NOTICE OF FUNDING OPPORTUNITY

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Executive Summary

Federal Agency Name

National Environmental Satellite Data and Information Service Program Office (NE

Funding Opportunity Title

Inflation Reduction Act: Improving Alaska Flood Monitoring with Synthetic Aperture Radar (SAR) Imagery

Announcement Type

Competitive

Funding Opportunity Number

NOAA-NESDIS-STAR-2025-28317

Assistance Listing Number(s)

11.440

Dates

Dates: Letter of Intent Date: Letters of Intent are required and must be received by electronic mail by 11:59 PM Eastern Time on October 18, 2024. No facsimile applications will be accepted. Electronic mail must be sent to: sean.helfrich@noaa.gov

Full Application Date: Invited full applications must be received by www.Grants.gov by 11:59 PM Eastern Time on December 23, 2024. No facsimile or electronic mail applications will be accepted.

Funding Opportunity Description

The Alaska and Arctic regions are significantly affected by climate variability and change. Risks of flooding and inundation present the region with economic, health, safety, and security challenges. As part of its mission to provide secure and timely access to global environmental data and information from satellites and other sources, NOAA's National Environmental Satellite, Data, and Information Service (NESDIS) is working to enhance flood monitoring capabilities in Alaska.

This award will provide Inflation Reduction Act (IRA) funding for grantees to acquire and evaluate the potential of using commercial Synthetic Aperture Radar (SAR) imagery to help monitor the extent and impacts of flooding in Alaskan communities. NOAA’s current flood monitoring products for Alaska have significant limitations as compared to capabilities possible over the contiguous United States. Challenges include limited satellite data coverage, frequent cloud cover, snow melt, dense forest cover, ice jams, un-managed rivers, and limited user access. Acquisition and evaluation of SAR imagery through this award will explore how to address these challenges, improving utilization of satellite observations and enhancing data accessibility.

Satellites with SAR sensors measure how energy reflects off the Earth to map surface features such as rivers, land, and floodwaters. Currently, SAR observations in Alaska are limited to coastal areas. There is limited SAR imagery coverage over Central Alaskan rivers, delaying the ability for emergency management personnel and forecasters to address the flood impacts. Additionally, current SAR observations can lack the resolution, low latency, frequencies, polarizations, and swath width to provide the timely and actionable data needed to support flood hazards. Adding targeted SAR observations from commercial imagery may address observation gaps.

As authorized by the IRA, P.L. 117-169, Section 40004, this NOFO aligns with the direction to “accelerate advances in research, observation systems, modeling, forecasting, assessments, and dissemination of information to the public.” Funds will support products and information that are Findable, Accessible, Interoperable, and Reusable (FAIR), analysis-ready, actionable, and authoritative.

Full Text of Announcement

I. Funding Opportunity Description

A. Program Objective

NOAA’s mission is to understand and predict changes in climate, weather, ocean, and coasts, and to share authoritative climate information that can help build resilient communities and economies. The Inflation Reduction Act (IRA) represents one of the most substantial direct investments to date in our nation's climate resilience, encompassing advancements in research, observational systems, and the dissemination of information and data to the public. NOAA's National Environmental Satellite, Data, and Information Service (NESDIS) is using IRA funding to enhance provision of global environmental data and information from satellites and other sources. This award will explore expansion of satellite data to improve flood monitoring capabilities in Alaska, where flooding and inundation are considered among the greatest risks related to climate change (https://www.commerce.alaska.gov/web/dcra/PlanningLandManagement/RiskMAP.aspx). has experienced major destruction and disruptions from flooding in recent years. For example, coastal communities along Western Alaska were inundated after the Typhoon Merbok in 2022, and an ice jam event flooded areas of Galena and Eagle in 2023. Alaska lacks capacity to address flood disasters, because current observations cannot properly detect active flood events and assess flood risk. Recent applications of satellites for flood monitoring have been introduced in NOAA that could help address this observation gap. However, satellite flood mapping in Alaska is currently challenged by frequency of clouds, dense forest cover, ice jams, limited satellite observations, mountains, meandering rivers, melting snow cover, and long darkness periods.

This award seeks to provide improvements and integration of flood and inundation products for Alaska, by utilizing targeted Synthetic Aperture Radar (SAR) and high resolution optical imagery over floods while they are occurring. Satellites with SAR sensors send out energy and measure how that energy reflects off the Earth to map surface features such as rivers, land, and floodwaters. This project will involve SAR imagery acquisition ordering in advance of Alaskan flood and ice jam events. There is currently limited SAR imagery coverage over Central Alaskan rivers, delaying the ability for emergency management personnel and forecasters to address the flood impacts. NOAA currently receives Sentinel 1 (S1) and RadarSAT Constellation Mission (RCM) acquisitions over Alaska, but many of the current scenes leave gaps in spatial and temporal coverage, leaving populations and emergency managers without satellite data to help monitor conditions. Additionally, current SAR observations can lack the resolution, low latency, frequencies, polarizations, and swath width to provide the timely and actionable data needed to support flood hazards.

Proposals are sought that will explore how to employ data from privately-managed satellites to fill observation gaps over the flood and ice jam events, and apply such data to flood, ice, and other predictive models. Proposals should also provide commercial SAR imagery to support observational gaps in river and coastal flooding in Alaska, to monitor coastlines, rivers, and lakes with low latency, cloud-free imagery at the resolutions needed to determine ice jams, river flooding, and coastal inundation. Alaska flood products and data may be used to construct historical analysis to understand flood frequency, river pattern migrations, coastline changes in sensitive areas, and changes in boreal lakes, and compared to other publicly available historic analyzes (such as those on these sites: https://www.weather.gov/aprfc/riverWatchProgram, https://www.usgs.gov/centers/alaska-science-center/science/flood-frequency-studies-alaska).

This initiative is being led by the NESDIS Center for Applications and Research (STAR), in collaboration with National Water Center (NWC), NWS Alaska-Pacific River Forecast Center (APRFC), National Ocean Services (NOS), National Centers for Environment Information (NCEI), NOAA CoastWatch, Alaskan Division of Emergency Services (ADES), and other Alaskan entities (state and local). Investments will directly tackle the woefully inadequate observational hydrology and flooding data in Alaska which is desperately needed for migration and adaptation due to a changing climate. Funds will support products and information that are Findable, Accessible, Interoperable, and Reusable (FAIR), analysis-ready, actionable, and authoritative.

B. Program Priorities

This funding opportunity announcement is being executed by the NESDIS Center for Satellite Applications and Research (STAR), to advance NOAA's strategic goals of building a climate-ready nation and making equity central to service delivery. By expanding the use of commercial SAR imagery, this effort will help Alaskan communities better prepare for flood and inundation events. In addition, improved flood monitoring capabilities will address longstanding inequities in actionable climate data available to Alaska as compared to the contiguous U.S. The priority objective of this competition is to provide an assessment of privately-managed satellites that could fill observation gaps over Alaska, specifically for use in algorithms for flood and ice detection in Alaska. The grantee may purchase SAR data in order to perform the assessment and determine its value to models. The grantee is responsible for managing the data acquisition, delivery process, and customer support. Priorities include, but are not limited to, the following:

- DATA LATENCY. This project requires near-real-time staging of the SAR data. Near-real-time latency is considered to be the capability of delivering images no more than six (6) hours from time of image downlink to a ground station to receipt of image on servers.
- ADDRESS GAPS IN GEOGRAPHIC COVERAGE. Coverage is primarily needed over Alaskan rivers, particularly over areas without current SAR collections from RCM. This is primarily from 54-68N and 130-166W. Coverage outside of this geographic area may be required from time to time based on active or predicted flood events.

- ADEQUATE COVERAGE ACROSS TIME. Temporal coverage is generally based on annual cycles of snowmelt, river ice breakup, freeze up of river ice, and return of snow cover throughout Alaska. Melt out of snow and river ice generally begins in April and migrates throughout the Alaskan river systems, and generally ends in July. Freeze up of Alaskan rivers generally begins in October/November, but timing is regionally dependent and highly variable. All dates are subject to local weather conditions and will require monitoring to ensure coverage of most flood and ice jam events. Coordination with APRFC and ADES, along with STAR, will be needed to ensure officials can acquire the necessary data. Data collected on river conditions observed by APRFC and ADES can be found at https://www.weather.gov/aprfc/ or at University of Alaska - Fairbanks ice observation site (https://fresheyesonice.org/).
- FLEXIBLE DATA PRACTICES. SAR acquisitions with multiple SAR polarizations are strongly desired. Ability to get targeted acquisitions from multiple frequencies and satellites is preferred, but not required. Each SAR frequency, SAR orbit, and SAR constellation has strengths and weaknesses that can be leveraged to generate the most timely and accurate flood and river ice algorithms. Multiple SAR sources would allow greater flexibility. The ability to acquire and disseminate high resolution commercial optical imagery within <6 hrs is also desired, but not required. Selection of sources should be coordinated with STAR, APRFC, NWC, and ADES.
- DATA COMPATIBILITY. Commercial SAR data must be Level 1b imagery in Geotiff format
- DATA LICENSING. Consistent with 2 CFR 200.315, the license to any commercial SAR data acquired with grant funds must, at a minimum, provide a royalty-free, nonexclusive and irrevocable right to reproduce, publish, or otherwise use the work for Federal purposes, and to authorize others to do so. Standard open data licenses, such as Creative Commons Attribution 4.0 International License (CC BY 4.0) are preferred.

For purposes of this competition, the following definitions are provided:

Data Management refers to the processes that handle the acquisition, validation, processing, and storage of data to ensure accessibility, reliability, and timeliness for its users. Data management can include a wide range of activities such as standardizing data from various sources, metadata management, and ensuring that the data is stored in a way that can be easily accessed and used by others, now and in the future.

Climate resilience is the ability of a community to prepare and plan for, absorb impacts of, recover from, and/or adapt to extreme weather events and longer-term climate impacts.

Synthetic Aperture Radar (SAR) is a type of active data collection where a sensor produces its own energy and then records the amount of that energy reflected after interacting with the Earth. The different wavelengths of SAR are often referred to as bands, with letter designations such as X, C, L, and P.

Polarization refers to the orientation of the plane in which the transmitted electromagnetic wave oscillates. While the orientation can occur at any angle, SAR sensors typically transmit linearly polarized. The horizontal polarization is indicated by the letter H, and the vertical polarization is indicated by the letter V.

Commercial data means data of a type customarily used by the general public or by nongovernmental entities for purposes other than governmental purposes, and (i) Has been sold, leased, or licensed to the general public; or (ii) Has been offered for sale, lease, or license to the general public.

For questions and information about these priorities, please contact the Competition Manager: Sean Helfrich, Water Surface Conditions (WSC)/SAR Applications Lead, at sean.helfrich@noaa.gov or (301) 683-3328 and Rachel Zinn at Rachel.Zinn@noaa.gov, Program Analyst

C. Program Authority

The Secretary of Commerce is authorized under the following statutes to provide grants and cooperative agreements for the purposes described in this announcement: Section 40004 of the Inflation Reduction Act (Public Law 117-169) and the National Climate Program Act (15 U.S.C. 2901 et seq.)

II. Award Information

A. Funding Availability

Approximately $1,150,000 million is anticipated to fund one three-year award. Funds will be available for obligation in Fiscal Year 2025 and/or Fiscal Year 2026, following approval by the U.S. Office of Management and Budget. Each year the primary investment should be on the procurement of remote sensing data. No more than 25% of the total funding for Year 1 should be on development of staffing, management, or IT investments needed to accomplish the data acquisition and data transfer; and Years 2 & 3 should have no more than 20% of total funds in staffing, management, and IT investments.

B. Project/Award Period

Applicants may submit applications covering up to a 36-month period with an anticipated start date of February 24, 2025.

C. Type of Funding Instrument

The funding instrument for awards will be a grant. If, however, it is anticipated that NOAA will be substantially involved in the implementation of the project, a cooperative agreement may be awarded. Examples of substantial involvement may include, but are not limited to, applications for collaboration between NOAA scientists and a recipient scientist or contemplation by NOAA of detailing Federal personnel to work on proposed projects. NOAA will make decisions regarding the use of a cooperative agreement on a case-by-case basis. Funding for contractual arrangements for services and products for delivery to NOAA is not available under this announcement.

III. Eligibility Information

A. Eligible Applicants

Eligible applicants are institutions of higher education, other nonprofits, international organizations, and state, local, and Indian tribal governments. Federal agencies or institutions are not eligible to receive Federal assistance under this NOFO. Collaborations and partnerships with NOAA laboratories, cooperative institutes, and centers are allowed. Federal employees are not eligible to be Lead-PIs. However, federal employees could be co-PI, co-I, and/or collaborators using in-kind contributions from their agency. A letter of support acknowledging participation in the proposed project by federal employees or federal contractors must be included in the application.

For-profit organizations may participate as contractors or through other arrangements pertinent to the project that do not involve the transfer of funds.

B. Cost Share or Matching Requirement

Pursuant to the Inflation Reduction Act, Public Law: 117-169, Section 40004, there is no non-federal matching requirement for this funding.

C. Other Criteria that Affect Eligibility

None

IV. Application and Submission Information

A. Address to Request Application Package

Complete application packages, including required federal forms and instructions, can be found on www.Grants.gov. If a prospective applicant is having difficulty downloading the application forms from www.grants.gov, or using the Grants.gov Workspace feature, contact www.grants.gov Customer Support at 1-800-518-4726 or support@grants.gov.

B. Content and Form of Application

1. Letter of Intent (LOI)
For this funding competition, a LOI is required before submitting a full proposal. The LOI should provide a concise description of the proposed work and its relevance to program priorities. NOAA will invite applicants to submit a full proposal if their LOI strongly aligns with the program priorities and includes the required components listed below. An applicant may not submit a full proposal unless they receive an invitation from NOAA after review of a submitted LOI. NOAA anticipates that proposed activities may change between the LOI and the full application. Any full proposal submitted without having received such an invitation will not be reviewed.
LOI submission as a PDF attachment via email to the identified NOAA Competition Managers should be done by September 20, 2024. Refer to Section IV.D. below. Competition Manager: Sean Helfrich, Water Surface Conditions (WSC)/SAR Applications Lead, at sean.helfrich@noaa.gov or (301) 683-3328 and Rachel Zinn at Rachel.C.Zinn@noaa.gov, Program Analyst.
The LOI should provide a concise description of the proposed work, be no more than two (2) pages in length, and should include the items listed below. If these items are not included, or
the LOI is submitted late, the LOI may not be considered. Please include:
- Name(s) and institution(s) of the Lead Principal Investigator(s) and other Principal Investigator(s)
- Brief summary of project benefits/outcomes, products/outputs, and methodology to be used
- Summary project budget, showing costs for categories: staff, contracts, other
A response to the LOI from the Competition Manager (e-mail) will be sent to the investigator within three (3) weeks after the LOI's due date, either inviting or not inviting a full application based on its relevance to the targeted competition.
2. Full Application
a) Format
All pages should be single-spaced and set in 12-point font with one-inch margins on 8 ½ x 11 inch paper. The proposal should be submitted as a PDF file. It must be dated and display page numbers. The final proposal must include the following items that are described below.
PROJECT NARRATIVE (<20 pages plus Data Management Plans and Other Attachments)
- Title Page
- Abstract page
- Impacts/Benefits/Outcomes
- Products/Outputs
- Methods and Activities
- Schedule
- Diversity and Inclusion
- Data Management Plan
- Other Attachments
BUDGET SECTION
- Budget Table
- Budget Justification
- Current and Pending Support

STANDARD FORMS
- Standard Form 424 - Application for Federal Assistance
- Standard Form 424A - Budget Information - Non-Construction Programs
- Standard Form 424B - Assurances - Non-Construction Program
- Form CD-511 - Certifications Regarding Lobbying
- Standard Form LLL - Disclosure of Lobbying Activities

b) Project Narrative

The project narrative shall not exceed 20 pages, including the sections below. The page limit includes the title page, abstract, and figures, but not the Data Management Plans or Other Attachments (Curricula Vitae (CVs), reference list, and Letters of Support). For project narratives that exceed 20 pages, only the first 20 pages will be reviewed. The Project Narrative must contain the following elements:

TITLE PAGE (one page): Provide the following information: each PI and the respective institutional representative by full name, title, organization, telephone number, email address; the mailing address for the institution's PI; the total requested funds for each annual period, including indirect costs; and the competition to which it is being submitted.

ABSTRACT (one page): The abstract must appear on a separate page, headed with the proposal title and the names of all PIs, co-PIs, and collaborators, and their affiliation(s). The abstract text must contain a brief, plain-language summary of the proposed work including:

-primary project products/outputs and potential end-users
-intended impacts, benefits, and overall outcome(s)
-the relevance to the competition's priorities
-the total funds requested by the proposal

PROJECT IMPACTS/BENEFITS/OUTCOMES: Identify the planned impacts/benefits/outcomes (e.g. improvements in detection, accuracy, reliability, coverage, latency, lead time, skill, processing speed, efficiency, cost, knowledge, workforce development). Identify which specific weather enterprise group or organization is expected to be the ultimate recipient(s) and beneficiary(ies) and/or end users of these project outcomes (e.g., local weather or river forecast offices, a national operational forecast center, community code repository, a state mesonet, a commercial organization, etc.). Provide any metrics or success indicators as appropriate.

PROJECT PRODUCTS/OUTPUTS: Identify the primary planned products/outputs, e.g., tools, widgets, and technologies; model codes, software, or algorithms and associated documentation; published data sets or databases; reports, research-guided recommendations, or other formal summary documents; methodologies; visual displays or other graphical prototypes; inventions, patent applications, and/or licenses; audio or video products; outreach, education, and training events; websites; publications, conference papers, and presentations.

If appropriate, provide the current/starting and target/project-completion readiness level (RL) with an explanation of how each level was determined. More information about NOAA Readiness Levels can be found at https://orta.research.noaa.gov/support/readiness-levels/

Any project outputs or products other than those required for standard progress reporting are not considered project deliverables but should still be described as key planned outputs.

SCHEDULE: Provide a table or chart with a schedule for completing key milestones and products.

METHODS AND ACTIVITIES: Concisely describe the key activities and methods that will be conducted to successfully complete the project. This may include information on model frameworks, simulations, HPC availability, data collection, analysis, and necessary travel (associated with data collection, project meetings, testbed planning meetings, testbed experiments, and the presentation of results at scientific conferences as appropriate). Applicants are encouraged to consider contingencies in the event of scenarios that restrict travel, such as those resulting from the COVID-19 pandemic.

DIVERSITY, EQUITY, INCLUSION, ACCESSIBILITY (DEIA): In accordance with Executive Order 13985, which mandates a comprehensive federal approach to advance equity for all and support for underserved communities, NESDIS recognizes that it has a particular and unique opportunity to support NOAA's commitment to diversity and inclusion by taking an intentional step that encourages program applicants to consider diversity and inclusion as part of their scientific projects. This action has the potential to make an impact on not only the diversity and inclusion in science at NOAA, but also beyond the agency. In this section, describe how well the proposed activity advances full participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.) in STEM. Underserved or underrepresented populations are defined as populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life, as exemplified by the list in the preceding definition of "equity."

Proposals should include and will be evaluated on (among other criteria; see Section V.A), specifics on ongoing or planned project activities that encourage diversity, accessibility, and an inclusive research environment, including, but not limited to:

- utilization of educational and research partnerships with institutions serving minority and underrepresented populations (such as Minority Serving Institutions, NOAA's Educational Partnership Program with Minority Serving Institutions Cooperative Science Centers, and institutions that work in underserved communities);
- utilization of active collaborative programs seeking diversity in science, technology, engineering, and mathematics (STEM);
- involvement with existing education and outreach programs (such as the NOAA Educational Partnership Program with Minority Serving Institutions);
- the provision of accommodations and modifications to ensure equal access to employment and participation in activities for people with disabilities, the reduction or elimination of physical and attitudinal barriers to equitable opportunities, a commitment to ensuring that individuals with disabilities can independently access every outward-facing and internal activity or electronic space, and the pursuit of best practices such as universal design;
- project team or individual training, such as for awareness and prevention of sexual assault and sexual harassment (SASH); and
- any other initiatives that build the capacity of and materially foster a research team with diverse perspectives and an inclusive environment.

DATA MANAGEMENT PLANS. Proposals submitted in response to this announcement must include a Data Management Plan with details on how the data collected in the project will be made publicly available. See Section VI.B., Administrative and National Policy Requirements, below for additional information on what the plans should contain. Also refer to your institution's data storing and sharing policies and regulations. The Data Management Plan does not count towards the 20-page proposal limit.

OTHER ATTACHMENTS: Additional attachments described below do not count towards the 20-page count defined above.

-Curriculum Vitae (CV): (Required) A CV of 3 pages or less for all PIs requesting funding. The CV should include a reference list of all publications and conference presentations relevant to the proposed work within at least the last three years. CVs are not required for unfunded collaborator partners.

-Letters of Support: In addition to any letters from federal collaborators, optional Letters of Support from key stakeholders or potential end-users may be included.

c) Budget Section

In addition to the title page budget table and SF-424A Budget Information Form contained in the Standards Forms section, each individual proposal must include a Budget Section that includes a full Budget Table, Budget Justification, and list of current and pending support. The information in the Budget Table, Budget Justification, and the SF424A Budget Information form must be consistent. Unlike the title page, neither the Budget Table in this section nor the SF-424A should include budget information for PIs or co-Is at other institutions who may be contributing to a joint project.

BUDGET TABLE: The table must include a detailed itemized budget table organized by year, including the PI's scientific and technical support staff salaries and fringe benefits, facility requirements, computing and communications, supplies, and travel. The information in this table must exactly match the SF-424A.

If indirect charges are included in the budget, the applicant must have an approved negotiated Indirect Cost Rate Agreement and must include it as a part of the application package. Federal or contractor salaries, materials, equipment, and travel expenses are not appropriate to classify as indirect costs. If an applicant does not have a current indirect cost rate with a federal agency, they may choose to negotiate a rate with the Department of Commerce or use the de minimis indirect cost rate of 15% of Modified Total Direct Cost (MTDC; as allowable under updates to 2 C.F.R. §200.414 that will go into effect in October 2024). The negotiation and approval of a rate is subject to the procedures required by NOAA and the Department of Commerce Standard Terms and Conditions Section B.06.

The NOAA contact for indirect or facilities and administrative costs is:

Raishan Adams, Grants Office
NOAA Grants Management Division
1325 East West Highway 9th Floor
Silver Spring, Maryland 20910
raishan.adams@noaa.gov

BUDGET JUSTIFICATION (max two pages): The proposal must provide a budget justification that explains the costs included on the budget table and demonstrates the cost is appropriate. All funded investigators must assure and verify, if requested, that they will not be allocated for greater than 100% of their annual employment time should their proposal be selected for funding. NOAA will verify this requirement if the proposal is recommended for funding.

CURRENT AND PENDING SUPPORT. For each Principal Investigator and Co-Principal Investigator(s), submit a list of all current and pending Federal support that includes project title, supporting agency with grant number, investigator months per year, dollar value, and duration. Requested values should be listed for pending support.

d) Standard Forms

The full proposal package includes the information described above as well as the required federal forms:

-Standard Form 424 - Application for Federal Assistance
-Standard Form 424A - Budget Information - Non-Construction Programs
-Standard Form 424B - Assurances - Non-Construction Program
-Form CD-511 - Certifications Regarding Lobbying
-Standard Form LLL - Disclosure of Lobbying Activities

Applicants must use the Standard Form SF-424A Budget Information-Non Construction Programs that is contained in the standard NOAA Grants and Cooperative Agreement Package. Pay careful attention to show the yearly budget breakout on page 1A of the SF 424A for multi-year proposals.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA). This announcement does not require any NEPA questions to be answered as part of the application. A NEPA evaluation will be completed after project selection. The applicant(s) may be required to answer additional NEPA-related questions if NOAA needs additional information beyond what is described in the proposal package.

Proposals submitted in response to this Announcement must include a Data Management Plan (up to 2 pages). See Section VI.B., Administrative and National Policy Requirements, below for additional information on what the plan should contain.

NEPA is not expected

C. Unique entity identifier and System for Award Management (SAM)

Each applicant (unless the applicant is an individual or Federal awarding agency that is excepted from those requirements under 2 CFR 25.110(b) or (c), or has an exception approved by the Federal awarding agency under 2 CFR 25.110(d)) is required to: (i) Be registered in SAM before submitting its application; (ii) Provide a valid unique entity identifier (UEI) in its application; and (iii) Continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency. NOAA may not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements and, if an applicant has not fully complied with the requirements by the time NOAA is ready to make a Federal award, NOAA may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

D. Submission Dates and Times

Letters of intent (LOIs) should be received by 11:59 p.m. Eastern Time on October 18, 2024. Late submissions will not be reviewed or invited to submit a full application. Submission time will be documented by an email time stamp.

Full applications must be received by 11:59 p.m. Eastern Time on December 23, 2024. Late applications will not be considered for funding. Submission time will be documented by electronic submission to Grants.gov. Information regarding electronic submission through Grants.gov is in Section IV.G.

E. Intergovernmental Review

Applications under this program are not subject to Executive Order 12372, Intergovernmental Review of Federal Programs.

F. Funding Restrictions

i. Federal Costs. NOAA will not fund costs for federal institutions.

i. Deliverables. NOAA cannot fund nor accept any award deliverables that would be more appropriately funded through a procurement mechanism. However, NOAA may pursue such follow-on contract mechanisms with the recipient after the award ends if the project is successful and follow-on contractual work is warranted, as permitted by law and regulation. Any proposed transitions to NOAA cannot be completed using funds awarded through this NOFO; as a result, please include planned transitions to NOAA as potential follow-on work and not as a deliverable for this award.

iii. Multi-Year Projects. Funding beyond the first year will be dependent upon satisfactory performance and the continued availability of funds and is at the sole discretion of NOAA/Department of Commerce. NOAA is not responsible for proposal preparation costs.

iv. Fees and profits are not permitted.

G. Other Submission Requirements

Applicant organizations must complete and maintain three registrations to be eligible to apply for or receive an award. These registrations includeSAM.gov,Grants.gov,andeRA Commons. All registrations must be completed prior to the application being submitted. The complete registration process for all three systems can take 4 to 6 weeks, so applicants should begin this activity as soon as possible. If an eligible applicant does not have access to the internet, please contact the Agency Contacts listed in Section VII for submission instructions.

Prior to registering with eRA Commons, applicant organizations must first obtain a Unique Entity Identifier (UEI) from SAM.gov, if needed (refer to Section IV. Applications and Submission Information, Section C). Organizations can register with eRA Commons in tandem with completing their full SAM and Grants.gov registrations; however, all registrations must be in place by time of application submission. eRA Commons requires organizations to identify at least one Signing Official (SO) and at least one Program Director/Principal Investigator (PD/PI) account in order to submit an application.

The first PD/PI listed on the application must include their eRA Commons ID in the"Credential, e.g. agency login" Applicant Identifier field on the SF424 form.Failure to register in the Commons and to include a valid PD/PI Commons ID in the Applicant Identifier field will prevent the successful submission of an electronic application.

H. Address for Submitting Proposals

V. Application Review Information

1. Importance/relevance and applicability of proposed projects to the program goals	Maximum Points: 0
This criterion ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, federal, regional, state, or local activities.	

2. Technical/scientific merit	Maximum Points: 0
This criterion assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear project goals and objectives.	

3. Overall qualifications of applicants	Maximum Points: 0
This criterion ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project.	

4. Project costs	Maximum Points: 0
This criterion evaluates the budget to determine if it is realistic and commensurate with the project needs and time frame.	

5. Outreach and Education	Maximum Points: 0
This criterion assesses whether the project provides a focused and effective education and outreach strategy regarding NOAA's mission to protect the Nation's natural resources.	

Evaluation Criteria

Review and Selection Process

1. Relevance to Program Goals (40% LOI; 25% Full Application)
This criterion assesses how well the proposed project benefits/outcomes and products/outputs align with the program objectives explained in Section I.A. and program priorities described in Section I.B., as well as the quality and feasibility of the Data Management Plans described in Section IV.B.2.b.
2. Technical/Scientific Merit and Project Design (40% LOI; 35% Full Application)
This criterion assesses whether the project is well-designed, technically sound, and/or innovative. Reviewers will consider the rigor of the proposed methods, how much the project improves technology or knowledge in the field of study, and whether the proposed project milestones, output, and timeline are well-defined and achievable.
3. Project Costs (20% LOI; 15% Full Application)
This criterion evaluates the budget to determine if it is realistic, cost-efficient, aligns with project needs, and produces a substantial benefit relative to the cost. Reviewers will consider how reasonable and necessary are the requested costs, and how well do they align with project outputs/products, outcomes/benefits, and time period?
4. Qualifications of Applicants (15% Full Application)
This criterion assesses whether the research team possesses the necessary experience, education, training, facilities, collaborative partnerships, and administrative resources to accomplish the proposed project.
5. Diversity, Equity, Inclusion and Accessibility (10% Full Application)
This criterion assesses how well the project advances the DEIA objectives outlined in Section IV.B.2.b.
B. Review and Selection Process

1. Letter of Intent Review and Selection Process

All LOIs received consistent with the deadline and procedures in Section IV above will be evaluated by NOAA. Each LOI will be reviewed by at least three objective reviewers. Appropriate mechanisms will be established to avoid conflicts of interest. A rank order will be established based on Evaluation Criteria 1 (Relevance to Program Goals), 2 (Technical/Scientific Merit and Project Design), and 3 (Project Costs) described in Section IV.A.

Reviewers will rate each Evaluation Criteria on the following scale:

0 – Poor: LOI does not address Evaluation Criterion;

1 – Fair: LOI marginally addresses Evaluation Criterion;

2 – Good: LOI adequately addresses Evaluation Criterion; or

3 – Excellent: LOI exceptionally addresses Evaluation Criterion.

A Total Score for every Letter of Intent is then calculated using the weights and ratings for each criterion, as follows:

(Sum of all ratings for “Relevance to Program Goals” × 0.4) +

(Sum of all ratings for “Technical/Scientific Merit and Project Design” × 0.4) +

(Sum of all ratings for “Project Costs” x 0.2)

# of reviewers = Total Score (Range: 0.00 - 3.00)

A rank order for LOIs will be established based on the Total Scores. NOAA will issue invitations to submit full applications based on the rank order, subject to the application of any of the Selection Factors in Section V.C below. Applicants who do not receive invitations are not eligible to submit full proposals.

2. Full Application and Selection Process

Once a full application package has been received, an administrative review will first be conducted to determine compliance with all submission requirements, completeness of the application, and general responsiveness to the NOAA priorities in Section I.B. If all requirements are satisfied and the application is responsive to at least one of the NOAA priorities, the application will move to the next stage of review. If not, the application may be rejected, and the PIs will be notified.

NOAA, in its sole discretion, may continue the review process for applications with non-substantive issues that may be easily rectified or cured. NOAA is not required to screen applications before the submission deadline, to identify deficiencies that would cause the application to be rejected or receive a poor evaluation (for example, a missing component). However, if deficiencies are identified by NOAA or the applicant before the deadline, the applicant may correct any deficiencies by submitting a revised application.

Applications that meet the minimum requirements will be reviewed by at least three independent peer reviewers during a merit-based review and ranking process. Appropriate mechanisms will be implemented to avoid potential conflicts of interest during the proposal review process. Each reviewer will be asked to individually evaluate and rate proposals on each Evaluation Criteria described in Section IV.A. Proposal evaluations will be based primarily on information included in the application.

Reviewers will use the following standardized scoring rubric:

4 - Excellent - Highest priority for support. This category should be used only for truly outstanding proposals.

3 - Very Good – Fully addresses all Evaluation Criteria. Should be supported.

2 - Good – Mostly addresses Evaluation Criteria. Worthy of support.

1 - Fair – Partially addresses evaluation criteria.

0 - Poor - Proposal has serious deficiencies; should not be supported.

A Total Score for every proposal is then calculated using the weights and ratings for each criterion, as follows:

(Sum of all ratings for “Relevance to Program Goals” × 0.25) +

(Sum of all ratings for “Technical/Scientific Merit and Project Design” × 0.35) +

(Sum of all ratings for “Project Costs” x 0.15) +
(Sum of all ratings for “Qualifications of Applicants” x 0.15) +
(Sum of all ratings for “Diversity, Equity, Inclusion and Accessibility” x 0.10) +

# of reviewers = Total Score (Range: 0.00 - 4.00)

A rank order for proposals will be established based on the Total Scores. Final selections will be based on the rank order and Selection Factors described below in Section V.C.

Any application considered for funding may be required to address the issues raised in the evaluation of the application by the reviewers, program officer, selecting official, and/or a grants officer before a selection recommendation decision is made.

Selection Factors

The Selecting Official shall award in the rank order unless the proposal is justified to be selected out of rank order based on one or more of the following factors:

1. Availability of funding.
2. Balance/distribution of funds:
   a. geographically
   b. by type of institution
   c. by type of partners
   d. by research priority
   e. by project types
3. Duplication of other projects funded or considered for funding by NOAA/Federal agencies.
4. Program priorities and policy factors.
5. Applicant’s prior award performance.
6. Partnerships with/Participation of targeted groups.
7. Adequacy of information necessary for NOAA staff to make a NEPA determination and draft necessary documentation before recommendations for funding are made to the Grants Officer.

Anticipated Announcement and Award Dates

The applicant(s) with the highest ranked proposal(s) will be notified in January 2025 that they have been recommended for funding. Applicants must undergo reviews by NOAA’s Grants Management Division as described in Sections V.B. and VI.B.9., and successfully complete all NOAA/applicant negotiations including providing the information required for NOAA to comply with NEPA and permit requirements, and the provision of other supporting documentation as requested prior to funding being awarded. The anticipated start date for awards made under this competition is February 24, 2025, dependent on funding availability.

Unsuccessful applicants will be notified by e-mail that their application was not recommended for funding after the final selection package has been approved by the NOAA Grants Management Division, which is expected to be approximately January 2025. Unsuccessful applications submitted to this competition will be retained for three years and then destroyed.

VI. Award Administration Information

A. Award Notices

PRE-AWARD COSTS. Per 2 CFR 200.458, NOAA authorizes award recipients to expend pre-award costs up to 90 days before the period of performance start date at the applicant's own risk without approval from NOAA and in accordance with the applicant's internal policies and procedures. Such costs are allowable only to the extent that they would have been allowable if incurred after the date of the Federal award. This does not include direct proposal costs (as defined at 2 CFR 200.460). In no event will NOAA or the Department of Commerce be responsible for direct proposal preparation costs. Pre-award costs will be a portion of, not in addition to, the approved total budget of the award. Pre-award costs expended more than 90 days prior to the period of performance start date require approval from the Grants Officer. This does not change the period of performance start date.

GRANTS OFFICER SIGNATURE. Proposals submitted in response to this solicitation are not considered awards until the Grants Officer has signed the grant agreement. Only Grants Officers can bind the Government to the expenditure of funds. The Grants Officer's digital signature constitutes an obligation of funds by the federal government and formal approval of the award.

LIMITATION OF LIABILITY. Funding for programs listed in this notice is contingent upon the availability of funds. Applicants are hereby given notice that funds may not have been appropriated yet for the programs listed in this notice. Publication of this announcement does not oblige NOAA to award any specific project or to obligate any available funds.

B. Administrative and National Policy Requirements

UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS. Through 2 C.F.R. § 1327.101, the Department of Commerce adopted Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 C.F.R. Part 200, which applies to awards in this program. Refer to http://go.usa.gov/SBYh and http://go.usa.gov/SBg4.

RESEARCH TERMS AND CONDITIONS. For awards designated on the CD-450 as Research, the Commerce Terms, and the Federal-wide Research Terms and Conditions (Research Terms) as implemented by the Department of Commerce, currently, at https://www.nsf.gov/awards/managing/rtc.jsp, both apply to the award. The Commerce Terms and the Research Terms are generally intended to harmonize with each other; however, where the Commerce Terms and the Research Terms differ in a Research award, the Research Terms prevail, unless otherwise indicated in a specific award condition.

DEPARTMENT OF COMMERCE PRE-AWARD NOTIFICATION REQUIREMENTS FOR GRANTS AND COOPERATIVE AGREEMENTS. The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained in the Federal Register notice of December 30, 2014 (79 FR 78390) are applicable to this solicitation and may be accessed online at http://www.gpo.gov/fdsys/pkg/FR-2014-12-30/pdf/2014-30297.pdf.

DEPARTMENT OF COMMERCE (DOC) TERMS AND CONDITIONS. Successful applicants who accept a NOAA award under this solicitation will be bound by the DOC Financial Assistance Standard Terms and Conditions. This document will be provided in the award package in eRA at http://www.ago.noaa.gov and at https://www.commerce.gov/oam/policy/financial-assistance-policy.

BUREAU TERMS AND CONDITIONS. Successful applicants who accept an award under this solicitation will be bound by bureau-specific standard terms and conditions. These terms and conditions will be provided in the award package in NOAA's Grants Online system. For NOAA awards only, the Administrative Standard Award Conditions for National Oceanic and Atmospheric Administration (NOAA) Financial Assistance Awards U.S. Department of Commerce are applicable to this solicitation and may be accessed online at https://www.noaa.gov/organization/acquisition-grants/financial-assistance

HUMAN SUBJECTS RESEARCH. For research projects involving Human Subjects an Institutional Review Board (IRB) approval or an exemption determination will be required in accordance with DOC Financial Assistance Standard Terms and Conditions Section G.05.i "Research Involving Human Subjects" found at https://www.commerce.gov/oam/policy/financial-assistance-policy.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA). NOAA must analyze the potential environmental impacts, as required by the National Environmental Policy Act (NEPA), for applicant projects or proposals which are seeking NOAA federal funding opportunities. Detailed information on NOAA compliance with NEPA can be found at the following NOAA NEPA website: http://www.nepa.noaa.gov/, including our NOAA Administrative Order 216-6 for NEPA, http://www.nepa.noaa.gov/NAO216_6.pdf, and the Council on Environmental Quality implementation regulations, http://energy.gov/sites/prod/files/NEPA-40CFR1500_1508.pdf. Consequently, as part of an applicant's package, and under their description of their program activities, applicants are required to provide detailed information on the activities to be conducted, locations, sites, species and habitat to be affected, possible construction activities, and any environmental concerns that may exist (e.g., the use and disposal of hazardous or toxic chemicals, introduction of non- indigenous species, impacts to endangered and threatened species, aquaculture projects, and impacts to coral reef systems). In addition to providing specific information that will serve as the basis for any required impact analyses, applicants may also be requested to assist NOAA in drafting an environmental assessment, if NOAA determines an assessment is required. Applicants will also be required to cooperate with NOAA in identifying feasible measures to reduce or avoid any identified adverse environmental impacts of their proposal. Failure to do so shall be grounds for not selecting an application. In some cases if additional information is required after an application is selected, funds can be withheld by the Grants Officer under a special award condition requiring the recipient to submit additional environmental compliance information sufficient to enable NOAA to make an assessment on any impacts that a project may have on the environment.

FREEDOM OF INFORMATION ACT. Department of Commerce regulations implementing the Freedom of Information Act (FOIA), 5 U.S.C. Sec. 552, are found at 15 C.F.R. Part 4, Public Information. These regulations set forth rules for the Department regarding making requested materials, information, and records publicly available under the FOIA. Applications submitted in response to this Notice of Funding Opportunity may be subject to requests for release under the Act. In the event that an application contains information or data that the applicant deems to be confidential commercial information that should be exempt from disclosure under FOIA, that information should be identified, bracketed, and marked as Privileged, Confidential, Commercial or Financial Information. In accordance with 15 CFR § 4.9, the Department of Commerce will protect from disclosure confidential business information contained in financial assistance applications and other documentation provided by applicants to the extent permitted by law.

MINORITY SERVING INSTITUTIONS. The Department of Commerce/National Oceanic and Atmospheric Administration (DOC/NOAA) is strongly committed to increasing the participation of Minority Serving Institutions (MSIs), i.e., Historically Black Colleges and Universities, Hispanic-serving institutions, Tribal colleges and universities, Alaskan Native and Native Hawaiian institutions, and institutions that work in underserved communities.

DATA SHARING PLAN. 1. Environmental data and information collected or created under NOAA grants or cooperative agreements must be made discoverable by and accessible to the general public, in a timely fashion (typically within two years), free of charge or at no more than the cost of reproduction, unless an exemption is granted by the NOAA Program. Data should be available in at least one machine-readable format, preferably a widely-used or open-standard format, and should also be accompanied by machine-readable documentation (metadata), preferably based on widely used or international standards. 2. Proposals submitted in response to this Announcement must include a Data Management Plan of up to two pages describing how these requirements will be satisfied. The Data Management Plan should be aligned with the Data Management Guidance provided by NOAA in the Announcement. The contents of the Data Management Plan (or absence thereof), and past performance regarding such plans, will be considered as part of proposal review. A typical plan should include descriptions of the types of environmental data and information expected to be created during the course of the project; the tentative date by which data will be shared; the standards to be used for data/metadata format and content; methods for providing data access; approximate total volume of data to be collected; and prior experience in making such data accessible. The costs of data preparation, accessibility, or archiving may be included in the proposal budget unless otherwise stated in the Guidance. Accepted submission of data to the NOAA National Centers for Environmental Information (NCEI) is one way to satisfy data sharing requirements; however, NCEI is not obligated to accept all submissions and may charge a fee, particularly for large or unusual datasets. 3. NOAA may, at its own discretion, make publicly visible the Data Management Plan from funded proposals, or use information from the Data Management Plan to produce a formal metadata record and include that metadata in a Catalog to indicate the pending availability of new data. 4. Proposal submitters are hereby advised that the final pre-publication manuscripts of scholarly articles produced entirely or primarily with NOAA funding will be required to be submitted to NOAA Institutional Repository after acceptance, and no later than upon publication. Such manuscripts shall be made publicly available by NOAA one year after publication by the journal.

More information can be found on NOAA's Data Management Procedures at: https://nosc.noaa.gov/EDMC/documents/Data_Sharing_Directive_v3.0_remediated.pdf and at NAO 212-15 Management of Environmental Data and Information: https://www.noaa.gov/organization/administration/nao-212-15-management-of-environmental-data-and-information

NOAA SEXUAL ASSAULT AND SEXUAL HARASSMENT PREVENTION AND RESPONSE POLICY. NOAA requires organizations receiving federal assistance to report findings of sexual harassment, or any other kind of harassment, regarding a Principal Investigator (PI), co-PI, or any other key personnel in the award.

NOAA expects all financial assistance recipients to establish and maintain clear and unambiguous standards of behavior to ensure harassment free workplaces wherever NOAA grant or cooperative agreement work is conducted, including notification pathways for all personnel, including students, on the awards. This expectation includes activities at all on- and offsite facilities and during conferences and workshops. All such settings should have accessible and evident means for reporting violations and recipients should exercise due diligence with timely investigations of allegations and corrective actions.

For more information, please visit: https://www.noaa.gov/organization/acquisition-grants/noaa-workplace-harassment-training-for-contractors-and-financial.

SCIENCE INTEGRITY. 1. Maintaining Integrity. The non-Federal entity shall maintain the scientific integrity of research performed pursuant to this grant or financial assistance award including the prevention, detection, and remediation of any allegations regarding the violation of scientific integrity or scientific and research misconduct, and the conduct of inquiries, investigations, and adjudications of allegations of violations of scientific integrity or scientific and research misconduct. All the requirements of this provision flow down to subrecipients. 2. Peer Review. The peer review of the results of scientific activities under a NOAA grant, financial assistance award or cooperative agreement shall be accomplished to ensure consistency with NOAA standards on quality, relevance, scientific integrity, reproducibility, transparency, and performance. NOAA will ensure that peer review of "influential scientific information" or "highly influential scientific assessments" is conducted in accordance with the Office of Management and Budget (OMB) Final Information Quality Bulletin for Peer Review and NOAA policies on peer review, such as the Information Quality Guidelines. 3. In performing or presenting the results of scientific activities under the NOAA grant, financial assistance award, or cooperative agreement and in responding to allegations regarding the violation of scientific integrity or scientific and research misconduct, the non-Federal entity and all subrecipients shall comply with the provisions herein and NOAA Administrative Order (NAO) 202-735D, Scientific Integrity, and its Procedural Handbook, including any amendments thereto. That Order can be found athttp://nrc.noaa.gov/ScientificIntegrityCommons.aspx. 4. Primary Responsibility. The non-Federal entity shall have the primary responsibility to prevent, detect, and investigate allegations of a violation of scientific integrity or scientific and research misconduct. Unless otherwise instructed by the grants officer, the non-Federal entity shall promptly conduct an initial inquiry into any allegation of such misconduct and may rely on its internal policies and procedures, as appropriate, to do so. 5. By executing this grant, financial assistance award, or cooperative agreement the non-Federal entity provides its assurance that it has established an administrative process for performing an inquiry, investigating, and reporting allegations of a violation of scientific integrity or scientific and research misconduct; and that it will comply with its own administrative process for performing an inquiry, investigation, and reporting of such misconduct. 6. The non-Federal entity shall insert this provision in all subawards at all tiers under this grant, financial assistance award, or cooperative agreement.

REVIEW OF RISK. After applications are proposed for funding by the Selecting Official, the Grants Office will perform administrative reviews, including an assessment of risk posed by the applicant under 2 C.F.R. 200.206. These may include assessments of the financial stability of an applicant and the quality of the applicant’s management systems, history of performance, and the applicant’s ability to effectively implement statutory, regulatory, or other requirements imposed on non-Federal entities. Special conditions that address any risks determined to exist may be applied. Applicants may submit comments about any information concerning organizational performance listed in the Responsibility/Qualification section of SAM.gov for consideration by the awarding agency.

REVIEWS AND EVALUATION. The applicant acknowledges and understands that information and data contained in applications for financial assistance, as well as information and data contained in financial, performance and other reports submitted by applicants, may be used by the Department of Commerce in conducting reviews and evaluations of its financial assistance programs. For this purpose, applicant information and data may be accessed, reviewed and evaluated by Department of Commerce employees, other Federal employees, and also by Federal agents and contractors, and/or by non-Federal personnel, all of whom enter into appropriate conflict of interest and confidentiality agreements covering the use of such information. As may be provided in the terms and conditions of a specific financial assistance award, applicants are expected to support program reviews and evaluations by submitting required financial and performance information and data in an accurate and timely manner, and by cooperating with the Department of Commerce and external program evaluators. In accordance with §200.303(e), applicants are reminded that they must take reasonable measures to safeguard protected personally identifiable information and other confidential or sensitive personal or business information created or obtained in connection with a Department of Commerce financial assistance award.

C. Reporting

In accordance with 2 CFR 200.328-9 and the terms and conditions of the award, financial reports are to be submitted semi-annual schedule and performance (technical) reports are to be submitted semi-annual schedule. Reports are submitted electronically through eRA.

The Federal Funding Accountability and Transparency Act, 31 U.S.C. 6101 note, includes a requirement for awardees of applicable Federal grants to report information about first-tier subawards and executive compensation under Federal assistance awards. All awardees of applicable grants and cooperative agreements are required to report to the FFATA Subaward Reporting System (FSRS) available at https://www.fsrs.gov/ on all subawards over $30,000. Refer to 2 CFR Part 170.

All dissemination of results, including publications and written or oral presentations, supported by this funding opportunity should acknowledge NOAA/NESDIS and the Inflation Reduction Act as supporting the project.

VII. Agency Contacts

Sean Helfrich, Water Surface Conditions (WSC)/SAR Applications Lead, at sean.helfrich@noaa.gov or (301) 683-3328 and Rachel Zinn at Rachel.C.Zinn@noaa.gov, Program Analyst.

VIII. Other Information

None