CORE QUESTIONS and REPORT TEMPLATE
for
FY 2004 NSF COMMITTEE OF VISITOR (COV) REVIEWS

Guidance to NSF Staff: This document includes the FY 2004 set of Core Questions and the COV Report Template for use by NSF staff when preparing and conducting COVs during FY 2004. Specific guidance for NSF staff describing the COV review process is described in Subchapter 300-Committee of Visitors Reviews (NSF Manual 1, Section VIII) that can be obtained at http://www.inside.nsf.gov/od/gpra/.

NSF relies on the judgment of external experts to maintain high standards of program management, to provide advice for continuous improvement of NSF performance, and to ensure openness to the research and education community served by the Foundation. Committee of Visitor (COV) reviews provide NSF with external expert judgments in two areas: (1) assessments of the quality and integrity of program operations and program-level technical and managerial matters pertaining to proposal decisions; and (2) comments on how the outputs and outcomes generated by awardees have contributed to the attainment of NSF's mission and strategic outcome goals.

Many of the Core Questions are derived from NSF performance goals and apply to the portfolio of activities represented in the program(s) under review. The program(s) under review may include several subactivities as well as NSF-wide activities. The directorate or division may instruct the COV to provide answers addressing a cluster or group of programs – a portfolio of activities integrated as a whole – or to provide answers specific to the subactivities of the program, with the latter requiring more time but providing more detailed information.

The Division or Directorate may choose to add questions relevant to the activities under review. NSF staff should work with the COV members in advance of the meeting to provide them with the report template, organized background materials, and to identify questions/goals that apply to the program(s) under review.

Guidance to the COV: The COV report should provide a balanced assessment of NSF's performance in two primary areas: (A) the integrity and efficiency of the ***processes*** related to proposal review; and (B) the quality of the ***results*** of NSF's investments in the form of outputs and outcomes that appear over time. The COV also explores the relationships between award decisions and program/NSF-wide goals in order to determine the likelihood that the portfolio will lead to the desired results in the future. Discussions leading to answers for Part A of the Core Questions will require study of confidential material such as declined proposals and reviewer comments. *COV reports should not contain confidential material or specific information about declined proposals.* Discussions leading to answers for Part B of the Core Questions will involve study of non-confidential material such as results of NSF-funded projects. It is important to recognize that the reports generated by COVs are used in assessing agency progress in order to meet government-wide performance reporting requirements, and are made available to the public. Since material from COV reports is used in NSF performance reports, the COV report may be subject to an audit.

We encourage COV members to provide comments to NSF on how to improve in all areas, as well as suggestions for the COV process, format, and questions.

FY 2004 REPORT TEMPLATE FOR
NSF COMMITTEES OF VISITORS (COVs)

Date of COV   May 20-21, 2004
Program/Cluster: Rural Systemic Initiative
Division: Human Resource Development
Directorate: Education and Human Resources
Number of actions reviewed by COV[1]: Awards: 9   Declinations: 4   Other:
Total number of actions within Program/Cluster/Division during period being reviewed by COV[2]:   25   Awards: 15   Declinations: 10   Other:
Manner in which reviewed actions were selected: randomly selected by the COV

PART A.   INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES AND MANAGEMENT

Briefly discuss and provide comments for *each* relevant aspect of the program's review process and management. Comments should be based on a review of proposal actions (awards, declinations, and withdrawals) that were *completed within the past three fiscal years*. Provide comments for *each* program being reviewed and for those questions that are relevant to the program under review. Quantitative information may be required for some questions. Constructive comments noting areas in need of improvement are encouraged. Please do not take time to answer questions if they do not apply to the program.

A.1 Questions about the quality and effectiveness of the program's use of merit review procedures. Provide comments in the space below the question. Discuss areas of concern in the space provided.

QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCEDURES	YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE
Is the review mechanism appropriate? (panels, ad hoc reviews, site visits) Comments:	Yes
Is the review process efficient and effective? Comments:	Yes
Are reviews consistent with priorities and criteria stated in the program's solicitations, announcements, and guidelines? Comments: The COV found that unsolicited proposals had activities that were outside of the	Usually

scope of the program.	
Do the individual reviews (either mail or panel) provide sufficient information for the principal investigator(s) to understand the basis for the reviewer's recommendation? Comments: The quality of the information from many reviewers was very good. Their individual feedback was informative for both the awards accepted and the proposals declined. In a few cases the COV found the reviews to lack substance.	Yes
Do the panel summaries provide sufficient information for the principal investigator(s) to understand the basis for the panel recommendation? Comments: The panel summaries which were identified as panel summaries gave more than adequate documentation on the recommendation to the proposed PIs. The COV found a number of cases where the panel summaries were not clearly identified as panel summaries.	Yes
Is the documentation for recommendations complete, and does the program officer provide sufficient information and justification for her/his recommendation? Comments: The COV found insufficient documentation on one project that was not funded yet received fundable ratings. In one case a proposal was given a rating of poor which was not in alignment with the other ratings. Further investigation in to jacket revealed that the reviewer did not attend the panel review. There were no comments on staff discussions that determine final funding. The COV questioned as to whether these should be included in the review analyses in Form 7. .	No
Is the time to decision appropriate? Comments: In 2001, 23% took longer than 6 months to be funded. In discussions with the Program Director the COV was made aware that the issues with staff completion of duties which caused this high percentage have been rectified.	No
Discuss issues identified by the COV concerning the quality and effectiveness of the program's use of merit review procedures: The inconsistency in the depth and substance of the comments from some reviewers was of concern to the COV. The COV questioned whether this was considered when inviting reviewers for additional panels. In addition, the COV was concerned about the review process for unsolicited proposals.	

A.2 Questions concerning the implementation of the NSF Merit Review Criteria (intellectual merit and broader impacts) by reviewers and program officers. Provide comments in the space below the question. Discuss issues or concerns in the space provided.

IMPLEMENTATION OF NSF MERIT REVIEW CRITERIA	YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE
Have the individual reviews (either mail or panel) addressed whether the proposal contributes to both merit review criteria? Comments: The reviewers addressed the merit review criteria with various levels of expertise and quality.	Yes
Have the panel summary reviews addressed whether the proposal contributes to both merit review criteria? Comments:	Yes
Have the *review analyses* (Form 7s) addressed whether the proposal contributes to both merit review criteria? Comments: Elements of intellectual merit and broader impacts were addressed in the review analyses but were not necessarily highlighted. It is the understanding of the COV that current electronic formats of the review analyses require comments specific to each criteria.	Yes
Discuss any issues or concerns the COV has identified with respect to NSF's merit review system. None	

A.3 Questions concerning the selection of reviewers. Provide comments in the space below the question. Discuss areas of concern in the space provided.

SELECTION OF REVIEWERS	YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE
Did the program make use of an adequate number of reviewers for a balanced review? Comments: A minimum of 5 were solicited in panel reviews and a minimum of 3 in offsite reviews.	Yes
Did the program make use of reviewers having appropriate expertise and/or qualifications? Comments: Reviewers represented a variety of disciplines and expertise.	Yes
Did the program make appropriate use of reviewers to reflect balance among characteristics such as geography, type of institution, and underrepresented groups? Comments: The COV determined that in general the panels represented a variety of institutions, such as national organizations, colleges, universities, and public school systems. They represented a variety of disciplines and types of institutions. A balance between racial, ethnic and gender representation was not always apparent. In some cases, the COV was able to determine or knew what ethnic groups the panels represented. There was insufficient information to determine this for all panel members.	Yes
Did the program recognize and resolve conflicts of interest when appropriate? Comments: The management of a potential conflict of interest or bias in one jacket was handled in an appropriate manner. The COV felt that this was a good practice.	Yes
Discuss any concerns identified that are relevant to selection of reviewers. Because of the small pool of individuals for the RSI panels, the COV was concerned about the possible lack of bias and objectivity of reviewers.	

A.4 Questions concerning the resulting portfolio of awards under review. Provide comments in the space below the question. Discuss areas of concern in the space provided.

RESULTING PORTFOLIO OF AWARDS	APPROPRIATE, NOT APPROPRIATE, OR DATA NOT AVAILABLE
Overall quality of the research and/or education projects supported by the program. Comments:	Appropriate
Are awards appropriate in size and duration for the scope of the projects? Comments: There were many demands on the RSIs that are unable to be met in a five year plan. The achievement levels and educational needs of the populations served by RSIs and the demands of Systemic change takes more than 5 years.	Not appropriate
Does the program portfolio have an appropriate balance of: · High Risk Proposals? Comments: High risk proposals do not appear to be appropriate for this type of program.	Not appropriate
Does the program portfolio have an appropriate balance of: · Multidisciplinary Proposals? Comments: Each RSI had a focus on both mathematics and science.	Appropriate
Does the program portfolio have an appropriate balance of: · Innovative Proposals? Comments:	Appropriate
Does the program portfolio have an appropriate balance of: · Funding for centers, groups and awards to individuals? Comments: An RSI was awarded to a school or a consortium as appropriate.	Appropriate
Does the program portfolio have an appropriate balance of: · Awards to new investigators? Comments:	Appropriate

	Appropriate
Does the program portfolio have an appropriate balance of: · Geographical distribution of Principal Investigators? Comments: The 2001 awards were primarily funded to the Southwest and the High Plains. Further investigation revealed that prior awards were awarded in other areas.	
Does the program portfolio have an appropriate balance of: · Institutional types? Comments: Awards were granted to 5 tribal colleges, 1 college, 4 universities, 2 public schools, 2 educational organizations, and 1 consortium. The COV commends the division for funding this diverse collection of institutions.	Appropriate
Does the program portfolio have an appropriate balance of: · Projects that integrate research and education? Comments: The RFP for this program did not require research. Projects were based on the research of teaching and learning and contribute to the current knowledge base.	Not appropriate
Does the program portfolio have an appropriate balance: -——Across disciplines and subdisciplines of the activity and of emerging opportunities? Comments: Of the 13 projects reviewed all emphasized both mathematics and science achievement. One of the planning grants also focused on technology.	Appropriate
Does the program portfolio have appropriate participation of underrepresented groups? Comments on PIs who were awarded: 70% of the PIs were males. There was not sufficient information to determine the percentage of PIs who were American Indian, Hispanic, African American or White. Comments on groups being served by award: 50% of 2001 awards funded served the American Indian populations in either the Southwest or the High Plains areas. 30% served predominately white institutions. 17% served Hispanic institutions and 3% African American institutions. The COV expressed a concern that this may be biased to American Indians and that rural areas of the country containing diverse populations were not included in this program. A review of the prior COV report found that the RSI program portfolio of awards included more diversity than the 2001 awards. The COV is aware that there are other NSF programs that address these other populations but these do not serve the K-12 population. The COV was concerned about the message being sent by NSF related to	Not appropriate

meeting the needs of our diverse population.	
Is the program relevant to national priorities, agency mission, relevant fields and other customer needs? Include citations of relevant external reports. Comments:	Appropriate

Discuss any concerns identified that are relevant to the quality of the projects or the balance of the portfolio.

Concerns for funding of planning grants in final year of the RSI program. The COV had concerns about the impact of a one year of funds for planning for a program that was being eliminated. Review of one annual report and discussions with the program director caused the COV to determine that in fact the monies allocated for the planning grants had little or no impact. Time and effort on the PIs and program officers is an issue. There is also the issue of unfavorable image for NSF in funding planning grants that have no future.

A review of one project in Texas showed that the RSI had impacted the quality of master teachers while embedding the leadership in the rural areas. The supplement was successful but the COV noted that there were only 3 Hispanics out of 23 (leaders and mentors). The COV would like to ask: who is paying attention to the diversity issue?

A.5 Management of the program under review. Please comment on:

Management of the program.
Comments:
Program management has been very good.

There appeared to be a lack of stability in the management including permanent division director

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Responsiveness of the program to emerging research and education trends.
Comments:
The RSI required that projects base their work on current research.

Program planning and prioritization process (internal and external) that guided the development of the portfolio under review.
Comments:

It appeared that PIs on several successful proposals interacted with NSF program officers and other successful PIs in developing their proposals. In most cases, groups of key stakeholders in the region formed the core project management team.

Discuss any concerns identified that are relevant to the management of the program.
The COV notes but offers no solution to a complex challenge that is not unique to the RSI: Program management stability and the challenge to remain positive and optimistic when interacting with funded project leaders, knowing the project is terminating.

PART B. RESULTS :   OUTPUTS AND OUTCOMES OF NSF INVESTMENTS

NSF investments produce results that appear over time. The answers to the first three (People, Ideas and Tools) questions in this section are to be based on the COV's study of award results, which are direct and indirect accomplishments of projects supported by the program. These projects may be currently active or closed out during the previous three fiscal years. The COV review may also include consideration of significant impacts and advances that have developed since the previous COV review and are demonstrably linked to NSF investments, regardless of when the investments were made. Incremental progress made on results reported in prior fiscal years may also be considered.

The following questions are developed using the NSF outcome goals in the NSF Strategic Plan. The COV should look carefully at and comment on (1) noteworthy achievements of the year based on NSF awards; (2) the ways in which funded projects have collectively affected progress toward NSF's mission and strategic outcomes; and (3) expectations for future performance based on the current set of awards. NSF asks the COV to provide comments on the degree to which past investments in research and education have contributed to NSF's progress towards its annual strategic outcome goals and to its mission:
- ·   To promote the progress of science.
- ·   To advance national health, prosperity, and welfare.
- ·   To secure the national defense.
- ·   And for other purposes.

Excellence in managing NSF underpins all of the agency's activities. For the response to the Outcome Goal for Organizational Excellence, the COV should comment, where appropriate, on NSF providing an agile, innovative organization. Critical indicators in this area include (1) operation of a credible, efficient merit review system; (2) utilizing and sustaining broad access to new and emerging technologies for business application; (3) developing a diverse, capable, motivated staff that operates with efficiency and integrity; and (4) developing and using performance assessment tools and measures to provide an environment of continuous improvement in NSF's intellectual investments as well as its management effectiveness.

B. Please provide comments on the activity as it relates to NSF's Strategic Outcome Goals. Provide examples of outcomes (nuggets) as appropriate. Examples should reference the NSF award number, the Principal Investigator(s) names, and their institutions.

B.1 OUTCOME GOAL for PEOPLE: Developing "a diverse, competitive and globally engaged workforce of scientists, engineers, technologists and well-prepared citizens."

Comments:

Nugget
Each of the five cultural regions in Alaska employs a full-time Teacher Leader who is funded through the NSF project and the Alaska Department of Education. These master teachers participate in all planning activities associated with the RSI.

Nugget
The Ozark RSI (#0135145) professional development has impacted the region beyond the RSI scope. 106 non-RSI teachers from 19 other districts have used their own funds to attend workshops.

B.2 OUTCOME GOAL for IDEAS: Enabling "discovery across the frontier of science and engineering, connected to learning, innovation, and service to society."

Comments:

B.3 <u>OUTCOME GOAL for TOOLS:</u> Providing "broadly accessible, state-of-the-art S&E facilities, tools and other infrastructure that enable discovery, learning and innovation."

Comments:

Ozark using Lenses on Learning

B.4 <u>OUTCOME GOAL for ORGANIZATIONAL EXCELLENCE</u>: Providing "an agile, innovative organization that fulfills its mission through leadership in state-of-the-art business practices."

Comments:
Nugget:
The Ozark RSI (#0135145) has established a leadership team with administrator, key administrator, lead math and science teachers in each district.

The Ozark RSI (#0135145) has refined their project evaluation to be consistent with the logic model approach for performance measurement as recommended in the NSF's *The 2002 User-Friendly Handbook for Project Evaluation.*

PART C. OTHER TOPICS

C.1 Please comment on any program areas in need of improvement or gaps (if any) within program areas.

C.2 Please provide comments as appropriate on the program's performance in meeting program-specific goals and objectives that are not covered by the above questions.

C.3 Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.

C.4 Please provide comments on any other issues the COV feels are relevant.

 The COV was concerned about the elimination of the RSIs due to the lack of attention being paid to the rural areas. What programs are now in NSF to help meet the needs of the rural populations?

C.5 NSF would appreciate your comments on how to improve the COV review process, format and report template.

SIGNATURE BLOCK:

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For the [Replace with Name of COV]
[Name of Chair of COV]
Chair

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[1] To be provided by NSF staff.
[2] To be provided by NSF staff.