



**NSF Research Support:  
Economics, Policy and Decision Making**

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Directorate for Social, Behavioral, and Economic  
Sciences  
National Science Foundation**

**Penn State 2010**



# Workshop Outline

- Background on the National Science Foundation
- Research Opportunities
- Submission Procedures
- Separating Awards from Declinations

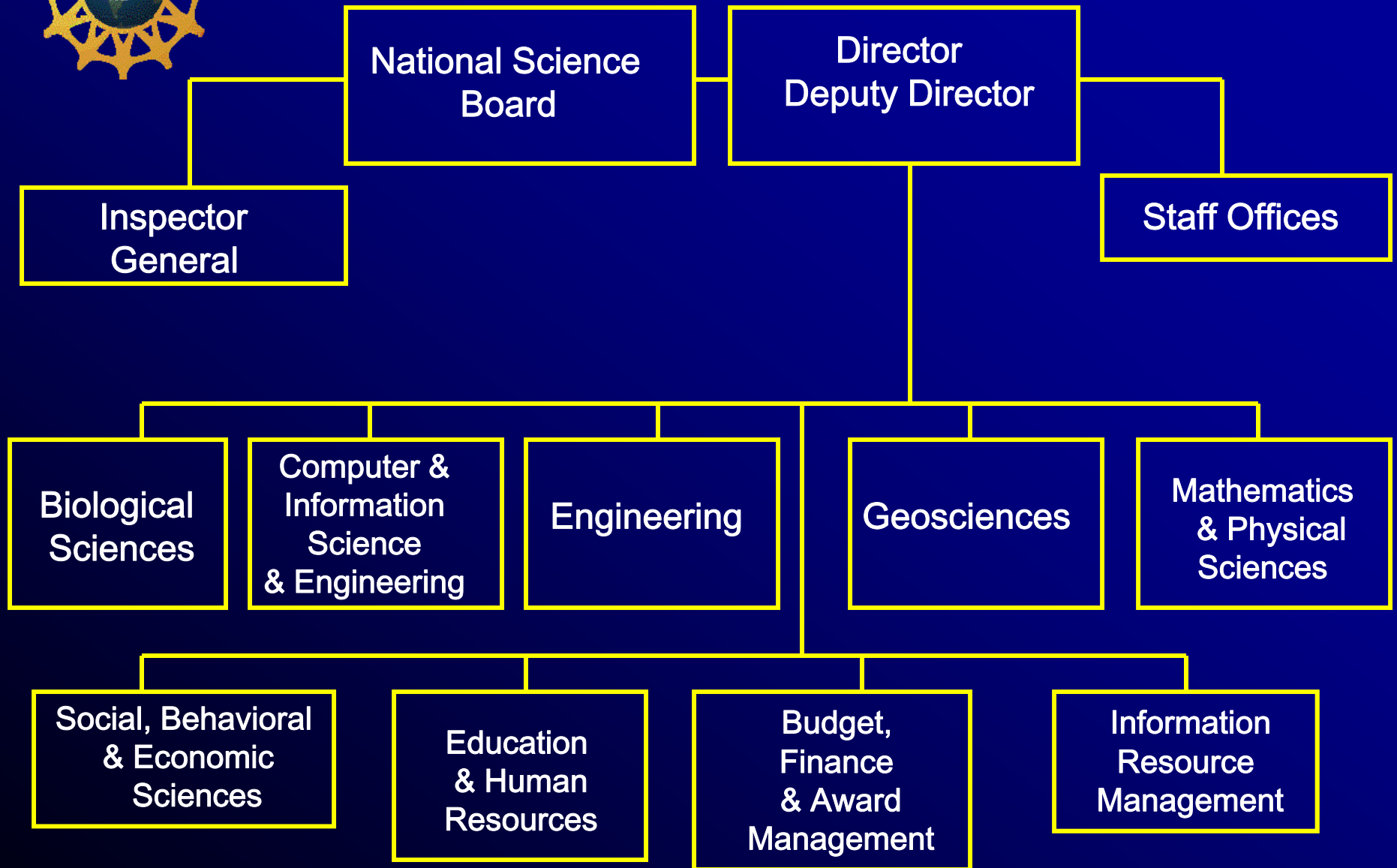


# NSF in a Nutshell

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



# National Science Foundation





**Office of the Director**

**Directorate for Social,  
Behavioral & Economic  
Sciences**

**Social and Economic  
Sciences**

**Behavioral and Cognitive  
Sciences**

**Science Resources Statistics**



# Why Do You Want NSF Funding?

- Funds curiosity-driven research
- Pays full overhead (no match)
- Provides summer salary support
- Uses the grant mechanism



# Opportunities

- Unsolicited competitions
- Special solicitations
- Rapid response research (RAPID)
- Early-concept grants for exploratory research (EAGER)
- CAREER grants
- Dear Colleague Letter
- Doctoral dissertation improvement grants



# Where to Start?

- [www.nsf.gov](http://www.nsf.gov)
- Check awards by program, keyword, etc. ([www.nsf.gov/awardsearch/](http://www.nsf.gov/awardsearch/))
- Read solicitation carefully (if not unsolicited competition)
- Download *Grant Proposal Guide*  
([http://www.nsf.gov/publications/pub\\_summary.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summary.jsp?ods_key=gpg))





# SES Target Dates

## **January 15 & August 15**

Law and Social Science

Political Science

Sociology

## **January 16 & August 16**

Methodology, Measurement, and Statistics

## **January 18 & August 18**

Decision, Risk, & Management Sciences

Economics

## **February 1 & August 1**

Science and Society

## **February 2 & September 3**

Innovation and Organizational Sciences



# BCS Target Dates

**January 14 & July 14**

Cognitive Neuroscience

**January 15 & July 15**

Developmental & Learning  
Sciences

Linguistics

Social Psychology

**January 15 & August 15**

Cultural Anthropology  
Geography & Regional  
Science

**January 20 & August 20**

Physical Anthropology

**February 1 & August 1**

Perception, Cognition and  
Action

**July 1 & December 1**

Archaeology



# Doctoral Dissertation Improvement Awards

- Archaeology
- Cultural Anthropology
- Decision, Risk, & Management Science
- Economics
- Geography & Regional Science
- Law and Social Science
- Linguistics
- Physical Anthropology
- Political Science
- Science and Society
- Sociology

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**Directorate for Social, Behavioral, and Economic Sciences**





## Faculty Early Career Development (CAREER) Program

- Untenured faculty (or comparable)
- Single scholar award
- \$400,000, 5-years minimum award
- Three proposals lifetime limit
- July 1 deadline
- "Walk on Water" expectation



# Rapid Response Research (RAPID)

- Research when data are ephemeral
- \$200,000 maximum; 1 year
- 5-page project description
- Internal review only
- Contact program officer first



# Early-concept grants for exploratory research (EAGER)

- Exploratory work on untested, potentially transformative ideas
- High-risk, high-potential payoff
- \$300,000 maximum; 2 years
- 8-page descriptive
- Internal review only
- Contact program officer first



## Dear Colleague Letter

Example: DCL for SBE Research Related to the Gulf Oil Spill and Other Disasters

- <http://www.nsf.gov/pubs/2010/nsf10063/nsf10063.jsp>
- No separate deadline or competition
- Oil spill as testbed for fundamental, theory-enhancing contributions to SBE sciences

# Science, Engineering and Education for Sustainability

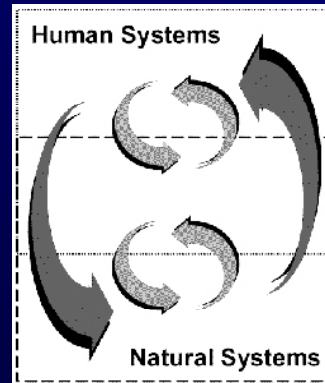
- <http://www.nsf.gov/geo/sees/>
- Social science friendly solicitations:
  - Water sustainability and climate
  - Climate change education partnership
- Actual solicitations await NSF's FY2011 budget





# Special Program: Dynamics of Coupled Natural and Human Systems (CNH)

- Funds quantitative, interdisciplinary analyses of relevant human and natural system processes and complex interactions at diverse scales
- First permanent inter-directorate program



**Program Officer: Tom Baerwald**



## NSF's Future?

- Stimulus funds are gone
- But, excluded from budget freeze plans
- Proposal numbers increasing greatly
- Popular across the spectrum
- More interdisciplinary competitions



# IGERT

## **Integrative Graduate Education and Research Traineeship Program**

- Penn State is a past recipient of IGERT funding
- Focused training in specific topical areas for graduate students—pre- and post-doctoral
- Currently a handful in the social sciences

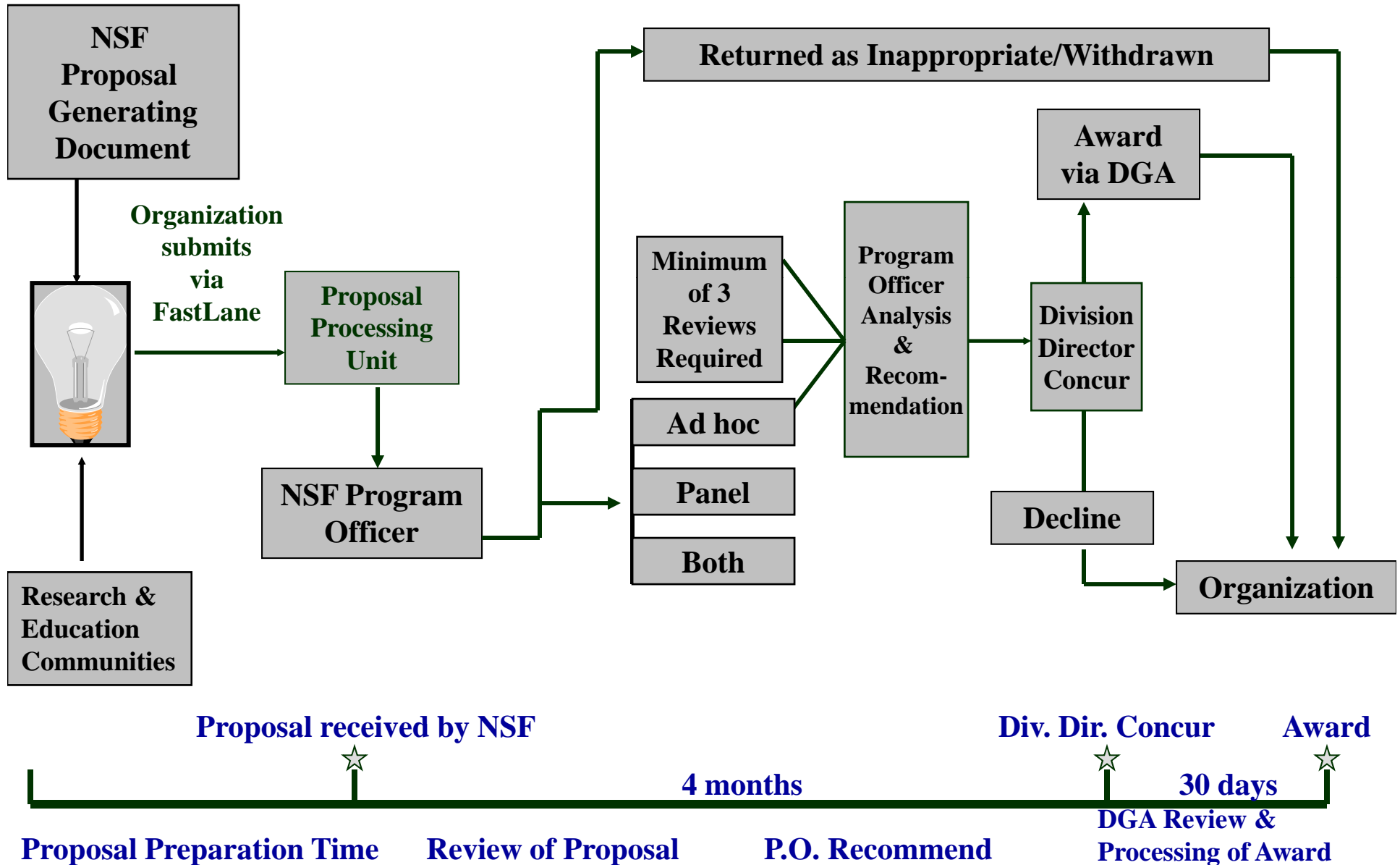


## STEM\* Initiatives

- NSF Graduate STEM Fellows in K-12 Education (GK-12)
- National STEM Education Distributed Learning (NSDL)
- Alliances for Broadening Participation in STEM (ABP)

As three examples . . . .

\* Science, Technology, Engineering, and Mathematics





## NSF **Sources** of Reviewers

- Program Officer's knowledge
- References listed in the proposal
- Google
- Community of Science and other databases
- Reviewer's recommendations
- Investigator's suggestions



# Human Subjects

- No award for a project involving human subjects can be made without prior Institutional Review Board (IRB) approval of the research activity.
- IRB approval is not needed at the time of proposal submission.



# Funding Decisions

- Program Officer decision
- Feedback to PI
- Informal and formal notification
- Scope of work and budget discussions





## Two Funding Criteria

- Intellectual merit
- Broader impacts



# Intellectual Merit?

- NSF funds basic research
- NSF funds basic research
- Intellectual merit means increasing knowledge through developing and examining basic theories or methods



# Broader Impacts

- Promote teaching, training and learning
- Broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)
- Enhance the infrastructure for research and education, such as facilities, instrumentation, networks and partnerships
- Disseminate results broadly to enhance scientific and technological understanding
- Benefit society



# Budget Tips

- **Amounts**
  - Reasonable for work -- Realistic
  - Well justified -- Need established
  - In-line with program guidelines
- **Eligible costs**
  - Personnel
  - Equipment
  - Travel
  - Other Direct Costs, Subawards
  - Facilities & Administrative Costs



# Myths about NSF

- Only funds scholars at elite graduate institutions
- Only funds “famous” academics
- Once declined, you are likely always to be declined
- Only funds “normal science”
- Advisory committees make funding decisions



# Reasons for Declinations

- "Trust-me" proposal
- Not feasible
  - Expertise gaps
  - Insufficient funding
  - Too ambitious
- Incremental contribution
- Bad luck

# How to Put Together an Interdisciplinary Team

- Commit for the long haul
  - Be wary if untenured
  - Expect a long development period
- Find a wise and strong leader
  - Proposals need coherence
  - Leaders need to listen and then decide
- Meet for intellectual as well as task-related purposes



## NSF vs. NIH

- NSF tends to be smaller
- NSF is more open to risky, exploratory, paradigm-challenging work
- NSF stresses basic research
- NSF has no scoring system, percentile system
- NSF program officers make funding decisions
- NSF uses "revision encouragement" loosely





# Advice

- Learn to love rejection
- Team up
- E-mail or call Program Officer with specific questions
- Encourage dissertation improvement grant proposals (check program first)



## Useful to submit even if declined

- Revise and resubmit
- Discover other funding sources
- Forces thinking
- Build relationships
- Receive reviews from experts



**QUESTIONS??**

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