



Welcome - We will begin shortly

NSF Navigating the NNA Proposal Preparation and Merit Review Process Workshop

Thursday, December 9, 2021

2:00pm-4:00pm Eastern / 12:00pm-2:00pm Mountain / 10:00am-12:00pm Alaska



Navigating the NNA Proposal Preparation and Merit Review Process

NNA WORKING GROUP
NATIONAL SCIENCE FOUNDATION

Navigating the New Arctic
Fall 2021



NNA | Navigating the New Arctic CO | Community Office

The **Navigating the New Arctic Community Office (NNA-CO)** supports the NNA mission by building awareness, partnerships, opportunities, and resources for collaboration and equitable knowledge generation within, between, and beyond the research projects funded by the NNA Initiative.

www.nna-co.org





Presentation Outline

- Mission and workings of the NSF
- Merit Review process
- Common myths about NSF funding
- Foundations of an NSF proposal
- Navigate the NNA program page
- Special considerations for the NNA proposals
- The key Do's and Don'ts
- The next steps

NSF Introduction

GOALS & MECHANISMS



NSF Strategic Goals

Strategic Goal 1: Transform the Frontiers of Science and Engineering

“to promote the progress of science”

Strategic Goal 2: Stimulate Innovation and Address Societal Needs through Research and Education

“to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes”



What NSF Does

- Supports all fields of fundamental science and engineering, except for medical sciences.
- Ensures that research is integrated with education so that today's revolutionary work will also be training tomorrow's top scientists and engineers.

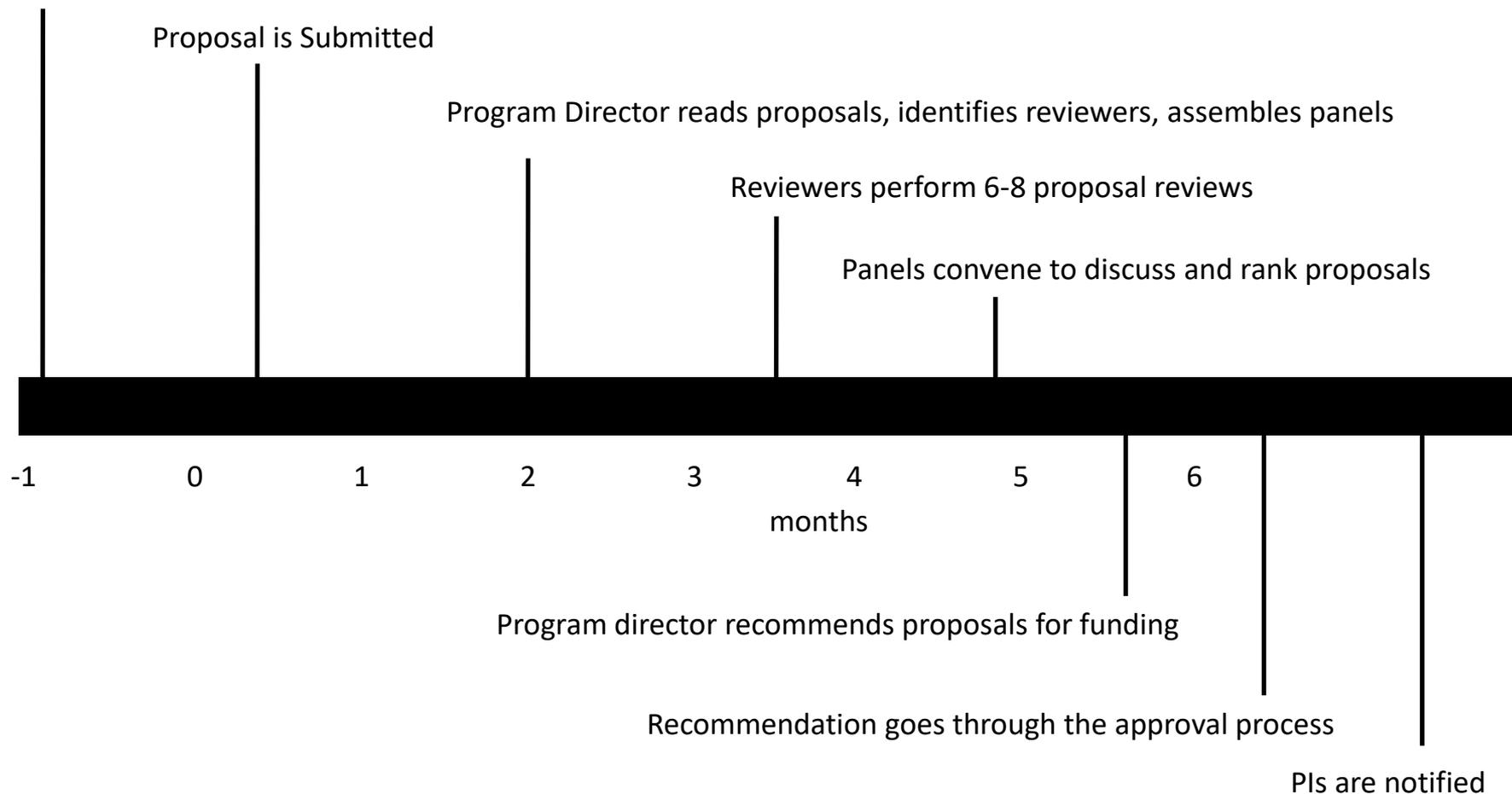
Merit Review Process

TIMELINE & RUBRICS



Merit Review Timeline

PI communicates with Program Director to determine program fit





Merit Review Criteria

Intellectual Merit: How important is the proposed activity to **advancing knowledge and understanding** within its own field or across different fields?

Broader Impacts: What is the potential for the proposed activity to **benefit society** or advance desired societal outcomes?

The Five Elements of Merit Review



1. What is the potential for the proposed activity to:
 - advance knowledge and understanding within its own field or across different fields (**Intellectual Merit**); and
 - benefit society or advance desired societal outcomes (**Broader Impacts**)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?

The Five Elements of Merit Review (2)



3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or institution to conduct the proposed activities?
5. Are there adequate resources available to the PI (either internally or through collaborations) to carry out the proposed activities?

Common Myths About NSF Funding



Common myths...

1. NSF only funds scholars at elite institutions
2. NSF only funds “famous” academics
3. Once declined, always declined
4. NSF is only interested in quantitative approaches
5. Qualitative and quantitative approaches are mutually exclusive
6. NSF proposals must have hypotheses

Proposal Foundations



Proposal Basics

- Write to the reviewers (not to the program director and not to yourself)
- Your proposal will be judged by the reviewers
- Reviewers want to know four things:
 - What is it about (the research objective)?
 - How will you do it (the technical approach)?
 - Can you do it (you and your facilities)?
 - Is it worth doing (intellectual merit and broader impacts)?
- This is, basically, all the proposal needs to convey – but it needs to convey this



12 Steps to a Better Proposal

1. Know yourself - strengths/weaknesses
2. Know the program from which you seek support
3. Read the program announcement and PAPPG
4. Formulate clear and appropriate research and education objectives
5. Develop a viable plan to accomplish your stated objectives
6. State your objectives up front in your proposal
7. Frame (contextualize) your project around the work of others



12 Steps to a Better Proposal (2)

8. Grammar and spelling count
9. Format and brevity are important
10. Know the review process
11. Proofread the proposal before you submit it
12. Submit your proposal early and proofread it after you submit it

Writing a good proposal takes common sense and effort—it's not magic!

Navigate the NNA Program Page



Explore the program page

Get to know
the NNA
program

Synopsis

In 2016, the National Science Foundation (NSF) unveiled a set of "Big Ideas," 10 bold, long-term research and process ideas that identify areas for future investment at the frontiers of science and engineering. The Big Ideas represent unique opportunities to position our Nation at the cutting edge of global science and engineering leadership by bringing together diverse disciplinary perspectives to support convergence research. As such, even though proposals must be submitted to the Directorate for Geosciences when responding to this solicitation, once received, the proposals will be managed by a cross-Directorate team of NSF Program Directors.

Arctic temperatures are warming faster than nearly everywhere else on Earth, with some

[Expand +](#)

Program Contacts

NNA Working Group	nna@nsf.gov	(703) 292-8030
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Program Webinars

[Navigating the New Arctic Webinar - January 15, 2021](#)

Awards Made Through This Program

[Browse projects funded by this program](#)

[Map of recent awards made through this program](#)

Organization(s)

Directorate for Geosciences (GEO)

Upcoming Due Dates

Full Proposal

2022

February 16 - Deadline Date

Second Wednesday in February, recurring

Program Guidelines

Award Information

This solicitation will consider proposals for three types of projects:

- **NNA Incubator Grants** with a total budget of up to \$300,000 and a maximum duration of 24 months.
- **NNA Research Grants** with a total budget of up to \$3,000,000 and a maximum duration of 5 years.
- **NNA Collaboratory Grants** with no budget restrictions and a maximum duration of 5 years.

Project durations and budgets must be commensurate with the scope of the work proposed, and with guidance provided elsewhere in this solicitation regarding anticipated program resources. NSF anticipates a portfolio of awards with a range of budgets and durations up to these maxima.

Estimated program budget, number of awards, and average award size/duration are subject to the availability of funds.

Estimated Number of Awards

Find funded projects and read abstracts



What has been previously funded by NNA?

Export up to 3,000 Awards: CSV | XML | Excel | Text Email this Link | Export All Results

Sort By: Relevance Results size: Page 1 of 5

30 per page Table List

NNA Track 1: Collaborative Research: Navigating Convergent Pressures on Arctic Development

Award Number:2022599; Principal Investigator:Amanda Lynch; Co-Principal Investigator:Laurence Smith; Organization:Brown University;NSF Organization:ICER Start Date:09/01/2020; Award Amount:\$1,163,987.00; Relevance:48.0;

NNA Track 1: Collaborative Research: Navigating Convergent Pressures on Arctic Development

Award Number:2022588; Principal Investigator:Michael Goldstein; Co-Principal Investigator:; Organization: Babson College;NSF Organization:ICER Start Date:09/01/2020; Award Amount:\$116,468.00; Relevance:48.0;

NNA Research: Collaborative Research: Frozen Commons: Change, Resilience and Sustainability in the Arctic

Award Number:2127346; Principal Investigator:James Temte; Co-Principal Investigator:; Organization:Alaska Pacific University;NSF Organization:ICER Start Date:09/01/2021; Award Amount:\$174,935.00; Relevance:48.0;

ABSTRACT

Navigating the New Arctic (NNA) is one of NSF's 10 Big Ideas. NNA projects address convergence scientific challenges in the rapidly changing Arctic. The Arctic research is needed to inform the economy, security and resilience of the Nation, the larger region and the globe. NNA empowers new research partnerships from local to international scales, diversifies the next generation of Arctic researchers, enhances efforts in formal and informal education, and integrates the co-production of knowledge where appropriate. This award fulfills part of that aim by addressing interactions among social systems, natural environment, and built environment in the following NNA focus areas: Arctic Residents, Data and Observation, Forecasting, Global Impact, and Resilient Infrastructure.

Few transformations are as dramatic or as complex as those occurring now in the Arctic. There are rapid changes in climate and the environment, in international treaties and regulations, in national security, and claims for territory. At the same time, Arctic communities and Indigenous Peoples are looking to find their place in a changing global economy. This convergence of changes and aspirations is leading to questions about what kinds of infrastructure are needed, where it should be located, and how this may impact Arctic people and environment. This project is using a combination of observations, satellites, maps, and models to identify where useful and viable locations for new development might be located. These kinds of data and analysis have not been combined before to make such an assessment. These locations are then explored with communities, emergency managers, environmental scientists, industry representatives, local governments, and members of Indigenous groups. Through this merging of environmental sciences, real-world engineering, financial analyses, and cultural concerns, the project is documenting likely future developments and understand their impacts on the Arctic environment and its people.

You can review the abstracts of NNA awards.

Additional resources on the program page



Find contact information



Watch webinar recordings



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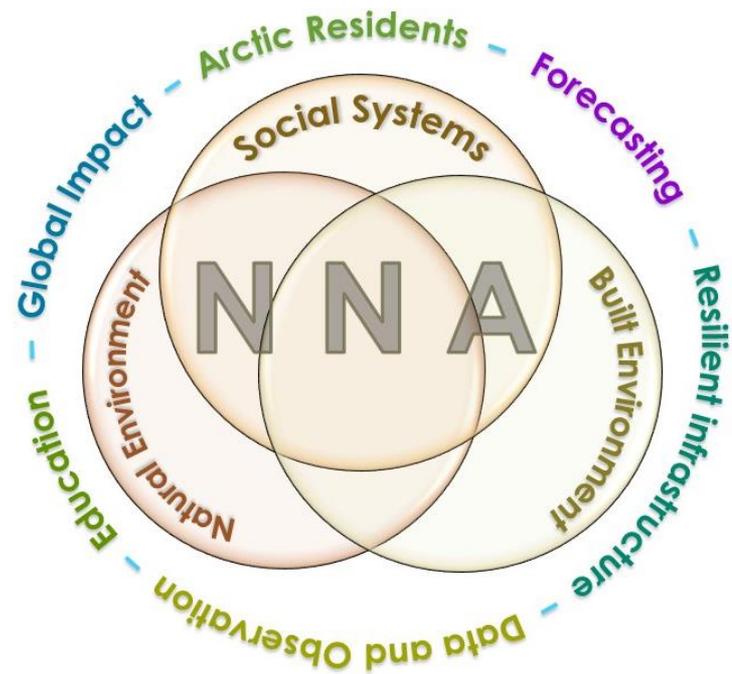
Estimated Number of Awards

NNA Proposals

SPECIAL CONSIDERATIONS

NNA Special Considerations

- ✓ Proposal should clearly articulate what major elements and focus area(s) depicted in the NNA Venn diagram your project addresses.
- ✓ The team's expertise and proposed methods/theories should clearly correspond to these Venn diagram elements and focus area(s).
- ✓ Co-production of knowledge and outreach activities do NOT automatically meet the requirement for addressing 'social system' questions per the NNA Venn diagram.



Do's & Don'ts



DOs

- Have a strategic plan
- Build on your strengths
- Differentiate this proposal from your and other sponsored work
- Perform a thorough literature search and exploratory research before writing the proposal



DON'Ts

- Rush
- Wait until last minute (1 month) to contact program directors
- Make the proposed work too broad
- Make the proposed work too narrow
- Ask for too much (or too little) money
- Ignore rules (PAPPG) and misc. items – violation of the PAPPG requirements will result in return without review

Talking to Program Directors: Pre-Submission



DO:

Discuss the objectives of the program

Relate your research idea to the program objectives

Ask about Broader Impact activities

Ask about budgets

Volunteer to serve on review panels

DON'T:

Argue that your proposal fits the program

Try to convince the Program Director to fund your proposal

Count on the Program Director remembering anything you talked about

Talking to Program Directors: Post-Decisions



DO:

Ask for feedback on the panel discussion

Respond to technical issues from the reviews

Discuss a possible revision

Volunteer to serve on review panels

DON'T:

Get mad

Insult the reviewers and/or the Program Director

Try to convince the Program Director to change the decision

What Next?



Target Program

- Begin with
 - **White paper**, i.e., one-page summary
 - **Dialog** with program director
- Be an NSF **proposal reviewer**—best place to learn about what makes a winning proposal!
- **We are here to help!**



QUESTIONS?

NNA Working Group, NNA@nsf.gov





Breakout Rooms

Please choose breakout rooms based on your questions for the NSF program officers. You are free to bounce between breakout rooms as you wish. To do so, leave the breakout room you are currently in, and choose a new one to join.

NNA Incubator Grants: up to \$300,000 / 2 years – **Breakout Room 1**

- Proposals that support activities related to convergence research team formation, pilot convergence research, testing project feasibility, and/or engagement in capacity-building to address important challenges.
- Unlike the Planning Grant Track in previous NNA solicitations, Incubator grants can be used to support convergence research activities.

NNA Research Grants: up to \$3,000,000 / 5 years – **Breakout Rooms 2, 3 and 4**

- Proposals that support fundamental research that tackles convergent scientific and engineering challenges related to the rapidly changing Arctic.

NNA Collaboratory Grants: no budget restrictions / maximum duration of 5 years – **Breakout Room 5**

- Organize and collaborate on multifaceted, complex challenges and opportunities related to the rapidly changing Arctic.
- Support activities that involve a breadth of collaborations, working together to address grand challenge questions of a scope broader what is expected for a Research Grant, with outcomes that have far-reaching implications.