USGS/GCMRC Cultural Program Updates
TWG meeting 29 June 2010

Cultural Monitoring R&D Project: 2010 Project Status and Future Plans

After an extended delay due to NPS permitting concerns in FY2008 and FY2009, GCMRC resumed fieldwork on Phase I of the Cultural Monitoring R&D Project this year. In April, USGS staff from GCMRC and the Western Earth Surfaces Process (WESP) team in Menlo Park CA completed lidar surveys at six sites in the upper reaches of the canyon (AZ C:5:31, AZ:C:13:006, AZ C:13:99, AZ C:13:336, AZ C:13:321, and AZ C:13:009(B). The sites targeted for lidar mapping this year include several of the same sites previously evaluated for topographic change in 2006-2007; in addition, we are applying lidar at a some previously unmapped sites to expand the baseline dataset and explore the utility of lidar for mapping physical changes in archaeological structures, surface artifacts, and biological soil crusts – all important indicators of archaeological site stability and change. In September, 2010, we are planning to conduct a second trip, which will conclude field data collection for Phase I of this project.

Several reports will be forthcoming from this project in the months ahead. In the near future, another Open-File Report (OFR) documenting the 2009 weather data and extending our evaluation of effects of the 2008 HFE at select sites will be published (it is currently "in press" undergoing final formatting). Two chapters in the soon-to-be published Proceedings of the November 2008 "Coming Together" Science and Resource Management Symposium report on various aspects of the cultural monitoring R&D project. In addition, the virtual shoreline GIS analysis conducted by Sondossi and Fairley in 2009 will be published as an OFR by the end of this fiscal year. Other reports that will be forthcoming in FY2011 include an OFR on the results of the 2010 field (lidar) work, a journal article summarizing results of the geomorphic assessment study led by Pederson and Obrien in 2006-2007, and a synthesis of Phase I.

Phase II, which is scheduled to begin in spring of 2011, will initiate the pilot monitoring phase of this project. GCMRC has established a cooperative agreement with Dr. Francis Smiley of NAU to assist GCMRC with the selection of a stratified random sample of sites to be monitored during the pilot program. The sample will be stratified to ensure that it represents the full range of site types and geomorphic settings in the Colorado River ecosystem. The pilot program, which is anticipated to run for 3 years (FY2011-2013) will allow us to refine the sample that is optimal for characterizing ecosystem-wide site condition, given the diversity of site types and settings in the CRE, and to work out logistical issues related to monitoring a broader cross-section of archaeological sites located throughout the CRE.

Prior to initiating the pilot monitoring phase, GCMRC has committed to host a geomorphic workshop and a tribal monitoring integration workshop. The workshop to discuss integration of tribal, NPS and GCMRC cultural site monitoring programs is tentatively proposed for late fall or early winter, 2010. More specifics about this workshop will be forthcoming later in the year, after the CRAHG has had an opportunity to meet and discuss possible approaches and desired outcomes for this workshop.

The geomorphic modeling workshop is now scheduled for August 5-6, 2010. The location of the workshop is still to be determined but will most likely be either in Flagstaff or at Marble Canyon. This workshop will bring together a small group of geomorphologists, along with interested resource managers and stakeholders, to review and discuss the status of existing geomorphic data related to the Holocene deposits in the Colorado River corridor (the deposits in which most archaeological sites of interest to the AMP are situated) and to identify appropriate geomorphic models to help structure and inform the future monitoring program, as recommended by the Legacy Monitoring Data Review panel in their 2007 report to the TWG. Further details about the workshop, including a draft agenda and list of invited participants, will be forthcoming in the next few weeks. TWG members interested in attending the geomorphic workshop should email Helen Fairley (hfairley@usgs.gov) to get on the workshop mailing list.