

**GLEN CANYON DAM
ADAPTIVE MANAGEMENT
PROGRAM
TECHNICAL WORKGROUP**

**FY-2005 BUDGET
RECOMMENDATION**

2005 TWG BUDGET CHRONOLOGY

- October 1-2, 2003; Preliminary '05 budget submitted to TWG, comments submitted to GCMRC/BOR 10/17/03
- November 12-13, 2003; Revised '05 budget and workplan submitted to TWG. 198 comments received, BAHG reviewed comments
- December 4, 2003 (Saguaro Ranch); Comments considered and discussed between BAHG and GCMRC. All comments could not be reviewed
 - with addressing comments
- January 7, 2004; BAHG met to resolve remaining comments
- January 7-8, 2004; full TWG met to resolve final budget issues, '05 budget modified and approved (unanimous)
- February 3, 2004; recommended changes incorporated, TWG reviewed final with no comment

2005 BUDGET SPREADSHEET LAYOUT

- Column A (New) = the project ID number in the GCMRC 2005 workplan
- Column B (ID) = the type of GCMRC project:
 - CM – Core Monitoring
 - EXP – Experimental action
 - RES – Research project
 - HCA – Humpback chub action
 - DASA – Data acquisition storage and analysis
 - L&S – Logistics and survey
 - ADM – Administration
 - AMP – Adaptive Management issues
 - IPO – Information and outreach

- Column C = title of the budget element (ref to the '05 workplan)
- Column D = approved '04 budget amount for comparison
- Column E = TWG recommended '05 budget amount
- Column F = potential carryover from '04 (if sed input does not occur)
- Column G = TWG action on budget item; OK indicates consensus
- Column H = TWG comment on specific budget item

2005 BUDGET KEY ISSUES

- 1 **Consensus** – after lengthy debate and additional information from GCMRC and BOR, TWG reached consensus on the vast majority of the budget items₂

- 2 **Issues** – Several budget items required lengthy debate with eventual consensus on all but a few. Those requiring lengthy discussion were the following:
 - Remote sensing (change in type of data to be collected)
 - PA activities (uncertainty over NHPA responsibilities)
 - TCD (what is the timeline for completion and use of warm water)
 - Foodbase monitoring (change in approach)
 - Concurrent hbc population estimates (changed scope of project)

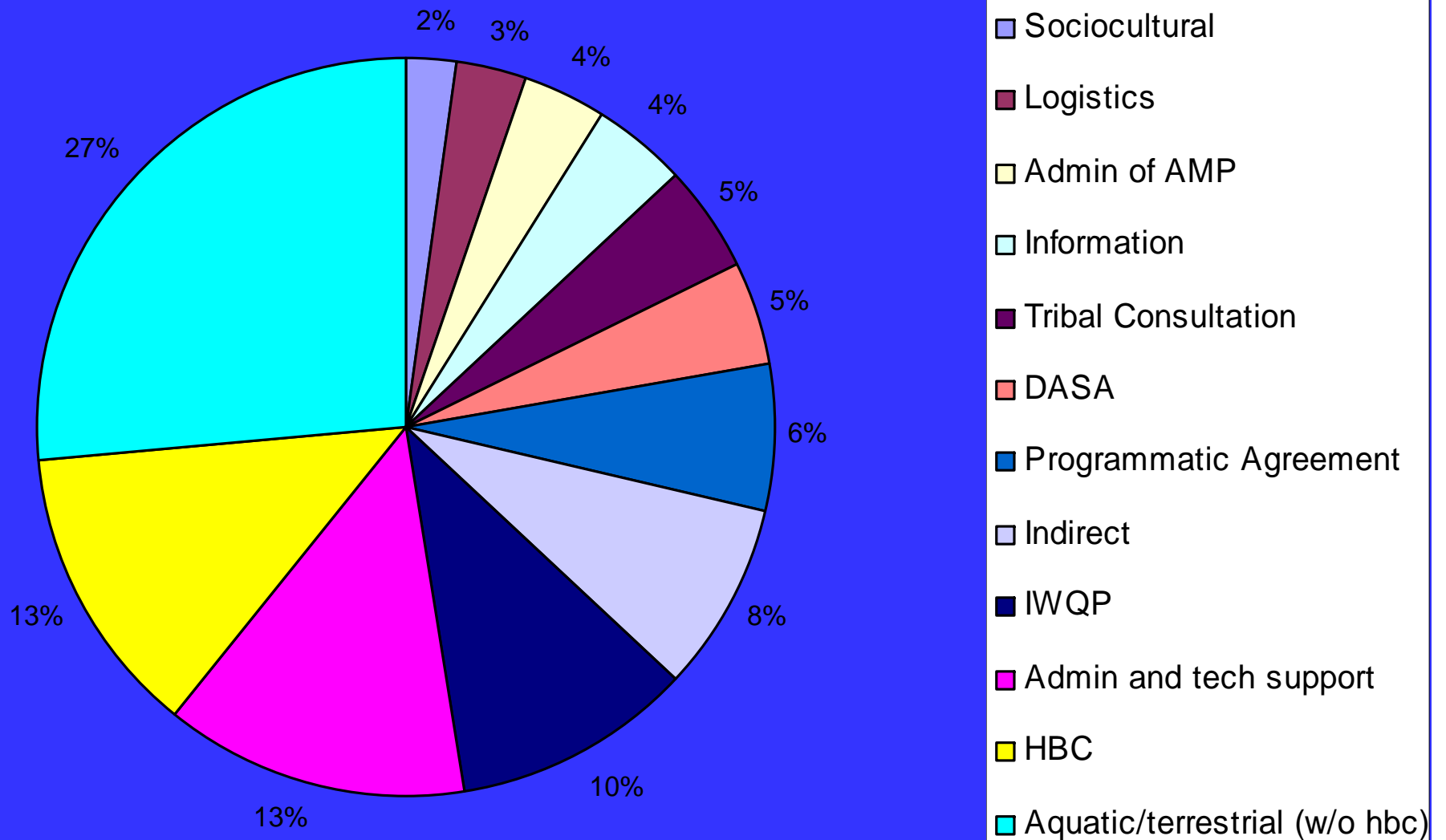
 - 3/150 budget items consensus could not be reached:
 - Sediment, turbidity augmentation (project A.30, line 95)
 - Sediment augmentation feasibility study (project A.30, line 96)
 - Bright Angel Non-native fish removal (line 97)

3. **Changes** – Various changes (reductions/increases) were discussed by TWG and incorporated into the final recommended budget. Significant changes are indicated in the comments section of the budget spreadsheet

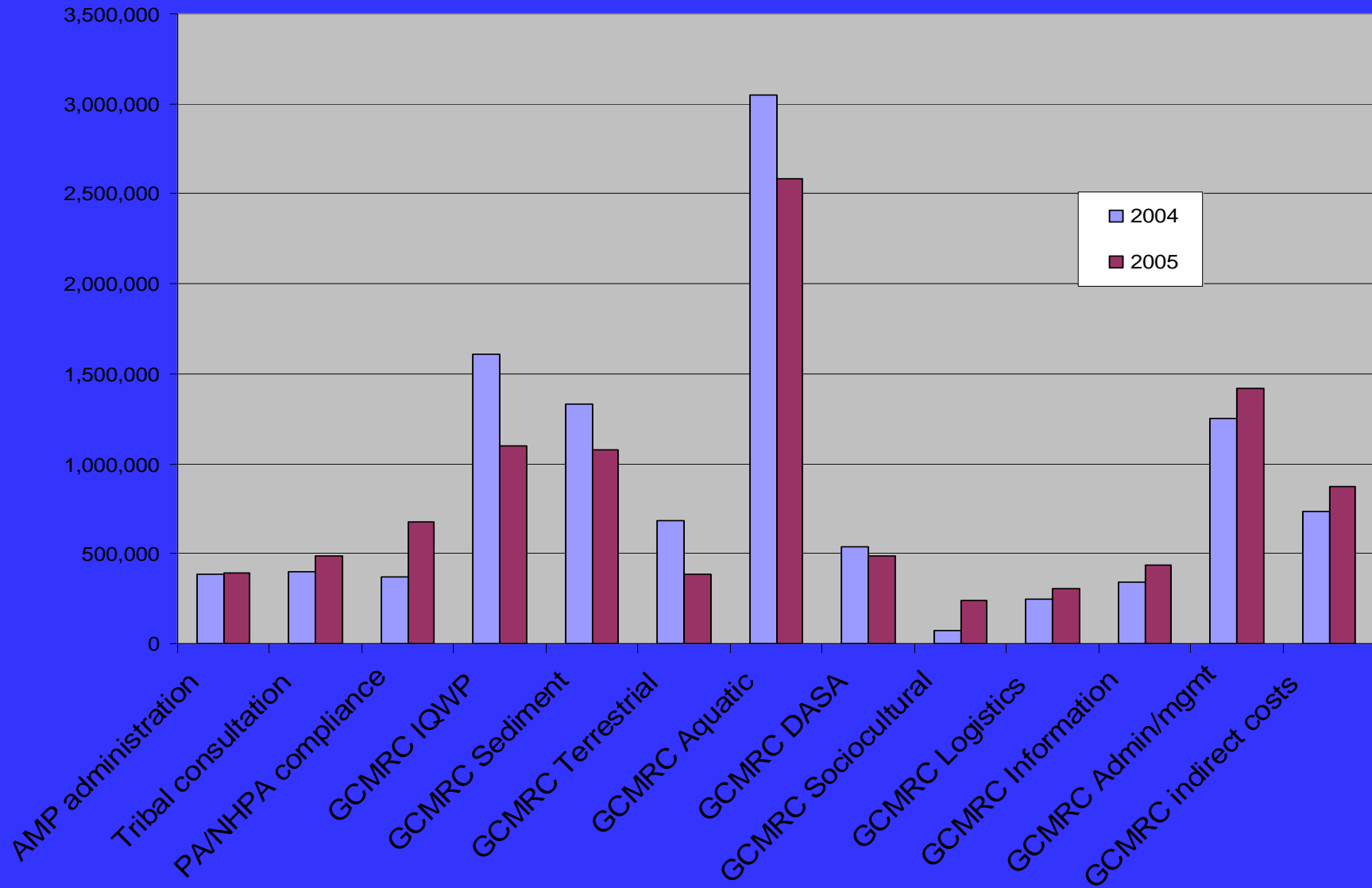
2005 TWG RECOMMENDED AMP BUDGET SUMMARY

BOR -	
Admin of AMP	\$390,650
Tribal Consultation	\$487,000
Programmatic Agreement	\$676,340
TOTAL	\$1,553,990
GCMRC	
IWQP	\$1,097,500
Aquatic/terrestrial (w/o hbc)	\$2,775,000
HBC	\$1,473,000
DASA	\$488,000
Sociocultural	\$240,000
Logistics	\$308,000
Information	\$437,000
Admin and tech support	\$1,417,170
Indirect	\$874,900
TOTAL	\$9,110,570

2005 AMP BUDGET BREAKOUT



AMP BUDGET 2004-2005



TWG FEEDBACK ON BUDGET

1. **Additional time** – Most TWG member believed that additional time was needed to discuss the budget with GCMRC and BOR in order to make a solid recommendation to AMWG.
2. **Budget Process** – TWG believes that a more formalized budget process should be developed so that stakeholders know the chronology and due dates for various budget items. TWG has initiated the process of developing a recommendation to the AMWG.
3. **Strategic Planning** – The budget process should be effectively integrated into GCMRC planning (strategic/research/monitoring) so that stakeholders understand how the current budget fits into a long-term science strategy.
4. **Scientific Detail** - Many TWG members believe that greater detail is needed for each budget element to evaluate how the proposed research program addresses AMP MOs and INs.

TWG FEEDBACK ON BUDGET

5. **Administrative detail** – GCMRC should provide greater detail on administrative costs (salaries, overhead, contracts etc.)
6. **Use of appropriated funds** – Indicate where USGS appropriated funds are utilized in program.
7. **Long-range experimental flow initiative** – AMWG gave direction in April '02 for the TWG/GCMRC to develop a revised-long term experimental flow proposal. TWG has been working through the MATA process to settle on the correct treatment scenarios to test.
8. **'05 experimental flows** – Current AMWG approval for the experimental flows ends in '04. Recommended budget includes funds for exp flows. TWG discussed three interim options for continuation of the program in '05 without clear consensus.

2005 FLOW SCENARIOS CONSIDERED BY TWG

Calendar/Fiscal Year	GCMRC 16 Year Conceptual Plan	Proposal 1	Proposal 2	Mech Removal	EHF
Oct 04/ WY 05	MLFF/FSF ^a	FSF (begin Sep 04)	FSF (begin Sep 04)		
Nov	MLFF/FSF	FSF/FF	MLFF/FSF		
Dec	MLFF	FF	MLFF/FSF		
Jan	MLFF	FF	PNNF	Yes	Yes
Feb	MLFF	FF	PNNF	Yes	
Mar	MLFF	FF	PNNF	Yes	
Apr	MLFF	FF	MLFF		
May	MLFF	FF	MLFF		
Jun	MLFF	FF	MLFF		
Jul	MLFF	FF	MLFF	Yes	
Aug	MLFF	FF	MLFF	Yes	
Sep	MLFF/FSF	FSF	FSF	Yes	
Vote	No vote	Yes-10, No-8, ab-1	Yes-6, No-9, ab-1		

MLFF (see EIS; actual flow varies but never fluctuates more than 8k daily).

FSF = Fall steady flow of alternating 8 kcfs for two weeks and 6-9 kcfs for two weeks.

FF = Fluctuating daily flow of ~5-25 kcfs sufficient to release monthly volume.

PNNF = Power and Non-native Flows = 5-20,000 cfs as in FY04.

EHF = Experimental high flow of 42-45,000 cfs that would occur in all scenarios if autumn sediment trigger occurs.

Mech Rem = Mechanical removal that would take place under all alternatives.

^aMLFF if no sed trigger, FSF if sed trigger.

TWG FEEDBACK ON BUDGET

9. **Program obligations** – Based on the above discussions and those that occurred yesterday, it is clear that there are several complicated issues now before the program. These obligations are presented below with the projected timelines.

Considerations

1. **'05 Budget** – Approve the '05 budget.

Notwithstanding the problems that TWG went through to develop the '05 budget Is the level of detail provided to the AMWG in '05?

2. **AMP budget process** - TWG has initiated the development of a revised AMP budget process. It should continue in this endeavor and and bring a formal/detailed recommendation to the AMWG. Should the process continue and consider the following items:

- Evaluate a 2yr budget cycle to reduce time
- Incorporate long-range budget planning and funding requests with the detailed analysis of the next year implementation
- Develop a clear chronology/deadlines for all budget requirements

3. **Science planning** – TWG recognizes that to prepare an adequate AMP budget that GCMRC must develop adequate science planning documents (Strategic Plan, Research Plan, and Core Monitoring Plan. Direct TWG to work closely with the GCMRC to develop these documents and bring a recommendation to the AMWG.

4. **Experimental flow initiative** – Developing a single year experiment for '05 doesn't make much sense. TWG recommends that it continue to work closely with GCMRC through the MATA process to develop a revised experimental flow initiative and bring a recommendation to the AMWG for implementation in '05.

5. **Workload** – Evaluate the AMP workload and develop priorities for the program, i.e., what should be done first.