



United States Department of the Interior
U.S. GEOLOGICAL SURVEY
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March 22, 2007

MEMORANDUM

To: Technical Work Group

From: Chief, Grand Canyon Monitoring and Research Center, Southwest Biological Science Center, US Geological Survey, Flagstaff, Arizona

Subject: Preliminary Fiscal Year 2008 Glen Canyon Dam Adaptive Management Program Budget

Attached is the subject budget for your consideration. The budget was developed based on the Monitoring and Research Plan (MRP) to Support the Glen Canyon Dam Adaptive Management Program (AMP). In December 2006, the Adaptive Management Work Group (AMWG) approved the MRP as a working document to help guide the preparation of the FY08-09 work plan and budget (refer to January 26, 2007, memorandum from Mark Limbaugh to the Secretary of the Interior re: Report and Recommendation from the GCDAMP Federal Advisory Committee).

The proposed budget provides for the continued implementation of projects included in the approved AMP FY 07 Work Plan and Budget. General descriptions of each of the proposed projects can be found in the MRP; more detailed descriptions are contained in the FY 07 AMP Work Plan and Budget.

The only new starts identified in FY 08 are for implementation of the:

- Grand Canyon archaeological site treatment plan.
- Long term sediment storage monitoring project which will be reviewed by the Technical Work Group (TWG) for Core Monitoring status in FY 07.

Projects that will be completed or discontinued at the end of FY 07 are noted in the attached spreadsheet. To achieve a balanced budget, a number of projects had to be scaled back to accommodate the increased funding being requested for the new projects noted above and for other non-discretionary increases in costs for continuing projects. These adjustments are also noted in the attached spreadsheet.

Several new projects that were identified in the MRP to start in FY 08 will need to be deferred because sufficient funding was not available. These projects include:

1. Expanding/Updating the Conceptual Ecosystem Model.
2. Hiring a visiting ecosystem scientist to pursue specific integrated ecosystem science strategies.
3. Compilation and analysis of existing recreation safety data (deferred from FY 07).
4. Evaluation of the relative importance and effects of different flows on the recreation experience.

Unfunded projects identified in the MRP should be the highest priority for any discretionary funds that may become available in FY 08.

In addition, the MRP identified several new FY 08 initiatives to address priority research and monitoring needs outside of the Colorado River Ecosystem. These projects, which were proposed for funding by U.S. Geological Survey (USGS) or other non-AMP sources, include:

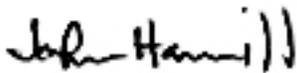
1. Lake Powell Modeling and Synthesis
2. Little Colorado River gaging, water quality/quantity synthesis, and contaminant risk assessment
3. Climate change and drought effects on Glen Canyon Dam Operations

USGS funding to address these needs was not included in the President's Proposed FY 08 budget request.

Finally, I need to note that the preliminary budget does not account for GMCRC's support for the development of the Long Term Experimental Plan EIS. The FY 08 work plan may need to be adjusted after Reclamation provides more detailed direction on the scope of GCMRC involvement in the EIS.

After considering recommendations from the TWG and/or AMWG, GCMRC will develop work plans for each of the projects that will be submitted to the Budget Ad Hoc Group, TWG, and AMWG for final review and consideration.

Your participation in this review process is appreciated.



JOHN HAMILL, Chief, GCMRC

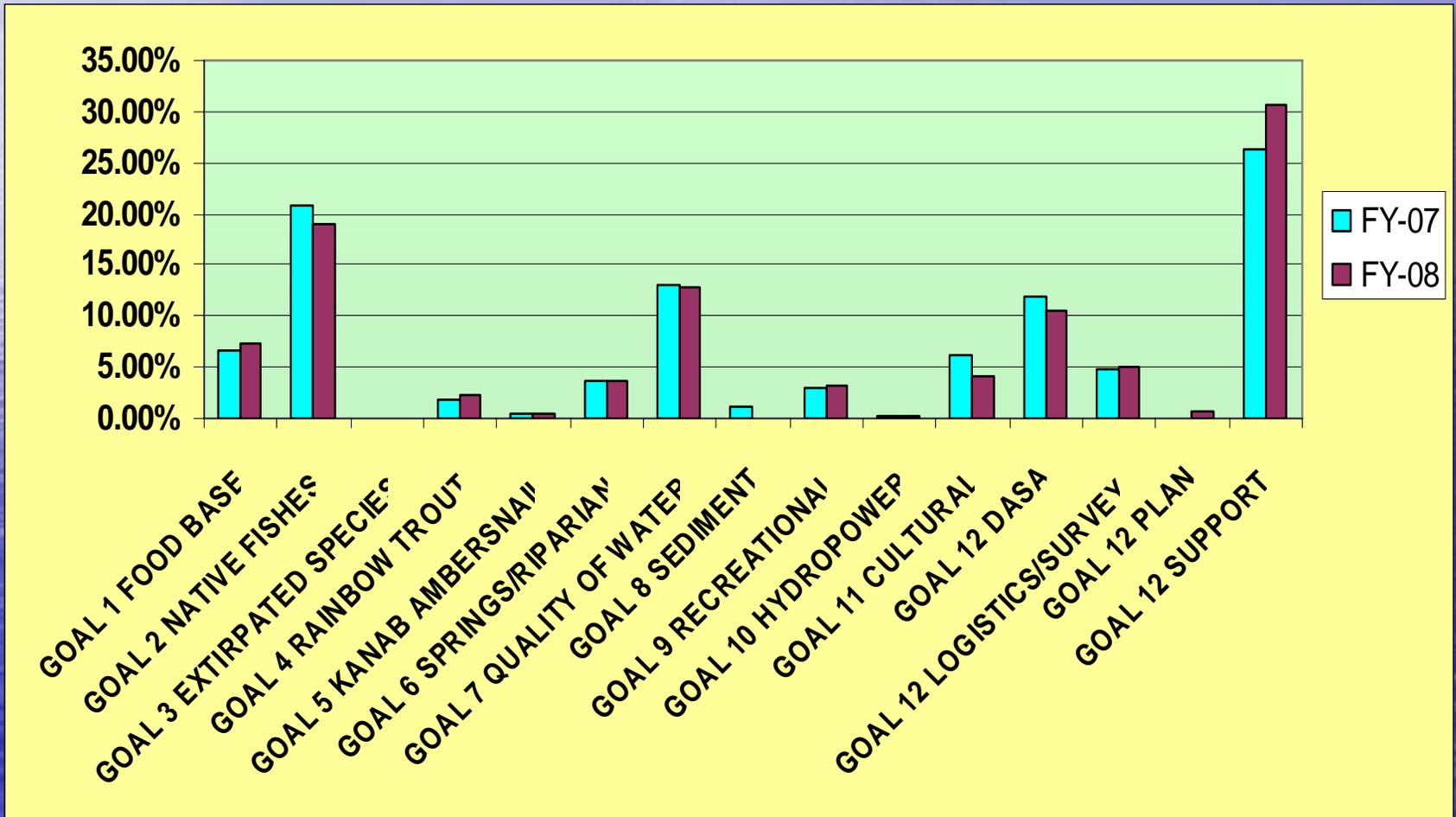
Attachment

cc: Secretary's Designee

Comparison of GCMRC Portion of Glen Canyon Dam Adaptive Management Program

FY 2007 Approved and FY 2008 Draft Budgets

March 22, 2007



**USBR - GCMRC Preliminary 2008 BUDGET
for the Technical Work Group
Reveiw Copy
March 22, 2007**

	A	B	C	D	E	F	G
				Bureau of Reclamation Project Descriptions	USBR Proposed FY08 Budget (GCMRC DRAFT)	USBR Approved FY07 Budget	COMMENTS
1							
2							
3				<i>Adaptive Management Work Group</i>			
4				<i>Personnel Costs</i>	159,267	154,628	
5				<i>AMWG Member Travel Reimbursement</i>	16,683	16,197	
6				<i>Reclamation Travel</i>	13,792	13,390	
7				<i>Facilitation Contract</i>	25,750	25,000	
8				<i>POAHG Expenses</i>	53,045	51,500	
9				<i>Other</i>	7,612	7,390	
10					276,148	268,105	
11				<i>Technical Work Group</i>			
12				<i>Personnel Costs</i>	72,777	70,657	
13				<i>TWG Member Travel Reimbursement</i>	22,877	22,211	
14				<i>Reclamation Travel</i>	16,866	16,375	
15				<i>TWG Chair Reimbursement</i>	23,521	22,836	
16				<i>Other</i>	2,175	2,112	
17					138,217	134,191	
18				<i>Other</i>			
19				<i>Compliance Documents</i>	271,531	263,622	
20				<i>Administrative Support for NPS Permitting(1)</i>	110,000	110,000	<i>FY06 report pending.</i>
21				<i>Contract Administration</i>	33,385	32,413	
22				<i>Experimental Carryover Funds - to be held by BOR</i>	500,000	500,000	<i>Refer to line 129 in the GCMRC portion of budget.</i>
23				<i>Integrated Tribal Resources Monitoring</i>	136,475	132,500	<i>Recommend FY08 expenditures by Tribes for definitions of TCPs.</i>
24				<i>USFWS HBC Genetics Mgmt Plan</i>	0	-	
25					1,051,391	1,038,535	
26					1,465,756	1,440,831	

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	A	B	C	D	E	F	G
27							
28							
29				Reclamation Administration	57,354	71,892	
30				NPS Support for Archaeological Site Assessment	0	67,500	FY08 funding (\$69,525) moved to GCMRC (below the line; added to line 104). FY07 BOR will enter agmt directly for NPS assmt and monitoring (\$67,500).
31				NN & GLCA Treatment Plan and Implementation	0	-	
32				Canyon Treatment Plan and Implementation	300,000	145,000	CRAG will be asking for \$500K; GCMRC's budget is based on \$300K.
33					357,354	284,392	
34					1,823,110	1,725,223	
35							
36							
37							
38				Agreements with Tribes			
39				Hopi Tribe	95,000	95,000	
40				Hualapai Tribe	95,000	95,000	
41				Navajo Nation	95,000	95,000	
42				Pueblo of Zuni	95,000	95,000	
43				Southern Paiute	95,000	95,000	
44				DOI Handling Fee	-	-	
45					475,000	475,000	
46					475,000	475,000	
47							
48					2,298,110	2,200,223	
49							

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	GCMRC Project ID	Status	Funding Emphasis	Grand Canyon Monitoring and Research Center Project Descriptions	GCMRC Est FY08 Budget with Burden as of 03/14/2007; See NOTE 1	GCMRC Approved FY07 Budget with Burden	COMMENTS
50							
51	U.S. Geological Survey - Biological Resource Division - GCMRC - Power Revenue Funded Projects						
52	GOAL 1 - FOOD BASE						
53	BIO 1.R1.07	O	CRD	Aquatic Food Base (FY07--FY09)	509,409	489,917	
54	BIO 1.R3.07	C		Diet, Drift and Predation Data Analysis (FY07)	-	68,829	Project will be completed in FY2007.
55	SUB-TOTAL GOAL 1:				509,409	558,746	
56	GOAL 2 - NATIVE FISHES						
57	BIO 2.R1.07	O	CRD	LCR HBC Monitoring Lower 15km (HBC Population Est; Ongoing)	405,031	388,128	
58	BIO 2.R2.07	O	CRD	LCR HBC Monitoring Lower 1,200m; Ongoing)	73,088	37,312	Funds moved from PIT Tag Reader Project (line 68) to this project to more accurately reflect where effort is being expended.
59	BIO 2.R3.07	O	CRD	HBC Monitoring Above Chute Falls; Ongoing)	76,754	73,504	
60	BIO 2.R4.07	O	CRD	Monitoring Mainstem Fishes (includes Diamond Down; Ongoing)	508,204	388,452	Restored essential equip & personnel needs (80K)
61	BIO 2.R5.07	O	ORD	Nonnative Control Planning (FY07--FY10)	102,125	95,144	
62	BIO 2.R6.07	O	ORD	Nonnative Control Pilot Testing (FY07--FY10)	121,579	114,338	
63	BIO 2.R7.07	O	CRD	Stock Assessment of Native Fish in Grand Canyon (FY07--Ongoing)	39,385	35,360	
64	BIO 2.R8.07	O	CRD	Abundance Estimation Procedures (FY07--Ongoing)	39,385	35,360	
65	BIO 2.R9.07	O	CRD	Bioenergetics Modeling (FY07--FY10)	39,384	35,359	
66	BIO 2.R11.07	O	CRD	Native Fishes Habitat Data Analysis (FY07--FY10)	26,934	32,884	Eliminated travel and reduced personnel costs.
67	BIO 2.R12.07	O	CRD	Trammel Net Effects (FY07--FY08)	38,154	37,789	
68	BIO 2.R13.07	O	CRD	Remote PIT Tag Reading (FY07--FY09)	34,929	61,536	Funds moved from this project to the LCR HBC Monitoring Lower 1,200m project (line 58) to more accurately reflect where effort is being expended.
69	BIO 2.R14.07	O	CRD	Test Sonic Tags (FY07--FY09)	76,022	78,434	Reduced equipment costs.
70	BIO 2.R15.07	C		Test DIDSON Camera (FY07--FY09)	-	13,151	Project eliminated in FY08 because sonic tags appear more promising.
71	SUB-TOTAL GOAL 2:				1,580,974	1,426,751	
72	GOAL 3 - EXTIRPATED SPECIES						
73	07.3.00	NA		None Identified	-	-	
74	SUB-TOTAL GOAL 3:				-	-	
75	GOAL 4 - RAINBOW TROUT						
76	BIO 4.M1.07	O	COR	Status & Trends of Lees Ferry Trout (Ongoing)	135,073	122,768	Anticipates approval as Core Monitoring Project in FY-07.
77	BIO 4.E1.07	O	LTE	Evaluate Effects of Exp Flows on Rainbow Trout (FY07)	-	48,029	Propose to fund from Experimental Fund.
78	SUB-TOTAL GOAL 4:				135,073	170,797	
79	GOAL 5 - KANAB AMBERSNAIL						
80	BIO 5.R1.07	O	CRD	Monitor Kanab Ambersnail (FY95--FY10)	34,340	32,727	Includes logistics costs for back water sampling for small fish.
81	SUB-TOTAL GOAL 5:				34,340	32,727	

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50							
51	U.S. Geological Survey - Biological Resource Division - GCMRC - Power Revenue Funded Projects						
82	GOAL 6 - SPRINGS / RIPARIAN						
83	BIO 6.R1.07	O	CRD	Vegetation Mapping (FY07--FY10)	107,851	112,496	Reduce logistics costs by combining trips.
84	BIO 6.R2.07	O	COR	Vegetation Transects (FY07--FY10)	98,996	95,501	Anticipates approval as Core Montoring Project in FY-07.
85	BIO 6.R3.07	O	CRD	Vegetation Synthesis (FY07--FY10)	69,973	66,502	Reduced travel and training.
86	SUB-TOTAL GOAL 6:				276,820	274,499	
87	GOAL 7 - QUALITY-OF-WATER						
88	BIO 7.R1.07	O	CRD	Water Quality Monitoring Lake - Powell & Tailwaters (Budget presented below; FY07--FY09)	-	-	
89	PHY 7.M1.07	O	CRD	Integrated Quality-of-Water Monitoring (Downstream of GCD; FY07--Ongoing)	883,024	879,852	Add'l indirect costs increased project by 50K; project total reduced in travel, training, equipment, supplies by \$75K.
90	PHY 7.R1.07	O	CRD	Modeling Support Linked with Integrated Quality-of-Water Monitoring (FY07--FY08)	116,877	76,465	Includes add'l personnel funding for Physical Science Coord; Will evaluate in March 2007 based on Modeling Panel report; FY07 amount was incorrect.
91	SUB-TOTAL GOAL 7:				999,901	956,317	
92	GOAL 8 - SEDIMENT						
93	PHY 8.M1.07	N	COR	Longterm Monitoring of Changes in Sediment Storage	95,000	-	Sand bar monitoring is being accomplished under Goal 9, line 96. Anticipates approval as Core Monitoring Project in FY-07.
94	SUB-TOTAL GOAL 8:				95,000	-	
95	GOAL 9 - RECREATIONAL EXPERIENCE						
96	REC 9.R1.07	O	CRD	Sand Bar and Campable Area Monitoring (FY07--FY11)	146,778	130,208	Contribute to meeting Goal 8
97	REC 9.R2.07	C	CRD	Evaluate Campable Area Monitoring Results Using Measured Field Data vs. Remotely Sensed Data (FY07)	-	47,031	To be completed in FY07.
98	REC 9.R3.07	O	CRD	Compile Campsite Inventory and GIS Atlas (FY07--FY08)	86,179	64,445	Planned increase for add'l data compilation in FY08.
99	REC 9.R4.07	N	CRD	Compile and Analyze Existing Safety Data	-	-	Deferred
100	REC 9.R5.07	N	ORD	Evaluate Relation between Flows and Recreation Experience	-	-	Deferred
101	SUB-TOTAL GOAL 9:				232,957	241,684	
102	GOAL 10 - HYDROPOWER						
103	HYD 10.M1.07	O	CRD	Monitor Power Generation and Market Values under Current and Future Dam Operations (FY07--Ongoing)	18,998	18,135	
104	SUB-TOTAL GOAL 10:				18,998	18,135	

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51	U.S. Geological Survey - Biological Resource Division - GCMRC - Power Revenue Funded Projects						
105	GOAL 11 - CULTURAL						
106	CUL 11.R1.07	O	CRD	Research & Development toward Core Monitoring (FY07; Note 10; Pilot Phase starting in FY08)	468,009	316,418	Includes \$69,525, plus burden, from BOR (line 30) for NPS staff support. Includes support for USU erosion monitoring and additional support for weather monitoring.
107	CUL 11.R2.07	O	CRD	Implement Tribal Monitoring Projects (See funding in BOR section)	-	-	
108	SUB-TOTAL GOAL 11:				468,009	316,418	
109	GOAL 12 - HIGH QUALITY MONITORING, RESEARCH & AEAM						
110	DASA 12.D1.07	O	CRD	Preparation for Monitoring Data Acquisition (Remote Sensing; FY07--Ongoing)	260,000	148,400	Increased to maintain a deposit of \$200K per year into WCF for FY09 overflight. FY07 was cut to \$140K.
111	DASA 12.D2.07	O	APM	Grand Canyon Integrated Oracle Database Management System (FY07--Ongoing)	178,607	171,445	Reduction in travel, training and software; Bennett salary moved to Program Mgrs project.
112	DASA 12.D3.07	O	APM	Library Operations (FY07--Ongoing)	42,365	48,745	Reduction in purchase of any new library holdings; travel and training are eliminated; Bennett salary moved to Program Mgrs project.
113	DASA 12.D4.07	O	APM	Legacy Analog Data Conversion (Analog to Digital - Reports & Imagery) (FY07--FY11)	78,737	104,463	Elimination of all equipment and supplies related to digital conversion of aerial overflights and scanner service contract Bennett salary moved to Program Mgrs project.
114	DASA 12.D5.07	O	APM	GIS Support for Integrated Analyses and Projects, GIS Lead (FY07--Ongoing; Note 7)	227,515	231,704	Reduction in travel, training budget and elimination of some GIS support supplies and equipment and renewal of various software licenses; Bennett salary moved to Program Mgrs project.
115	DASA 12.D6.07	O	CRD	Integrated Analysis and Modeling - Mapping Shoreline Habitat Changes (FY07--08)	115,888	84,199	Increase to cover Utah State Univ employee salary for 12 months vs 9 months.
116	Sub-total Goal 12 DASA Portion:				903,112	788,956	
117	SUP 12.S1.07	O	APM	Logistics Base Costs (Other costs dispersed throughout projects; Ongoing)	126,691	135,252	Reduced equipment budget.
118	SUP 12.S2.07	O	APM	Survey Operations (Ongoing)	102,418	112,082	Reduced equipment budget.
119	SUP 12.S3.07	O	APM	Control Network (Ongoing)	134,823	126,496	
120	Sub-total Goal 12 Support Portion:				363,932	373,830	

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51	U.S. Geological Survey - Biological Resource Division - GCMRC - Power Revenue Funded Projects						
121	PLAN 12.P1.07	N		Enhancing the Conceptual Ecosystem Model to Identify Critical Ecosystem Interactions and Data Gap (Science Advisor's conduct work in FY07; Funding in Independent Reviews, ADM 12.A4.07; FY07--FY08)	-	-	Deferred
122	PLAN 12.P2.07	C	APM	AMP Effectiveness Workshop (FY07)	-	46,800	To be completed in FY07.
123	Sub-total Goal 12 Planning Portion:				-	46,800	
124	ADM 12.A1.07	O	APM	Administrative Operations (Ongoing)	296,225	790,942	In FY07 Secretary and Budget Analyst salaries and Flagstaff Science Center overhead costs moved to SBSC overhead accounts per USGS Headquarters direction. Also includes reductions in travel, training and supply costs; equipment; etc. Increased by 36K to reduce impact from previous reductions.
125	ADM 12.A2.07	O	APM	Program Planning, Management & AMP Support (Ongoing)	1,059,438	908,802	In FY08 moved salary of DASA Program Manager from DASA projects to this project to correctly reflect his position in planning; this project also maintains the Physical Program Manager's position (not currently filled) as well as the GCMRC Chief and the Deputy Chief, Sociocultural, Biology and Survey and Logistics Program Managers salaries, travel and training budgets.
126	ADM 12.A3.07	O	APM	AMWG/TWG Travel Costs (Ongoing)	18,077	17,550	
127	ADM 12.A4.07	O	APM	Independent Reviews (Ongoing)	263,390	275,514	Outside contract estimates were reduced; publishing costs increased.
128	ADM 12.A5.07	O	APM	GCMRC Component of SBSC Sys Admin Support (FY05-Ongoing)	335,693	320,438	
129	NA	O	APM	GCMRC Science Symposium (FY97-Ongoing)	23,800		Symposium is usually held every other year. Will possibly charge attendees a small registration fee to help cover costs.
130	ADM 12.E1.07	O	LTE	Projected FY08 Carry Forward (\$500,000) for Experiment Phase II moved to BOR section. FY07 - Ongoing)			\$500K has been placed in the BOR portion of the budget for the FY08 Experimental Fund (refer to line 22).
131	Sub-total Goal 12 Administrative/Management Portion:				1,996,623	2,313,246	
132	SUB-TOTAL GOAL 12:				3,263,667	3,522,832	
133	SUB-TOTAL OF GCMRC POWER REVENUE PROJECTS:				7,615,148	7,518,906	

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51	U.S. Geological Survey - Biological Resource Division - GCMRC - Power Revenue Funded Projects							
134								
135	U.S. Geological Survey - Biological Resource Division - GCMRC - NON-Power Revenue Funded Projects							
136	BIO 7.R1.07	O		Water Quality Monitoring - Lake Powell & Tailwaters (FY07-09)	237,450	226,658	FY07 IWQP Lake Powell agreement funding was planned at \$226,659 but funded by BOR at \$220,632.	
137	BIO TBD	O		Glen Canyon Dam TCD Experimental Studies	-	200,000	No TCD Experimental Actions agreement funding expected for FY07, although the GCDAMP budget originally showed \$200K planned for FY07. (Funding being used for LTEP EIS)	
138	SUB-TOTAL OF GCMRC NON-POWER REVENUE PROJECTS:				237,450	426,658		
139								
140	GCMRC TOTAL AMP FY2008 PLANNED PROGRAM COSTS:				7,852,598	7,945,564		
141								
142								
143					BOR & USGS-GCMRC AMP PROGRAM COSTS	FISCAL YEAR 2008	FISCAL YEAR 2007	COMMENTS
144					BOR Power Revenue Program Costs	1,823,110	1,725,223	
145					BOR Power Revenue Program Costs	7,615,148	7,518,907	
146					Subtotal BOR & GCMRC Power Revenue Program Costs	9,438,258	9,244,130	
147					BOR Non-Power Revenue Program Costs	475,000	475,000	
148					GCMRC Non-Power Revenue Program Costs	237,450	426,658	
149					Subtotal BOR & GCMRC Non-Power Revenue Program Costs	712,450	901,658	
150					Estimated Cost Share expense required by USGS policy	1,000,000	1,000,000	
151					TOTAL AMP PROGRAM COSTS (BOR & GCMRC):	11,150,708	11,145,788	
152								

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51	<i>U.S. Geological Survey - Biological Resource Division - GCMRC - Power Revenue Funded Projects</i>						
153	FUNDING:				FY2008	FY 2007	
154	USBR & USGS Power Revenues under cap				9,438,258	9,244,131	FY08 Power Rev based on the FY07 plus CPI of 3%.
155	USGS Appropriations				1,095,000	1,095,000	Tribal Participation Funding & 1mil in Appropriations
156	USBR Appropriations				95,000	295,000	Tribal Participation Funding
157	USFWS Appropriations				95,000	95,000	Tribal Participation Funding
158	BIA Appropriations				95,000	95,000	Tribal Participation Funding
159	NPS Appropriations				95,000	95,000	Tribal Participation Funding
160	BOR Operations & Maintenance				237,450	226,659	IWQP Lake Powell Agreement (05-AA-40-2385)
161					11,150,708	11,145,790	
162	TOTAL FUNDING NEEDED:				11,150,708	11,145,788	
163	FUNDING BALANCE:				(0)	2	
164							
165	NOTES:						
166	NOTE 1: All FY08 project costs were increased by 3% for CPI and 2% for increased burden rate (from 17% in FY07 to 19% in FY08).						
167	In addition, personnel costs were adjusted to reflect expected increases in FY08 costs. Any additional changes are noted in the comment column.						
168							
169	NOTE 2: Projected costs based on assumption that the \$1M of appropriated USGS funds are sufficient to pay the required cost share.						
170	Current estimates indicate that an additional \$75,000 - \$125,000 in USGS appropriations may be needed to cover the cost share in FY2008						
171	if the Experimental test flow is conducted.						
172							