Issue from 2005 COV Report	2005 Response	2009 Update
The COV was concerned that there is a lack of uniformity in the review process across NSF. The COV was also concerned that when ad-hoc review was used as the only review mechanism, the review process lacked transparency.	The MRI program instituted a consistent panel review template to be used by all organizations across the Foundation that participate in the review of MRI proposals. The template included three review criteria: intellectual merit, broader impacts, and a management plan. The template requires a discussion of the proposal's strengths and weaknesses for the three criteria listed above and the rationale for panel's final recommendation. Program Director's (PD's) comments summarizing the decision were included in the feedback to the Principal Investigator (PI) in cases where: (i) there is no panel summary, (ii) the panel recommendation is overridden by the PD, or, (iii) the panel summary does not contain a sufficient level of detail. In addition, each PI receives a context statement describing the review process for the cognate division, the general MRI review procedures, and any other relevant information. A Foundation-wide evaluation of the quality of feedback to the PI and jacket documentation will be conducted by the end of FY 2006. The evaluation will involve representatives from all directorates/offices participating in the MRI program with the mandate to develop a set of guidelines for MRI proposal review, feedback to PI, and jacket documentation.	The MRI program is managed by an NSF-wide team which is chaired by OIA and is comprised of MRI technical coordinators f**rom** NSF directorates and offices that participate in the program. This team is responsible for providing input into the policies and procedures for the MRI merit review and post-award management processes, to promote comparable implementation across the individual NSF organizations. In 2007, OIA convened a group of the MRI technical coordinators (TC's) to conduct an internal evaluation of MRI jacket documentation from the FY 2006 competition. Technical coordinators examined a subset of 80 MRI proposals (17 awards; 63 declinations) to answer two questions: 1) Is the rationale for award/decline decision transparent from material in the jacket?, and 2) Is the rationale for award/decline decision transparent in information provided to the PI? Conclusions: there was quite a bit of variance in feedback to the PI, and in a few cases, review analyses were inadequate. Overall, the internal review was an educational experience for the participants as they were able to observe different practices and reflect on their own. In FY10, to improve review analyses' quality and consistency in approach, OIA will provide

		technical coordinators with examples of "best practice" review analyses to serve as a guide when for promoting greater transparency in the review process Prior to the submission deadline, the MRI program conducts an orientation for technical coordinators to discuss the latest solicitation, proposal reviews and the award/decline process. The program provides MRI-specific review guidance in the form of a letter when reviewers agree to serve,. Panels are provided an MRI-specific orientation in the form of PowerPoint slides when the panel convenes. Beginning in 2010 these slides will incorporate a discussion of implicit biases. The MRI program continues to use a consistent reviewer template during the review, and a uniform context statement describing the MRI review process is included for all MRI award/decline decisions.
The COV commented that there was disparity in how the broader impacts criterion is applied across the foundation.	The importance of the broader impacts criterion was emphasized by developing and deploying a reviewer/panel template that requires the reviewers to address *all MRI criteria* (intellectual merit, broader impacts, and management plan) and to list the strengths and weaknesses for each. The reviewers also now have the ability to click on each criterion for specific instructions. The program also began doing outreach to the research and education	The MRI program continues to emphasize the importance of broader impacts to program officers, reviewers and the community of PIs submitting proposals (as described in the 2005 response). During the "kickoff meeting", prior to a new competition, technical coordinators are reminded of the MRI review criteria, including a discussion of the broader impacts criteria. In particular, OIA stresses the importance of a diverse MRI

	communities on what is appropriate to include in an MRI proposal when addressing broader impacts. We added FAQs linked to the MRI solicitation to delineate the appropriate ways of addressing the broader impacts criterion.	award portfolio, which is enabled by serious consideration of the broader impacts. Information on broader impacts is highlighted in all outreach activities to research and education communities. Examples of regular outreach include: • NSF Regional Grants Conferences (2x per year) • Participation in a Quality Education for Minorities (QEM) workshop on writing MRI proposals • Participation in the Council on Undergraduate Research (CUR) Dialogues workshop discussing the MRI program • Participation in an annual workshop sponsored by the Independent Colleges Office (ICO) • Outreach (webcast) to the American Association of State Colleges and Universities (AAASCU) • Participation at the Society for Advancement of Chicanos and Native Americans in Science (SACNAS) annual meeting • Participation at the Joint Annual Meeting (JAM) of the NSF HRD Directorate Panelists are reminded of the various types of broader impacts during the panel orientation.
The COV suggested clarifying the expectations regarding what constitutes a good management plan and how management plans are reviewed.	The importance of the management plan and what is necessary to include in a management plan was emphasized in the FY 2006 competition by explicitly including management plan	The management plan continues to be a critical requirement of any MRI proposal, whether for acquisition or development. The management plan is evaluated as the third criterion in the reviewer and panel summary

	evaluation as the third criterion in the MRI reviewer/panel summary template. This template was also posted in the FAQs accompanying the MRI program solicitation. In addition, one of the FAQs specifically addresses what is required in a good management plan.	template, with reviewers being asked to comment on both the strengths and weaknesses of the proposed management plan. The requirement for and characteristics of the management plan are clearly stated in the MRI solicitation rather than in an FAQ due to the importance of this section of the proposal. Outreach activities that describe critical elements of an MRI proposal highlight the importance of the management plan.
The COV mentioned the need for transparency regarding the review of large proposals.	One of the new items in the FAQs linked to the program solicitation specifically addresses the process utilized for the review of large proposals.	The following information is provided in the MRI context statement to promote transparency: NSF Divisions/Offices are able to make awards to any highly-ranked proposal (large or small) from their allotted MRI funds. To ensure that the highest-recommended large proposals are supported, an internal committee consisting of program officers from all participating NSF units is convened. The committee draws upon the outcome of the panel merit review process to prioritize the allocation of MRI funds reserved for large proposals. This process ensures that the most meritorious large MRI awards are supported, and it ensures the best investment of NSF MRI funds.
The definition of a development	The issue of what is appropriate	There is now a comprehensive

proposal was not clearly spelled out.	for a development proposal is currently being discussed by the technical coordinators and NSF personnel involved in running similar instrumentation or infrastructure programs. It is anticipated that the FY 2007 solicitation will include a more explicit definition of ``instrument`` and ``instrument development.`.	discussion of what constitutes a development proposal in the program solicitation.
The COV recommended that the limit on the number of proposals be increased to one proposal/directorate/institution.	The suggestion to increase of number of proposals per organization was carefully considered by the Technical Coordinators and the NSF's senior management. Both groups recognize the need of some organizations and, more importantly, some areas of science to have more opportunities to submit instrumentation proposals. However, the general feeling is that this issue should be revisited only if the funding allocation to the MRI program allows considering a significantly larger number of proposals.	The proposal limits were reviewed and determined to be appropriate given current funding levels and proposal pressure.
The COV suggested increasing the cap on the requested amount, particularly for development proposals. The COV also suggested including the cost of operations and maintenance	The importance of support for operations and maintenance is recognized by the NSF staff. It is also recognized that the institutional commitment is crucial to ensure that the instruments be utilized in the best possible way for research, research training, and education. Since the eligible cost (of the MRI program) and the cost-sharing requirements were changed only a year ago, the impact of these changes has not been evaluated. Changing the current policy on operations and maintenance may be considered	In 2009, the award cap was $4M for the MRI program and $6M for MRI-$R^2$. The cap on requests for MRI is specified in the America COMPETES Act, and depends on the appropriated funding for the program. Operation and maintenance costs have been allowed since the FY2008 competition. Both acquisition and development proposals may request up to the maximum amount effective with the FY2009 competition.

	after the impact of these changes can be properly measured.	
The COV suggested that the program consider new mechanisms for acquiring information on impact.	The MRI Technical Coordinators are in the process of discussing the reporting requirements for the MRI program. As a first step, it is expected that the awards in FY 2006 will have specific requirements on what information is required for the annual and final reports.	The MRI program currently uses several mechanisms of outcomes assessment. An annual report template specific to MRI was developed after the 2005 COV and continues to be used. Since 2007, OIA annually solicits highlights from PIs to document the impact of MRI awards. The MRI program contracted with an external evaluation firm, SRI International, to conduct a feasibility study for an outcomes assessment. One of SRI International's recommendations was the use of a survey tool to conduct a field study of Principle Investigators. OIA plans to conduct a field survey in 2010 to assess near-term and long-term impacts of the MRI program.