




1

Virtual Office Hours Set-up

- All attendees are muted
- Please use Q&A button at the bottom of your screen to submit questions. Set to "send Anonymously"
 - Questions will be answered after the presentation, but you may submit questions at any time.



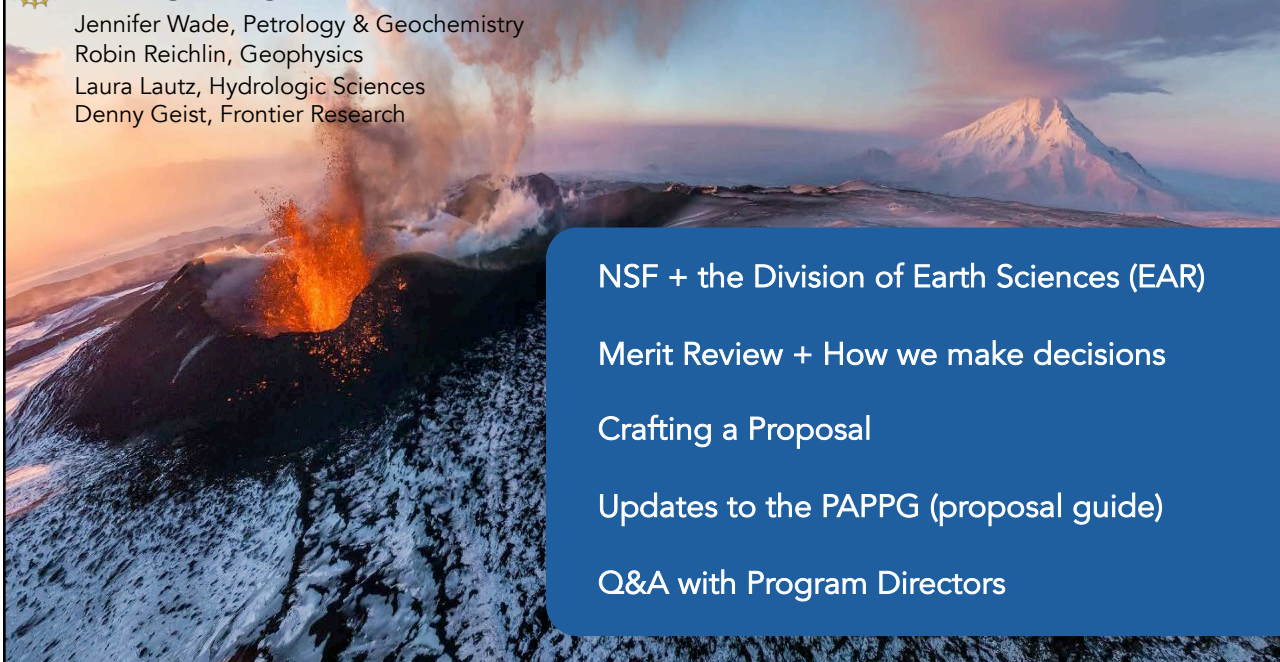
Audio Settings ^ Chat Raise Hand Q&A Leave Meeting

2



Navigating NSF & the Division of Earth Sciences

Jennifer Wade, Petrology & Geochemistry
Robin Reichlin, Geophysics
Laura Lautz, Hydrologic Sciences
Denny Geist, Frontier Research

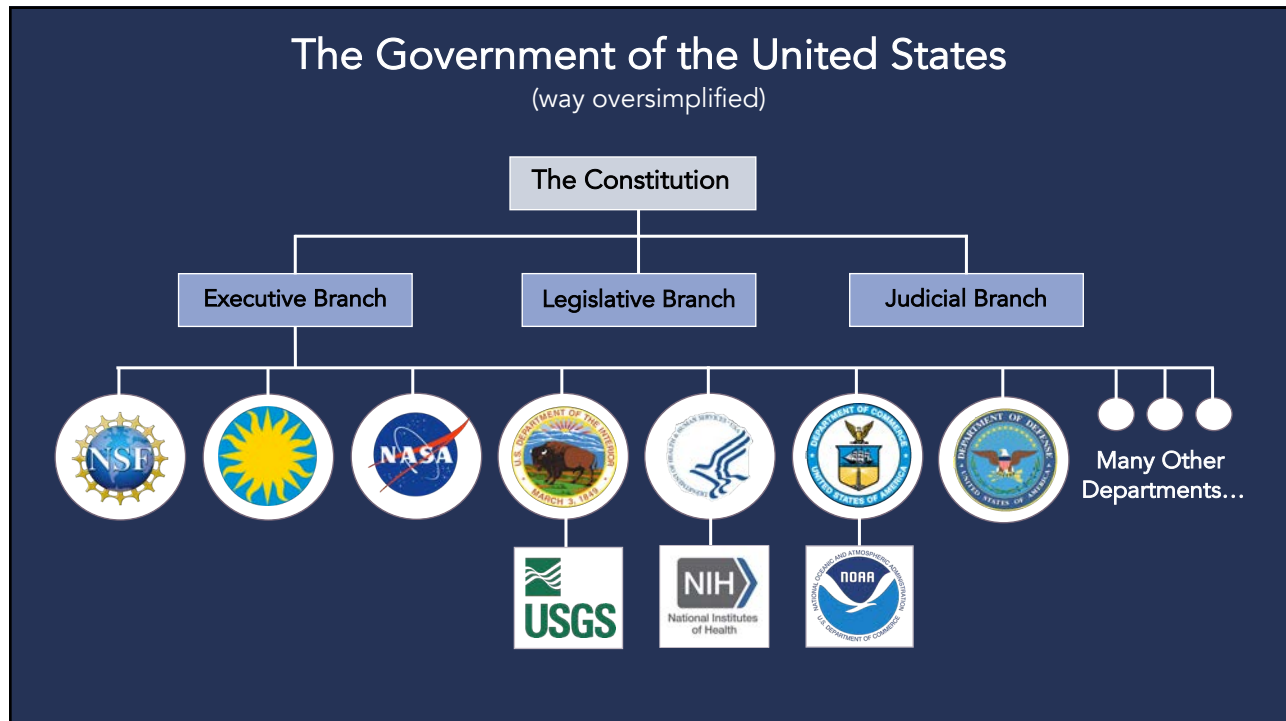


- NSF + the Division of Earth Sciences (EAR)
- Merit Review + How we make decisions
- Crafting a Proposal
- Updates to the PAPPG (proposal guide)
- Q&A with Program Directors

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The Government of the United States

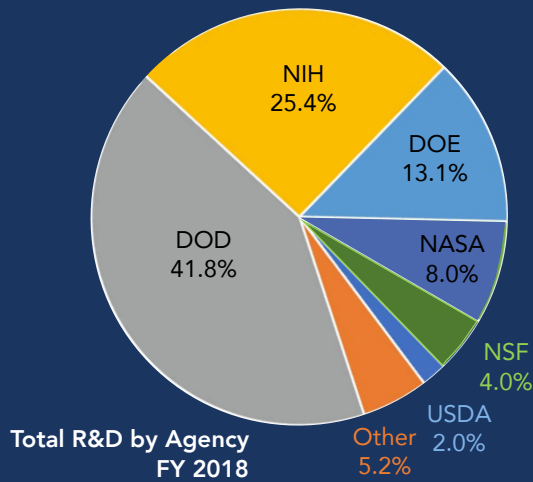
(way oversimplified)



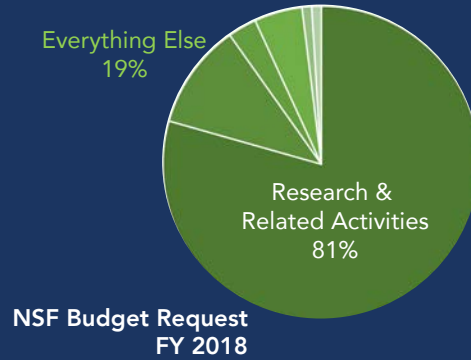
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NSF is a very small agency...

...with a **big impact**,
due to low overhead



95% of our money goes out the door as grants

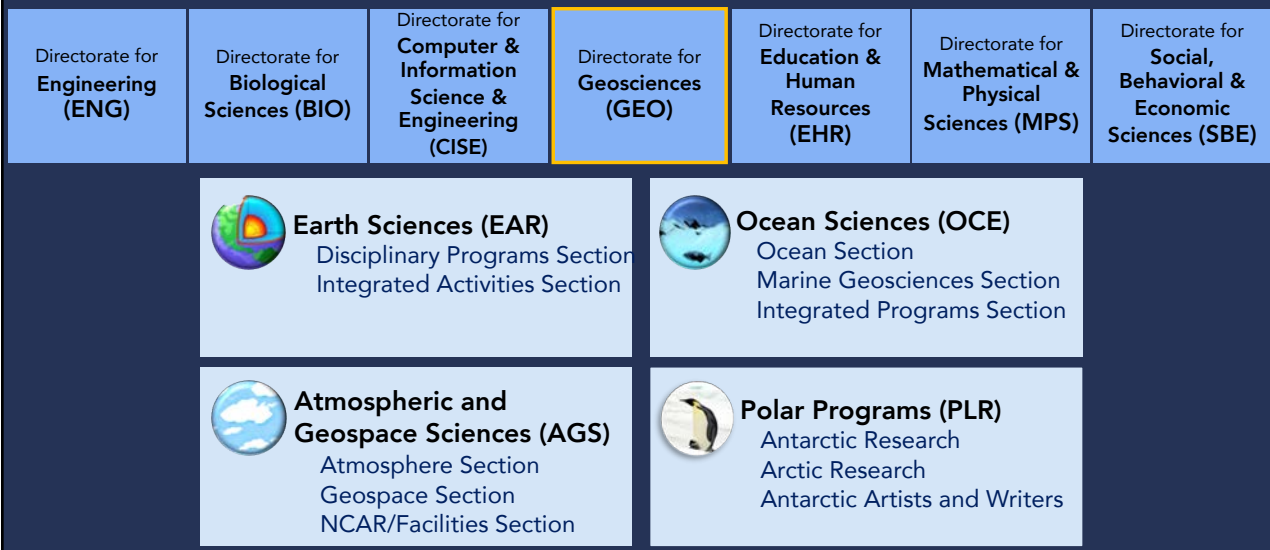


Source: AAAS, NSF Budget Office

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NSF Structure

The Director, Office of Budget, Finance, & Award Management,
Office of International Science & Engineering, etc....



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The Division of Earth Sciences (EAR)

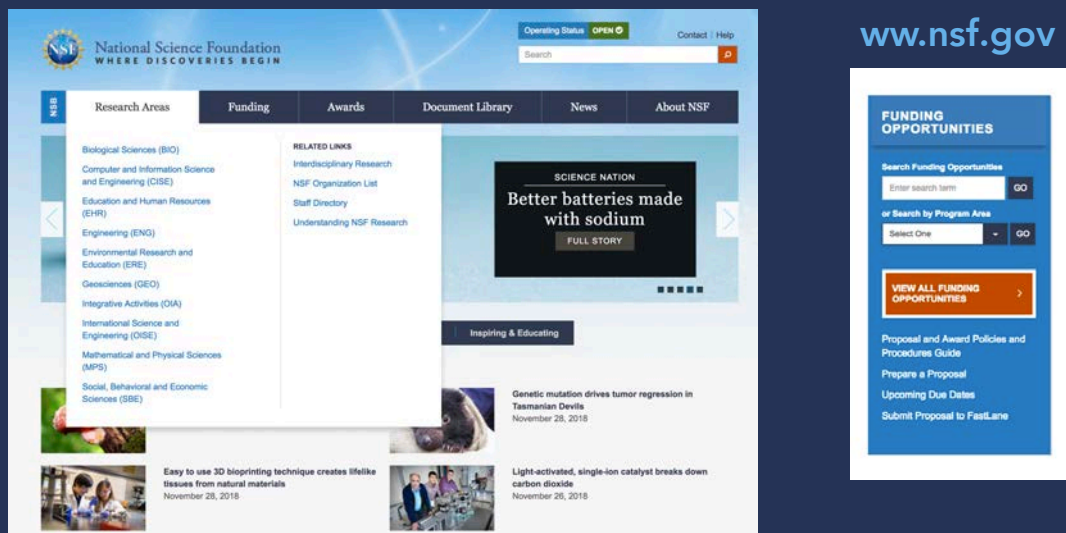
Disciplinary Programs Section

Integrated Activities Section



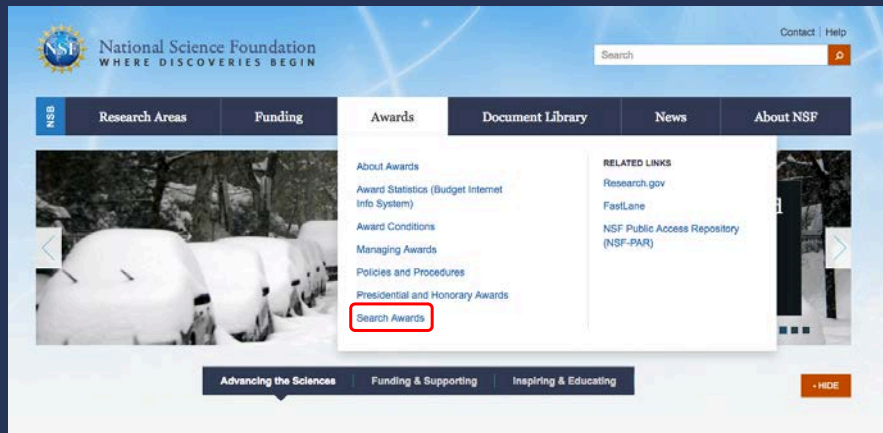
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Search for funding opportunities



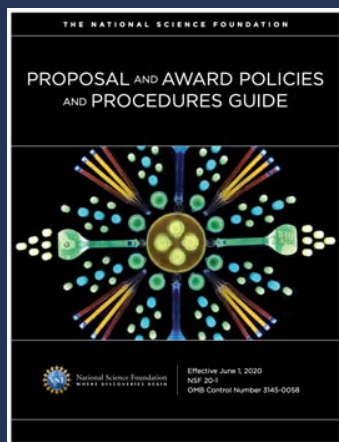
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Where does your research fit?



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Essential Documents - PAPPG



NSF 20-1

- Provides guidance for preparation and submission of proposals to NSF
 - Who can submit proposals?
 - What is allowed in the budget?
 - Format + required documents
- Describes process – and criteria – by which proposals will be reviewed
- Outlines reasons why a proposal may be returned without review

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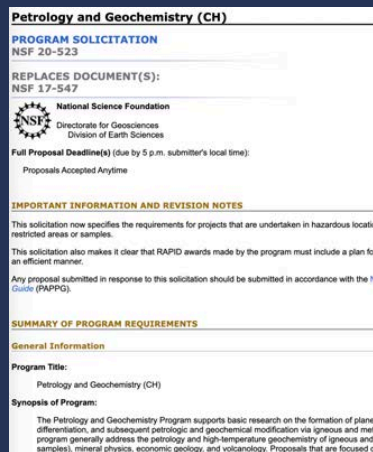
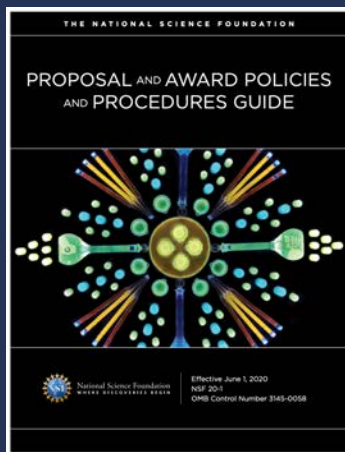
Essential Documents - Solicitation



- Deadline / Target Date
- Synopsis (do you belong?)
- Program Directors (who to ask questions)
- Eligibility (are you/your institution allowed in this program?)
- Budget limitations
- Do you need a Pre-Proposal or Letter of Intent?
- How much money do they have, how many awards do they expect?

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Essential Documents



PAPPG + **Solicitation**

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Parts of a Proposal

Cover Page

Project Summary – IM, BI, Summary

Project Description – 15 pages (usually)

Biosketch

Current & Pending Support

Budget

Letters of Collaboration

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Merit Review Process

1. Deadline/Target Date/No Deadline



2. Ad hoc review and/or



3. Panel



4. PD makes recommendation

Note that this varies across NSF, even within GEO!

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Who are the reviewers?

NSF runs the gold standard of merit review.

For every proposal submitted, I have to ask 6-10 people to review it, and if I'm lucky, HALF will actually do it.

If we get 100 proposals in @ deadline, that's a minimum of 600 people I have to ask to review.

For one deadline.

In one program.

There are 13 programs in EAR alone.



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How are proposals rated?

- E Excellent; It must be funded!!
- V Very good; Please fund it if there is enough money.
- G Good; Probably would bet better with revision
- F Fair; Proposal is flawed in one of the five elements.
- P Poor; Fundamental rethinking is needed before resubmission

The content is WAY more important than the letter rating

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Merit Review Criteria

- **Intellectual Merit (IM):**
the potential to advance knowledge
- **Broader Impacts (BI):**
the potential to benefit society and contribute to the achievement of specific, desired societal outcomes



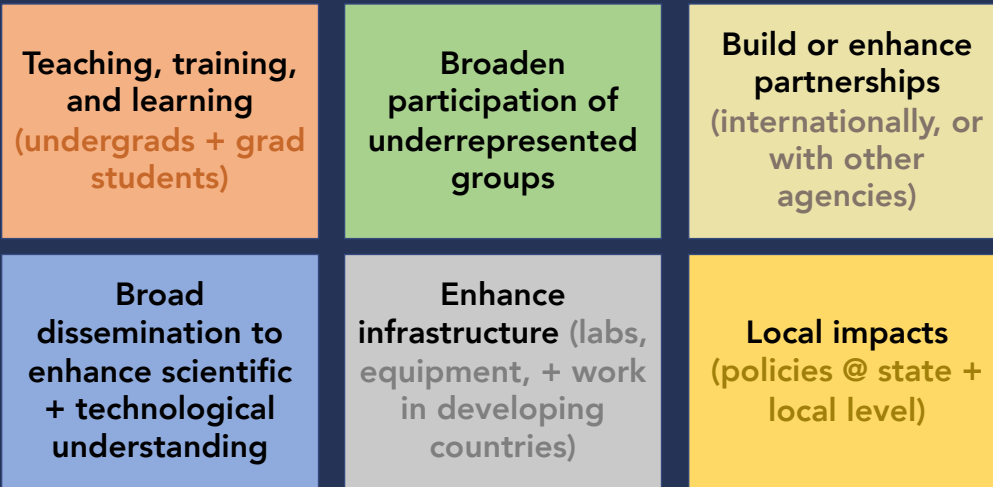
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5 Review Elements

1. Will the work advance knowledge, and benefit society?
2. Is the work creative? even potentially transformative?
3. Does the work plan make sense? Will they know if they're successful?
4. Is the team qualified to do what they propose?
5. Do they have the right lab, or know the right people?

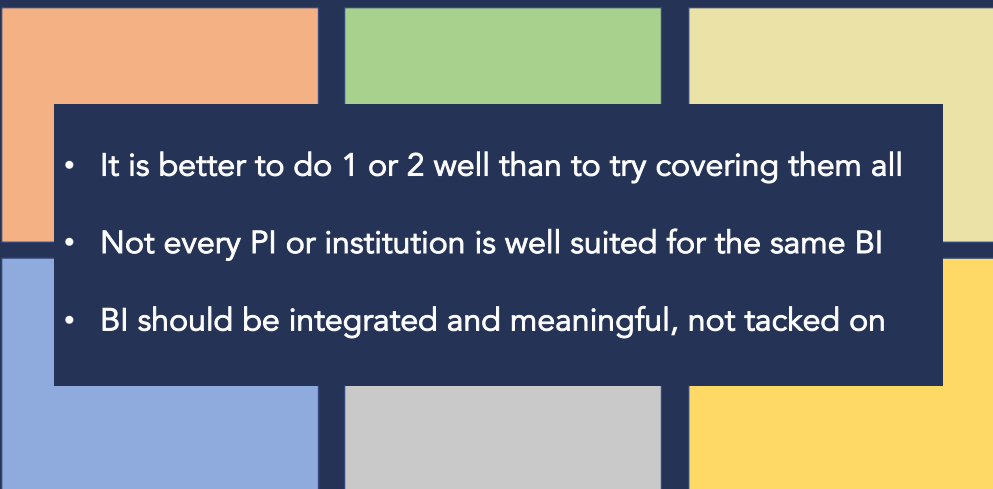
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Broader Impacts: Benefitting Society



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Broader Impacts: Benefitting Society



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Things to think about

- Does NSF fund your area of research?
 - Search Awards in the NSF website
 - Ask funded colleagues, mentors, advisors, past rotators
 - Email or meet with Program Directors
- Know your audience - Who will read your proposal?
 - Ad hoc reviewers are close experts in your field, whereas a panel will see your proposal in a broad context
 - Make sure at least one person reads your proposal before you submit it (not just your SRO!)

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What if your project fits in 2+ programs?

Many projects are multidisciplinary (across EAR, GEO, or all of NSF)

We as POs are committed to:

- trying our best to find the best home for any proposal submitted
- the inclusivity of all good ideas

One benefit of co-review, beyond sharing financially, is that the PI will benefit from feedback from a broad community

Talk to your program director!

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Parts of a Proposal

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COVER SHEET FOR PROPOSAL TO THE NATIONAL SCIENCE FOUNDATION

NSF 14-061 881311 NSF PROPOSAL NUMBER
1524596

DATE RECEIVED: 3 NUMBER OF COPIES: 5 DIVISION ASSIGNED: 0173 FUND CODE: OLDSAP FILE LOCATION:

PI INFORMATION:
NAME OF ORGANIZATION TO WHICH FUNDS SHOULD BE SENT: **Jefferson Manor University**
ADDRESS: **Jefferson Manor University, 1 Lucille Lane, Saddle Valley, CA 92663**

PI CONTACT INFORMATION:
NAME OF PI: **Megan Fogarty**
ADDRESS: **1 Lucille Lane, Saddle Valley, CA 92663**
PHONE: **949-441-1111**
EMAIL: **mfogarty@jmu.edu**

PI CONTACT NAME	PI TITLE	PI ADDRESS	PI PHONE	PI EMAIL
Megan Fogarty	PI	1 Lucille Lane, Saddle Valley, CA 92663	949-441-1111	mfogarty@jmu.edu
Lucas Butler	PI	1 Lucille Lane, Saddle Valley, CA 92663	949-441-1111	lbutler@jmu.edu

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Writing a Proposal is NOT like writing a Paper

A Paper is:

- a scholarly pursuit: individual passion
- past-oriented, work that has been done
- theme-centered: theory and thesis
- expository rhetoric: explaining to the reader
- impersonal tone, objective, dispassionate
- few length constraints: verbosity rewarded
- specialized terminology: "insider jargon"

A Proposal is:

- aimed at sponsor goals: service attitude
- future-oriented, work that should be done
- project-centered: objectives and activities
- persuasive rhetoric: 'selling' the reader
- personal tone, conveys excitement
- strict length constraints: brevity rewarded
- accessible language: easily understood

Porter (2007) The Journal of Research Administration, Volume XXXVIII, No. 2, p. 37-43

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A Compelling Introduction

- This is basically a statement of the Intellectual Merit. Catch the reader's attention immediately. State up front what you want to do, and why it's exciting and important
- Explain why previous studies have been insufficient to resolve the problem and how you can remedy the situation.
- Explain why your field site (or experiment or model) was chosen for the study.
- Lay out your specific **hypothesis** to be tested. Or, explain your compelling observation that is so new, you need to do the work to develop a hypothesis (a "pilot" or "EAGER")

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What Is a Hypothesis?

Not so great; a list of tasks:

We propose to map Volcano A, then collect and characterize 10 samples from that volcano. We will date these samples to develop a stratigraphy. This will reveal the history of volcanism in the region.

Clarity:

The objective of this project is to assess whether volcanism in this region is related to changes in tectonic regime from compression to extension over the last 10 million years.

or

This project will test the validity of two competing models for the source of magmatism in X region.

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Lay out a Clear Work Plan, Timeline, and Role for Each Participant

Work Plan A:

- draw out a timeline, with tasks
- PIs Wade and Fogarty will go into the field with the graduate and undergraduate students in year 1 to collect samples, and will complete the proposed analyses by year 2
- Explain how each analysis of mode connects to your hypotheses
- Clarify the specific role of each PI + student
- show that the work is feasible within your timeline

Work Plan B:

PIs Wade and Fogarty, along with one graduate student and two undergraduates from each institution will go into the field in year 1. Graduate students will be responsible for mapping the region, and the undergraduates will learn tephra sampling skills. Upon return from the field, undergraduates will be involved in sample preparation including thin section billet cutting, and bulk major and trace element analyses. Each graduate student has a defined project [describe] focused on mineral-scale analyses.


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Build a Realistic Budget

- We know science costs money. Be accurate, be reasonable
- Find out what size grants are the norm for the program to which you are applying and get into that ball park
- Know what the funder will pay for and will not pay for...talk to your program manager (equipment? Travel? USGS collaborators?)
- Use the "Budget Justification" pages to explain your costs (so important that it's now 5 pages)
- Ask for money to support your Broader Impacts

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What If You're Declined?

- It happens to everyone, except those who don't
- Stay calm, and don't get discouraged. Breathe more than once
- Identify common themes across different reviews
- Don't fixate on minutia + cranky comments 
- Ask a friend/colleague to read the reviews objectively



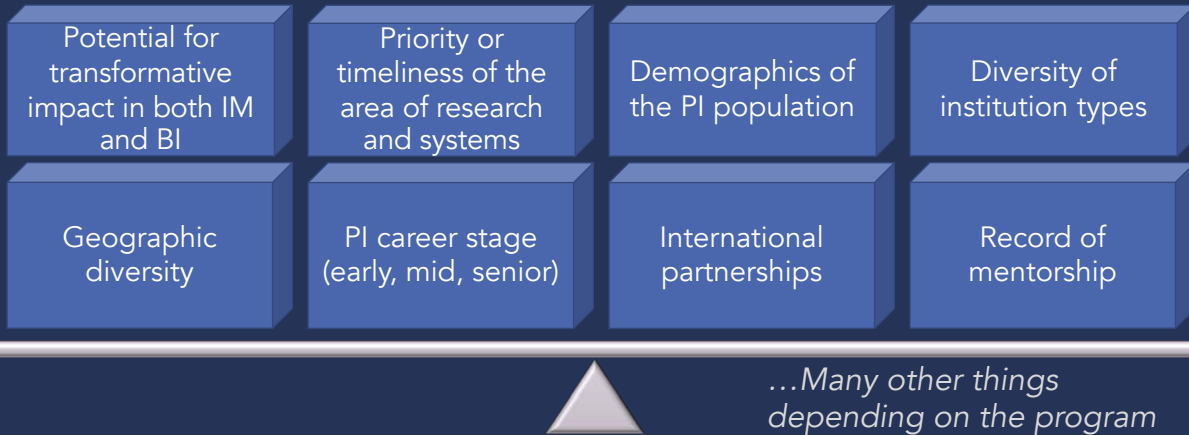
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What If You're Awarded?

- Celebrate! We're so proud of you 
- Read the reviews and/or panel summary: they likely had some useful criticisms and advice
- Cite the award and NSF when you publish or present
- Read NSF's guide for awardees (the PAPPG) + write your annual reports on time
- Develop a rapport with your Program Director + keep her updated
- Be a good mentor to the students and colleagues you support

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Program Decision-Making & Portfolio Balance



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Program Decision-Making & Portfolio Balance

- Potential for transformative impact in both IM and BI
- Priority or timeliness of the area of research and systems
- Demographics of the PI population
- Diversity of institution types
- Geographic diversity
- PI career stage (early, mid, senior)
- International partnerships
- Record of mentorship
- *Many other things depending on the program goals*

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Fastlane Retirement

Currently, PIs can submit via



or



Any proposal

Most proposals

But not all solicitations yet

By 2021/22, NSF intends to move everything to



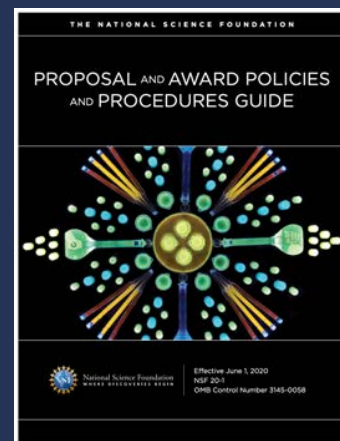
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New PAPPG Effective June 1

Major changes/clarifications in the realm of:

Biosketches

Current & Pending



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New PAPPG Effective June 1

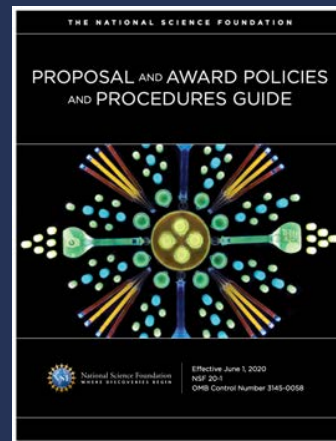
Major changes/clarifications in the realm of:

Biosketches

must use an NSF-approved format like



from NIH



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New PAPPG Effective June 1

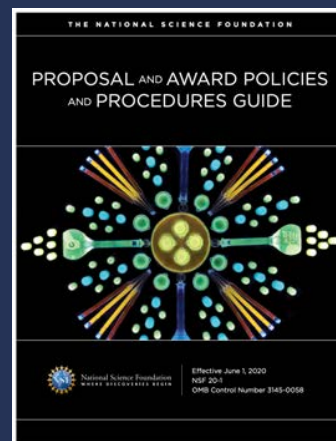
Major changes/clarifications in the realm of:

Biosketches

Current & Pending



- The reason the new PAPPG was delayed
- Requires an NSF-approved format
- Now includes all resources made available to a PI in support of and/or related to all research efforts, *regardless of whether or not they have monetary value.* This also includes in-kind contributions (such as office/laboratory space, equipment, supplies, employees, students). In-kind contributions *not intended for use on the project being proposed also must be reported*



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NSF + the Division of Earth Sciences (EAR)

Merit Review + How we make decisions

Crafting a Proposal

Updates to the PAPPG (proposal guide)

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Submit your questions or comments now using the Q&A function at the bottom of your screen and set to "Send anonymously."

Audio Settings ^



Chat



Raise Hand



Q&A

Leave Meeting

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