

PROJECT TITLE AND ID: V.A.1.a TERRESTRIAL ECOSYSTEM MONITORING - Cultural Component – Tribal Participation

STATUS: Ongoing. Originally Approved and Implemented in FY 2001
ESTIMATED COST: \$ 125,000

Purpose: The goal of this project is the collection of data necessary to monitor the effects of Glen Canyon Dam operations on terrestrial biological resources of concern. Analysis includes: (1) the relative abundance and distribution of waterfowl, raptors and riparian breeding birds (including southwestern willow flycatcher); (2) the composition, distribution and structure of vegetative communities and plant species; and (3) the abundance and distribution of faunal constituents linked to these vegetative communities. The project is multidisciplinary and includes Native American perspectives in ecosystem monitoring and interpretation. See biological component for full project description.

Tribal Participation Component: Tribal perspectives for terrestrial resources that are significant to the tribes are included in this monitoring effort. Tasks to incorporate tribal perspectives include transferring information to the tribe for interpretation and subsequent reporting, augmenting monitoring methods with tribal monitoring methods and monitors, or by other means. These efforts are funded at levels in addition to those already designated for this program and administered under a separate contract or agreement. Tribal participation for FY 2003 is specified at \$ 125,000 to incorporate all five AMP participating tribal groups. This project was initiated in FY 2001 with additional approved funding in FY 2002.

Objectives:

- Provide tribal perspectives on resource data collection methods relative to western science and tribal methodologies
- Identify impacts to resources from tribal perspectives
- Provide recommendations for future monitoring of biological resources.

Products:

- Participation in data discussion meetings, presentation of preliminary data and provide information on the assessment of the condition of resources.
- Participation in late fall/early winter meeting to discuss tribal data, collection methods, and a tribal interpretation of the information
- Provide a brief written report to include tribal perspectives on data methodologies, tribal methodologies, data results, and recommendations for future monitoring activities.

MOs and INs To Be Addressed: This project addresses the current biological resource management objectives (MOs 11,12, 13 and INs 11.1- 11.3, 12.1, 13.2) and the current cultural resource MOs and INs(MO1,2 and IN 1.1, 2.1).

Project Time Line FY 2003:

Winter	Spring	Summer	Fall	December
Agreements drafted – Oct. – Dec.	Data collection	Data Collection & analysis	Data analysis & reporting	Report delivery

PROJECT TITLE AND ID: V.A.5. MAPPING HOLOCENE TERRACES

STATUS: Ongoing. Originally Approved and Implemented in FY2002

ESTIMATED COST: \$ 100,000 – second and final year

Purpose: Terrestrial mapping of the Colorado River corridor is required for spatial monitoring of physical, biological, and cultural resources. Attributes associated with a coverage type can also be used as a predictive tool for monitoring and research. This project addresses recommendations made by the terrestrial, cultural resource, and sediment protocol review reports.

Cultural Resource Component: The primary goal for this project is to document geomorphology, including Holocene deposits for purposes of assessing impacts related to dam operations and cultural resources. The Holocene terrace deposits are a coverage that would be applied to the topographic base map. In some areas, geomorphic base maps currently exist.

Objectives:

- To measure, record and map terrestrial habitat throughout the river ecosystem including the various geomorphic features and substrates.
- Mapping of the Holocene terrace deposits within the canyon to geomorphically define the area potentially affected by dam operations relative to sediment deposits, cultural, and recreational resources.
- Provide a focal area for the investigation of geomorphic processes and linkages with dam operations and the archaeological remains.

Products:

- Compilation of existing data including previously mapped areas, remotely sensed data, and modeled information and the underlying data sources.
- Integration of existing and new data to produce a map with Holocene terrace deposits
- Map data with geomorphological definition of area potentially affected by dam operations relative to sediment deposits, cultural, and recreational resources

Note: Scope and scale of project is determined by existing data as identified by FY 2001 and FY2002 efforts.

MO's and IN's to be Addressed: This project addresses several resource area MOs and INs. For the cultural resource area, the current MO 1, and IN 1.1 are addressed.

Project Time Line FY 2003:

Fall	Winter	Spring	Summer	Fall
Continuation of data compilation and mapping efforts initiated in 2002				September Report to AMP

PROJECT TITLE AND ID: V.A.6. CULTURAL MONITORING PLAN

STATUS: Ongoing. Monitoring Plan Approved and Implemented In FY 2002

ESTIMATED COST: \$ 50,000

DURATION: One year

Purpose: Currently, there are several monitoring efforts that are conducted within the CRE. Funding for a Cultural Monitoring Plan (Plan) was approved in FY 2002. The Plan will provide direction for coordinated long- term monitoring efforts of the NPS, GCMRC, Reclamation and the Tribes. The Plan will directly link to the research design that addresses research and monitoring questions and resources. The Plan contributes to a portion of the Historic Preservation Plan suite of documents and was a recommendation of the Cultural Resource PEP report. This project implements the recommendations of the Plan. Plan implementation will result in a coordination of monitoring efforts.

Objectives:

- Implements recommendations of cultural resource monitoring plan which is a component of the Historic Preservation Plan
- Improve coordination and information potential from monitoring efforts within all aspects of the AMP
- Coordinate Federal and Tribal monitoring efforts for resource assessments including the Programmatic Agreement program, the GCMRC monitoring efforts.

Products:

- Workshop/meetings to discuss Monitoring Plan implementation
- Development of schedule to implement major components of the Monitoring Plan
- Report to the AMP on the Monitoring Plan implementation and the coordination of efforts.
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MOs and INs To Be Addressed: This project addresses current cultural resource management objectives and information needs (MO1, IN1.1).

Project Time Line FY 2003:

Fall	Winter	Spring	Summer	Fall
Implementation planning, timetables Coordination of Field efforts	Coordination of monitoring data	Data collection	Data collection	September Report to AMP

PROJECT TITLE AND ID: C.1. a. ADOPT-A-BEACH PROJECT

STATUS: Ongoing, Originally Approved and Implemented in 1996

ESTIMATED COST: \$ 10,000

DURATION: Annual

Purpose: Through volunteer efforts, this project collects repeat photographic data on changes at selected beaches throughout the CRE. Project data supplements quantitative data collected under other protocols. Data are collected through out the river season and presently consist of several years of archived data. The project personnel dissemination data at educational and other public workshops.

Objectives:

- Collect repeat photographic data at selected beach locations ranging from 3 to 10 photographic sets
- Provide qualitative data to assist in focusing quantitative efforts
- Provide volunteer efforts to assist the AMP in resource monitoring

Products:

- Photographic data collection of selected beach locations
- Integrative data report on beach changes relative to flow regimes
- Education and data dissemination to recreational community

MOs and INs To Be Addressed: This project addresses the current recreational resource management objectives (MO 2) and informational needs (IN 2.2, and 2.3).

Project Time Line FY 2003:

Fall	Winter	Spring	Summer
Data compilation and analysis	Data analysis and report write up	Workshops Data dissemination	Report delivery and new data collection

PROJECT TITLE AND ID: C. 11. TRIBAL TRAINING, SCIENCE/TRIBAL PERSPECTIVES INTEGRATION/TRIBAL INTERNS

STATUS: New work for FY 2003

ESTIMATED COST: \$ 20,000

DURATION: One year

Purpose: Incorporation of Tribal stakeholder perspectives within the AMP/GCMRC project development, implementation and activities. The project provides a mechanism for the integration of tribal perspectives within western science projects including the use of tribal interns for projects and activities at GCMRC and with AMP stakeholders

Objectives:

- Increase tribal participation within AMP project development and implementation
- Increase tribal participation within AMP project activities
- Utilize tribal interns to assist in project development, implementation and activities
- Link project with other public outreach/involvement efforts

Products:

- Conduct workshops at GCMRC provide training to tribal stakeholders on technological issues, specific legislative issues, and other AMP specific issues.
- Utilize tribal interns within GCMRC and AMP stakeholders to assist with project development, implementation and activities.
- Provide AMP with report of activities of this project and recommendations for future activities

MO's and IN's To Be Addressed : This project addresses current cultural resource management objectives and information needs (MO4, IN 4.1).

Project Time Line FY 2003:

Fall	Winter	Spring	Summer
Initiate efforts to recruit tribal interns Schedule workshops and trainings	Conduct workshops, trainings, utilize interns	Continue workshops, use of interns	Report write up to AMP

**PROJECT TITLE AND ID: V.C.12. CULTURAL DATA BASE
IMPLEMENTATION**

STATUS: Ongoing. Data Base Funding Approved and Implemented in FY 2002

ESTIMATED COST: \$20,000

DURATION: One year

Purpose: Cultural resource data currently exists in a number of locations, including federal and tribal databases. Consolidation of data under the Database Plan initiated in FY 2002 will assist the AMP in their assessment efforts for cultural resources.

This project implements the consolidation efforts that were initiated and recommended under the Database Plan developed during FY 2002. The overall objective of this project is to consolidate cultural data for utilization by the AMP while taking into consideration issues of data sensitivity and dissemination. The Database Plan contributes to a portion of the overall Historic Preservation Plan suite of documents and was a recommendation of the Cultural Resource PEP report.

Objectives:

- Implement database plan to consolidate cultural resource data
- Provide information on implementation methods and appropriate transfer of data.

Products:

- Workshops and meetings to discuss data base plan implementation
- Development of schedule to implement major components of data base plan
- Workshop to train cultural representatives on data base plan implementation and data transfer.
- Report to AMP on data and scheduled availability

MOs and INs To Be Addressed: This project addresses current cultural resource management objectives and information needs (MO4, IN4.1) and implements recommendations by the cultural PEP.

Project Time Line FY 2003:

Fall	Winter	Spring	Summer
Workshops on Database Implementation, timetables	Data transfer as per plan	Training workshops on data access etc.	September Report delivery to AMP

PROJECT TITLE AND ID: C. 13. CULTURAL RESOURCE SYNTHESIS AND STATUS REPORT

STATUS: New work for FY 2003

ESTIMATED COST: \$ 5,000

DURATION: One year

Purpose: A synthesis of the current status of socio - cultural resources is briefly presented in the annual SCORE report. Given the number of projects and efforts within the Tribal groups, NPS, Reclamation and GCMRC, this information needs to be consolidated and coordinated to provide current and comprehensive information for these resources. This project will incorporate data from these sources and provide a general synthetic report of the knowledge gained from these projects and integrated across resource areas. The report will be developed in-house by GCMRC through collaboration within AMP stakeholders.

Objectives:

- Coordinate data collected from stakeholder and GCMRC projects to provide up to date synthetic report on resources.
- Provide more comprehensive knowledge to the SCORE report.

Products:

- Conduct workshops at GCMRC to share and collaborate on data obtained from projects
- Provide an improved, more comprehensive socio-cultural component to the SCORE report.

MO's and IN's To Be Addressed : This project addresses current cultural resource management objectives and information needs (MO4, IN 4.1).

Project Time Line FY 2003:

Spring	Summer	Fall	Winter
Workshops to discuss existing project data	Data collection	Workshops Data compilation	Report write up

PROJECT TITLE AND ID: C.14. RECREATIONAL EFFECTS TO CULTURAL AND BIOLOGICAL RESOURCES

STATUS: New Work for FY 2003

ESTIMATED COST: \$ 20,000

DURATION: One Year

Purpose: Recreationalists enjoy the natural and cultural aspects of Glen and Grand Canyons and are attracted to these resources. These activities may impact cultural and traditional resources in negative ways. Examples of these activities include high visitation to cultural locations and areas containing traditional resources. This project proposes to study these potential impacts in a systematic manner to determine if these impacts are directly or indirectly related to dam operations. Project efforts need to be coordinated with NPS work efforts and plans.

Objectives:

- Identify potential recreational impacts within Glen and Grand Canyons to cultural and traditionally important sites
- Determine if impacts are related to dam operations
- Provide recommendations to mitigate impacts to these resources

Products:

- Data collection from existing and new sources
- Report to AMP identifying impacts and their sources
- Provide recommendations to the AMP to lessen or mitigate impacts as appropriate

MOs and INs To Be Addressed: This project addresses the current cultural resource management objectives and informational needs (MO 1, IN 1.1).

Project Time Line FY 2003:

Fall	Winter	Spring	Summer
RFP drafted and released (October 2002)	Project awarded, project scoping	Workshops, data collection	September Report delivery to AMP

PROJECT TITLE AND ID: C.1.b. LONG –TERM MONITORING OF FINE-GRAINED SEDIMENT STORAGE THROUGHOUT THE MAIN CHANNEL – Recreational Component – Monitoring Camping Beaches

STATUS: Ongoing

ESTIMATED COST: \$ 75,000

DURATION: One year

Purpose: Fine-grained deposits (sand and finer) of the main channel constitute a major storage component of the Colorado River ecosystem’s sediment budget. Glen Canyon Dam operations influence fine deposits in ways that affect aquatic and terrestrial habitats over both short and long periods. The emphasis of this long-term sediment monitoring project shall be to document system-wide changes in fine-grained deposits relative to dam operations and natural inputs, with emphasis on key storage settings within critical reaches.

Recreational Component: This component of the long-term sediment monitoring studies recreational camping beaches to determine if and how they are affected by flow releases. These beaches provide needed locations for recreationalists within the river corridor. Various flow regimes may affect the distribution, size, and availability of beaches.

Objectives:

- Record and monitor beach conditions and changes at selected beach locations within narrow and wide reaches throughout the river corridor.
- Provide an annual assessment of beach changes or stability to the AMP stakeholders and the NPS.
- Provide recommendations on the sources of beach change or stability and methodologies for assessing and monitoring beaches

Products:

- Data collection at specified beach locations on an annual basis
- Coordinate beach monitoring efforts with sandbar monitoring, river terraces and other sediment data
- Provide an annual report incorporating camping beaches within larger sediment storage reports.

MO’s and IN’s To Be Addressed : This project addresses current recreational cultural resource management objectives and information needs (MO 2, IN 2.1-2.3).

Project Time Line FY 2003:

Fall	Winter	Spring	Summer
Annual October monitoring trip	Data analysis	Data analysis & report write up	September report Delivery to AMP

PROJECT TITLE AND ID: D.1. PUBLIC OUTREACH/ INVOLVEMENT PLAN

STATUS: New work for FY 2003

ESTIMATED COST: \$ 20,000

DURATION: One year

Purpose: Dissemination of information collected within the GCMRC cultural resource program for the benefit of the Adaptive Management Program Stakeholders and the interested public. In conjunction with an ad hoc group of the AMWG and pursuant to Executive Orders relative to Tribal consultation, GCMRC is developing public outreach activities. To coordinate GCMRC's overall public outreach efforts and the public outreach efforts under Reclamation's Programmatic Agreement program, a public outreach/involvement plan is necessary. Issues concerning culturally sensitive data and dissemination processes will be discussed with Native American groups prior to project implementation. This project implements the recommendations of the Cultural Resource PEP to coordinate public outreach efforts by AMP stakeholders, including Native American representatives to disseminate information. This plan forms a portion of the overall Historic Preservation Plan suite of documents. Project is also funded by Reclamation.

Objectives:

- Develop a plan to guide and coordinate dissemination of cultural material
- Incorporate and address issues concerning culturally sensitive data and dissemination processes with Native American groups and other concerned parties
- Identify mechanisms for information dissemination and education.
- Provide for participation of the stakeholders in the dissemination process.

Products:

- Public outreach/involvement plan
- Identification of current outreach efforts and future mechanisms for information dissemination include presentations, workshop materials, and scoping efforts to expand dissemination efforts.

MO's and IN's To Be Addressed : This project addresses current cultural resource management objectives and information needs (MO1, IN1.1).

Project Time Line FY 2003:

Fall	Winter	Spring	Summer
RFP drafted and released (October 2002)	Project awarded	Workshops, project scoping, plan development	September Delivery of Plan