



GCMRC FY2022 Budget Overview

**Adaptive Management Work Group Meeting
August 18, 2021**

Michael Moran
Southwest Biological Science Center
Grand Canyon Monitoring and Research Center

GCMRC Budget Requests for FY22

Project	FY2022
Project A. Streamflow, Water Quality, and Sediment Transport and Budgeting	\$ 1,147,000
Project B. Sandbar and Sediment Storage Monitoring and Research	\$ 907,000
Project C. Riparian Vegetation Monitoring and Research	\$ 333,000
Project D. Effects of Dam Ops and Vegetation Mgmt for Archaeological Sites	\$ 301,000
Project E. Controls on Ecosystem Productivity: Nutrients, Flow, and Temperature	\$ 294,000
Project F. Aquatic Invertebrate Ecology	\$ 709,000
Project G. Humpback Chub Population Dynamics	\$ 1,835,000
Project H. Salmonid Research and Monitoring	\$ 648,000
Project I. Warm-Water Native and Non-Native Fish Monitoring and Research	\$ 671,000
Project J. Socioeconomic Research	\$ 204,000
Project K. Geospatial Science, Data Management, and Technology	\$ 464,000
Project L. Overflight Remote Sensing	\$ 284,000
Project M. Leadership, Management, and Support	\$ 1,427,000
Project N. Hydropower Monitoring and Research	\$ 25,000
Total Cost	\$ 9,249,000
Anticipated AMP Funding Available	\$ 9,088,000
Anticipated Carryover Funding Available	\$ 203,000

Requests in each project identical to FY21-23 Triennial Work Plan



Lake Powell Water Quality Project

- Lake Powell QW included in the FY21-23 TWP but NOT GCDAMP funded
- Funding request for this project in Calendar Year 2022 is \$223,893

End of Year Funds to Balance GCMRC Budget

- The aggregate GCMRC budget for each year in the FY21-23 TWP budget relies on estimated end of year funds in order to balance
- FY22 budget relies on a built-in estimated end of year funds of \$203,000 from FY21
- Preliminary estimates of FY21 end of year funds indicate we have enough to balance budget in FY22

Overhead Rates for FY22

- In FY21-23 TWP overhead rate was estimated to be 22%
- Increased rate from previous average was due to anticipated new building occupation in FY22
- New building will not be occupied in FY22 and so overhead rate will be around 16%

New GCMRC Building

- **USGS has signed lease for new building; awaiting City of Flagstaff to sign**
- **Anticipating City to sign in September 2021**
- **If they do, we will move to design phase with engineering and architectural drawings**

New GCMRC Building Cont.

- **GSA estimates building occupation within 1 year from City of Flagstaff signing the lease**
- **Thus we would anticipate being in the new building at the beginning of FY23**
- **GCMRC overhead rate for FY23 (28%) included occupation for entire fiscal year**

BAHG Recommendations for Funding

Priority	Project	Fiscal Year	Estimated Cost
1	Juvenile Humpback Chub Monitoring West	2023	\$250,000
2	Trout Recruitment & Growth Dynamics – additional site	2023	\$54,000
3	Aquatic Vegetation Removal Pilot Lees Ferry (Subject to compliance)	2022/ 2023	NA
4	Decision Analysis – Project O.11 and Bug Flows (Subject to review by Science Advisors)	2022/ 2023	\$61,000
5	Aquatic Food Base – Project O.1	2022	\$50,000
6	Sediment Mapping Below Diamond Creek – Project O.2	2022	\$162,000

BAHG Project Significance

What information is lost if we do not accomplish each recommended project?

Priority 1: Juvenile Humpback Chub Monitoring West - We may not be able to develop a clear picture of drivers needed for management recommendations, such as why HBC survival is lower in Western Grand Canyon than in LCR. In eastern GC, the ability to estimate the relative importance of trout and temperature was not realized until we had 7 or 8 years of data.

Priority 2: Trout Recruitment & Growth Dynamics additional site - Lose ability to track brown trout population abundance and impacts of incentivized harvest and other management actions will be compromised

BAHG Project Significance Continued

Priority 3: Aquatic Vegetation Removal Pilot Lees Ferry – Not yet clear since this a pilot project but is anticipated that vegetation removal in Glen Canyon may disadvantage brown trout

Priority 4: Decision Analysis, Project O.11 and Bug Flows - Reduced chance to continue to improve decision analysis processes into AMP, as well as the design and prioritization of monitoring and research of future flows

Priority 5: Aquatic Food Base, Project O.1 - Miss full analysis of data collected from the FLAHG flow as tradeoffs were made to accommodate more resources in first year work

BAHG Project Significance Cont.

Priority 6: Sediment Mapping Below Diamond Creek, Project O.2
- Miss full analysis of data collected from the FLAHG flow as tradeoffs were made to accommodate more resources in first year work

Questions?