CORE QUESTIONS and REPORT TEMPLATE
for
FY 2005 NSF COMMITTEE OF VISITOR (COV) REVIEWS

Guidance to NSF Staff: This document includes the FY 2005 set of Core Questions and the COV Report Template for use by NSF staff when preparing and conducting COVs during FY 2005. 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 2005 REPORT TEMPLATE FOR
NSF COMMITTEES OF VISITORS (COVs)

Date of COV: June 7-8, 2005
Program/Cluster: ADVANCE Program
Division:
Directorate: SBE
Number of actions reviewed by COV[1]: Awards: 60 Declinations: 74 Other:
Total number of actions within Program/Cluster/Division during period being reviewed by COV[2]: Awards: 111 Declinations: 314 Other:
Manner in which reviewed actions were selected: **Dispersed among all three programs, haphazardly selected from within program**

Conflicts of interest:

Because some COV members had some prior experience with the ADVANCE program there were some cases where COV members had a conflict of interest with individual jackets. No COV member reviewed a jacket for an action where they served as a panelist, reviewer, or program officer. COV members were asked to excuse themselves from the room if a specific jacket where they had participated in the review process was brought up for discussion. The Chair of the COV, Pamela O'Neil, was a Program Director in the BIO directorate from 2001-2003 and participated in one round of the fellows competition. Jackets for the fellows competition were reviewed in a separate room and Dr. O'Neil did not review any of the Fellow's jackets. Dr. Cecilla Conrad led the general discussion of the fellows program and Dr. O'Neil participated in the general discussion. Dr. O'Neil was not present when any of the individual jackets that she had handled were discussed.

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.

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.

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

QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCEDURES	YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE[3]
1. Is the review mechanism appropriate? (panels, ad hoc reviews, site visits) Comments: Fellows feedback: The review process is inconsistent among directorates. Some directorates used panels and ad-hoc reviews while others used only ad-hoc reviews. The COV recommends consistency of forms for reviewing and thinks that panel review is preferable.	yes
2. Is the review process efficient and effective? Comments:	yes
3. Are reviews consistent with priorities and criteria stated in the program's solicitations, announcements, and guidelines? Comments: Some reviews talked only about intellectual merit, some only about ADVANCE goals. Suggestion: there should be a template that reviewers use to encourage them to address both criteria.	yes
4. 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:	yes
5. Do the panel summaries provide sufficient information for the principal investigator(s) to understand the basis for the panel recommendation? Comments: In general the panel summaries were sufficient. Occasionally a summary was too brief to provide a clear message to the principal investigator. Adding staff to the panels (i.e. science assistant) could solve this problem.	yes

[3] If "Not Applicable" please explain why in the "Comments" section.

6. Is the documentation for recommendations complete, and does the program officer provide sufficient information and justification for her/his recommendation? Comments: The Program Officer's review analyses were extraordinarily detailed and contained all the information relevant to understanding the decision process and the program recommendation. It was clear that a great deal of thought went into every decision.	yes
7. Is the time to decision appropriate? Comments: Yes, recognizing that cooperative agreements take more time to negotiate that other awards.	yes
8. Discuss any issues identified by the COV concerning the quality and effectiveness of the program's use of merit review procedures: no additional issues were identified.	

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[4]
1. Have the individual reviews (either mail or panel) addressed both merit review criteria? Comments:	yes
2. Have the panel summaries addressed both merit review criteria? Comments: yes for fellows, and no for leadership and IT. In some of the leadership and IT jackets we reviewed, the panel summaries did not address both review criteria. However, since that time a new panel summary template had been implemented to correct that problem.	yes/no
3. Have the *review analyses* (Form 7s) addressed both merit review criteria? Comments: The review analyses were very detailed and always addressed both criteria.	yes
4. Discuss any issues the COV has identified with respect to implementation of NSF's merit review criteria.	

[4] In "Not Applicable" please explain why in the "Comments" section.

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**[5]
1. Did the program make use of an adequate number of reviewers? Comments:	yes
2.Did the program make use of reviewers having appropriate expertise and/or qualifications? Comments: We applaud the fact that the review panels have included social scientists with expertise in gender issues and organizational design and encourage this practice to continue. We also think it's a good idea to continue to include people from the private sector.	yes
3. Did the program make appropriate use of reviewers to reflect balance among characteristics such as geography, type of institution, and underrepresented groups? Comments: We did not have sufficient data on underrepresented groups or type of institution to make a judgment because it is not provided by reviewers.	yes (geography), n/a for institution and population
4. Did the program recognize and resolve conflicts of interest when appropriate? Comments:	yes
5. Discuss any issues the COV has identified relevant to selection of reviewers. No issues identified.	

[5] If "Not Applicable" please explain why in the "Comments" section.

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[6], OR DATA NOT AVAILABLE
1. Overall quality of the research and/or education projects supported by the program. Comments:	appropriate
2. Are awards appropriate in size and duration for the scope of the projects? Comments:	appropriate
3. Does the program portfolio have an appropriate balance of: • High risk projects? Comments: Yes for all three programs we think there is an appropriate level of risk; these programs are probably riskier than most NSF programs but we feel that this is appropriate for such an innovative program.	appropriate
4. Does the program portfolio have an appropriate balance of: • Multidisciplinary projects? Comments:	appropriate
5. Does the program portfolio have an appropriate balance of: • Innovative projects? Comments: The program has an appropriate balance of innovative projects where we define innovation to include the introduction of new practices to an institution as well as the development of novel or uncommon approaches.	appropriate
6. Does the program portfolio have an appropriate balance of: • Funding for centers, groups and awards to individuals? Comments:	appropriate

[6] If "Not Appropriate" please explain why in the "Comments" section.

7. Does the program portfolio have an appropriate balance of: • Awards to new investigators? Comments: There was no specific data on whether recipients of Fellow awards were new investigators, but we assumed that the majority were.	appropriate
8. Does the program portfolio have an appropriate balance of: • Geographical distribution of Principal Investigators? Comments: Given the number of awards and size of the sample this is an appropriate distribution.	appropriate
9. Does the program portfolio have an appropriate balance of: Institutional types? Comments: Diverse institutions have received awards; the committee endorses this heterogeneity for the breadth of impact.	appropriate
10. Does the program portfolio have an appropriate balance of: • Projects that integrate research and education? Comments:	appropriate
11. Does the program portfolio have an appropriate balance: • Across disciplines and subdisciplines of the activity and of emerging opportunities? Comments:	appropriate
12. Does the program portfolio have appropriate participation of underrepresented groups? Comments: The ADVANCE program should consider increased focus on women faculty of color. The new program announcement for 2005 addressed this concern.	appropriate

13. Is the program relevant to national priorities, agency mission, relevant fields and other customer needs? Include citations of relevant external reports. Comments: NSF: Women, Minorities, and Persons With Disabilities in Science and Engineering: 2004 (NSF 04-317) ; PITAC (http://www.hpcc.gov/pitac/); MIT Report: (web.mit.edu/fnl/women/women.html); Cawmset (http://www.nsf.gov/od/cawmset); CPST (http://www.cpst.org/)	appropriate
14. Discuss any concerns relevant to the quality of the projects or the balance of the portfolio. We are concerned about the representation of women faculty of color across disciplines and institution types. We are also concerned about the large number of highly meritorious Institutional Transformation proposals that go unfunded. We support the shift in the leadership program from grants focused on individuals to broader projects. We endorse the new effort (PAID) to support dissemination of lessons from ADVANCE projects.	

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

1. Management of the program. Comments: The program manager has done an exceptional job. Examples include: thorough review process; detailed review analyses; negotiating cooperative agreements; comprehensive well written reports; strong leadership within the foundation; exceptional outreach to the university community; well organized effective site visits. The program is significantly understaffed, even by NSF standards. Managing a program with 3 different types of competitions, and this number of awards including cooperative agreements with site reviews of about 9 institutions per year requires more than one PO.
2. Responsiveness of the program to emerging research and education opportunities. Comments: The program is effective in recognizing the need for, and incorporation of, social scientists in the IT projects. We applaud the use of formative assessments at both the project and program level. We recognize that several projects had strong evaluation components and we encourage continued attention to this dimension in future awards.

3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.
Comments: The COV recognizes the collaborative effort to design the program using data from both inside NSF and external constituencies. Also positively noted: the continued development of the portfolio has been guided by the NSF Implementation Committee and feedback from the PI's.

4. Additional concerns relevant to the management of the program.

The COV recommends that NSF highlight case studies and quantitative data that show successes in advancing women in specific disciplines. This will provide AD's a mechanism to promote the success of ADVANCE.

The COV notes the organizational structure of the ADVANCE funding model has both strengths and weaknesses.
Strengths include:
* the participation of all directorates
* high profile within the foundation.
Weaknesses include:
* no line item for budget
* need for high management effort for administration.

The COV recognizes the need for a synthetic analysis of program outcomes -- we encourage NSF to consider ways to do this -- see suggestions in section C.

Understaffing to the degree seen in the ADVANCE program can result in loss of diversity in points of view, lack of program continuity, insufficient opportunities for outreach, and lost opportunities for external partnership/fundraising.

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:
The focus of the ADVANCE program is increasing gender diversity of the science and technology workforce, especially the academic workforce, so the entire portfolio provides examples of activities that relate to this outcome goal. Examples of the types of activities funded under this program include mentoring programs, studies of academic climate on specific campuses and within STEM disciplines, administrator training, recruitment training, data collection, and leadership development. The program has also provided support to re-establish research programs for individual scholars who have assumed leadership roles in furthering the careers of women. We offer a few examples to illustrate activities that reach underrepresented minorities, undergraduate and high school students.

Award # 0123681 - ADVANCE Leadership Grant
The PI is a mathematics professor at an HBCU and is a co-founder of the EDGE program in mathematics. Approximately half of EDGE participants are women of color. She has used her award to disseminate findings regarding issues related to women in graduate programs in mathematics. This effort has led to the creation of two new transition programs for graduate students in the biological science and in mathematics.

Award # 011238 - ADVANCE IT
The ADVANCE program at the University of Puerto Rico at Humacao has promoted awareness within the university community of the gender inequalities that exist in academia and their effect on limiting participation and advancement of women in academic science and engineering. This program is noteworthy because it disproportionately affects women of color. All of the PI's and CO-PIs and most of the faculty at this University are Latina. Additionally, women make up the majority of the undergraduate population - 67% of the undergraduates in the sciences are female (70% in biology and social sciences; 67% of chemistry; 46% in math; and 30 % in physics). In the four years prior to ADVANCE, 18% of the tenure promotions in science were to women. In the same period after ADVANCE, 53% of the tenure promotions in science were to women.

Award # 011239 - ADVANCE IT
The ADVANCE program at New Mexico State has had a significant impact on minority women. The program has done an exceptional job of partnering with other equity programs such as NMSU Women's Studies, New Mexico Alliance for Minority Participation, The Hispanic Faculty/Caucus, Equity Office, and The President's Commission on the Status of Women. The advance award to NMSU has had a significant impact on faculty development. The advance faculty advancement and research travel grants were essential to the development of women scholars. Faculty used the funds to improve their teaching. The program

provided support for broad based institutional training. Advance funds were used to launch the NMSU Teaching academy.

Award # 0137629 - ADVANCE Fellows
The PI, a minority woman scholar, had been out of the full time science workforce for several years to attend to family responsibilities. As a result of this award, she was able to obtain an academic appointment as a Research Assistant Professor in the Department of Tropical Medicine at Tulane University and to establish an independent research program. In addition, her project has given six undergraduate students the opportunity to conduct research in the laboratory. This group included 3 women and two students from an HBCU. The PI has maintained close ties to a local New Orleans high school and has served as a mentor to high school students from underrepresented minority groups

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

Comments: The ADVANCE program has generated a large number of innovative ideas to increase the number of women in science and to improve their environment. Established ideas were also applied for the first time in new settings and/or to the specific situation of women in science. Below we describe some of the best ideas from the ADVANCE Institutional Transformation and Leadership awards; Fellows awards may well have generated innovative ideas but were too extensive and diverse for us to evaluate usefully.

Hiring

- Training search committees in gender equity issues and best practices (U Wash, UM, UCI)
- Additional start-up money for female hires (U Texas El Paso)
-

Training for Department Chairs and Administrators

- Theater group to develop awareness of barriers faced by women and under-represented minorities through realistic reenactment of typical faculty events, like hiring, mentoring, tenure (UM)
- Development of case studies to illustrate situation for women and under-represented minorities in science.
- Training for department chairs to think about developing leadership among their women faculty (UPRH)
- Online tutorial about gender equity issues (Hunter College)
- Gender equity training for departments on the tenure and promotion process (Georgia Tech)

Mentoring

- Intensive mentoring to restart research careers that are stalled or vulnerable due to spousal move, extended absence, or other family circumstances (Hunter College, Fellows program)
- Training of mentors (URI)
- Eminent scholars mentoring program (UMBC, Hunter)

Development of Women Faculty

- Creating a community of women scholars, breaking down isolation (U Col, UCI, U Wash)
- Training in communication skills, conflict resolution, psycho-social power issues, negotiation skills, leadership skills (U Wash, U Oregon-Leadership[CoaCH], Utah State, Columbia, UCI)
- Step-by-step guide to the publishing process for scientists, disseminated via CD (Auburn-Leadership)

Research support

- Grants to women scholars (Hunter, Virginia Tech, NMSU)
- Endowed ADVANCE chairs (Georgia Tech, UCI, Virginia Tech)

Family-friendly policies and initiatives (Georgia Tech, U Wash, U Wisc, Columbia, UAB, UM)

- Daycare facilities
- Delayed tenure clocks
- Modified duties for family-related issues
- Lactation facilities
- Travel support for childcare or other family-related costs when travel is work related
- Research support during family life transitions
- Dual career hiring policies and funds

Structure of faculty positions

- Part-time tenure positions (U Wash)
- Conversion of research staff to tenure-track positions (UAB, U Wisc)
- Transition to tenure track with 1-3 year fellowships to women research faculty (URI)

Special Initiatives

- Distinguished visitors/visitor professors (NMSU, Columbia, CWRU)
- Departmental grants to engage faculty at the grass roots (Utah State, UM, Hunter, U Wash)
- Participation of tribal college and tribal women in science in local "talking circles" and annual workshops (U Montana)
- Integration of women's studies into Engineering (NC State-Leadership)
- Create organization for women in specific disciplines (e.g., Cognitive Science, Rice U - Leadership)

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:
The ADVANCE program promises to provide tools for colleges and universities to use to recruit and retain women faculty members; effective practices that can be implemented in a wide range of academic settings. The Institutional Transformation program is designed to provide demonstration projects for the development, and refinement, of these tools. The proposals typically sketch a set of social and human resources management tools, broadly defined. The evaluation component of the program, and particularly the collection of consistent data across sites, is allowing for assessment of these particular tools.

The various IT programs have developed a series of different sorts of tools. On the issue of recruitment and retention, the University of Michigan program (ADVANCE 0123571) has a campus-wide committee that meets regularly to look at
policies and practices that need to be improved. Rather than a one-size-fits-all program, this committee looks at department- and campus-specific changes that could be made. Michigan also has developed a program of awards and public recognition for women scientists and engineers, elevating their visibility on campus. The University of Washington at Seattle's (ADVANCE 0123552) LIFT program offers training for graduate students
and faculty on soft skills: conflict resolution, politics, power issues. They have also developed a series of recruitment and retention tool kits designed for use by other campuses. These kits offer specific tools for campuses interested in learning from the experiences of first-mover institutions. They cover policies, procedures, programs, benefits, and resource lists that are fully transportable to other settings. The University of California at Irvine (ADVANCE 0123682) has implemented exit interviews for faculty who are leaving,
modeled on the exit interviews that corporations use to understand why people leave and to inform institutional change. UCI, and several other programs, have implemented faculty salary inequity surveys. This tool appears to have spread widely among the IT programs. The committee was particularly impressed
by UCI's fundraising program, which offers the private sector an opportunity to partner with the university, as financial sponsors of chairs in the sciences, workshops, and other initiatives. Given that NSF ADVANCE IT awards are limited to five years, our hope is that this program would spread to other places. Georgia Tech (ADVANCE 0123532) has web-based computer

simulations designed for use by other schools that address 1) evaluating promotion and tenure of women, and 2) planning academic careers.

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

Comments:
The ADVANCE program meets this goal by addressing each of four critical management objectives.

(1) Merit review - The merit review process addresses both fundamental NSF criteria (intellectual merit and broader impact). Panel summary templates have now been modified to include both criteria explicitly. Panels included at least three reviewers who discussed proposals and developed a consensus recommendation. The review process for Institutional Transformation awards also includes site visits, which provide the Program Director with additional important feedback.
(2) Technology - Current proposal files are well documented and well organized. The implementation of electronic jacket processing should streamline and increase efficiency in extracting information.
(3) Staff - There is only one program director and one support staff person. The current staff members are highly capable and extremely motivated. However, due to the small size of the staff it is not clear how best to support, retain and develop these staff members within the existing program.
(4) Assessment - NSF has created a chain of feedback mechanisms by which the Foundation ensures that it is meeting its organizational excellence goals. This feedback chain includes assessment information provided through templates at both the individual project level and program level. Appropriate templates are completed by PI's and COV's for use by the Advisory Board and reported to Congress. These reports are made available to the public through websites of participating institutions, written reports generated by the NSF Directorates and Advisory Board and through annual reports by the Foundation.

PART C. OTHER TOPICS

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

- We recommend that funding Fellows grants should be done by the core programs in the individual directorates (see C.4) and that the funds previously allocated to fellows should be used to fund additional IT or PAID proposals.
- Dissemination is a widely noted gap. However, the new PAID program will ameliorate this problem by providing a mechanism for funding dissemination and synthesis. This will have the affect of leveraging existing ADVANACE grants to larger audiences. Also, PAID offers additional funding to awardees that are doing important ongoing work since there is no current renewal program for IT awards. This is preferable to a renewal for multiple reasons (such as keeping the pressure on schools to make changes within the specified time frame of the original award).

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.

- Synthetic analysis/meta-analysis of the broad sweep of outcomes, much like the IWTF program would be beneficial. This should be integrated with other existing knowledge about these issues and posted on the website. While this is not done in other disciplines, the people applying for pure S+E grants are already domain experts, while S+E professionals applying for ADVANCE may not be social science experts and thus need to understand the corpus of existing research/data.
- A longer term evaluation of at least a subset of programs would be informative - this may be above/beyond the scope of PAID or existing evaluation supplements. This is essential to show the long term impact (on schools, on professional societies, etc).

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

- Leadership from Joe Bordogna has been stellar; however, we are concerned about the continuity of the program in both funding and mindshare for the foreseeable future. Both academia and industry encourage and look forward to sustained or increased commitment from senior management/SMIG for this flagship program.

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

Institutional Transformation Program:

IT grants are the best hope for making major changes in Science and Engineering cultures and practices that will ultimately increase the participation of women in these areas. We would like to note that this positive change in climate and culture will have the effect of increasing the number of Americans (both male and female) who decide to pursue careers in Science or Engineering. This is neither a program for women only, nor for science only -- this is a program that transforms an institution for the betterment of all. The impact has positively affected even schools that are not part of the program, as they see how ADVANCE galvanizes universities around the issues of gender equity and advancement. The COV has seen tremendous change for the positive in awarded institutions, as reflected in section B. The COV feels that the IT awards are extremely important for the following reasons:
1] Preliminary findings from site visits and progress reports suggest that there are increases in recruitment and retention, including tenure, of women faculty.
2] The program has created a culture of data collection and evaluation and heightened general consciousness about academic climate within institutions.
3] Program has the potential for affecting more individuals per dollar spent than awards to individuals.
4] Program has spillover effects to institutions without awards. Example: A news story in the Chronicle of Higher Education indicated that Harvard was studying the Advance program at the University of Wisconsin as a model.
5] A diversity of institutions and programs provides an opportunity to add to our knowledge base about what works and what doesn't across the breadth of academia, including those institutions that employ and educate the largest numbers of women.
6] This program advances the goal of increasing the number of US students going into science both by increasing the number of women and by improving the environment and making science more attractive for all students.
7] There is a great leveraging effect. The investment by the Advance IT institutions goes beyond the historical cost sharing requirements as institutions extend the successful program components to departments and units outside the STEM fields.

We concur with the decision by the Advance program to not fund renewals for IT proposals. Institutions should be expected to find the funds to continue programs past the 5th year. If renewal proposals were considered it would put pressure on PIs to seek additional NSF funding and they would not be able to obtain commitments from their administrators to institutionalize programs.

Advance Fellows Program:

Although we recognize the value of this program to the individual grantees who have received awards, the program is oversubscribed and does not deliver the multidisciplinary, "bang for the buck" broad benefit of the other ADVANCE programs. Moreover, these are research proposals that should be reviewed in research programs. Recommendation: Proposals from PIs in situations like the Advance fellows applicants should be funded by the core programs within the individual directorates through modifications to the existing grant programs -- e.g. program officers need to demonstrate a willingness to fund salary (need program manager training to discuss broader impact of career disruption events – This could be done in "boot camp" as a case study); coding jackets so that the broader impact of keeping a woman in Science and Engineering is noted; publicize this opportunity outside of NSF. This approach would also prevent these awards from being undervalued because they are given by a program that is targeted at women.

PAID Program

We are very excited about the new PAID (Partnerships for Adaptation, Implementation, and Dissemination) component in the new program solicitation. In particular, we're very enthusiastic about the opportunity for disseminating some of the successful practices developed in the Institutional Transformation and Leadership projects. This will allow the demonstration of how practices can be applied at different institutions without having to reinvent the entire process. Collaboration will also be a positive means for effecting change at institutions that may not be able to mount an entire institutional transformation effort. We also hope there will be an opportunity for synthesizing some of the results across different institutional projects (meta-analysis); this could be a vehicle for doing that.

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

- The contractor hired to support the COV provided COV members with the wrong dates for the COV, resulting in two COV members arriving a day early.
- The science writer provided by the contractor was not qualified for this task and not helpful.
- The template was fine.
- The COV would have preferred to receive more material upfront. The second binder would have been great to have had prior to arriving at NSF. Even though we were told there would be no work ahead of time, we would have been happy to have pre-loaded the work/reading.
- There were not enough nuggets.
- The briefing was too long at the start of the COV.

- It was extremely helpful to have a past NSF PO on the COV to provide background on Advance history and process.
- It would have been helpful if the tables in the binder had been numbered.
- There was insufficient info in binder relative to Fellows.

SIGNATURE BLOCK:

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For the ADVANCE 2005 COV
Pamela O'Neil
Chair

The following is the description of the ADVANCE COV demographics and COI issues.

The cross-Foundation ADVANCE Program held its COV meetings in June 2005. The list of members is attached. Here is relevant information about the composition of the COV and procedures to resolve conflicts.

ADVANCE Committee of Visitors members were chosen to provide a variety of disciplinary and institutional perspectives with as few conflicts of interest as possible with ADVANCE awardee institutions. The COV included representatives of both public and private institutions as well as private industry and academic associations. The Co-Chair of the COV is a member of the SBE Advisory Committee.

Gender: 7 Women, 3 Men
Geographic Distribution: 4 Northeast, 1 Mid-Atlantic, 1 South, 1 Midwest, 3 West
Minority Representation: 2 URM
Institutions: 3 Public, 5 Private, 1 Industry, 1 Non-Profit
Recent NSF Awardees: 6
Number With No NSF Support in Past Five Years: 4

The introductory session at the COV meeting included a conflicts briefing and review of confidentiality requirements. None attending had pending proposals to the ADVANCE Program during the period of time they were appointed and completed their assignments for the COV. The procedure for random selection of declinations and awards to be reviewed set aside proposals on which COV members were principal investigators. Because some COV members had prior experience with the ADVANCE program there were some cases where COV members had a conflict of interest with individual jackets. No COV member reviewed a jacket for an action where they served as a panelist, reviewer, or program officer. COV members were asked to excuse themselves from the room if a specific jacket where they had participated in the review process was brought up for discussion.

The Chair of the COV, Pamela O'Neil, was a Program Director in the BIO directorate from 2001-2003 and participated in one round of the Fellows competition. Jackets for the Fellows competition were reviewed in a separate room and Dr. O'Neil did not review any of the Fellow's jackets. Dr. Cecilia Conrad led the general discussion of the Fellows

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NATIONAL SCIENCE FOUNDATION

ADVANCE: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers
Room 1060

Committee of Visitors Review
June 7-8, 2005

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MEMORANDUM

To: Office of the Assistant Director, SBE

From: Program Director for ADVANCE

Subject: Demographics of the ADVANCE COV

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Alice Hogan