2019 Regional Ecosystem Prediction Program (REPP): Understanding Coral Ecosystem Connectivity in the Hawaiian Archipelago

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ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY

EXECUTIVE SUMMARY

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

Funding Opportunity Title: 2019 Regional Ecosystem Prediction Program (REPP): Understanding Coral Ecosystem Connectivity in the Hawaiian Archipelago

Announcement Type: Initial

Funding Opportunity Number: NOAA-NOS-NCCOS-2019-2005822

Catalog of Federal Domestic Assistance (CFDA) Number: 11.478, Center for Sponsored Coastal Ocean Research - Coastal Ocean Program

Dates: Full proposals must be received and validated by Grants.gov by 11:59 p.m. Eastern Time on March 1, 2019. NOAA will also accept paper applications subject to further details described in this Announcement that are postmarked or provided to a commercial carrier with tracking number and receipt on or before 11:59 pm Eastern Time on March 1, 2019. Private metered postmarks will not be accepted. Applicants submitting by paper are responsible for tracking their applications and should notify the Program Manager in Section VII of this Announcement that they are submitting by paper. Electronic or paper copies received after the deadline will not be considered, and paper copy applications will be returned to the sender.

When developing your submission timeline, keep in mind the following information necessary to submit an application on Grants.gov: (1) a free annual registration process in the electronic System for Award Management (SAM) may take between three and five business days or as long as several weeks, as described in Section IV.F. of this Announcement, and (2) if you submit an application via Grants.gov, you will receive a series of email notifications for up to two business days before learning via validation or rejection whether NOAA has received your application.

Funding Opportunity Description: The purpose of this document is to advise the public that NOAA/NOS/National Centers for Coastal Ocean Science/Competitive Research Program, in partnership with NOAA’s Office of National Marine Sanctuaries and Office of Ocean Exploration and Research, is soliciting proposals under the Regional Ecosystem Prediction Program for a project up to five years in duration to conduct research to improve the understanding of population connectivity of key mesophotic coral ecosystem species in the Hawaiian Archipelago. This information will be used to improve the ability of resource managers to proactively develop strategies to manage and protect poorly understood mesophotic

coral ecosystems and provide insight into regional ecosystem connectivity. Funding is contingent upon the availability of Fiscal Year 2019 Federal appropriations. If funds become available for this program, one project is expected to be supported for up to five years, with an approximate annual budget of up to $1,000,000.

Electronic Access: Proposals should be submitted through Grants.gov, http://www.grants.gov. Sign up to receive any potential amendments to this Announcement via www.grants.gov.

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

A. Program Objective

The National Oceanic and Atmospheric Administration's (NOAA) National Centers for Coastal Ocean Science (NCCOS) develops and improves predictive capabilities for managing the Nation's use of its coastal resources through its Competitive Research Program (CRP). NCCOS/CRP also supports efforts to translate the results of its research investments, and those of others, into accessible and useful information for coastal managers, planners, lawmakers, and the public to help balance the needs of economic growth, with those of conserving the resources of our Nation's oceans, coasts, and Great Lakes.

NCCOS/CRP provides a focal point for regional ecosystem-scale, multidisciplinary coastal ocean research within the NOAA National Ocean Service. Together with partners in NOAA and other organizations responsible for coastal resources, NCCOS/CRP advances the scientific understanding needed to protect coastal resources and ensure their viability for future generations. This increased understanding of the ocean, coasts, and Great Lakes directly benefits the management of U.S. coastal and ocean resources, and helps NOAA, other Federal agencies, and state, tribal, and local governments achieve their stewardship responsibilities.

A key objective of NCCOS/CRP research is the production of user-driven predictive tools that will enable resource managers to assess alternative management strategies to restore degraded ecosystems and protect healthy ones. Research supported is outcome-oriented towards predictions, as well as increased scientific understanding that will provide managers and the public with sound scientific information for making decisions in support of societal objectives. Articulation of outcome-based management goals is required in proposals (see Section IV.B.) and recipients must report progress toward achieving outcome-based goals annually.

In 2006, NCCOS/CRP, in partnership with NOAA's Office of Ocean Exploration and Research (OER), initiated a new research program, the Deep Coral Reef Ecosystem Studies (Deep-CRES) Program, focused on improving the understanding of poorly known mesophotic coral ecosystems (MCEs). MCEs are characterized by the presence of light-dependent corals and associated communities typically found at depths from 30–40 m and extending to over 150 m in some tropical and subtropical regions. MCEs may be regarded as extensions of shallow coral ecosystems including sharing common species. The Deep-CRES

Program resulted in two multi-year research projects focused on MCEs, one in the Caribbean (Puerto Rico) and one in the Pacific (Hawai‘i). While these studies were underway, in 2008, the first International MCE Workshop was held to bring together scientists and managers to discuss and review the state of knowledge regarding MCEs and identify critical research needs to help inform management of these ecosystems, resulting in the development of a MCE Research Strategy (2009), https://cdn.coastalscience.noaa.gov/page-attachments/research/noaa_514_DS1.pdf.

In response to the MCE Research Strategy and resource manager needs, in FY 2011 and FY 2018, two competitions were conducted to improve the understanding of coral ecosystem connectivity in (1) the eastern Gulf of Mexico from Pulley Ridge to the Florida Keys, and (2) the western Gulf of Mexico. The resulting project from the FY 2011 competition (https://coastalscience.noaa.gov/projects/detail?key=63) is providing the Florida Keys National Marine Sanctuary and the Gulf of Mexico Fishery Management Council with a better understanding of population connectivity between Pulley Ridge and the Florida Keys, and information on the extent of Pulley Ridge’s habitat and ecosystem composition. Information on the project’s 2013–2015 field seasons are highlighted on NOAA’s Ocean Explorer website (http://oceanexplorer.noaa.gov/explorations/explorations.html) under “Coral Ecosystem Connectivity: From Pulley Ridge to the Florida Keys.” The FY 2018 competition project began on September 1, 2018 and will help resource managers to better understand the connectivity of shallow reefs and MCEs in the Flower Garden Banks National Marine Sanctuary to the banks in the proposed boundary expansion, as well as to more distant reefs in the Gulf of Mexico and the Caribbean.

While we have made progress in the understanding of MCE connectivity in the Gulf of Mexico, there is still little known outside this region with regards to whether MCEs can serve as a potential source of larvae for impacted shallow species or vice versa. Improving the understanding of MCEs, including their connectivity to shallow reefs and MCEs in other locations, the factors responsible for controlling where they are located, the impacts to these ecosystems, and the ecological role they play are key research needs identified in the United Nations Environment Programme report, “MCEs: A lifeboat for coral reefs?,” http://www.coastalscience.noaa.gov/publications/handler.aspx?key=9192.

B. Program Priorities

The Regional Ecosystem Prediction Program (REPP) was established to provide resource managers with actionable information, predictive tools, and capabilities to improve their ability to protect, conserve, and restore the Nation’s ocean, coastal, and Great Lakes ecosystems. REPP identifies key regional research needs that are limiting the ability of resource managers to address one or more issues from a regional ecosystem perspective.

NCCOS/CRP, in partnership with NOAA's Office of National Marine Sanctuaries (ONMS) and OER, is soliciting proposals for a project under REPP to improve the understanding of population connectivity of key MCE species (also found in waters < 30–40 m in depth) in the Hawaiian Archipelago. This information will be used to improve the ability of resource managers to proactively develop strategies to manage and protect poorly understood MCEs and provide insight into regional ecosystem connectivity.

MCEs in the Hawaiian Archipelago can be found at depths from 30–40 m to over 150 m. The lower depth limit is dependent on the water clarity and location within the archipelago. MCEs are populated with organisms typically associated with shallow coral reefs, such as corals, macroalgae, sponges, and fishes, as well as species unique to mesophotic depths or deeper, making them especially vulnerable to disturbances. MCEs are unique ecosystems that may serve as potential sources to reseed or replenish degraded shallow-water populations. For resource managers, it is important to understand the types of ecological roles that MCEs play (e.g., essential fish habitat), as well as the connectivity of these ecosystems with adjacent shallow reefs, as well as with MCEs in other locations.

Connectivity can be broadly defined as the exchange of materials (e.g., nutrients and pollutants), organisms, and genes and can be divided into three categories: (1) genetic connectivity that concerns the exchange of genetic material, (2) demographic or ecological connectivity, which is the exchange of individual propagules, juveniles and adults, and (3) oceanographic connectivity, which includes flow of materials and circulation patterns and variability that underpins many of these exchanges. At present, there is limited understanding about connectivity. Yet, the success of management measures [e.g., marine protected areas (MPAs) and MPA networks] to protect, conserve, and restore marine habitats or populations hinges on the establishment of ecologically relevant boundaries that take into account genetic connectivity (typically via spores, eggs, and larvae) and the movements of juveniles and adults, as well as the spatial distribution of stressors that may impact organisms.

MPAs have been used as one of the main tools to protect significant natural and cultural resources within the marine environment for the benefit of present and future generations. While the use of MPAs and MPA networks as resource management tools has grown significantly in recent decades, there is still substantial scientific investigation needed to improve our understanding of how connectivity functions across temporal and spatial scales for a variety of mobile and sessile species. This lack of knowledge is a major impediment to the management of marine resources for sustainable fishing, maintenance of biodiversity, recovery of endangered species, and other management goals in the face of natural disasters,

habitat degradation, and other ecosystem threats.

This announcement seeks to address our lack of understanding of coral ecosystem function and connectivity by using the geographically isolated Hawaiian Archipelago, a natural laboratory, to investigate connectivity for the entire coral ecosystem continuum from shallow to mesophotic depths, and from lower to higher latitudes. The Hawaiian Archipelago, located in the central Pacific Ocean, consists of the eight high volcanic main Hawaiian Islands (MHI) in the southeast, and an assortment of islands, atolls, banks, and seamounts in the Northwestern Hawaiian Islands (NWHI). The NWHI are part of the Papahanaumokuakea Marine National Monument (PMNM), the largest contiguous MPA in the U.S. at 582,578 square miles.

The Hawaiian Archipelago is part of the geographically longest and geologically oldest volcanic chains on Earth. Extensive shallow reefs and MCEs exist around every island, atoll, bank or seamount of the archipelago, from the southern tip of Hawai‘i Island to Kure Atoll, over 1,500 miles to the northwest. The geographic isolation of the Hawaiian Archipelago has produced a unique biodiversity that is marked by one of the highest levels of marine endemism recorded on Earth. While Hawai‘i’s terrestrial and shallow-water marine ecosystems have been relatively well documented and studied, its MCEs remain largely unexplored with the exception of the Au‘au Channel, where the Deep-CRES program took place from 2006–2012. Despite their remoteness, MCEs are not immune to anthropogenic impacts, as invasive species, climate change, and overfishing threaten MCEs much like their shallow-water counterparts.

The large latitudinal gradient of the archipelago (19–28 °N) spans from the subtropical, productive waters of the NWHI to the tropical, oligotrophic waters of the MHI. The isolation of the Hawaiian Islands and their size provides the unique opportunity to study (1) connectivity within a closed system (i.e., most larvae are from the Hawaiian Islands and not an outside source), (2) environmental parameters and how they change across a latitudinal gradient, and (3) natural and anthropogenic impacts across gradients.

This announcement solicits proposals to provide resource managers with the scientific information and predictive tools needed to proactively develop strategies to manage and protect poorly understood MCEs and provide insights into regional ecosystem connectivity. Proposals should further the understanding of MCEs and their connectivity to shallow coral ecosystems in the Hawaiian Archipelago. Furthermore, proposals should address quantifying the biological, geological, chemical, and physical processes, to the extent necessary, for a functional understanding of MCEs in the Hawaiian Archipelago. Proposals should address the following research priorities:

a. Determine the horizontal and vertical population structure for a set of key mobile and sessile coral ecosystem species (i.e., two or more of each species, and should include ecologically- and economically-important species), and to what extent there is genetic and ecological connectivity across the archipelago, as well as between shallow coral ecosystems and MCEs.

b. Identify dominant mechanisms of connectivity for key species, including directional flow, and their temporal and spatial dynamics.

c. Determine whether MCEs can serve as refugia and reseed shallow reefs (or vice versa).

d. Characterize MCEs by quantifying the community structure and the biotic and abiotic factors which influence community structure.

e. Characterize the physical environment of MCEs across a latitudinal gradient and how this influences MCE structure.

f. Determine ecosystem stressors (i.e., threats), whether they change with depth and geography, and their associated effects on ecosystem structure, function, and connectivity, as appropriate.

Conducting research on MCEs may require specialized technologies beyond standard SCUBA diving, such as advanced diving technologies (e.g., mixed-gas SCUBA diving, closed-circuit rebreathers, and the requisite safety oversight), remotely operated vehicles (ROVs), autonomous underwater vehicles (AUVs), benthic landers, and/or manned submersibles. Applicants must include all operating costs for conducting the research including these specialized technologies and the necessary ship costs in their proposals. For questions regarding operational costs and logistical support for conducting research in the NWHI, applicants should contact PMNM (see below).

NCCOS/CRP will fund a single comprehensive proposal that includes a set of subprojects led by individual Principal Investigators (PIs). This multi-disciplinary collaborative team should be led by a single PI. The Lead PI should provide strong leadership for the project enabling it to be fully integrated and effectively implemented to ensure production of the expected outputs and outcomes. Successful projects typically include a Project Program Manager that interacts with the NCCOS/CRP Program Manager on a regular basis to ensure that the project is well-coordinated, responsive to management needs, and presents a

comprehensive and integrated set of research results.

Expected Outputs and Outcomes:

The intended outcome of this research is to provide resource managers in Hawai‘i with the scientific information and predictive tools necessary to improve effectiveness of MPAs in the Hawaiian Archipelago. Results from this research will also be of wide interest to coral reef scientists and managers applying findings from population connectivity studies to support MPA planning and management. Management end users of the research results include the State of Hawai‘i Division of Aquatic Resources, the Western Pacific Fishery Management Council, the U.S. Fish and Wildlife Service, NOAA’s ONMS, Coral Reef Conservation Program, MPA Center, and National Marine Fisheries Service, and others.

Transition of research results to use by managers and policy-makers is a central objective of NCCOS/CRP. Clear articulation of outcome-based management goals is required (more information can be found at https://coastalscience.noaa.gov/about/fundingopportunities/outputs-and-outcomes/). The Lead PI will be expected to work with the NCCOS/CRP Program Manager to establish an effective method of transferring research results to the end users (e.g., a management transition advisory group). To facilitate the transition of information to resource managers, the Lead PI shall hold at least one meeting per year with subproject PIs that will also be open to the above mentioned primary management groups. The purpose of the annual meeting will be to present results of the research to date and to interact with end users to ensure that the research results are packaged for optimal utility by management. The end users can then facilitate the transfer and utilization of information derived from this work for management applications, including sustainable fisheries management, habitat conservation and protection, and protection of listed threatened or endangered species. Applicants should include all costs associated with the annual meetings (with the exception of end user travel costs for Federal employees) in their proposal.

Expected outputs from this research include:

1) Maps that will identify the degree of vertical and horizontal connectivity (oceanographic, genetic, and ecological) for the key species between MCEs and shallow coral ecosystems in the Hawaiian Archipelago, as well as between regions spanning the length of the archipelago.

2) Connectivity information determined for key sessile and mobile coral ecosystem species.

3) Information regarding the potential of MCEs to serve as a refuge for shallow coral reef species.

4) Estimates of the contribution of various abiotic and biotic factors to determining the distribution and structure of MCEs.

5) Information on the physical environment of MCEs across the archipelago.

6) Information on the implications of research results in the context of managing MCEs in the Hawaiian Archipelago, including information on the spatial distribution of stressors across Hawai‘i’s MCEs.

In addition to the above outputs and outcomes, the applicant will be expected to work with the NCCOS/CRP Program Manager, ONMS, and OER to develop outreach and education materials (e.g., materials for websites, handouts and social media, incorporating research into the classroom, and highlighting research findings/discoveries as they emerge). The proposal must describe a process to include resource management agency participation at the onset of program implementation. The NCCOS/CRP Program Manager will work closely with the Lead PI to engage the appropriate management representatives (as end users of the program outputs) and establish a clear mechanism to involve these representatives as advisors.

Contact Information:

For overall information regarding this Announcement contact: Kimberly Puglise, NCCOS/CRP Program Manager, 240-533-0190, internet: Kimberly.Puglise@noaa.gov.

For information regarding operations in the NWHI contact: Randall Kosaki, PMNM Deputy Superintendent, 808-725-5816, internet: randall.kosaki@noaa.gov.

C. Program Authority

33 U.S.C. §883 et seq.; Public Law 102-567, §201(c), Coastal Ocean Program.

II. Award Information

A. Funding Availability

If funds become available for this program, one project is expected to be supported for

up to five years, with an approximate annual budget up to $1,000,000, not to exceed $5,000,000 per proposal. Funding is contingent upon availability of Federal appropriations, which may not have been appropriated at the time of this announcement.

B. Project/Award Period

Full applications may cover a project/award period up to five years, but shorter-term project proposals are also welcomed.

Awards may be funded incrementally, generally on an annual basis, but once awarded; those awards will not compete for funding in subsequent years. This multi-year funding is often appropriate for projects to be funded for two to five years. Once approved, full applications are not required for the continuation out years. While applicants are not required to divide Federal assistance project activities into annual increments based on appropriations law, this approach may be constructive given the possibility that funding may not be available in subsequent years.

Funding for each year's activity is contingent upon the availability of funds from Congress, satisfactory performance, and is at the sole discretion of the agency.

During the implementation phase of research projects funded under this announcement, regardless of the funding mechanism used, NCCOS/CRP Program Managers will analyze financial statements and progress reports for each continuing award, and will have dialogue with the PIs and Authorized Representatives of the recipient institutions to discuss research progress and expected time lines for the remaining award period. If NOAA experiences budget fluctuations in future fiscal years, the amount of funding provided in any given fiscal year will be determined on a project-specific basis by the remaining tasks to be completed, the overall pace of the research and the length of time remaining on the award and/or across the board reductions or increases based on the overall funds available.

Regardless of the budget for any given fiscal year, NCCOS/CRP Program Managers will consider the length of time remaining for each project, the amount of funds available, the tasks to be completed in the upcoming fiscal year, the pace of research, and any delayed progress relative to that originally proposed, before determining the funding amount in any given fiscal year.

C. Type of Funding Instrument

In an effort to maximize the use of limited resources, applications from non-Federal, non-NOAA Federal and NOAA Federal applicants will be evaluated in the same competition, with different funding instruments applicable to the type of applicant.

The funding instrument for a research application selected for funding from a non-Federal researcher is expected to be a cooperative agreement. A cooperative agreement is appropriate when substantial Federal government involvement is anticipated. This means that the recipient can expect substantial agency collaboration, participation, or intervention in project performance. Substantial involvement exists when: responsibility for the management, control, direction, or performance of the project is shared by the assisting agency and the recipient; or the assisting agency has the right to intervene (including interruption or modification) in the conduct or performance of project activities. "Substantial involvement" will be coordinated and communicated by NCCOS/CRP Program Managers, and can include collaboration and participation by NOAA (but see section III.A.5.), as well as NCCOS/CRP Program Manager involvement in PI meetings, setting up management advisory groups, development of management transition plans, and communication of project results.

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

If the non-Federal applicant is at an institution that has a NOAA approved Cooperative Ecosystem Studies Units (CESU), it is allowed to submit applications. If the applicant is a member of one of these CESUs and is interested in using its CESU status, it may state its wishes in a cover letter to the application stating its desire to have the application associated with the CESU. This letter should specify the name of the CESU. Of the 17 CESUs across the nation, NOAA is a member of 10: North and West Alaska, California, Hawaii-Pacific Islands, South Florida-Caribbean, Gulf Coast, Piedmont-South Atlantic Coast, Chesapeake

Watershed, North Atlantic Coast, Pacific Northwest, and Great Plains. Applications are allowed to be submitted from these CESUs only.

The following criteria must be met for NOAA to use the established partnerships with CESUs:

The proposed funding opportunity must fit within the objectives of the National CESU Network Program outlined below:

- To provide research, technical assistance, and education to federal land management, environmental, and research agencies and their partners in biological, physical, social, cultural, and engineering disciplines needed to address natural and cultural resource management issues at multiple scales and in an ecosystem context.

- The proposed funding opportunity must fit the intent of the Cooperative and Joint Agreements, which means:

  - The research partnership will carry out or stimulate an activity (data, products or services) for a public purpose; and

  - NOAA will be significantly involved in the work.

Previous research completed by a local CI will be considered in decisions made to issue an award to a CESU.

The funding instrument for a selected application from an eligible NOAA Federal applicant will be an intra-agency transfer of funds.

The funding instrument for a selected application from a non-NOAA Federal applicant will be through an inter-agency transfer of funds, provided legal authority exists for the Federal applicant to receive funds from another agency. Non-NOAA Federal applicants that intend to be the lead institution must call Laura Golden/240-533-0285 to discuss technical details. PLEASE NOTE: Before non-NOAA Federal applicants may be funded, they must demonstrate that they have applicable legal authority for an interagency transfer of funds. Support may be solely through NCCOS/CRP or partnered with other Federal offices and agencies.

The intra- and inter-agency transfers of funds are not Federal assistance (grants or cooperative agreements), and the policies described in this Announcement applicable to

Federal assistance awards do not apply to Federal entities receiving intra- and inter-agency transfers of funds. Refer to the Agency Contact officials in Section VII for more information.

III. Eligibility Information

A. Eligible Applicants

Eligible applicants for Federal financial assistance in this competition are institutions of higher education, other non-profits, state, local, Indian Tribal Governments, U.S. Territories, and for-profit organizations. Federal agencies that possess the statutory authority to receive transfers of funds are eligible to submit applications for intra- or interagency funds transfers through this competition. NOAA supports cultural and gender diversity and encourages women and minority individuals and groups to submit applications to NOAA programs. In addition, DOC/NOAA is strongly committed to broadening the participation of historically black colleges and universities, Hispanic serving institutions, tribal colleges and universities, and institutions that work in underserved areas. DOC/NOAA encourages applications involving any of the above institutions to apply.

Please note that:

(1) PIs should be employees of an eligible entity listed above; and applications should be submitted through that entity. Non-Federal researchers should comply with their institutional requirements for application submission.

(2) Non-Federal researchers affiliated with NOAA-University Cooperative/Joint Institutes will be funded through cooperative agreements.

(3) Foreign researchers must apply as subawards or contracts through an eligible U.S. entity.

(4) Federal applicants are eligible to submit applications from intra- or interagency funds transfers through this competition. Non-NOAA Federal applicants will be required to submit certifications or documentation showing that they have specific legal authority to accept funds for this type of research.

(5) An eligible U.S. entity may propose Federal agency researchers as funded or unfunded collaborators. If Federal agency researchers are proposed as funded collaborators, the applicant should present the collaborator’s funding request in the application in the same way documentation is provided for a subrecipient for purposes of project evaluation, even though intra- or interagency funding transfers will generally be used if the project is selected.

(5) NCCOS researchers may apply through an eligible US entity as funded or unfunded collaborators, but cannot be the lead PI on the application.

B. Cost Sharing or Matching Requirement

None

C. Other Criteria that Affect Eligibility

Each application must substantially comply with the 16 elements listed under Content and Form of Application, Required Elements, (1) - (16), or it will be returned to sender without further consideration. A checklist with the required and requested application elements can be found in Section VIII.

IV. Application and Submission Information

A. Address to Request Application Package

Laura Golden
1305 East West Hwy
SSMC 4 Station 8219
Silver Spring, MD 20910

B. Content and Form of Application

Example Application

A sample application package can be found on the NCCOS website at: https://coastalscience.noaa.gov/about/funding-opportunities/application-forms/.

Required Elements

Collaborative Proposals - If more than one institution is collaborating in a project awarded funds, the lead institution will be responsible for distributing funds to the partner institutions with the exception of Federal partners. Federal partners will be funded with either intra- or inter-agency agreements initiated by NCCOS. Collaborating institutions expected to receive funds must be budgeted as subawards or contracts. Unfunded collaborators may also participate.

Each application must substantially comply with the following 16 elements to be forwarded for merit review. The Summary Title Page, Abstract, Project Description, References,

Biographical Sketch, and Budget Justification must be single spaced in 12-point font with 1-inch margins. The Collaborators List must be an Excel spread sheet. The 16 elements are as follows:

(1) Standard Form 424. The applicant must submit the Standard Form, SF-424, "Application for Federal Assistance," to indicate the total amount of funding proposed for the whole project period. This form is to be the cover page for the original application and is the first required form in the grants.gov application package.

(2) Summary Title Page. One-page maximum. The Summary Title Page identifies the project's title, starting with the acronym: REPP 2019 and the PI's name and affiliation, complete address, phone and e-mail information. The requested funding amounts for each fiscal year should be included on the Summary Title Page. If this proposal is a resubmission from a previous NCCOS competition, indicate that information on the Summary Title Page.

(3) One-page abstract/project summary. The summary (abstract) should appear on a separate single page, headed with the proposal title, institution(s), investigator(s), total proposed cost (with and without ship funds), and budget period. It should be written in the third person. The summary is used to help compare proposals quickly and allows the respondents to summarize their key points in their own words. Project summaries of applications that receive funding may be posted on program-related websites.

The project summary should include an introduction of the problem, rationale, scientific objectives and/or hypotheses to be tested, and a brief summary of work to be completed.

(4) Project Description. The description of the proposed project must include narratives of the Proposed Research (elements a through d), the Application to Management (element e), and the Data Management Plan (element f).

The description of the proposed project must not be more than 20 pages for elements (a) through (e) and an additional two pages for the Data Management Plan (f).

The Proposed Research Narrative should be thorough and explicitly indicate its relevance to the program goals and scientific priorities by:

(a) Identifying the topic that is being addressed by the proposal;

(b) Describing the proposed scientific objectives and research activities in relation to the present state of knowledge in the field and in relation to previous and current work by the

proposing PI(s).

(c) Discussing how the proposed project lends value to the program goals;

(d) Identifying the function of each PI. The Lead PI will be responsible for communicating with the Federal Program Manager on all pertinent verbal or written information.

(e) The Applications to Management Narrative should establish the connection to relevant resource management needs by explicitly identifying the end user group(s) including the proposed mechanism for establishing the connections to relevant resource management needs by explicitly identifying the frequency and method of interaction with end users, and evidence of the linkage between the scientific questions and management needs. The format and role of management and technical advisory committees should be included in this section. The narrative should provide the management justification for the research by:

(i) Articulating the coordination with one or more end users;

(ii) Discussing the expected significance of the project to management priorities and needs. Specific management targets, with proposed outputs and outcomes, should describe how this project will improve management capabilities. Outputs are defined as products (e.g., publications, models) or activities that lead to outcomes (changes in management knowledge or action). Definitions and examples of outputs and outcomes can be accessed at https://coastalscience.noaa.gov/about/funding-opportunities/outputs-and-outcomes/. The timeline for achieving outcomes should be included in the Milestone Chart (below).

(iii) Describing specific activities, such as workshops or development of outreach materials that will enhance information transfer from project scientists to relevant management entities, other end-users, or the public.

If the proposal is a resubmission from a previous competition, any concerns identified in the previous review process and provided to the applicant should be addressed in the resubmitted proposal.

(f) Providing a detailed Data Management Plan that describes how metadata and data collected as part of the project will be disseminated to the broader community, and plans for longer term archiving of these data. PIs that propose to collaborate with data centers or networks, except the National Center for Environmental Information, are advised to obtain letters of commitment that affirm the collaboration. Where possible, all PIs are strongly

encouraged to use existing data centers and data portals to archive and disseminate their data. Costs associated with use of data centers, or data archiving, should be included in the application budget. See the section on the NOAA Data Reporting requirements below (Section VI.C.).

(5) References cited. Reference information is required. Each reference should include the names of all authors in the same sequence they appear in the publications, the article title, the journal or book title, volume number, page numbers, and year of publications. While there is no established page limitation, this section should include bibliographic citations only and should not be used to provide parenthetical information outside of the Project Description.

(6) Milestone chart. Provide time lines of major tasks covering the duration of the proposed project.

(7) Biographical sketch. All PIs and co-PIs must provide summaries of up to 2 pages that include the following:

(a) A listing of professional and academic credentials and mailing address;

(b) A list of up to five publications most closely related to the proposed project and five other significant publications.

(8) Current and pending support. Describe all current and pending Federal financial/funding support for all PIs and co-PIs. Continuing grants must also be included. A current and pending support form is available on the NCCOS web site for your use: https://coastalscience.noaa.gov/about/funding-opportunities/application-forms/. You should respond to this element whether or not you have any current and/or pending support, e.g., by indicating “not applicable.”

(9) A list of all known applicable permits that will be required to perform the proposed work. You should respond to this requirement element whether or not permits are required.

(10) Accomplishments from Prior Federal Support. If any PI or co-PI identified on the project has received Federal funding in the past five years for coral, MCE, and/or population connectivity research, information on the award(s) is required. Each PI and co-PI who has received more than one award (excluding amendments) must report on the award most closely related to the proposal. This section should not exceed two pages per award in addition to the 20 pages for the Project Description.

The following information should be provided:

(a) the award number, amount, and period of support;

(b) the title of the project;

(c) a summary of the results of the completed work;

(d) publications resulting from the award;

(e) a brief description of outputs and outcomes; and

(f) as appropriate, a description of the relation of the completed work to the proposed work.

When applicable, this information will be considered by reviewers in the evaluation of overall qualifications of applicants. You should respond to this element whether or not you have accomplishments from prior Federal support on this topic; e.g., by indicating “no prior Federal research on coral, MCE, and/or population connectivity research.”

(11) Budget narrative/justification. In order to allow reviewers to fully evaluate the appropriateness of costs, all applications must include a detailed budget narrative and a justification to support all proposed budget categories for each fiscal year. Personnel costs should be broken out by named PI and number of months and percentage of time requested per year per PI. Support for each PI should be commensurate with their stated involvement each year in the milestones chart (see Required Elements (6) Milestone chart).

Any unnamed personnel (graduate students, post-doctoral researchers, technicians) should be identified by their job title, and their personnel costs explained similar to PI personnel costs above. The contribution of any personnel to the project goals should be explained. Travel costs should be broken out by number of people traveling, destination and purpose of travel, and projected costs per person. Equipment costs should describe the equipment to be purchased, and its contribution to the achievement of the project goals. Each subaward should be listed as a separate item in the budget justification. Provide separate budget justifications for each subaward and indicate the basis for the cost estimates. Describe project activities for subawards and products/services to be obtained for acquisitions, and indicate the applicability or necessity of each to the project.

A separate budget justification is required for each subaward. Signed approval from each

identified subaward institution is also required. For acquisition contracts, the purpose and cost or price must be fully justified and the contract must fully comply with 2 C.F.R. 200.317-.326. For additional information concerning each of the required categories and appropriate level of disclosure please see https://coastalscience.noaa.gov/about/funding-opportunities/requirements/.

An applicant requesting funds for indirect costs in its proposal budget that has a current Federally approved rate should submit documentation of the indirect cost rate agreement as an attachment to its application submission. An applicant without a Federally approved rate should refer to Section IV.F. of this Announcement regarding options.

(12) CD 511. Certification Regarding Lobbying. Lead institutions can submit these forms through the grants.gov CD 511 document placeholder without a hard signature because electronic signatures are allowed on documents from the submitting institution.

(13) Standard Form 424B. Assurances-Non-Construction Programs. Lead institutions can submit these forms through the grants.gov SF 424B document placeholder without a hard signature because electronic signatures are allowed on document from the submitting institutions.

(14) Standard Form 424A. All applicants are required to submit a SF 424A Budget Form that identifies the budget for each fiscal year of the proposal. Place each fiscal year in separate columns in Section B of page 1 on the SF 424A by filling in the fiscal years 1 to 5 in Section A Budget Summary - Grant Program Function or Activity column. (Note that this revised 424A Section B format is a NOAA requirement that is not reflected in the Instructions for the SF 424A). For 5-year projects, use two SF 424As. Place the first four years on one form in Section B columns one through four. The first four years will total in column five. Place the total from the first form onto the second SF424A form in Section B column one and use column two for the fifth year budget figures. The budget figures must correspond with the descriptions contained in the proposal.

Each subaward should provide a SF 424A listing each year of funding being requested. List the total subaward costs under the 6.h. Other category and contractor costs under line item 6.f. Contractual category on the SF 424A. Signed approval from the institution of each identified subaward and contractor should be provided. Indirect cost may not be applied to ship costs.

(15) Provide one list that includes all (U.S. and Foreign) collaborators, advisors, and advisees for each investigator (PI and co-PIs, post-docs, and subawardees), complete with

corresponding institutions. Submit only one, combined and alphabetized list per application in an excel spreadsheet using First Name, Last Name, and Institution for the column headings. Collaborators are individuals who have participated in a project or publication within the last 48 months with any investigator, including co-authors on publications in their resumes. Collaborators also include those persons with which the investigators may have ongoing collaboration negotiations. Advisees and Advisors do not have a time limit. Advisees are persons with whom the individual investigator has had an association as thesis advisor or postdoctoral sponsor. Advisors include an individual's own graduate and postgraduate advisors. Unfunded participants in the proposed study should also be listed (but not their collaborators). This information is critical for identifying potential conflicts of interests and avoiding bias in the selection of reviewers.

(16) Key Contacts form. All applicants must submit the Key Contacts form. This form can be found on the NCCOS website: https://coastalscience.noaa.gov/about/funding-opportunities/application-forms/. This form identifies the official applicant contacts.

Application format and assembly. Applications submitted via Grants.gov APPLY should follow the format guidelines below:

Workspace is the standard way for organizations or individuals to apply for federal grants in Grants.gov. Workspace allows a grant team to simultaneously access and edit different forms within an application. Plus, the forms can be filled out online or offline—your choice.

Grants.gov Workspace also allows applicants and organizations to tailor their application workflow. Please refer to https://www.grants.gov/web/grants/applicants/workspace-overview.html to determine which of the three approaches your institution should take when completing a Workspace application. This page also contains resources to aid in setting up the workspace and the application submission process.

If you experience submission problems that may result in your application being late, send an e-mail to support@grants.gov and call the Grants.gov help desk (800-518-4726). The Federal Program Officer for this Federal Funding Opportunity (FFO) will use programmatic discretion in accepting applications due to documented electronic submission problems.

Please note: If more than one submission of an application is performed, the last application submitted before the due date and time will be the official version.

In addition to the 16 required elements, applicants may provide the following:

(1) A list of potential merit reviewers on a page after the Summary Title Page.

(2) Letters from unfunded collaborators, verifying their contribution to the project. These elements can be uploaded in to the Optional Form box under Other Attachments in Grants.gov.

Applications containing known subawards must provide an SF 424A, Budget Justification, Current and Pending Support, and Key Contacts. Signed approval from the institution of each subaward and contractor should be provided. We also request submission of the indirect rate agreement for subawards, if applicable. Applicants should provide Key Contacts for acquisition contracts and may provide additional information similar to that requested in this section for an acquisition contract if it may help NOAA assure compliance of the contract with 2 C.F.R. 200.317-.326. Permits, accomplishments, Biographical sketches and the collaborators lists should be supplied to the lead institution in order for them to be combined within the lead application information.

It will be the applicant's responsibility to obtain all necessary Federal, state, and local government permits and approvals where necessary for the proposed work to be conducted.

Applicants are expected to design their proposals so that they minimize the potential adverse impact on the environment. If applicable, documentation of requests or approvals of environmental permits should be received by the Program Manager prior to funding. Applications will be reviewed to ensure that they have sufficient environmental documentation to allow program staff to determine whether the proposal is categorically excluded from further National Environmental Policy Act (NEPA) analysis, or whether an Environmental Assessment is necessary in conformance with requirements of the NEPA. For those applications needing an Environmental Assessment, affected applicants will be informed after the peer review stage, and will be requested to assist in the preparation of a draft of the assessment (prior to award). Failure to apply for and/or obtain Federal, state, and local permits, approvals, letters of agreement, or failure to provide environmental analysis where necessary (e.g., NEPA environmental assessment) may delay the award of funds if a project is selected for funding.

Applicants to be recommended for funding will be required to answer relevant questions from the “Environmental Compliance Questionnaire for NOAA Federal Financial Assistance Applicants": https://www.nepa.noaa.gov/questionnaire.pdf (OMB Control No. 0648-0538). The Program Manager will determine which questions are relevant to each specific proposal. Answers must be provided before the application can be submitted for final funding approval.

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

To enable the use of a universal identifier and to build the quality of information available to the public as required by the Federal Funding Accountability and Transparency Act, 16 U.S.C. 6101 note, 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 (DUNS) and will be subject to reporting requirements, as identified in OMB guidance published at 2 CFR Part 25, which may be accessed at: https://go.usa.gov/xPTZg.

Applicants and recipients are required to 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. The Federal awarding agency may not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements and, if an applicant has not fully complied with the requirements by the time the Federal awarding agency is ready to make a Federal award, the Federal awarding agency 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.

See Section IV.G. of this Announcement for more information.

D. Submission Dates and Times

The deadline for receipt of full applications for is 11:59 p.m., Eastern Time on March 1, 2019. Full applications should be submitted electronically to Grants.gov and must be received and validated by Grants.gov by the deadline. Applications received after the deadline will be rejected and returned to the sender without further consideration. PIs submitting applications via Grants.gov are advised to submit well in advance of the deadline.

If use of Grants.gov is not feasible, an applicant is concerned about possible problems associated with the Grants.gov system, or Grants.gov is unable to accept an application electronically in a timely fashion, an applicant may submit a paper copy of their application. Paper applications must include all application elements described in this Announcement, including an SF 424 form with original ink or valid electronic signature and date from an Authorized Organization Representative, and must be stamped with an official U.S. Postal Service postmark or provided to a commercial carrier with tracking number and receipt before 11:59 p.m., Eastern Time on March 1, 2019. Private metered postmarks will not be accepted. Applicants submitting by paper are responsible for tracking their applications and

should notify the Program Manager (refer to Section VII) that they are submitting by paper. The Federal Program Officer will notify applicants within 48 hours of receipt of paper applications. Due to facilities access restrictions, an applicant seeking to hand deliver an application should contact the Federal Program Officer for this Announcement (refer to Section VII) to make advance arrangements to receive the application by 3 p.m. on the application closing date. Advance notice of at least 24 hours is recommended to assure that such arrangements can be made.

Late-arriving paper applications will be accepted for review only if the applicant can document that:

(1) The application was provided to a delivery service with delivery to the National Oceanic and Atmospheric Administration, National Centers for Coastal Ocean Science, 1305 East-West Highway, SSMC4, Mail Station 8219, Silver Spring, Maryland 20910 by the deadline;

(2) The application was postmarked or provided to a commercial carrier with a tracking number and receipt by 11:59 p.m., Eastern Time on the specified closing date; and

(3) The application was received at the specified address by 11:59 p.m., Eastern Time no later than five business days following the closing date. The applicant is responsible for notifying the Federal Program Officer for this Announcement (refer to Section VII) of their submission. If an applicant is not notified of receipt of its application by NOAA, the applicant is responsible for contacting the Federal program officer for this Announcement and providing documentation that demonstrates the application was provided to the delivery service ahead of the deadline.

Facsimile transmissions and electronic mail (“email”) submission of full applications will not be accepted.

Important: All applicants, both electronic and paper, should be aware that adequate time must be factored into applicant schedules for delivery of the application. Electronic applicants are advised that volume on Grants.gov is currently extremely heavy, and if Grants.gov is unable to accept applications electronically in a timely fashion, applicants are encouraged to exercise their option to submit applications in paper format.

E. Intergovernmental Review

Applications under this program are not subject to Executive Order 12372, "Intergovernmental Review of Federal Programs." It has been determined that this notice is not significant for purposes of Executive Order 12866. Pursuant to 5 U.S.C. 553(a) (2), an

opportunity for public notice and comment is not required for this notice relating to grants, benefits and contracts. Because this notice is exempt from the notice and comment provisions of the Administrative Procedure Act, a Regulatory Flexibility Analysis is not required, and none has been prepared. It has been determined that this notice does not contain policies with Federalism implications as that term is defined in Executive Order 13132.

F. Funding Restrictions

Indirect Costs: If an applicant has not previously established an indirect cost rate with a Federal agency it may choose to use the de minimis indirect cost rate of 10% of Modified Total Direct Cost as allowable under 2 C.F.R. §200.414 or negotiate a rate with the Department of Commerce. The negotiation and approval of such a new 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, Maryland, 20910, lamar.revis@noaa.gov.

NCCOS/CRP will not fund start up or operational costs for private business ventures and neither fees nor profits will be considered as allowable costs. Ship costs may not be included in indirect cost calculations unless specified within the indirect cost rate agreement of the institution. NCCOS/CRP will not pay for ship overhead expenses otherwise. If indirect costs are applied incorrectly, an approved indirect cost agreement or budget revision will be required before an application can be recommended for funding.

G. Other Submission Requirements

Applications previously submitted to NCCOS/CRP FFOs and not recommended for funding must be revised to address any reviewer or panel concerns before resubmission. Resubmitted applications that have not been revised to address identified concerns may be returned without review.

Applications submitted in response to this announcement are strongly encouraged to be submitted through the Grants.gov website. The full funding announcement for this program is available via the Grants.gov website: http://www.grants.gov. You will be able to access, download, and submit electronic grant applications for NOAA Programs in this announcement at http://www.grants.gov. NOAA strongly recommends that you do not wait until the application deadline date to begin the application process through Grants.gov.

Applicants must register with Grants.gov before any application materials can be submitted. To use Grants.gov, applicant must have a Dun and Bradstreet Data Universal Number

System (DUNS) number and be registered in the System for Award Management (SAM), and periodic renewals are required. Applicants can receive a DUNS number at no cost by calling the dedicated toll-free DUNS Number request line at 1-866-705-5711 or online at http://fedgov.dnb.com/webform. Allow a minimum of five days to complete the SAM registration. (Note: Your organization's Employer Identification Number (EIN) will be needed on the application form). An organization's one-time registration process may take up to three weeks to complete. In addition, it may take two days until the applicant is notified as to whether NOAA received the application, so allow sufficient time to ensure applications are submitted before the closing date.

After electronic submission of the application through Grants.gov, the person submitting the application will receive up to three email messages from Grants.gov updating them on the progress of their application. In the first 24 to 48 hours after submission, the first email will confirm receipt of the application by the Grants.gov system, and the second email will indicate that the application has either been successfully validated by the system before transmission to the grantor agency or has been rejected because of errors. Only validated applications are sent to NOAA for review. After the application has been validated, this same person will receive a third email, generally within two days, when the application has been downloaded by NOAA.

In addition to Grants.gov, this announcement will also be available by contacting the program official identified in Section VII. The closing dates for electronic and paper applications are the same. Please refer to important information in Submission Dates and Times (Section IV.D.) to help ensure your application is received on time.

Facsimile transmissions and electronic mail submission of applications will not be accepted.

V. Application Review Information

A. Evaluation Criteria

1. Importance and/or relevance and applicability of proposed project to the program goals: This ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, Federal, regional, state, or local activities. Does the research address the priorities stated in the FFO? Are the expected research products clearly identified, including how they will be used to achieve management outcomes? (30 percent)

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

objectives. The proposed work should have focused objectives and a complete and technically sound strategy for project design, methodologies, data management, data analysis, and development of products and outcomes in support of the objectives. Does the proposal include an acceptable Data Management Plan that includes details on the types of environmental data and information expected and how and when the data will be shared? (30 percent)

3. Overall qualifications of applicants: This ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project. This includes the capability of the investigator and collaborators to complete the proposed work as evidenced by past research accomplishments, previous cooperative work, timely communication, and the sharing of findings, data, and other research products (as described in the Accomplishments from Prior Federal Support). (15 percent)

4. Project costs: The Budget is evaluated to determine if it is realistic and commensurate with the project needs and time-frame. Are costs reasonable? Are there any unexplained costs? (10 percent)

5. Outreach and education: NOAA assesses whether this project provides a focused and effective education and outreach strategy regarding NOAA's mission to protect the Nation's natural resources. The applicant must include plans for communicating and disseminating the results of research in ways that are appropriate to inform the relevant management entities that will use the results of the proposed work, including specific products, outcomes, and timing of the proposed work that will be used in achieving this goal. For the purposes of this review, the applicant must demonstrate how they will interact with end users to ensure that the research results are packaged for optimal utility by management (15 percent)

B. Review and Selection Process

Once an application has been received by NOAA, an initial administrative review is conducted to determine compliance with requirements and completeness of the application. Ineligible, incomplete, and/or non-responsive applications may be eliminated from further review. NOAA, in its sole discretion, may continue the review process for applications with non-substantive issues that can easily be rectified or cured. All applications that pass this initial review will be evaluated and scored individually by independent peer mail review and/or by independent peer panel review.

Both Federal and non-Federal experts may be used in this process. The peer mail reviewers will be several individuals with expertise in the subjects addressed by particular applications.

Each mail reviewer will see only certain individual applications within his or her area of expertise, and score them individually on a scale of one to five, where scores represent respectively: Excellent (5), Very Good (4), Good (3), Fair (2), Poor (1). Peer mail reviewers will consider the relative weighting of the evaluation criteria in providing an overall proposal score.

The peer panel will comprise several individuals, with each individual having expertise in a separate area, so that the panel, as a whole, covers a range of relevant scientific expertise. The panel will have access to all mail reviews of proposals and will use the mail reviews in discussion and evaluation of the proposals. The peer panel shall rate the proposals using the evaluation criteria and scoring using the scale provided above (and used by the mail reviewers). Individual peer panel reviewers will consider the relative weighting of the evaluation criteria in providing their individual score. The individual peer panelists' scores shall be combined, using one or more methods, to obtain a numerical ranking of the proposals. If a full review (mail and panel) is conducted, only the panel scores shall be used to rank each proposal. If any non-Federal reviewer is used, no consensus advice will be given by the independent peer mail review or the review panel.

The Program Manager will neither vote or score applications as part of the independent peer review panel nor participate in discussion of the merits of the applications other than to ask questions. Those applications receiving an average panel score of "Fair" or "Poor" will not be given further consideration, and applicants will be notified of non-selection.

For the applications scored by the reviewers as either "Excellent," "Very Good," or "Good," the Program Manager will (a) create a ranking of the applications using the average panel scores; (b) recommend the total duration of funding; and (c) recommend the amount of funds available subject to the availability of fiscal year funds. Recommendations for funding are forwarded from the Program Manager to the NCCOS/CRP Director for development of the final recommendation to the Selecting Official, the Director of NCCOS or designee, for the final funding recommendation decision. Recommendations will be made in rank order from the peer-review process unless the proposal is justified to be selected out of rank order based on the selection factors listed below in Section V.C.

NOAA reserves the right to negotiate the budget with the applicants that have been selected to receive awards, which may include requesting that the applicant removes certain costs, combine budgets into a single application, add/subtract expertise, or change the lead or sub institution. Additionally, NOAA may request that the applicant modify objectives or work plans and provide supplemental information required by the agency prior to award. NOAA may select some, all, or none of the applications, or part(s) of any particular application, and

may request that applicants combine projects. In addition, applications rated by the panel as either "Excellent," "Very Good," or "Good" that are not funded in the current fiscal period, may be considered for funding in another fiscal period without having to repeat the competitive review process.

The Selecting Official will make recommendations to the NOAA Grants Management Division, and the final approval of selected applications and issuance of awards will be by the NOAA Grants Officer. The award decisions of the NOAA Grants Officer are final.

The NOAA Grants Officer will review financial and grants administration aspects of a proposed award, including conducting an assessment of the risk posed by the applicant in accordance with 2 C.F.R. 200.205. In addition to reviewing repositories of government-wide eligibility, qualifications or financial integrity information, the risk assessment conducted by NOAA may consider items such as the financial stability of an applicant, quality of the applicant's management systems, an applicant's history of performance, previous audit reports and audit findings concerning the applicant and the applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on non-Federal entities. See also "Review of Risk" in Section VI. of this Announcement.

Applicants should be in compliance with the terms of any existing NOAA grants or cooperative agreements and otherwise eligible to receive Federal awards, or make arrangements satisfactory to the Grants Officer, to be considered for funding under this competition. All reports due should be received and any concerns raised by the agency should be timely addressed in order to receive a new award. Upon review of these factors, if appropriate, specific award conditions that respond to the degree of risk may be applied by the NOAA Grants Officer pursuant to 2 C.F.R. 200.207. In addition, NOAA reserves the right to reject an application in its entirety where information is uncovered that raises a significant risk with respect to the responsibility or suitability of an applicant. The final approval of selected applications and issuance of awards will be by the NOAA Grants Officer.

In accordance with Federal appropriations law expected to be in effect at the time of award, NOAA will provide a successful corporate applicant a form to be completed by its authorized representatives certifying whether the corporation has Federally-assessed unpaid or delinquent tax liability or recent felony criminal convictions under any Federal law.

When a decision has been made (whether an award or declination), verbatim anonymous copies of reviews and summaries of review panel deliberations, if any, will be made available to the applicant. Declined applications will be held in NCCOS/CRP for three years

in accordance with current retention policies, and then destroyed.

C. Selection Factors

Proposals may 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. Whether this project duplicates other projects funded or considered for funding by NOAA or other Federal agencies.

4. Program priorities and policy factors. Refer to section I.B.

5. Applicant's prior award performance.

6. Partnerships and/or participation of targeted groups.

7. Adequacy of information necessary for NOAA to make a NEPA determination and draft necessary documentation before recommendations for funding are made to the grants officer.

Awards may also be modified for selected projects depending on budget availability or according to the selection factors listed above.

D. Anticipated Announcement and Award Dates

Subject to the availability of funds, review of the applications will begin upon receipt. Applicants may be notified of award or declination by September 2019, and applicants should use a start date of September 1, 2019.

VI. Award Administration Information

A. Award Notices

The notice of award is signed by the NOAA Grants Officer and is the authorizing document. It is provided electronically through NOAA's Grants Online system to the appropriate business office of the recipient organization. The award cover page, i.e., CD-450, Financial Assistance Award, is available at http://go.usa.gov/SNMR. The Internet Explorer browser should be used with Grants Online.

B. Administrative and National Policy Requirements

1. Department of Commerce Pre-Award Notification Requirements

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

2. Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards

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

3. Department of Commerce Financial Assistance Standard Terms and Conditions

Successful applicants who accept a NOAA award under this solicitation will be bound by Department of Commerce Financial Assistance Standard Terms and Conditions. A current version of this document is available at http://go.usa.gov/xRW4R. In addition, award documents provided by the NOAA Grants Management Division in the Grants Online award package may contain special award conditions unique to a project, including conditions that may limit the use of funds for activities that have outstanding environmental compliant requirements and/or stating other compliance requirements for the award as applicable.

4. 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. NOAA or the Department of Commerce are not responsible for proposal preparation costs. Publication of this announcement does not oblige NOAA to award any specific project or to obligate any available funds.

5. Unpaid or Delinquent Tax Liability

When applicable under appropriations law, NOAA will provide certain applicant organizations a form to be completed by the applicant's authorized representative making a certification regarding Federally-assessed unpaid or delinquent tax liability or recent felony criminal convictions under any Federal law by the organization.

6. National Environmental Policy Act (NEPA)

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

7. 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. 200.205. 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.

8. 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.

9. Permits

It is the applicant's responsibility to obtain all permits and approvals from Federal, state, and local governments and private landowners where necessary for the proposed work to be conducted. If applicable, documentation of requests or approvals of environmental permits must be received by the Federal Program Office prior to release of funding. Failure to apply for and obtain Federal, state, and local permits, approvals, or letters of agreement may delay the award of funds if a project is otherwise selected for funding. In some cases if additional permits and approvals are required after an application is selected, funds may be withheld by the Grants Officer under a Special Award Condition requiring the recipient to submit required permits and approvals.

10. Access to Information

Patentable ideas, trade secrets, privileged or confidential commercial or financial information, disclosure of which may harm the proposer, should be included in proposals only when such information is necessary to convey an understanding of the proposed project. Such information should be clearly marked in the proposal or included as a separate statement accompanying the proposal and should be appropriately labeled with a legend such

as, “The following is [proprietary or confidential] information that [name of proposing organization] requests not be released to persons outside the Government, except for purposes of review and evaluation.” As an alternative example 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. While NOAA will make every effort to prevent unauthorized access to such material, it is not responsible or in any way liable for the release of such material.

Department of Commerce regulations implementing the Freedom of Information Act (FOIA), 5 U.S.C 552, are found at 15 C.F.R. Part 4, 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 the applicant, the confidentiality of the content of funded applications will be maintained to the maximum extent permitted by law.

A proposal that results in an award will be available to the public on request, except for privileged information or material that is personal, proprietary or otherwise exempt from disclosure under law. Appropriate labeling in the proposal aids identification of what may be specifically exempt. Such information will be withheld from public disclosure to the extent permitted by law, including the Freedom of Information Act, referenced in the paragraph above. Without assuming any liability for inadvertent disclosure, NOAA will seek to limit disclosure of such information to its employees and to outside reviewers when necessary for merit review of the proposal or as otherwise authorized by law. Portions of proposals resulting in grants that contain descriptions of inventions in which either the Government or the grantee owns a right, title, or interest (including a nonexclusive license) will not normally be made available to the public until a reasonable time has been allowed for filing patent applications. NOAA will notify the grantee of receipt of requests for copies of funded proposals so the grantee may advise NOAA of such inventions described, or other confidential, commercial or proprietary information contained in the proposal.

In addition, applicants are also reminded that under 2 C.F.R. § 200.303(e) 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. By submitting an application, an applicant (1) agrees to cooperate with Department of Commerce and external project and program evaluators and submit required financial and performance information and data in an accurate and timely manner, and (2) acknowledges and understands that information and

data contained in applications for financial assistance, as well as information and data contained in recipient financial, performance and other reports, may be used by the Department of Commerce in conducting reviews and evaluations of its financial assistance projects and programs. Applicants are notified that Department of Commerce and other Federal employees, Federal agents and contractors, and/or non-Federal personnel who enter into appropriate confidentiality and nondisclosure agreements may access, review, and evaluate applicant and recipient information and data.

11. Scientific Integrity

NCCOS/CRP adheres to the principles of scientific integrity. This policy can be found at: https://nrc.noaa.gov/ScientificIntegrityCommons.aspx.

C. Reporting

All performance (i.e. technical progress) reports shall be submitted electronically through NOAA's electronic Grants Online system unless the recipient does not have electronic access. In that case, performance (technical) reports are to be submitted to the NOAA Program Manager. All financial reports shall be submitted in the same manner. All ship time use must be reported by the PI or Chief Scientist on each cruise within the performance reports.

The Federal Funding Accountability and Transparency Act, 16 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 Subaward Reporting System (FSRS) available at www.FSRS.gov on all subawards over $25,000. See 2 C.F.R. Parts 25, 170.

Data Reporting Requirement

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 (see Data Management Guidance to Proposal Writers below). 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.

Data Management Guidance to Proposal Writers

1. Responsible NOAA Official for questions regarding this guidance and for verifying accessibility of data produced by funding recipients: Laura Golden, Grant Coordinator, NOAA National Centers for Coastal Ocean Science, laurie.golden@noaa.gov, 240-533-0285. Responsible NOAA Data Manager for questions regarding data management and implementing this guidance: Jessica Morgan, Responsible NOAA Data Manager, NOAA National Centers for Coastal Ocean Science, 240-533-0300.

2. Data Accessibility: The NCCOS/CRP Program requires that public access to grant-produced data be enabled as follows; Data Management Plans (see Section IV.B.2.) submitted with Proposals should reflect one or more of the option(s) provided by

NCCOS/CRP.

Option A: For the majority of oceanographic and ecological data, except those listed below, funding recipients are expected to submit data to the NOAA NCEI for long-term preservation, which will provide public access, archiving, discovery metadata meeting NOAA standards and formats, and a Digital Object Identifier (DOI). NCCOS/CRP has held preliminary consultation with NCEI regarding these pending data.

Option B: For any other data not appropriate for submission to NOAA NCEI, funding recipients are expected to submit data to an appropriate data facility (i.e., NIH GenBank for genomics data) that preserves data, properly manages archived data to assure their quality, mints DOIs, and makes archived data and related information available to users in a timely and efficient manner. Funding recipients should submit discovery metadata meeting NOAA standards and formats documenting these non-NOAA data archives to the Responsible NOAA Data Manager listed above.

Option C: For limited-release data that are limited by law, regulation, policy, security requirements, commercial or international agreements, or valid technical considerations, funding recipients may request permission not to make data publicly accessible from the Responsible NOAA Official listed above.

3. Technical recommendations: The NOAA Program is not offering specific technical guidance. Proposals are to describe their proposed approach. Use of open-standard formats and methods is encouraged. Definitions of data management terms are included here:

Environmental data are recorded and derived observations and measurements of the physical, chemical, biological, geological, and geophysical properties and conditions of the oceans, atmosphere, space environment, sun, and solid earth, as well as correlative data such as socio-economic data, related documentation, and metadata. Digital audio or video recordings of environmental phenomena (such as animal sounds or undersea video) are included in this definition. Numerical model outputs are included in this definition, particularly if they are used to support the conclusion of a peer-reviewed publication. Data collected in a laboratory or other controlled environment, such as measurements of animals and chemical processes, are included in this definition.

Sharing data means making data publicly visible and accessible in a timely (see below) manner at no cost (or no more than the cost of reproduction), in a format which is machine-readable and based on open standard

VII. Agency Contacts

Technical Information: Kimberly Puglise, Program Manager for NCCOS/CRP, 240-533-0190, Internet: Kimberly.Puglise@noaa.gov

Grants Administration Information: Laura Golden, NCCOS/CRP Grants Administrator, 240-533-0285, Internet: Laurie.Golden@noaa.gov

VIII. Other Information

Additional background information on this program and announcement are available on the NCCOS/CRP home page at: https://coastalscience.noaa.gov/.

If any Frequently Asked Questions arise, they will be posted at this site.

Check List for Required and Requested Documents:

(1) SF 424

(2) Summary Title Page

(3) Abstract

(4) Project Description

(5) References

(6) Milestone Chart

(7) Bio Sketch (for each PI and co-PI)

(8) Current and Pending Support (for each PI and co-PI)

(9) Permits (if none, say so)

(10) Accomplishments (if none, say so)

(11) Budget Narrative and Justification (One for the lead institution and each subaward/subcontract).

If Applicable: Signed Approval from subaward/subcontractor institutes; Ship Request form

(12) CD-511

(13) SF 424B

(14) SF 424A (One for the lead institution and each subaward/subcontract)

(15) Alphabetized Collaborator List (ONE Excel spreadsheet for all)

(16) Key Contact form

Indirect Rate Agreement (requested).

If applicable: Signed Approval from subaward/subcontractor institutes, SF-LLL