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NSF 19-017

Frequently Asked Questions (FAQs) for NSF 19-511, Navigating the New Arctic FY 2019 Solicitation

This document answers common questions associated with the FY 2019 Navigating the New Arctic (NNA) Big Idea solicitation (NSF 19-511) and may be updated from time to time as additional common questions emerge. If you have a question about the NNA solicitation, please review these FAQs carefully. If you still have questions after reviewing the content below, you may reach the NNA Working Group by sending an email to NNA@nsf.gov.

GENERAL

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14. I submitted a proposal pursuant to the NNA Dear Colleague Letter (DCL; NSF 18-048). Is that submission eligible for consideration under this solicitation?

TRACK 1 - RESEARCH GRANTS

TRACK 2 - PLANNING GRANTS

GENERAL

1. **What are the goals for the Navigating the New Arctic initiative?**

Major goals of NSF's NNA Big Idea include:

- *Improved understanding of Arctic change and its local and global effects that capitalize on innovative and optimized observation infrastructure, advances in understanding of fundamental processes, and new approaches to modeling interactions among the natural environment, built environment, and social systems.*
- *New enhanced research communities that are diverse, integrative, and well-positioned to carry out productive research at the intersections of Arctic natural and built environments and social systems.*
- *Research outcomes that inform U.S. national security and economic development needs and enable resilient, sustainable Arctic communities.*

2. **Must proposals submitted to the Navigating the New Arctic solicitation include a component addressing the actual navigation of the Arctic region?**

   No, "Navigating" is meant as a metaphor, and not as a constraint or requirement for proposals submitted to this competition.

3. **How will NNA proposals be reviewed?**

   The review process is described in the solicitation, Section VI.B. Please note that the convergent nature of NNA projects will require a multidisciplinary group of reviewers.

4. **Can I obtain a waiver of the page limitation for the project description if my project is large and complex, or if my project is a large collaboration among multiple organizations?**

   No. All proposals must adhere to the page limit given in the solicitation.

5. **Can NNA projects involve international collaborations?**

   NSF encourages NNA proposals that include significant international components. Note, however, NSF rarely provides funding support to foreign organizations. International collaborators should seek support from their respective funding organizations, and not NSF.

6. **What is meant by "co-production of knowledge"?**

   NSF identifies co-production of knowledge as research in which local and Indigenous people and organizations fully engage in the complete research process from development of questions, to the collection, use, and stewardship of data, and interpretation and application of results.

7. **What are some examples of development, implementation, or evaluation of educational activities?**

Such activities may include, but are not limited to:

- Research experiences and other activities that capitalize on disciplinary and interdisciplinary scientific training or indigenous experience and knowledge to advance Arctic science;
- Development of courses that will advance training related to the scientific focus of the proposal;
- Development, implementation or evaluation of curricular changes to existing educational programs to reflect the emerging scientific focus of the proposal;
- Development of certificate programs that enable students to master a narrow subject or topic or offer professional training in an area of Arctic science;
- Implementation of evidence-based practices that increase the number, diversity, and expertise of Arctic researchers;
- Opportunities for students to partner with industry, government, community, and non-profit stakeholders that work within the Arctic nexus; and/or
- Involvement of local educational institutions, including Tribal College and Universities Program (TCUP) eligible institutions, Historically Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs).

8. **Do all proposals require a Data Management Plan?**

   Yes, all proposals submitted under this solicitation are required to include a Data Management Plan. Special requirements for the Data Management Plan are described in the solicitation, Section V.A.

9. **Do all proposals require a Management and Integration Plan?**

   Yes. Please note that the quality and appropriateness of the Management and Integration Plan are important review criteria for NNA proposals.

10. **Can an individual be simultaneously involved as a PI, co-PI or Senior Personnel in Track 1 and Track 2 proposals?**

    Yes, however, an individual may not participate as PI, Co-PI, and/or Senior Personnel on more than two proposals in response to Track 2 of this solicitation.

11. **Is the submission deadline flexible?**

    No. Proposals will not be accepted after 5:00 PM submitter's local time on the deadline date.

12. **The solicitation lists maximum durations and budgets for NNA proposals. Can we propose a project with a shorter duration or smaller budget?**

Yes, you may. NSF does not consider any particular project duration or budget to be optimal, provided that neither exceeds the limits given in the solicitation, and that project durations and budgets are commensurate with the scope of the work proposed. NSF anticipates funding awards with a range of project durations and budgets.

13. **My project may require Institutional Review Board (IRB) approval. Do I need to submit IRB approval paperwork with my proposal?**

IRB approval is not needed at the time of proposal submission, but must be provided before NSF can make the award. The box for "Human Subjects" must be checked on the Cover Sheet if use of human subjects is envisioned. The requirements contained in the NSF *Proposal and Award Policies and Procedures Guide* (PAPPG) Chapter II.D.5 must be followed. NSF provides additional guidance on IRB requirements on the Human Subjects Web page at https://www.nsf.gov/bfa/dias/policy/human.jsp. Additional approvals or permits may be needed for projects with international, tribal, or collaborative dimensions.

14. **I submitted a proposal pursuant to the NNA Dear Colleague Letter (DCL; NSF 18-048). Is that submission eligible for consideration under this solicitation?**

Proposals submitted to another funding opportunity at NSF will not be considered for funding under this solicitation. If you wish for your proposal to be considered for this solicitation, you may withdraw your earlier proposal to the NNA DCL (or other funding opportunities) and revise it for submission to this NNA solicitation. Please contact the NSF program officer managing your proposal before withdrawing your proposal.

15. **Can I submit a proposal for a center pursuant to this solicitation?**

The current solicitation does not allow for center or center-like proposals, at this time. NSF anticipates that future NNA solicitations may include opportunities for projects up to the scale of centers and/or consortia. See the description of Track 2 proposals in the solicitation for more information regarding future NNA goals.

16. **Can I submit a proposal for a conference pursuant to this solicitation?**

NNA Track 2 proposals "may include support to conduct organizational planning meetings"; therefore, small conferences may be proposed as an integral component of a Track 2 proposal. However, proposals for conferences whose primary purpose is not aligned with the goals of NNA Track 2 should not be submitted to this solicitation. Other programs at NSF may be more appropriate for such a conference proposal.

17. **Can you explain what is meant by "new enhanced research community"?**

The development of the NNA Big Idea is based on the recognition that profound

changes in the Arctic present challenges and unprecedented risks to natural, social, and built systems both within and outside of the Arctic. Meeting these challenges requires a large and diverse research community empowered to work across disciplinary boundaries and to bring to bear new perspectives on local, regional, and global causes and consequences of Arctic change. For these reasons, NNA has as a major objective the development of an expanded community of researchers, including participants new to Arctic research and teams that incorporate novel combinations of scientists, stakeholders, community-members, and students from a range of disciplines, backgrounds, and social and cultural contexts.

18. **I have never worked in the Arctic before, but I think my research could be appropriate for NNA. Should I submit a proposal?**

   Yes! NSF welcomes proposals from investigators new to the Arctic, provided all requirements of the solicitation are met.

19. **What if my organization has knowledge of issues relevant to, or works in, the Arctic but doesn't normally submit proposals to NSF? Is my organization eligible to submit a proposal to this competition?**

   NSF is interested in engaging, through this NNA solicitation, new investigative teams and organizations in the Arctic. The NSF PAPPG and the NNA solicitation list a wide range of eligible organization types, with examples provided in the PAPPG. Please note that US-based organizations that primarily represent, research, and/or lead Indigenous and non-Indigenous residents of the Arctic and beyond, including but not limited to tribal colleges and councils, local Indigenous organizations, and non-profit organizations may meet the PAPPG definitions. NSF does require financial review of awardee organizations that have never received an NSF award, but that review does not take place unless the proposal is going to be recommended for funding. You can find additional information for prospective new proposers in the NSF Prospective New Awardee Guide.

TRACK 1 - RESEARCH GRANTS

20. **How do I know if my project is more appropriate for NNA Research Grant (Track1) or for another program at NSF?**

   As stated in the NNA solicitation, Track 1 proposals must address a question or questions at the intersection between at least two of the following: the natural environment, the built environment, and social systems and must address at least one, and preferably more than one, of the five focus areas listed in the solicitation. In addition, proposals must have a strong connection to real-world needs of the changing Arctic or its global impact, with clear evidence of domain expertise within the

investigative team. Proposals are expected to be convergent in nature as defined by NSF (https://www.nsf.gov/news/special_reports/big_ideas/convergent.jsp). Projects not meeting these requirements would not be appropriate for NNA Research Grants but could be appropriate for other programs at NSF.

21. **The solicitation lists five focus areas for Track 1 proposals. Can you provide examples of activities that might fit under each focus area?**

    ○ *Innovations in interoperable national and international Arctic observational networks, instruments and technologies; shared and open data collections; and/or intelligent data management, analysis, and/or modeling efforts that address impacts and new opportunities at the intersection of the natural and built environments and social systems.*

    For example, anticipating, understanding, and predicting changes in the Arctic social, natural, and built environments may be enabled by the introduction of customized sensor platforms whose observational data and analysis may inform research models in anticipating, predicting, and mitigating extreme events. Underwater robots could map the sea floor as never before; characterize biogeochemical, geophysical, and ecological sea conditions; and provide ground-truthing for satellite estimation of ice thickness. Novel and robust observation techniques by Arctic residents could also provide a valuable source of information that can deepen our understanding of Arctic systems at multiple scales.

    ○ *Studies to understand and forecast interdependent changes in the biogeochemical, geophysical, biological, ecological, institutional, and social processes occurring in the new Arctic, including, when appropriate, global feedbacks.*

    This could include, for example, the evolutionary, physiological, and ecological responses of flora and fauna; changes in Arctic landscapes, driven by permafrost thaw and fire, that fundamentally alter ecosystems; changes in Arctic Sea temperatures and salinity that impact marine ecology; or a wide range of human activities, such as governance and decision-making structures, examinations of the influence of environmental change in the Arctic on global security and political phenomena, and/or the impact of responses of state governmental institutions and international organizations to rapid Arctic change. Keep in mind that, as stated above, proposals must address how research activities will lead to understanding of questions at the intersection between the natural environment, the built environment, and social systems.

    ○ *Enabling fundamental science and engineering research in forward-looking, sustainable, adaptable, and resilient infrastructure to meet current and future*

challenges of a changing Arctic.

For example, projects (1) to understand and mitigate the negative effects of thawing permafrost, changes in the frequency and nature of natural disasters; and changing demands for, and stresses on, current and future built infrastructure; (2) to explore approaches to vastly improved communications and transportation systems that can endure Arctic conditions, including ground-based and marine transportation systems (manned or autonomous), satellite-based communications, and/or supply chain logistics under dynamic and uncertain conditions; and/or (3) to research new technologies that are needed to enable sustainable, green Arctic infrastructure capable of withstanding extreme and variable conditions.

- *Convergence research approaches to help researchers to understand the complex relationship between Arctic residents and their natural and cultural landscape.*

This could include a focus on multi-scalar governance systems, how Arctic communities adapt to rapid Arctic transformations, shifting demographics and cultural systems, or resilience and vulnerability of coastal and inland settlements to rapid environmental changes, including sea level rise and increasing wildland fires. In addition, studies could focus on changes in biodiversity and ways of life and their effects on food security and subsistence harvests, efforts made to maintain and share Indigenous knowledge and languages in the face of rapid loss, and wider social, ecological, institutional and cultural efforts being made by Arctic residents to adapt to these changes.

- *Understanding and forecasting global influences, consequences, and opportunities arising from a changing Arctic.*

Projects focused on understanding the impacts of Arctic change on environmental, climatic and biophysical processes across the globe may be appropriate for NNA, if the link to Arctic processes is made clear. In addition, understanding the consequences and opportunities for international trade, the global economy, oil and mineral extraction industries, national security, and other geopolitical factors from the expanding ability to navigate the new Arctic could be appropriate for NNA.

22. **Can I submit a Track 1 proposal for a project that does not involve research in the Arctic?**

Yes, provided the project meets the requirements given in the solicitation and summarized in FAQ #20. As one example, a project that examines the implications of the changing Arctic on two or more of the natural environment, built environment, and social systems could be appropriate under the fifth focus area, even if those environments and/or systems are not located in the Arctic itself.

23. **Can an individual be involved as a PI, co-PI, or Senior Personnel in more than one NNA Track 1 proposal?**

    Yes. There are no limits on the number of Track 1 submissions by any individual as PI, co-PI, or Senior Personnel.

TRACK 2 - PLANNING GRANTS

24. **Is it necessary to submit a planning grant proposal, or receive a planning grant award, to submit proposals to future NNA competitions?**

    No. One is not required to submit a planning grant proposal to participate in future NNA competitions.

25. **Must the original team for a successful planning grant proposal be retained for future NNA proposals?**

    No. Participation in the planning grants program should not be construed as a proposal for future NNA competitions, and the information presented in a submitted planning grant will not limit in any way a future NNA proposal submission.

26. **Can an individual be involved as a PI, co-PI, or Senior Personnel on more than two NNA Track 2 proposals?**

    No. NNA is intended to promote initiatives that empower new research communities and diversify the next generation of Arctic researchers. NSF believes that limiting the participation of any one individual in the role of PI, co-PI, or Senior Personnel will help ensure that a wide, diverse group of new discoverers will play leading roles in NNA projects. Therefore, an individual may participate as PI, Co-PI, or Senior Personnel on at most two proposals in response to Track 2 of this solicitation. In cases where an individual appears in three or more Track 2 proposals, only the first two submitted Track 2 proposals involving that individual will be accepted; all other Track 2 proposals involving that individual may be returned without review.

27. **The solicitation states "NSF particularly encourages Track 2 proposals that reflect integrative, multidisciplinary research; tangible research capacity-building; meaningful community engagement; and efforts to advance education." Is it required that all four elements be present in the proposal?**

    No. The proposals are not required to include all four of the listed elements, however, note that one of the Track 2 proposal review criteria is: "What is the potential of the proposed work to strengthen the following elements: full integration across the natural and built environments and social systems; community engagement; research capacity

building; and education and training?" Planning Grant proposals that aim to strengthen as many of these elements as possible are expected to make stronger contributions towards the major goals of the NNA program.

28. **Someone put my name on a proposal without my knowledge, and now I am named in more than two Track 2 proposals. What do I do?**

    You should contact the organization responsible for including your name in the proposal without your knowledge. You should also contact the NNA Working Group by sending an email to NNA@nsf.gov, so that the Working Group can determine an appropriate NSF response to the situation.