To: David Lytle, Director, Southwest Biological Science Center Max Ethridge, Regional Director, Southwest Mark Sogge, Regional Director, Pacific Anne Kinsinger, Associate Director, Ecosystems

From: Jack Schmidt, Chief, Grand Canyon Monitoring and Research Center (GCMRC)

Re: GCMRC status report

Today is my last day as GCMRC Chief. I appreciate the opportunity to have served in this capacity since August 2011.

During that time, I have focused my attention on solidifying GCMRC's status within the USGS, repairing and strengthening GCMRC's working relationship with sister agencies and with stakeholders of the Glen Canyon Dam Adaptive Management Program (GCDAMP), and in helping with other science activities of the USGS and the Department of the Interior (DoI).

## 1) Solidifying GCMRC's position within the USGS.

Although only a research station within SBSC, GCMRC is somewhat unique in its easy access to that portion of the Colorado River Basin Fund that underwrites the GCDAMP. GCMRC receives ~80% of the annual funding for the GCDAMP. Thus, GCMRC only needs to develop work plans and obtain approval from various GCDAMP advisory boards to support its work; the effort to obtain these approvals in not inconsequential, but it is certainly easier than writing competitive NSF grants. The entire ~\$9 million annual budget of GCMRC is reimbursable funds. In an era of challenging access to research funds, GCMRC is in an enviable position to sustain important scientific work.

In August 2011, GCMRC staff was an uninspired scientific group whose activities were largely spent producing administrative planning documents and overseeing contract services of universities, cooperators, and contractors. Many folks outside of GCMRC referred to the station as, "They spend a lot of money, but I don't know what they do." In my job interviews, I argued that the proper role for GCMRC was to aspire to be a regional, or perhaps national, center for applied river science and adaptive management.

To move towards that goal, I used the FY2012/2013 Work Plan development cycle as the vehicle to create numerous post-doc positions within GCMRC, thereby increasing the station's productivity and intellectual energy. I

encouraged permanent employees to apply for RGE status, reorganized the station's organizational structure, and placed a high standard on peer-reviewed publication. These efforts gained stakeholder support, and GCMRC's FY13/14 Work Plan included a supplemental budget increase of ~15%.

My vision was that GCMRC could someday serve as the Science Center for the Colorado River Storage Project, addressing the applied science needs of the Bureau of Reclamation, National Park Service, and International Boundary and Water Commission. I sought to build alliances with sister agencies to support work beyond Grand Canyon, and I worked to convince the GCDAMP stakeholders to see our work beyond Grand Canyon as a positive effort to gain scientific context. I am proud that we were successful in gaining substantial outside funding from the National Park Service to establish new suspended sediment gaging stations in Colorado and Utah. This work also culminated in increased revenue to the Water Science Centers with whom we collaborate. I was not able to craft a larger scale reorganization of GCMRC within the USGS, but I am optimistic that the effort to achieve that goal will ultimately succeed.

## 2) Repairing and strengthening GCMRC's working relationship with sister agencies.

In 2011, many stakeholders, as well as staff of Reclamation, the Park Service, and the Western Area Power Administration were distrustful of GCMRC. In meetings that I had with agency leaders and stakeholders, I was told that, "We don't know what you do, we don't know how you spend money, and we don't know what you accomplish."

I reorganized our annual reporting of work and budget spending and received widespread thanks from Reclamation and stakeholders for this effort. We reorganized annual reporting meetings and earned praise from stakeholders. I worked hard to repair dysfunctional working relations with Grand Canyon National Park.

The FY15/16/17 Work Plan was described by the Science Advisor review team as the most comprehensive and informative ever produced by GCMRC. I am very proud that the FY13/14 and the FY15/16/17 Work Plans were both approved unanimously by the Adaptive Management Work Group of the GCDAMP, something that had not happened in many years. Today, the GCMRC is an organization trusted by stakeholders who expect to be led in identifying key science questions and approaches to managing the river.

## 3) Other science activities

Although only a station leader, I was expected to work directly with the Assistant Secretary for Water and Science and her staff. This was an expectation that I enjoyed, but one that sometimes caused tension within the structure of my other, more formal, USGS chain of command. I apologize for any missteps I may have made in doing my work, but it is difficult to serve many masters.

At the direction of the Assistant Secretary and at the invitation of the Environmental Defense Fund, I participated in a team who planned the 2014 Delta Pulse flow. The most challenging part of my work was to invent an approach by which I might convince my Survey colleagues to join in this effort. When I began that effort, I could not get any Science Center to help me, and I was routinely told, "There won't be any money, and we aren't in a position to help you." Yet the pressure to bring the Survey into the Pulse Flow process did not subside, and I devised a strategy wherein the Survey would take lead responsibility for science work in the Limitrophe segment of the river. I thereafter set about writing a Limitrophe-centric science plan that could be melded within the larger Delta science plan being developed by NGOs and academics. Once various other Science Centers joined the effort, my proposal was subsumed within a broader USGS program, but I am proud to have gotten this ball rolling.

Early in my professional career, I conducted my dissertation research as a USGS hydrologist working for the Arizona District of the Water Resources Division. In the 1980s and 1990s, I collaborated with some of the very best hydrologists, geomorphologists, and ecologists with whom I have ever worked, and most of these people worked for the Survey. My mentors in my own graduate education were Luna Leopold and Reds Wolman, members of the National Academy, transformative figures in their discipline, who themselves spent the majority of their career working for and with the Survey. Thus, I came to my GCMRC job steeped in the organization's traditions and committed to its mission.

It is now time for me to return to Utah State University. I think that I will be better positioned to continue to contribute to national and regional applied river science problems from that venue. I believe that GCMRC is stronger and is better positioned because of my efforts, and I am proud of my accomplishments. I wish I had done more and could have generated more fundamental change, but I have learned of my own limitations.

Thank you again for the opportunity that you provided me to serve the nation's interests as they relate to the Colorado River.