Ask Early, Ask Often

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Topics Covered

- Personnel Update
- NSF Budget in the Federal Context
- NSF Fiscal Year 2013 Budget Request
- ARRA Acceleration
- Merit Review:
  - Merit Review Process Working Group
  - Merit Review Criteria Working Group
- Research.gov Update
- Award Terms and Conditions Update
- Cost Sharing Update
- Research Performance Progress Report
Personnel Update

- Mr. Eugene Hubbard appointed Head, Office of Information & Resource Management and Chief Human Capital Officer January 8, 2012

- Ms. Amy Northcutt appointed Chief Information Officer January 8, 2012


- Dr. Karl Erb, Head, Office of Polar Programs (OPP) to retire March 31, 2012

- Dr. Kelly Falkner will be Acting Head, OPP as of April 1, 2012
FY 2013 Budget Request

- $7.373 billion
- Consistent with Administration’s commitment to doubling NSF and basic research agencies
- Emphasizes ways that fundamental research contributes to addressing national challenges
## FY 2013 Budget Request

National Science Foundation
Funding by Account

(Dollars in Millions)

<table>
<thead>
<tr>
<th>Account</th>
<th>FY 2012 Enacted</th>
<th>FY 2013 Request</th>
<th>Change Over FY 2012 Enacted</th>
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<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>Percent</td>
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<tr>
<td>Research &amp; Related Activities</td>
<td>$5,689</td>
<td>$5,983</td>
<td>$294</td>
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<tr>
<td>Education &amp; Human Resources</td>
<td>829</td>
<td>876</td>
<td>47</td>
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<tr>
<td>Major Research Equipment &amp; Facilities Construction</td>
<td>197</td>
<td>196</td>
<td>-1</td>
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<td>Agency Operations &amp; Award Management</td>
<td>299</td>
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<td>National Science Board</td>
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<tr>
<td>Office of Inspector General</td>
<td>14</td>
<td>14</td>
<td>-</td>
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<tr>
<td><strong>Total, NSF</strong></td>
<td><strong>$7,033</strong></td>
<td><strong>$7,373</strong></td>
<td><strong>$340</strong></td>
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Totals may not add due to rounding.
FY 2013 Request: Total R&D by Agency
Budget Authority in Billions of Dollars

- DOD, $71.2
- HHS (NIH), $31.4
- NASA, $9.6
- DOE, $11.9
- NSF, $5.9
- USDA, $2.3
- DOC, $2.6
- All Other, $5.9

Total R&D = $140.8 billion
NSF Competitive Awards, Declines & Funding Rates

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<td>10,230</td>
<td>10,721</td>
<td>10,255</td>
<td>9,757</td>
<td>10,318</td>
<td>11,354</td>
<td>11,024</td>
<td>14,641</td>
<td>42,547</td>
<td>40,370</td>
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<td>24,581</td>
<td>29,024</td>
<td>33,234</td>
<td>31,841</td>
<td>31,732</td>
<td>32,752</td>
<td>32,883</td>
<td>30,587</td>
<td>13,015</td>
<td>11,207</td>
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</table>

29% 27% 24% 23% 25% 26% 25% 32% 23% 22%
Distribution by Average Reviewer Ratings for Awards and Declines, FY 2011

- No Score: 701 (Awards: 1614) 3 (Declines)
- Poor: 1550 (Awards: 15) 3 (Declines)
- Fair: 11335 (Awards: 64) 64 (Declines)
- Good: 19192 (Awards: 2170) 6052 (Declines)
- Very Good: 6052 (Awards: 4003) 3338 (Declines)
- Excellent: 1540 (Awards: 3338) 3338 (Declines)
Key Informational Sites

- Fiscal Year 2013 Budget Request
  http://www.nsf.gov/about/budget/fy2013/index.jsp

- NSF Strategic Plan for Fiscal Years 2011-2016

- NSB Report on Merit Review
ARRA Acceleration: NSF Implementation of OMB Memorandum M-11-34
OMB Memorandum M-11-34

• Federal agencies directed to accelerate spending of remaining ARRA funds in discretionary grant programs

• Funds not spent by 9/30/2013 will be reclaimed to the extent permitted by law

• Waivers may be requested sparingly in case of:
  • Contractual commitments;
  • Complex environmental review;
  • Programs that are long-term by design and acceleration would compromise core programmatic goals; and/or
  • Special circumstances

• No guarantee of OMB approval of requested waivers
Current NSF ARRA Expenditures total $1.44 billion
Projections for 9/30/13 total Just Over $2 billion

ARRA Appropriation

~$1 B
NSF Implementation of OMB M-11-34

• **Interagency coordination** – where necessary, see OMB guidance; coordinate implementation strategy with NIH & other agencies.

• **Aggressive stratification** – analyze NSF ARRA portfolio to determine all areas where we can encourage responsible acceleration.

• **Waiver application** – request OMB waivers as appropriate.

• **Award modification** – modify policies for ARRA awards as necessary; modify no-cost extension policies for all ARRA awards terminating during FY2012 or later.

• **Aggressive communication** – increased communication within NSF, between other agencies & to ARRA recipients.
NSF Implementation of OMB M-11-34
What NSF Staff and Recipients Need to Know!

• Responsible expenditure acceleration now!!

• Award specific: Consider the program plan and the Ts & Cs and facts and circumstances of each specific award

• Communicate with the cognizant NSF program officer and check the NSF ARRA web page for guidance: http://www.nsf.gov/recovery/

• Grantee approved no-cost extensions (NCE)

• ARRA grantees may ONLY issue themselves NCE through 9/30/2013, but NOT beyond 9/30/2013

• Waiver requests

• NSF will only go forward with requests that have a compelling and defendable rationale in accordance with the OMB waiver criteria.
NSF Merit Review Criteria Revision
NSB Task Force on Merit Review

• Established Spring 2010

• Rationale:
  • More than 13 years since the last in-depth review and revision of the review criteria
  • Opportunity to align review criteria with NSF’s new Strategic Plan
  • Persistent anecdotal reports about confusion related to the Broader Impacts criterion, and inconsistency in how the criterion was being applied.
Stakeholder Input

• Interviews
  • 20 NSF senior leaders (BIO, CISE, EHR, ENG, GEO, MPS, SBE, OCI, OIA, OISE, OGC, BFA)
  • Representatives of a small set of diverse institutions

• Surveys
  • NSF POs, Division Directors, Advisory Committee members
    • 520 responses, 61% response rate
  • NSF PIs and reviewers
    • 3989 responses, 51% response rate

• NSF website
  • 611 people provided responses to one or more questions (>2200 total comments)
Sec. 526 of America COMPETES Reauthorization Act of 2010

• Instructs NSF to have a Broader Impacts review criterion to address several societal goals

• Further instructs NSF to develop and implement a policy for this criterion related to:
  • Strategies and approaches employed to address the Broader Impacts criterion
  • Assessment and evaluation
  • Institutional engagement
  • Education of NSF staff and potential NSF-supported investigators about new policies
Final Report: Conclusions

- The Intellectual Merit and Broader Impacts review criteria together capture the important elements that should guide the evaluation of NSF proposals.

- Revisions to the descriptions of the Broader Impacts criterion and how it is implemented are needed.

- Use of the review criteria should be informed by a guiding set of core principles.
Merit Review Criteria Guiding Principles

• All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.

• NSF projects, in the aggregate, should contribute more broadly to achieving societal goals.

• Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects.
Merit Review Criteria

When evaluating NSF proposals, reviewers should consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits would accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, reviewers are asked to evaluate all proposals against two criteria:

- **Intellectual Merit:** The intellectual Merit criterion encompasses the potential to advance knowledge; and

- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.
Status and Next Steps

• NSB approved report on December 14, 2011

• Published on January 10, 2012:

• Next Steps:
  • NSF is developing an implementation plan
  • Revised criteria and principles will be included in the next revision of the *Proposal and Award Policies and Procedures Guide* (external), and the *Proposal and Award Manual* (internal)
Merit Review Process
Working Group
Relevant Trends

• The number of proposals submitted is up
• The number of PIs submitting proposals is up

… and Consequences
The merit review process is under stress

• **PIs:**
  • The number of proposals submitted per PI before an award is rising
  • The proportion of PIs not receiving funding in three years is rising

• **Reviewers:**
  • Increasing number of proposals increases reviewer workload
  • Increased use of panel-only review increases time and travel commitment for those participating, narrows overall participation

• **NSF staff:**
  • Workload is high
Main Source of Proposal Pressure

PIs submitting research proposals per 3-year period

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<tbody>
<tr>
<td>PIs Applied</td>
<td>37.0</td>
<td>39.2</td>
<td>42.0</td>
<td>44.1</td>
<td>45.2</td>
<td>46.2</td>
<td>47.0</td>
<td>48.5</td>
<td>51.7</td>
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<tr>
<td>PIs Awarded</td>
<td>16.0</td>
<td>16.2</td>
<td>16.4</td>
<td>16.2</td>
<td>16.1</td>
<td>16.8</td>
<td>17.4</td>
<td>19.6</td>
<td>20.5</td>
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<tr>
<td>PIs Funded%</td>
<td>43.0%</td>
<td>41.0%</td>
<td>39.0%</td>
<td>37.0%</td>
<td>36.0%</td>
<td>36.0%</td>
<td>37.0%</td>
<td>40.0%</td>
<td>39.6%</td>
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Over the decade -
PIs applying: up 48%
PIs awarded: up 31%
PIs not funded: up 60%
Review Methods

Graph showing data trends with four lines representing different data sets. The x-axis is not labeled, and the y-axis ranges from 0% to 70%.