub Comprehensive Plan (HCCP), etc. They also provide advisory service to GCMRC, AMWG, and TWG regarding adaptive management and long term experimental approaches, general science planning, development of new ecosystem science approaches, and technical projects such as a Temperature Control Device and management actions.</p>			
(4.) REPORT ON FY2010 ACTIVITIES, ACCOMPLISHMENTS, AND SHORTFALL: <i>(Summarize major tasks in the FY2009 AWP. Describe how each task was/was not met. Summarize initial findings and/or final results. Include a description of any significant deviation from the AWP Scope of Work.)</i>			
<p>The SAs provided science document reviews and advisory service and accomplishment in the following areas:</p> <ul style="list-style-type: none"> • Evaluating overall Adaptive Management Program effectiveness, • Evaluating overall program direction; i.e., experimental and management strategies, • Review of monitoring and research assessment approaches; synthesis; etc., • Review of Request For Proposal processes, • Protocol assessments, (i.e. Management actions, science modeling, etc.) • Strategic, Operational and Annual Plan assessments, • Proposed new science programs; i.e. Near Shore Ecology Program, Core Monitoring Program • Budget proposal for FY 2010-2011. <p>SAs and Executive Coordinator also provided advisory services on science and technical issues as requested by GCD AMP entities the Secretary and approved by GCMRC. Services were provided to GCMRC, TWG, AMWG and the Secretary.</p>			
(5.) BRIEF SUMMARY OF KNOWLEDGE RELATED TO KEY STRATEGIC SCIENCE QUESTIONS BEING ADDRESSED BY THE PROJECT <i>(Summarize how this project is addressing the key strategic science questions, what has been learned or remains to be learned relative to the key strategic science questions)</i>			
<p>The GCDAMP Science Advisors review and advisory service program does not explicitly create new knowledge to address key strategic science questions. It does in its advisory service program respond to specific information needs regarding appropriate science and adaptive management processes.</p>			
(6.) REPORTS/PRODUCTS COMPLETED: <i>(Include all deliverables identified in the AWP that have been completed and report on all products beyond those deliverables identified. Include reports, presentations, poster sessions, exhibits, databases, workshops, maps, website contributions, decision support systems, newsletters, etc.)</i>			
<p>The following proposals, reviews, reports etc. were developed in FY 2010 by the SAs Reports and Reviews</p>			

- Review of 2011-2012 Draft Annual Research and Monitoring Plan
- Review of Draft Non-Native Fish Science/Mgt Proposal
- Review of 2011-2012 Draft Budget
- Development and approval of final Management Actions Proposal
- Development of Management Action Report for AMWG
- Development of draft and Final prospectus on Decision Support System Assessments
- Review of revised Core Monitoring Plan
- Review of TWG Appendix B, Core Monitoring Plan

SA Service

- Conference call(s) related to Native and Non-native Fish Program
- Conference calls on review of CMP
- TWG conference calls on CMP Appendix review
- AMWG and TWG presentations on Management Actions Report
- GCMRC workshop on NSE, Native and Non-native Fish Plan (Florida)
- GCMRC workshop on sediment, NSE Native and Non-native Fish Program (AZ)
- TWG conference calls on budget development
- Workshop on socio-economic program, conference call
- Consultation with Assistant Secretary on rules of management and science in AM
- Consultation with TWG on DSS

(7.) REPORTS/PRODUCTS PLANNED:

(See above, but report those items that are in progress and include expected delivery dates.)

SAs Potential Document Reviews and Advisory Service for 2011

- Review of Runge et. al. SDM Report
- Overview of proposed 2012 Science Program and activities, budgets
- Review of LSSF Synthesis Recommendations for management direction
- Review of one or more of individual resource Core Monitoring Plans for:
 - Aquatic Food base
 - Lake Powell
 - Downstream Water Quality
 - Native and Non-native Fish
- Review of HFE Science Plan
- Review of revised HFE Science Plan to respond to final EA
- Review of Non-native Fish Science Plan
- Review of revised Non-native Fish Plan to respond to final EA
- Review of TWG/AMWG/GCMRC proposed socioeconomic science RFP/science plan
- Review of HFE Synthesis recommendations for Management Direction
- GCMRC/TWG/SA workshops on CMP.
- AMWG/TWG/GCMRC/SAs workshop on GCDAMP effectiveness; i.e., roles, DFCs, management/science integration, etc.
- GCMRC/TWG/SAs workshop on socioeconomic program planning.
- GCMRC science workshops for development of final Non-native Fish Plan.
- Assist GCMRC in designing and implementing ecosystem science approaches in research and monitoring programs, experimental options. modeling, sampling designs, etc.
- Working with GCMRC on greater integration of science and management
- Participation in January 2012 GCMRC annual reporting workshop
- Participate in GCMRC proposed PEP for FY 2012
- Assist GCMRC in development of Knowledge Assessment
- Assist GCMRC in development of SCORE REPORT
- Assist TWG in implementing DSS approaches

(8.) RECOMMENDATIONS: *(Describe recommendations for continuation or modification of project, other studies, or activities resulting from findings of this project; recommendations for MRP changes or future program guidance, etc.)*

1. Provide risk assessment (s) especially as relates to management actions on non-native fish, native fish, cultural resources, HBC translocations, HFE, etc

2. Implement more collaborative workshops of TWG GCMRC to improve AM protocols, operational effectiveness and management and science integration
3. Utilize assessments of knowledge, improve science synthesis, modeling and risk assessments to clarify best non-native fish and native fish management alternatives, management actions, and science for Colorado River Ecosystem
4. Increase interdisciplinary science program implementation and integrated resource science study and assessment, especially as relates to HFE, native and non-native fish management

(9.) FY2009 BUDGET REPORT		FINANCIAL INFORMATION COLLECTION DATE:			
FY PLANNED GROSS BUDGET:			FISCAL YEAR NET AVAIL BAL:		
FISCAL YEAR EXPENDITURES/ OBLIGATIONS:					
END OF FISCAL YEAR AVAILABLE BALANCE:					
COMMENTS: <i>(Discuss anomalies in the budget; expected changes; anticipated carryover; etc.)</i>					
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SIGNATURE: (Must be signed or submitted by PM.)		TITLE:	Program Manager	DATE:	
SIGNATURE: (Must be signed or submitted by PI.)		TITLE:	Principal Investigator	DATE:	

**Fiscal Year 2010 Science Advisors Program Report
to GCDAMP**

Lawrence D. Garrett Executive Coordinator

**Presentation to Technical Work Group and
GCMRC**

March 8-9, 2011

Phoenix, AZ

Program Administration

- GCDAMP SA program is contracted by USGS through RFP process to M3 Research
- Current contract period is 2009-2014 with annual renewal and review.
- M3 Research is to provide all contract services of 6 Science Advisors and Executive Coordinator, also a Science Advisor
- Budget: \$160,573.00

Required Contributions of Science Advisors

- Serve special functions not provided by other IRPs.
- Increase quality of science and management being developed and used by the Adaptive Management Work Group.
- Provide independent scientific oversight to insure efficient, unbiased, objective, science
- Comprised of 7 interdisciplinary senior scientists
- Provide review of scientific and technical planning documents of GCMRC/TWG/AMWG.
- Provide advisory service to GCMRC, AMWG, TWG and Secretary

The Following Proposals, Reviews, Reports Were Developed in FY 2010 by the SAs

Reports and Reviews

- Review of 2011-2012 Draft Annual Research and Monitoring Plan
- Review of Draft Non-Native Fish Science/Mgt Proposal
- Review of 2011-2012 Draft Budget
- Development and approval of final Management Actions Proposal
- Development of Management Action Report for AMWG
- Development of draft and Final prospectus on Decision Support System Assessments
- Review of revised Core Monitoring Plan
- Review of TWG Appendix B, Core Monitoring Plan

The Following Advisory Service Was Developed in FY 2010 by the SAs (con't)

SA Service

- Conference call(s) related to Native and Non-native Fish Program
- Conference calls on review of CMP
- TWG conference calls on CMP Appendix
- AMWG and TWG presentations on Management Actions Report
- GCMRC workshop on NSE, Native and Non-native Fish Plan (Florida)
- GCMRC workshop on sediment, NSE Native and Non-native Fish Program (AZ)
- TWG conference calls on budget development
- Workshop on socio-economic program, conference call
- Consultation with Assistant Secretary on roles of management and science in AM
- Consultation with TWG on DSS

SAs Potential Document Reviews and Advisory Service for 2011

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- Review of Runge et. al SDM Report
- Overview of proposed 2012 Science Program and activities, budgets
- Review of LSSF Synthesis recommendations for management direction
- Review of one or more of individual Core Monitoring Plans for:
 - ▣ Aquatic Food base
 - ▣ Lake Powell
 - ▣ Downstream Water Quality
 - ▣ Native and Non-native Fish

SA's Potential Document Reviews and Advisory Service for 2011 (con't)

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- Review of HFE Science Plan
- Review of revised HFE Science Plan to respond to final EA
- Review of Non-native Fish Science Plan
- Review of revised Non-native Fish Plan to respond to final EA
- Review of TWG/AMWG/GCMRC proposed socioeconomic science RFP/science plan
- Review of HFE Synthesis recommendations for Management Direction

SA's Potential Document Reviews and Advisory Service for 2011 (con't)

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- GCMRC/TWIG/SA workshops on CMP.
- AMWG/TWIG/GCMRC/SAs workshop on GCDAMP effectiveness; i.e., roles, DFCs, management/science integration, etc.
- GCMRC/TWIG/SAs workshop on socioeconomic program planning.
- GCMRC science workshos for development of final Non-native Fish Plan.
- Assist GCMRC in designing and implementing ecosystem science approaches in research and monitoring programs, experimental options. modeling, sampling designs, etc.

SAs Potential Document Reviews and Advisory Service for 2011 (con't)

9

- Working with GCMRC on greater integration of science and management
- Participation in January 2012 GCMRC annual reporting workshop
- Participate in GCMRC proposed PEP for FY 2012
- Assist GCMRC in development of Knowledge Assessment
- Assist GCMRC in development of SCORE REPORT
- Assist TWG in implementing DSS approaches

General Science Advisor Recommendations

- 1. Provide risk assessment(s) especially as relates to management actions on non-native fish, native fish, cultural resources, HBC translocations, HFE, etc;**
- 2. Implement more collaborative workshops of TWG GCMRC to improve AM protocols, operational effectiveness, and management and science integration**
- 3. Utilize assessments of knowledge, improved science synthesis, modeling and risk assessments to clarify best non-native fish and native fish management alternatives, management actions, and science for Colorado River Ecosystem**

General Science Advisor Recommendations (con't)

4. Increase interdisciplinary science program implementation and integrated resource science study and assessments, especially as relates to HFE, native and Non-native Fish management