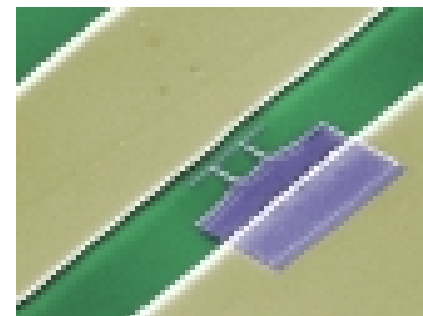
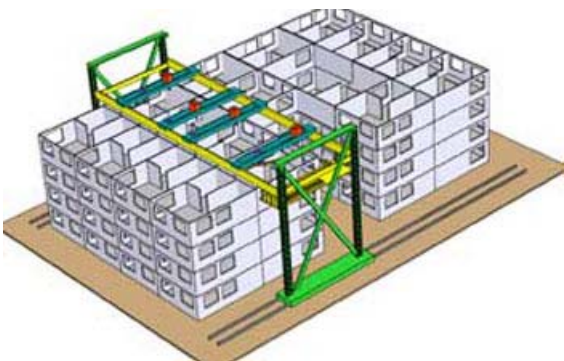


NSF: Proposal and Merit Review Process

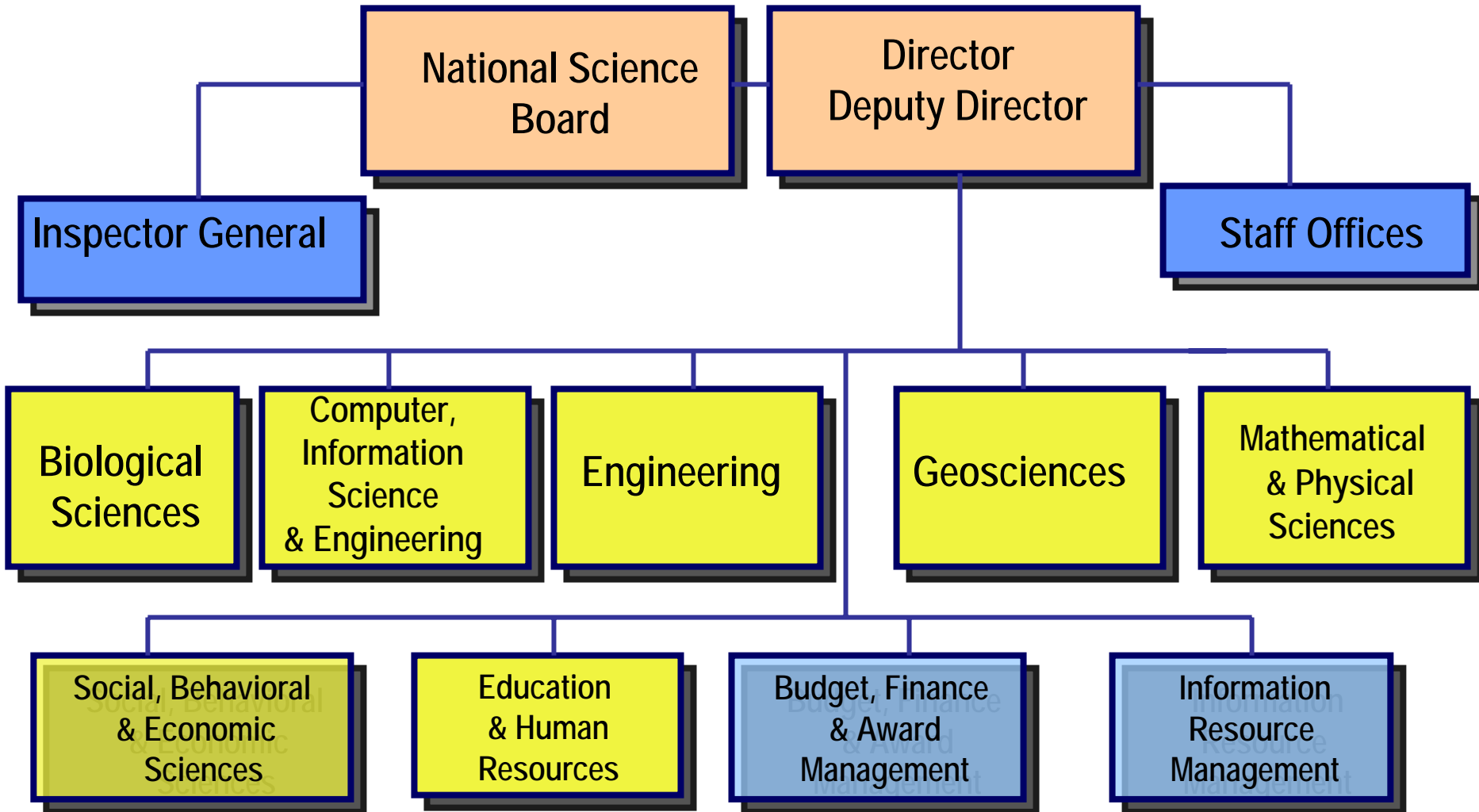
Thomas A. Weber
tweber@nsf.gov

National Science Foundation
2005





National Science Foundation





Sources of Information on NSF Funding Opportunities

- Web: www.nsf.gov
- Grant Proposal Guide:
http://www.nsf.gov/pubs/gpg/nsf04_23/
- NSF – Awards:
<http://www.nsf.gov/awardsearch/>
- Program Officer
- Colleagues



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Hint: The text field below 'Search Award For' searches the title, abstract, and award number fields.

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Restrict to Title Only:

 **Awardee Information**

Principal Investigator

First Name:

Last Name:

Hint: Including CO-PI will result in slower searches.



Grant Proposal Guide

- Provides guidance for preparation of proposals
- Specifies process for deviations, such as individual program announcements
- Describes process -- and criteria -- by which proposals will be reviewed
- Describes process for withdrawals, returns & declinations
- Describes the award process and procedures for requesting continued support
- Identifies significant grant administrative highlights



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(NSF 05-606) Posted August 15, 2005

[Cooperative Activities in Chemistry Between U.S. and German Investigators](#)
(NSF 05-604) Posted August 3, 2005

[Quantitative Environmental and Integrative Biology](#)
(NSF 05-602) Posted July 28, 2005

[Atomic Molecular and Optical Physics](#)
Posted July 14, 2005

[Particle and Nuclear Astrophysics](#)
Posted July 11, 2005

Upcoming Due Dates

[Focused Research Groups in the Mathematical Sciences](#)
(NSF 02-129) Letter of Intent: August 19, 2005

[Research Experiences for Undergraduates](#)

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What to look for in Program Solicitation

- Goals of program
- Eligibility
- Specific proposal review criteria
- Special proposal preparation and/or award requirements



Types of Proposal Submission

- No deadlines
- Deadlines
- Target dates
- Submission Windows
- Preliminary proposals



Sections of an NSF Proposal

- Cover Sheet
- Project Summary
- Table of Contents
- Project Description
- References Cited
- Biographical Sketch(es)
- Budget
- Current & Pending Support
- Facilities, Equipment & Other Resources
- Special Information & Supplementary Documentation



Proposal Development

Key Questions for Prospective Investigator

1. What do you intend to do?
2. Why is the work important?
3. What has already been done?
4. How are you going to do the work?



Proposal Development Strategies

Individual Investigator

- Determine your long-term research/education goals
- Develop your idea
 - Survey the literature
 - Contact Investigators working on topic
 - Prepare a brief concept paper
 - Discuss with colleagues/mentors
- Prepare to do the project
 - Determine available resources
 - Realistically assess needs
 - Develop preliminary data
 - Present to colleagues/mentors/students



Proposal Development Strategies – Funding Sources

- Determine possible funding sources
- Ascertain overall scope and mission
 - Read carefully solicitation instructions
 - Determine where your project fits
 - Ascertain evaluation procedures and criteria



Proposal Development Strategies – Funding Sources

- Talk with NSF Program Officer:
 - Your proposed project
 - Specific program requirements/limitations
 - Current program patterns
- Coordinate with your organization's sponsored projects office



Budgetary Guidelines

- Amounts
 - Reasonable for work - Realistic
 - Well justified - Needs established
 - In-line with program guidelines
- Eligible costs
 - Personnel
 - Equipment
 - Travel
 - Participant Support
 - Other Direct Costs (including subawards, consultant services, computer services, publication costs)



Budgetary Guidelines (cont'd)

- General Suggestions
- All funding sources noted in Current and Pending Support
- Help from Sponsored Projects Office
- Special Note: No cost sharing allowed



Getting Support in Proposal Writing

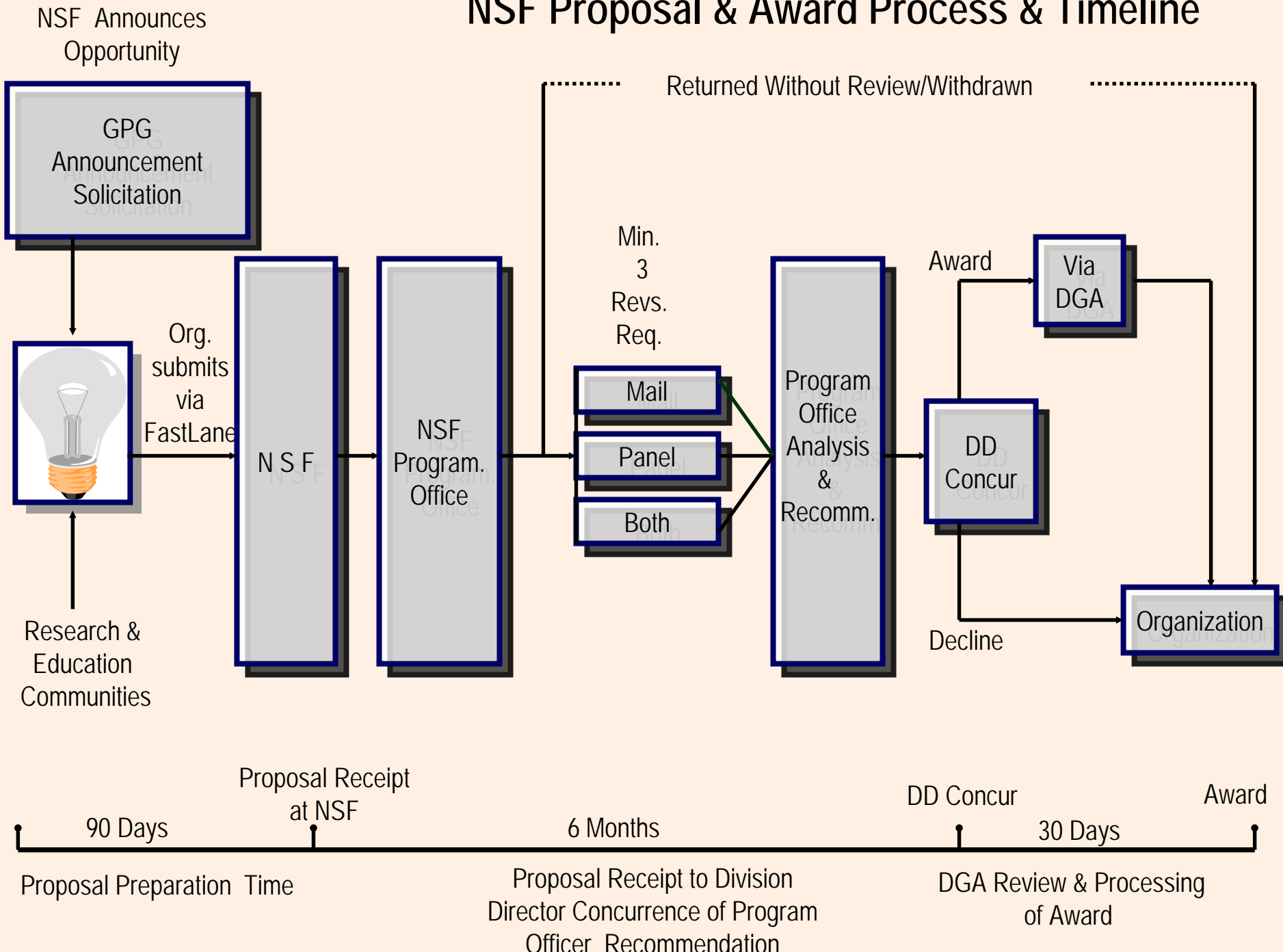
- NSF Publications
 - Program Announcements/
Solicitations
 - Grant Proposal Guide
 - Web Pages
 - Funded Project Abstracts
 - Reports, Special Publications
- Program Officers
 - Incumbent
 - Former “Rotators”
- Mentors on Campus
- Previous Panelists
- Serve As Reviewer
- Sponsored Research Office
- Successful Proposals



Reviewer Selection

- Identifying reviewers:
 - PI reviewer suggestions
 - Program Officer's knowledge of what is being done and who's doing what in the research area
 - References listed in proposal
 - Recent technical programs from professional societies
 - Recent authors in Scientific and Engineering journals
 - S&E Abstracts by computer search
 - Reviewer recommendations

NSF Proposal & Award Process & Timeline





Return Without Review

- The proposal:
 - is inappropriate for funding by the National Science Foundation
 - is submitted with insufficient lead-time before the activity is scheduled to begin;
 - is a full proposal that was submitted by a proposer that has received a "not invited" response to the submission of a preliminary proposal;
 - is a duplicate of, or substantially similar to, a proposal already under consideration by NSF from the same submitter;



Return Without Review cont'd

■ The Proposal

- does not meet NSF proposal preparation requirements, such as page limitations, formatting instructions, and electronic submission, as specified in the Grant Proposal Guide or program solicitation;)
- is not responsive to the GPG or program announcement/solicitation;
- does not meet an announced proposal deadline date (and time, where specified); or
- was previously reviewed and declined and has not been substantially revised.



Return Without Review cont'd

- Per Important Notice 127, *“Implementation of new Grant Proposal Guide Requirements related to the Broader Impacts Criterion”* –
- Proposals that do not separately address both criteria within the one-page Project Summary will be returned without review.



NSF Merit Review Criteria

- NSB Approved Criteria include:
 - Intellectual Merit
 - Broader Impacts of the Proposed Effort



What is the intellectual merit?

Potential Considerations:

- Will the proposed activity advance knowledge and understanding within its own field or across different fields?
- How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.)
- To what extent does the proposed activity explore creative and original concepts?
- How well conceived and organized is the proposed activity?
- Is there sufficient access to resources?



What are the broader impacts?

Potential Considerations:

- How well does the activity advance discovery and understanding while promoting teaching, training and learning?
- How well does the activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)?
- To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks and partnerships?



What are the broader impacts?

- Potential Considerations (continued):
 - Will the results be disseminated broadly to enhance scientific and technological understanding?
 - What are the potential benefits of the proposed activity to society?



Role of the Review Panel

- Peer review
- Taking Risks
- Budget Constraints
- Balancing Priorities



Reasons For Funding A Competitive Proposal

- Likely high impact
- PI Career Point (tenured?/"established"/
"young")
- Place in Program Portfolio
- Other Support for PI
- Impact on Institution/State



Reasons For Funding A Competitive Proposal

A good proposal is a good idea, well expressed, with a clear indication of methods for pursuing the idea, evaluating the findings, making them known to all who need to know, and indicating the broader impacts of the activity.



Funding Decisions

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



Myths about NSF

- Only funds researchers from elite institutions
- Once declined...always declined
- Only funds “normal” science
- Advisory committees make funding decisions



Advice

- Learn to love rejection
- Contact the program officer with specific questions
- Revise and resubmit
- Collaboration is good, if appropriate
- Discover alternative funding sources



Useful URLs - Bookmark!!

NSF Home Page:

<http://www.nsf.gov>

Search NSF Awards:

<http://www.nsf.gov/awardsearch/>

Search NSF Documents On-Line:

<http://www.nsf.gov/publications/ods/>

FastLane Home Page:

<https://www.fastlane.nsf.gov/fastlane.jsp>

My NSF Service:

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Grant Proposal Guide (GPG):

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg

Guide to Programs:

http://www.nsf.gov/funding/browse_all_funding.jsp