Glen Canyon Dam Adaptive Management Work Group
Agenda Item Form
August 24-25, 2016

Agenda Item

Fiscal Year (FY) 2017 Budget and Work Plan

Purpose of Agenda Item

To send a recommendation to the Secretary of the Interior regarding the FY 2017 Glen Canyon Dam Adaptive Management Program (GCDAMP) budget and work plan.

Action Requested

Motion requested. The following proposed motion is based on the recommendation from the Technical Work Group (TWG). However, no motion is presumed to be made unless and until an AMWG member makes the motion in accordance with the AMWG Operating Procedures.

> AMWG recommends to the Secretary of the Interior her approval of the GCDAMP FY 2017 budget as described in the two tables (attached) from the Bureau of Reclamation and the Grand Canyon Monitoring and Research Center. AMWG also requests TWG to further review the FY 2017 budget after issuance of the Long-Term Experimental and Management Plan Record of Decision (ROD); to determine if budget and/or work plan changes may be needed as a result of the ROD. AMWG acknowledges that tribal representatives will work with the Bureau of Reclamation on the implementation of its budget items D.2.5 through D.2.8.

Presenters

Katrina Grantz, Adaptive Management Group Chief, Bureau of Reclamation, Upper Colorado Region
Vineetha Kartha, AMWG alternate from Arizona and TWG Chair
Scott VanderKooi, Chief, Grand Canyon Monitoring and Research Center (GCMRC)

Previous Action Taken

- ✓ **June 14, 2016** – TWG passed the following motion by consensus:
  TWG recommends that the AMWG recommend to the Secretary of the Interior her approval of the GCDAMP FY 2017 budget as described in the two tables (attached) from the Bureau of Reclamation and the Grand Canyon Monitoring and Research Center. TWG further requests that AMWG give TWG the opportunity to further review the FY 2017 budget after issuance of the LTEMP ROD, to determine if budget and/or work plan changes may be needed as a result of the ROD. Further, tribal representatives will work with the Bureau of Reclamation on the implementation of its budget items D.2.5 through D.2.8.
- ✓ **September 29, 2014** – Secretary Jewell approved the FY 2015-17 Triennial Budget and Work Plan.
- ✓ **August 28, 2014** – AMWG Motion: AMWG recommends the FY 2015-17 Triennial Budget and Work Plan from the Bureau of Reclamation and the Grand Canyon Monitoring and Research

Center, as presented to the AMWG at their meeting August 27-28, 2014, to the Secretary of the Interior for approval. Motion passed by consensus.

Relevant Science and Background Information

- Final FY 2015-17 Budget and Work Plan (approved by the AMWG on August 28, 2014): http://www.usbr.gov/uc/rm/amp/amwg/mtgs/14aug27/Attach_06f.pdf
- Report and Recommendations Memo from Secretary's Designee Anne Castle to DOI Secretary Sally Jewell (dated Sept. 29, 2014): http://www.usbr.gov/uc/rm/amp/amwg/mtgs/14aug27/Attach_11.pdf

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Summary of Presentation and Background Information

While the GCDAMP FY 2015-17 Triennial Budget and Work Plan (TWP) was recommended by the AMWG and approved by the Secretary in 2014, the AMWG is still required to provide a recommendation on a budget to the Secretary of the Interior every year to be consistent with the Federal budget process and the approved GCDAMP budget process (2010).

The TWG Budget Ad Hoc Group (BAHG) is tasked to initiate this activity and to make a recommendation to the full TWG. The BAHG, chaired by Shane Capron, requested input on the FY 2017 budget from the full TWG. Those items were discussed at two conference calls. The BAHG report (consisting of notes from the two calls) describes the details of each comment or issue as well as the resolution of that issue. The BAHG was able to resolve all issues, except for a few that needed further discussion or that involved use of the bypass tubes at Glen Canyon Dam. The latter was seen as out of the scope for the FY 2017 budget discussion and was moved to Reclamation for their consideration and input to TWG at its October meeting.

On June 14, 2016 the full TWG considered the recommendation from the BAHG and agreed to recommend the FY 2017 budget to AMWG as it was presented by Reclamation and GCMRC.

The only changes to the budget for FY 2017 from that which was approved in 2014 involve Consumer Price Index (CPI), which allows the GCDAMP budget to increase with inflation, and overhead rates.

The budget was originally developed with a projected CPI of 3.0%. In October 2014, CPI was actualized at 1.7%. The original estimate of the FY 2015 budget at projected CPI of 3.0% of $10,892,444 was reduced to the actual CPI of 1.7%, $10,754,967. In October 2015, CPI was actualized at 0%. The original estimate of the FY 2016 budget at projected CPI of 3.0% of $11,219,217 has been reduced to the actual CPI of 0%, $10,754,967. To take a conservative approach to funding in FY 2017, Reclamation and GCMRC are projecting a CPI of 0%. This results in a projected budget of $10,754,967 versus the original estimate of $11,555,794 at a CPI of 3%.

USGS overhead rates for FY 2015, 2016, and 2017 have been revised downward, due to lower than anticipated lease costs. GSA, on behalf of USGS, has renegotiated lease rates with the City of Flagstaff for current facilities until the new USGS building is constructed and occupied. The FY 2015 and 2016 rates decreased from the initial estimates of 15.6% and 21.3% to approximately 13.6% and 11.9%. The FY 2017 rate was estimated to be 27.4%, but is now projected to be about

12%. Reclamation and GCMRC will discuss the effects of changes in the CPI and USGS overhead rates on the budget, as well as any other potential changes for FY 2017.

Reclamation - Adaptive Management Program Budget Summary

		2017 (assumes 0% CPI)
A	**Adaptive Management Work Group**	**$ 375,000**
A.1	AMWG Reclamation Personnel Costs (Labor & Burden)	$ 194,000
A.2	AMWG Member Travel Reimbursement	$ 15,000
A.3	AMWG Reclamation Travel	$ 16,000
A.4	AMWG Facilitation Contract	$ 79,000
A.5	Public Outreach (POAHG Expenses - Labor, Burden & Travel)	$ 62,000
A.6	AMWG Other	$ 9,000
B	**Technical Working Group**	**$ 169,000**
B.1	TWG Reclamation Personnel Costs (Labor & Burden)	$ 96,000
B.2	TWG Member Travel Reimbursement	$ 23,000
B.3	TWG Reclamation Travel	$ 16,000
B.4	TWG Chair Reimbursement/Facilitation	$ 32,000
B.5	TWG Other	$ 2,000
C	**Reclamation Administration**	**$ 783,000**
C.1	Administrative Support for NPS Permitting	$ 134,000
C.2	Contract Administration	$ 45,000
C.3	Science Advisor Contract (FY16 contract includes carryover from FY15)	$ 74,000
C.4	Experimental Carryover Funds	$ 530,000
C.5	Installation of Acoustic Flow Meters	$ -
C.6	**Native Fish Conservation Contingency Fund Balance**	**$ 1,595,000**
D	**Cultural Resources**	**$ 753,000**
D.1	Cultural Resources Program Management	$ 133,000
D.2	Cultural Resources Work Plan	$ 460,000
	D.2.1. Long-term Monitoring Program for Terrestrial and Submerged CR	*$ 104,000*
	D.2.2 Zuni Associative Values (FY16 contract includes carrover from FY15)	*$ -*
	D.2.3 Funds to Support USGS4	*$ 173,000*
	D.2.4 TEK Ecological Restoration Project	*$ 96,000*
	D.2.5 Tribal Synthesis	*$ 48,000*
	D.2.6 Annual Integrated River Trip: An Exchange of Values and World-Views	*$ 29,000*
	D.2.7 Nonnative Fish Removal Consultation	*$ 10,000*
	D.2.8 Tribal Preparation of Paperwork for DOE of Grand Canyon to NR	*$ -*
D.3	Integrated Tribal Resources Monitoring	$ 160,000
	Reclamation Power Revenue Costs - Total	**$ 3,675,000**
	Reclamation Power Revenue Costs - w/o carryover	**$ 2,080,000**
D.4	**Tribal Participation in the GCDAMP (5 tribes at $95,000) - (Appropriated funding)**	**$ 475,000**
	Reclamation Program Costs - Total (includes appropriated funding)	**$ 4,150,000**
	Reclamation Program Costs - w/o carryover (includes appropriated fundin	**$ 2,555,000**

Grand Canyon Monitoring and Research Center

FY 2017 Project Budgets

Project Number	Project Title	FY 2017 Requirements (with revised overhead)
2	Stream Flow, Water Quality, and Sediment Transport	$1,412,000
3	Sandbars and Sediment Storage Dynamics	$1,325,000
4	Connectivity Along the Fluvial-Aeolian-Hillslope Continuum	$530,000
5	Food Base Monitoring and Research	$528,000
6	Mainstem Colorado River Humpback Chub Aggregations and Fish Community Dynamics	$688,000
7	Humpback Chub in and around the Little Colorado River	$1,254,000
8	Experimental Actions to Increase Abundance and Distribution of Native Fishes	$278,000
9	Rainbow Trout in Glen and Marble Canyons	$536,000
10	Mapping and Assessment of Aquatic Habitats below Glen Canyon Dam	$117,000
11	Riparian Vegetation Studies	$460,000
12	Dam-Related Effects on the Distribution and Abundance of Selected Culturally-Important Plants	$ -
13	Socio-economic Monitoring and Research	$335,000
14	Geographic Information Systems, Services, and Support	$224,000
15	Administration and Support	$1,373,000
	Total	**$9,060,000**

FY 2017 Budget

(Amounts rounded to nearest $1,000)

FY 2017 Projects @ 100% (with 12% overhead*)	$9,060,000
Fisheries Monitoring: Juvenile Chub Monitoring (JCM)/Lees Ferry	$246,000
Total FY 2017 Costs	$9,306,000

FY 2017 AMP Funding @ 0% CPI	$8,672,000
FY 2017 Cultural Funding	$173,000
Total FY 2017 Funding	$8,845,000

Projected FY 2017 Long/(Short)	$8,845,000 minus $9,306,000 = ($461,000)*
Projected FY 2015-16 Carryover Funding	$652,000*
Projected FY 2015-17 Long/Short	$191,000*

*Preliminary & subject to change

RECLAMATION

Managing Water in the West

Overview of Reclamation FY 17 Budget and Work Plan

Glen Canyon Dam Adaptive Management Program

Adaptive Management Work Group meeting
August 24-25, 2016

U.S. Department of the Interior
Bureau of Reclamation

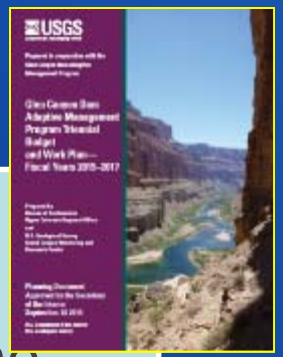
Katrina Grantz
Bureau of Relcamation
AMP Program Manager

GCDAMP Triennial Budget Process Fiscal Years 2015-2017

Sec. Designee Anne Castle May 7, 2014 memo:

- Develop a three year budget and work plan for the GCDAMP for fiscal years 2015-2017
- Revise and update the biennial budget development timeline and process to a triennial process
- Organize the FY2015-17 TWP around:
  - The four DFCs: Colorado River Ecosystem, Cultural Resources, Recreation, and Hydropower
  - TWG recommendations
  - A need to be responsive to the outcomes of the GCD LTEMP EIS

Where are we in the TWP Process?



FY 14

- Heavy lifting, the FY15-17 TWP

FY 15

- Easy times, review and approve FY 16 year of the TWP

FY 16

- Some work to do, do we need to change anything?

FY 17

- Heavy lifting, develop the FY 18-20 TWP

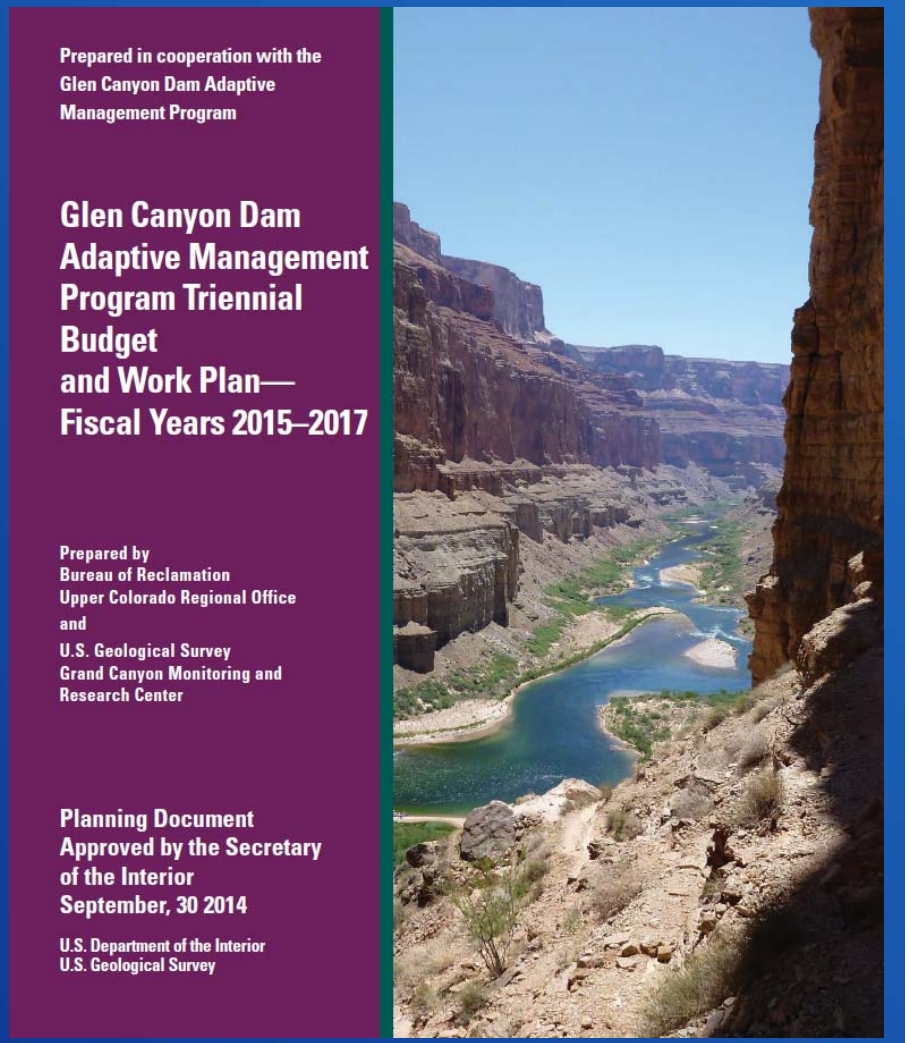
RECLAMATION

FY 17 Budget Planning

Start with approved FY 15-17 Budget and Work Plan

Determine whether any adjustments need to be made for FY17

(e.g., changes in CPI, changes in science, carryover, adjustments in implementation)



RECLAMATION

GCDAMP Budget FY 15-17

GCDAMP Budget Power Revenues

FY 15 = $10,755,000 (1.7% CPI) (budgeted 3%)

Reclamation = $2,083,000 (-$27,000)

GCMRC = $8,672,000 (-$110,000)

FY 16 = $10,755,000 (0% CPI)

Reclamation = $2,083,000

GCMRC = $8,672,000

FY 17 = $10,755,000 (assuming 0% CPI)

Reclamation = $2,083,000

GCMRC = $8,672,000

RECLAMATION

Reclamation - Adaptive Management Program Budget Summary

	Values rounded to nearest $1,000	2016 (FY15 1.7%, FY16 0.0%)	2017 (assumes 0% CPI)
A	**Adaptive Management Work Group**	**$ 375,000**	**$ 375,000**
A.1	AMWG Reclamation Personnel Costs (Labor & Burden)	$ 194,000	$ 194,000
A.2	AMWG Member Travel Reimbursement	$ 15,000	$ 15,000
A.3	AMWG Reclamation Travel	$ 16,000	$ 16,000
A.4	AMWG Facilitation Contract	$ 79,000	$ 79,000
A.5	Public Outreach (POAHG Expenses - Labor, Burden & Travel)	$ 62,000	$ 62,000
A.6	AMWG Other	$ 9,000	$ 9,000
B	**Technical Working Group**	**$ 169,000**	**$ 169,000**
B.1	TWG Reclamation Personnel Costs (Labor & Burden)	$ 96,000	$ 96,000
B.2	TWG Member Travel Reimbursement	$ 23,000	$ 23,000
B.3	TWG Reclamation Travel	$ 16,000	$ 16,000
B.4	TWG Chair Reimbursement/Facilitation	$ 32,000	$ 32,000
B.5	TWG Other	$ 2,000	$ 2,000

RECLAMATION

Reclamation - Adaptive Management Program Budget Summary

	Values rounded to nearest $1,000	2016 (FY15 1.7%, FY16 0.0%)	2017 (assumes 0% CPI)
C	**Reclamation Administration**	**$ 783,000**	**$ 783,000**
C.1	Administrative Support for NPS Permitting	$ 134,000	$ 134,000
C.2	Contract Administration	$ 45,000	$ 45,000
C.3	Science Advisor Contract (FY16 contract includes carryover from FY15)	$ 74,000	$ 74,000
C.4	Experimental Funds (Carried over to Native Fish Conservation Contingency Fund if not used)	$ 530,000	$ 530,000
C.5	Installation of Acoustic Flow Meters	$ -	$ -
C.6	**Native Fish Conservation Contingency Fund Balance**	**$ 1,065,000**	**$ 1,595,000**

FY 17 Native Fish Conservation Fund Balance is projected amount for beginning of Fiscal Year

RECLAMATION

Native Fish Conservation Contingency Fund

"The goal of this budget item is to ensure that funds are available for nonnative fish control in the event this conservation action is needed for endangered humpback chub." …

FY 15 = $ 824,000

FY 16 = $1,065,000

FY 17 = $1,595,000*

* FY 17 is projected balance for beginning of fiscal year

C.4. Experimental Fund

This budget item reserves funds for conducting experiments under the GCDAMP. The funds will be available to conduct experiments when conditions are appropriate. If the funds are not needed in a given year, they will be transferred to the Native Fish Conservation Contingency Fund.

RECLAMATION

Reclamation - Adaptive Management Program Budget Summary

	Values rounded to nearest $1,000	2016 (FY15 1.7%, FY16 0.0%)	2017 (assumes 0% CPI)
D	**Cultural Resources**	**$ 789,000**	**$ 753,000**
D.1	Cultural Resources Program Management	$ 133,000	$ 133,000
D.2	Cultural Resources Work Plan	$ 496,000	$ 460,000
	D.2.1. Long-term Monitoring Program for Terrestrial and Submerged CR	*$ 139,000*	*$ 104,000*
	D.2.2 Zuni Associative Values (FY16 contract includes carrover from FY15)	*$ 30,000*	*$ -*
	D.2.3 Funds to Support USGS4	*$ 144,000*	*$ 173,000*
	D.2.4 TEK Ecological Restoration Project	*$ 96,000*	*$ 96,000*
	D.2.5 Tribal Synthesis	*$ 48,000*	*$ 48,000*
	D.2.6 Annual Integrated River Trip: An Exchange of Values and World-Views	*$ 29,000*	*$ 29,000*
	D.2.7 Nonnative Fish Removal Consultation	*$ 10,000*	*$ 10,000*
	D.2.8 Tribal Preparation of Paperwork for DOE of Grand Canyon to NR ($20K in FY15)	*$ -*	*$ -*
D.3	Integrated Tribal Resources Monitoring	$ 160,000	$ 160,000
	Reclamation Power Revenue Costs - Total	**$ 3,181,000**	**$ 3,675,000**
	Reclamation Power Revenue Costs - w/o carryover	**$ 2,116,000**	**$ 2,080,000**
D.4	**Tribal Participation in the GCDAMP (5 tribes at $95,000) - (Appropriated funding)**	**$ 475,000**	**$ 475,000**
	Reclamation Program Costs - Total (includes appropriated funding)	**$ 3,656,000**	**$ 4,150,000**
	Reclamation Program Costs - w/o carryover (includes appropriated funding)	**$ 2,591,000**	**$ 2,555,000**

RECLAMATION

- **"... Further, tribal representatives will work with the Bureau of Reclamation on the implementation of its budget items D.2.5 through D.2.8."**

Reclamation - Adaptive Management Program Budget Summary

		2016 (FY15 1.7%, FY16 0.0%)	2017 (assumes 0% CPI)
	D.2.5 Tribal Synthesis	*$ 48,000*	*$ 48,000*
	D.2.6 Annual Integrated River Trip: An Exchange of Values and World-Views	*$ 29,000*	*$ 29,000*
	D.2.7 Nonnative Fish Removal Consultation	*$ 10,000*	*$ 10,000*
	D.2.8 Tribal Preparation of Paperwork for DOE of Grand Canyon to NR ($20K in FY15)	*$ -*	*$ -*

RECLAMATION

Thank you

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RECLAMATION

Reclamation - Adaptive Management Program Budget Summary

includes labor and contract data through end of June 2016

		Category	2016 TWP (FY15 1.7.0%, FY16 0.0%)	FY 16 Funding Assigned	FY16 Commitments	Delta between 2016 TWP and Assigned	Delta between 2016 TWP and Committed
A	**Adaptive Management Work Group**		**$ 375,185**	**$ 280,148**	**$ 285,273**	**$ 95,037**	**$ 89,912**
A.1	Adaptive Management Work Group Costs (only ERD)	Labor	**$ 194,054**	$ 161,372	$ 161,372	$ 32,682	$ 32,682
A.2	AMWG Member Travel Reimbursement	Other	**$ 15,491**	$ 11,241	$ 11,241	$ 4,250	$ 4,250
A.3	AMWG Reclamation Travel	Other	**$ 15,894**	$ 11,241	$ 11,241	$ 4,653	$ 4,653
A.4	AMWG Facilitation Contract	Contact	**$ 78,554**	$ 82,215	$ 82,215	$ (3,661)	$ (3,661)
A.5	Public Outreach	L&T	**$ 62,259**	$ 5,146	$ 5,146	$ 57,113	$ 57,113
A.6	AMWG Other	Other	**$ 8,933**	$ 8,933	$ 14,058	$ (0)	$ (5,126)
B	**Technical Working Group**		**$ 169,294**	**$ 64,773**	**$ 64,773**	**$ 104,521**	**$ 104,521**
B.1	TWG Costs	Labor	**$ 96,630**	$ 41,275	$ 41,275	$ 55,356	$ 55,356
B.2	TWG Member Travel Reimbursement	Other	**$ 22,761**	$ 11,749	$ 11,749	$ 11,013	$ 11,013
B.3	TWG Reclamation Travel	Other	**$ 15,704**	$ 11,750	$ 11,750	$ 3,954	$ 3,954
B.4	TWG Chair Reimbursement/Facilitation	Contract	**$ 31,647**	$ -	$ -	$ 31,647	$ 31,647
B.5	TWG Other	Other	**$ 2,552**	$ -	$ -	$ 2,552	$ 2,552

RECLAMATION

Reclamation - Adaptive Management Program Budget Summary

includes labor and contract data through end of June 2016

		Category	2016 TWP (FY15 1.7.0%, FY16 0.0%)	FY 16 Funding Assigned	FY16 Commitments	Delta between 2016 TWP and Assigned	Delta between 2016 TWP and Committed
C	**Reclamation Administration**		**$ 607,299**	**$ 577,990**	**$ 578,987**	**$ 29,309**	**$ 28,312**
C.1	Administrative Support for NPS Permitting	Contract	**$ 134,254**	$ 140,046	$ 140,046	$ (5,792)	$ (5,792)
C.2	Contract Administration	L&T	**$ 44,791**	$ 3,819	$ 3,819	$ 40,972	$ 40,972
C.3	Science Advisor Contract (includes carryover from FY15)	Contract	**$ 145,954**	$ 151,824	$ 152,821	$ (5,871)	$ (6,868)
C.4	Experimental Fund	Reserve	**$ 530,054**	$ -	$ -	$ 530,054	$ 530,054
C.5	Installation of Acoustic Flow Meters	Contract	**$ -**	$ -	$ -	$ -	$ -
C.6	Native Fish Conservation Contingency Fund	Reserve	**$ 1,064,953**	$ -	$ -	$ 1,064,953	$ 1,064,953
C.6	GCMRC Contract Funds Under NFCCF	Contract	**$ 282,300**	$ 282,300	$ 282,300	$ -	$ -
C.6.6.2	*Aggregation recruitment*	*Contract*	**$ 53,400**	$ 53,400	$ 53,400	$ -	$ -
C.6.6.3	*Monitoring mainstem aggregations with PIT tag antennas (pilot)*	*Contract*	**$ 13,500**	$ 13,500	$ 13,500	$ -	$ -
C.6.6.6	*Direct mainstem augmentation of humpback chub*	*Contract*	**$ -**	$ -	$ -	$ -	$ -
C.6.7.3	*July LCR juvenile HC marking to estimate production and outmigration*	*Contract*	**$ -**	$ -	$ -	$ -	$ -
C.6.7.6	*Potential for gravel substrate limitation for HC reproduction in the LCR*	*Contract*	**$ 12,400**	$ 12,400	$ 12,400	$ -	$ -
C.6.7.7	*Evaluate CO2 as a limiting factor early life history stages of HC in the LCR*	*Contract*	**$ 108,000**	$ 108,000	$ 108,000	$ -	$ -
C.6.7.9	*Dev of a non-lethal tool to assess physiological condition of HC in the CR/LCR*	*Contract*	**$ 95,000**	$ 95,000	$ 95,000	$ -	$ -

RECLAMATION

A.5. Public Outreach

This budget covers the expenses for BOR staff and the Public Outreach Ad Hoc Group (POAHG) to develop materials for the GCDAMP public outreach efforts.

BOR public affairs staff and the POAHG will work jointly in developing materials to inform and educate the public on the goals and administration of the GCDAMP. They will keep other GCDAMP members advised of progress and expenditures.

Products will include fact sheets, Web site information, tribal outreach materials, video B-roll, special events, conference participation, and other pertinent means of advising the public and program members on the achievements of the GCDAMP. The POAHG will maintain accurate records of payments made against the contracts and will keep BOR staff informed of discrepancies or concerns.

Since 2010, this line item has accumulated approximately $100,000 in carryover funding as a result of reduced activity. Part of the proposal for the FY15–17 triennial budget is to use $50,000 of these funds each in FY15 and FY16 to implement the Glen Canyon Dam Administrative History Pilot Project. This project would help accomplish the goals of the Public Outreach Ad Hoc Group by providing a better understanding of the history of the GCDAMP, its work, and participants. The pilot project will undertake the following:

- Begin developing oral histories and interviews with AMP historical figures
- Create an annotated bibliography for program related literature
- Create a website and library database for information archival and retrieval
- Create a chronological program overview including participants
- Develop a new participant's handbook for the AMP.

Budget FY15 = $63,054 FY16 = $64,945 FY17 = $66,893

Admin. History (carryover)

FY15 = $50,000 FY16 = $50,000 FY17 = $0

RECLAMATION

A.6. AMWG Other

This budget represents some of the other "miscellaneous" expenses incurred in operation of the AMWG, including the following expenses:

- Overnight mailings of AMWG meeting packets
- Copying of reports
- Purchasing meeting materials (cassette tapes, markers, paper, software upgrades for GCDAMP Web site posting, etc.)
- Purchasing equipment (audio recording/transcribing machines).

In addition to the expenses noted above, training courses are often required for staff to keep current on environmental issues, FACA changes, computer technology improvements, etc. The primary goal is to limit spending on "other" items as much as possible. By doing so, more money can be applied to science and research. Other expenses will be kept to a minimum in an effort to reduce the administrative portion of the GCDAMP budget.

Budget FY15 = $9,047 FY16 = $9,318 FY17 = $9,598

RECLAMATION

Reclamation - Adaptive Management Program Budget Summary

includes labor and contract data through end of June 2016

		Category	2016 TWP (FY15 1.7.0%, FY16 0.0%)	FY 16 Funding Assigned	FY16 Commitments	Delta between 2016 TWP and Assigned	Delta between 2016 TWP and Committed
D	**Cultural Resources**		**$ 1,262,432**	**$ 1,138,722**	**$ 981,325**	**$ 123,710**	**$ 281,107**
D.1	Cultural Resources Program Management	L&T	**$ 133,546**	$ 54,145	$ 54,145	$ 79,401	$ 79,401
D.2	Cultural Resources Work Plan	Contract	**$ 493,702**	$ 462,000	$ 456,004	$ 31,702	$ 37,699
D.2.1	*Long-term Monitoring Program for Terrestrial and Submerged CR*	*Contract*	***$ 139,004***	*$ 145,000*	*$ 139,004*	$ (5,996)	$ 0
D.2.2	*Zuni Associative Values*	*Contract*	***$ 28,759***	*$ 65,000*	*$ 65,000*	$ (36,241)	$ (36,241)
D.2.3	*Support for GCMRC's Project 4*	*Contract*	***$ 143,797***	*$ 157,000*	*$ 157,000*	$ (13,203)	$ (13,203)
D.2.4	*TEK Ecological Restoration Project*	*Contract*	***$ 95,865***	*$ 95,000*	*$ 95,000*	$ 865	$ 865
D.2.5	*Tribal Synthesis*	*Contract*	***$ 47,932***	$ -	$ -	$ 47,932	$ 47,932
D.2.6	*Annual Integrated River Trip: An Exchange of Values and World-Views*	*Contract*	***$ 28,759***	$ -	$ -	$ 28,759	$ 28,759
D.2.7	*Nonnative Fish Removal Consultation*	*Contract*	***$ 9,586***	$ -	$ -	$ 9,586	$ 9,586
D.2.8	*Tribal Preparation of Paperwork for DOE of Grand Canyon to NR*	*Contract*	***$ -***	$ -	$ -	$ -	$ -
D.3	Integrated Tribal Resources Monitoring	Contract	**$ 160,184**	$ 172,410	$ 172,410	$ (12,226)	$ (12,226)
D.4	Tribal Participation in the GCDAMP (5 tribes at $95,000) -appropriated funds	Grant	**$ 475,000**	$ 450,167	$ 298,767	$ 24,833	$ 176,233

RECLAMATION

D.2.1

1. Glen Canyon National Recreation Area Monitoring and Mitigation

In FY15, Glen Canyon NRA proposes to conduct data collection and monitoring of cultural resources at sites potentially affected by operations of the Glen Canyon Dam. Results from these efforts will inform the timing and scope of remedial action treatments proposed in out years for sites in Glen Canyon NRA. The FY15 scope of work includes two components: 1) implement the long-term monitoring program; and 2) conduct consultation with the five tribes to develop a plan of action to obtain tribal values. By so doing, Glen Canyon NRA gathers the data needed to assess effects on the sites, landscape and Traditional Cultural Property of Glen Canyon Reach. This work will help inform and be integrated into the long-term monitoring program proposed under Component 1 below.

Budget FY15 = $61,000 FY16 = $145,000 FY17 = $104,000

RECLAMATION

D.2.2

2. Zuni Associative Values

When historic properties are valued for their association with important historical events and important people, mitigation may be accomplished by documenting those associations. This project mitigates for losses of these values through the production of a DVD. Zuni religious leaders will be interviewed and asked to express their views and feelings about the importance of Grand Canyon, the Colorado River, the Little Colorado River, Ribbon Falls, and Zuni ancestral archaeological sites in Zuni culture, heritage, and the continuing sense of Zuni community. The DVD will be recorded on location within the Grand Canyon. Zuni heritage themes discussed in the DVD will be the emergence, the creation of medicine bundles, the migrations, and the continuing relational spiritual connection between the Pueblo of Zuni and the Grand Canyon. The final DVD is intended for use in the Zuni school systems, available for the Zuni general public through the Zuni libraries, and for use in educating GCDAMP stakeholders about the Zuni relationship to Grand Canyon.

Budget FY15 = $100,000 FY16 = $30,000 FY17 = $0

RECLAMATION

D.2.3

3. Support for GCMRC's Project 4

This project will examine deposition of aeolian sand from HFE-created sand bars on historic properties within the area of potential effect of future dam operations. The primary objectives of element 4.2. are to 1) draft and 2) implement a monitoring plan that meets requirements for monitoring effects of dam operations to cultural resources relative to the National Historic Preservation Act and Grand Canyon Protection Act. The plan will be designed to identify whether, and how much, HFE sand is transported by wind to a representative sample of archaeological sites, and to measure the effect that wind transported sand has on site surface condition and site stability (i.e., the degree to which this mitigates effects from precipitation induced gully erosion and other surface impacts). Year 1 of the project will focus on drafting, reviewing, revising, and pursuing approval for the monitoring plan. Years 2 and 3 of the project will focus on implementing the monitoring plan. The draft plan will make a recommendation of the sample of archaeological sites that should be monitored, but stakeholders (presumably including the BOR, NPS, SHPO, ACHP and tribes) will need to work very closely with GCMRC in year 1 of the project to come to agreement on the monitoring protocol and set of sites that is ultimately monitored. The monitoring plan will be designed in the context of the archaeological site classification developed and applied in 2013 and 2014 which provides useful, site-specific expectations of landscape response to dam operations and controlled floods. While recent monitoring efforts have focused on the use of lidar to measure topographic changes, in drafting the monitoring plan, GCMRC will also consider the use of other monitoring methods and tools. Funding in FY 2015 also includes funding for tribal consultation and review of the monitoring plan.

Budget FY15 = $180,000 FY16 = $150,000 FY17 = $186,450

RECLAMATION

D.2.4

4. TEK Ecological Restoration Project

Based on the proposed completion of a Determination of Eligibility for Grand Canyon as a Hualapai TCP, this project will be a mitigation measure for vegetation that can be contributing elements to the TCP, such as the Gooddings Willow at Granite Park. The project will comprise planning (choosing collection areas and restoration sites), especially during the first year, site preparation (e.g., tamarisk removal if necessary), and some limited planting of certain species in select locations as pilot plots. Other aspects of the project are envisioned as longer term efforts, in particular propagating and nurturing Gooddings willow, cottonwood, and possibly other tree species, as well as research and monitoring for associated changes in ecological conditions.

Budget FY15 = $99,000 FY16 = $100,000 FY17 = $100,000

RECLAMATION

D.2.5

5. Tribal Synthesis

This project will increase the understanding of the Native American perspective within the GCDAMP by utilizing Traditional Ecological Knowledge (TEK). The project will evaluate the management of other river systems and the involvement of Native Americans, increase tribal participation in the GCDAMP planning and management process and integrate tribal perspectives into the AMP science program.

Budget FY15 = $0 FY16 = $50,000 FY17 = $50,000

RECLAMATION

D.2.6

6. Annual Integrated River Trip: An Exchange of Values and World-Views

The objective of this project is to provide an opportunity for tribal representatives and GCDAMP stakeholders to articulate their respective concerns and issues in a field situation. Each river trips will be agenda-driven and may also include restoration projects.

Budget FY15 = $30,000 FY16 = $30,000 FY17 = $30,000

RECLAMATION

D.2.7

7. Nonnative Fish Removal Consultation

This project provides funding to support ongoing tribal consultation-related expenses associated with implementation of the Nonnative Fish Control EA, FONSI, and NHPA MOA. Should mechanical removal of non-native fish be necessary, this funding would be used to support tribal consultation and tribal participation in nonnative fish control efforts.

Budget FY15 = $10,000 FY16 = $10,000 FY17 = $10,000

RECLAMATION

D.2.8

8. Tribal Preparation of Paperwork for DOE of Grand Canyon to National Register

This project provides funding to support and assist tribes to prepare the paperwork to prepare determinations of eligibility (DOE) of the Grand Canyon and contributing elements to the National Register of Historic Places as a Traditional Cultural Property. This would be done under criteria a and b.

Budget FY15 = $20,000 FY16 = $0 FY17 = $0

RECLAMATION

Summary budget table for cultural resources work plan.

FY	GLCA Treat/ Monitor	Zuni Assoc. Values	GCMRC Proj. 4	Tribal TEK Veg.	Tribal Synth.	Tribal River Trip	NN Removal Consult.	Tribal NRHP Nom.	Total
15	$61,000	$100,000	$180,000	$99,000	$0	$30,000	$10,000	$20,000	$500,000
16	$145,000	$30,000	$150,000	$100,000	$50,000	$30,000	$10,000	$0	$515,000
17	$104,000	$0	$236,450	$100,000	$50,000	$30,000	$10,000	$0	$530,450

RECLAMATION