FY2023 Ocean Technology Transition Project

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NOTICE OF FUNDING OPPORTUNITY

EXECUTIVE SUMMARY

Federal Agency Name(s): National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce

Funding Opportunity Title: FY2023 Ocean Technology Transition Project

Announcement Type: Initial

Funding Opportunity Number: NOAA-NOS-IOOS-2023-2007492

Federal Assistance Listings Number: 11.012, Integrated Ocean Observing System (IOOS)

Dates: Letters of Intent (LOI) are highly recommended but not required. The requested letters of intent (LOI) should be submitted via this Google Form https://forms.gle/E2SmYg2K7JXDyJrJ6 (copy and paste the link into your web browser). The form and must be received by 11:59 p.m. Eastern Time on Friday, October 21, 2022.

Full proposals must be received no later than 11:59 PM Eastern on Tuesday, January 17, 2023.

Funding Opportunity Description: The U.S. Integrated Ocean Observing System (IOOS®) is a national and regional partnership working to provide ocean, coastal and Great Lakes observations, data, tools, and forecasts to improve safety, enhance the economy, and protect our environment. To increase observational and technical capabilities we need smart investments to innovate sensors, data management, decision support products, and other technical capabilities that will improve our ability to monitor and forecast environmental conditions with greater efficiency. The primary objective of IOOS' Ocean Technology Transition Project (OTT) is to reduce the Research to Operations transition period for ocean observing, product development, and data management technologies for the ocean, coastal and Great Lakes. The term 'Technologies' includes: ocean, coastal, and Great Lakes sensors, information technology (data management, data visualization), platform enhancement, and technology modernization efforts. This objective is accomplished by investing in the transition of emerging and promising marine and Great Lakes observing technological capabilities from the mid to latter phases of research into operational status.

The U.S. IOOS Office is seeking to fund projects, subject to the availability of funds, which advance new or existing technology-based solutions that address long standing and emerging coastal observing, product development, and data management challenges. The projects will be

focused on those technologies for which there are demonstrated operators who commit to integrated, long term use of those technologies and open data sharing. A Transition Manager for the project should be identified and a Transition Plan will be a Year One deliverable.

Funding will be targeted to technologies that are sufficiently mature for long term operations. This announcement specifically funds activities needed to progress these technologies through the transitional stages between research and full operations such as system integration, testing, validation, and verification. Funding will not be awarded to continue projects previously funded through the Ocean Technology Transition Project.

In FY 2023-2024, it is estimated that up to $2.5 million will be available from the U.S. IOOS Office. Multiple awards are anticipated, subject to availability of funds, in amounts up to $400,000 per year for up to three years, with some exceptions for highly ranked proposals. Proposals not funded in the current fiscal period (Fiscal Year 2023) may be considered for funding in the next fiscal period (Fiscal Year 2024) without NOAA repeating the competitive process outlined in this announcement.

Investigators are highly encouraged to visit the U.S. IOOS Ocean Technology Transition website for more information about the program: https://ioos.noaa.gov/project/ocean-technology-transition/

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

A. Program Objective

The overarching purpose of the U.S. Integrated Ocean Observing System (IOOS®) is to address regional and national needs for information, to gather reliable data on key coastal, ocean, and Great Lakes variables to ensure timely and sustained dissemination and availability of these data, and overall to contribute to the Blue Economy. IOOS is a national, regional, and private-sector partnership working to enhance the nation's ability to collect, disseminate, and use ocean information.

U.S. IOOS is designed to address regional and national needs for ocean, coastal, and Great Lakes information, to gather specific data on key coastal, ocean, and Great Lakes variables, and to ensure timely and sustained dissemination and availability of these data to support national defense, marine commerce, navigation safety, weather, climate, and marine forecasting, energy siting and production, economic development, ecosystem-based marine, coastal, and Great Lakes resource management, public safety, and public outreach training and education.

The IOOS Ocean Technology Transition Project (OTT) is an ongoing, multi-year effort to transition prototype ocean, coastal, and Great Lakes observing, product development, and data management technologies to sustained operations in a stepped, parallel, and scalable process that includes stakeholder engagement from industry, government, academia, and others invested in the monitoring and assessment of the nation's ocean and coastal regions. Sustained or Operational mode is defined as the actual application of the technology in its final form and under mission requirements. OTT focuses on developing and improving technologies for ocean chemical, biological, and physical parameters at multiple spatial and temporal scales to monitor changing conditions in the oceans, coasts, and Great Lakes. OTT technologies include hardware and software platforms, sensors, and data management resulting in improved ocean information supporting decision making for the coastal ocean, and Great Lakes' environments.

Within this context, the U.S. IOOS Office is managing a competitive federal funding opportunity (FFO) to fund research and development proposals that advance ocean, coastal, and Great Lakes observing technology innovation projects designed to foster the transition of these technologies to operations mode. This funding will support technology transitions in regions across the United States, nationally, and globally. A Transition Manager for the project should be identified and a Transition Plan will be a Year One deliverable.

B. Program Priorities

In FY 2023, the U.S. IOOS Office will accept applications to accelerate the transition of advanced coastal, ocean, and Great Lakes observing technologies to operations mode. Technologies which support developing and improving observation, sensors, and information capabilities for chemical, biological, and physical parameters at multiple spatial and temporal scales to monitor changing conditions in the oceans, coasts, and Great Lakes will be considered.

Specific areas of interest under this funding opportunity include, but are not limited to:
1. sensors for physical, biological, or chemical parameters
2. use of cloud-based technologies and platforms
3. novel autonomous vehicles/platforms
4. HAB sensors and sensor platforms including deployment of sensors on new platforms
5. novel data management, analytics, and integration to improve service delivery to customers
6. sensors for ocean acidification related measurements
7. high frequency radar use impact and metrics, development, and improvement

Investigators are highly encouraged to learn more about IOOS and its OTT Project prior to submitting applications. This information, along with the name and contact information for the relevant competition manager can be found at the following website: https://ioos.noaa.gov/about/funding-opportunities

OTT utilizes NOAA's Readiness Levels (RL) ontology (see NOAA Administrative Order 215-105A at https://www.noaa.gov/organization/administration/nao-216-105b-policy-on-research-and-development-transitions) to assess the maturity of R&D projects from research to operation, application, commercial product, or service, (Note: NOAA's Readiness Levels are similar to the Technology Readiness Levels developed by NASA) and embody the same concept for quantifying the maturity of research. RLs are used as a systematic metric/measurement system that supports assessments of the maturity of a particular IOOS technology, and enables a consistent comparison between different types of technologies. OTT specifically focuses on transitioning technology from RLs 5 through 7 to RL 8; in effect transforming the innovative research developed externally from this Project into operational elements of IOOS or other parts of NOAA. Applicants are asked to identify the RL of the technologies with which they are working. Each applicant's application will state clearly how the applicant determined that their proposed technology project is at an appropriate RL level for this funding opportunity.

Applicants should describe end-to-end projects that will result in innovations for routine operations for identified operators (e.g., small business, commercial sector, Regional Associations, and/or Federal and State Programs). A project needs to involve operators and practitioners, to the fullest extent possible, from the beginning of the project. Commitment from operators and practitioners is critical to the eventual success of each project and the transition and adoption of technology for sustained use. The applicant must show a clear path for further developing the partnerships and opportunities for transfer throughout the course of the project.

To ensure that research leads to practical and valuable management outcomes, proposals should include a minimum of two investigators, a Scientific Principal Investigator and a Transition Manager/Principal Investigator. In order to ensure transition of management tools to application, the duties and responsibilities of the two PIs are presented below:

Scientific Principal Investigator: will coordinate activities such as:
- development and validation of technologies,
- deployment and testing of prototypes, and
- working with the Transition PI to refine and develop technologies based on input from end users.

Transition Principal Investigator: will be responsible for activities related to transitioning the technology toward operational application, such as:
- writing the Transition Plan,
- developing application concepts based on stakeholder outreach,
- coordination and communications with the operator and end user groups, ensuring continuous engagement in project activities (meetings, workshops), and outreach of project results, and
- ensuring that the milestones representing transition of research to operations timeline are met.

The operator(s) that will ultimately adopt technologies for operational use should demonstrate a strong interest in and commitment to the proposed technology. As the technology matures and the likelihood of success increases, the commitment of the operator(s) is expected to grow, including resource commitments to incorporate and maintain the new technology in operational settings.

Applicants to this topic must include partners from an IOOS Regional Association (RA) to qualify. The participation of an RA should be described in a Letter of Support and the RA providing the letter should be contacted no later than three weeks before the submission of

the proposal to allow for sufficient coordination. Additional partners are encouraged, e.g., academia, government, (including Federal, State, local, and tribal) and other private sector partners (including Non-Governmental Organizations and Foundations).

Applicants must also provide specific details regarding their quality assurance and quality control (QA/QC) plan to ensure data integrity if sensor technologies are developed and how they should be regularly calibrated using approved reference materials. A plan for routine inter-calibration with partner laboratories is also encouraged for applications proposing the advancement of sensor technologies. It is important that the information produced be acceptable by the broader research community as well as end users and a plan to ensure these goals must be included in the application. Applicants shall also provide a plan for assessing the market potential for, and stakeholder satisfaction with, the transitioned technology.

Applicants are expected to commit to drafting a technical report describing an end-to-end system for the proposed technology at a regional scale. The end-to-end system described in the technical report should be scalable to a national system. The technical report will be required at the end of the project and shall include a cost and benefit analysis. This is in addition to any financial and performance project reports identified in the terms and conditions if the proposal is successfully chosen at the end of this competitive process.

Applicants are also expected to describe how the transitioned technology will result in improvements to the overall ability of the observing system to provide information, such as:
a) significant reductions in overall cost, and
b) significant improvements in data and information products that flow from sensors to servers and users

C. Program Authority

Statutory authority for this project is provided under the Integrated Coastal and Ocean Observation System Act of 2009 (Pub. L. 111-11) (“ICOOS Act” or “Act”), as amended by the Coordinated Ocean Observation and Research Act of 2020 (Public Law 116-271, Title I) (“COORA”), codified at 33 U.S.C. 3601-3610.

II. Award Information

A. Funding Availability

In FY 2023 - 2024 it is estimated that up to $2.5 million will be available from the U.S. IOOS Office. Multiple awards are anticipated, subject to availability of funds, in amounts up to $400,000 per year for up to three years. The number of awards is anticipated to range

from approximately three to five, and will be adjusted based on availability of funds. Proposals not funded in the current fiscal period (Fiscal Year 2023) may be considered for funding in the next fiscal period (FY 2024) without NOAA repeating the competitive process outlined in this announcement.

There is no guarantee that funds will be available to make awards for this Notice of Funding Opportunity (NOFO) or that any proposal will be selected for funding. If an applicant incurs any costs prior to receiving an award agreement signed by a NOAA grants officer, the applicant does so at the applicant's own risk. In no event will NOAA or the Department of Commerce be responsible for any proposal preparation costs. Recipients and subrecipients are subject to all Federal laws and agency policies, regulations, and procedures applicable to Federal financial assistance awards. Applicants must be in good standing with respect to all existing NOAA awards in order to receive funds.

B. Project/Award Period

Applicants may request funding for up to three years. Funding is contingent upon availability of funds and the satisfactory performance of the recipient, and is at the sole discretion of NOAA

C. Type of Funding Instrument

NOAA will likely issue a cooperative agreement. If a cooperative agreement is awarded, the Federal government will be substantially involved by, for example, coordinating partners and teams to accomplish the work; assisting with technical aspects of the project; and/or coordinating access to Federal data or facilities needed to support the work.

If the non-Federal applicant is at an institution that has a NOAA Cooperative Institute (CI), it is allowed to submit applications that references the CI by attaching a cover letter to the application stating its desire to have the application associated with the CI. This letter should specify the name of the cooperative institute, the CI cooperative agreement number, and the NOAA-approved research theme and task that applies to the proposal. The application will use the Facilities & Administrative (F&A, or indirect cost) rate associated with the main CI agreement. If the application is selected for funding, NOAA will notify the university that a separate award will be issued with its own award number. However, the award will include two Special Award Conditions (SACs): (1) the existing University/NOAA Memorandum Of Agreement (MOA) would be incorporated by reference into the terms of the competitive award, and (2) any performance report(s) for the competitive project must follow the scheduled timetable of, and submit directly to, the IOOS Office. Report(s) will be copied to the CI's administrator when due, to be attached to the main cooperative agreement progress report as an appendix. This will allow the CI to

coordinate all the projects submitted through the CI, since the terms of these awards will specify that this is a CI project via the MOA.

III. Eligibility Information

A. Eligible Applicants

Eligible funding applicants for this competition are institutions of higher education, non-profit and for-profit organizations, and State, local and tribal governments. Federal agencies or institutions and foreign governments may not be the primary recipient of awards under this announcement, but they are encouraged to partner with applicants when appropriate.

If an applicant has a partner(s) who would receive funds, the lead grantee will be expected to use subcontracts or other appropriate mechanisms to provide funds to the partner(s). If a partner is a NOAA office or laboratory, the funds will be transferred internally.

Funding will not be awarded to continue projects previously funded through the Ocean Technology Project.

Applicants should note that paying for transportation, travel, or other expenses for any Federal employee are unallowable costs.

B. Cost Sharing or Matching Requirement

None.

C. Other Criteria that Affect Eligibility

Letters of intent (LOI) are highly recommended but not required.

IV. Application and Submission Information

A. Address to Request Application Package

Application packages are available online as part of the NOFO announcement on grants.gov and final applications will only be accepted via submission through www.grants.gov.

B. Content and Form of Application

Applicants must be responsive to all requirements stated in this announcement or their application will not be considered.

1. Letter of Intent (LOI)

The purpose of the LOI process is to provide information to potential applicants on the relevance of their proposed project and the likelihood of it being competitive in advance of preparing a full application. The LOI should provide a concise description of the proposed work and its relevance to the OTT Program. Full applications will be encouraged only for LOIs deemed relevant; however, the final decision to submit a full proposal is made by the investigator. Failure to submit an LOI is not grounds for rejection of proposals but is highly recommended. The LOI should be no more than two pages (front only) in length, single spaced in 12-point Times New Roman font with 1-inch margins and should include in order the components listed below.

(1) Tentative project title.
(2) Name(s) phone number(s), email address(s) and institution of all Principal Investigator(s) and specification of which individual is the Lead Principal Investigator.
(3) Approximate cost of the project.
(4) Statement of the problem and its management relevance.
(5) Brief summary of work to be completed, process to plan for transition to operations.

IOOS Office Program Managers will review each LOI to determine whether it is responsive to the Program's goals, as advertised in this notice. Letters or emails to encourage or discourage a full application are scheduled to be sent out two weeks after the LOI due date.

FULL APPLICATION:

The proposal narrative must total no more than 15 pages (double-spaced, 12-point font). The 15-page limit does not include the proposal title page, table of contents, the data sharing plan, the project summary referenced below under item two (2), and any required appendices. Appendices should be limited to:

A. Materials that directly support the main body of the proposal (e.g., support letters, resumes, references, lists of data sources, and maps), which may not exceed 30 pages in length;

B. Detailed Budget not to exceed 10 pages. See guidance at: https://www.noaa.gov/sites/default/files/legacy/document/2019/Jun/gmd_budget_narrative_guidance_-_05-24-2017_final.pdf. In addition to an overall budget, an SF-424A must be submitted for each year of the proposal. Applicants must also provide a separate budget for

each subcontract. SF- 424As will not be included in the page count of the proposal or appendices. For your convenience, sample forms and instructions on how to fill out the forms can be found online at https://www.grants.gov/web/grants/forms/sf-424-family.html

C. Environmental Compliance materials, including all of the information referenced in Section C (NEPA) below.

Applicants should paginate their proposal and any appendices. Appendices should be paginated as independent documents. Applicants should present their work plan in priority order such that if less money is available than is requested the process of modifying proposals is simplified.

All funding application packages must contain the following components:

1. Title Page (Proposal Cover Sheet). Include proposal title, complete contact information for the Principal Investigator and Financial Representative, duration of proposed project, funding type (cooperative agreement), applicant type (i.e. cooperative institute (see section C. Type of Funding Instrument), non-profit, state, etc.)) and funding request by year and total funds requested. If funds are to be transferred to a NOAA partner on the project, also state the amount to NOAA on the cover.

2. Project Summary. Provide a one-to-two-page summary of the proposed project. The summary should be prepared to be readable to a broad audience and contain the following sections:

a. Project Name/Title
b. Primary Contact (name, address, telephone, fax, e-mail)
c. Primary Recipient Institution
d. Other Investigators (name, affiliated institution or agency)
e. Brief Project Summary including objectives and intended benefits
f. Name and affiliation of the Transition Manager
g. Partners

3. Project Description/Narrative. All project descriptions (proposals) must include the following sections:

a. Goals and Objectives. Describe in the narrative the specific project goals and objectives to be achieved. Goals and objectives should be specific for each year of the work plan presented. Recipients will be required to submit semi-annual progress reports in which progress against these goals and objectives will be reported.

b. Background. Provide sufficient background information for NOAA and non-NOAA reviewers to assess independently the significance of the proposed project. Summarize the problem to be addressed and the status of ongoing efforts to address the identified needs. Identify the current readiness level of the technology and the anticipated level at the end of the project and how you determined these levels.

c. Audience. Identify specific users of the results of the project, describe how they will use the results, and identify any training that will be needed for users to make full use of the results.

d. Approach. Provide a work plan that: identifies specific tasks to be accomplished; explains the technical approach (including quality assurance) needed to accomplish the tasks; identifies partner roles and contributions, including resources; and identifies potential obstacles to successful completion of the goals and objectives. Describe how end-users are involved in the planning and design process. If the project generates data, the work plan must include a data management plan which clearly addresses data management requirements, and the steps to be taken to achieve efficient and effective data access/sharing through U.S. IOOS and archiving that is compliant with Federal regulations as indicated in the Data Sharing Plan Policy under “"B. Administrative and National Policy Requirements". If the project includes Federal partners, the roles, responsibilities and contributions of the Federal partners must be clearly identified.

e. Benefits. Identify, with a high degree of specificity, the users of the products or information derived from the work, and the benefits that will be achieved for those users, as well as society as a whole. Document how valid user requirements are guiding the proposed work. Describe how the technologies or information from the project will be delivered to those users, and any special considerations or requirements for ensuring or improving the delivery of the technology or information.

f. Milestone Schedule. Display time lines for major tasks, target milestones for important intermediate and final products including deliverables and key project outcomes.

g. Project Budget. Provide a budget description that follows the categories and formats in the NOAA grants package (SF-424A) and a brief narrative justification of the budget. An SF-424A must be submitted for each year of the project as well as for each subcontract.

h. All applicants must submit (in addition to the above SF-424A) a detailed itemized Budget Table within the Budget Narrative Attachment section broken out by year. It must also include a detailed Budget Justification that describes and justifies each expense and

demonstrates cost effectiveness (refer to the budget narrative guidance at

https://www.noaa.gov/sites/default/files/legacy/document/2019/Jun/gmd_budget_narrative_guidance_-_05-24-2017_final.pdf

The full proposal package includes the information described in this section as well as the required federal forms as applicable: 1) Application for Federal Assistance (SF-424), 2) Budget Information - Non-Construction Programs (SF-424A), 3) Certifications (CD-511), 4) Assurances - Non-Construction Program (SF-424B), and 5) Disclosure of Lobbying Activities (Standard Form LLL). 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 the SF 424A for multi-year proposals.

The budget narrative must also provide, to the extent possible, detailed information on travel, including costs, a description of anticipated travel, destinations, the number of travelers, and a justification of how the requested travel is directly relevant to the successful completion of the project. If actual trip details are unknown, applicants must state the basis for the proposed travel charges. Applicants should allocate travel funds for any coordination meetings at regional or national levels. Foreign travel must receive prior approval, and therefore, should be included in the proposal to avoid having to request prior approval after the project starts.

Applicants may factor in travel costs for participation in a NOAA Grants Management Division workshop for recipients should one be offered.

If a NOAA or another non-NOAA Federal partner is requested to perform any work as part of the project, please be advised that the work to be performed and resources required must be reflected separately in the project description and partner budget. The budget should clearly show where all funds will go and how the funds will be used.

For a NOAA partner, applications for Federal assistance (SF-424 and SF-424A) must show the total amount less that which would go to the NOAA partner. Detailed budget and budget justifications within the proposal should show the total amount, including that which would go to the NOAA partner, and should include text stating that the applicant wishes for NOAA to retain those funds and transfer them to the NOAA partner.

For a non-NOAA Federal partner, applications for Federal assistance (SF-424 and SF-424A) must show the total amount including that which would go to the non- NOAA Federal

partner. Detailed budget and budget justifications within the proposal should show the total amount, including that which would go to the non-NOAA Federal partner. NOAA will not retain the funds and transfer them to the non-NOAA Federal partner. That transfer will be the responsibility of the awardee.

Additional detailed budget information, including a description of complementary funding and in-kind contributions from project partners, should be included in an appendix (see IV.B.4 for additional information). For your convenience, sample forms and instructions on how to fill out the forms can be found online at https://ioos.noaa.gov/about/funding-opportunities/;

4. Appendices

a. Resumes. Provide resumes of the Principal Investigator for the project and other key personnel critical to the success of the project. Ensure that resumes address qualifications relevant to conducting the proposed work, and do not exceed 3 pages per person.

b. Detailed Budget Information, including budgets of subawards and contracts, detailed information on travel, etc. Information should include the names of all entities receiving funds, the locations of the entities receiving funds (city, State, and Congressional district), and the locations of the primary places of performance under the contract/subaward. In this appendix, the budget narrative also shall clearly identify the priority and cost of separable elements of the proposed work, and shall identify the elements of the project that the cooperator would recommend for revision or elimination in the event that sufficient funding is not available for all proposed activities.

c. National Environmental Policy Act (NEPA).

NEPA requires Federal agencies to complete an environmental analysis for all major Federal

actions, including funding non-federal projects through Federal financial assistance awards where Federal participation in the funded activity is expected to be significant. This Environmental Compliance Questionnaire for National Oceanic and Atmospheric Administration Notice of Federal Funding Opportunity Applicants (“Questionnaire”) is used by NOAA to collect information about proposed activities for NEPA and other environmental compliance requirements associated with the proposed project, such as Federal consultations under the Endangered Species Act.

Applicants to be recommended for funding will be required to answer relevant questions from the Questionnaire. The Federal program officer will determine which questions are relevant to each specific applicant.

Answers must be provided before the application can be submitted for final funding approval. For more details see: https://www.nepa.noaa.gov/docs/NOAA-Grants-Questionnaire-final.pdf

Applicants should answer the NEPA questions to the best of their ability with as much detail as possible. Further analysis of NEPA considerations will be completed with applicants selected for funding during the negotiation process.

Some of the questions may overlap with material provided in other parts of the application. If appropriate, the applicant may copy the information from other parts of the application and paste it into the answers to the questionnaire. Many questions have a “yes” or “no” response. If the response is “no” the applicant does not need to elaborate on their answer. If the response is “yes” the question will have a second part asking the applicant to provide more information.

Paperwork Reduction Act Statement: Public reporting burden for this collection of NEPA information is estimated to average 3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other suggestions for reducing this burden to NOAA NEPA Coordinator, NOAA Office of Program Planning and Integration, SSMC 3, Room 15700, 1315 East West Highway, Silver Spring, MD 20910. The information collection does not request any proprietary or confidential information. No confidentiality is provided.

Notwithstanding any other provisions of the law, no person is required to respond to, nor shall any person be subjected to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number. The valid OMB Control Number is 0648-0538, which expires on November 30, 2024.

C. Unique Entity Identifier and System for Award Management (SAM)

Any applicant awarded in response to this Announcement will be required to use the System for Award Management (SAM), which may be accessed online at https://sam.gov/SAM/. SAM enables the use of a universal entity identifier and to build the quality of information available to the public as required by the Federal Funding Accountability and Transparency Act, 31 U.S.C. 6106 Note, to the extent applicable.

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 proposal, which takes an average of 7-10 business days after entering all information into SAM and requires the applicant's Employer Identification Number; (ii) provide a valid unique entity identifier in its proposal; and (iii) continue to maintain an active SAM registration with current information at all times during which it has an active federal award or a proposal or plan under consideration by a federal awarding agency. SAM registration must be revalidated and renewed every 12 months. Applicants are advised to complete SAM registration or renewal well in advance of the full proposal deadline. For UEI registration visited this link, https://sam.directory/UEI?gclid=CjwKCAjw_b6WBhAQEiwAp4HyIJaUI9DfZ6GgKVQxxeLeLsp72ZneUyTrcA7qQsOB_vQdGh9Z8B_XIRoCm-0QAvD_BwE

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

Optional, but recommended, Letters of intent (LOI) should be submitted to this link as a pdf and must be received by 11:59 p.m. Eastern Time on Friday, October 21, 2022.

E. Intergovernmental Review

Funding applications to NOAA are subject to Executive Order 12372, "Intergovernmental Review of Federal Programs." It is the State agency's responsibility to contact their State's Single Point of Contact (SPCO) to find out about and comply with the State's process under EO 12372. To assist the applicant, the names and addresses of the SPOCs are listed on the White House's web site https://www.whitehouse.gov/wp-content/uploads/2020/04/SPOC-4-13-20.pdf

F. Funding Restrictions

None.

G. Other Submission Requirements

LETTER OF INTENT (LOI):
Letters of Intent (LOI) are highly recommended but not required. The requested letters of intent (LOI) should be submitted via this Google Form https://forms.gle/E2SmYg2K7JXDyJrJ6 (copy and paste the link into your web browser). The form and must be received by 11:59 p.m. Eastern Time on Friday, October 21, 2022.

FULL APPLICATION:
Full application packages must be submitted through www.Grants.gov/apply. No e-mail or hard copies will be accepted.

Applicants using www.Grants.gov must locate the downloadable application package for this solicitation by the Funding Opportunity Number or the CFDA number (11.012). Applicants will be able to download a copy of the application package, complete it off line, and then upload and submit the application through Grants.gov.

Grants.gov will provide information about submitting a proposal through the site as well as the hours of operation. After electronic submission of the application, the person submitting the application will receive within 24 to 48 hours two e- mail messages from Grants.gov updating him or her on the progress of the application. The first e-mail will confirm receipt of the application by Grants.gov, and the second will indicate that the application has been either successfully validated by the system prior to transmission to the grantor agency, or rejected due to errors. After the application has been validated, this same person will receive another e-mail when the application has been downloaded by the Federal agency.

Please refer to important information in "Submission Dates and Times" above to help ensure your application is received on time. Please be advised that potential funding applicants must register with Grants.gov before any application materials can be submitted. An organization's one-time registration process may take up to three weeks to complete, so please allow sufficient time to ensure applications are submitted before the closing date.

Grants.gov contains directions for submitting an application, the application package (forms), and is also where the completed application is submitted.

Full proposals must be received no later than 11:59 PM Eastern on Tuesday, January 17, 2023.
Applications received after this deadline will not be considered for funding. For applications submitted through www.Grants.gov a date and time receipt indication is included and will be the basis of determining timeliness. Hard copy submissions will not be accepted. Faxed or emailed copies of applications will not be accepted.

V. Application Review Information

A. Evaluation Criteria

1. Importance/Relevance and Applicability of Application to the Project Goals (35%)

This ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, Federal, regional, State, and/or local activities. This includes importance and relevance to the topics and scientific priorities described in the Funding Opportunity. Proposed projects will be assessed on their ability to advance new or existing technology-based solutions that address ocean, coastal, and Great Lakes observing, product development, and data management challenges. Funding will be targeted to projects focused on: 1) technologies for which there are demonstrated operational end-users who commit to integrated, long term use of those technologies and open data sharing; 2) are transitioning technology from RLs 6 through 8; 3) and include partners from at least one IOOS Regional Association, academia, and the private sector. The PI's record of making his/her technologies and data accessible and useable by the scientific community in the past may also be considered when evaluating the importance and relevance of the application.

2. Technical/Scientific Merit (35%)

This assesses whether the approach is technically sound and/or innovative, whether the methods are appropriate, and whether there are clear project goals and objectives. The proposed work should have focused objectives and a complete and technically sound strategy for project design, methodologies, data management (including QA/QC), data analysis, and development of products and outcomes in support of the objectives. The proposed work should demonstrate the technology is mature and proven for consideration in long- term operations.

3. Overall Qualifications of Applicants (10%)

This criterion assesses whether the applicant team possesses the necessary education,

experience, training, facilities, and administrative resources to accomplish the project.

4. Project Costs (10%)

This criterion evaluates the budget to determine if it is realistic and commensurate with the project needs and time frame.

5. Outreach/Education/Broader Impacts/Inclusion Diversity Equity and Access (10%)

This criterion assesses whether the project provides a focused and effective education and outreach strategy regarding partner agency missions, including NOAA's mission to understand and protect the Nation's natural resources. Education can include plans for development of technical workforce capacity to work with the technology that the project will deliver. Broader Impacts address actions that will enhance the potential of the research to benefit society and contribute to the achievement of specific, desired societal outcomes. Inclusion Diversity Equity and Access (IDEA) addresses actions that will support IOOS' vision of turning the ocean observing workforce into one that is fully inclusive of excellence across the social spectrum and supporting U.S. IOOS' mission to include the eleven regional observing networks and the IOOS office to engage underrepresented communities in ocean observing activities in conservation and stewardship.

B. Review and Selection Process

An LOI is not required but is highly recommended. The purpose of the LOI process is to provide information to potential applicants on the relevance of their proposed project and the likelihood of it being competitive in advance of preparing a full application. Full applications will be encouraged only for LOIs deemed relevant; however, the final decision to submit a full proposal is made by the investigator.

The LOI should provide a concise description of the proposed work and its relevance to the OTT Program. The LOI should be no more than two pages (front only) in length, single spaced in 12-point Times New Roman font with 1-inch margins and should include in order the components listed below.

Full application:

An initial administrative screening is conducted to determine compliance with requirements/completeness for the proposal. Proposals that do not meet the requirements and goals of this FFO, will not be evaluated.

All proposals meeting the FFO requirements will be evaluated and individually scored in accordance with the assigned weights of the above evaluation criteria by an impartial expert panel review process. The panel will consist of 7-10 members with each panelist expected to read all proposals. Three panelists will provide written reviews before the panel meeting and all panelists will participate in the reviews and scoring. One panelist will be assigned as the lead to guide discussion, a second panelist will take notes, and a third will provide a written review. All panelists will be present to review proposals. The merit reviewers' ratings are used to produce a rank order of the proposals. The Selecting Official will award in the rank order unless proposals are justified to be selected out of rank order based upon one or more of the selection factors provided below. The Selecting Official or designee may negotiate the funding level of the proposal.

C. Selection Factors

The competition manager will present selection recommendations to the selecting official in rank order as determined by the merit review ratings. The selection official shall award in rank order unless the proposal is justified to be selected out of rank order based upon one or more of the following factors:

1. Availability of funding
2. Balance/distribution of funds:
   a. By number and type of partners
   b. By project type
   c. By operational focus
   d. By type of institutions
   e. By geographic region
   f. By industry type
3. Leveraging of other projects funded or considered for funding by NOAA/Federal agencies
4. Project 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 determination about the environmental impacts of the project on the environment and draft necessary documentation before recommendations for funding are made to the Grants Officer.

The Selecting Official makes final recommendations for awards to the Grants Officer who is authorized to obligate the funds.

D. Anticipated Announcement and Award Dates

The start date on proposals should be September 1, 2023, or the first day of the month of any month after September 1, 2023, but no later than December 1, 2023.

VI. Award Administration Information

A. Award Notices

Applicants will receive an evaluation of their LOI within 2 weeks of submission.

Successful applicants will receive notification that the application has been recommended for funding by an official of the U.S. IOOS Office. This notification is not an authorization to begin performance of the project. Official notification of funding, signed by a NOAA Grants Officer, is the authorizing document that allows the project to begin.

Notifications will be issued to the applicant's Authorized Representative and the Principal Investigator of the project.

B. Administrative and National Policy Requirements

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

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 apply to awards in this program. Refer to http://go.usa.gov/SBYh and http://go.usa.gov/SBg4 .

DOC Terms and Conditions

Successful applicants who accept a NOAA award under this solicitation will be bound by Department of Commerce Financial Assistance Standard Terms and 16 Conditions. This document will be provided in the award package in NOAA's Grants Online system at http://www.ago.noaa.gov.

Limitation of Liability

Funding for programs listed in this notice is contingent upon the availability of continuing Congressional appropriations. Applicants are hereby given notice that funds have not yet been appropriated for the programs listed in this notice. In no event will NOAA or the Department of Commerce be responsible for proposal preparation costs. Publication of this announcement does not oblige NOAA to award any specific project or to obligate any available funds.

Transition Plan

Applicants are expected to commit to developing a draft transition plan using the guidance in https://www.noaa.gov/organization/administration/nao-216-105b-policy-on-research-and-development-transitions. The draft transition plan will be required no later than the end of year one and follow the guidelines provided in the NOAA Transition Procedural Handbook. See page 9 for section on Transition Plans - https://www.noaa.gov/organization/administration/nao-216-105b-policy-on-research-and-development-transitions

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), based on widely used or international standards.

2. Proposals submitted in response to this Announcement that generate data 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.

C. Reporting

NOAA awardees will be required to submit financial and performance (technical) progress reports electronically through NOAA Grants Online. Instructions for submitting financial and progress reports will be provided by the NOAA Grants Management Division as part of the award terms and conditions.

Review of Risk

After applications are proposed for funding by the selecting official, the Grants Office will perform administration reviews. 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. GMD also performs a search for SAM registration, SAM entity and Key Personnel Exclusions, and when appropriate, a FAC, on the Federal Audit Clearinghouse search to pull a current Single Audit Report. Special conditions that address any risks determined to exist may be applied. Applicants may submit comments to the Federal Awardee Performance and Integrity Information System (FAPIIS) about any information included in the system about their organization for consideration by the awarding agency.

The Federal Funding Accountability and Transparency Act of 2006, includes a requirement for awardees of applicable Federal grants to report information about first-tier sub-awards

and executive compensation under Federal assistance awards issued in FY 2011 or later. All awardees of applicable grants and cooperative agreements are required to report to the Federal Sub-award Reporting System (FSRS) available at www.FSRS.gov on all sub-awards over $25,000.

Indirect Cost Rate

If an applicant has not previously established an 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 10% of MTDC (as allowable under 2 C.F.R. §200.414). The negotiation and approval of a rate is subject to the procedures required by NOAA and the Department of Commerce Standard Terms and Conditions.

The NOAA contact for indirect or facilities and administrative costs is:
Lamar Revis, Grants Officer
NOAA Grants Management Division
1325 East West Highway, 9th Floor
Silver Spring, MD 20910
lamar.revis@noaa.gov

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.

Freedom of Information Act (FOIA)

In the event that an application contains information or data that you do not want disclosed prior to award for purposes other than the evaluation of the application, mark each page containing such information or data with the words "Privileged, Confidential, Commercial, or Financial Information - Limited Use" at the top of the page to assist NOAA in making disclosure determinations. DOC regulations implementing the Freedom of Information Act (FOIA) are found at 5 U.S.C 552, which sets forth rules for DOC to make requested materials, information, and records publicly available under FOIA. The contents of funded applications may be subject to requests for release under the FOIA. Based on the information provided by you, the confidentiality of the content of funded applications will be maintained

to the maximum extent permitted by law.

VII. Agency Contacts

For questions regarding this announcement, contact: Jennifer Hinden, U.S. IOOS via e-mail at jennifer.hinden@noaa.gov.

For questions of a technical nature, contact: Tiffany C. Vance, U.S. IOOS, via e-mail at tiffany.c.vance@noaa.gov.

VIII. Other Information

Official notification of an award is provided by the Grants Management Division, not the U.S. IOOS Office. If one incurs any costs prior to receiving an award agreement from an authorized NOAA grant official, one would do so solely at one's own risk of these costs not being included under the award.

Successful applicants will be requested to ensure that all progress reports: a) clearly state the resulting impact of their project and products in the coastal management community and on forecasting environmental events; and b) indicate whether financial reports have been submitted to NOAA's Grants Management Division and are up-to-date. Applicants in their final progress report will be asked to certify that "Final financial reports have been submitted to NOAA's Grants Management Division and a final funding draw-down has been made through the Automated Standard Application for Payments (ASAP)." See https://cdn.ioos.noaa.gov/attachments/2018/11/Cooperative-Agreement-Progress-Report-Guidance-November-2018.pdf for general guidance on the content of these progress reports.

Paperwork Reduction Act Statement: Public reporting burden for this collection of NEPA information is estimated to average 3 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other suggestions for reducing this burden to NOAA NEPA Coordinator, NOAA Office of Program Planning and Integration, SSMC 3, Room 15700, 1315 East West Highway, Silver Spring, MD 20910. The information collection does not request any proprietary or confidential information. No confidentiality is provided.

References:

Readiness Levels: https://www.noaa.gov/organization/administration/nao-216-105b-policy-on-research-and-development-transitions

U.S. IOOS 2012 Summit Report: A New Decade for the Integrated Ocean Observing System: http://www.iooc.us/wp-content/uploads/2013/01/U.S.-IOOS-Summit-Report.pdf

U.S. IOOS Enterprise Strategic Plan (2018-22): https://ioos.noaa.gov/about/governance-and-management/strategic-plan/