



M3 RESEARCH

L. David & Pamela Garrett, Principals
53716 Falcon Rd
Olathe, CO 81425
970-323-9511 (Ph)
970-323-9512 (Fax)
E-Mail: m3research@aol.com

TO: Technical Work Group of GCD AMP; Kurt Dongoske, Chair
FROM: L.D. Garrett, Executive Director Science Advisors
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SUBJECT: Progress Report of Science Planning Group on Science Planning Activities

**SCIENCE PLANNING GROUP (SPG) PROGRESS
REPORT ON COOPERATIVE SCIENCE
PLANNING ACTIVITIES WITH THE GRAND CANYON
MONITORING AND RESEARCH CENTER**

SPG CHARGE

The SPG was requested by GCMRC and TWG and charged by the AMP Secretary Designee in August 2005 to conduct a one year collaborative science planning exercise. The SPG, GCMRC, and Science Advisors are to complete the following planning documents.

- Strategic Science Plan
- Core Monitoring Plan
- Research Plan
- Long Term Experimental Plan

The SPG, although established by the Secretary Designee and approved by the AMWG, is considered by SPG to be a TWG subgroup. It, therefore, will provide its official recommendations to the Technical Work Group with courtesy copies to the Secretary Designee, AMWG, GCMRC and the Science Advisors.

SPG considers its recommendations to TWG as its official line of reporting. That is, it feels the full TWG and AMWG should act on its recommendations before they



are considered by the Secretary Designee as an official AMP process outcome.

PROGRESS AND FINAL REPORTS TO THE TWG

The SPG presents this progress report to the TWG to demonstrate its planned accomplishment of its charge by October 1, 2006. The SPG is authorized to operate until October 1, 2006 to complete its charge, and will schedule two final meetings in August and September, 2006.

A final report to the TWG is being prepared by the SPG. It will be submitted to the TWG at its September meeting. Significant information and recommendations will be included in that report that are not referenced in this progress report. For example, several objectives established for development of the MRP were not adequately completed by the SPG. Completion of these objectives which is proposed for the future would significantly improve future versions of the MRP.

This progress report provides only an evaluation of the development status of the four primary documents it is charged to complete. Several elements are covered for each planning document.

1. Involvement of SPG in the development process
2. Compliance to objectives prescribed by SPG
3. Review of plan for quality assurance
4. Status of plan

DOCUMENTATION OF PROGRESS ON GCMRC/GCD AMP SCIENCE PLANS

Five documents were originally planned by the SPG, and although only four are developed, they differ only slightly in content from the original plans as outlined in the following two columns.

<u>Planned</u>	Core Monitoring Plan (CMP)
Strategic Science Plan (SSP)	Research Plan (RP)
	Biannual Work Plan (BWP) (07/08)

Long Term experimental Plan
(LTEP)

Strategic Science Plan (SSP)
Monitoring and Research Plan
(MRP)
Annual Work Plan (AWP) (07)
Experimental Plan Options

Developed

Operationally all plan elements originally intended for development have been developed. However, their structural format differs slightly from the original intent, as outlined in the following sections.

The Strategic Science Plan (SSP)

Involvement of SPG: The first SSP draft did not have strong involvement of the SPG. However, that draft was revised significantly and a second draft was developed with input from the SPG, SAs, and TWG on needed changes. Sections were revised regarding length of planning periods, increased manager/scientist interaction in planning, increased focus on ecosystem approaches, as well as other strategies.

Compliance to objectives: Development of the second draft SSP complies with the objectives of the SPG. Originally the SSP was to represent strictly a GCMRC strategy. That changed and GCMRC adopted instead a more collaborative science strategy that involves strong working relationships with SPG like groups, TWG and AMWG over the next decade. The SSP emphasizes future collaborative processes in several areas to strengthen science/management planning in defining science needs, setting program priorities, attaining effective funding, etc.

Review of Plans for quality assurance: The SSP has received two reviews. Significant changes were proposed for the first draft in many areas. As noted above this draft was revised and a new strategy developed. The current SSP has had reviews of the SPG, SAs, TWG and other parties.

Status of plan: The new SSP is supported for adoption by the Science Advisors, SPG and TWG. It will be proposed to the AMWG for approval at the next AMWG meeting.

The Monitoring and Research Plan (MRP)

Involvement of SPG: The SPG has been fully involved in development of the MRP. Originally two plans were considered, a Core Monitoring Plan (CMP) and a Research Plan (RP). Outlines were considered for both documents but discussions by the SPG led to a decision to develop a combined Monitoring and Research Plan (MRP). An outline was completed, and the plan was partially developed in a more detailed format when an SPG decision occurred to make it less specific and increase the detail in the BWP. In June 2006, a draft MRP was developed that was accepted by the SPG with recommended SPG and SA changes specified.

Compliance to SPG objectives: The MRP has responded to many aspects of the SPG objectives. However, as noted above some specified objectives in the SPG process could not be met fully in this planning cycle and require additional effort by SPG or another AMP body in the future. Completion of these objectives will significantly improve future versions of the Monitoring and Research Plan. One objective of the SPG was to have TWG propose by August a final experimental option that could be the primary experimental basis for the MRP. That proposal will not occur until the AMWG provides a recommendation in October and the Secretary approves a plan several months later following appropriate NEPA compliance. As such, the adopted MRP will have to be revisited and revised in some sections after the LTEP is finalized and approved.

Review of plan for quality assurance: The current MRP draft is in its third revision. It links both to the SSP and AWP with reasonable effectiveness. It has been reviewed by the SAs, and SPG. Final revisions to the MRP were proposed in July by the SPG. A final MRP will be sent to the TWG for approval at its September meeting and presented to the AMWG for approval in October 2006. The plan will have to be modified after the Secretary's approval of the long term experimental option.

Status of Plan: The SPG and SAs have accepted the MRP with inclusion of final SPG and SA changes proposed in the July meeting and documented in SPG meeting

notes. Formal approval of the MRP will occur at the September TWG meeting.

Long Term Experimental Option

The experimental options have required significant input by the SPG in their development. A total of four experimental approaches were originally developed and reviewed by the SPG, including variants on the four, i.e., modified 3, 4b etc. These were then reduced to two options, SPG A and SPG B with the interest to develop one preferred option. However, greater involvement of policy leaders in Washington caused the SPG to reevaluate the six options, i.e., 1-4 and SPG A & B, and develop three experimental options and a baseline. The baseline is the MLFF (Record of Decision (ROD)). Final development of this baseline and three options is in process.

Involvement of SPG: SPG has had total involvement in developing the proposed options. This has involved explicit specification of and review of elements in each option and comparisons of potential resource impacts from each options application. Their development has occupied the greatest percentage of SPG development time.

Compliance to objectives: Development of the options has complied with SPG's objectives. Difficulties have occurred in resolving how the options might potentially impact resources. For example objectives to complete an economic impact assessment and biophysical impact assessment are incomplete.

Reviews for Quality Assurance: The various proposed experimental options have had significant review and input of the SPG and GCMRC. They have not been subjected to external peer review, although selected elements of each were exposed to indirect reviews in the Knowledge Assessment document. Currently the various options are not scheduled for an external review.

Status of Plan: TWG was originally to receive for its September meeting full specification and evaluation of the baseline and three experimental options. The complete specification of these final options is in process and will be complete. The evaluation is to include hypothesized impacts of the differing options on multiple resources. Actual impacts can only be known through the five year science program.

Completion of the physical, biological and social/economic resource impact assessment of the options can be accomplished, but cannot be provided to TWG until the last week of September at the earliest. If variance can be tolerated by TWG as to the extent and timing of information it receives, it is possible a TWG review and decision on the three options could be developed two weeks prior to the proposed October AMWG meeting proposed for the week of August 16th.

The Biennial Work Plan (BWP)

The Biennial Work Plan to be approved in late FY 2006 was to propose operational programs and budgets for FY 2007 and 2008. The extended discussions of the experimental options caused this objective to change to completion of a FY 2007 annual work plan (AWP) and budget.

Involvement of SPG: The FY 2007 AWP has had full involvement of the SPG in review of both programs and budgets. It is proposed as a FY 2007 AWP, but its development by the SPG and GCMRC considers significant linkages to FY 2008 programs, many of which have been discussed. The FY 2007 AWP and budget is normally developed officially by the BAHG, but the BAHG elected to utilize the SPG as its venue for developing the FY 2007 AWP. BAHG members also sit on the SPG.

Conforming to objectives: Because the AWP presents programs only for FY 2007 and does not include FY 2008 programs and budget, it does not conform to all objectives of the SPG. However, it has been designed to explicitly link the FY 2007 programs to planned activities in FY 2008. In that regard it will facilitate rapid development of a FY 2008 plan.

Review of Plans for Quality Assurance: The FY 2007 AWP has been reviewed by GCMRC scientists, SPG members, the CRAHG, BAHG and the Science Advisors. The AWP has been revised to reflect reviews and changes by the various group.

Status of the FY 2007 AWP: The FY 2007 AWP is provided to TWG with approval by the SPG. The following issues/concerns were resolved by the SPG in coordination

with the CRAHG and BAHG.

AMP Goal 1

- Submerged Aquatic Vegetation project: The SPG could not reach agreement on whether to support the SAV project. SPG Vote: To not do at all in FY 07 (5 votes in favor); To do part in FY07 and part in FY 08 (1 vote). To do all of project in FY 07 (4 votes). Three (3) people abstain all together. SPG agreed to pass up to the TWG the results of the split vote and let them decide if the project will be in or out of the AWP. *Status: GCMRC has determined the project is best conducted over two years, not one year as proposed in the draft AWP. This reduces the anticipated cost to ~\$48K in FY 07. GCMRC will provide a presentation on the SAV project to the TWG*

AWP Goal 2

- Request that new research projects be developed to evaluate marking techniques for very YOY fishes, so effects of TCD can be tracked and evaluated in less than 4 yrs. Proposed that the HBC Ad Hoc team identify the questions that need answering related to fate of very YOY HBC and define a scope of work for GCMRC to implement in FY 08. GCMRC agreed start working on researching available technologies for marking/ tracking very YOY starting in FY 07.

- Chute Falls translocation project. Additional translocations will be considered after the PEP is concluded. If necessary, there will be an attempt to providing funding (\$15K) if it's concluded that more translocation is necessary in FY 07.

- Mechanical Removal. The SPG recommends that the non-native fish mechanical removal program focused primarily on trout be discontinued in FY 2007, as originally designed, and efforts be redirected at other non-native species, provided that appropriate monitoring of native and non-native fish populations is conducted. Such monitoring information may be used to evaluate the need to reinitiate trout removal on schedule differing from the original experimental design.

AWP GOAL 4

- RBT-- GCMRC funding should be included in the project budget to support the PEP evaluation. *Status: \$20K added to budget to support a PEP in FY 07.*

AWP GOAL 6

- Field sampling project should be put on hold until after the PEP in spring of 07. NPS has interests in having input into the vegetation mapping/monitoring program. GCMRC will meet with Larry Stevens to address his concerns with the project and revise the proposal as needed. *Status: GCMRC met with Larry Stevens; Work plan was revised to address concerns raised by Larry. Field work will not occur in FY 07 until completion on the PEP. GCMRC plans to meet with NPS (GRCA) in August 2006 to coordinate vegetation mapping efforts. GCMRC will provide project update at the TWG meeting*

AWP Goal 7

- Need to include funding to continue to operate the LCR gage. *Status: \$30 K plus burden added for continued support of the LCR gage in FY 07.*

AWP Goal 11:

- Tribal Funding up to 125K is proposed from experimental fund. The SPG recommends that funding up to 25K per tribe be made available in FY 07 from the experimental fund (and/or from the budget currently allocated for the SAV project, if the SAV project does not get approved for FY 07), PROVIDED that the tribes first complete their existing contractual obligations with BOR to refine and explicitly define their monitoring interests/needs and proposed monitoring protocols, and these monitoring programs and protocols are formally presented to the TWG for consideration as core monitoring projects. *Status: \$120 K (24K/tribe) plus burden added for continued support of tribal monitoring in FY 07.*
- At a meeting on July 13, the CRAHG reviewed and discussed the cultural monitoring program research and development project as described in the MRP and FY 07 annual work plan. There was considerable discussion regarding the assessment phase of this project. To resolve differences of opinion surrounding the assessment phase, CRAHG members voted on two different options. The outcome

of the vote was a majority of the CRAHG agreed with a proposal by Mike Yeatts that GCMRC will use data collected by USU/ZCRE and NPS/GCMRC during the FY 06 site assessment process to determine which of the remaining sites require further field assessment in FY 07. There was general concurrence that other elements of the program proceed as planned. During their July 20 conference call, the SPG agreed that Mike Yeatts would develop the final proposal in coordination with the CRAHG chair and GCMRC. This will involve amending the CRAHG proposal re the site assessment phase of the Project with the following information:

- Responding to SPG interests regarding use of existing assessment data by GCMRC to develop effective monitoring protocols and procedures to assure all agency monitoring is the same.
- Responding to SPG interests to address I06 compliance monitoring in the plan.
- Specification that although sites outside of the CRE may be used for developing protocols and procedures, future monitoring of these same sites would not necessarily be the responsibility of the AMP.

Status: Yeatt's proposal was completed and distributed to the CRAHG/SPG on July 21. Numerous comments were provided. A revised proposal reflecting comments from various CRAHG members and GCMRC was distributed to the TWG by the SPG Chair on July 31, 2006. Several issues related to the site assessment phase of the project remain unresolved that will be discussed by the TWG.

Other:

- Continuation of SPG. Proposed that the report to the Secretary's Designee and TWG, should include explicit recommendations for the future role of this group (future needs for SPG services and associated budgets to meet those needs). The Secretary's Designee can then decide and direct TWG as to the future need/role for the SPG.

Status: The SPG Chair will provide a complete report on SPG activities and outstanding issues at the September TWG meeting.

- NPS requested that \$7K extra be provided to pay for additional permitting costs in FY 07. Status: *\$7 K plus burden added for continued support of NPS permitting in FY 07.*

Source of funding SPG priority needs:

Funding Need	Amount	Funding Source	Amount
LCR gage	30.0	SAV Study (1)	48.0
NPS Permit Support	7.0	Economic Analysis (2)	146.2
Tribal Monitoring	125.0		
Trout PEP	20.0		
Total	182.0		194.2

(1): Economic Assessment (\$146): Eliminate project from in FY 07 AWP ; WAPA will complete the work at not cost to AMP; peer review will be funded out of FY 06 fund is by GCMRC.

(2) GCMRC has determined the project is best conducted over two years, not one year as proposed in the draft AWP. This reduces the anticipated cost to \$48K in FY 07.