

# APPENDICES

## APPENDIX A. CHARGE TO IPAMM

**DATE:** March 22, 2006

**TO:** NSF ADs

**FROM:** Deputy Director, NSF

**SUBJECT:** NSF Working Group on the Impact of Proposal and Award Mechanisms

**Introduction:** Effective immediately, the Working Group on the Impact of Proposal and Award Management Mechanisms is established to recommend policies and preferred practices within NSF to improve the management of program announcements, solicitations, and unsolicited proposals, particularly with respect to community expectations vs. funds availability, while maintaining the robustness of the scientific and engineering community.

**Background:** In recent years, many NSF programs have experienced low and declining proposal funding rates, resulting in increased workload, diminished S&E capacity, and program imbalances. A number of NSF organizations have attempted to manage workload and community expectations through variety of approaches, such as restricting the number of program solicitations and solicitation target dates, and limiting the number of proposal submissions. While these attempts are laudable, there are some concerns within the S&E community that such practices may sometimes have unintended consequences for the scientific community or for NSF.

**Charge:** The Working Group is responsible for recommending policies and preferred practices to improve NSF program announcement and solicitation processes in ways that achieve appropriate balances between proposal funding rates, award sizes and award duration in the various types of awards that comprise the total NSF portfolio, with the emphasis on individual, investigator-initiated grants. In doing so, the group will address the following issues:

- What do the current and historical data indicate in terms of trends and problem areas? Are there unexplained or unanticipated imbalances; for example, between solicited and unsolicited proposals, new and experienced investigators, directorates and major disciplines, and special programs and standard disciplinary programs?
- What have been or would be anticipated to be the impacts of changing funding rates, award amounts, or award durations on NSF and the S&E community? How is the workload and infrastructure affected? What S&E capacity/innovation is being lost or diminished? What is the effect of trade-offs between funding rates, average award size, and award duration? How have perceptions affected NSF's relationship with the S&E community?

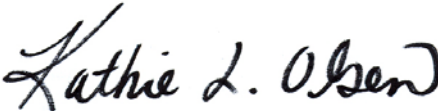
- What are the reasons for recent declines in funding rates? Why has the number of proposal submitted to NSF substantially increased over the past few years? Is it possible to determine whether there have been impacts to NSF of budget reductions in the science programs of other Federal agencies?
- What has been the impact of NSF policies, strategies and practices to act on these issues? Have they worked? Are they administered in a reliable and equitable manner? Are there new approaches that should be tried?
- How can NSF data regarding funding rates, award amounts, and award duration be disseminated more effectively? Should NSF establish standards for reporting data to the external community?

**Membership:** The membership of the working group is as follows:

Adnan Akay, ENG  
 Paul Herer, O/D, (Exec. Secretary)  
 Suzi Iacono, CISE  
 Dan Litynski, EHR  
 Jacqueline Meszaros, SBE  
 Jarvis Moyers, GEO  
 Vernon Ross, BFA  
 Bill Rundell, MPS  
 Neil Swanberg, OPP  
 Rita Teutonico, BIO  
 Joanne Tornow, EHR/BIO (Chair)

**Operation:** The Working Group, including representative Program Officers and Division Directors from across the foundation, will meet regularly and establish a liaison with the Office of the Director. It will produce reports and presentations as needed to keep NSF senior staff and the NSB informed of its progress. Within six to twelve months, the working group will produce a final report and/or a series of reports that address the issues described above.

The success of the Working Group depends on the participation and assistance of the NSF staff. Staff members are encouraged to assist the Working Group as opportunity permits.



Kathie L. Olsen

## APPENDIX B. TERMS AND ACRONYMS

BIIS	Budget Internet Information System
BIO	Directorate for Biological Sciences
CISE	Directorate for Computer and Information Sciences and Engineering
CHE	Division of Chemistry
Co-PI	Co-Principal Investigator
COV	Committee of Visitors
DEB	Division of Environmental Biology
DMS	Division of Mathematical Sciences
EAR	Division of Earth Sciences
EHR	Directorate for Education and Human Resources
EIS	Enterprise Information System
ENG	Directorate for Engineering
EPSCoR	Experimental Program to Stimulate Competitive Research
FY	Fiscal Year
GEO	Directorate for Geosciences
GPG	Grant Proposal Guide
GPRA	Government Performance and Results Act
HSD	Human and Social Dynamics Program
IGERT	Integrated Graduate Education and Research Training Program
IIS	Division for Information and Intelligent Systems
IPAMM	Impact of Proposal and Award Management Mechanisms working group
ITR	Information Technology Research Program
MCB	Division of Molecular and Cellular Biosciences
MPS	Directorate for Mathematical and Physical Sciences
MSPA	Mathematical Sciences Priority Area
MSPA-WG	Mathematical Sciences Priority Area Working Group
NASA	National Aeronautics and Space Administration
NIH	National Institutes of Health
NIMH	National Institute for Mental Health
NSB	National Science Board
NSF	National Science Foundation
O/D	Office of the Director
OCI	Office of Cyberinfrastructure
OISE	Office of International Science and Engineering
OPP	Office of Polar Programs
PAPPG	Proposal and Award Policies and Procedures Guide
PI	Principal Investigator
PIMS	Program Information Management System
R&D	Research and Development
RI	Research Intensive
R&RA	Research and Related Activities
SBE	Directorate for Social, Behavioral and Economic Sciences
S&E	Science and Engineering
SRS	Science Resources Statistics

## APPENDIX C. REGRESSION TABLES: PREDICTING CHANGES IN SUBMISSIONS

**Regression Analysis:** Changes in proposal submissions as a function of funding rates, award sizes, budget changes, and year (division-level data, unsolicited proposals only)

### Variables Entered:

- Dependent variable
  - Change in proposals (ch props)
- Independent variables
  - Percent change in budget (% ch budg)
  - Previous year average award size (prvyrsz)
  - Previous year funding rate (prvyfundrt)

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.367 <sup>a</sup>	.134	.035	310.398

a. Predictors: (Constant), FY, % ch budg, prvyrsz, prvyfundrt

### ANOVA<sup>b</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	523567.089	4	130891.772	1.359	.268 <sup>a</sup>
Residual	3372151.311	35	96347.180		
Total	3895718.400	39			

a. Predictors: (Constant), FY, % ch budg, prvyrsz, prvyfundrt

b. Dependent Variable: ch props

### Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-135066.314	75725.944		-1.784	.083
Prv yr sz	.000	.000	-.106	-.597	.555
Prv yr fundrt	-2.585	7.029	-.069	-.368	.715
% ch budg	-1.096	1.836	-.099	-.597	.554
FY	67.570	37.772	.306	1.789	.082

a. Dependent Variable: ch props





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