

# Grand Canyon Monitoring and Research Center (GCMRC) Biennial Work Plan for Fiscal Years 2011-12

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Adaptive Management Work Group Meeting  
August 24, 2010



# GCMRC FY10-12

## Anticipated Revenues & Sources

	FY10	FY11	FY12
Hydropower Capped Revenues	\$7,863,844	\$8,060,440	\$8,302,253
<i>LESS</i> redirected funds to BOR	<77,602>	<266,382>	<356,519>
Experimental Funds	71,326	646,340	759,319
FYxx Carry Over	1,625,406	37,152	0
Ancillary Project Revenues			
BOR - Lake Powell	193,253	144,850	188,063
USGS Appropriations			
Reduced Overhead	1,000,000	1,000,000	1,000,000
Appropriations to Tribes	95,000	95,000	95,000
BOR Appropriations – Tribal River Trips	79,357	0	0
BOR Appropriations – NSE	215,000	697,039	423,475
<b>TOTAL Anticipated Funds</b>	<b>\$11,065,584</b>	<b>\$10,414,436</b>	<b>\$10,411,591</b>



# Guidance

- Monitoring and Research Plan (MRP) as amended and approved
- FY 10-11 BWP
- Annual Reporting Meeting
- Budget Ad Hoc Group conference calls and TWG meetings
- AMWG Guidance (May 2010)

# Revisions to Address AMWG Priorities

- Nonnative fish control
- Long Term Experimental and Management Plan EIS development
- Increased monitoring to support the evaluation of the proposed High Flow Experiment Protocol
- A new study to evaluate rainbow trout use of the Paria River to Badger Rapid reach (the reach immediately below Lee's Ferry)
- HBC monitoring and translocation above Chute Falls.
- Hydropower economic analyses by Western Area Power Administration with independent technical oversight by GCMRC.

# Nonnative Fish Control

- FY 11: \$600K; FY 12: \$300K
  - Includes funding already in the Nonnative Fish Suppression Fund
- Deposited into Nonnative Fish Suppression Fund (Reclamation's budget)
  - TWG recommended moving to the Experimental Fund
- Purpose: Support implementation of nonnative fish control actions as specified in the Nonnative Fish Control EA

# Long Term Experimental and Management Plan EIS

- FY 11: \$250K; FY 12: \$250K
  - Includes funding already in the Compliance Document line item (Reclamation's budget)
  - Assumes matching funds from Reclamation (\$250K / FY)
  - Does not include \$77K of FY 10 Carryover
- Purpose: BOR development of the LTEMP EIS

# High Flow Experiment Protocol Science Plan

- FY 11: \$448K; FY 12: \$448K
  - funds derived from the Experimental Fund
  - see Project PLAN 12.P6.11-12, page 204
- Purpose/goal:
  - test the hypothesis that repeated high flows will be an effective strategy for rebuilding sand bars
  - evaluate effects on other AMP resources
- Approach: Rely on existing monitoring projects
  - aquatic food base, Lee Ferry Trout, and sediment monitoring efforts expanded
  - new study evaluating impacts of HFE's on recreation experience in Lees Ferry was added (REC 9.R4.11-12, page 145)
  - approach may be modified based results on HFE EA

# Rainbow trout use of the Paria River to Badger Rapid reach

- FY 11: \$437K; FY 12: \$459K
  - Funds derived from the Experimental Fund
  - See Project BIO2.E18.11, page 83
- Purpose/Goal:
  - Understand downstream movement of RBT movement from Lee Ferry
  - Assess feasibility of trout removal in the PBR reach
- Study may be modified based results on Nonnative Fish Control EA

# HBC Monitoring and Translocation above Chute Falls

- FY 11: \$131K; FY 12: \$138K
  - Originally deferred by GCMRC with recommendation it be funded as a management action
  - See Project BIO2.M3.11-12, page 57
- Purpose/Goal:
  - Translocate HBC and estimate population above Chute Falls
  - Prepare a HBC translocation plan

# Hydropower Economic Analyses

- FY 11: \$31K; FY 12: \$20K
  - See Project HYD 10.R2.11-12, page 150
- Purpose and Goals:
  - Assess suitability of hydropower model (GTMax)
  - Evaluate hydropower costs related to changes in dam operations
- Consistent with recommendation from the December 2009 socio economics workshop
- WAPA will conducted the modeling with independent technical oversight by GCMRC

# Other Focus Areas

- Resource monitoring (status and trends)
  - Transition of several projects from research and development phase to core monitoring
- Continued science support for 2008 Environmental Assessment (EA) and ESA conservation measures
- Continued emphasis on data analysis and reporting (including HFE Synthesis, Knowledge Assessment, and SCORE report)
- See Summary Table 1, page 37-40

# Reductions to Accommodate AMWG Priorities

GCMRC Budget	<u>FY 2011</u>	<u>FY 2012</u>
➤ Aquatic Food Base Monitoring	\$ - 84,200	\$-84,200
➤ Monitoring of Mainstem Fishes	-518,400	-239,300
➤ Stock Assessment of Native Fish	- 48,700	- 49,000
➤ Nonnative Control Science Support	- 76,900	- 76,900
➤ DFC Facilitation & Decision Support	- 60,500	- 60,500
➤ Science Advisors Support	- 50,000	- 50,000
➤ SBSC IT Support	- 72,900	- 72,900
Reclamation Budget		
➤ ½ POAHG	- 28,100	- 28,900
➤ ½ NPS Permitting support	- 60,100	- 61,900
➤ Canyon Treatment Plan	<u>-300,000</u>	<u>- 0</u>
	TOTAL \$1,299,500	\$723,600

# Other Major Cuts and Deferred Projects

- Riparian Monitoring (bird and bugs)
- Flow, Temp, Sediment model R&D
- Ecosystem modeling R&D
- Socio-economics studies
- Recreation studies
- Arch Site Geomorphic Model R&D
- Arch site pilot monitoring
- 1984 Sand bar analysis
- Extirpated species workshop
- Library operations (scanning)
- Overflight data acquisition
- Remote PIT Tag deployment

# Protocol Evaluation Panel (PEP) and Core Monitoring Plans (CMP) Reviews

- Aquatic Food Base and Lake Powell and Downstream Water-Quality Monitoring
  - PEP and CMP's in FY11
- Native and Nonnative Fish Monitoring
  - Lees Ferry Trout CMP in FY11
  - Little Colorado River and mainstem Colorado River CMP in FY11
- Vegetation Monitoring
  - CMP in FY11
- Camping Beaches Monitoring
  - PEP and CMP in FY12
- Sediment Monitoring
  - Revisit CMP in FY 12
- Requires timely and effective TWG support

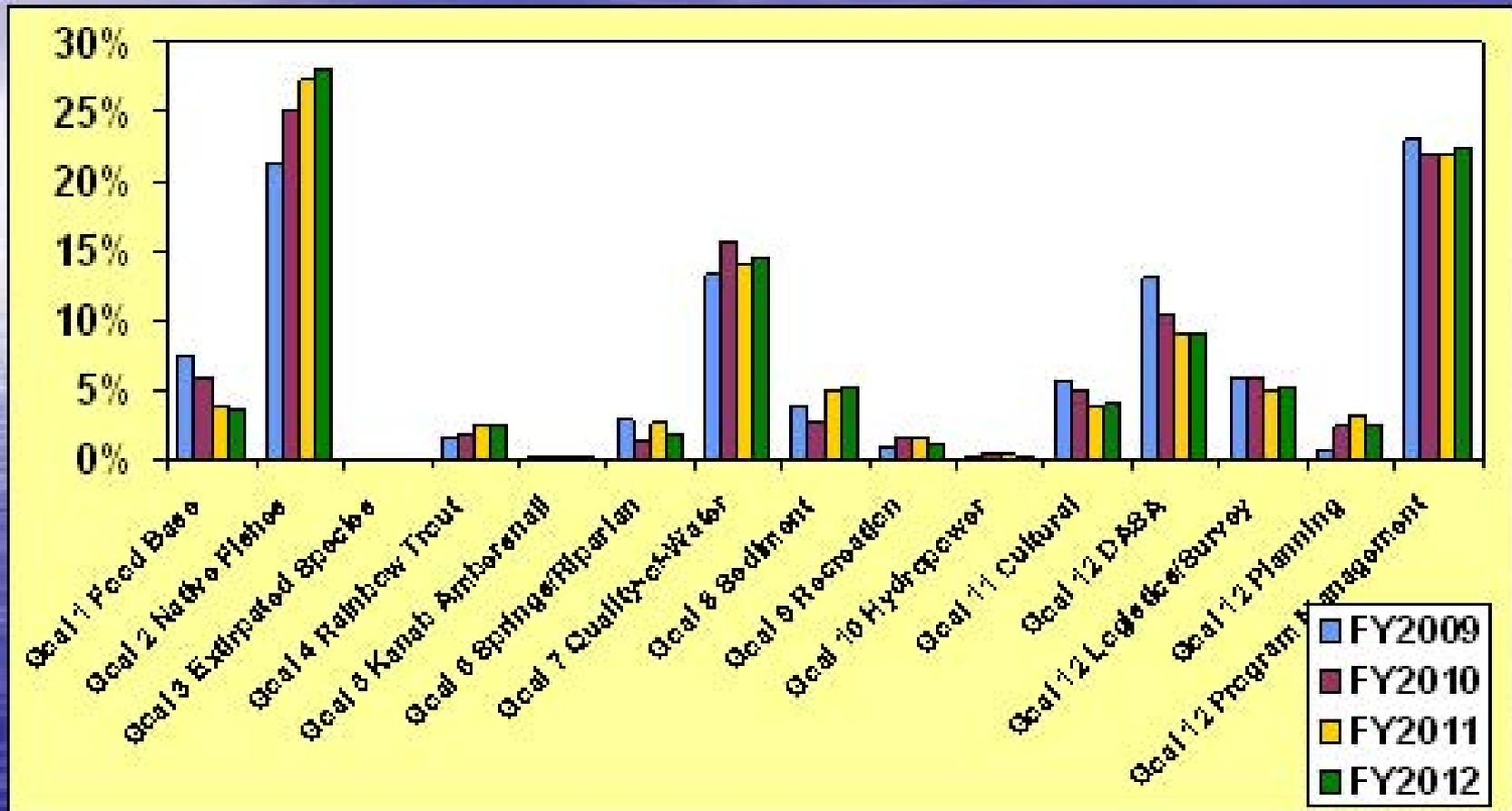
# Technical Work Group Recommendations

- Reduce funding for Aquatic Food Base (AFB) monitoring by \$100k in FY11.
  - GCMRC believes enhanced AFB monitoring will help explain the effects of HFE on native and nonnative fishes
- Add \$20,000 to the Science Advisors budget in FY11 and FY12, to restore funding. Funding would be taken from Administrative Support (publications).
  - Editorial support will need to be reduced by \$20,000 (net), delaying the publication of several GCMRC publications planned for FY 11 and 12.

# GCMRC Recommended Budget Changes

- See August 7, memo; reviewed with TWG on August 13
- Minor language changes
- Drop fall multi-gear mainstem fish monitoring trip
- Reinstate one spring mainstem electrofishing monitoring trip
  - Maintains long term data set
  - Provides estimate of trout abundance and native fishes
  - Added cost: \$100,000 (from NN contingency fund)
- Maintain fall monitoring of HBC aggregations near Shinumo and Havasu creeks
- Request these changes be incorporated into AMWG budget motion

## GCMRC Portion of the GCDAMP Budgets: Approved FY09 Budget, Proposed FY10 and FY11 Budgets August 24, 2010



# Tribal Concerns

- Killing of fish (mechanical removal, NSE, etc)
- Collateral impacts to other animals from electrofishing
- Science and recreation use of the LCR
- De-emphasis on monitoring priority tribal resources (springs and riparian plants and animals)
- Integration of tribal concerns into Core Monitoring and AMP decision processes (e.g., use of TEK)
- Native American expert missing from Science Advisors
- Access to river bank near Salt Mines for channel mapping

# Other Significant Issues

- Significant uncertainty in several major projects:
  - Nonnative fish control and related science support
  - HFE protocol and science support
  - LTEMP EIS scope and cost and science support needs
  - Phase II DFC development and science support
- Erosion of funding for monitoring projects
  - Critical element of Adaptive Management
  - Continued debate over scope and cost of core monitoring
- What is the long term funding strategy?
  - Seek additional revenues?
  - Reduce scope of GCDAMP?
  - Fund management and compliance actions at the expense of the science (monitoring) activities?