

Climate Program Office 2018

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ANNOUNCEMENT OF FEDERAL 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: Climate Program Office 2018

Announcement Type: Initial

Funding Opportunity Number: NOAA-OAR-CPO-2018-2005133

Catalog of Federal Domestic Assistance (CFDA) Number: 11.431, Climate and Atmospheric Research

Dates: Letters of intent (LOIs) for all competitions (with the exception of the three MAPP Program competitions) should be received by email by 5:00 p.m. ET on June 14, 2017. Letters of Intent for the three MAPP Program competitions should be received electronically by 5:00 p.m. ET on June 28, 2017.

Full Applications: Full applications for all competitions (with the exception of the three MAPP Program competitions) must be received by 5:00 p.m. Eastern Time, August 14, 2017. Full applications for the three MAPP Program competitions must be received by 5:00 p.m. ET on September 11, 2017.

Funding Opportunity Description: The National Oceanic and Atmospheric Administration (NOAA) is focused on providing the essential and highest quality environmental information vital to our Nation's safety, prosperity and resilience. Toward this goal, the agency conducts and supports weather and climate research, oceanic and atmospheric observations, modeling, information management, assessments, interdisciplinary decision-support research, outreach, education, and partnership development.

Climate variability and change present society with significant economic, health, safety, and security challenges and opportunities. In meeting these challenges, and as part of NOAA's climate portfolio within the Office of Oceanic and Atmospheric Research (OAR), the Climate Program Office (CPO) advances scientific understanding, monitoring, and prediction of climate and its impacts, to enable effective decisions. These investments are key to NOAA's mission of "Science, Service, and Stewardship" and are guided by the agency's vision to create and sustain enhanced resilience in ecosystems, communities, and economies.

Within this context, CPO manages competitive research programs through which NOAA funds high-priority climate science, assessments, decision support research, outreach, education, and

capacity-building activities designed to advance our understanding of the Earth's climate system, and to foster the application and use of this knowledge to improve the resilience of our Nation and its partners. CPO supports research that is conducted across the United States and internationally. CPO also provides strategic guidance for the agency's climate science and services programs and supports NOAA's contributions to the U.S. Global Change Research Program (USGCRP) and its National Climate Assessment, and similar international endeavors such as the Global Framework for Climate Services.

CPO's climate research portfolio is designed to achieve a fully integrated research and applications program. We meet this objective through a focus on climate intelligence and climate resilience, in support of NOAA's goals.

Climate intelligence defines CPO's technical strength through its foundational capabilities, which include (1) Observations and monitoring, (2) Research to advance scientific understanding, (3) Modeling and prediction, (4) Communication, education, and engagement, and, (5) Climate and societal interactions. A focus on climate resilience leverages CPO's climate intelligence to advance capabilities for responding to the urgent and growing demand for reliable, trusted, transparent, and timely climate information needed to sustain all sectors of our economy and environment. CPO's strategy addresses challenges in the areas of, (1) Weather and climate extremes, (2) Climate impacts on water resources, (3) Coasts and climate resilience, (4) Sustainability of marine ecosystems, and (5) Changing atmospheric composition and its impacts. Making progress in addressing climate-related societal challenges and realizing benefits for NOAA's public and private partners, requires that these mission-focused capabilities be integrated across CPO to align research, applications, transitions, and operations, and to meet the information needs of a resilient society.

NOAA envisions a Nation that is prepared for, thriving, and resilient to climate variability and change. CPO's activities support a unique and highly flexible climate research enterprise to improve scientific understanding of climate variability and change and to enable businesses and communities to derive the benefits of this investment in the present and into the future. Effectively coordinating across these components through the development and deployment of end-to-end research-based integrated information systems that address needs of high societal relevance, have been hallmarks of CPO's success in linking environmental intelligence to resilience. Key components in this enterprise are annual Federal Funding Opportunities, competitive grants programs and other types of support that advance and extend NOAA's foundational capabilities and applications research. Proficiency in these core areas ensures that CPO's infrastructure is always in place to meet the intelligence and resilience challenges of our changing climate.

NOAA, OAR, and the Climate Program Office encourage applicants and awardees to support the

principles of diversity and inclusion when writing their proposals and performing their work. Diversity is defined as a collection of individual attributes that together help organizations achieve objectives. Inclusion is defined as a culture that connects each employee to the organization. By promoting diversity and inclusion you can improve creativity, productivity, and the vitality of the research community.

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

A. Program Objective

The National Oceanic and Atmospheric Administration (NOAA) is focused on providing the essential and highest quality environmental information vital to our Nation's safety, prosperity and resilience. Toward this goal, the agency conducts and supports weather and climate research, oceanic and atmospheric observations, modeling, information management, assessments, interdisciplinary decision-support research, outreach, education, and partnership development.

Climate variability and change present society with significant economic, health, safety, and security challenges and opportunities. In meeting these challenges, and as part of NOAA's climate portfolio within the Office of Oceanic and Atmospheric Research (OAR), the Climate Program Office (CPO) advances scientific understanding, monitoring, and prediction of climate and its impacts, to enable effective decisions. These investments are key to NOAA's mission of "Science, Service, and Stewardship" and are guided by the agency's vision to create and sustain enhanced resilience in ecosystems, communities, and economies.

Within this context, CPO manages competitive research programs through which NOAA funds high-priority climate science, assessments, decision support research, outreach, education, and capacity-building activities designed to advance our understanding of the Earth's climate system, and to foster the application and use of this knowledge to improve the resilience of our Nation and its partners. CPO supports research that is conducted across the United States and internationally. CPO also provides strategic guidance for the agency's climate science and services programs and supports NOAA's contributions to the U.S. Global Change Research Program (USGCRP) and its National Climate Assessment, and similar international endeavors such as the Global Framework for Climate Services.

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leverages CPO's climate intelligence to advance capabilities for responding to the urgent and growing demand for reliable, trusted, transparent, and timely climate information needed to sustain all sectors of our economy and environment. CPO's strategy addresses challenges in the areas of, (1) Weather and climate extremes, (2) Climate impacts on water resources, (3) Coasts and climate resilience, (4) Sustainability of marine ecosystems, and (5) Changing atmospheric composition and its impacts. Making progress in addressing climate-related societal challenges and realizing benefits for NOAA's public and private partners, requires that these mission-focused capabilities be integrated across CPO to align research, applications, transitions, and operations, and to meet the information needs of a resilient society.

NOAA envisions a Nation that is prepared for, thriving, and resilient to climate variability and change. CPO's activities support a unique and highly flexible climate research enterprise to improve scientific understanding of climate variability and change and to enable businesses and communities to derive the benefits of this investment in the present and into the future. Effectively coordinating across these components through the development and deployment of end-to-end research-based integrated information systems that address needs of high societal relevance, have been hallmarks of CPO's success in linking environmental intelligence to resilience. Key components in this enterprise are annual Federal Funding Opportunities, competitive grants programs and other types of support that advance and extend NOAA's foundational capabilities and applications research. Proficiency in these core areas ensures that CPO's infrastructure is always in place to meet the intelligence and resilience challenges of our changing climate.

B. Program Priorities

CPO supports competitive research through three major program areas: Ocean Observations and Monitoring (OOM); Earth System Science and Modeling (ESSM); and Climate and Societal Interactions (CSI). Through this Announcement, CPO's activities are seeking applications for seven individual competitions in FY 2018. Prior to submitting applications, investigators are highly encouraged to learn more about CPO and its Programs, as well as specific Program priorities for FY 2018.

This information, along with the names and contact information of relevant Competition Managers, is provided in information sheets that can be found at the following website: <http://cpo.noaa.gov/GrantsandProjects.aspx>.

The 7 competitions covered by this Announcement are as follows:

OOM - High-quality data sets for enhancing predictions and informing stakeholders

AC4 - The Role of Reactive Nitrogen in Biogenic VOC Oxidation and Aerosol Formation

MAPP - Advancing Earth System Data Assimilation

MAPP - Addressing Key Issues in CMIP6-era Earth System Models

MAPP - Climate Test Bed - Advancing NOAA's Operational Subseasonal to Seasonal Prediction Capability

SARP - Water - Extreme Events Preparedness, Planning, and Adaptation Within the Water Sector

SARP - Coping with Drought Program- advancing NIDIS regional drought early warning systems through a better understanding of how to better provide early warning

Ocean Observing and Monitoring (OOM)

OOM's mission is to provide long-term, high quality, timely, global observational data, information and products in support of climate, Arctic, weather, and ocean research communities, forecasters, and other service providers and users, for the benefit of society. OOM supports research to develop informational products, diagnostics, and assessments of observed climate variability and change on global to regional scales. The monitoring program within OOM focuses on producing long time series and higher level data products of key climate variables, from both instrumental and proxy records, and analyzing trends, variability and patterns within these records to better inform our understanding of important processes in the climate system, particularly those processes connected to weather and climate extremes and other societally relevant impacts.

1. OOM – High-quality data sets for enhancing predictions and informing stakeholders
In FY18 the OOM Monitoring Program is soliciting projects that will develop long term, climate quality data sets and products that will address key climate processes and uncertainties, particularly those that can reduce uncertainty in key processes in climate models, and those that inform our understanding, monitoring and projections of the frequency and occurrence of weather and climate extremes.

Projects appropriate for this competition will develop new or significantly improve existing long term climate records that address one of the following priorities:

(a) Present day monitoring of trends and variability in weather and climate extremes (particularly those that translate to influences on water resources) that are suitable for periodically updated assessment or operational monitoring products. Projects are

encouraged to consider utilizing and synthesizing from multiple observing systems or sensors, and to thoughtfully consider how innovative technology or measurements may be incorporated in maintaining the records through time.

(b) Development of data sets that address uncertainties in our current understanding of the climate system, and how climate processes are represented in climate models, and have the potential to inform or improve model projections of future climate and our understanding of climate feedback processes and their representations in current models. Again, projects are encouraged to consider utilizing and synthesizing from multiple observing systems or sensors.

(c) Paleoclimate studies that exploit or evaluate the Last Millennium Climate Reanalysis (LMR) product to provide new benchmarks in extreme events and climate variability to evaluate present day occurrences and future projections, as well as studies that use the LMR to better describe hemispheric changes in extreme events and the linkage of these changes to large-scale natural modes of climate variability.

2. Earth System Science and Modeling (ESSM) Division

The mission of CPO's Earth System Science and Modeling (ESSM) Division is to advance scientific understanding of Earth's atmosphere, ocean, land, and cryosphere as an integrated system and to improve NOAA's climate and Earth system models and predictions from weeks to decades. To accomplish this mission, ESSM funds a unique and highly flexible research enterprise including process-level studies, predictability studies of climate phenomena, testing for research-to-operation transitions; improving model representations of key processes and prediction technologies and developing application products.

A. Atmospheric Chemistry, Carbon Cycle, and Climate (AC4)

AC4 is a competitive research program that incorporates research on atmospheric chemistry and carbon cycle. The program aims to provide a process-level understanding of the climate

system through observation, modeling, analysis, and field studies to support the development

and improvement of models and ultimately predictions. In collaboration with NOAA

Laboratories and academic community, AC4 program supports research on atmospheric trace

gases (including greenhouse gases), aerosols and their precursors in connection with field and

laboratory studies, regional and global climate and Earth system modeling, as well as research

on atmospheric components of nitrogen cycle.

AC4 - The Role of Reactive Nitrogen in Biogenic VOC Oxidation and Aerosol Formation
Aerosols and aerosol formation have a significant influence on both climate and air quality.

There are, however, a number of uncertainties in fully understanding and representing reactive nitrogen processes in the atmosphere as they relate to aerosol formation. In FY18, as part of its continuing interest in the nitrogen cycle, the AC4 program announcement focuses on laboratory, modeling, and analysis studies (of existing field data) that investigate the mechanisms of BVOC oxidation involving reactive nitrogen species.

B. Modeling, Analysis, Predictions, and Projections (MAPP) Program

MAPP's mission is to enhance the Nation's capability to understand and predict natural variability and changes in Earth's climate system. The MAPP Program supports development of advanced climate modeling technologies to improve simulation of climate variability, prediction of future climate variations from weeks to decades, and projection of long-term future climate conditions. To achieve its mission, the MAPP Program supports research focused on the coupling, integration, and application of Earth system models and analyses across NOAA, among partner agencies, and with the external research community.

i. MAPP - Advancing Earth System Data Assimilation

In FY18, the MAPP Program solicits exploratory projects on coupled data assimilation in support of NOAA's plans for unified modeling and prediction across scales. Additional foci include improving data assimilation or data assimilation-based monitoring products for individual components of the Earth system (i.e., the cryosphere, ocean, including biogeochemistry, land surface, and atmospheric chemistry).

ii MAPP - Addressing Key Issues in CMIP6-era Earth System Models

In FY18, the MAPP program is soliciting projects that address key issues in the Coupled Model Intercomparison Project - Phase 6 (CMIP6) Earth System Models -- in particular, systematic biases in these models. Projects will utilize CMIP-6 model data to examine and improve the representation of processes associated to the cryosphere, weather and climate extremes, and sea level and coastal dynamics.

iii MAPP - Climate Test Bed - Advancing NOAA's Operational Subseasonal to Seasonal

Prediction Capability

The objective of this competition is to involve the external community in advancing the NOAA/NCEP/NWS Climate Prediction Center's operational subseasonal to seasonal prediction capabilities as part of the NOAA Climate Test Bed. Priorities include optimizing the North American Multi-Model Ensemble system to meet operational requirements, and testing experimental subseasonal-to-seasonal prediction methodologies (e.g. new calibration or post-processing techniques) developed in the broader community for operational purposes.

3. Climate and Societal Interactions (CSI)

CSI's mission is to improve resilience and preparedness in diverse socio-economic regions and sectors throughout the US and abroad through the use of climate knowledge and information. Our research advances the nation's understanding of climate-related risks and vulnerabilities across sectors and regions, and the development of tools to foster more informed decision making. These efforts support NOAA's vision to create and sustain enhanced resilience in ecosystems, communities, and economies.

Information sheets containing further details and Points of Contact for each competition can be found at <http://cpo.noaa.gov/GrantsandProjects.aspx>.

A. SARP - Extreme Events Preparedness, Planning and Adaptation Within the Water Sector

For FY18, SARP will award grants focused on developing strategies for increasing community resilience in U.S. towns, municipalities or small cities planning for the impacts of extreme precipitation events (too much or too little water) on their civilian population. Proposals should focus on the impact of extreme events on water resources and water-resource dependent activities (e.g., land use, watershed and water utility planning, emergency preparedness), specifically the connection between communication of risk and the design and implementation of risk mitigation and reduction strategies.

B. SARP - Coping with Drought in Support of the National Integrated Drought Information Systems (NIDIS)

In FY18, the SARP portion of the Coping with Drought Initiative will focus on advancing

NIDIS regional drought early warning systems through a better understanding of how to better provide early warning through enhanced language, metrics and joint decision spaces (e.g., calendars, etc.).

C. Program Authority

49 U.S.C. 44720(b), 15 U.S.C. 2904, 15 U.S.C. 2931-2934

II. Award Information

A. Funding Availability

In FY 2018, approximately \$8 million will be available for approximately 90 new awards pending budget appropriations (see section I.B above). It is anticipated that most awards will be at a funding level between \$50,000 and \$300,000 per year with exceptions for larger awards. Federal funding for FY 2019 may be used to fund some awards submitted under this Federal Funding Opportunity. Current or previous grantees are eligible to apply for a new award that builds on, but does not replicate, activities covered in existing or previous awards. Current grantees should not apply for supplementary funding through this announcement.

1. Ocean Observing and Monitoring (OOM)

It is anticipated that approximately \$1 million will be available for FY18 new starts for the OOM competitions. Two or three year proposals are requested. Projects for the OOM competition should be at a funding level between \$100,000 - \$150,000 per year, including any costs for data management.

2. Atmospheric Chemistry, Carbon Cycle and Climate (AC4)

It is anticipated that \$1,250,000 will be available for FY18 new starts for the AC4 competition. Two or three year proposals are requested. Proposal budget cannot exceed \$600,000 in total costs.

3. Modeling, Analysis, Predictions, and Projections (MAPP)

It is anticipated that \$4.5 million will be available in FY 2018 for new projects for the MAPP competitions.

Advancing Earth System Data Assimilation. Two types of proposals are requested through this competition. Type 1 proposals involving a large team may request up to \$500,000 per year, not including potential additional costs for data sharing and/or archiving (see information sheet for details), whereas Type 2 proposals, which are more targeted, may

request up to \$170,000 per year. See information sheet for further information.

Addressing Key Issues in CMIP6-era Earth System Models. Two types of proposals are requested through this competition. Type 1 proposals involving a large team may request up to \$500,000 per year, not including potential additional costs for data sharing and/or archiving (see information sheet for details), whereas Type 2 proposals, which are more targeted, may request up to \$170,000 per year. See information sheet for further information. Climate Test Bed - Advancing NOAA's Operational Subseasonal to Seasonal Prediction Capability. Proposals may request up to \$170,000 per year, not including potential additional costs for data sharing and/or archiving. See information sheet for further information.

4. Climate and Societal Interactions

It is anticipated that \$ 1.9 million will be available in FY 2018 for new projects for the SARP competitions.

B. Project/Award Period

1. OOM projects are expected to last 2 -3 years.

2. AC4 Projects are expected to last 2-3 years.

3. Modeling, Analysis, Predictions, and Projections Program projects will be funded for up to three years for MAPP competitions 1 and 2, and up to two years for MAPP competition 3 (Climate Test Bed).

4. SARP both competitions will one-year in length.

C. Type of Funding Instrument

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

If the applicant is at an institution that has a NOAA Cooperative Institute (CI), the applicant is encouraged to submit a proposal that references the CI by attaching a cover letter to the proposal stating the desire to have the grant associated with the CI.

III. Eligibility Information

A. Eligible Applicants

Eligible applicants are institutions of higher education, other nonprofits, commercial organizations, international organizations, and state, local and Indian tribal governments. Federal agencies interested in receiving financial support for projects should contact the appropriate competition manager.

B. Cost Sharing or Matching Requirement

None.

C. Other Criteria that Affect Eligibility

None.

IV. Application and Submission Information

A. Address to Request Application Package

Application packages are at grants.gov. For applicants without Internet access, please contact the CPO Grants Manager Diane Brown by mail at NOAA Climate Program Office (R/CP1), SSMC3, Room 12734, 1315 East-West Highway, Silver Spring, MD 20910 to obtain an Application Package.

B. Content and Form of Application

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 to the Competition in advance of preparing a full application. Full applications will be encouraged only for LOIs deemed relevant. Applicants who have not been encouraged may still submit a full application. While LOIs are strongly encouraged, applicants are not required to submit them and may submit a full application even if they have not submitted an LOI.

LOIs should be submitted by email to the identified NOAA Competition Manager by the deadline specified in section IV.C below. The LOI should provide a concise description of the proposed work and a statement regarding its relevance to the targeted Competition. The LOI should be no more than two pages in length and should include the items listed below. If these items are not included or the LOI is submitted late, the LOI may not be considered:

Identification of the Competition that is being targeted in the LOI.

A tentative project title.

Name(s) and institution(s) of the Lead Principal Investigator(s) and other Principal Investigator(s).

Statement of the problem.

Brief summary of work to be completed, methodology to be used, data sets needed or to be collected.

Approximate cost of the project.

Relevance to the Competition that is being targeted.

A response to the LOI from the Competition Manager (e-mail or letter) will be sent to the investigator within four weeks after the LOI's due date encouraging or discouraging a full application based on its relevance to the targeted Competition. The final decision to submit a full application will be made by the investigator.

2. Full Application

Failure to comply with these provisions will result in applications being returned without review. Full applications are limited to 35 pages, single spaced, using 12-point font type with one-inch margins on standard 8.5 by 11 inch paper. For full applications with three or more Principal Investigators, the page limit is increased to 40. The page limit includes:

The title page

Abstract

Results from prior research

Statement of work

Budget justification

Budget table

Vitae

Current and pending support

Associated figures

References

Diversity and Inclusion section should be included in the official page count.

For applications to the MAPP Competitions, the form to request the use of NOAA's high-performance computing platforms is considered part of the full proposal, but it will not be included in the page count.

The full proposal and Indirect Cost Rate Agreement (IDCRA) should be put into one electronic file. The budget table/justification should be submitted in a file labeled budget narrative. The Federal Forms (SF424, SF424A, SF424B, CD511) and other mandated forms should be inserted in separate files when submitted and are not included in the page count.

The following forms and elements are required in each application.

(1) Title page: The title page shall identify the Principal Investigator(s) (PI) and institutional representative and clearly indicate which Competition is being addressed by name and Competition number. The title page should also include co-PIs from Federal Institutions. If more than one investigator is listed on the title page, please identify the lead investigator. The lead PI and institutional representative should be identified by: full name, title, organization, telephone number, email, and address. For paper submissions, the lead PI and the institutional representative must sign the title page. The total amount of Federal funds being requested should be listed for each budget period. If there are several institutions submitting separate applications associated with the same project, the names of all component institutions along with their lead PI name, e-mail, and amount requested per year must also appear on the title page of all applications that anticipate being funded under the same project.

(2) Abstract: A one-page abstract must be included and should contain the project title, an introduction to the problem, rationale, and a brief summary of the work to be completed. Abstracts must identify the name of the Competition that is being targeted and must also include a paragraph describing the work's relevance to the Competition that is being targeted as well as NOAA's long-term climate goals stated in section I.A. For multiple applications associated with the same project, the abstract must be identical in all applications. Failure to include this paragraph can result in the application being denied without additional review.

(3) Results from prior research: The results of each prior research project led by the Principal Investigator(s) during the last three years relevant to the proposed effort should be summarized in brief paragraphs. Because NOAA believes it is important that data sets developed with its support should be shared with the scientific community, PIs should also indicate how and when they have made their data accessible and useable by the community in the past. This section should not exceed two pages. For multiple applications associated with the same project, this section must be identical in all applications.

(4) Statement of work: The proposed project must be completely described, including identification of the problem, scientific objectives, proposed methodology, and relevance to the Competition to which you are submitting the proposal and to NOAA's long-term climate goal. Benefits of the proposed project to the general public and the scientific community should be discussed. The statement of work, excluding references, figures, and other visual materials, must not exceed 15 pages of text. Applications from three or more investigators may include a statement of work containing up to 20 pages of overall project description. For

multiple applications associated with the same project, all applications must have an identical statement of work, including a clear statement of the roles and responsibilities of each applicant.

(5) Data/Information Sharing Plan:

Proposals submitted in response to this announcement must include a data management plan (up to 2 page). See section VI.B Administrative and National Policy requirements below for additional information of what the plan should contain.

(6) Statement of Diversity, Inclusion, and Broader Impacts: This section should provide a discussion of the broader impacts of the proposed activities including a statement on diversity and inclusion. Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to the project. NOAA CPO values the advancement of scientific knowledge and activities that contribute to the achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM); increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the US; and enhanced infrastructure for research and education.

(7) Budget Table and Justification:

Budget Table: An itemized budget for all years and a total itemized budget must be included as a separate spreadsheet that breaks down the budget per object class category. Travel must be itemized to include destination, airfare, per diem, lodging, and ground travel.

For multiple applications associated with the same project, the Lead Principal Investigator should include a spreadsheet that displays the total budget for all partners. All partners, including the Lead Principal Investigator and any co-PIs from Federal Institutions, should include a separate budget for their portion of the project.

Budget Justification: A brief description of the expenses listed on the budget table and how they address the proposed work. Item justifications must include salaries, equipment, publications, supplies, tuition, travel, etc. Investigators who will not be requesting funds for salaries must also be listed, indicating their estimated time of commitment. Purchases of equipment greater than \$5000 must include a purchase versus lease justification.

(8) Federal Budget Forms: Budget numbers corresponding with the descriptions contained in the statement of work and budget table must be included. In addition to including the total budget on the SF424, the application must include the total budget and budgets for years 1, 2, and 3 in separate columns in Section B on page 1 on the SF424A. (Note that this revised 424A Section B format is a NOAA requirement that is not reflected in the Instructions for the SF 424A). Note that these forms are not part of the required page limit.

For multiple applications associated with the same project, each application requesting funding from NOAA needs to complete the federal budget forms for their specific institution.

(9) Indirect Costs: A copy of the institution's current Indirect Cost Rate Agreement (IDCRA) must be included. The IDCRA does not, however, count as part of the required page limit. To obtain an indirect cost rate if your institution does not already have one, a grantee must submit an indirect cost proposal to its cognizant agency and negotiate an indirect cost agreement. If an applicant has not previously (ever) 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 Section B.06. 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.

(10) Vitae: Abbreviated curriculum vitae are requested with each application. Reference lists should be limited to all publications in the last three years with up to five other relevant papers. For multiple applications associated with the same project, each application should include identical vitae for all applications.

(11) Current and pending support: For each Principal Investigator and Co-Principal Investigator(s), submit a list of all current and pending Federal support that includes project title, supporting agency with grant number, investigator months per year, dollar value, and duration. Requested values should be listed for pending support. The list of support will be included in the page limit for the proposals.

For multiple applications associated with the same project, each application should include identical current and pending support information for all applications.

(12) All letters of support must be submitted as part of the proposal and are included in the page limit for the proposals.

(13) DUNS Number: All applications must have a DUNS (Dun and Bradstreet Data Universal Numbering System) number when applying for federal grants. No application is deemed complete without the DUNS number, and only the Office of Management and Budget (OMB) may grant exceptions.

(14) National Environmental Policy Act (NEPA): NOAA must analyze the potential environmental impacts, as required by the National Environmental Policy Act (NEPA), of each applicant's project that is seeking NOAA federal funding opportunities. Detailed information on NOAA's compliance with NEPA can be found at the following NOAA NEPA website: <http://www.nepa.noaa.gov/>, including the NOAA Administrative Order 216-6 for NEPA, http://www.nepa.noaa.gov/NAO216_6_TOC.pdf, and the Council of Environmental Quality implementation regulations, http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm.

No NEPA information is required with the initial application. However, after review of the application, NEPA information may be requested if NOAA determines such information is required. See VI.B., Administrative and National Policy Requirements, below for more information.

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

. In order to submit an application through Grants.gov, an applicant must register for a Grants.gov user ID and password. Note that this process can take between three to five business days or as long as four weeks if all steps are not completed correctly. To avoid delays, applicants are strongly encouraged to start early and not wait until the approaching application deadline before registering, logging in, reviewing the application instructions, and applying. Information about the Grants.gov registration process for organizations can be found at http://grants.gov/applicants/organization_registration.jsp.

Please note that organizations already registered with Grants.gov do not need to re-register; however, all registered organizations must keep their Grants.gov password and SAM database (which now incorporates CCR) registration up-to-date or their applications will not be accepted by Grants.gov. Note that your CCR username will not work in SAM. You must create a new SAM user account to renew or update your registration. Registration on SAM is a requirement. To obtain additional information and to verify that all required registrations are current, please visit www.sam.gov/portal/public/SAM.

If you experience a Grants.gov systems issue (technical problems or glitches with the Grants.gov website) that you believe threatens your ability to complete a submission before the application deadline, please do all of the following:

- o Print any error message received
- o Call the Grants.gov Contact Center at 1-800-518-4726 for immediate assistance
- o Contact NOAA using the contact information in section VIII. of this FFO prior to the close of the competition
- o Ensure that you obtain a case number regarding your communications with Grants.gov

In the event of a confirmed systems issue, NOAA reserves the right to accept an application in an alternate format prior to the application deadline. Problems with an applicant organization's computer system or equipment are not considered systems issues. Similarly, an applicant's failure to do the following are not considered systems issues:

- o Complete the required registration
- o Ensure that a registered Authorized Organization Representative (AOR) submits the application
- o Read an email message with guidance from Grants.gov

D. Submission Dates and Times

Letters of Intent for all Competitions should be received by the Competition Manager electronically via the Internet and by email by May 31, 2017 5:00 p.m. Eastern Time.

Full applications for all Competitions must be received by 5:00 p.m. Eastern Time, August 1, 2017.

Applications received after this time will not be considered for funding. Applications must be submitted via grants.gov. Faxed or emailed copies of applications will not be accepted.

E. Intergovernmental Review

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

F. Funding Restrictions

Fees and profits are disallowed.

G. Other Submission Requirements

All applications should be submitted through grants.gov. If an applicant does not have Internet access, CPO Grants Manager Diane Brown should be contacted by mail at NOAA

Climate Program Office (R/CP1), SSMC3, Room 12734, 1315 East-West Highway, Silver Spring, MD 20910 for hard copy submission instructions.

V. Application Review Information

A. Evaluation Criteria

1. Importance/Relevance and Applicability of Application to the Program Goals (Stage 1 Weight=0%) (Stage 2 Weight=100%) (Final Weight=25%)

This criterion ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, federal, regional, state, tribal, or local activities. For the CPO Grant Program Competition, this includes importance and relevance to the scientific priorities of the selected Competition(s), the PI's record of making his/her data accessible and useable by the scientific community in the past, the Statement of Diversity, Inclusion, and Broader Impacts described in Section IV.B(6), and the procedures described in Section IV.B(5) Data/Information Sharing Plan will also be considered when evaluating the importance and relevance of the application. For the CSI competitions, the above stated relevance score will also include the applicant's approach for engaging decision makers and building networks of relationships to help support decision makers with scientific information.

2. Technical/Scientific Merit (Stage 1 Weight=70%) (Stage 2 Weight=0%) (Final Weight=52.5%)

This criterion assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether the goals of the Competition will be realized through clear project goals and objectives. For CSI competitions, the above stated merit score will also include the applicant's credibility in capacity-building approaches.

3. Overall Qualifications of Applicants (Stage 1 Weight=20%) (Stage 2 Weight=0%) (Final Weight=15%)

This criterion assesses whether the applicant team possesses the necessary education, experience, training, facilities, and/or administrative resources to accomplish the project. For CSI competitions, the above stated qualifications score will also include the PIs' record of collaborating with decision-making communities.

4. Project Costs (Stage 1 Weight = 10%) (Stage 2 Weight = 0) (Final Weight =7.5%)

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

B. Review and Selection Process

Once a full application has been received, an administrative review will be conducted to determine compliance with requirements and completeness of the application. The reviews will take place in two stages. In Stage 1, independent peer mail reviewers and/or independent peer panel reviewers consisting of both Federal and/or non-Federal experts will evaluate applications using the following three criteria described above: technical/scientific merit, overall qualifications of applicants, and project costs. Relevance will be assessed separately in Stage 2. The panel will not give consensus advice. We protect the identities of reviewers to the extent permitted by law.

During Stage 1, each reviewer will provide one score for each of three criteria: technical/scientific merit, overall qualifications of applicants, and project costs for each application. The scores from the reviewers for each application will be combined using the weighting averages to produce a single numerical score for Stage 1. Occasionally a reviewer may, due to lack of familiarity in a particular area, choose not to score a particular application. Proposals that score a 3.0 or higher (out of a possible high score of 5) in Stage 1 will proceed to Stage 2.

If only a mail peer review is conducted for stage 1, proposals that score a 3.0 or higher (out of a possible high score of 5) in Stage 1 will proceed to Stage 2.

If a mail review and a panel review are both conducted for Stage 1, the mail reviews will be provided to the Stage 1 review panel for use in its deliberations prior to providing its ratings, but the Competition Manager will use only the numerical rank order of the peer review panel to determine the average score for each proposal. Proposals that score a 3.0 or higher (out of a possible high score of 5) in Stage 1 will proceed to Stage 2.

In Stage 2, scores for Importance/Relevance and Applicability of Application to the Program Goals will be determined by a second panel comprising either Federal or a combination of Federal and non-Federal partners. Each panel reviewer will provide a relevance score for each application that moved forward from Stage 1. The Stage 2 panel will not give consensus advice. The applications and their associated scores from Stage 1 will be provided to the Stage 2 panel.

The Stage 1 and Stage 2 weighting of scores for the individual criteria is shown in the following table:

Criterion	Stage 1 Weight	Stage 2 Weight	Final Weight
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Importance and Relevance/Applicability	0%	100%	25%
Technical/Scientific Merit	70%	0%	52.5%
Overall Qualifications of Applications	20%	0%	15%
Project Costs	10%	0%	7.5%
Final Score			
Stage Total	100%	100%	100%

To determine the final score, the scores from Stage 1 and Stage 2 will be combined, with a weighting of 75% for the Stage 1 score and 25% for the Stage 2 score, leading to the overall weightings for each criterion reported in section V.A above. The final score for each application will be used to determine the numerical rank order of proposals within each Competition.

The Competition Manager will recommend applications to the Selecting Official in numerical rank order unless a recommendation out of rank order is justified based upon any of the factors listed in the following section. Should applications receive a tie score, and funding is not available for every tied application, the Competition Manager may preferentially recommend applications for funding also according to any of the factors listed in the following section. The Competition Manager will review the amounts requested for each selected application (including costs for computing and networking services) and recommend the total duration and the amount of funding, which may be less than the application and budget requested.

C. Selection Factors

The Selecting Official shall select awards in rank order unless a selection out of rank order is justified based upon any of the following factors:

Availability of funding

Balance/distribution of funds:

Geographically

By type of institutions

By type of partners

By research area

By project types

Duplication of other projects funded or considered for funding by NOAA/Federal agencies

Program priorities and policy factors

Applicant's prior award performance

Partnerships with/participation of targeted group

Adequacy of information necessary for NOAA staff to make a NEPA determination and draft necessary documentation before recommendations for funding are made to the Grants Officer.

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

Subject to the availability of funds, review of applications will occur during the 6-7 months following the full applications due date. CPO anticipates that funding decisions on applications will be made during spring 2018. Such decisions are contingent upon the final FY 2017 appropriation for NOAA by Congress and the final allocation of funds to CPO by NOAA. Funding for successful applicants is expected to begin during spring-summer 2018 for most approved projects. Applications should use July 1, 2018, as the start date unless otherwise directed by the Competition Manager.

VI. Award Administration Information

A. Award Notices

The Grants Officer will provide notice to the applicant that they have received the award. Successful applicants will receive notification that the application has been recommended for funding by an official of the NOAA Climate Program Office. This notification is not an authorization to begin performance of the project. The 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 Authorizing Official and the Principal Investigator of the project. Unsuccessful applicants will be notified that their application was not selected for recommendation.

B. Administrative and National Policy Requirements

STATUTORY AND NATIONAL POLICY REQUIREMENTS - To enable the use of a universal identifier and to enhance the quality of information available to the public as required by the Federal Funding Accountability and Transparency Act of 2006, to the extent applicable, any proposal awarded in response to this announcement will be required to use the System for Award Management (SAM), which may be accessed online at <https://www.sam.gov/portal/public/SAM/>. Applicants are also required to use the Dun and Bradstreet Universal Numbering System and will be subject to reporting requirements, as identified in OMB guidance published at 2 CFR Parts 25, 170 (2013), which may be accessed at <http://www.ecfr.gov/cgi-bin/text->

idx?SID=1ccffb4c1d4de03add6a041113460f9&mc=true&node=se2.1.200_1300&rgn=div8

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>.

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.

UNPAID OR DELINQUENT TAX LIABILITY. Certifications Regarding Federal Felony and Federal Criminal Tax Convictions, Unpaid Federal Tax Assessments and Delinquent Federal Tax Returns. In accordance with Federal appropriations law, an authorized representative of the selected applicant(s) may be required to provide certain pre-award certifications regarding federal felony and federal criminal tax convictions, unpaid federal tax assessments, and delinquent federal tax returns.

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. 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 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 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

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.

PAPERWORK REDUCTION ACT – This notification involves collection-of-information requirements subject to the Paperwork Reduction Act. The use of Standard Forms 424, 424A, 424B, and SF-LLL and CD-346 has been approved by the Office of Management and Budget (OMB) under control numbers 0348-0043, 0348-0044, 0348-0040, and 0348-0046 and 0605-0001. Notwithstanding any other provision of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA unless that collection of information displays a currently valid OMB control number.

C. Reporting

Award recipients are required to submit financial and technical progress reports. These reports are to be submitted electronically via <https://grantsonline.rdc.noaa.gov>. The first technical progress report covering the first nine months of a multi-year award is due 10 months after the start date of the award. Each subsequent technical progress report covering a period of 12 months is due 12 months after the previous report. The comprehensive final technical progress report is due 90 days after the expiration date of the award. Technical progress reports should report on adherence to the Data/Information Sharing Plan and all listed publications resulting from the grant should adhere to the requirements established in said section.

The Federal Funding Accountability and Transparency Act of 2006: this Act 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.

VII. Agency Contacts

Please visit the CPO website for further information at or contact the CPO Grants Manager, Diane Brown, by mail (see address above) or at diane.brown@noaa.gov. Please allow up to two weeks after receipt for a response.

VIII. Other Information

None.