

Proposed Cooperative Institute for Earth System Research and Data Science

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NOTICE OF FUNDING OPPORTUNITY

EXECUTIVE SUMMARY

Federal Agency Name(s): Oceanic and Atmospheric Research (OAR), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce

Funding Opportunity Title: Proposed Cooperative Institute for Earth System Research and Data Science

Announcement Type: Initial

Funding Opportunity Number: NOAA-OAR-CIPO-2022-2007108

Federal Assistance Listings Number: 11.432, NOAA Cooperative Institutes

Dates: Applications must be received by OAR no later than 01/24/22, at 5:00 p.m.

EDT. For applications submitted via Grants.gov, a date and time receipt indication will form the basis for determining timeliness. For those applicants not having access to the Internet, one signed original and two hard copy applications must be received by OAR at the following address: NOAA/OAR, Attn: Competition Manager Sandra Byers, 1315 East-West Highway, Room 11340, Silver Spring, Maryland 20910. Use of U.S. mail or another delivery service must be documented with a receipt (note that late-arriving hardcopy applications provided to a delivery service on or before 5:00 p.m. EDT on the closing date for applications will be accepted for review if the applicant is able to document that the application was provided to the guaranteed delivery service by the specified closing date and time and if the application is received by OAR no later than 5:00 p.m., EDT, two business days following the closing date). No facsimile or electronic mail applications will be accepted. Applications submitted after [60 days], will not be reviewed or considered for funding.

Funding Opportunity Description: The NOAA Office of Oceanic and Atmospheric Research (OAR) invites applications for the establishment of a Cooperative Institute (CI) to assist NOAA in fulfilling NOAA's Next Generation Strategic Plan vision of "Healthy ecosystems, communities, and economies that are resilient in the face of change." The CI's research will leverage its expertise in climate processing and modeling, atmospheric processes, geophysics, advanced information systems, earth system modeling, and space weather to expand our understanding of the entire earth system. The proposed CI supports NOAA mission science by developing and applying satellite systems, ships, buoys, aircraft, research facilities, high-performance computing, and information management and distribution systems. In addition, the proposed CI will partner with NOAA in the pursuit of innovative research-to-application capabilities that recognize and apply significant new understanding.

The proposed CI research themes are (1) Future Atmosphere; (2) Climate Science and Prediction; (3) Earth System Data Science, Stewardship, and Application; (4) Regional Science and Applications; (5) Scientific Outreach, Education and Diversity; (6) Space Weather Science and Prediction; (7) Weather Research and Forecasting; and (8) Ecosystem Science and Prediction.

The research described herein was carefully defined to complement, rather than duplicate research at other CIs.

The CI may consist of one or more (e.g., a consortium) academic or non-profit, degree-granting institutions that possess an outstanding research program in one or more areas related to NOAA's mission. In the case of a consortium applicant, NOAA will issue only one award to the lead academic institution that applied for the award and where the CI will be established and resident. The CI is strongly encouraged to work in conjunction with a range of supporting research affiliates, including, but not limited to other governmental agencies; private industry; non-traditional partners; Minority Serving Institutions (MSI); NOAA laboratories, science and data centers; other CIs; Cooperative Science Centers (CSCs); and Sea Grant Colleges.

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

A. Program Objective

The purpose of this announcement is to invite the submission of proposals to establish a Cooperative Institute for Earth System Research and Data Science and to provide details on the application, review, and selection process.

CI Concept/Program Background

A CI is a NOAA-supported, non-Federal organization that has established an outstanding research program in one or more areas that are relevant to the NOAA mission “to understand and predict changes in climate, weather, oceans, and coasts, to share that knowledge and information with others, and to conserve and manage coastal and marine ecosystems and resources.” CIs are established at research institutions with outstanding graduate degree programs in NOAA-related sciences. CIs provide significant coordination of resources across partners and promote the involvement of students and post- doctoral scientists in NOAA-funded research. NOAA establishes a new CI competitively when it identifies a need to sponsor a long-term (5-10 years) collaborative partnership with one or more outstanding non-Federal, non-profit research institutions.

For NOAA, the purpose of this long-term collaborative partnership is to promote research, education, training, and outreach aligned with NOAA’s mission; to obtain research capabilities that do not exist internally; and/or to expand research capacity in NOAA-related sciences to:

- conduct collaborative, long-term research that involves NOAA scientists and those at the research institution(s) from one or more scientific disciplines of interest to NOAA;
- utilize the scientific, education, and outreach expertise at the research institution(s) that, depending on NOAA’s research needs, may or may not be located near a NOAA facility;
- support student participation in NOAA-related research studies; and
- strengthen or expand NOAA-related research capabilities and capacity at the research institution(s) that complements and contributes to NOAA’s ability to reach its mission goals.

A CI may be comprised of a single academic institution or a consortium of academic institutions, at times working in conjunction with supporting research affiliates, each of which demonstrates outstanding performance within one or more established research programs in NOAA-related sciences. CIs conduct research under approved administrative tasks, as described below. These tasks may not be redefined or abbreviated:

Task I activities are related to the management of the CI, as well as general education and outreach activities. This task also includes support of postdoctoral and visiting scientists conducting activities within the research themes of the CI that are approved by the CI Director, in consultation with NOAA, and are relevant to NOAA and the CI's mission goals.

Task II research activities usually involve ongoing direct collaboration with NOAA scientists. This collaboration typically is fostered by the collocation of Federal and CI employees.

Task III research activities require minimal collaboration with NOAA scientists and may include research funded by other NOAA competitive grant programs.

B. Program Priorities

Research Themes of Proposed Cooperative Institute for Earth System Research and Data Science:

I. Future Atmosphere

Changes in the composition of Earth's atmosphere are responsible for many current environmental issues, such as global warming, air quality degradation, and stratospheric ozone depletion. Timely and accurate predictions of atmospheric composition are needed to manage current problems and to make policy decisions that will mitigate future problems. Such predictions can only be gained from understanding the inter-related chemical, dynamical, and physical processes that affect atmospheric composition, and incorporation of that understanding into numerical models of the atmosphere. The CI's research under this theme will focus on observations and modeling of the atmosphere from the surface through the stratosphere not only to advance understanding of the processes that drive changes in atmospheric composition, but also to improve predictions of the future atmosphere. Examples include monitoring and understanding changes in climate forcing agents; studies of air quality changes from diverse and changing emission sources (e.g., wildfires and vehicle fleet electrification); research into how aerosols affect earth's radiation balance (including potential climate warming mitigation strategies such as marine cloud brightening); and studies to understand how stratospheric chemical composition (e.g., ozone layer) affects global circulation and surface weather. Work under this research theme could include measurements of natural and man-made emission sources; observations of atmospheric gases and particles over short and long timescales; laboratory and field studies of chemical and physical processes that transform atmospheric constituents; studies of transport and mixing processes on local, regional, and global scales; regional and global model development; and application of field observations and laboratory studies to evaluate

and improve model predictions.

Execution of these research priorities requires innovative observational approaches including in situ sampling platforms (e.g., UxS), remote sensing capabilities (e.g., lidar), and use of current and emerging satellite measurements (e.g., TEMPO). Evaluation and improvement of numerical models take advantage of new techniques, such as artificial intelligence and machine learning. New scientific understanding from this research will be translated into information usable by customers, stakeholders, and policymakers.

II. Climate Science and Prediction

Research under this theme advances understanding of physical processes that produce variability, change, and extreme events in the climate system, including the interactions among the atmosphere, ocean, land surface and cryosphere. The CI enhances understanding of oceanic and atmospheric dynamics, internal feedbacks and teleconnections between the tropics, mid-latitudes, and polar regions which affect short and long-term climate variability, extreme events and change. The CI will provide results from in-depth investigations of climate system variability, trend analysis, extremes and dynamics. CI will use traditional and novel observation techniques, characterization of systematic relationships from observations and process understanding, and advanced modeling techniques. Research analyzing long time series of climate variability, extremes and change from paleoclimate data will offer insights to Earth system dynamics under different boundary conditions and climate forcings. Climate diagnostics research will develop and provide a suite of analysis, visualization and data products to support NOAA science capabilities and applications. Research will also focus on the effects of climate variability and change on the water cycle and the occurrence of extreme events and their impacts. Research will identify systematic errors in coupled modeling systems, improve the characterization of physical processes in these models, and advance understanding of climate system processes and phenomena. Research on the role of the atmospheric boundary layer will ensure key exchanges across atmosphere-ocean-land-sea ice boundaries are adequately represented in NOAA's Earth system models. This portfolio of research leverages the array of ground-, air- and ship-based observing systems which NOAA deploys from the equator to the poles, at sea, and on land. An overarching element of this research theme is to accelerate the transition of climate science research advancements to enhance NOAA mission capabilities.

III. Earth System Data Science, Stewardship, and Application

Research under this theme supports properly managed data obtained from NOAA and non-NOAA observing systems, including geophysical data, coastal bathymetry, tsunami and hazards data, precise geodetic measurements, paleoclimate data, biological data, and world-wide geomagnetic, solar and ionospheric measurements. Future datasets include

interplanetary measurements from deep-space platforms, total solar irradiance observations from space, and atmospheric/ionospheric profiles derived from the Global

Positioning System (GPS) and other Global Navigation Satellite Systems, extensive ocean and coastal observations. CI research focuses on documenting, displaying, integrating, preserving, archiving, and distributing large amounts of environmental data and utilizing standard formats, documentation, and services, whenever beneficial. Research under this theme will improve understanding of our environment by collecting, organizing, and exploiting datasets collected from our Earth system. Research is needed to improve the quality and utility of these highly-relevant datasets and their derived information. Research should improve existing products, as well as create new higher-level products. In addition, modern data-access systems will be needed that improve the utility and accessibility, respectively, of NOAA's environmental data. Beneficial research under this theme will involve implementing tools such as AI/ML, migrating existing systems, and developing new systems in Cloud environments.

All environmental data and derived products must be managed in accordance with NOAA Administrative Order 212-15, "Management of Environmental Data and Information." Decisions regarding the acquisition of new datasets that may contribute to NOAA's overall environmental mission requiring careful consideration using established guidelines (e.g., the "NOAA Procedure for Scientific Records Appraisal and Archive Approval"). Such decisions rely on the sound judgment of a scientifically-proficient staff familiar with the needs of NOAA's operational and research constituents. In summary, the research conducted within this theme will improve NOAA's understanding of our Earth system by collecting, organizing, and exploiting environmental datasets.

IV. Regional Science and Applications

The impacts of climate variability, extreme events and change are felt strongly at regional scales on land and in the ocean, whether through retreating Arctic sea ice and melting permafrost, heat and cold waves, floods, or persistent droughts. The CI's research under this theme observes and reports on the impacts by: 1) enhancing measurement, analysis, and providing understanding of physical processes of the coupled atmosphere-ocean-land-ice-snow system that modulate extreme events on regional, national, and global scales, 2) advancing observations, analysis, and providing understanding of local changes in the tropics and polar regions and assessing the role of these regions in the global climate system, 3) advancing observing system science, demonstration, and transition of research advances to operations through regional testbeds that could lead to improved forecasts and warnings of

extreme precipitation events and flooding, 4) identifying the role of key phenomena and processes in the weather-climate system producing extreme precipitation events, severe and prolonged droughts, and both marine and terrestrial heatwaves, 5) promoting the development of decision support tools for water resource management and validation data for weather and climate models in collaboration with programs such as the National Integrated Drought Information System (NIDIS), Western Water Assessment (WWA), Hydrometeorology Testbed (HMT), Atmospheric Science for Renewable Energy (ASRE), Arctic Testbed (ATB) and Hazardous Weather Testbed (HWT), and 6) developing the ability to explain the origins of weather and climate extremes that typically occur at regional scales.

V. Scientific Outreach, Education and Diversity

Scientific outreach, education and diversity efforts by the CI support research to explore and integrate transformative technologies including artificial intelligence and migration to Cloud infrastructure. Research under this theme identifies opportunities for improving environmental literacy and new technologies for learning. Under this theme, the CI develops exhibits featuring display systems showing Earth system science and developing science modules.

To improve diversity, inclusion, and equality within under-represented communities in science, the CI shall establish partnerships with Tribal Colleges, MSIs and NOAA CSCs. The CI also explores involvement in university education through graduate student fellowship programs, active participation in postdoctoral and visiting scientist programs, and engagement with underrepresented minority K-12 students.

VI. Space Weather Science and Prediction

Research under this theme includes harnessing cutting-edge science and technology to provide actionable space weather information that safeguards society by planning, researching, and developing improvements to space weather prediction. CI will improve the effectiveness of space weather event notifications through new forecast tools, displays, and data streams. The CI will support a continuous transition of science and technology advances into SWPC's operations in alignment with NOAA Administrative Order 216-105B. Research under this theme will streamline processes for rapid prototyping and adopting innovative science and technologies into operations. CI research in this area serves decision-makers in mitigating the significant societal, economic, national security, and health impacts effects of severe space weather. CI research on space weather product calibration and validation for both operational and scientifically authoritative data products, product development, archive,

and access could also better inform decision-makers. Research advancements require space weather physical and instrumentation subject matter expertise.

VII. Weather Research and Forecasting

Research under this theme provides improvement on weather research through a focused program of investment in affordable and attainable advances in observational, computing, and modeling capabilities to support substantial improvement in weather forecasting and prediction of high impact weather events as described in the Weather Research and Forecasting Innovation Act of 2017. The CI will enhance NOAA's advancements in the integrated components of observing systems, data assimilation, high performance computing, coupled numerical models, model ensembles, and forecast dissemination tools. This effort would include contributions to NOAA's Unified Forecast System and the Earth Prediction Innovation Center (EPIC) described in the National Integrated Drought Information System Reauthorization Act of 2018. An overarching element of this priority is to accelerate the transition of these advancements into operations and applications.

VIII. Ecosystem Science and Prediction

In the U.S., living marine and terrestrial resources and healthy ecosystems provide societal benefits. The CI's research under this theme focuses on high-resolution, multi-decadal climate and Earth system model projections for assessing climate impacts, and informing adaptation planning for Large Marine Ecosystem regions, terrestrial ecosystems, and the coastal interface. Research includes predictions and projections of ecologically relevant variables at scales impacting marine and terrestrial ecosystems, and at much finer resolution than those resolved by global climate models (GCMs). Additionally, the CI will research the development of environmental indices that can be used to describe conditions from basin to regional scales and also interannual to interdecadal time frames.

COOPERATIVE INSTITUTE CAPABILITIES

The proposed CI should provide the expertise described above in the Research Themes of Proposed Cooperative Institute for Earth System Research and Data Science and flexibility needed to work on multidisciplinary research in collaboration primarily with NOAA scientists. AI/ML expertise will include both the ability to support specific AI/ML research needs, as well as provide broader training and expertise to support workforce adoption of AI/ML technologies. Expertise in Cloud migration and tools is also sought.

The CI must also have the ability to assist NOAA with effectively communicating the results of our research and associated social and economic impacts to decision-makers and the public. Since it is important to maximize utilization of the research performed and observations, it is essential that the CI maintains a high level of scientific training within its staff and that it maintains a purposeful engagement across all sectors through education training and outreach activities. The CI is expected to fully embrace the principles laid out in NOAA's Diversity and Inclusion Strategic Plan (FY 2020-2024) to strengthen diversity and inclusion through the

three stated goals and eight high-priority objectives, and to implement tactics necessary to recruit a diverse, highly capable workforce, build an inclusive work environment, and ensure continued progress and commitment.

COMPOSITION OF THE INSTITUTE

The CI will promote undergraduate, graduate students, and postdoctoral support in research projects in ways to train the next generation of scientists and engineers, and NOAA employees. The CI should provide support for graduate and undergraduate students and postdoctoral scientists that will provide a “hands-on” opportunity for the development of a wide range of expertise. These can include work-based learning opportunities such as fellowships, internships, and cooperative experiences with NOAA or other sponsors (e.g., Hollings Undergraduate Scholarship, Knauss Sea Grant Fellowship, Margaret A. Davidson Graduate Fellowship). In addition to science, technology, engineering and mathematics interdisciplinary departmental and student involvement, a CI that can provide opportunities for interaction with social scientists and scholars in the humanities will be highly encouraged.

The Nation’s underrepresented minority students enrolled in undergraduate science, technology, engineering or mathematics (STEM) degree programs and gaining degrees, are an untapped talent pool. NOAA is committed to developing a future workforce that reflects the diversity of the Nation and encourages the CI to work with Minority Serving Institutions (MSIs) and NOAA Cooperative Science Centers (CSCs). The MSI designation is determined by statute, with the U.S. Department of Education serving as the cognizant Federal education

agency. The U.S. Department of Education provides the following MSI definitions:

a part B institution (a historically Black college or university) [§322 of the HEA, 20 U.S.C. §1061(2)];

a Hispanic-serving institution [§502 of the HEA, 20 U.S.C. §1101a(a)(5)];

a Tribal College or University [§316 of the HEA, 20 U.S.C. §1059c(b)(3)];

an Alaska Native-serving institution [§317(b) of the HEA, 20 U.S.C. §1059d(b)(2)] or a Native Hawaiian-serving institution [§317(b) of the HEA, 20 U.S.C. §1059d(b)(4)];

a Predominantly Black Institution [§§318(b) and 371(c)(9) of the HEA; 20 U.S.C. §§ 1059e(b)(6) and 1067q(c)(9)];

an Asian American and Native American Pacific Islander-serving institution [§§ 320(b)

and 371(c)(2) of the HEA, 20 U.S.C. §§1059g(b)(2) and 1067q(c)(2)]; or

a Native American-serving nontribal institution [§§319(b) and 371(c)(8) of the HEA; 20 U.S.C. §§1059f(b)(2) and 1067q(c)(8)].

DEMONSTRATED ABILITY TO SUPPORT NOAA'S LONG-TERM GOALS AND RESEARCH FOCI

The CI will provide expertise to meet a number of critical research objectives identified in the Agency's 2005 20-year Research Vision, NOAA's NextGeneration Strategic Plan, and the NOAA Research and Development Vision Areas: 2020-2026.

C. Program Authority

15 U.S.C. 1540; 118 Stat. 71 (January 23, 2004)

II. Award Information

A. Funding Availability

All funding is contingent upon the availability of Federal appropriations. NOAA anticipates that up to \$565.8M will be available for this CI. The actual annual funding that the CI receives may be less than the anticipated amount and will depend on the actual projects that are approved by NOAA after the main CI award begins, the availability of funding, the quality of the research, the satisfactory progress in achieving the stated goals described in project proposals, and continued relevance to program objectives.

NOAA has a reasonable expectation that proposed funding levels will be executed through the proposed CI; however, the agency will establish flexibility in post-award execution in the event additional NOAA spending becomes available to further support its mission.

B. Project/Award Period

The award period will be 5 years and may be renewed for up to an additional 5 years based on the outcome of a review of scientific and administrative performance conducted in the fourth year of the award period, as described in the NOAA CI Interim Handbook.

C. Type of Funding Instrument

The funding instrument for this institutional award will be a cooperative agreement since several NOAA organizations will be substantially involved in working with the CI. Examples of substantial involvement may include, but are not limited to, proposals for collaboration between NOAA scientists and a CI scientist and/or assistance by NOAA personnel in developing curricula. NOAA will issue only one award to the successful

institution or to the lead academic institution of a consortium of universities, with supporting research affiliates if applicable, where the Institute will be established and resident.

III. Eligibility Information

A. Eligible Applicants

Eligibility is limited to non-Federal public and private non-profit universities, colleges and research institutions that offer accredited graduate-level degree-granting programs in NOAA-related sciences.

B. Cost Sharing or Matching Requirement

Cost sharing or matching is not required. It cannot be used as an evaluation factor during the merit review of applications or proposals but may be considered. Values for non-Federal entity contributions of services and property must be established in accordance with applicable cost principles. Voluntarily committed cost sharing is not considered when determining the level of the CI's funding ceiling.

Acceptable cost sharing proposals could include, but are not limited to: offering a reduced indirect cost rate against activities in one or more Tasks; waiver of any indirect costs assessed by the awardee on subawards; waiver of indirect costs assessed against base funds and/or Task I activities; waiver or reduction of any costs associated with the use of facilities at the CI; and full or partial salary funding for the CI director, administrative staff, graduate students, visiting scientists, or postdoctoral scientists.

C. Other Criteria that Affect Eligibility

Not applicable

IV. Application and Submission Information

A. Address to Request Application Package

The standard application package, consisting of the standard forms, i.e., SF-424, SF424A, SF-424B, SF-LLL, and the CD-511, is available at <http://www.grants.gov>. Users of Grants.gov will be able to download a copy of the application package, complete it offline, and then upload and submit the application via the Grants.gov site. In addition, budget justification and narrative guidance can be found at https://www.noaa.gov/sites/default/files/legacy/document/2019/Jun/gmd_budget_narrative_g

uidance_-_05-24-2017_final.pdf. If an applicant has problems downloading the application forms from Grants.gov, contact Grants.gov Customer support at 1-800-518-4726 or support@Grants.gov. For applicants without Internet access, an application package may be secured by contacting:

Sandra Byers, Competition Manager

OAR Cooperative Institutes Administration Office 1315 East West Highway, Room 11350
Silver Spring, MD 20910 Telephone: (301) 734-1125 Sandra.byers@noaa.gov

B. Content and Form of Application

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.

As required by the National Environmental Policy Act (NEPA), NOAA must analyze the potential environmental impacts of applications that request Federal funding. In order for NOAA to complete its analysis, NOAA must address the following questionnaires:

The U.S. Department of Commerce National Environmental Policy Act (NEPA)
Environmental Questionnaire & Checklist, which may be found at:
<https://www.nepa.noaa.gov/docs/NOAA-Grants-Questionnaire-final.pdf>

Applicants are required to submit answers to the following abbreviated set of questions and, depending on the specifics of the project as indicated in response to those questions, may be required to provide additional detail, prior to a funding decision, as NOAA deems necessary in order for NOAA to fulfill its NEPA responsibilities:

Project Title

Name and contact information for the principal investigator Describe the proposed activity, including, as applicable:

its purpose, objectives, and goals;

graphics (i.e. figures, photographs), site plans, plan diagrams, models, etc.;

sampling, collection, or observation protocols and operational procedures;

any proposed mitigation or monitoring measures and protocols;

a description and plan diagram of the proposed impact area, if the proposed activity involves construction, restoration, dredging, excavation, and/or fill;

a description (i.e. specifications) of the equipment or structures (e.g. scientific monitoring equipment, deployment platforms, etc.) that would need to be temporarily or permanently placed in the environment. Proposals must adhere to the provisions under “Proposals” and the requirements under “Required Elements” in this section.

PROPOSALS

Proposals must include elements requested on the Grants.gov portal. If a hard copy application is submitted, NOAA requests that the original and two unbound copies of the proposal be included.

Proposals, electronic or paper, should be no more than 75 pages (numbered) in length, excluding budget, investigators vitae, and all appendices. Federally mandated forms are not included within the page count. Facsimile transmissions and electronic mail submission of full proposals will not be accepted.

REQUIRED ELEMENTS

a. Title page. The title page should clearly indicate the proposed name of the CI, principal investigators, total amount of Federal funds being requested, and award period. In the event that the application is submitted by a consortium, the lead academic institution for the consortium should submit the application on behalf of its supporting research affiliates. Applications submitted by a CI consortium should include the name of each academic institution and supporting research affiliate, along with each associated principal investigator.

b. Abstract. An abstract must be included and should contain a brief description of the CI, research themes, and proposed activities. The abstract should appear on a separate page, headed with the proposal title, institution's investigators, total proposed cost and budget period.

c. Results from prior research. The results of related projects supported by NOAA and other agencies should be described, including their relation to the currently proposed work. Reference to each prior research award should include the title, agency, award number, Principal Investigators, period of award, and total award. The section should be a brief summary and should not exceed two pages.

d. Project Description. The information provided in this section will be used to evaluate the proposal according to NOAA's standard evaluation criteria described in Section V of this document. The project description includes the following sections: The Goals Section should clearly describe the mission and vision of the CI, and what the CI expects to accomplish during the award.

The Research Theme Section includes information that will help NOAA determine the quality of the CI's capabilities and the expertise at the CI needed to conduct outstanding research in each of the research themes described in Section I.B. This Section also includes

project descriptions of research projects that could be conducted by the CI under each theme (or combination of themes), if sufficient funding during the five-year award is provided. The selection of this proposal neither precludes the CI from proposing additional research projects after the award has been made as long as they fit under one of the research themes nor obligates NOAA to fund the projects proposed in this application. Following the selection of the award, the CI will be required to provide a complete proposal and budget for each research project funded under the CI award after consulting with the OAR CI Program Director and the NOAA program(s) that provide funding for the project. The Education Section includes information on NOAA-related education programs offered at the CI's institution(s), including a complete list of terminal degrees in these programs. This section should also describe how the CI will integrate students and post-docs into the research projects at the CI, as well as conduct outreach and education activities in support of the research themes.

The Business Plan should be well-developed and include details regarding CI governance structure, fiscal and human resource management, as well as strategic planning and accountability. It must describe the organizational structure of the CI, how it will operate, the responsibilities of the participants from multiple institutions, and the composition of the Executive Board and the Council of Fellows (as well as each governing entity's roles and responsibilities, consistent with the terms of the Cooperative Institute Interim Handbook (found at <https://ci.noaa.gov/Policies-Guidance>)). The Business Plan must describe how the CI chooses projects and reviews its progress, as well as how the CI will support enhanced communication and collaborations with NOAA. If any CI personnel will work in NOAA-operated facilities, the Business Plan must describe the administrative support structure for such personnel.

The Performance Measures Section must include proposed measures to be used by the CI to gauge, quantify, and/or evaluate progress on both individual projects and its overall performance. After the award is made, NOAA will work with the CI to finalize a set of performance measures that are acceptable to the CI and NOAA. Immediately after the CI award has been established, the CI must produce an annual research plan that provides specific information about the research projects described in the Research Themes Section that will be accomplished during the first year. The plan will be developed after consultations with the OAR CI Program Director and the NOAA programs that will provide project funding to the CI. This plan must state the goals and objectives of each project, along with a description of the research that the CI expects to accomplish and a detailed budget for these projects. CI funding for the projects described in this plan will be released upon NOAA's approval of the annual research plan. Funding for subsequent years of the award will require additional annual research plans.

e. Budget. Applicants must submit a Standard Form 424 “Application for Federal Assistance,” including a detailed budget using the Standard Form 424A, “Budget Information--Non-Construction Programs,” and a Standard Form 424B, “Assurances -- NonConstruction Programs.” These and other forms, including Commerce Department Form CD-511 “Certification Regarding Lobbying,” and, if applicable, Standard Form SF-LLL “Disclosure of Lobbying Activities,” are provided in the Grants.gov application package. Additionally, the CD-512 “Certifications Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion-Lower Tier Covered Transactions and Lobbying” is required to be submitted with the application package. To do this, download the form from http://ci.noaa.gov/sites/lci/Documents/Forms/funding_forms_CD-512.pdf. Fill out, sign, scan, and attach the form to the application package. The proposal must include total and annual budgets corresponding to the descriptions provided in the project description not to exceed \$113M in the first year, with a reasonable inflationary escalation in subsequent years. NOAA uses the proposed annual budgets to establish funding for the entire award. After award selection, annual funding will be provided only after approval by the NOAA Grants Officer of an annual research plan or any other proposal submitted to NOAA that includes a detailed budget. While this level of funding is not guaranteed, this amount will allow for the possibility of funding for projects that were not originally planned for the CI award. Annual and total budgets should be stratified by Task and Institution, particularly if the CI award has proposed a reduced indirect cost rate for certain tasks. A budget justification should include the information described in the budget guidelines provided in the Grants.gov application package. NOAA AGO also provides guidance on preparing the budget narrative on its website at http://www.ago.noaa.gov/grants/docs/gmd_budget_narrative_guidance_-_05-24-2017_final.pdf.

f. Vitae. Abbreviated 1-2 page curriculum vitae are sought with each proposal. Publication lists should be limited to all publications in the last 3 years with up to five other relevant papers.

g. Current and pending support. For each principal investigator, submit a list which includes project title, supporting agency with grant number, investigator months, dollar value, and duration. Requested values should be listed for pending support.

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 C.F.R. §25.110(b) or (c), or has an exception approved by the Federal awarding agency under 2 C.F.R. §25.110(d)) is required to: (i) Be

registered in SAM before submitting its application; (ii) Provide a valid unique entity identifier 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. 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

The deadline for receipt of proposals in Grants.gov or at the NOAA/OAR office is no later than 01/24/22], by 5:00 p.m. EDT. Proposals received after the deadline will not be considered. NOAA uses information from Grants.gov to determine whether an application has been submitted before the deadline. If a hard copy proposal is submitted, the original and two unbound copies of the proposal should be included. Paper submissions should be sent to: Sandra Byers 1315 East-West Highway, Room 11340, Silver Spring, Maryland 20910; telephone (301) 734-1125. Hard copy applications will be date/time stamped as they are physically received in the NOAA/OAR office. (Note that late-arriving hard copy proposals provided to a delivery service on or before [60 days], will be accepted for review if the applicant can document that the proposal was provided to the guaranteed delivery service by the specified closing date and time and if the proposal is received by OAR no later than 5 p.m., two business days following the closing date.) No email or facsimile proposal submissions will be accepted.

E. Intergovernmental Review

Applications under this program are not subject to Executive Order 12372.

F. Funding Restrictions

NOAA will not consider expenses associated with fees, fund-raising activities, travel for activities not directly related to project implementation, travel or salaries for Federal employees or profit as allowable costs in the proposed budget. The total costs of a project consist of all allowable costs incurred in accomplishing project activities during the project period. Project costs can only include support for activities conducted between the effective start date and end date of the award, and cannot include activities undertaken either before or after the agreed-upon dates. Applicants will not be reimbursed for time expended or costs incurred in developing a project or in preparing an application, or in any discussions or negotiations with the agency prior to the award. Such expenditures may not be considered as

part of the applicant's cost share or matching contribution.

G. Other Submission Requirements

Federal employees are not allowed to assist in the preparation of an application or proposal, except that these individuals may provide you with information on program goals, funding priorities, application procedures, and completion of application forms. Because this is a competitive program, Federal employees will not provide assistance in conceptualizing, developing, or structuring proposals or writing letters of support for an application or proposal. All applicants are strongly encouraged to submit proposals through the Grants.gov portal. For applicants without Internet access, hard copy proposals will be accepted. The hard copies must be submitted by postal mail, commercial delivery service, or hand-delivery. Proposals must be submitted to: NOAA/OAR, 1315 East-West Highway, Room 11350, Silver Spring, Maryland 20910, Attn: Sandra Byers.

N/A

V. Application Review Information

A. Evaluation Criteria

Proposals will be evaluated using the standard NOAA evaluation criteria. Various questions under each criterion are provided to ensure that the applicant includes information that NOAA will consider important during the evaluation, in addition to any other information provided by the applicant.

1. Importance and/or relevance and applicability of proposed project to the program goals (25 percent): This criterion ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, Federal, regional, state, or local activities.

Does the proposal include research goals and projects that address the critical issues identified in NOAA's 2005 20-year Research Vision, NOAA's NextGeneration Strategic Plan, and the NOAA Research and Development Vision Areas: 2020-2026 and the priorities described in the program priorities (see Section I.B.)?

Is there a demonstrated commitment (in terms of resources and facilities) to enhance existing NOAA and CI resources to foster a long-term collaborative research environment?

2. Technical/scientific merit (30 percent): 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.

Does the project description include a summary of clearly stated goals to be achieved during the five-year period that reflect NOAA's strategic plan and goals?

Does the CI involve partnerships with other universities or research institutions, including Minority Serving Institutions, and universities, such as NOAA CSCs, that can contribute to the proposed activities of the CI?

Does the proposal include a Data Management Plan that is appropriate for work and that addresses the intent of NOAA's Data and Publication Sharing Directive for NOAA Grants, Cooperative Agreements, and Contracts?

3. Overall qualifications of applicants (30 percent): This criterion ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project.

If the institution(s) and/or Principal Investigators have received current or recent NOAA funding, is there a demonstrated record of outstanding performance working with NOAA and/or NOAA scientists on research projects?

Is there nationally and/or internationally recognized expertise within the appropriate disciplines needed to conduct the collaborative/interdisciplinary research described in the proposal?

Is there a well-developed business plan that includes fiscal and human resource management, as well as strategic planning and accountability?

Are there any unique capabilities in a mission-critical area of research for NOAA?

Has the applicant shown a substantial investment and to foster a long term collaboration with NOAA?

4. Project costs (5 percent): The budget is evaluated to determine if it is realistic and commensurate with the project needs and time-frame

5. Outreach and education (10 percent): 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.

Is there a strong education program with established graduate degree programs in NOAA related sciences that also encourages student participation in NOAA-related research studies?

B. Review and Selection Process

An initial administrative review/screening is conducted to determine compliance with requirements/completeness. Thereafter, these proposals will be evaluated and individually ranked in accordance with the assigned weights of the above-listed evaluation criteria by an independent peer review panel. At least three experts, who may be Federal or non-Federal, will be used in this process. Each expert will submit an individual merit review and there will be no consensus opinion. The merit reviewers' ratings are used to produce a rank order of the proposals. The Selecting Official selects proposals after considering the peer reviews and selection factors listed below. In making the final selections, the Selecting Official will recommend awarding in rank order unless the proposal is justified to be selected out of rank order based upon one or more of the selection factors. The Selecting Official makes the final award recommendation to the Grants Officer authorized to obligate funds.

C. Selection Factors

The merit review ratings shall provide a rank order to the Selecting Official for final funding recommendations. A program officer may first make recommendations to the Selecting Official applying the selection factors below. The Selecting Official shall award in the 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. Geographically
 - b. By type of institutions
 - c. By type of partners
 - d. By research areas
 - e. By project types
3. Duplication of other projects funded or considered for funding by NOAA or other federal agencies.
4. Program priorities and policy factors.
5. Applicant's prior award performance.
6. Partnerships and/or 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 NOAA Grants Officer. Awards may not necessarily be made to the highest scored proposals.

D. Anticipated Announcement and Award Dates

September 1, 2022, should be used as the proposed start date on proposals. The announcement of the award is expected by May 1, 2022.

VI. Award Administration Information

A. Award Notices

1. Successful applicants will receive notification that the application has been recommended for funding to the NOAA Grants Management Division. This notification is not an authorization to begin performance of the project. Official notification of funding, signed by the NOAA Grants Officer, is the authorizing document that allows the project to begin. Notification will be issued to the Authorizing Official and the Principal Investigator of the project electronically via Grants Online or in hard copy. Unsuccessful applicants will be notified that their proposals were not selected for recommendation. Applications not selected for funding will be destroyed.

2. Modification of Applications. Successful applicants may be asked to modify objectives, work plans, or budgets prior to final approval of an award. The exact amount of funds to be awarded, the final scope of activities, the project duration, and specific NOAA substantial involvement (if any) with the activities of each project will be determined in pre-award negotiations among the applicant, the NOAA Grants Office, and NOAA program staff.

3. Award documents provided by the Grants Officer may contain special award conditions limiting the use of funds for activities that have outstanding environmental compliance requirements. These special award conditions may also include other compliance requirements for the award as applicable and will be applied on a case-by-case basis. Applicants are strongly encouraged to review award documents carefully before accepting a Federal award so they are fully aware of the relevant Standard Terms and Conditions as well as any Special Award Conditions that have been placed on the award.

4. PRE-AWARD COSTS. Per 2 C.F.R. §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 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. 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 90 or more days prior to the period of performance start date require approval from the Grants Officer. This does not constitute prior approval for an applicant to begin the period of performance early.

5. 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.

B. Administrative and National Policy Requirements

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>.

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-2, Scientific Integrity, and its Procedural Handbook, including any amendments thereto. That Order can be found at <http://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. In addition, allegations of misconduct must be reported to the Grants Officer.

6. The non-Federal entity shall insert this provision in all subawards at all tiers under this grant, financial assistance award, or cooperative agreement.

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 CFR Part 200, which apply 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.

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>.

NOAA SEXUAL ASSAULT AND SEXUAL HARASSMENT PREVENTION AND RESPONSE POLICY. NOAA requires organizations receiving federal assistance to report incidents of sexual harassment, or any other kind of harassment, regarding a Principal Investigator (PI), co-PI, or any personnel associated with the award. For more information, please visit <https://www.noaa.gov/organization/acquisition-grants/noaa-workplace-harassment-training-for-contractors-and-financial>

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 Standard Financial Assistance Terms and Conditions Section G.05.i “Research Involving Human Subjects” found at <https://www.commerce.gov/oam/policy/financial-assistance-policy>.

LIMITATION OF LIABILITY. Funding for programs listed in this notice is contingent upon the availability of appropriations. Applicants are hereby given notice that funds may not have been appropriated yet 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.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA). The National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4321 et seq., as implemented by the Council on Environmental Quality Regulations (40 CFR Parts 1500 through 1508), requires that Federal agencies include in their decision-making processes appropriate and careful consideration of all environmental effects of proposed actions, analyze potential environmental effects of proposed actions and their alternatives, avoid or minimize adverse effects of proposed actions, and restore and enhance environmental quality to the extent practicable. Therefore 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 NOAA Administrative Order 216-6A for NEPA, http://www.corporateservices.noaa.gov/ames/administrative_orders/chapter_216/216-cfr6A.html, 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 its description of its 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.

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 or 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 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.

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 Notice 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.

INDIRECT COST RATE - 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 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, or 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.

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.

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.

C. Reporting

In accordance with the terms and conditions of the award, financial reports are to be submitted to the NOAA Grants Officer semiannually and Performance (technical) reports are to be submitted to the NOAA program officer annually. Near the end of each award year, NOAA will provide the CI with guidance on what information should be submitted as part of the annual performance report. This information will be used by NOAA to assess the quality of the research and provide NOAA with general information about the quality of activities at the CI, including how many students are participating, scientific output, and number of employees associated with the CI receiving NOAA support. Reports should be submitted electronically through NOAA's Grants Online system. 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 Federal Sub-award Reporting System (FSRS) available at <https://www.fsrs.gov/> on all sub-awards over \$30,000. Refer to 2 CFR Parts 170.

Publications, Videos and Acknowledgement of Sponsorship. Publication of the results or findings of the funded award activities in appropriate professional journals, outreach materials, or press releases, and production of video or other media is encouraged as an important method of recording and reporting scientific information. These are also constructive means to expand access to federally funded research. The recipient is required to submit a copy of any publication to the funding agency, and when releasing information related to a funded project, include a statement that the project or effort undertaken was or is sponsored by NOAA Cooperative Institute Program. The recipient is also responsible for assuring that every publication of material (including Internet sites and videos) based on or developed under an award, except scientific articles or papers appearing in scientific, technical or professional journals, contains the following acknowledgment and disclaimer:

“This project received funding under award [number] from NOAA Cooperative Institute Program. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of NOAA.” The final report is a public document and may be posted, partially or in its entirety, on the NOAA Cooperative Institute

VII. Agency Contacts

Shannon Louie
OAR Cooperative Institutes Administration Office
1315 East-West Highway, Room 11350
Silver Spring, MD 20910
301-734-1180
Cipo.oar@noaa.gov

VIII. Other Information

Permits and Approvals

It is the applicant's responsibility to ensure that all necessary Federal, state and local government permits and approvals for the proposed work to be conducted are obtained and effective before any research begins. Permits for proposed projects can be held by any formally and substantially involved collaborator, including a NOAA collaborator, provided

the collaborator is receiving or providing resources associated with this announcement and related awards. Failure to apply for and/or obtain Federal, state, and local permits, approvals, letters of agreement, or failure to provide environmental analysis, when necessary, will eliminate any further consideration of a proposed project for funding.

Per 2 C.F.R. §200.315(b), the recipient may copyright any work that is subject to copyright and was developed under this Federal award, and NOAA receives a royalty-free, nonexclusive and irrevocable right to reproduce, publish, or otherwise use to work for Federal purposes, and to authorize others to do so. Federal purposes are derived from all authorities and mandates Congress has entrusted to federal agencies. By submitting a proposal to this competition, you acknowledge that if selected, you understand that work produced under this cooperative agreement could be publicly disseminated by NOAA for federal purposes in furtherance of its authorities and mandates. NOAA may define specific intended uses, pursuant to its Federal purpose(s) in individual awards.