



## **National Science Foundation Update**

**National Council of University Research  
Administrators  
Annual Meeting  
Washington, DC  
October 31-November 3, 2010**

### **Ask Early, Ask Often**

■ **Marty Rubenstein**

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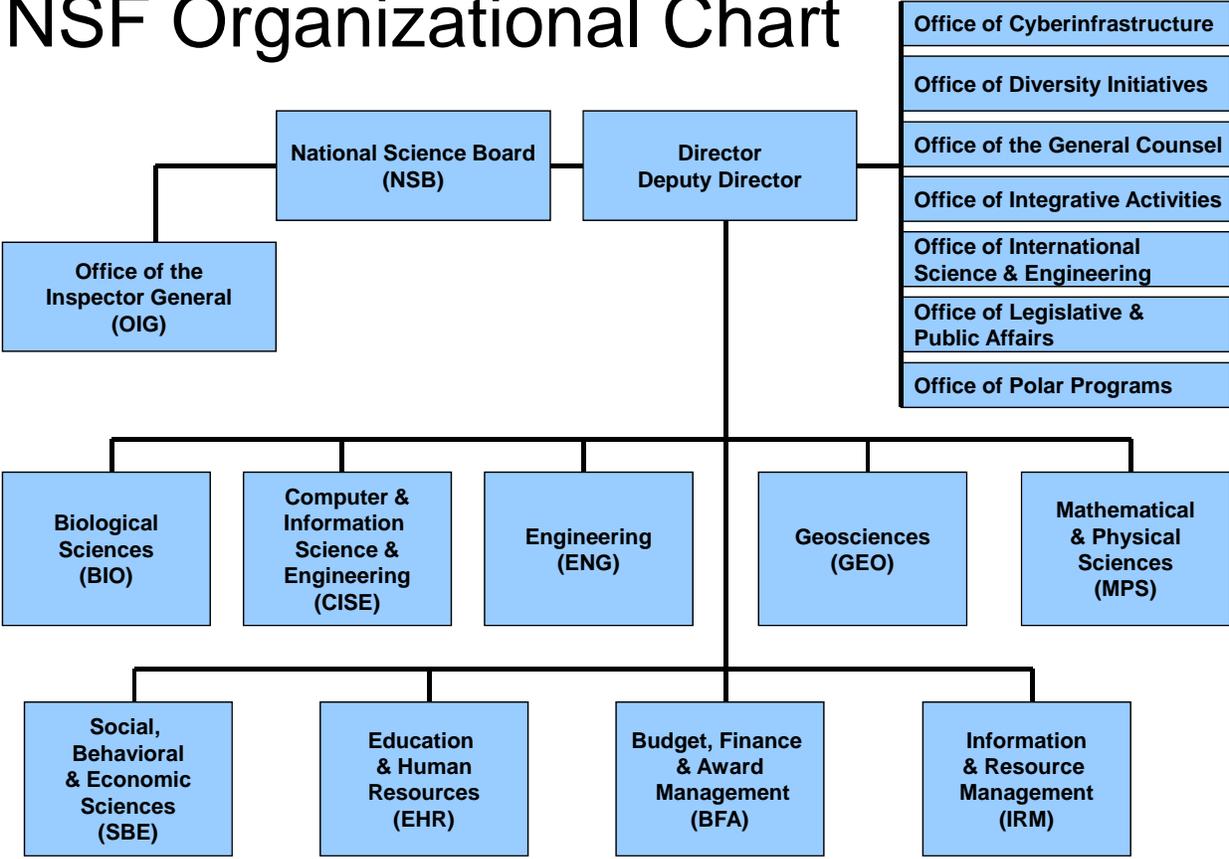
■ **Jean Feldman**

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## Topics

- NSF Organization & Personnel Changes
- FY 2011 Budget Request
- Transparency & Accountability
- NSF Policy Updates

# NSF Organizational Chart



## Recent Personnel Changes

- Dr. Subra Suresh confirmed as NSF Director
- Dr. Cora Marrett nominated as Deputy Director
- Dr. Farnam Jahanian named Assistant Director for Computer & Information Science & Engineering
- Ms. Amy Northcutt named Acting Director of the Office of Information & Resource Management (OIRM)
- Dr. Edward Seidel named Assistant Director for Mathematical & Physical Sciences (MPS)
- Dr. Jose Munoz named Chief Technology Officer
- Dr. Alan Blatecky named Acting Director of the Office of Cyberinfrastructure (OCI)



## **FY 2011 Budget Request**

# FY 2011 Budget Request

*(dollars in millions)*

<b>Account</b>	<b>FY 2011 Request</b>	<b>FY 2011 House Mark</b>	<b>FY 2011 Senate Mark</b>
<b>R&amp;RA</b>	<b>\$6,019</b>	<b>\$5,961</b>	<b>\$5,967</b>
<b>EHR</b>	<b>\$892</b>	<b>\$958</b>	<b>\$892</b>
<b>MREFC</b>	<b>\$165</b>	<b>\$165</b>	<b>\$155</b>
<b>AOAM</b>	<b>\$329</b>	<b>\$321</b>	<b>\$319</b>
<b>NSB</b>	<b>\$5</b>	<b>\$5</b>	<b>\$5</b>
<b>OIG</b>	<b>\$14</b>	<b>\$14</b>	<b>\$15</b>
<b>Total</b>	<b>\$7,424</b>	<b>\$7,424</b>	<b>\$7,353</b>

**Totals may not add due to rounding.**

## FY 2011 Budget Request: Administration Priority Programs

### Administration Priority Programs:

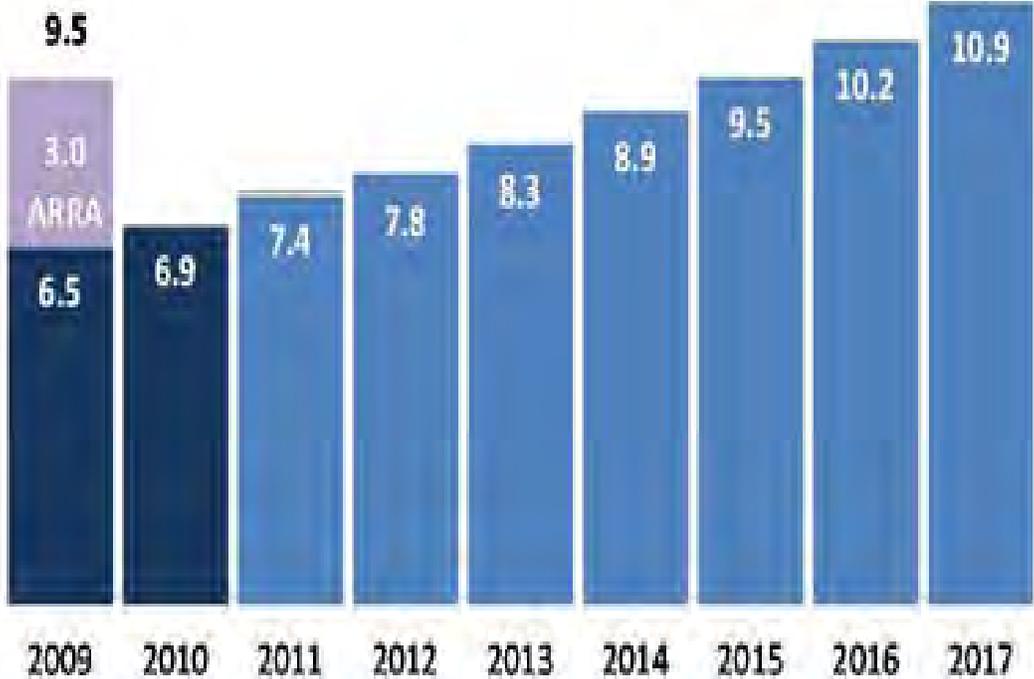
	<b>FY 2011 Total</b>	<b>Increase over FY 2010</b>
Graduate Research Fellowship Program	\$158 M	\$22.3 M
Faculty Early Career Development	\$209 M	\$12.8 M
Climate Change Education Program	\$10 M	-
Advanced Technological Education	\$64 M	-

## FY 2011 Budget Request: NSF-wide Priorities

- USGCRP: NSF contributions increase by 16 percent, to \$370 million
  
- NSF portfolios:
  - Science, Engineering, and Education for Sustainability (SEES): \$766 million
  - Cyberlearning Transforming Education (CTE): \$41 million

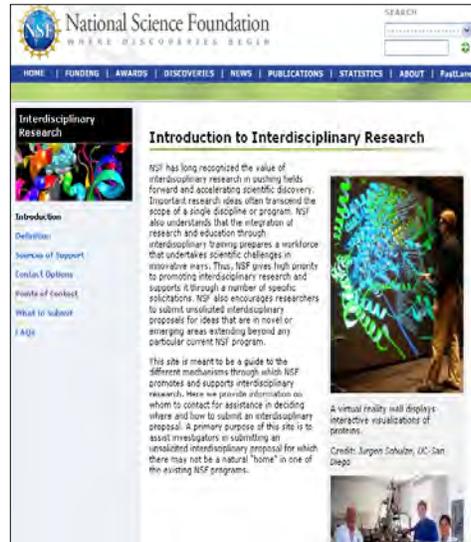
# President's Plan for Science and Innovation

**Total NSF Funding**  
*Dollars in billions*



# Interdisciplinary Research (IDR)

- Important research ideas often transcend the scope of a single discipline or program.
- NSF gives high priority to promoting interdisciplinary research and supports it through a number of specific solicitations.
- NSF encourages submission of unsolicited interdisciplinary proposals for ideas that are in novel or emerging areas extending beyond any particular current NSF program.



## Transparency & Accountability Administration Priorities

## Focus on “Open Government”

### Core Principles:

- Transparency
- Participation
- Collaboration

### Open Government Policy:

- The President’s Memorandum on Transparency and Open Government (Jan 21, 2009)
- A Strategy for American Innovation: Driving Towards Sustainable Growth and Quality Jobs
- The Open Government Directive



*“My Administration is committed to creating an unprecedented level of openness in Government. We will work together to ensure the public trust and establish a system of transparency, public participation, and collaboration. Openness will strengthen our democracy and promote efficiency and effectiveness in Government.”*

**- President Barack Obama**

## Government-wide efforts: Transparency



- **USASpending.gov:**
  - Financial Transparency
- **Recovery.gov:**
  - Economic Stimulus Spending
- **Data.gov**
  - One Stop Data Sharing Platform
- **IT Dashboard:**
  - Visualizing Technology Spending

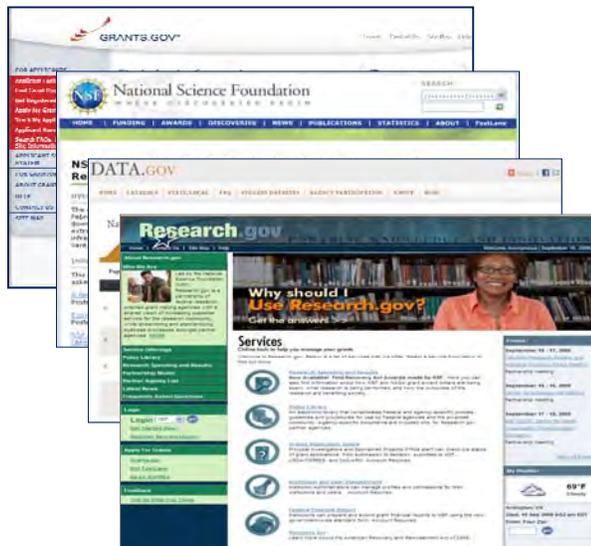
*“Transparency promotes accountability by providing the public with information about what the Government is doing.”*

OMB Memo on Open Government, Dec. 8, 2009



## Transparency & Accountability Meeting Administration Priorities

### NSF Efforts - Transparency



- Grants.gov
- NSF Recovery.gov
- Data.gov: NSF Datasets
- Research.gov



## **Transparency & Accountability What It All Means For You**

### **NSF Bringing it All Together**

- **Technology & Tools:**
  - Research.gov: Partnerships and Services for the Research Community
- **Standards and Policy:**
  - Project Outcomes Report for the General Public (America COMPETES Act)
  - Federal Financial Report
  - Research Performance Progress Report

## Research.gov

- Supports the needs of institutions and researchers
- Increases transparency of Federal research spending and outcomes (Research Spending & Results/Project Outcomes Report)
- Provides the public, scientific community, and Congress with easy access to information (SEE Innovation)
- Leverages government-wide standards (RPPR/FFR)

## Current Research.gov Partners

Research.gov simplifies the research community's access to information and grant services for multiple federal agencies:

- National Science Foundation (Lead Agency)
- National Aeronautics and Space Administration (Partner Agency)
- Department of Defense Research (Partner Agency)
- National Institute of Food and Agriculture (Partner Agency)



# Current Research.gov Services

## Public Facing Services:

- SEE Innovation (New!)
- Research Spending & Results
  - Find Recovery Act Awards
- Research Headlines & Events
- Policy Library (Government-wide)



## Research Community Services:

- Project Outcomes Report for the General Public (New!)
- Grants Application Status
- Federal Financial Reports
- Manage institution and user accounts
- Research Performance Progress Reports (planning stage)
- Application Submission Web Service (now in pilot)



# NSF Policy Updates

## Topics

- America COMPETES Act Provisions
  - Responsible Conduct of Research
  - Reporting of Research Results
  - NSF Cost Sharing Policy
- NSF Data Sharing Policy
- FFATA Subrecipient Reporting
- ARRA Update

## SEC 7009: Responsible Conduct of Research

“The Director shall require that each institution that applies for financial assistance from the Foundation for science and engineering research or education describe in its grant proposal a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduate students, graduate students, and postdoctoral researchers participating in the proposed research project.”

## SEC 7009 Implementation

- Implementation:

- Effective January 4, 2010, a proposing institution's AOR must certify that the institution has a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduates, graduate students, and postdoctoral researchers who will be supported by NSF to conduct research.

## NSF RCR Resources

- RCR Page on the NSF Policy Website

- <http://www.nsf.gov/bfa/dias/policy/rcr.jsp>
  - Federal Register Notices
  - FAQs
  - International Research Integrity

## NSF Funding of an On-line Ethics Resource

- NSF 10-547: Ethics in Science, Mathematics, and Engineering Online Resource Center (Ethics Resource). This competition proposed to fund one award to support a multidisciplinary team of researchers who will create an online ethics resource center.
- The National Professional and Research Ethics Portal is an online resource center for ethics in science, mathematics, and engineering. It will be developed by the University of Illinois at Urbana-Champaign and its partners Howard University, the National Academy of Engineering, and Public Responsibility in Medicine and Research (PRIM&R).

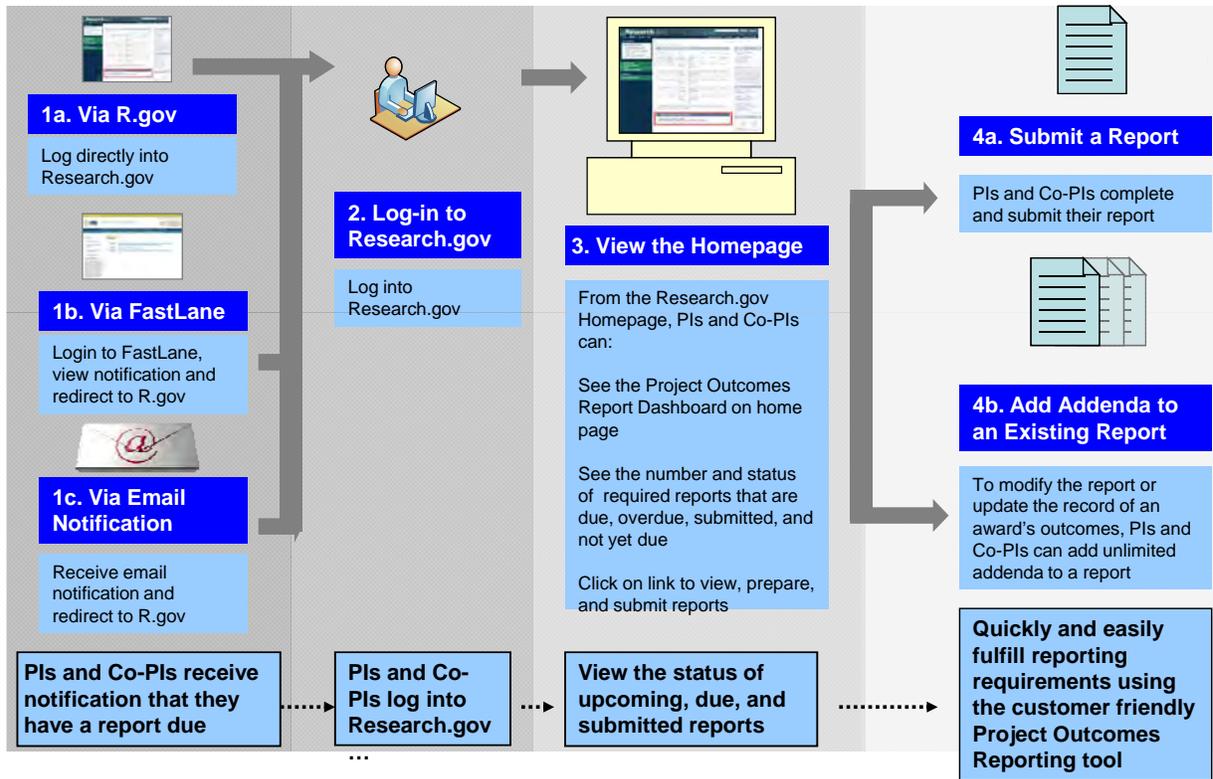
## On-line Ethics Resource (Cont'd)

- This resource center:
  - is designed to foster a broad conversation about professional and research ethics across a range of disciplines and settings and to provide support resources for those studying, conveying and practicing research and professional ethics.
  - will incorporate existing resources and a wide range of new, peer-reviewed materials to be developed by the proposal team and other scholars, from instructional modules for learners to white papers that summarize research and best practices in teaching ethics and maintaining ethics programs.
  - will provide comprehensive access to the research literature and other materials through sophisticated, user-friendly federated search functions and will host discussions among communities of interest.

## SEC 7010: Reporting of Research Results

- Section 7010 requires that all final project reports and citations of published research documents resulting from research funded, in whole or in part, by the Foundation, are made available to the public in a timely manner and in electronic form through the Foundation's Website.

# How PIs will submit PORs



## Report Preparation and Submission

- PIs will submit a brief (200 – 800 words of content) report and have the option to upload images via the new reporting tool in Research.gov. This report is in addition to, not in lieu of, the final project report.
- Report is posted publically to Research.gov with a disclaimer:

*“The Project Outcomes Report for the General Public is displayed verbatim as submitted by the Principle Investigator (PI0 for this award. Any opinions, findings, and conclusions or recommendations expressed in this Report are those of the PI and do not necessarily reflect the views of the National Science Foundation; NSF has not approved or endorsed its content”.*
- Ability to modify a submitted report for up to 30 days after submission. After 30 days, modifications to reports can be made by adding an unlimited number of addenda to the original report.

## Report Contents

- Report Should Contain:
  - Outcomes/findings that address the intellectual merit and broader impacts of the NSF-funded activity
  - Products that have resulted from the award should also be listed (collections, data sets, software, etc.)
    - All publications that are provided in FastLane are automatically included.
- Report should NOT contain:
  - Confidential, proprietary business information
  - Unpublished conclusions or data that could compromise ability to publish results
  - Invention disclosures that might adversely affect patent rights
  - Private Personally identifiable information

## Section 7013: Cost Sharing

- NSB Cost Sharing Report
  - ACA directed NSB to evaluate decision to eliminate cost sharing
  - This is a second comprehensive report which provides specific recommendations to NSF
  - NSF has made revisions to its existing cost sharing policy and has received clearance from OMB to proceed with implementation these recommendations



## NSF's Revised Cost Sharing Policy

- In response to statutory requirements, and, as recommended by the National Science Board, mandatory cost sharing has been implemented for the following programs:
  - Major Research Instrumentation Program;
  - Robert Noyce Scholarship Program;
  - Engineering Research Centers;
  - Industry/University Cooperative Research Centers;
  - Experimental Program to Stimulate Competitive Research
    - Cost sharing for these programs must be identified on Line M of the approved budget.

## NSF's Revised Cost Sharing Policy (Cont'd)

- Mandatory NSF-required programmatic cost sharing will rarely be approved for an NSF program.
  - To request consideration of mandatory programmatic cost sharing requirement in an NSF solicitation, the program must develop a **compelling justification regarding why non-Federal financial support and commitment is considered foundational to programmatic success**. Such requests to require cost sharing must be explicitly approved by the NSF Director.

## NSF's Revised Cost Sharing Policy (Cont'd)

- Inclusion of voluntary *committed* cost sharing will be prohibited in solicited & unsolicited proposals.
  - To be considered voluntary committed cost sharing, the cost sharing must meet all of the standards of [2 CFR § 215.23](#), to include identification of cost sharing on the NSF budget.
  - Line M will be “greyed out” in FastLane.
- Organizations may, at their own discretion, continue to contribute any amount of voluntary uncommitted cost sharing to NSF-sponsored projects.

## NSF's Revised Cost Sharing Policy (Cont'd)

- The Facilities, Equipment & Other Resources section of the proposal should be used to provide a comprehensive description of all resources (both physical and personnel) necessary for, and available to a project, without reference to cost, date of acquisition, and whether the resources are currently available or would be provided upon receipt of the grant.

## NSF's Revised Cost Sharing Policy (Cont'd)

- NSF program officers may discuss the “bottom line” award amount with PIs, but may not renegotiate or impose cost sharing or other organizational commitments.
- NSF Program Officers may not impose or encourage programmatic cost sharing requirements.

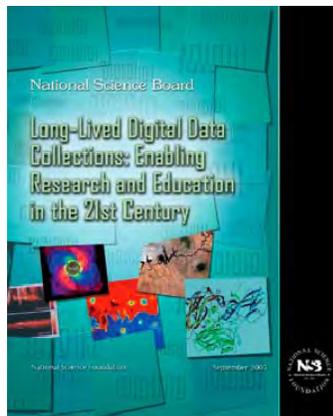
And, as a reminder....

- Per Recommendation 7 of the NSB Report, there is a continued expectation for grantees to continue the existing practice of sharing in the costs of faculty salaries; and
- NSF grantees remain subject to the provisions of OMB M-01-06, "*Clarification of OMB A-21 Treatment of Voluntary Uncommitted Cost Sharing and Tuition Remission Costs*," regarding requirements for committing and tracking "some level" of faculty (or senior researcher) effort as part of the organized research base.



## **Changes to Implementation of NSF's Data Sharing Policy**

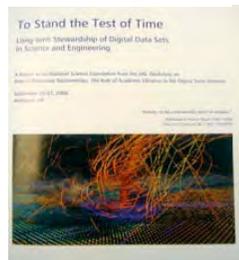
**NSB Report: Long Lived Digital Data Collections Enabling Research and Education in the 21st Century**



**PCAST Digital Data**



**NSF Experts Study**



**Industry**

**Storage Networking Industry Association (SNIA) 100 Year Archive Requirements Survey Report**

**"there is a pending crisis in archiving... we have to create long-term methods for preserving information, for making it available for analysis in the future." 80% respondents: >50 yrs; 68% > 100 yrs**

**Wired Nature**



**"The data deluge represents an opportunity to advance U.S. leadership in science and technology, and harnessing it has become a national priority." President's Council of Advisors on Science & Technology, August 2007**

## Data Management Plans

- NSF is making a change in the implementation of its existing data sharing policy. Existing policy states NSF's expectations with respect to sharing of data and other research products:
  - **Grant Conditions:** "NSF expects investigators to share with other researchers, at no more than incremental cost and within a reasonable time, the data, samples, physical collections and other supporting materials created or gathered in the course of the work. It also encourages grantees to share software and inventions or otherwise act to make the innovations they embody widely useful and usable."
  - **Grant Proposal Guide:** Current proposal preparation requirements stipulate that the project description should provide: "...a clear description of experimental methods and procedures and plans for preservation, documentation, and sharing of data, samples, physical collections, curriculum materials and other related research and education products."

## New Data Management Plan Requirements

- All proposals are required to include, as a supplementary doc, a data management plan of up to 2 pages.
- Plan should describe how the proposal will conform to NSF policy on dissemination and sharing of research results.
- A valid Data Management Plan may include only the statement that no detailed plan is needed, as long a clear justification is provided.
- Plan will be reviewed as part of the intellectual merit and/or broader impacts of the proposal.

## New Data Management Plan Requirements (Cont'd)

- Proposers who feel that the plan cannot fit within the two page limit may use part of the 15-page Project Description for additional data management information.
- Does not supersede specialized solicitation requirements regarding data management plans.
- Data management requirements specific to the Directorate, Division, Office or other unit are available at: <http://www.nsf.gov/bfa/dias/policy/dmp.jsp>
- FastLane will not permit submission of a proposal that is missing a data management plan.



## **NSF Implementation of Subaward Reporting & Executive Compensation Data under FFATA**

## FFATA Subrecipient Reporting: What NEW reporting is required?

- Prime contract awardees of contracts \$25K or more must report associated contract subawards
  - Data collection will be phased with all required contract subawards reporting by March 2011
- Prime grant awardees of grants \$25K or more must report associated grant subawards
- Executive compensation information for awardees

## Subrecipient Reporting: When does reporting begin?

- Contracts subaward (subcontracts only) reporting requirement will be phased in as follows:
  - Phase 1: Reporting subawards of prime awards valued greater than \$20M began in **July 2010**
  - Phase 2: Reporting subawards of prime awards valued greater than \$550K begins **October 1, 2010**
  - Phase 3: Reporting subawards of prime awards valued at \$25K or more begins **March 1, 2011**
- Grants subaward (subgrants only) reporting is required for all new awards made on or after **October 1, 2010** for all new prime grant awards \$25K or more
  - FSRs will begin accepting reports on **October 29, 2010**

## FFATA Subrecipient Reporting: How Do Agencies/Institutions Report??

- Agencies must report prime grant award information through the **FAADS+**
- Prime grant awardees must report subaward information through the **FFATA SubAward Reporting Systems (FSRS)**
- Prime grant awardees must register with the **Central Contractor Registry (CCR)**
- If required, prime grant awardees must report executive compensation through the **CCR**

## Report Submission Timeframe



All awardees must report by the end of the month following the month the award or obligation was made

- For example, if an award is made on October 10, 2010 the awardee would have until November 30, 2010 to report the award – all awards made during October will have until November 30, 2010 to report

## NSF Implementation

- Effective October 1<sup>st</sup>:
  - NSF's standard award conditions were modified to incorporate the:
    - Reporting Subawards and Executive Compensation Award Term; and
    - Central Contractor Registration and Universal Identifier Requirements Award
  - This includes:
    - NSF Agency Specific Requirements to the RTC;
    - GC-1;
    - CA-FATC; and
    - SBIR.

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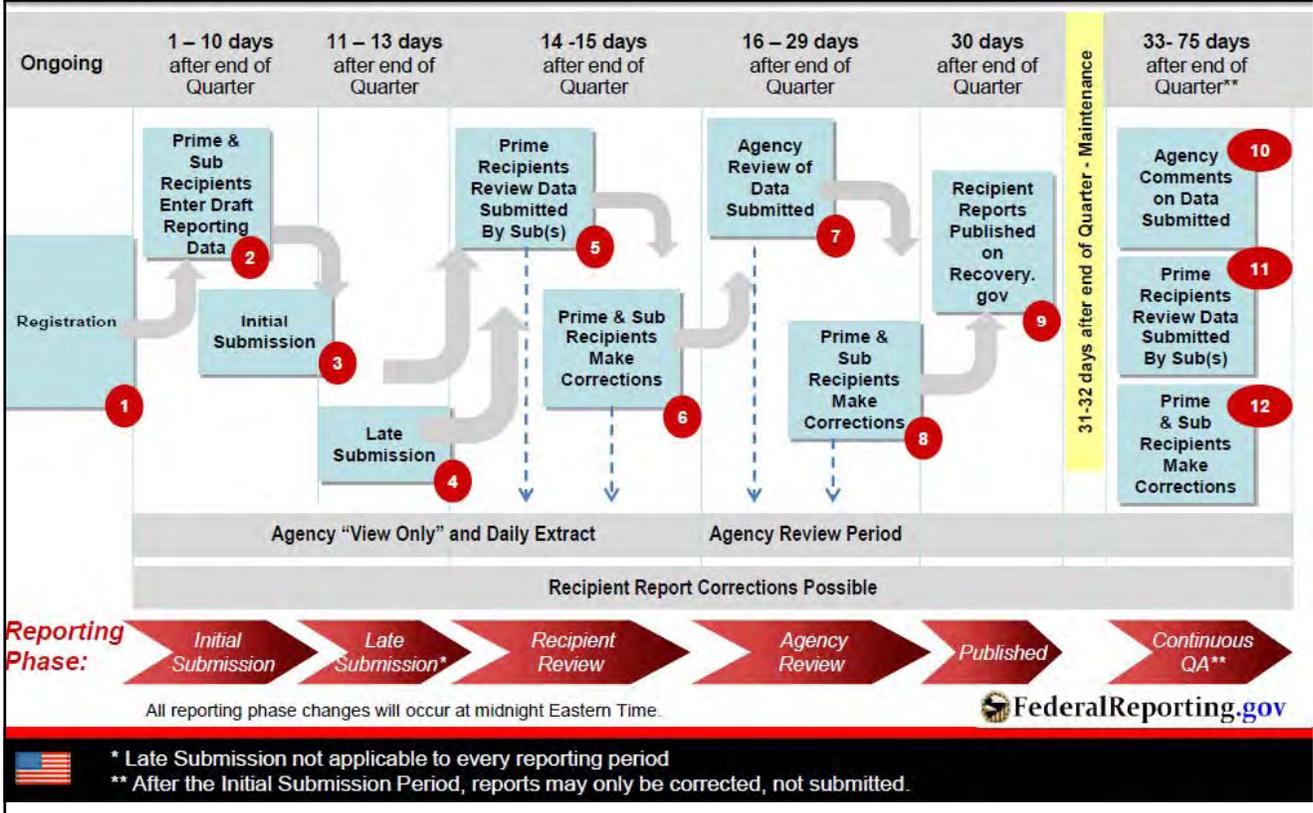


## NSF ARRA Update

## ARRA: NSF Implementation

- Recovery Act funds were to be awarded in a timely manner. NSF made 5,023 awards totaling \$3.0B to more than 900 institutions by September 30, 2010.
- All grants were issued as standard grants with durations of up to five years.
- Funding of new PIs and high-risk, high-return research were top priorities.
- Only four ARRA-specific solicitations were released.
- NSF considered proposals declined on or after October 1, 2008, and made 318 awards from this pool.

# October 2010 Recipient Reporting Timeline and Activities



# NSF ARRA Reporting Results

## Quarter Ending 9/30/2009

- Recipient Reporting Compliance rate was 98%
- Total of 107 out of 4,502 did not report
- No uncorrected significant errors and 100% accuracy rate
- Responded to six data calls from OMB and Recovery Board

## Quarter Ending 12/31/2009

- Recipient Reporting Compliance rate was 99.7%
- Total of 14 out of 4,535 did not report
- 7 two time non-reporters
- One uncorrected significant error and 99.9% accuracy rate
- Responded to nine data calls from OMB and Recovery Board

## Quarter Ending 3/31/2010

- Recipient reporting compliance rate was 99.5%
- Total of 25 out of 4,626 awards did not report
- Only 2 two-time non reporters
- No uncorrected significant error and 100% accuracy rate
- Responded to nine data calls from OMB and Recovery Board

## Quarter Ending 6/30/2010

- Recipient reporting compliance rate was 99.8%
- Total of 8 out of 4,706 awards did not report
- Only 1 two-time non reporter
- Two uncorrected significant errors and 99.6% accuracy rate
- Responded to six data calls from OMB and Recovery Board

**Government-wide compliance rate average of 99.5% for quarter ending 6/30**

# Common ARRA Reporting Errors and Guidance to Improve Recipient Reporting

Data Element	Guidance
Award Date	Enter the value from the field entitled, "Award Date" in Research.gov. The "Award Date" is the date to be entered in this field in lieu of the Effective Date specified in the Award Notice. This is not the Project Start date.
Award Description	Enter the value from the field entitled, "Abstract at Time of Award" in Research.gov. This description should offer enough information for the public to understand the scope and intent of the project.
Award Number	Enter only the 7-digit numeric value from the field entitled, "Federal Award ID Number" in Research.gov. For example, 0973743, 1067943. Do not include prefixes such as IIP or PHY.
Program Source TAS Code	Enter the value from the field entitled "Primary Program Source" in Research.gov." This can only be one of three numbers: "49-0101" for "Research and Related Activities; "49-0107" for Education and Human Resources Activities; or "49-0552" for Major Research Equipment and Facilities Construction (MREFC) Activities.
Project Name	Enter the value from the field entitled, "Award Title or Description" in Research.gov. Please do not abbreviate the award title.
Reported Quarterly Activities/Project Description	Provide a brief summary of activities conducted to date. If no activities have been conducted, please explain. Responses of N/A are not valid.
Reporting Description of Jobs Created	Provide a list of the job titles for the jobs created over the life of the project. If not jobs have been created, please explain. Responses of N/A are not valid.

# Key Documents

- FY 2011 NSF Budget Request to Congress
- Proposal & Award Policies & Procedures Guide (NSF 11-1)
- Science & Engineering Indicators

