Concerns/Recommendations by the CRAHG for the GCMRC FY08 Cultural Resources Budget

1) The group wants a schedule of reports for FY08 and future projects. As an example, the study of ground-based LiDAR; the group did not feel that GCMRC had provided updates or enough information to support the continuation of this program. It has been going on for two years, and there have been no reports or updates. The group would like some sort of decision matrix to determine whether or not the R&D project is working.

   GCMRC response: A schedule of deliverables for FY08 is attached at the end of this document. Please note that the LIDAR work was initiated in May 2006, therefore it has been underway for 18 months, not two years.

2) Prior to evaluating/approving the FY09 budget, the group would like reports and/or updates on all FY08 components of the budget.

   GCMRC response: GCMRC has agreed to provide updates on the work completed through winter 2008 at a spring TWG meeting (March or April, 2008, depending on whether we have a BHBF or not.)

3) The group would like contractors who are working on projects to give presentations/answer questions at a CRAHG meeting as part of the discussion for the FY09 budget.

   GCMRC response: Please see response to #2 above. It is anticipated that several aspects of the R&D work from Phase I of this project will be completed by spring of 2008, while other products will still be in draft form. Final reports will be provided for finalized products, while progress updates will be provided for project elements that are still in draft form. The established schedule of deliverables for work conducted in FY07 and FY08 will not permit presentation of final results by spring FY08 for all elements of the project.

4) The CRAHG could consider a hiatus for specific projects for FY09 if researchers are not making sufficient progress or the CRAHG doesn't have sufficient information to evaluate progress.

   GCMRC response: Fair enough, but GCMRC needs to have a clear understanding in advance of how "sufficient progress" and "sufficient information" is being defined by the CRAHG. At the present time, we are on track to deliver all products according to schedules specified in our current agreements with cooperating scientists.

5) For the FY09 budget, the group would like the proposals to include timeframes for deliverables that are more closely aligned with the budget/planning cycle.

GCMRC response: While we recognize the desirability of aligning deliverable schedules with the AMP budget planning cycle, the reality is that these schedules as currently structured are not very compatible. For example, we will be in the middle of conducting FY08 work when the FY09 budget is being developed, and the same will likely apply to deliverables schedule for FY09 work. What we can arrange in the future is a schedule that is similar to what we have in place right now, i.e., most of the products resulting from FY07 field season will be available when decisions are being made about the FY09 budget.

6) Native American perspectives need to be included in all projects, including outcomes that the tribes would like. One example that was discussed was the lack of Tribal consultation for the weather monitoring stations. It was requested that BOR should do this consultation for visual issues related to landscapes.

   GCMRC response: GCMRC has the lead responsibility for consulting with Tribes on projects that GCMRC has primary responsibility for implementing. In FY07, GCMRC spoke to each of the Tribal representatives on the TWG to express our interest in meeting with the Tribes individually to discuss issues of mutual concern; however, none of the Tribes got back to us with dates of their availability for a meeting. GCMRC also submitted a written request to the Hualapai Tribe to install a weather station on the left bank upstream of Granite Park, but received no response to that request; therefore, no weather station was installed at that location. GCMRC remains interested in and very open to consulting with Tribes regarding any and all AMP projects, however, we need to hear back from the Tribes when we request meetings or submit permit requests to in order to move forward.

7) There needs to be clear link between LiDAR and archaeology, e.g. how does LiDAR affect evaluations and assessments of archaeological site condition. In order to do this, archaeologists should work more closely with the geologists.

   GCMRC response: The individuals who are conducting the LIDAR work for the cultural monitoring R&D effort understand that most archaeological sites in the CRE are embedded within or situated on unconsolidated sedimentary deposits, many of which are deflating or eroding. They are testing the applicability of LIDAR as a tool for accurately measuring the amount of topographic change (gullying, deflation, inflation, etc.) occurring at a sample of archaeological sites. LIDAR can theoretically provide very accurate measurements of the amount of change. It will be up to the land managers to determine whether this amount and rate of change is acceptable. All of the LIDAR work has been conducted in the presence of and with the direct involvement of NPS and GCMRC archaeologists and in coordination with the work of USU geomorphologists, so the concern underlying the last part of this comment is not clear to us.

8) An issue was the new assistant position for Helen will not be a tribal liaison position. There were concerns over this since it had been identified as a need.

GCMRC response: The GCMRC Socio-Cultural Program Manager manages a program that is broadly concerned with monitoring and researching dam effects on archaeological sites, TCPs and other resource concerns of the affiliated Native American Tribes, as well as campsites, recreational experience qualities, and socioeconomic issues. The Sociocultural program requires an assistant who can provide support in all of these arenas, not just in the area of Native American relations. GCMRC recognizes that it would be desirable to have another individual on board who could focus more time and effort on Native American concerns specifically, and we are actively working with NPS, BOR and other Interior agencies to find the best way of addressing this need in the near future.

9) The group needs more information on exactly what researchers are doing. GCMRC should identify bridging mechanisms between the geologists, archaeologists, and Native Americans. Examples discussed included weather monitoring stations, LiDAR and gully erosion/check dam study. This would then be the basis for discussion between GCMRC and the CRAHG. GCMRC should identify hypotheses for each project which would help determine if the projects are successful. GCMRC will provide to CRAHG members the research proposal that was submitted to NPS.

GCMRC response: We fully understand the CRAHG's desire for more information about the work that is being conducted and are seeking appropriate mechanisms to provide additional information without compromising the independence of scientific endeavors in the process. As noted under Items 2 and 3 above, we are prepared to make presentations on available final products as well as updates on work in progress at a TWG meeting in spring, 2008. We are fully committed to the concept of a scientifically-integrated approach to developing the cultural monitoring program, which is fully in keeping with the interdisciplinary science theme of the Strategic Science Plan and MRP; in fact, several Science Advisors have previously commented on the cultural monitoring R&D project as a model example of how integrated science ought to occur in this program. The reference to the need to identify bridging mechanisms is unclear to us, because the R&D project is explicitly designed to bring several lines of data together from the disciplines of archaeology (archaeological values, concept of site integrity), geomorphology (geomorphic contexts and processes as they affect the physical stability of sites) and meteorology (role of climate and individual weather events in affecting site stability and rates of physical change) to develop a robust, ecosystem-based approach to future archaeological site monitoring in the CRE. We agree that hypothesis-driven research can be a useful mechanism for evaluating if projects are successful or not; however, in the case of the cultural monitoring R&D effort, a majority of effort during the first two years of this project have been focused on gathering baseline information about the archaeological sites, their inherent archaeological values, and their geomorphic setting and processes affecting them, as this information is needed to form the basic foundation for the development of future monitoring protocols: therefore, a

hypothesis-driven research design was not appropriate for most elements of the Phase I R&D efforts. As far as releasing the cultural monitoring R&D proposal, we are fully prepared to do so once the project has been officially permitted by the NPS (a permit specific to this project has not yet been issued by GRCA.)

Schedule of deliverables in FY08

Legacy Data Review Report: Completed. (Presentation to TWG scheduled for Dec. 5, 2007.)

NPS **Draft** Report on Archaeological Assessment Task and database: due December 15, 2007
NPS **Final** Report on Archaeological Assessment Task: due February 28, 2008

USU **Draft** Report on Geomorphic Assessment Task and database: due December 31, 2007
USU **Final** Report on Geomorphic Assessment Task: due March 31, 2008

USU **Draft** Report on Check Dam Effectiveness and Monitoring Implications: due March 31, 2008
USU **Final** Report on Check Dam Effectiveness and Monitoring Implications: due June 30, 2008

USGS **Draft** Report on Comparison of LiDAR vs. Total Station Surveys as a measurement tool: due December 15, 2007
USGS **Final** Open-File Report on Comparison of LiDAR vs. Total Station Surveys as a measurement tool: due March 31, 2008.

USGS **Draft** Open-file Report on LiDAR-based topographic change detection: due March 31, 2008
USGS **Final** OFR on LiDAR-based topographic change detection: due June 30, 2008.

USGS **Draft** Open-file Report on 2007 weather monitoring project and data: due March 31, 2008.
USGS **Final** Open-file Report on 2007 weather monitoring project and data: due March 31, 2008: final due June 30, 2008