Introduction & NSF Overview

NSF Regional Grants Conference
Hosted by
Arizona State University

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Ask Early, Ask Often!

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Main Topics

- Origins of NSF
- NSF Organization
- American Recovery & Reinvestment Act of 2009
- The NSF FY 2009 Budget
  - NSF Initiatives
  - Outcomes
- NSF FY 2010 Budget
- Current Proposal, Award and Funding Trends

Origins of NSF

- "The Government should accept new responsibilities for promoting the flow of scientific knowledge and the development of scientific talent in our youth."
  - Science, The Endless Frontier, 1945
- 1947: Congress Approves, Truman Vetoes
- 1950: Compromise Bill Approved & Signed by Truman

NSF Act of 1950

- “To promote the progress of science…”
- NSB (24) and 1 Director, appointed by the President
- Encourage & develop a national policy for the promotion of basic research and education in the math, physical, medical, biological, engineering and other sciences
- Initiate & support basic scientific research in the sciences
- Evaluate the science research programs undertaken by agencies of the Federal government
- Provide information for S&E policy formation

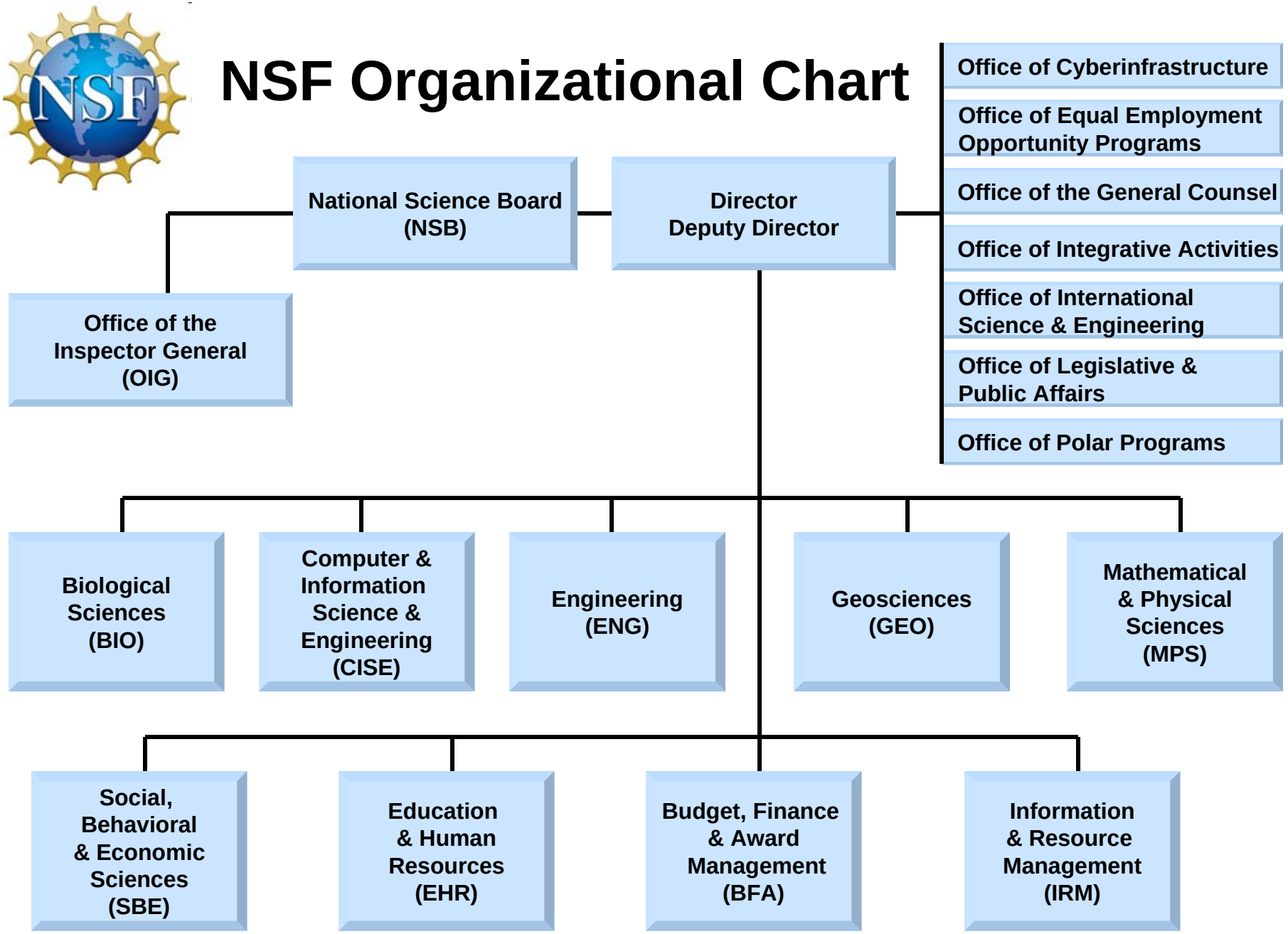
NSF Vision

Advancing discovery, innovation & education
beyond the frontiers of current knowledge, and empowering future generations in science and engineering.

NSF in a Nutshell

- Independent Agency
- Supports basic research & education
- Uses grant mechanism
- Low overhead; highly automated
- Discipline-based structure
- Cross-disciplinary mechanisms
- Use of Rotators/IPAs
- National Science Board

NSF Organizational Chart



Recent Personnel Changes

- Dr. Cora Marrett named Acting Deputy Director
- Dr. Thomas W. Peterson selected as Assistant Director for Engineering
- Dr. Edward Seidel named as Director of the Office of Cyberinfrastructure (OCI)
- Dr. Tim Killeen named Assistant Director for Geosciences (GEO)

American Recovery and Reinvestment Act of 2009 - Science

"Even beyond energy, from the National Institutes of Health to the National Science Foundation, this recovery act represents the biggest increase in basic research funding in the long history of America's noble endeavor to better understand our world. Just as President Kennedy sparked an explosion of innovation when he set America's sights on the moon, I hope this investment will ignite our imagination once more, spurring new discoveries and breakthroughs that will make our economy stronger, our nation more secure, and our planet safer for our children."

President Barack Obama
February 17, 2009

American Recovery and Reinvestment Act of 2009 - Science

- $21.5 billion for scientific endeavors
- Funding for biomedical and physical sciences
- Funds for short-term and long-term scientific payoffs

American Recovery and Reinvestment Act of 2009 – Science Highlights

- Department of Energy
  - $1.6 billion for green-energy projects
  - $400 million for Advanced Research Projects Agency for Energy
- National Institutes of Health
  - $10.4 billion breaks five years of flat-lined funding
- NASA
  - $1 billion for manned and robotic space exploration and assessing climatic and other global changes
- NOAA
  - $833 million for understanding weather and climate patterns
- US Geological Survey
  - $140 million for research on earthquakes and other natural disasters

American Recovery and Reinvestment Act of 2009 - NSF

NSF Programs Receiving Recovery Act Funding

- $3 billion supplements FY 2009 funding
  - $2 billion for Research and Related Activities for proposals already in house and that will be reviewed and/or awarded prior to September 30, 2009.
  - $ 1 billion to award funds as specified in the Recovery Act

American Recovery & Reinvestment Act

- Reporting and Accountability Requirements
  - OMB expectations for accountability & transparency for agencies and recipients
  - Higher scrutiny from
    - Administration
    - Congress
    - Public
    - Recovery Act Accountability & Transparency Board
    - NSF Office of the Inspector General (OIG)

FY 2009 Appropriation

Appropriations Account	FY 2009 Request	FY 2009 Appropriation	
Research & Related Activities	$5,594	$5,183	(-$411)
Education & Human Resources	$790	$845	(+$55)
Major Research Equipment & Facilities Construction	$148	$152	(+$5)
Agency Operations & Award Management	$305	$294	(-$11)
National Science Board	$4	$4	(N/A)
Inspector General	$13	$12	(-$1)
TOTAL	$6,854	$6,490	(-$364)

FY 2009 Appropriation

Appropriations Account	FY 2009 Appropriation	FY 2009 Recovery Act	Total FY 2009 Appropriations
Research & Related Activities	$5,183	$2,500	$7,683
Education & Human Resources	$845	$100	$945
Major Research Equipment & Facilities Construction	$152	$400	$552
Agency Operations & Award Management	$294	-	$294
National Science Board	$4	-	$4
Inspector General	$12	$2	$14
TOTAL	$6,490	$3,002	$9,492

Research & Related Activities in FY 2009

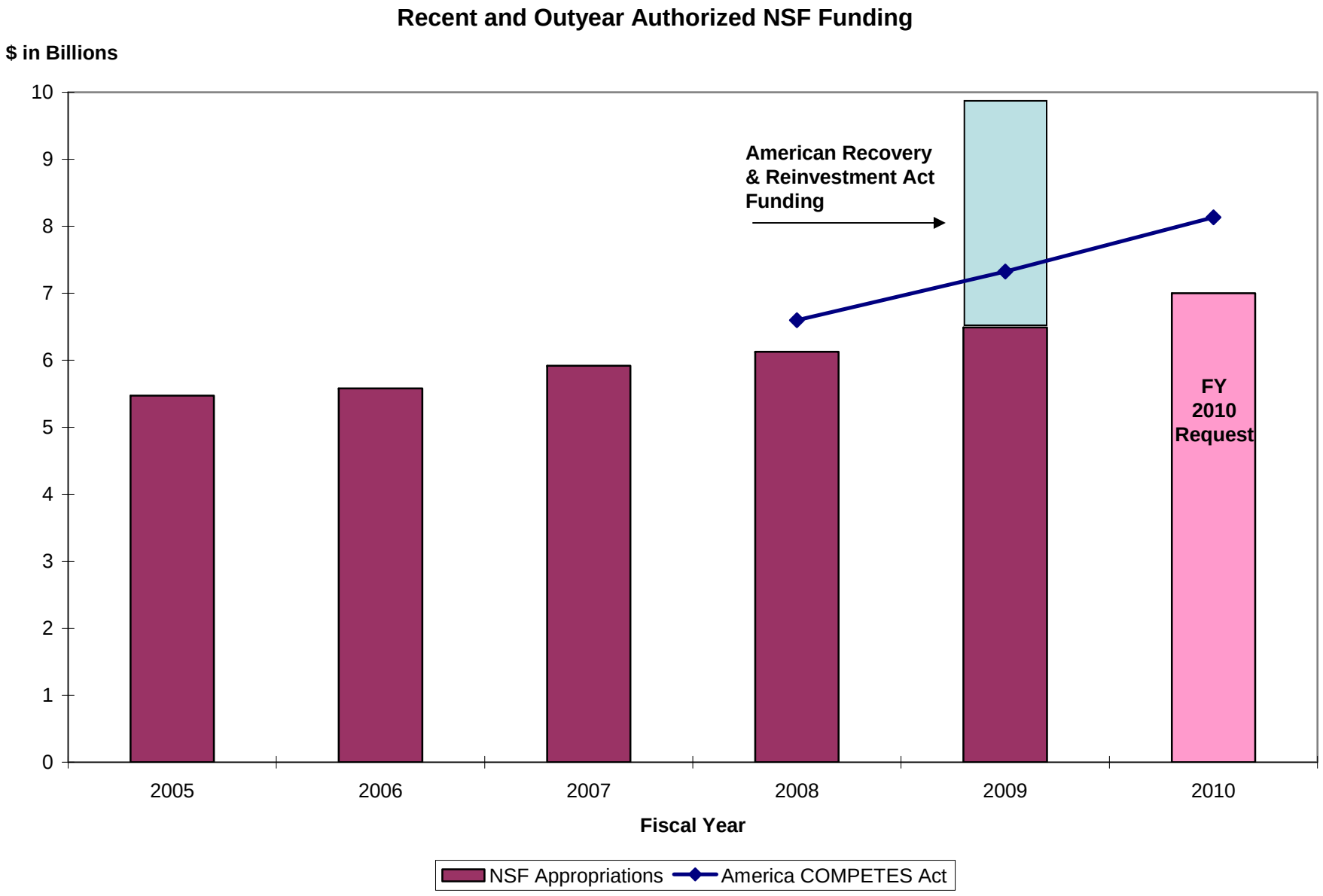
- EPSCoR
- Plant Genome
- National Radio Astronomy Observatory
- Establish mathematical institute
- IceCube O&M
- ATST design work

EHR Account in FY 2009

- Graduate Research Fellowships
- Robert Noyce Scholarship Program
- Louis Stokes Alliances for Minority Participation
- Historically Black Colleges and Universities Undergraduate Program
- Tribal Colleges and Universities Program
- Graduate teaching fellowship in K-12
- Math and Science Partnership program
- Climate change education program

FY 2010 Budget Request

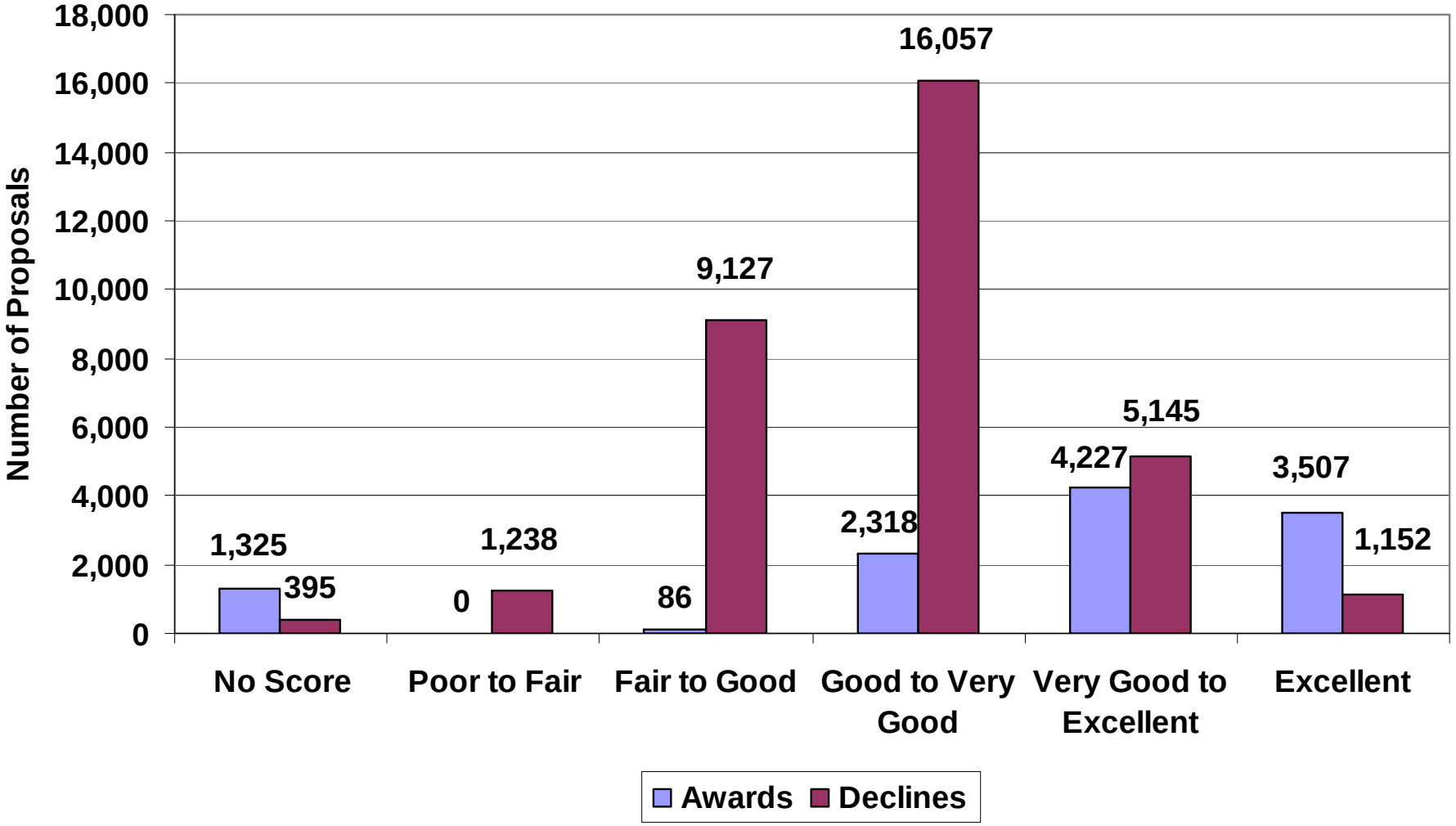
- Increase of $950 million over FY 2008.
- Increased support for Graduate Research Fellowship and CAREER Programs.
- Increases support for Advanced Technological Education (ATE) Program.
- Increases support for exploratory, high risk research
- Supports research to predict future environmental conditions and develop strategies for responding to global environmental change.
- Details on specific allocations for FY 2010 will be available when the full budget is released.


Recent and Outyear Authorized NSF Funding
$ in Billions
10
9
8
7
6
5
4
3
2
1
0
American Recovery & Reinvestment Act Funding
FY 2010 Request
2005
2006
2007
2008
2009
2010
Fiscal Year
NSF Appropriations
America COMPETES Act

Current Proposal, Award & Funding Trends

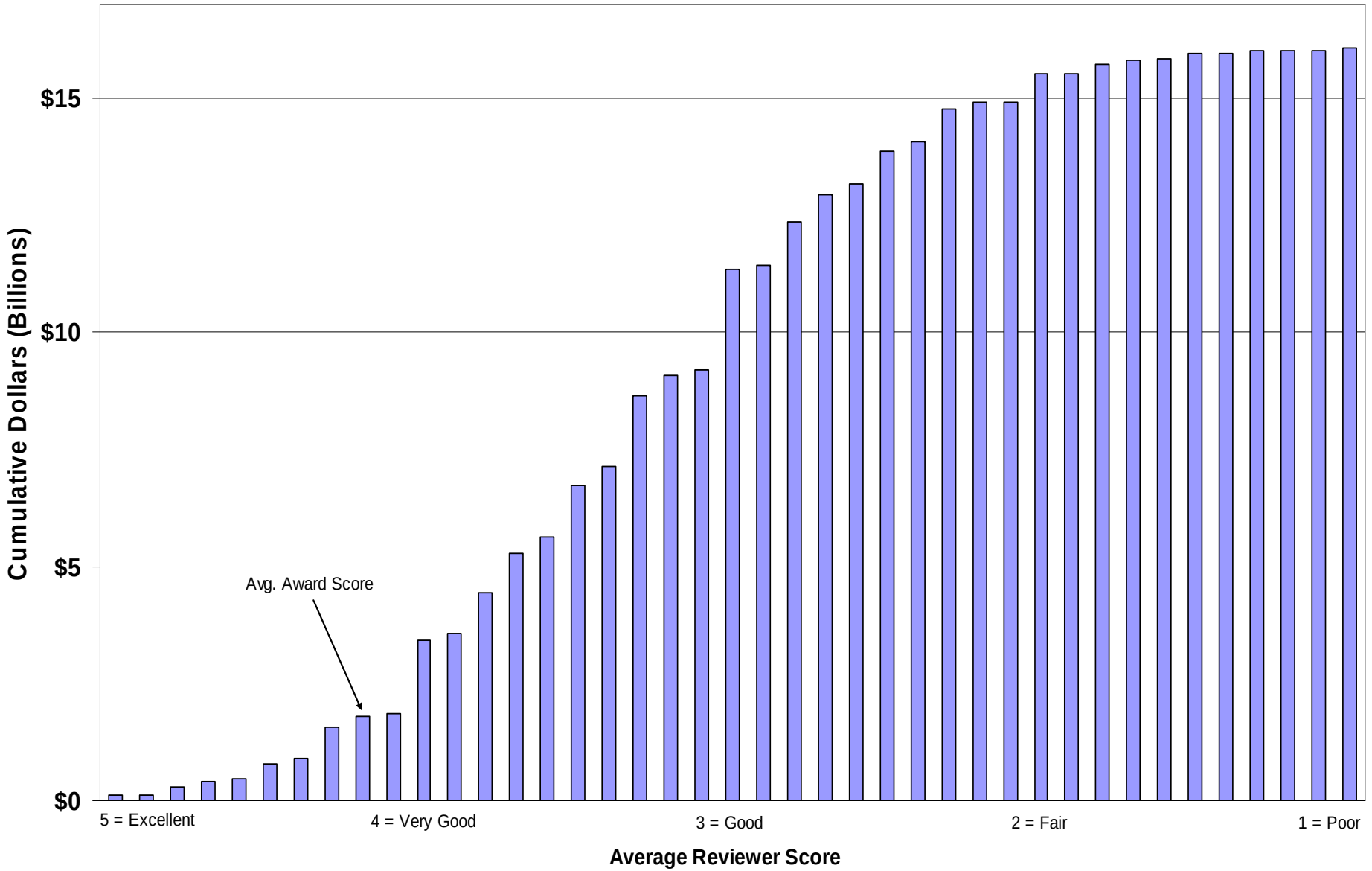
Distribution of Average Reviewer Ratings

FY 2007

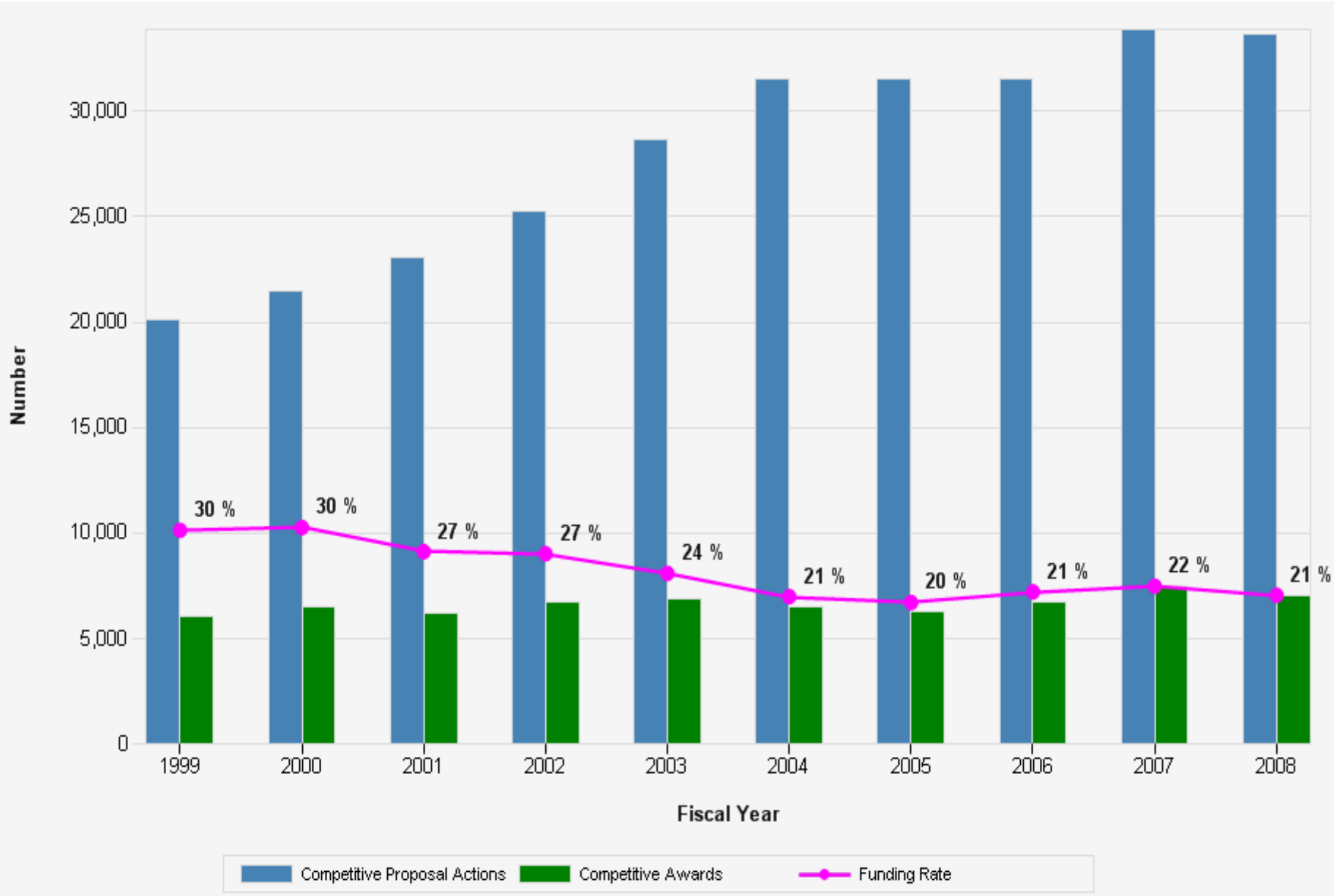


Number of Proposals: 33,114 Declines, 11,463 Awards

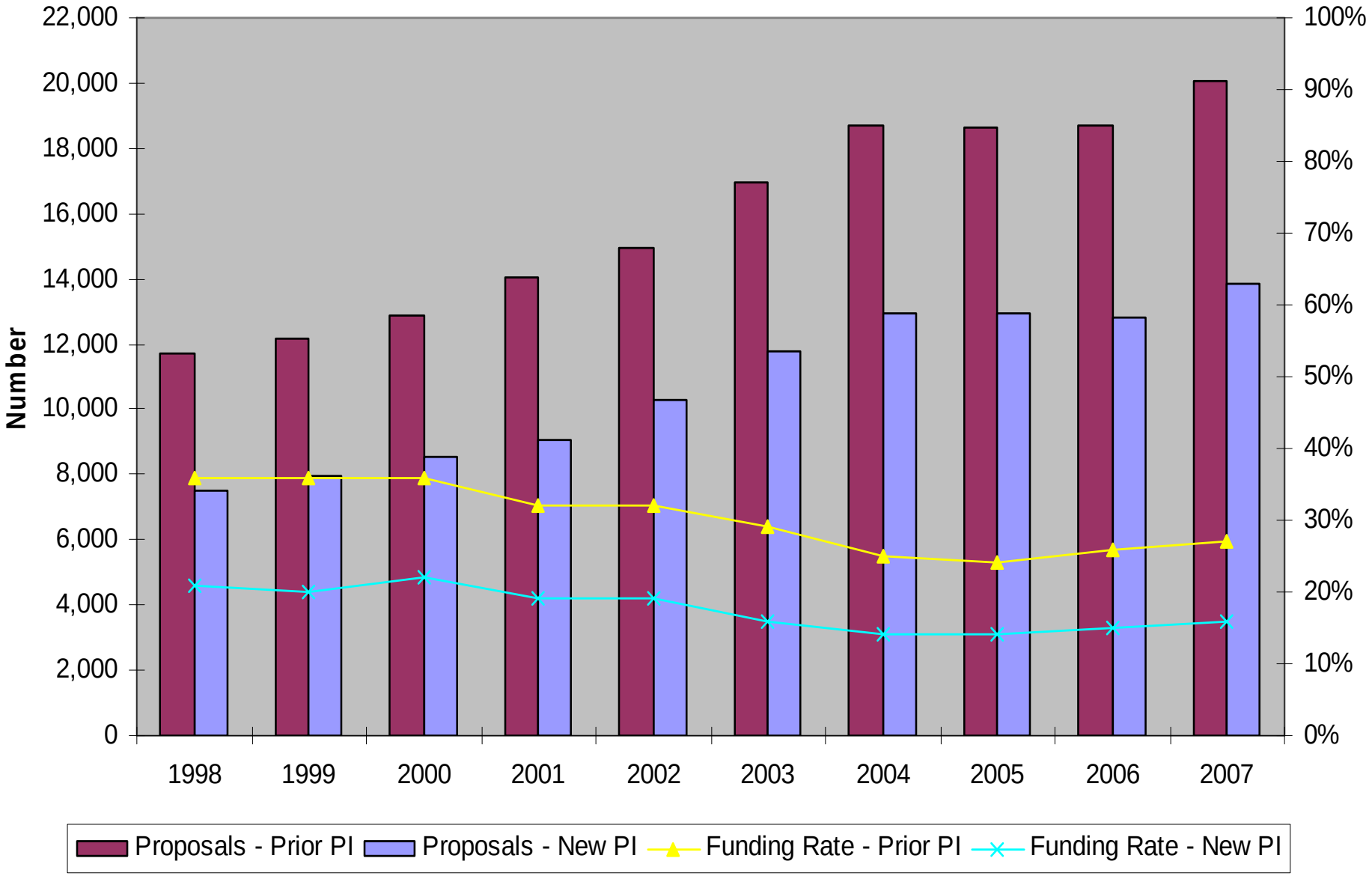
Cumulative Requested Amounts for Declined Proposals by Average Reviewer Score for FY 2007

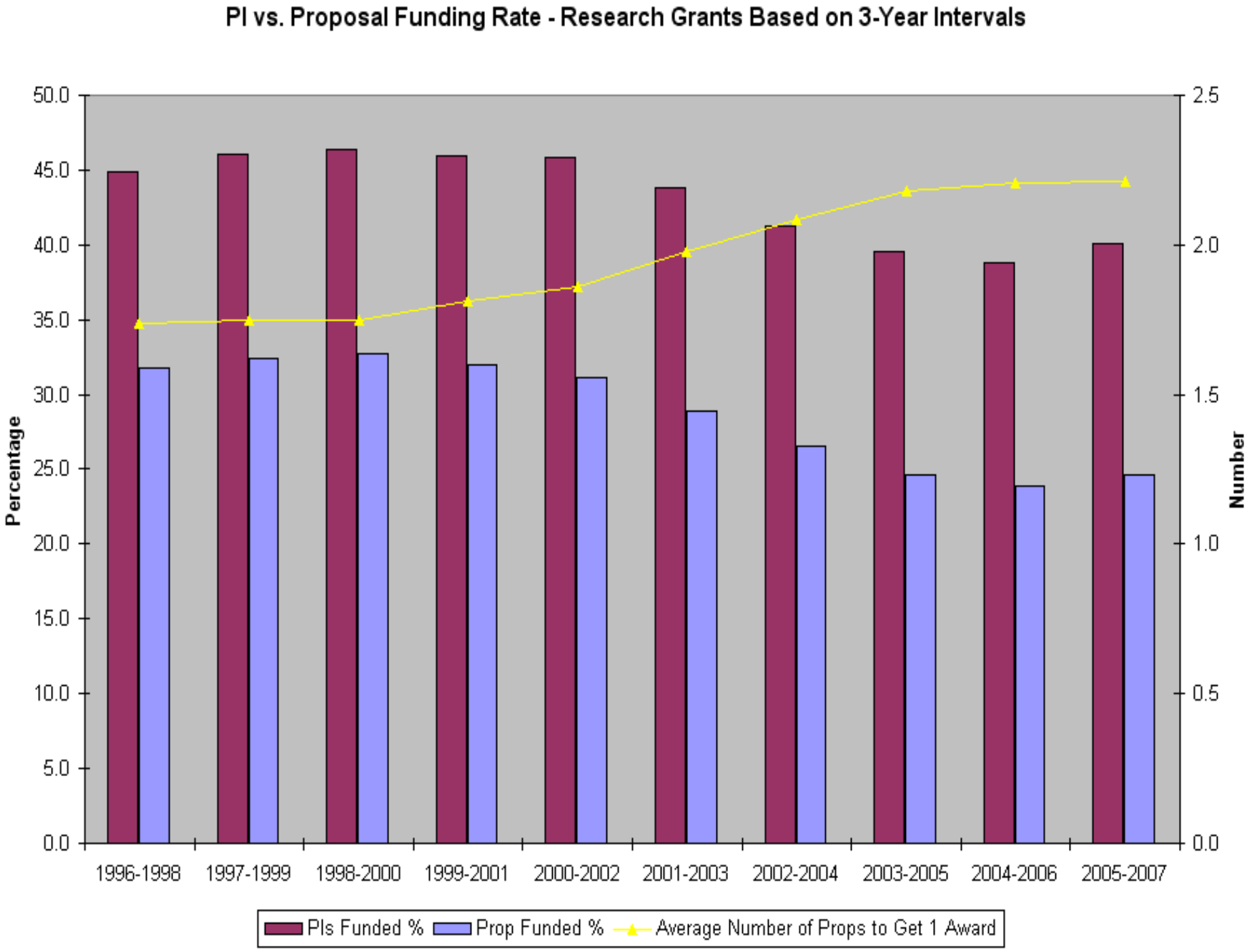


NSF Funding Rate for Competitive Awards

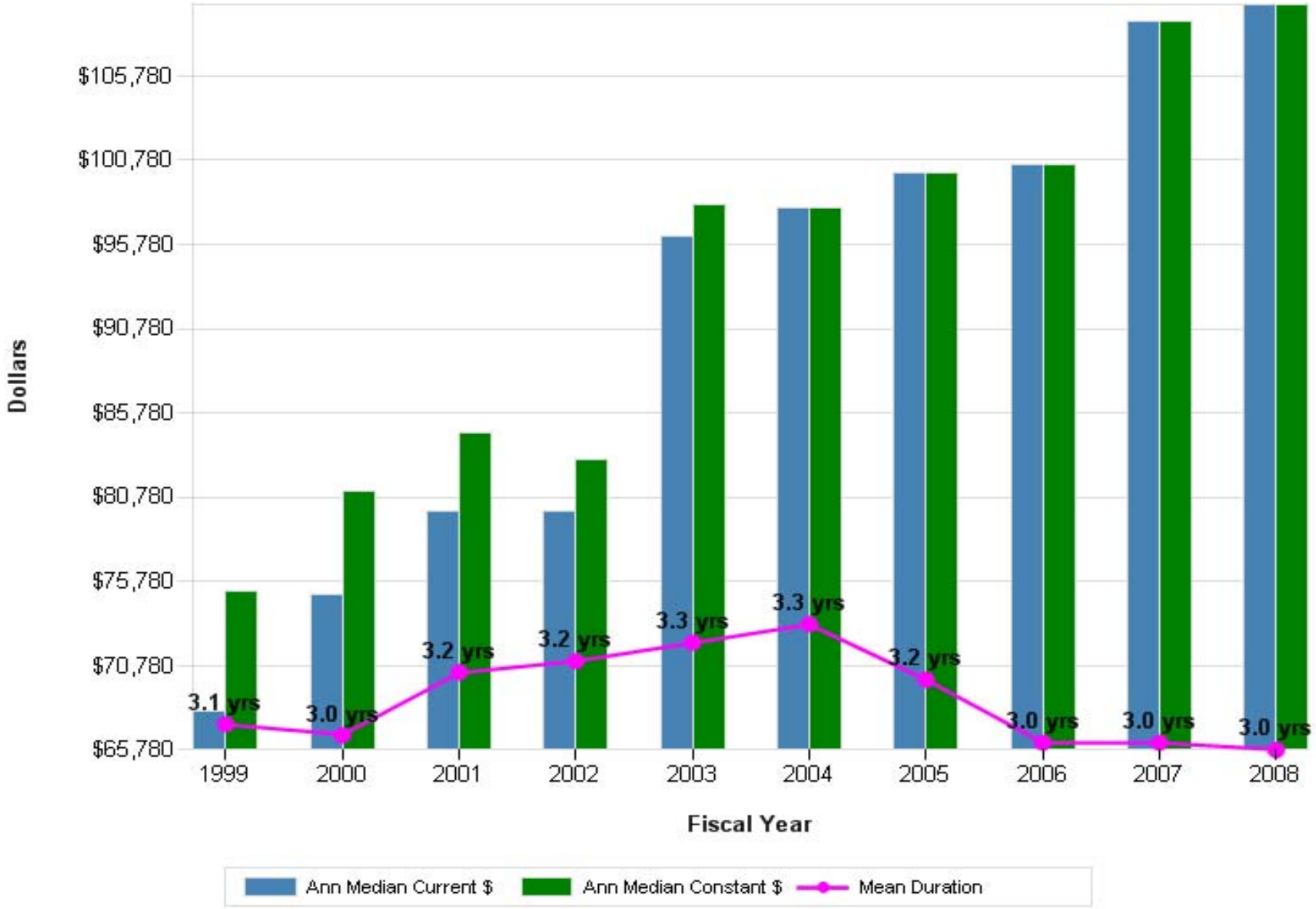


Research Grant Proposals by PI Type



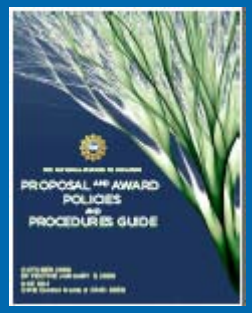

PI vs. Proposal Funding Rate - Research Grants Based on 3-Year Intervals
Percentage
Number
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
2.5
2.0
1.5
1.0
0.5
0.0
1996-1998
1997-1999
1998-2000
1999-2001
2000-2002
2001-2003
2002-2004
2003-2005
2004-2006
2005-2007
PIs Funded %
Prop Funded %
Average Number of Props to Get 1 Award

NSF Competitive Award Size and Duration

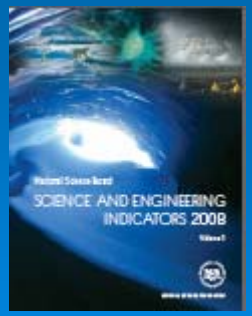


Key Documents

- FY 2009 NSF Budget Request



- Proposal & Award Policies & Procedures Guide



- Science & Engineering Indicators

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www.nsf.gov