

ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY

EXECUTIVE SUMMARY

Federal Agency Name(s): Center for Sponsored Coastal Ocean Research (CSCOR), National Centers for Coastal Ocean Science (NCCOS), National Ocean Service (NOS), National Oceanic and Atmospheric Association (NOAA), Department of Commerce (DOC)

Funding Opportunity Title: Center for Sponsored Coastal Ocean Research, Ecological Effects of Sea Level Rise Program, FY 2010

Announcement Type: Initial

Funding Opportunity Number: NOAA-NOS-NCCOS-2010-2001818

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

Dates: Final applications must be received and validated by Grants.gov, postmarked, or provided to a delivery service on or before 3 p.m. ET, October 14, 2009. Please note: Validation or rejection of your application by Grants.gov may take up to 2 business days after submission. Please consider this process in developing your submission timeline. Applications received after the deadline will be rejected/returned to the sender without further consideration. Use of U.S. mail or another delivery service must be documented with a receipt. No facsimile or electronic mail applications will be accepted.

Funding Opportunity Description: The purpose of this document is to advise the public that NOAA/NOS/NCCOS/CSCOR is soliciting research proposals for projects of 3 to 5 years in duration for development of modeling and mapping tools to better understand and predict the impacts of sea level rise on coastal ecosystems, including ecologically and economically valuable natural resources, to support proactive coastal management and mitigation decisions. The area of interest includes the coastal ecosystems in the northern Gulf of Mexico, ranging from the eastern boundary of the Apalachicola National Estuarine Research Reserve to the western extent of the Mississippi coast. Projects should be interdisciplinary, multiple investigator, and well integrated studies designed to develop capabilities for understanding, predicting, and mitigating the effects of longterm sea level rise. Funding is contingent upon the availability of Fiscal Year 2010 Federal appropriations. It is anticipated that final recommendations for funding under this announcement will be made in early calendar year 2010, and that projects funded under this announcement will have a July 2010, start date.

Electronic Access: Background information about the NCCOS/CSCOR efforts in the Ecological Effects of Sea Level Rise Program can be found at <http://www.cop.noaa.gov/stressors/climatechange/welcome.html>. Proposals should be submitted through Grants.gov, <http://www.grants.gov>.

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

A. Program Objective

NCCOS/CSCOR's Coastal Ecosystem Effects of Climate Change (CEECC) Program

Coastal and marine ecosystems, including their vast wealth of natural resources and socially and economically vital coastal communities, are intimately linked to climate. Coastal counties are the most densely populated regions in the U.S. and this trend is expected to continue into the future. Some of the existing problems in these vulnerable ecosystems due to high population density and resource use patterns will certainly be exacerbated by climate change, such as an increase in habitat loss/degradation, additional nutrient pollution and the spread of invasive species. Climate induced environmental changes on estuarine and marine ecosystems include: temperature changes that alter ecological processes and species interactions; increase in frequency of extreme ocean warming events, with implications for coral reef bleaching; changes in precipitation that alter freshwater run-off of nutrients, sediment, and contaminants; accelerated rates of sea level rise; alteration of oceanic wind and water circulation patterns; continued losses of sea ice over large areas of the Arctic basin; and ocean acidification caused by reactions of increasing CO₂ with seawater. The consequences of these probable ecological changes will negatively affect coastal and marine ecosystems and, therefore, society.

Through a suite of subprograms under the Coastal Ecosystem Effects of Climate Change (CEECC) Program, NCCOS/CSCOR supports interdisciplinary, multi-year research projects investigating how oceanic and coastal (including Great Lakes) ecosystems respond to climate variability and change. The goal of CEECC is to provide managers with the scientific knowledge and tools, including ecological models, to prepare for climate change impacts with more certainty in scale, timing, and local detail. Improving the predictive understanding of ecosystem responses to climate will allow coastal zone managers to more effectively assess alternative management strategies for mitigating the ecological and socioeconomic impacts of climate change. Through the CEECC, NCCOS/CSCOR has ongoing and planned research activities on climate change in four focus areas: fisheries, protected resource impacts, ocean acidification, and sea level rise.

Fisheries: NCCOS/CSCOR has partnered with the National Science Foundation and NOAA's National Marine Fisheries Service to support the Global Ocean Ecosystems Dynamics program (GLOBEC), a component of the US Global Change Research Program since the early 1990s. GLOBEC addresses the question of how global climate change may affect the abundance, distribution and production of animals in the sea. GLOBEC research has advanced understanding of the population dynamics of important species in the

Northwest Atlantic and Northeast Pacific Oceans, and developed models that provide new, ecosystem-based estimates of abundances and distribution for improved fishery forecasts.

Accomplishments of GLOBEC are summarized at:

http://www.cop.noaa.gov/stressors/climatechange/ceec_accomp.html#main

Protected Resource Impacts: Through the Coastal Zone Management and National Marine Sanctuaries Acts, NOAA is mandated to protect and conserve the Nation's suite of National Estuarine Research Reserves (NERR) and National Marine Sanctuary (NMS) sites. These ecosystems are comprised of diverse habitats that provide a wide variety of goods and services but a major knowledge gap lies in understanding how these and other similar ecosystems will respond to climate change impacts. A NCCOS/CSCOR-supported study comparing East and West U.S. Coast NERR sites is examining the effects of long-term temperature changes on the population biology of dominant species in intertidal areas. Ultimately, the project will forecast the impact of climate change on the suitability of estuaries and rocky intertidal shores as nursery grounds for commercially and recreationally important marine species (see <http://www.cop.noaa.gov/stressors/climatechange/current/Wethey/wethey.html>). The Protected Resource Impacts initiative proposes to provide estuarine research reserve and marine sanctuary managers with the predictive understanding and tools to assess coastal ecosystem responses to climate variability and change. These efforts propose to leverage the extensive infrastructure, monitoring, outreach, and management capabilities found at the target locations and to incorporate research results and developed predictive tools into threat assessments and management plans. Coastal managers will then have the information, mechanistic linkages, and models to determine and mitigate projected climate change impacts on these NOAA managed ecosystems.

Ocean Acidification: The amount of carbon dioxide in the atmosphere has been increasing steadily for the past 150 years, since the onset of the industrial revolution. The world's oceans act as a sink of the carbon dioxide emitted by humans, and this absorption is causing a reduction in surface ocean pH, or ocean acidification (OA). Over the next century, OA is expected to reduce surface ocean pH by 0.3 - 0.5 units, faster than in the past 650,000 years. A growing number of laboratory experiments now demonstrate that OA adversely affects many marine organisms, especially organisms that construct their shell material from calcium carbonate. In particular, OA has been shown to hamper the ability of reef-building corals and reef-cementing algae to calcify, thereby affecting their growth and accretion, and making the reef more vulnerable to erosion. The Federal Ocean Acidification Research and Monitoring Act of 2009 requires NOAA to respond to this pressing issue which also has the potential to impact other NOAA mandates such as the Coral Reef Conservation Act, Magnuson-Stevens Act, and Endangered Species Act. To improve our understanding of the impacts of OA on coastal ecosystems, CEECC's Ocean Acidification initiative proposes to focus competitive grants towards research on regional ecosystem impacts of ocean

acidification, development of models to predict impacts of OA on ecosystems, and regional assessments and synthesis. . NCCOS/CSCOR is proposing to coordinate activities on a regional basis, integrate with other elements of the wider NOAA Ocean Acidification initiative, and encourage federal and academic partnerships to leverage NOAA capabilities.

Sea Level Rise: Rising sea level has worldwide consequences because of its potential to alter ecosystems and habitability of coastal regions. The vulnerability of coastal areas varies with shoreline physical attributes and the amount of development. Low lying developed coastal areas are especially at risk. Damages and economic losses could be reduced if decision makers understand the potential impacts of sea level rise and use this information for planning. The Ecological Effects of Sea Level Rise (EESLR) program, currently ongoing in the Pamlico Sound area of North Carolina, supports multidisplinary research to integrate storm surge models with ecological models for more precise predictions of how future sea level will affect coastal habitats and ecosystems. The outcome of this research will be the development of tools useful for coastal managers to mitigate regional ecological impacts of sea level rise. The purpose of this announcement is to extend application of the EESLR program to the northern Gulf of Mexico coastal region from the Florida Panhandle to coastal Mississippi Florida/Alabama Panhandle.

Ecological Effects of Sea Level Rise (EESLR) FY10 Competition

Climate change, and in particular sea level rise, is increasingly being seen as a major emerging threat to coastal ecosystems, communities and societies in general. The 2007 assessment report from the Intergovernmental Panel on Climate Change (IPCC) (1) projected a sea level rise of 18-59 centimeters by 2100 with recent reports indicating even higher rates of sea level rise (2,3). Under these projected scenarios, the impacts of sea level rise on our Nation's coastal areas will be dramatic. Low lying coastal areas can be expected to experience increased levels of flooding, accelerated erosion, loss of wetlands and low-lying terrestrial ecosystems, and seawater intrusion into freshwater sources. Critical ecosystem services will be adversely impacted due to the loss, change or migration of habitats and ecosystems in response to sea level rise. Rising sea level and erosion will also affect coastal habitats and ecosystems shoreward of wetlands such as beaches, sedimentary bottoms, submerged aquatic vegetation and oyster reefs. Key economic sectors could be damaged by sea level rise due to high populations in coastal cities and suburban areas, and popularity of coastal areas for recreation and retirement communities. Damages and economic losses could be reduced if decision makers understand the potential impacts of sea level rise and use this information for planning.

Coastal vulnerability to sea level rise has been recognized as a major challenge for coastal managers. Coastal areas contain some of the world's most diverse and productive ecosystems, including mangrove forests, marshes, forested wetlands, coral reefs, and sea grasses. Through the reauthorized Coastal Zone Management Act of 1972 and the Coastal

Zone Enhancement Reauthorization Act of 2005, there is a national interest in the effective management, beneficial use, protection, and development of the coastal zone. Because climate change may result in substantial sea level rise with serious adverse effects in the coastal zone, coastal states must anticipate and plan for such an occurrence. NOAA mandates associated with the Magnuson-Stevens Fishery Conservation and Management Act will also be impacted by sea level rise due to the important and critical role of habitat for a number of commercially valuable fish and shellfish as well as NOAA efforts related to habitat restoration in the face of climate change. Understanding and quantifying how sea level rise and long term effects of coastal storms affect natural ecosystems will improve our ability to manage and protect these systems.

1. IPCC, 2007: Summary for policymakers. In *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden, and C.E. Hanson, Eds. Cambridge University Press, pp. 7-22.

2. Rahmstorf, Stefan. A Semi-Empirical Approach to Projecting Future Sea-Level Rise. *Science* 19 January 2007: Vol. 315. no. 5810, pp. 368 - 370.

3. Grinsted, A., J. C. Moore, and S. Jevrejeva (2009), Reconstructing sea level from paleo and projected temperatures 200 to 2100 AD, *Clim. Dyn.*, doi:10.1007/s00382-008-0507-2

The goal of the EESLR Program is to advance the understanding of the ecosystem effects of sea level rise and through this understanding, develop predictive ecological models to inform coastal management decisions directed at mitigating potential impacts, and for use in planning related to habitat restoration and coastal development. Development of an ecological forecast predicting the long term effects of sea level rise on coastal ecosystems services is invaluable to successfully managing coastal resources under climate change. Many existing models currently utilized to predict the ecosystem effects of sea level rise often lack the ability to accurately predict the dynamics and feedbacks associated with species, habitat, and ultimately ecosystem changes over timeframes and spatial resolutions needed by coastal managers. Our goal is to 1) fund the best science through competitive research; 2) bring together the multidisciplinary teams of scientists and managers necessary to address in a holistic manner the complex interactions involved with predicting ecological impacts of climate change and 3) develop more integrated models and modeling tools that are validated and tested and then transitioned to end-users for routine application.

Initial efforts of the EESLR program focused on sea level rise impacts to North Carolina (NC) coastal habitats and ecosystems. Since 2003, managers and scientists have been working together to identify major areas of research needed to help NC coastal managers mitigate regional ecological impacts of sea level rise and to transition to application

developed tools and information being developed through this research effort. Information on the background, workshops, white papers, and results from the North Carolina sea level rise effort can be found at the following website:

http://www.cop.noaa.gov/stressors/climatechange/current/slr/slr_new_intro.html.

The strong management interest in the information and tools developed through the initial effort in North Carolina has demonstrated the tractability of the approach and goals of the EESLR program. NCCOS/CSCOR has decided to expand the program to the northern Gulf of Mexico region extending from the Florida Panhandle to coastal Mississippi because of the foundational work already conducted in this area and the location of key NOAA and other trust resources. This study area has long been identified as vulnerable to sea level rise, and its relatively intact ecosystems are threatened by sea level rise and the exacerbating effects of storm surge erosion and hurricanes. NCCOS/CSCOR also chose this study area to leverage the results of the NOS Storm Surge Partnership effort begun in 2005 (<http://www.csc.noaa.gov/sspp/>) and other research efforts (http://flseagrant.ifas.ufl.edu/CallForProposals/process_explained.htm), recent Light Detection and Ranging (LIDAR) data, and vertical elevation information being collected by the NOS National Geodetic Survey (<http://geodesy.noaa.gov/>). The Gulf of Mexico management community considers sea level rise a high priority and through regional governance structures such as the Gulf of Mexico Alliance there are pathways to apply the results of the efforts regionally (<http://gulfofmexicoalliance.org/>). In addition, the area of interest is the home of three National Estuarine Research Reserves (NERRs) and three National Wildlife reserves, with protected areas extending offshore and encompassing many diverse habitat types (e.g., submerged aquatic vegetation, oyster beds, etc.). Modeling the effects of sea level rise on intact areas will provide valuable information on restoration of fragmented environments and on planned restoration efforts in the face of projected sea level rise scenarios. A critical component missing for the successful management of these protected areas is an accurate ecological forecast of the long term effects of sea level rise and storm surge.

During the implementation phase of research projects funded under this announcement, regardless of the funding mechanism used, CSCOR Program Managers will analyze financial statements and progress reports for each continuing multi-year project, and will have dialogue with the Principal Investigators and Authorized Representatives of the recipient institutions to discuss research progress and expected time lines for the remaining award period. 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 amount of funds to allocate to continuing research projects in any given fiscal year. As identified in all CSCOR competitive announcements, funding for ongoing multi-year research awards is contingent upon the availability of funds from Congress, satisfactory performance relative to proposal metrics and is at the sole discretion of the agency.

B. Program Priorities

The NCCOS/CSCOR EESLR program supports regional, integrated, interdisciplinary research studies that develop capabilities for understanding, predicting and managing the effects of sea level rise and long term effects of coastal storms, on coastal ecosystems. The area of interest for this competition includes the coastal ecosystems in the northern Gulf of Mexico, ranging from the eastern boundary of the Apalachicola National Estuarine Research Reserve to the western extent of the Mississippi coast. For the purposes of this announcement, coastal landscapes of interest extend from marine to terrestrial habitats and include coastal forests; marshes and forested wetlands; intertidal and subtidal benthic habitats; and the near shore pelagic environment. Research proposals should combine the morphologic, hydrodynamic and biological processes at appropriate scales as part of a multi-disciplinary research program to develop and apply a model or modeling framework to predict the long term effects of sea level rise over the next 100 years, including the impact of increased frequency of major hurricane (Category 3 to 5) landfalls in the region.

The goal of the FY10 EESLR program is to improve the management of coastal habitats in the targeted study region through advanced understanding of the ecological processes associated with sea level rise and the long term effects of coastal storms and, through this understanding, development of predictive ecological models. The goal of all models developed is user friendly mapping and modeling tools for coastal managers with a long-term goal to extend this modeling approach to other coastal areas. Therefore, the ability to extend research results to other regions will be important. Ultimately, the results of this research should be incorporated into coastal ecosystem planning for restoration efforts and management decisions such as land use planning and zoning. The objective is not to predict

short-term hazards but to address long-term climate change impacts, especially with respect to coastal habitats and associated ecosystems.

As with the NC effort, NCCOS/CSCOR has assembled a Steering Committee to help guide the research program. Under direction of this committee, NCCOS/CSCOR organized a workshop in 2008 in which scientists and managers helped define key knowledge gaps and prioritized research to help fill these gaps. From the information compiled at this workshop, the Steering Committee developed a White Paper (available at - <http://www.cop.noaa.gov/stressors/climatechange/current/slr/SLRWhitePaper3-09.pdf>) outlining the consensus of the workshop attendees regarding the requirements for scientific information and predictions, and a research strategy for addressing these requirements. Management questions determined as priorities for the purposes of this announcement include:

(1) How will SAV beds respond to the increased water depth and erosion expected from climate change? Will barrier islands be available to protect offshore beds?

(2) How will oyster reefs respond to the increased water depth and erosion expected from climate change? Will increased salinity due to changes in circulation increase oyster vulnerability to predators? Can we characterize their future state to enable proper management of the fishery?

(3) How will habitat changes due to sea level rise affect nursery areas important for recreational and commercially valuable species?

(4) What are the effects of hurricanes, in addition to sea level rise, on coastal transitional habitats and the ability of coastal species to persist and/or migrate landward?

(5) What is the rate of physical change occurring in coastal habitats? Can the biological communities keep pace? Will wetlands keep up with sea level rise, and repeated assaults of storm surge? How rapidly will they retreat or will they disappear due to lack of room to retreat from development or rapid change in land elevation?

(6) How will the shore and near shore habitats of barrier islands respond to stated threats?

(7) Protected coastal habitats are threatened by encroaching seas due to low elevation gradient. Are landward areas available for migration to save at least a subset of the habitat diversity through restoration of sites near reserves? Is Assisted Migration needed to save coastal habitats?

(8) What are the effects of sea level rise on native coastal habitat?

Program management: Ideally, a team of researchers with complementary expertise in mining data sources, process-based studies, modeling and management application will be supported. In all cases, it is recognized that modeling will be necessary to link existing and new knowledge. Matching scales and linking of physical and biological/ecological models, identifying threshold effects, and developing new modeling capabilities will also be supported under this announcement. To ensure cutting edge research leading to concrete management outcomes, we require both a Scientific Principal Investigator and an Application Principal Investigator. In order to ensure transition of management tools to application, the duties and responsibilities of the two PIs are presented below:

Scientific Principle Investigator: will coordinate research and modeling activities, specifically:

- (1) Data management
- (2) Process studies and field work
- (3) Development and validation of models
- (4) Development of tool prototypes
- (5) Working with Application PI to refine and develop tools for transition to end users.

Application Principal Investigator: will be responsible for activities related to transitioning the research information and tools toward management application, specifically:

- (1) Conceptualization of the project's application(s) to coastal management issue(s), and ensuring progress toward achieving management outcomes;
- (2) Coordination and communications with the end user group(s), ensuring continuous engagement in project activities (meetings, workshops), and outreach of project results;
- (3) Organization and coordination of the annual Managers' Workshops (see below);
- (4) Ensuring that the milestones representing transition of research to operation timeline are met.

We envision funding a single comprehensive proposal for three to five years that includes a collaborative team of multi-institutional, multi-disciplinary researchers and managers led by a Scientific PI and an Application PI. NCCOS/CSCOR is also requiring proposers to address the following additional priorities.

Modeling Approach: Applications may describe projects to investigate the ecological impacts of sea level rise and associated erosion by development of ecological models of the effects (from the organismal to ecosystem level) of habitat response to sea level rise; preferring the use of mined data when available but otherwise conducting integrated studies of the ecological processes of various habitats at site-specific locations. These models should allow for understanding of the processes, effects and trade-offs of sea level rise and storm surge on barrier islands, barriers to marsh migration, and changes in salt water and fresh water interface. Models should achieve spatial resolution with enough detail for direct management application, with LIDAR elevations used when possible. NCCOS/CSCOR is requesting ecological models for partial coverage of the study area within a modeling framework to integrate the various habitat models to encompass the coastal transition from near shore to uplands. An Advanced Circulation Model [ADCIRC] has been created for the majority of the study area to predict the rise of mean water level due to oceanic sea level rise, The ADCIRC modeling code will be made available to funded proposers. No preference is given for use of the ADCIRC model. More information about the NOS modeling effort can be found at (<http://www.nauticalcharts.noaa.gov/csdl/RD.html>).

Preference for NERRS sites: Through the Long Term Agreement (LTA) between NCCOS and NERRS, NCCOS/CSCOR is giving priority for funding to proposals that use the NERRS or public lands and waters adjacent to NERRS as research sites. Three NERRS sites are in the study region, Apalachicola (FL), Weeks Bay (AL), and Grand Bay (MS). A NOAA strategic planning initiative uses the NERRS as climate change sentinel sites and NCCOS/CSCOR plans on helping to build long term data sets toward understanding and predicting the effects of climate change on coastal habitats. Involvement of the NERRS research coordinators in the planning of field work is encouraged, thus ensuring management applicability of research products, and long term usability of data collected in the sites.

Application to Management: Annual Managers: Workshops must be specified in the project milestone chart that focus initially on developing management needs and project applications, and shift to management tool demonstration and training, and finally to transition to application. The proposal must include (in the Application to Management Narrative - see Section 2d) descriptions of each annual Workshop that includes goals, objectives, and expected outputs and outcomes. The applicant is responsible for identifying a funding source for the Managers' Workshops to support 100% of the costs after Year One. In the first year, NCCOS/CSCOR can support up to 100% of the Managers' Workshop. This cost should be included in the Year 1 project budget (see Budget Narrative Section 2(8) for more details).

On an annual basis, NCCOS/CSCOR Program Officers will assess the project's progress toward development of management tools and transition to management application, and determine whether a change of course is required and if funds should be awarded in subsequent years. Part of the mandatory requirement for continued funding from Year Two

on is the ability of the PIs to secure funds for the annual Managers' Workshops. Another criterion for continued funding is the demonstrated likelihood that the project tools would be used by managers; therefore securing a commitment for support of the operation of management tools by those in coastal decisionmaking roles will be an important factor for continued funding of the EESLR project. In addition, preference will be given to proposals that identify a funding source to support the end user operation of management tools developed. Commitment to supporting the operational phase can be expressed in a letter from the funding source.

For further information the researcher should contact the Program Manager, Carol Auer, (carol.auer@noaa.gov, 301 713-3338 x 164).

C. Program Authority

16 U.S.C. 1456c

II. Award Information

A. Funding Availability

Funding is contingent upon availability of Federal appropriations. NOAA is committed to continual improvement of the grants process and accelerating the award of financial assistance to qualified recipients in accordance with the recommendations of the Business Process Reengineering Team. In order to fulfill these responsibilities, this solicitation announces that award amounts will be determined by the proposals and available funds. Award amount will not exceed \$1 million per project per year with project durations of three to five years; total project funding will not exceed \$3 million. It is anticipated that 1 award will be funded through this solicitation.

Applicants are hereby given notice that funds have not yet been appropriated for this program. In no event will NOAA or the Department of Commerce be responsible for proposal preparation costs if this program fails to receive funding or is cancelled because of other agency priorities. There is no guarantee that sufficient funds will be available to make awards for all qualified projects. Publication of this notice does not oblige NOAA to award any specific project or to obligate any available funds. If one incurs any costs prior to receiving an award agreement signed by an authorized NOAA official, one would do so solely at one's own risk of these costs not being included under the award.

Publication of this notice does not obligate any agency to any specific award or to obligate any part of the entire amount of funds available. Recipients and subrecipients are

subject to all Federal laws and agency policies, regulations and procedures applicable to Federal financial assistance awards.

B. Project/Award Period

Full proposals may cover a project/award period of 3 to 5 years. Multi-year awards may be funded incrementally on an annual basis, but once awarded those awards will not compete for funding in subsequent years. Each award requires a project description that can be easily divided into annual increments of meaningful work representing solid accomplishments.

The following is a description of multi-year awards for those applicants subsequently recommended for award. Multi-year awards are awards which have an award/project period of more than 12 months of activity. Multi-year awards are partially funded when the awards are approved, and are subsequently funded in increments. One of the purposes of multi-year awards is to reduce the administrative burden on both the applicant and the operating unit. For example, with proper planning, one application can suffice for the entire multi-year award period. 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. Multi-year funding is appropriate for projects to be funded for 2 to 5 years. Once approved, full applications are not required for the continuation out years.

C. Type of Funding Instrument

Funding instruments available are project grants and cooperative agreements.

(1) Research Project Grants: A research project grant is one in which substantial programmatic involvement by the Federal government is not anticipated by the recipient during the project period. Applicants for grants must demonstrate an ability to conduct the proposed research with minimal assistance, other than financial support, from the Federal government.

(2) Cooperative Agreements: A cooperative agreement implies that the Federal government will assist recipients in conducting the proposed research. The application should be presented in a manner that demonstrates the applicant's ability to address the research problem in a collaborative manner with the Federal government. 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.

NOAA will review the applications in accordance with the evaluation criteria. Before issuing awards, NOAA will determine whether a grant or cooperative agreement is the appropriate instrument based upon the need for substantial NOAA involvement in the project. In an effort to maximize the use of limited resources, applications from non-Federal, non-NOAA Federal and NOAA Federal applicants will be competed against each other.

Research proposals selected for funding from non-Federal researchers will be funded through a project grant or cooperative agreement. Research proposals selected for funding from non-NOAA Federal applicants will be funded through an interagency transfer, provided legal authority exists for the Federal applicant to receive funds from another agency. PLEASE NOTE: Before non-NOAA Federal applicants may be funded, they must demonstrate that they have legal authority to receive funds from another Federal agency in excess of their appropriation. Because this announcement is not proposing to procure goods or services from the applicants, the Economy Act (31 U.S.C. section 1535) is not an appropriate basis. Support may be solely through NCCOS/CSCOR or partnered with other Federal offices and agencies.

III. Eligibility Information

A. Eligible Applicants

Eligible applicants are institutions of higher education, other non-profits, state, local, Indian Tribal Governments, commercial organizations and Federal agencies that possess the statutory authority to receive financial assistance. Please note that:

(1) NCCOS/CSCOR will not fund any Federal Full Time Employee (FTE) salaries, but will fund travel, equipment, supplies, and contractual personnel costs associated with the proposed work.

(2) Researchers must be employees of an eligible entity listed above; and proposals must be submitted through that entity. Non-Federal researchers should comply with their institutional requirements for proposal submission.

(3) Non-NOAA Federal applicants will be required to submit certifications or documentation showing that they have specific legal authority to receive funds from the Department of Commerce (DOC) for this research.

(4) NCCOS/CSCOR will accept proposals that include foreign researchers as collaborators with a researcher who has met the above stated eligibility requirements.

(5) Non-Federal researchers affiliated with NOAA-University Cooperative/Joint Institutes should comply with joint institutional requirements; they will be funded through grants either to their institutions or to joint institutes.

B. Cost Sharing or Matching Requirement

The applicant is responsible for identifying a funding source for the annual Managers' Workshops to support 100% of the costs after Year 1.

C. Other Criteria that Affect Eligibility

Each proposal must also include the thirteen elements (and sub elements) listed under Proposal Submission/Required Elements, or it will be returned to sender without further consideration.

It is 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 must 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) will also delay the award of funds if a project is otherwise selected for funding.

IV. Application and Submission Information

A. Address to Request Application Package

Applications submitted in response to this announcement are strongly encouraged to be submitted through the Grants.gov web site. The full funding announcement for this program is available via the Grants.gov web site: <http://www.grants.gov>. This announcement will also be available by contacting the program official identified below. You will be able to access, download and submit electronic grant applications for NOAA Programs in this announcement at <http://www.grants.gov>. The closing dates will be the same as for the paper

submissions noted in this announcement. NOAA strongly recommends that you do not wait until the application deadline date to begin the application process through Grants.gov.

Applicants should contact the Program Manager for non-electronic submission instructions.

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

B. Content and Form of Application

This document requests full proposals only.

1. Proposals

The provisions for proposal preparation provided here are mandatory. Proposals received after the published deadline (refer to DATES) or proposals that deviate from the prescribed format will be returned to the sender without further consideration. Information regarding this announcement and additional background information are available on the NCCOS/CSCOR home page.

2. Required Elements

For clarity in the submission of proposals, the following definitions are provided for applicant use: Funding and/or Budget Period - The period of time when Federal funding is available for obligation by the recipient. The funding period must always be specified in multi-year awards, using fixed year funds. This term may also be used to mean "budget period". A budget period is typically 12 months. Award and/or Project Period - The period established in the award document during which Federal sponsorship begins and ends. The term "award period" is also referred to as project period in 15 CFR 14.2(cc).

Each proposal must include the following thirteen elements or it will be returned to sender without further consideration. The Summary, Title page, Abstract, Project Description, References, Biographical Sketch, Current and Pending Support, Budget narrative and Collaborators List must be in 12-point font with 1-inch margins. The thirteen elements are as follows:

(1) Standard Form 424. At the time of proposal submission, all applicants requesting direct funding must submit the Standard Form, SF-424, "Application for Federal Assistance," to indicate the total amount of funding proposed for their institution for the whole project period. This form is to be the cover page for the original proposal. Multi-institutional proposals must include signed SF-424 forms from all institutions requesting

direct funding. Original signatures are required on SF-424 forms provided to a lead institution by a collaborating institution for grants.gov submission.

(2) Summary title page. The Summary title page identifies the project's title, starting with the acronym EESLR: and the Principal Investigator's (PI) name and affiliation, complete address, phone, FAX and E-mail information. The requested budget for each fiscal year should be included on the Summary title page. Multi-institution proposals must also identify the lead investigator for each institution and the requested funding for each fiscal year for each institution on the title page. Lead investigator and separate budget information is not requested on the title page for institutions that are proposed to receive funds through a subcontract to the lead institution; however, an accompanying budget justification must be submitted for each subcontractor. For further details on budget information, please see (7) Standard Form SF-424A of this part.

(3) One-page abstract/project summary. A project summary (abstract) is to be submitted at time of application, shall include an introduction of the problem, rationale, scientific objectives and/or hypotheses to be tested, and a brief summary of work to be completed.

The summary should appear on a separate page, headed with the proposal title, institution(s), investigator(s), total proposed cost, 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 these key points in their own words. Project summaries of applications that receive funding may be posted on program related websites.

(4) Project description. The description of the proposed project must include narratives of the Proposed Research and of the Applications to Management.

The Proposed Research Narrative must 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 principal investigator(s);
- (c) Discussing how the proposed project lends value to the program goals;
- (d) Identifying the function of each PI. The Scientific PI will be responsible for communicating with the Federal Program Manager on all pertinent verbal or written information.
- (e) Providing a full scientific justification for the research, rather than simply reiterating justifications presented in this full funding opportunity. Specific research

activities must be divided into annual increments of work that include specific objectives and methodology.

The Applications to Management Narrative should establish the connection to relevant management needs by explicitly identifying the end user group(s) including evidence of the linkage between the scientific questions and management needs. This narrative should provide the management justification for the research through:

(a) Describing the process of transitioning results to application, including identification of the end user group(s) and the expected management outcomes;

(b) Describing the goals, objectives, and expected outputs and outcomes of annual Managers' Workshops, including a list of expected participating agencies. The description should include the time course changes in Workshop objectives from identification of management needs and project applications, to management tool demonstration and training, to transition to application;

(c) Identifying the relevant regional management plan(s) or planning efforts which justify the need for the research proposed;

(d) Discussing the expected significance of the project to management priorities and needs. This should include the specific management targets, proposed outputs and outcomes, and an explicit description of how this project will improve management capabilities and/or address management goals or objectives. 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 www.cop.noaa.gov. The timeline for achieving outcomes should be included in the Milestone Chart (below).

The project description must not exceed 25 pages in 12-point, easily legible font with 1 to 3 pages for the Applications to Management Narrative and the balance used for the Proposed Research Narrative, inclusive of figures and other visual materials, but exclusive of references, a milestone chart, letters of intent from unfunded collaborators, and letters of endorsement.

(5) References cited. Reference information is required. Each reference must include the names of all authors in the same sequence they appear in the publications, the article 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 25-page proposal descriptions.

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

(7) Standard Form 424A. At time of proposal submission, all applicants are required to submit a SF-424A Budget Form which identifies the budget for each fiscal year of the proposal. Place each fiscal year 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). The budget figures must correspond with the descriptions contained in the proposal.

Multi-institution proposals must include a SF-424A for each institution, and multi-investigator proposals using a lead investigator with a contractor/subgrantee approach must submit a SF-424A for each contractor/subgrantee. Each contractor or subgrantee should be listed as a separate item. Provide separate budgets for each subgrantee or contractor regardless of the dollar value and indicate the basis for the cost estimates. List all subgrantee or contractor costs under line item 6.f. contractual on the SF-424A.

(8) Budget narrative and 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. Describe products/services to be obtained and indicate the applicability or necessity of each to the project. Personnel costs should be broken out by named PI and number of months 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. For additional information concerning each of the required categories and appropriate level of disclosure please see http://www.cop.noaa.gov/opportunities/grants/other_instructions.html.

Any ship time needs must be clearly identified in the proposed budget. The applicant is responsible for requesting ship time through appropriate channels and for meeting all requirements to ensure the availability of requested ship time. Copies of relevant ship time request forms (e.g. UNOLS ship request forms at <http://www.gso.uri.edu/unols/ship/mainmenu.html>. should be included with the proposal.

If any NOAA personnel will be present during ship operations, vessel safety clearances must be obtained through the NOAA Office of Marine and Aviation Operations (OMAO) in advance of the cruise. Required information and procedures are detailed in a Charter Vessel Acquisition and Safety NOAA Administrative Order which can be accessed via the OMAO website at <http://www.oma.noaa.gov/charterreq.html>.

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

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

(2) A list of up to five publications most closely related to the proposed project and five other significant publications. Additional lists of publications, lectures, and the rest should not be included;

(10) Current and pending support. Describe all current and pending federal financial/funding support for all principal and co-investigators, including subsequent funding in the case of continuing grants. The capability of the investigator and collaborators to complete the proposed work in light of present commitments to other projects should be addressed. Therefore, please discuss the percentage of time investigators and collaborators have devoted to other Federal or non-Federal projects, as compared to the time that will be devoted to the project solicited under this notice.

(11) A list of all applicable permits that will be required to perform the proposed work.

(12) Provide one list that includes all collaborators, advisors, and advisees for each investigator (principal and co-principal investigators, post-docs, and subawardees), complete with corresponding institutions. Submit only one, combined and alphabetized list per proposal. 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 the resumes. Collaborators also include those persons with which the investigators may have ongoing collaboration negotiations. 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.

(13) Proposal format and assembly. Proposals submitted via Grants.gov APPLY should follow the format guidelines below:

Attachments must be submitted in Adobe Acrobat PDF format to maintain format integrity. Please submit the required documents as described below.

Follow the instructions found on the Grants.gov web site for application submission into the Grants.gov system. All required forms that do not have specific placeholders in the "Mandatory Document" box must be submitted in the "Optional Form" box as "Other Attachments" and labeled with the document name i.e., budget narrative, project description, milestone chart etc.

For multi institutional proposal: The SF424's of the additional institutions should be uploaded separately and labeled using the name of the institution/SF424 and then submitted in the "Optional Form" box as "Other Attachments". Combine all of the remaining required documents for the individual institution into one PDF file and submit the file labeled with the name of the institution. Repeat this procedure for each collaborating institution.

Save your completed application package with two different names before submission to avoid having to re-create the package should you experience submission problems. 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. Their phone number is posted on the Grants.gov web site. The program manager associated with the RFA will use programmatic discretion in accepting proposals 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 thirteen required elements, it is requested the SF-424B, CD-511 and the indirect rate agreement be provided upon application submission. These forms can be uploaded in to the "Optional Form" box under "Other Attachments" in Grants.gov.

C. Submission Dates and Times

Final applications must be received and validated by Grants.gov, postmarked, or provided to a delivery service on or before 3 p.m. ET, October 14, 2009. Please note: Validation or rejection of your application by Grants.gov may take up to 2 business days after submission. Please consider this process in developing your submission timeline. Applications received after the deadline will be rejected/returned to the sender without further consideration. Use of U.S. mail or another delivery service must be documented with a receipt. No facsimile or electronic mail applications will be accepted.

(Note that late-arriving hard copy applications provided to a delivery service on or before the applicable above due date with delivery guaranteed before 3 p.m., Eastern Time on the applicable above due date will be accepted for review if the applicant can document that the application was provided to the delivery service with delivery to the National Oceanic & Atmospheric Administration, 1305 East-West Highway, SSMC4, Mail Station 8240 8th Floor, Silver Spring, Maryland 20910-3281 guaranteed by the specified closing date and time; and, in any event, the proposals are received in the NCCOS/CSCOR office by 3 p.m., Eastern Time no later than 2 business days following the closing date.)

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. Paper applicants should allow adequate time to ensure a paper application will be received on time, taking into account that guaranteed overnight carriers are not always able to fulfill their guarantees.

D. 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.

E. Funding Restrictions

Indirect Costs: Regardless of any approved indirect cost rate applicable to the award, the maximum dollar amount of allocable indirect costs for which DOC will reimburse the recipient shall be the lesser of (a) the line item amount for the Federal share of indirect costs contained in the approved budget of the award or (b) the Federal share of the total allocable indirect costs of the award based on the indirect cost rate approved by a cognizant or oversight Federal agency and current at the time the cost was incurred, provided the rate is approved on or before the award end date. NCCOS/CSCOR will not fund start up or operational costs for private business ventures and neither fees nor profits will be considered as allowable costs.

F. Other Submission Requirements

Proposals must include evidence of linkages between the scientific questions and management needs, such as the participation of co-investigators from both scientific and management entities. The applicant is responsible for identifying a funding source for the annual Managers' Workshops to support 100% of the costs after Year 1. Proposals previously submitted to NCCOS/CSCOR FFOs and not recommended for funding must be revised and reviewer or panel concerns addressed before resubmission. Resubmitted proposals that have not been revised will be returned without review.

Please refer to important information in submission dates and times above to help ensure your application is received on time.

Applications must be submitted through www.grants.gov, unless an applicant does not have internet access. In that case, hard copies with original signatures may be sent to:

Laura J. Golden

1305 East West Hwy

Routing Code: N/SCI2

Building: SSMC4

Silver Spring, MD 20910-3278

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. This should also include a detailed review of the management relevance of the proposed work. A significant component of this criteria includes the degree to which the proposed work will develop outcomes leading to improved ecosystem management in the targeted regions (as articulated within the proposal Application to Management Narrative). (45 percent)

2. Technical/scientific merit: This assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear project goals and objectives. The proposed work should have focused objectives and a complete and technically sound strategy for project design, methodologies, data management, data analysis, and development of products and outcomes in support of the objectives. (25 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. (10 percent)

4. Project costs: The Budget is evaluated to determine if it is realistic and commensurate with the project needs and time-frame. (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 demonstrate clear connections to the relevant management entities that will use the results of the proposed work and define the specific products, outcomes, and timing of the proposed work that will be used in achieving this goal. (10 percent)

B. Review and Selection Process

Once a full application has been received by NOAA, an initial administrative review is conducted to determine compliance with requirements and completeness of the application. All proposals will be evaluated and scored individually in accordance with the assigned weights of the above evaluation criteria 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 proposals. Each mail reviewer will see only certain individual proposals 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).

The peer panel will comprise 5 to 10 individuals, with each individual having expertise in a separate area, so that the panel, as a whole, covers a range of 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 entire slate of proposals. All proposals will be evaluated and scored individually. The peer panel shall rate the proposals using the evaluation criteria and scores provided above and used by the mail reviewers. The individual peer panelist scores shall be averaged for each application and presented to the Program Manager. No consensus advice will be given by the independent peer mail review or the review panel.

The Program Manager will neither vote or score proposals as part of the independent peer panel nor participate in discussion of the merits of the proposal. Those proposals

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 proposals scored by the panel as either "Excellent," "Very Good," or "Good", the Program Manager will (a) create a ranking of the proposals to be recommended for funding using the average panel scores (b) determine the total duration of funding for each proposal; and (c) determine the amount of funds available for each proposal subject to the availability of fiscal year funds. Awards may not necessarily be made in rank order. In addition, proposals 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.

Recommendations for funding are then forwarded to the selecting official, the Director of NCCOS, for the final funding decision. In making the final selections, the Director will award in rank order unless the proposal is justified to be selected out of rank order based on the selection factors listed below in C.

Investigators may be asked to modify objectives, work plans or budgets, and provide supplemental information required by the agency prior to the award. 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 the NCCOS/CSCOR for the required 3 years in accordance with the current retention requirements, and then destroyed.

C. Selection Factors

Based on the panel review scores, the Program Manager will provide a listing of proposals in rank order to the Selecting Official for final funding recommendations. A Program Manager may first make recommendations to the Selecting Official applying the selection factors below. The Selecting Official shall award in the rank order unless the proposal is justified to be selected out of rank order based upon one or more of the following factors:

1. Availability of funding.
2. Balance/distribution of funds:
 - a. Geographically
 - b. By type of institutions
 - c. By type of partners

d. By research areas

e. By project types

3. Whether this project duplicates other projects funded or considered for funding by NOAA or other federal agencies.

4. Program priorities and policy factors.

5. Applicant's prior award performance.

6. Partnerships and/or participation of targeted groups.

7. Adequacy of information necessary for NOAA 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 proposals will begin in October 2009.

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 by postal mail or electronically through the Grants Online system to the appropriate business office of the recipient organization.

B. Administrative and National Policy Requirements

The 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, 2004 (69 FR 78389) are applicable to this solicitation.

Limitation of Liability

In no event will NOAA or the Department of Commerce be responsible for proposal preparation costs if these programs fail to receive funding or are cancelled because of other

agency priorities. Publication of this announcement does not oblige NOAA to award any specific project or to obligate any available funds.

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_TOC.pdf, and the Council on Environmental Quality implementation regulations, http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm). 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 of an environmental assessment, if NOAA determines an assessment is required. Applicants will also be required to cooperate with NOAA in identifying and implementing feasible measures to reduce or avoid any identified adverse environmental impacts of their proposal. The failure to do so shall be grounds for the denial of an application.

In conformance with the Uniform Administrative Requirements for Grants and Cooperative Agreements section 15 CFR 14.36, any data collected in projects supported by NCCOS/CSCOR should be delivered to a National Data Center (NDC), such as the National Oceanographic Data Center (NODC), in a format to be determined by the institution, the NDC, and the Program Manager. Information on NOAA NDC's can be found at <http://www.nesdis.noaa.gov/datainfo.html>. It is the responsibility of the institution for the delivery of these data; the DOC will not provide additional support for delivery beyond the award. Additionally, all biological cultures established, molecular probes developed, genetic sequences identified, mathematical models constructed, or other resulting information products established through support provided by NCCOS/CSCOR are encouraged to be made available to the general research community at no or modest handling charge (to be determined by the institution, Program Manager, and DOC).

C. Reporting

All performance (i.e. technical progress) reports shall be submitted electronically through the Grants Online system unless the recipient does not have internet 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.

VII. Agency Contacts

Technical Information: Carol Auer, Program Manager, 301-713-3338/ext 164, Internet: Carol.Auer@noaa.gov.

Business Management Information: Laurie Golden, NCCOS/CSCOR Grants Administrator, 301-713-3338/ext 151, Internet: Laurie.Golden@noaa.gov.

VIII. Other Information

Collection of information requirements

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 Paperwork Reduction Act, unless that collection displays a currently valid OMB control number.

This notification involves collection-of-information requirements subject to the Paperwork Reduction Act. The use of Standard Forms 424, 424A, 424B, and SF-LLL has been approved by the Office of Management and Budget (OMB) under control numbers 0348-0043, 0348-0044, 0348-0040 and 0348-0046.