

**AGEP FINAL REPORT  
For  
FY 2010 NSF COMMITTEE OF VISITOR (COV) REVIEWS**

**Guidance to NSF Staff:** This document includes the FY 2010 Committee of Visitors Final Report of the AGEP Program. The COV followed the specific guidance for the COV review process as described in Subchapter 300-Committee of Visitors Reviews (NSF Manual 1, Section VIII) at: [www.inside.nsf.gov/od/oia/cov](http://www.inside.nsf.gov/od/oia/cov).

The COV report provides 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 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. The COV studied confidential material for Part A of the Core Questions such as declined proposals and reviewer comments. The *COV report does not contain confidential material or specific information about declined proposals*. Discussions leading to answers for Part B of the Core Questions involved the study of non-confidential material such as results of NSF-funded projects. The report is useful in assessing agency progress in order to meet government-wide performance reporting requirements that are available to the public. We understand that material from COV reports may appear in NSF performance reports and may be subject to an audit.

**FY 2010 NSF COMMITTEES OF VISITORS (COVs)  
REPORT FOR AGEP**

The table below will be completed by program staff.

<b>Date of COV:</b> August 31 – September 2, 2010.		
<b>Program/Cluster/Section:</b> AGEP		
<b>Division:</b> Human Resource Development		
<b>Directorate:</b> Education and Human Resources		
<b>Number of actions reviewed:</b>		
<b>Awards:</b> 10	<b>Declinations:</b> 0	<b>Other: Withdrawals (13)</b>
<b>Total number of actions within Program/Cluster/Division during period under review:</b>		
<b>Awards:</b> 50	<b>Declinations:</b> 0	<b>Other: Withdrawals (32)</b>
<b>Manner in which reviewed actions were selected:</b>		
Random sample of award and non-award actions ending in the numerals "3", "5" and "8" at end or second from end of award/decline identification number. The sample includes new, incremental and supplemental actions other than this methodology to form a representative sample of the portfolio.		
<i>Note: The AGEP Program solicited no alliance proposals in FY2007-2009. Award actions consisted of incremental funding to existing alliances and evaluation activities. Actions coded as declinations during the period were actually withdrawn proposals.</i>		



**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 process.** Provide comments in the space below the question. Discuss areas of concern in the space provided.

<p><b>QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCESS</b></p>	<p><b>YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE<sup>1</sup></b></p>
<p>1. Are the review methods (for example, panel, ad hoc, site visits) appropriate?</p> <p><b>Comments:</b></p> <p>There were no solicitations for FY 2007, 2008, or 2009; the reviews examined are from the FY 2006 solicitation.</p> <p>The panel reviews were well conducted; the panel did an excellent job at summarizing and then determining if criteria were met. The panelists were outstanding scholars and had tremendous sensitivity to AGEP goals. In general, reviewers had a good grasp of proposals. In contrast to the panel reviews, some ad hoc reviews lacked clarity, lacked substance, and did not address all merit criteria. The COV suggests that poor ad hoc reviewers should not be asked to review additional proposals. Lastly, there was no evidence of site visits.</p>	<p><b>YES</b></p>
<p>2. Are both merit review criteria addressed</p> <p>a) In individual reviews?</p> <p>b) In panel summaries?</p> <p>c) In Program Officer review analyses?</p>	<p><b>YES</b></p>

<sup>1</sup> If “Not Applicable,” please explain why in the “Comments” section.

<p><b>Comments:</b></p> <p>Individual reviews should address all merit review criteria and ad hoc reviewers need better instructions. The intellectual merit criterion should address the research contributions of Ph.D. students in addition to best education and training practices. AGEP should generate more scholarly work on best practices utilized by the projects to inform future proposals and programs.</p>	
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<p>3. Do the individual reviewers provide substantive comments to explain their assessment of the proposals?</p> <p><b>Comments:</b></p> <p>Explanations vary greatly; some reviewers are more thorough than others.</p>	<p><b>YES</b></p>
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<p>4. Do the panel summaries provide the rationale for the panel consensus (or reasons consensus was not reached)?</p> <p><b>Comments:</b></p> <p>The panel reviews were quite insightful and panelists did a good job of summarizing their evaluations and justifying their recommendations.</p>	<p><b>YES</b></p>
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<p>5. Does the documentation in the jacket provide the rationale for the award/decline decision?</p> <p>(Note: Documentation in jacket usually includes context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), program officer review analysis, and staff diary notes.)</p> <p><b>Comments:</b></p> <p>Without reviewing any declinations, it is not possible to fully assess the rationale of decisions. However, the COV was notified that there were no declined proposals to examine.</p> <p>Moreover, the rationale for awarding some proposals was not substantiated by the information in the jackets. In one case discussed, the proposal was poorly written, but was probably funded due to the past accomplishments of the PI.</p> <p>The jacket files were not well organized and overall, were poorly assembled. There were many technical difficulties in performing this review; all members of the COV had <b>great</b> technical difficulties accessing the eJackets. Some members of the COV were not able to open the “.docx” documents. Perhaps PDF files could be used in the future to avoid compatibility issues. For the AGEP COV, every step of the way was excruciatingly painful and time wasting.</p>	<p><b>YES</b></p>
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<p>It seems that AGEF was the only sub-panel with such difficulties.</p> <p>More staff time is necessary to make the technology and the jackets more accessible to the members of each COV sub-panel.</p>	
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<p>6. Does the documentation to PI provide the rationale for the award/decline decision?</p> <p>(Note: Documentation to PI usually includes context statement, individual reviews, panel summary (if applicable), site visit reports (if applicable), and, if not otherwise provided in the panel summary, an explanation from the program officer (written or telephoned with diary note in jacket) of the basis for a declination.)</p> <p>Comments: Without reviewing any declinations, it is not possible to determine if a declined PI was appropriately notified. However, for the awardees, the information appeared to be adequate.</p>	<p><b>DATA NOT AVAILABLE</b></p>
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<p>7. Is the time to decision appropriate?</p> <p>Note: Time to Decision --NSF Annual Performance Goal: <b>For 70 percent of proposals, inform applicants about funding decisions within six months of proposal receipt or deadline or target date, whichever is later.</b> The date of Division Director concurrence is used in determining the time to decision. Once the Division Director concurs, applicants may be informed that their proposals have been declined or recommended for funding. The NSF-wide goal of 70 percent recognizes that the time to decision is appropriately greater than six months for some programs or some individual proposals.</p> <p><b>Comments:</b></p> <p>The goal was met or exceeded.</p>	<p><b>YES</b></p>
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<p>8. Additional comments on the quality and effectiveness of the program's use of merit review process:</p> <p>Some programs were funded despite serious deficiencies identified by the panel and individual reviewers regarding limitations in their proposals. These limitations included some proposals that did not address all of the elements of the RFP. These programs were funded in spite of lack of evidence of program institutionalization in their respective universities.</p> <p>Records have not been updated to reflect the status of proposals submitted for a non-funded competition in 2008. The proposals listed as 2008 declines were actually withdrawals; they are currently coded incorrectly, and error that should be corrected.</p>	
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**A.2 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 <sup>2</sup>
<p>1. Did the program make use of reviewers having appropriate expertise and/or qualifications?</p> <p><b>Comments:</b></p> <p>In most instances, reviewers had appropriate expertise.</p>	<p><b>YES</b></p>
<p>2. Did the program use reviewers balanced with respect to characteristics such as geography, type of institution, and underrepresented groups?</p> <p>Note: Demographic data is self reported, with only about 25% of reviewers reporting this information.</p> <p><b>Comments:</b></p> <p>In this COV's very small sample, the geographic representation was highly limited; the East coast specifically was over-represented. Overall, other reviewer characteristics were well balanced.</p>	<p><b>YES</b></p>
<p>3. Did the program recognize and resolve conflicts of interest when appropriate?</p> <p><b>Comments:</b></p> <p>In this COV's very small sample, no COIs were reported during this period.</p>	<p><b>DATA NOT AVAILABLE</b></p>

<sup>2</sup> If "Not Applicable," please explain why in the "Comments" section.

4. Additional comments on reviewer selection:

AGEP needs to strive for better geographic distribution among reviewers. There should be a higher URM percentage among reviewers.

**A.3 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 <sup>3</sup> , OR DATA NOT AVAILABLE
<p>1. Overall quality of the research and/or education projects supported by the program.</p> <p><b>Comments:</b></p> <p>Most were appropriate but at least one of the projects was rather narrow in scope and did not encourage much flexibility for students after graduation.</p>	<p><b>APPROPRIATE</b></p>
<p>2. Does the program portfolio promote the integration of research and education?</p> <p><b>Comments:</b></p> <p>In some instances there was considerable integration of research and education, but at other times little integration was evident. With regard to the intellectual merit criterion, there is not enough emphasis placed on the research produced by students in advancing their field of research.</p>	<p><b>YES</b></p>
<p>3. Are awards appropriate in size and duration for the scope of the projects?</p> <p><b>Comments:</b></p> <p>Virtually no new awards were funded during this period because of lack of additional funding. The money was “pre-spent.” A number of proposals were withdrawn because of the lack of funding (and lack of notification of the lack of funding) during this period. (The 2006 AGEPE solicitation was not withdrawn in a timely manner.) Given these constraints, it is difficult to judge the appropriate size/duration for the projects.</p>	<p><b>NOT APPROPRIATE</b></p>

<sup>3</sup> If “Not Appropriate,” please explain why in the “Comments” section.

<p>4. Does the program portfolio have an appropriate balance of:</p> <ul style="list-style-type: none"> <li>• Innovative/potentially transformative projects?</li> </ul> <p><b>Comments:</b></p> <p>Most ideas presented were generally not new and/or creative. Moreover the most highly creative proposal observed by the COV members received mixed ratings.</p> <p>It is difficult to identify transformative works over a short period of time. There were very few evaluations of the projects so it is difficult to discern their effectiveness with respect to innovation and transformative activities. NSF should address the problem of reviewers not being able to properly acknowledge and review favorably proposals that are truly creative and transformative.</p>	<p><b>NOT APPROPRIATE</b></p>
<p>5. Does the program portfolio have an appropriate balance of:</p> <ul style="list-style-type: none"> <li>• Inter- and Multi- disciplinary projects?</li> </ul> <p><b>Comments:</b></p> <p>All of the AGEP proposals reviewed included a wide range of disciplines.</p>	<p><b>APPROPRIATE</b></p>

<p>6. Does the program portfolio have an appropriate balance considering, for example, award size, single and multiple investigator awards, or other characteristics as appropriate for the program?</p> <p><b>Comments:</b></p> <p>These large grants all involve multiple investigators.</p>	<p><b>APPROPRIATE</b></p>
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<p>7. Does the program portfolio have an appropriate balance of:</p> <ul style="list-style-type: none"> <li>• Awards to new investigators?</li> </ul> <p>NOTE: A new investigator is an investigator who has not been a PI on a previously funded NSF grant.</p> <p><b>Comments:</b></p> <p>The program appears to have been consistently funding the same set of institutions indicating a need to expand the number of institutions that are funded.</p> <p>Continuing awards should compete on equal footing with new proposals rather than seemingly receiving automatic renewals.</p>	<p><b>NOT APPROPRIATE</b></p>
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<p>8. Does the program portfolio have an appropriate balance of:</p> <ul style="list-style-type: none"> <li>• Geographical distribution of Principal Investigators?</li> </ul> <p><b>Comments:</b></p> <p>Many states in the Western region and some in the Midwest are not adequately represented. The COV members agree that extra efforts should be made to ensure improved geographic representation.</p>	<p><b>NOT APPROPRIATE</b></p>
<p>9. Does the program portfolio have an appropriate balance of:</p> <ul style="list-style-type: none"> <li>• Institutional types?</li> </ul> <p><b>Comments:</b></p> <p>Input from a wider range of institutions might be valuable. One way to obtain this would be to encourage non-minority serving institutions to participate in the alliances in some way.</p>	<p><b>NOT APPROPRIATE</b></p>
<p>10. Does the program portfolio have an appropriate balance:</p> <ul style="list-style-type: none"> <li>• Across disciplines and sub disciplines of the activity?</li> </ul> <p><b>Comments:</b></p> <p>There is a good balance within the STEM disciplines. The COV looks forward to the inclusion of the Social, Behavioral, and Economic Sciences in a unified AGEP portfolio. THE SBE AGEP proposals that were briefly examined appeared to have equal quality.</p>	<p><b>APPROPRIATE</b></p>
<p>11. Does the program portfolio have appropriate participation of underrepresented groups?</p> <p><b>Comments:</b></p> <p>More data are needed on the participation within underrepresented groups. For example, the involvement of Native Alaskans and Native Hawaiians is unclear in AGEP programs.</p> <p>Another issue arose during the COV discussion: If programs focus on African Americans, for example, are the Hispanic and American Indians well served in these programs? The COV would like to see a better understanding of the dynamics of interracial services in these programs.</p>	<p><b>DATA NOT AVAILABLE</b></p>
<p>12. Is the program relevant to national priorities, agency mission, relevant fields and other constituent needs? Include citations of relevant external reports.</p> <p><b>Comments:</b></p>	<p><b>APPROPRIATE</b></p>

<p>It is highly relevant and deserves additional support both financially, in order to support more programs, and in staffing, in order to fulfill its mission. AGEP should be increasingly connected to other NSF programs and vice versa to assist them with promoting greater engagement with URM.</p>	
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<p>13. Additional comments on the quality of the projects or the balance of the portfolio:</p> <p style="text-align: center;">NONE NOTED</p>
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**A.4 Management of the program under review.** Please comment on:

<p>1. Management of the program.</p> <p><b>Comments:</b></p> <p>The program needs more staffing to fulfill AGEP's mission. The COV experienced many logistical difficulties and had challenges completing responsibilities prior to the review. These challenges might have been prevented through more staff support.</p> <p>To better fulfill COV responsibilities, it would be helpful to review data as to when grantees received their award.</p>
<p>2. Responsiveness of the program to emerging research and education opportunities.</p> <p><b>Comments:</b></p> <p>With no new solicitation during the review period, it is not possible to determine responsiveness.</p>
<p>3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.</p> <p><b>Comments:</b></p> <p>Not applicable</p>
<p>4. Responsiveness of program to previous COV comments and recommendations.</p> <p><b>Comments:</b></p> <p>In large part the same concerns highlighted in 2007 remain in the current COV review.</p>

5. Additional comments on program management:

NONE NOTED

## **PART B. RESULTS OF NSF INVESTMENTS**

### **The NSF mission is to:**

- promote the progress of science;
- advance national health, prosperity, and welfare
- secure the national defense.

To fulfill this mission, NSF has identified four strategic outcome goals: Discovery, Learning, Research Infrastructure, and Stewardship, although the COV does not review accomplishments related to Stewardship.

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

**B.1 OUTCOME GOAL for Discovery: "*Foster research that will advance the frontier of knowledge, emphasizing areas of greatest opportunity and potential benefit and establishing the nation as a global leader in fundamental and transformational science and engineering.*"**

#### **Comments:**

The COV recommends that you make an effort to encourage proposals that are creative and transformative and work to get them through the review process.

We further suggest that you establish better linkages to other NSF-funded programs so that AGEP students become exposed to cross-cutting science.

**B.2 OUTCOME GOAL for Learning: “Cultivate a world-class, broadly inclusive science and engineering workforce, and expand the scientific literacy of all citizens.”**

**Comments:**

AGEP is contributing to engaging more URM in STEM disciplines. One recommendation is to provide opportunities to AGEP students to conduct outreach activities so that they are contributing to the scientific literacy of all citizens. AGEP students could be used as agents of change for creating a more educated and scientifically literate citizenry. Additionally, school teachers should be more engaged in research and other training activities at AGEP institutions.

**B.3 OUTCOME GOAL for Research Infrastructure: “Build the nation’s research capability through critical investments in advanced instrumentation, facilities, cyberinfrastructure and experimental tools.”**

**Comments:**

This goal is not applicable to the AGEP program.

## PART C. OTHER TOPICS

### FINAL CROSS-TALK SUMMARY

#### SUMMARY OF BUNDLED HRD COV CROSS-TALK REMARKS September 2, 2010

A group of COV review team members came together from 5 separate teams on September 2nd to discuss their differences in program perspectives, to find synergies that exist among the programs, and to identify mutual areas of concern that can help gain leverage and traction in broadening participation and increasing program effectiveness. The team members reviewed and evaluated the AGEP, CREST, HBCU, LSAMP, and TCUP programs before joining forces and sharing their views at the cross-talk session. Members were enthusiastically in alignment with anticipating the changing national education needs, encouraging collaboration and communication, and accelerating participation in global enterprises. The following summary represents major concerns of the assembled group.

- ❖ **Linkages/feedback mechanism across organizational lines:** The COV panel advocates improved linkages among the programs in HRD, and encourages the use and sharing of tracking and feedback mechanisms used by the programs.
  - A recommendation emerged that any awarded proposal should have the approval of the external review panel regarding its proposed broadening participation emphasis.
  - Several participants want to see more successful, collaborative efforts with other NSF programs, other agencies, National Laboratories, private industry, private foundations, and entrepreneurial research from small companies.
  - The group encourages private-public partnerships to facilitate technology transfer.
  - While use of Ad Hoc reviewers is an acceptable practice, the COV found that mainstream reviewers had more experience and seemed to do a better job. One suggestion to NSF is to provide a clear example of what a strong review looks like to facilitate better quality reviews.
  - Tracking of projects is sometimes difficult when the work ends. The team recommends practices that encourage sustainability and support for the projects.
  
- ❖ **Leadership Transition at the Top:** With new leadership coming in the opportune time exists to propose new methods of doing business. Panelists suggested that it is time to refine/restate NSF's commitment to BP. Some members recommended that NSF assess their structure to see if it promotes or discourages BP.
  - The panelists encourage the new Director of NSF to engage the affected community of institutional leadership and researchers in the first 90 days. Participants felt that by early engagement in the major concerns of the community, the first 90 days would make it possible to at the very least reinforce and/or establish a framework to meet objectives.
  - Considerable discussion revolved around which agency is best qualified to take the lead in managing a national education agenda. Besides NSF, the panel suggested National Institute of Health (NIH) with its very large budget, the Department of Education (DOE) which they did not feel has the needed clout and the Department of Defense (DOD) as possible candidates. The panel suggested that leadership

belongs with NSF which is well-positioned to take advantage of leveraging opportunities between agencies. With a formal leveraging mechanism in place, more opportunities to fund education would be possible. The NSF could consider developing a position called the Director of Integration to coordinate leveraging.

- IGERT represents a successful example of different directorates working together and cutting across the institutions as a flagship of graduate education. Panelists recommend identifying more programs like this that fund not just hard sciences but also social sciences to actually promote interdisciplinary education and thereby broaden participation.
- Encouraging collaborative grants with other institutions/organizations and/or companies may greatly expand and leverage the work across many programs and institutions.
- Developing leadership skills provides not only resources but also the type of leverage that enhances partnerships.

❖ **Broadening Participation:** Put teeth into it in the review process; identify a clear definition in the Strategic Plan that outlines goals and strategies for broadening participation.

- Consider using individuals who participate in programs and panels as mentors. Panels teach others how to do a better job of writing new proposals.
- A number of participants identified a need to increase the presence of minorities on panels.
- Generate increased participation from those who have been excluded from awards, grants, and fellowships over the years, particularly in STEM areas.
- Broader participation could come not only from giving others the opportunity to see what it is to develop an excellent proposal but also from obtaining diverse viewpoints from panelists.
- Develop a stand-alone section in standards that speaks to Broadening Participation so that it is not necessary to dilute what you emphasize in the science section.
- Several COV team members support the model of a separate panel or ad hoc reviewers to ensure that BP receives proper commentary and that PIs understand the need to incorporate it. The significance of the panel input drives the level of funding as determined by the scientific review, and appropriately, funds are not released until the criterion has been met. Be sure that panels have the expertise to deal with broadening participation and speak strongly to it.
- The funding structure should work to broaden participation rather than hinder it; if funding criteria are too bureaucratic, the result is a negative effect. The concern is that NSF does not have a mechanism in place that would allocate funding unless every piece of the proposal was rewritten to reflect a significant number of smaller proposals.
- Broadening Participation as a required criterion would also be appropriately included at the annual review stage and clearly addressed before the release of continuing grant increments.
- The panel asks which broad impacts NSF wants and further suggests setting standards and achievement metrics that NSF will examine yearly.
- Members suggested that NSF include reviewers who can do a critical analysis of broader impact. Most of the focus seems to be on intellectual merit.
- Improve communication between programs/agencies/organizations to strengthen alliances and make use of existing resources.

❖ **Structure of NSF – does it help or hinder Broadening Participation:** The consensus of the HRD COV Teams is that NSF should not consolidate these five programs. Other concerns emerged that ask whether NSF had a role in determining what is in the best

interest of the country to leverage and improve on education.

- Objections have been raised over proposed consolidation of the HRD programs. From a financial standpoint, some panelists feel that putting all the grant money in one pot is going to be a detriment especially to HBCU and TCUP and that the funding structure is short-sighted with the possibility of backfiring on the goal of broadening participation.
- While the group recognized that human capital resources in some programs showed an increase since the time of the last program evaluations, a suggestion emerged to increase staffing to better manage programs and strengthen opportunities to meet goals for BP and BI.
- A focus of new hires in specialized areas would allow for an increase in site visits by PIs that adds value to assessing programs, hiring individuals with experience in techniques for broadening participation increases the chance for achieving BP goals, and hiring someone at the executive level with expertise in leveraging opportunities among key parties/agencies.
- Concerns emerged in discussions that smaller institutions don't have the sophistication to compete with larger institutions and if programs merge, the communities with small institutions will "hear" a message that the federal government doesn't care, and they fear loss of identity.
- Talk to affected parties before making the organizational and funding changes that are going to generate long-term consequences.
- Even with structure that has to be addressed and realigned, and with internal problems that have to be solved, the NSF is the ideal agency to carry the banner and lead the national initiative to improve the quality of research and higher education.
- The incentive is there for NSF to emerge as a leader and to get creative to generate and leverage diverse funding pools.
- The panelists would like to see NSF become an advocate of change – emerge as the federal "Change Agent" in pursuit of advanced education and funding resources.

❖ **Allocation of Resources:**

- Look for ways to fund infrastructure development that includes equipment and laboratories or a way to leverage program resources with other NSF opportunities.
- Put funds directly into supporting students and personnel without taking away from the dollars set aside for research-related expenses.
- Find a way to train students to become active members of faculty by learning how to write proposals, develop networks, and engage with people to expand partnerships and innovative research.
- Set aside funding for information technology tools along with the training to work with new software so that emerging science moves into the next generation with quality results and smooth transitions.
- To ensure that programs are sustainable provide increased support so that you can measure outcomes.
- Look for innovative programs that cultivate entrepreneurial students and programs. Students want to know how they can earn a living, make money and enjoy their work. Without the incentive, they may choose other options that have less satisfying results.
- Consider engaging with private industry to forge partnerships that support internships for students within the organization. Identify success stories where

these partnerships have worked.

- ❖ **Demonstrate the Effectiveness of the HRD Programs:** A number of participants believe that NSF programs have a weak system for disseminating information on the successes coming out of these programs. Panelists feel that more investment of funds in NSF programs would be possible if a plan to attract other organizations was in place. Members advocate strengthening the information pipeline and generating national publicity for program accomplishments.
  - Use simple graphs; convince people on the outside with presentations that are simple and straightforward.
  - Publicize accomplishments of note; even consider putting ads in major media outlets
  - Consider engaging the services of public relations firms to create interest in investors that have the resources to fund programs.
  - Tell other institutions what we do, that NSF looks for opportunities to engage in collaborative grants and are looking for partnerships and new funding sources to advance education globally.
  - Widely disseminate information on best practices to share information at the national level.
  - Get the attention of the internal press, the Office of Legislative and Public Affairs, and ultimately the media to put the spotlight on successful NSF programs.
  - Develop data bases and target groups to share program information.
  
- ❖ **Role of the National Science Board:** Some discussion came up about how the National Science board can set priorities with respect to addressing BP and hold programs responsible for addressing it or do without funding. Perhaps this is an enforcement role for NSB.
  - Revisited the discussion regarding the possibility of weighting the merit review criteria.
  - Members were in passionate agreement that the composition of the National Science Board needs more diversity.
  - Broadening impact has to be evident throughout the structure including the National Science Board.

## AGEP COV COMMENTS

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

#### Across the Portfolio

- ❖ CREST offers a ripe opportunity to train students for the professoriate in addition to the AGEP program. It is recommended that there be a closer and more explicit link between these two programs (CREST and AGEP), citing the business of research as a necessary skill for future faculty.
- ❖ Intra-agency communication and collaboration between LSAMP and other NSF programs (e.g. REU, STEP, OISE) should be more explicitly emphasized and encouraged.
- ❖ Improved communication and coordination between AGEP and LSAMP-BD is necessary to leverage resources and achieve common goals in increasing the number of underrepresented minority (URM) students who obtain graduate degrees in STEM.

#### Program-Specific

- ❖ Areas in need of improvement include:
  1. Increasing geographic representation,
  2. Broadening alliances between and among research universities,
  3. Building on best practices and lessons learned from previous programs, and
  4. Linking AGEP to other NSF programs.
- ❖ Mentoring programs that match future faculty with faculty members currently working with URM STEM students could prove to have a big impact.
- ❖ Another interesting idea is to find ways to promote “cross-talk” among URM groups within and across universities. Schools should be encouraged to reach outside of the URM group they have historically serviced and share their best practices and lessons learned with other groups in the URM community.
- ❖ It is important to the program mission to recruit and encourage involvement from institutions not currently engaged in AGEP. New proposals should compete on equal footing with continuing alliances.

### 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.

#### Across the Portfolio

- ❖ How robust are the Directorate’s databases that track demographics and other data on the programs’ target populations? Is the Directorate’s use of money and performance evaluated with respect to those numbers?

#### Program-Specific

- ❖ The record of meeting outcome goals for Broadening Participation (BP) regarding individuals, institutions, geography, and across education levels and settings is mixed. Increased

outreach efforts, such as pre-award and post-award site visits, should be implemented to determine the adequacy of project implementation and measure outcomes.

- ❖ Some standardization of project data with respect to accomplishments would enhance project and program monitoring and evaluation.

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

**Across the Portfolio**

- ❖ The Foundation should assess the extent to which each directorate is involved in advancing the BP agenda and take corrective steps where appropriate. Preparing a yearly report on the progress in this area to share what strides other programs are making in BP would be informative and useful.
- ❖ The COV recommends that solicitations from other NSF programs encourage collaboration with HRD programs.
- ❖ Electronically-assembled panels should be established to ensure that proposals recommended for funding fulfill BP criteria.
- ❖ BP has an enormous agenda and the majority of the responsibility to carry out this agency-wide initiative is being placed on the smallest directorate with the least amount of resources, the Directorate for Education and Human Resources (EHR). While EHR is well-suited to provide leadership, all of the directorates should participate in fulfilling this directive. NSF policies with respect to BP should reflect that it is an agency-wide commitment and the Foundation needs to be clearer about what is expected from the various directorates.
- ❖ A more rigorous definition of BP is needed. In order to provide leadership on this issue, NSF should have explicit merit review procedures associated with the BP component of proposals.
- ❖ PIs should be provided with more information regarding the BP aspect of the merit review process. Additionally, the BP portion of the merit review process should be addressed separately in some way. For instance, one person from each panel could look specifically at the BP-related award components. Ultimately, a separate review is the best way to proceed.
- ❖ Make BP a more explicit part of future metrics and assessment so that accountability is built into BP goals.

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

**Across the Portfolio**

- ❖ Mandate BP within the Broader Impacts criterion and develop associated implications for non-compliance.
- ❖ Identify ways NSF can partner with government and private entities to pool resources to broaden participation.

### **Program-Specific**

- ❖ Potential activities to encourage innovative thinking include:
  1. Providing training for panelists to recognize and support creative, innovative, and transformative ideas/concepts within proposals;
  2. Holding annual meetings for PIs to discuss best practices and share innovative ideas;
  3. Supporting short-term exchanges from URM researchers outside of the alliances to assist/evaluate efforts to implement URM programs; and
  4. Offering more opportunities for alliance institution teachers to enhance their research and teaching skills.
  
- ❖ External resources that can be leveraged to promote BP for national competitiveness include:
  1. Partnering with large foundations (i.e. Gates Foundation) to promote BP;
  2. Encouraging Alliances to send more students to National Laboratories (such as Brookhaven National Laboratory) for summer research internships;
  3. Creating a database of AGEP alumni who can serve as program ambassadors; and
  4. Encouraging institutionalization through the successes of AGEP.
  
- ❖ The Foundation should continue to reach out to URM groups that have not been a part of an institution's historically served population.

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

#### **Across the Portfolio**

- ❖ Provide systematic training in the steps to be used in extracting programmatic data.
  
- ❖ The off-site processes allowed the COV to concentrate on the specifics of the program and helped the group cover the materials and come to agreement more quickly.
  
- ❖ The links and PDFs embedded in the PowerPoint presentations increased accessibility to the materials.
  
- ❖ In a bundled COV, it would have been nice to touch base with the other programs prior to the cross-talk discussion. Being isolated from each group limited the potential benefits of a more diverse pool of ideas.
  
- ❖ It is difficult to reconcile the concerns put forward by individual sub-panels into a single document. Some recommendations/concerns may be diluted by other sub-panel observations.
  
- ❖ Sub-panels may have experienced an unequal emphasis in preparation for the COV, which led to logistical problems.

#### **Program-Specific**

- ❖ Stream-lining the information provided for the review (for example, summary tables/data of program accomplishments) would have been beneficial to COV meeting participation.

- ❖ There were a number of logistical problems, mainly connected to the IT, in the preparation of the COV meeting. To resolve some of these problems, more staff is necessary. The COV sub-panel experienced problems accessing the eJackets and logging onto the website.
- ❖ Additional information on the unique situation of AGEF was necessary to adequately answer template questions. It would be helpful to provide major highlights of the program's recent history, present status, and near future prior to the meeting (e.g., an explanation of the funding chronology).
- ❖ The documentation inside the eJackets was not well organized.
- ❖ The template should be tailored to the program to facilitate the review and result in more substantive comments.

**SIGNATURE BLOCK:**

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For the AGEF COV  
James Renick  
Chair

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Marigold Linton  
Sub Chair