

TO: Dr. Willie Pearson, Jr., DRL/HRD Bundled COV Chair  
FROM: Dr. Joan M. McGuire, RDE COV Co-Chair  
RE: RDE COV Report

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## **Executive Summary**

The RDE COV reviewed numerous data and supporting materials for the RDE program for the 2009-2011 time period and commends the RDE program officers for their outstanding work in efficiently managing all elements of the proposal review process and portfolio administration.

## **Selected Findings**

Beginning with the diverse composition of review panels and extending to consistent use of NSF merit criteria, the process for proposal review is rigorous and objective. The quality and diversity of funded projects attest to RDE's responsiveness to emerging research and education opportunities for individuals with disabilities in STEM education and the STEM workforce. Within the parameters of a modest budget, the RDE portfolio addresses the complexities of various disabilities across types of funded awards distributed across types of institutions and nontraditional organizations. The commitment of the RDE program officers to reach new communities and new investigators as well as to consider innovative and potentially transformative ideas is noteworthy. Collaboration characterized the RDE program during this period with RDE co-funding 8 projects within NSF and, to a lesser degree, other programs cofunding a few (4) RDE initiatives.

## **Recommendations**

The RDE COV offers the following key recommendations for consideration:

- ▶ Document the selection process for assuring the representative fit between applications and the qualifications of review panelists in a more transparent manner to be shared with other NSF program officers who will be impaneling teams for the review of disability-inclusive applications outside the RDE program.
- ▶ Document strategies by which complexities of disabilities can be best addressed by other NSF program officers in their review process.
- ▶ Develop an action plan for disability research and education both in RDE as it moves to REAL and across the directorate.
- ▶ Plan for RDE to become the lead agent for professional development about disabilities research and education across disciplines and directorates.
- ▶ Consider and plan for additional personnel needs to manage disability-related activities within the RDE program and across the Foundation especially as implementation of REAL progresses.
- ▶ Document the decision and management processes for co-funded projects across the directorate.
- ▶ Target disabilities in research and education initiatives in both the RDE community and *all* STEM funded programs in the directorate.
- ▶ Determine the impact of RDE by gathering data and disseminating information about outcomes of RDE's important work across NSF STEM research and education programs.
- ▶ Use RDE benchmarks as a baseline for REAL in its implementation activities.

**CORE QUESTIONS and REPORT TEMPLATE  
for  
FY 2012 NSF COMMITTEE OF VISITOR (COV) REVIEWS**

**Guidance to NSF Staff:** This document includes the FY 2012 set of Core Questions and the COV Report Template for use by NSF staff when preparing and conducting COVs during FY 2012. 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 <[www.inside.nsf.gov/od/oia/cov](http://www.inside.nsf.gov/od/oia/cov)>.

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 (2) managerial matters pertaining to proposal decisions.

The program(s) under review may include several sub-activities 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 sub-activities 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.

Suggested sources of information for COVs to consider are provided for each item. As indicated, a resource for NSF staff preparing data for COVs is the Enterprise Information System (EIS) – Web COV module, which can be accessed by NSF staff only at <http://budg-eis-01/eisportal/default.aspx>. In addition, NSF staff preparing for the COV should consider other sources of information, as appropriate for the programs under review.

For section IV addressing portfolio balance the program should provide the COV with a statement of the program’s portfolio goals and ask specific questions about the program under review. Some suggestions regarding portfolio dimensions are given on the template. These suggestions will not be appropriate for all programs.

**Guidance to the COV:** The COV report should provide a balanced assessment of NSF’s performance in the integrity and efficiency of the *processes* related to proposal review.

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.*** The reports generated by COVs are made available to the public.

*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. For past COV reports, please see <http://www.nsf.gov/od/oia/activities/cov/covs.jsp>.*

**FY 2012 REPORT TEMPLATE FOR NSF COMMITTEES OF VISITORS (COVs)**

The table below should be completed by program staff.

<b>Date of COV:</b> Thursday, September 20 & Friday, September 21, 2012
<b>Program/Cluster/Section:</b> Research in Disabilities Education Program (RDE)
<b>Division:</b> Human Resource Development (HRD)
<b>Directorate:</b> Education and Human Resources (EHR)
<p><b>Number of actions reviewed:</b> 43 proposals</p> <p><b>Awards:</b> 27</p> <ul style="list-style-type: none"> <li>• 8 Alliances for Students with Disabilities in STEM (Alliance)</li> <li>• 8 Demonstration, Enrichment, or Dissemination (DEI)</li> <li>• 9 Research</li> <li>• 2 Innovation through Institution Integration (I-Cubed or I<sup>3</sup>)</li> </ul> <p><b>Declinations:</b> 16</p> <ul style="list-style-type: none"> <li>• 4 Alliances for Students with Disabilities in STEM (Alliance)</li> <li>• 6 Demonstration, Enrichment, or Dissemination (DEI)</li> <li>• 4 Research</li> <li>• 2 Innovation through Institutional Integration (I-Cubed or I<sup>3</sup>)</li> </ul> <p><b>File:</b>  Sample Jackets Summary Table for FY 2009-2011 – <a href="#">Introduction.2.1</a>  Sample Jackets Under Review for FY 2009-2011– <a href="#">Introduction.2.1</a></p>
<b>Total number of actions within Program/Cluster/Division during period under review:</b> 178

**Awards: 30**

- 8 Alliances for Students with Disabilities in STEM (Alliance)
- 8 Demonstration, Enrichment, or Dissemination (DEI)
- 9 Research
- 2 Innovation through Institutional Integration (I-Cubed or I<sup>3</sup>)
- 3 Unsolicited

**Declinations: 148**

- 25 Alliances for Students with Disabilities in STEM (Alliance)
- 52 Demonstration, Enrichment, or Dissemination (DEI)
- 63 Research
- 4 Innovation through Institutional Integration (I-Cubed or I<sup>3</sup>)
- 4 Unsolicited

**Other:**

- 4 co-funded awards (made by other NSF programs to RDE)
- 8 co-funded awards (made by RDE to other NSF programs)

**Files:**

Total Proposals Summary Table for FY 2009-2011 – [\*Introduction.2.3\*](#)

Funding Rate Table for FY 2009-2011 – [\*Introduction.2.4\*](#)

Funding Rate Graph for FY 2009-2011 – [\*Introduction.2.5\*](#)

List of FY 2009 RDE Proposals Received by Track – [\*Introduction.2.6\*](#)

List of FY 2010 RDE Proposals Received by Track – [\*Introduction.2.7\*](#)

List of FY 2011 RDE Proposals Received by Track – [\*Introduction.2.8\*](#)

**Manner in which reviewed actions were selected:**

Given that the RDE proposal pool for each of the six tracks was so small, random sampling procedures for jacket selection were abandoned. RDE program staff selected a representative sample of the award and decline jackets.

**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.

**I. Questions about the quality and effectiveness of the program's use of merit review process.** Please answer the following questions about the effectiveness of the merit review process and provide comments or concerns in the space below the question.

<p align="center"><b>QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCESS</b></p>	<p align="center"><b>YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE</b></p>
<p>1. Are the review methods (for example, panel, ad hoc, site visits) appropriate?</p> <p>Comments:</p> <p>Based on the information available to the COV, 178 proposals were reviewed by a total of 51 reviewers on 6 RDE panels convened during the 2009-2011 period. These review panels average 8.5 individuals per cycle, and each proposal received an average of 4.8 reviews. The larger, more complex Alliance proposals received more reviews (6) than the smaller research proposals (typically 3). Gender, ethnicity, and institutional diversity of panelists continue to be well balanced. Representation of panelists with disabilities dropped over the three year span, but the large proportion of unreported cases makes this hard to assess. The panel process appears to work well; in particular, panel summaries clearly address both review criteria more reliably than do individual reviews. The program officers select panelists based on the disciplines and topical areas of the proposals to be reviewed. A small number of mail reviews (47) were conducted, primarily to ensure a specific expertise in the review. The COV suggests that the RDE program office document the selection process for panelists in a more transparent manner and for instances when a proposal undergoes a solicited expert's mail review (whether in addition to a panel review or in the small number of cases of an unsolicited proposal).</p> <p><b>Data Source: EIS/Type of Review Module</b></p>	<p>Yes</p>

<p><b>Files:</b> Proposals by Review Type – <i>Section I.1.1</i></p>	
<p>2. Are both merit review criteria addressed</p> <ul style="list-style-type: none"> <li>a) In individual reviews? Yes.</li> <li>b) In panel summaries? Yes.</li> <li>c) In Program Officer review analyses? Yes.</li> </ul> <p>Comments:</p> <p>The COV found that in most cases the merit review criteria were consistently addressed across the individual reviews, the panel summaries, and the Program Officer review analyses. It was clear to all COV members that the guidance of the RDE program officers conducting preliminary panel preparation and the panel orientation webinar created a clear understanding among individual panelists that both Intellectual Merit and Broader Impact review criteria must be addressed. The COV also understood that examples of effective reviews were provided to the panelists in preparation for their role as reviewers. In most cases, strengths and weaknesses were discussed for each merit review criterion, and clearly delineated points were both well organized and succinct.</p> <p>The COV noted a few areas of potential improvement. Specifically, the COV observed that, in general, individual proposal review panelists wrote more to address Intellectual Merit and provided less input for the Broader Impact criterion. In addition, the COV concluded that it would be beneficial to underscore for reviewers the importance of explicit descriptions of both strengths and weaknesses for each of the criteria. For example, if a reviewer determined that an application’s evaluation plan was weak, it would promote understanding if specific, concrete examples/excerpts from the application were provided to illustrate such a weakness. This information would strengthen proposal feedback provided to the applicant.</p> <p>The COV noted that in all cases the panel summaries provided a more detailed level of information that reflected individual panelist perspectives and consensus of the panel in making recommendations to the NSF. The summaries were both complementary and additive. The COV concluded that the Program Officer review analyses clarified the rationale for the award/decline recommendations and, in a few cases, elaborated on considerations not available to the panel (e.g.,</p>	<p>Yes</p>

<p>moving a high quality proposal from the Research to Demonstration category). Reasoning behind such a recommendation and the process of communication with the applicant were described.</p> <p>While it was noted that the Program Officers make recommendations to colleagues at the NSF about awards and declinations, the COV observed that the process for final decisions is a bit opaque and not documented in the jackets by notes from phone calls and/or e-mails.</p> <p><b>Data Source: Jackets</b></p> <p><b>File:</b> Summary Table of Proposal Reviews – <i>Section I.2.1</i></p>	
<p>3. Do the individual reviewers provide substantive comments to explain their assessment of the proposals?</p> <p>Comments:</p> <p>The COV found that, in general, most individual reviewers did a thorough job of addressing the two merit criteria, identifying substantive issues and concerns related to proposals they reviewed, and providing meaningful feedback for applicants. In their reviews, panelists included important information related to assessment of each proposal and its overall rating.</p> <p>The COV identified several areas for improvement. Many of the reviews provided more details about strengths and weaknesses for the Intellectual Merit criterion than for the Broader Impact criterion. In the orientation session for review panels, it would be helpful to reinforce the importance of thoroughly addressing both criteria as both are equally important. The COV reinforces the importance of individual reviewers identifying strengths and weaknesses, with examples, for each criterion.</p> <p>The COV also noted some variation in reviews for proposals that were not recommended as competitive with less detail for the two criteria. The COV agreed that detailed reviews are even more critical for PIs whose proposals are not successful in order to provide feedback to improve proposals. This is particularly important for new PIs and typically underrepresented institutions such as HCBUs and community colleges.</p> <p>There were several instances where individual panel reviewers rendered notably diverse ratings of proposals (i.e., Highly Competitive, Competitive, Not Competitive) than what was agreed to in the panel summary. This suggested to</p>	<p>Yes</p>

<p>the COV that reaching consensus on the final panel summary could be facilitated by the development and use of a rubric with examples to illustrate rating categories as another method for addressing reliability of ratings across reviewers.</p> <p><b>Data Source: Jackets</b></p>	
<p>4. Do the panel summaries provide the rationale for the panel consensus (or reasons consensus was not reached)?</p> <p>Comments:</p> <p>Across all panel summaries, there was meaningful feedback. Both merit criteria were addressed, and in most panel summaries, strengths and weaknesses were noted for each criterion. The COV found it helpful to have a narrative of the discussion among panel members when individual review ratings were diverse (i.e., ratings varied across the categories of E, V, G, F, P) but consensus was reached about the final panel rating. For proposals that are rated as Not Competitive, it is equally, if not more, important to provide detailed feedback for applicants. The COV suggests that it would be informative for RDE to track the number of proposals that are not recommended for funding and subsequently revised and resubmitted.</p> <p>The COV noted that it is helpful to format the panel summaries so that strengths and weaknesses are clearly delineated under each merit criterion.</p> <p><b>Data Source: Jackets</b></p>	<p>Yes</p>

<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>Comments:</p> <p>The Review Analysis of the Program Officers was most helpful in understanding the decision to either forward a proposal with the recommendation to fund or to decline. Review analyses included narratives of the processes followed by the panel in weighing components of a proposal and specific comments about RDE questions for each merit criterion.</p> <p>While award jackets provided information about subsequent steps following the Program Officer’s Review Analysis, what was not always evident to the COV for some awards were the intermediate steps between the panel’s recommendations, and the final award. In some instances, it appeared that correspondence or diary notes of phone conversations were missing.</p> <p><b>Data Source: Jackets</b></p>	<p>Yes</p>
<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:</p> <p>The COV recognizes the need for each PI to receive clear and straightforward information about the funding recommendation for a submitted proposal. Panel summaries were consistently thorough and helpful in synthesizing the discussion and consensus of the review panel regarding an applicant’s proposal. The COV applauds the review analyses prepared by the Program Officers for their succinct, thorough, and objective qualities. Communication by RDE program officers in award and decline jackets including panel summaries and written</p>	<p>Yes</p>

<p>correspondence with PIs was highly professional and informative. Site visit reports presented detailed comments reflecting in-depth conversations and thoughtfully crafted recommendations and negotiations related to the overall award.</p> <p><b>Data Source: Jackets</b></p>	
<p>7. Additional comments on the quality and effectiveness of the program’s use of merit review process:</p> <p>Panelists continue to provide, for the most part, information on both review criteria, and the panel summaries all outlined both review criteria as well as strengths and weaknesses. The Program Officer review analyses were particularly detailed and synthesized elements of the review process from individual panel reviews to panel summaries and recommendations.</p> <p><b>Data Source: Jackets</b></p>	

**II. Questions concerning the selection of reviewers.** Please answer the following questions about the selection of reviewers and provide comments or concerns in the space below the question.

<p><b>SELECTION OF REVIEWERS</b></p>	<p><b>YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE</b></p>
<p>1. Did the program make use of reviewers having appropriate expertise and/or qualifications?</p> <p>Comments:</p> <p>The COV recognizes the challenges in identifying and retaining highly qualified and appropriate reviewers for each proposal review panel. The RDE staff has done an exceptional job of utilizing qualified reviewers that have the appropriate STEM, disability, and evaluation expertise needed to conduct high quality reviews of RDE proposals. In addition, the COV observed that the RDE staff has intentionally focused on assuring diversity among reviewers in terms of gender,</p>	<p>Yes.</p>

<p>disability, geographic location, and “new investigator” characteristics.</p> <p>The COV is in full consensus that the expertise and qualifications needed by proposal reviewers should be dependent upon the nature and scope of proposals under review. The RDE staff also has done an exceptional job of assuring the representative fit between proposals and the qualifications and experiences needed among reviewers. The COV recommends that the process by which this matching is done be documented and made available to other NSF program officers who will be impaneling teams for the review of disability-inclusive proposals outside the RDE program.</p> <p>The COV applauds the exceptionally positive manner in which RDE program staff has dealt with complexities of disabilities that have been represented across the RDE proposals from 2009 through 2011. As these complexities continue to expand, it is essential for the RDE staff to document strategies by which these complexities can be best addressed by other program officers.</p> <p><b>Data Source: Jackets</b></p> <p><b>Files:</b>  RDE Review Panels for FY 2009-2011 – <i>Section II.1.1</i>  Reviewers by State Table – <i>Section II.1.2</i>  Reviewers by Institution Type Table – <i>Section II.1.3</i>  Reviewer Demographics Table – <i>Section II.1.4</i></p>	
<p>2. Did the program recognize and resolve conflicts of interest when appropriate?</p> <p>Comments:</p> <p>The COV noted that the RDE program staff has collected information regarding conflict of interest across all proposal reviewers. In addition, the COV praises the RDE program staff for adding “rivalries and negative relationships” to the list of considerations for reviewers about potential conflicts of interest with applicant organizations and/or proposed staff. The COV determined that the current approaches are effective and do not require additional modifications to enhance them.</p> <p><b>Data Source: Jackets</b></p> <p><b>Files:</b>  Conflict of Interest &amp; Confidentiality Statement – <i>Section II.2.1</i></p>	<p>Yes.</p>

Sample Panel Assignments with COIs Identified by RDE Program – <i>Section II.2.2</i>	
Additional comments on reviewer selection:	

**III. Questions concerning the management of the program under review.** Please comment on the following:

MANAGEMENT OF THE PROGRAM UNDER REVIEW
<p>1. Management of the program.</p> <p>Comments:</p> <p>The RDE program is well managed by two dedicated, highly qualified program officers. The program has demonstrated that it has met the NSF dwell time standard and has been responsive to the 2009 COV recommendation by adding a second full time program officer and a half-time program specialist. Funded projects during this review period reflect diversity in institution type, geographic distribution, and topical areas although the COV wants to underscore the importance of broadening diversity of states/geographic areas in future funding decisions.</p> <p>The RDE program officers provide outstanding stewardship to the disability education community by working diligently with PIs to ensure that standards are met and documented. The effective management of 10 Alliances, complex projects that are characterized by collaborative partnerships that frequently include high schools and 2- and 4- year colleges and universities, includes site visits. Documentation in the project jackets confirmed that these site visits are detailed and substantive providing the projects and their PIs with constructive feedback for framing their responses midway through the funding cycle. The COV also concluded that the quality of the site visit feedback was instrumental for PIs when there was a need to redirect project activities or to reassess the uses of current resources. Clearly, these management responsibilities are time consuming. At a time of restructuring and commitment to OneNSF, this COV recommends that the RDE program, its division, and the EHR directorate consider and plan for additional personnel needs to manage disability-related activities within the RDE program and across the Foundation especially as implementation of REAL progresses.</p> <p>Award information indicates that the RDE program co-funded 8 projects within NSF and, to a lesser degree, it appears that other NSF programs were co-funding a few (4) RDE initiatives. However, the decision and management processes for these co-funded projects were not documented for the COV.</p>

The COV encourages this co-funding collaboration across divisions and hopes that other divisions and directorates will co-fund RDE projects. The relationships built through these co-funded projects may be the seed for developing more diversity expertise within each directorate.

The COV found that the management plans for the RDE program from 2009-2011 clearly articulated its goals and objectives based upon the need to address underrepresentation of people with disabilities in STEM professions. Each plan described the types of awards and range of funding levels anticipated. RDE's goals during this period also reflected NSF strategic planning. NSF's Strategic Plan (NSF 11-047) includes "Transform the Frontiers" which emphasizes the seamless integration of research and education as well as the close coupling of research infrastructure and discovery." The RDE program supported this goal in FY 2011 with multiple FY 2011 awards reflecting the integration of research and education. The NSF goal "Innovate for Society" is also reflected in RDE's management planning. While annual management plans were informative, the COV recommends that management level benchmarks be developed that are clear and measurable over time, including mechanisms for the engagement of stakeholders.

**Files:**

General Program Information:

RDE 2009 Solicitation 09-508 – [Section III.1a.1](#)

FY 2009 RDE Management Plan – [Section III.1a.2](#)

FY 2010 RDE Management Plan – [Section III.1a.3](#)

FY 2011 RDE Management Plan – [Section III.1a.4](#)

Average Dwell Time Data Graph – [Section III.1a.5](#)

Average Dwell Time Data Table – [Section III.1a.6](#)

Award Information:

List of RDE Awards for FY 2009-2011 – [Section III.1b.1](#)

Summary Table of RDE Co-Funding to Other NSF Organizations – [Section III.1b.2](#)

Summary Table of RDE Co-Funding from Other NSF Organizations – [Section III.1b.3](#)

Awards Co-Funded by RDE for FY 2009-2011 – [Section III.1b.4](#)

RDE Awards Co-Funded by Other NSF Organizations for FY 2009-2011 – [Section III.1b.5](#)

Average Award Size and Duration Table – [Section III.1b.6](#)

Awards by State Table – [Section III.1b.7](#)

Awards by Institution Type Table – [Section III.1b.8](#)

FY 2009 Award Summaries – [Section III.1b.9](#)

FY 2010 Award Summaries – [Section III.1b.10](#)

FY 2011 Award Summaries – [Section III.1b.11](#)

PI Information:

Characteristics of Grantees Summary Table – [Section III.1c.1](#)

PI Demographics Table – [Section III.1c.2](#)

Site Visit Information:

Reverse Site Visits for FY 2009-2011 Table – [Section III.1d.1](#)  
Sample FY 2009-2011 Reverse Site Visit Member Lists – [Section III.1d.2](#)  
Sample FY 2009-2011 Reverse Site Visit Reports – [Section III.1d.3](#)  
Sample FY 2009-2011 Responses to Reverse Site Visit Reports – [Section III.1d.4](#)  
Critical Site Visits for FY 2009-2011 Table – [Section III.1d.5](#)  
Sample FY 2009-2011 Critical Site Visit Member Lists – [Section III.1d.6](#)  
Sample FY 2009-2011 Critical Site Visit Reports – [Section III.1d.7](#)  
Sample FY 2009-2011 Responses to Critical Site Visit Reports – [Section III.1d.8](#)

Program Management Information:

Technology to Advance High School and Undergraduate Students with Disabilities – [Section III.1e.1](#)  
(*See Hard Copy*)  
RDE Evaluation Pilot Study Report (January 2009) – [Section III.1e.2](#)  
RDE Evaluation Presentation (June 2009) – [Section III.1e.3](#)  
RDE Evaluation Study 2 Final Report (September 2009) – [Section III.1e.4](#)  
Sample #1 RDE Monitoring Summary: Alliances for September 2009 through August 2010 – [Section III.1e.5](#)  
Sample #2 RDE Monitoring Summary: Enrichment for September 2009 through August 2010 – [Section III.1e.6](#)  
Sample #3 RDE Monitoring Summary: Research for September 2009 thru August,2010 – [Section III.1e.7](#)  
Sample #4 RDE Monitoring Summary: Demonstration for September 2009 thru August 2010 – [Section III.1e.8](#)  
Sample #5 RDE Monitoring Summary: Dissemination for September 2009 thru August 2010 – [Section III.1e.9](#)  
RDE Monitoring Data Presentation (June 2012) – [Section III.1e.10](#)

2. Responsiveness of the program to emerging research and education opportunities.

Comments:

The COV is impressed that the RDE program has supported many significant projects in merging research and education areas, including the Wounded Warrior Think Tank, an initiative to provide online resources for training STEM faculty about universal design, cyberlearning, underrepresented populations, and spatial thinking. These are examples of a portfolio that is responsive to diverse populations and discoveries across the Foundation and particularly to the disability community.

**Files:**

Selected RDE Program Highlights for FY 2009-2011 – [Section III.2.1](#)

Relevant Publications:

Journal of Postsecondary Education and Disability Winter 2011 Special Issue: STEM Education –

### ***Section III.2.2***

Transition STEM: A Wounded Warrior Think Tank October 2011 Summary Report – ***Section III.2.3***  
Basics About Disabilities and Science and Engineering Education (2011) – ***Section III.2.4 (See Hard Copy)***

#### **Emerging Research & Education Awards:**

Minority Serving Institution (MSI) Award Summary Examples – ***Section III.2.5***

Cyberlearning Award Summary Examples – ***Section III.2.6***

FY 2009 Award Priorities/Targets Table – ***Section III.2.7***

FY 2010 Award Priorities/Targets Table – ***Section III.2.8***

FY 2011 Award Priorities/Targets Table – ***Section III.2.9***

3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.

#### **Comments:**

The COV considered several factors that relate to program planning and the prioritization process that guided the development of the RDE portfolio. Data reviewed by the COV showed that there was a clear drop off in applications for funding from 2009 to 2010 and 2011. In the 2009 solicitation, 5 Alliance awards, which comprise the largest funding category, were made. The portfolio balance, or the lack thereof, between 2009-2011 appears to represent a disproportionate amount of funding across the different tracks of awards. It behooves the directorate to consider factors that may have a direct influence on application trends, particularly the effect that funding for the Alliances appears to have had: fewer applications in subsequent years. It also would have been informative to the COV to have information about whether applicants with disability inclusive proposals sought and received funding elsewhere within NSF since HRD programs are considered focal points for broadening participation across the Foundation. It was unclear to the COV whether there is a mechanism for systematically monitoring this.

The COV applauds the RDE program for using external input in developing its most recent solicitation by seeking stakeholder comments about priorities. The COV also noted that NSF's commitment to promoting the scientific literacy of all citizens must include individuals with disabilities. While the focus of the RDE program has included high school students and their preparation and readiness for transition to postsecondary education programs and careers in STEM, the need to promote this across K-12 is critical.

#### **Files:**

RDE 2009 Solicitation 09-508 – ***Section III.1a.1***

FY 2009 RDE Management Plan – ***Section III.1a.2***

FY 2010 RDE Management Plan – [Section III.1a.3](#)  
FY 2011 RDE Management Plan – [Section III.1a.4](#)  
NSF Strategic Plan 2006-2011 – [Section III.3.1 \(See Hard Copy\)](#)  
NSF Strategic Plan 2011-2016 – [Section III.3.2 \(See Hard Copy\)](#)

4. Responsiveness of program to previous COV comments and recommendations.

Comments:

The COV was provided the COV report of 2009, RDE’s response to that report, and a current update. In general, RDE has responded to the suggestions of the 2009 COV as noted:

- The Conflict of Interest training has been revised to encourage panel reviewers to be mindful of potential rivalries or negative relationships with applicants.
- Webinars, sample models of merit review summaries for proposals, and detailed instructions about the review panel process have been prepared and used by RDE staff with every panel. Panelists are also encouraged to disclose a disability given the powerful value of disability statistics.
- In addition to expertise, geographic, gender, disability, and institutional diversity have been an integral part of the selection process for panel reviewers.
- Staffing changes have been made since 2009 with one permanent full time program officer, 1 rotating program officer, and a 50% shared Program Specialist.
- The 2009 COV recommendation that RDE “serve as an NSF intra-agency contact point for all disability-related projects” has been demonstrated from 2009-2011, as evidenced by 8 cofunded awards made by RDE to other NSF programs.
- The Project Data Monitoring System (PDMS) has been developed to track institutional data about disability services from funded institutions. This will be useful to track changes and the sustainability of the impact of RDE funded projects over time.

**Files:**

2009 RDE COV Report – [Section III.4.1](#)

NSF Program Response to 2009 RDE COV Report – [Section III.4.2](#)

2012 Updated NSF Program Response to 2009 RDE COV Report – [Section III.4.3](#)

**IV. Portfolio Review.** Please provide comments on whether the program’s portfolio goals are appropriate and whether the program has achieved its goals for portfolio balance.

The Committee of Visitors for the RDE program was highly impressed by the program's ability to achieve balance across disciplines and sub-disciplines. The COV was particularly impressed with the distribution of awards across institutions and was pleased to see community colleges as well as other nontraditional organizations as a significant part of the portfolio, suggesting a broad inclusion of organizations reaching students with disabilities. The COV noted that projects they perceived as both high quality and high risk were funded. The Committee applauds the Program Officers' decision to broaden the RDE program's reach to new communities and new investigators and their openness to innovative and potentially transformative ideas. The geographical distribution remains a challenge, but the COV recognizes that limited resources (\$6.5 million for yearly investments) and limited proposal submissions also impact the ability to create an RDE portfolio that is as broad as desired.

In 2009, a substantial number of Alliance awards (5) were made, and that had a very large impact on the amount available for funding other award types in the portfolio from 2009 through 2011. In 2010 the number of submitted proposals (49) that included I-Cubed and unsolicited proposals showed a significant decrease from 2009 (90), a trend which continued in 2011 (39 submitted proposals). One possible explanation was that more proposals serving individuals with disabilities were being funded in other divisions or directorates. A challenge for the COV was determining whether this was the case, and, if so, how to measure this. The only indication was the amount of funding from RDE to other programs which was minimal due to its low level of funding overall. No funding flowed back into RDE other than EPSCoR funding. Recognizing that other NSF programs target a specific discipline, the COV believes addressing disabilities in research and education must be targeted to both the specific and unique needs of the RDE community and must also be a requirement of *all* STEM programs.

The RDE program budget has remained consistently low despite continuously increasing NSF budgets between 2009 – 2011 which suggests to the COV a perception on the part of NSF that other STEM areas are funding this work as well. The COV believes that the RDE program and the directorate have an important opportunity to accurately determine the impact of RDE by gathering data and disseminating information about outcomes of RDE's important work across NSF STEM research and education programs. The COV was concerned that the decision to merge RDE into REAL might inadvertently move this small but very visible and effective program into obscurity.

**Files:**

RDE 2009 Solicitation 09-508 – [Section III.1a.1](#)

List of RDE Awards for FY 2009-2011 – [Section III.1b.1](#)

## OTHER TOPICS

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

The RDE program budget has been very limited over the 2009-2011 period reviewed by the COV. It is clear to the COV that additional resources will be critical in the REAL program to accomplish the portfolio goals and the national priorities of the NSF as they relate to students with disabilities, diversity among STEM faculty, and increasing participation in the STEM workforce. The COV compliments the skillful manner by which the RDE program officers dispersed RDE fiscal resources to effect the greatest impact. In 2008 and 2009 increasing the number of Alliance awards resulted in an imbalance among all other RDE award types and limited the ability to initiate new awards, thus having a significant impact on the subsequent number of applications. That said, the COV judged that the funded RDE projects from 2009 through 2011 demonstrated significant impact and highly desirable outcomes.

The COV also noted that a specific strategic portfolio plan for each year of the review (2009-2011) would have been very helpful in addressing whether the RDE program met its goals or needed improvement. In addition, the COV believes there is likely a gap between the knowledge gained through RDE funded projects over the review period and the extent to which the rest of the NSF community (specifically program officers of education-related portfolios) is aware of the results and findings of these RDE projects. The COV concludes that a defined strategy is needed to capitalize on the outcomes and information gleaned from RDE sponsored projects and disability-oriented initiatives in other co-funded NSF projects. Such a strategic approach is critical across directorates at a time when program officers are planning and implementing projects aimed at targeting, attracting, and retaining students with disabilities in STEM. The COV is concerned that the RDE legacy and its baseline data are effectively translated and used by REAL in its efforts to plan and expand benefits to persons with disabilities. The COV recommends that the REAL program clearly document its strategic plan to build on RDE's legacy of effective disability-related projects and programs, using benchmarks developed by the RDE program as its baseline.

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.

The COV determined that there was a gap in the 2009 – 2011 documentation that outlined RDE's goals, objectives, measurable projections, and plans. The result was insufficient information to determine the rationale for allocating a large amount of funding to Alliances at the expense of other programs (see Portfolio Review section). This is not to suggest that this was a poor decision, but only that the documentation supporting this would have been helpful as a benchmark against which to evaluate "success toward goals." For future planning, the COV recommends the development of a strategic plan including goals, objectives, projected outcomes, and implementation plans as RDE becomes part of REAL.

Despite this gap, the COV viewed the RDE program's priorities as equivalent to its program goals and objectives. Specifically, the program sought to increase student success, increase the diversity of institutions of higher education represented in funding decisions, broaden collaborations across NSF projects, ensure strong independent project evaluation, and include

institutions in EPSCoR jurisdictions. The COV is very impressed with the dedication, focus, and hard work of the RDE Program Officers in achieving these priorities over the past three years.

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

This is a significant point in time for the RDE program with important lessons learned that need to be captured and disseminated as RDE merges with GSE and REESE to become REAL. To ensure transparency and support, the COV recommends the development of an action plan (with input from expert external stakeholders) including a detailed logic model with a six month timeline to clarify the NSF's understanding about disability research and education both in RDE as it moves to REAL and across the organization. The COV recommends the first step in this process be to make RDE the focal point/lead agent for the thorough professional development of program officers across the Foundation on issues relating to disabilities research and effective education practices. This cannot happen in a two hour workshop but will require sustained participation (up to a year) in continuous professional development and informal learning communities that explore quality research and practice. This is essential for three reasons:

- Recognition that disabilities literacy is as important for program officers and the leadership of the NSF as STEM literacy is for our citizenry.
- Recognition from the 2009-2011 COV review that one or two program officers with increasingly less FTE dedicated to the RDE program is not sufficient to serve the entire NSF in terms of program expertise.
- Recognition that high quality effective practices and research in disabilities is essential for funding decisions across the NSF just as STEM expertise is essential in RDE. This requires a certain threshold of understanding about disabilities to address remaining implicit biases that exist in our culture, our classrooms, and even our institutions of higher education.

This is critical to ensure the national goal of increasing the number of students with disabilities in STEM education and the workforce. The COV further believes this will be important for all underrepresented populations in STEM. Given the NSF's leadership in efforts to broaden diversity, the COV is confident that through lessons learned by the RDE program the NSF can and will provide innovative leadership to effect and sustain the transformation of organizational practice.

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

The COV wants to underscore its recognition of the support of the NSF in its commitment to increase the number of students and faculty with disabilities in the STEM academy and workforce. Too often and for too long persons with disabilities have been excluded from participation, and many have experienced palpable and subtle exclusionary practices, often

emanating from ignorance and stereotypic perceptions. There can be no doubt after the review of the many documents provided for the COV that RDE's work between 2009 and 2011 was significant and meaningful. Both NSF leadership and the RDE program officers should take pride in the program's exemplary work. The RDE program has made both research and education a priority with the understanding that meaningful change is based upon the synergy of research applied to practice. The implementation of high quality effective practices in secondary schools, colleges, and universities, as well as continued research among a diverse representation of beneficiaries is impressive.

The NSF is now poised to take this important base of knowledge developed through RDE's funded initiatives and move it beyond the RDE program to be integrated as relevant into all STEM education in practice. Capacity building across directorates to promote the results of RDE research to prepare individuals with disabilities to enter the STEM academy and workforce should be a priority. A concern of the COV is the burden on the small number of program officers with expertise in diversity issues. As RDE moves toward REAL, the COV wishes to emphasize the importance of professional development about disabilities across the disciplines and directorates to create disability literacy. This will prevent the siloing or marginalization of selected program officers with disability expertise as "the disabilities person," for example. Given the extensive work demands of the RDE program staff as demonstrated by the COV review of project jackets and other documentation, it is clear that the workload of the RDE program staff is significant. Planning for additional responsibilities that can be anticipated with the integrated REAL program must be thoughtfully addressed as a critical priority.

#### COV Recommendations:

- NSF's goal of scientific literacy must include additional funding and personnel to support disability research and education across all programs of the Foundation.
  - One action plan and timeline for promoting disability knowledge must be developed by REAL/RDE and implemented across the directorate.
  - Benchmarks developed by RDE must serve as a baseline for REAL in order to expand to meet the needs of Americans with disabilities related to STEM education and professions and to address the continuing STEM workforce shortages.
5. NSF would appreciate your comments on how to improve the COV review process, format and report template.
- Provide an orientation document to all COV members that includes the roles and responsibilities of the COV chair, sub-committee chairs, and each COV panelist.
  - Compile and share names and contact information for each member of each COV. During the COV process, conversations among COV panelists from different programs occur, and this would be a helpful document for future reference.
  - Distribute a timeline with dates and tasks to guide the COV process.

- Explain the difference between a panel review and a COV in the pre-COV webinar so that all COV members are aware of what is expected and what information is critical.
- Make all materials available for each COV sub-committee to review at least six weeks prior to the face-to-face meeting.
- Include live links to the reference materials in the COV master template.
- Clarify changes to the templates made between COV panel meetings.
- Describe what happens within NSF *after* the COV reports/findings. Are there Foundation wide impacts? Are the reports on results from funded projects reviewed by Program Officers in the research directorates?
- Provide the RDE COV with data and relevant content related to funding of awards serving individuals with disabilities across NSF directorates since HRD programs are considered focal points for broadening participation across the Foundation and one of RDE's priorities is clearly stated as, "Broaden collaborations across NSF projects." Experts within the RDE COV should be able to look at the larger impact of the program across other NSF programs, and at how the organization effectively integrates research and education across disciplines to truly achieve the RDE priority and the NSF goal of achieving national impact on the STEM workforce.

**SIGNATURE BLOCK:**

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For the Research in Disabilities Education Program (RDE) COV

Joan M. McGuire, Ph.D.

Chair