

ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY

EXECUTIVE SUMMARY

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

Funding Opportunity Title: Collaborative Science, Technology, and Applied Research (CSTAR) Program

Announcement Type: Initial

Funding Opportunity Number: NOAA-NWS-NWSPO-2011-2002537

Catalog of Federal Domestic Assistance (CFDA) Number: 11.468, Applied Meteorological Research

Dates: Full Proposals must be received by www.grants.gov, postmarked, or provided to a delivery service by 5:00 p.m. (EDT) on October 15, 2010. Use of U.S. mail or another delivery service must be documented with a receipt. No facsimile or electronic mail applications will be accepted. 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.

Funding Opportunity Description: The CSTAR Program represents an NOAA/NWS effort to create a cost-effective transition from basic and applied research to operations and services through collaborative research between operational forecasters and academic institutions which have expertise in the environmental sciences. These activities will engage researchers and students in applied research of interest to the operational meteorological community and will improve the accuracy of forecasts and warnings of environmental hazards by applying scientific knowledge and information to operational products and services. The NOAA CSTAR Program is a contributing element of the U.S. Weather Research Program (USWRP). NOAA's program is designed to complement other agency contributions to that national effort. The CSTAR Program addresses NOAA's Mission Goal 3--Serve society's needs for weather and water information.

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

A. Program Objective

The long term objective of the CSTAR Program is to improve the overall forecast and warning capabilities of the operational hydrometeorological community by addressing the following science and technology themes through collaborative research efforts between the NWS and academic institutions:

Warn on Forecast for High Impact Events: Decision support services will be enhanced by developing the capability to issue short-fused warnings/alerts before the phenomena actually occur. This concept, called "Warn on Forecast," advances the idea of warnings/alerts issued with greater lead times, allowing decision makers the opportunity to make better, more informed choices across the spectrum of high impact events. Warn on Forecast requires improved data assimilation and numerical models that capture the convective scale to provide improved "initiation of convection" forecasts.

Next Generation Forecast System: Decision support services will be enhanced by developing a next generation forecast system that will provide an increasing number of environmental and uncertainty fields in a high spatial and temporal resolution four-dimensional gridded database. The forecast database will support core operational services and be used as input to external user decision support systems. The forecast database would represent the best, quality-controlled state of current and forecast environmental conditions.

Integrated Observing and Analysis System: Decision support services will be enhanced by developing a robust next generation "Integrated Observing and Analysis System" to produce the best "state of the environment" and serve as the basis for future forecast systems such as "Warn on Forecast" and the "Next Generation 4-D Forecast System."

Decision Support Information Systems: Operational weather and water services will evolve from a role of disseminating data and products to one of interactive sharing of weather and climate environmental information for the primary goal of providing decision support to community leaders, partners and the public.

Integrating Social Science into Weather and Water Research and Operations: Operational decision support services will be enhanced by improving the ability to assess, understand, and meet customer needs and determine the value those services provide through the integration of social science in its research and operational programs.

Individual NWS Regions and the National Centers for Environmental Prediction (NCEP) service centers have developed a set of science priorities that can be categorized under these science and technology themes and reflect factors such as topography, weather regimes, and mission.

B. Program Priorities

NOAA will give sole attention to individual proposals addressing the identified science priorities from NWS Regions and National Centers for Environmental Prediction (NCEP) service centers as listed below. Proposals must clearly specify which primary science priorities are being addressed.

A proposal must address at least one of the major science themes listed under the Program Objective section. Principal investigators (PIs) must clearly address the science and technology transfer process contained within the proposal. This includes their interactions with operational NWS units, including Weather Forecast Offices, River Forecast Centers, national service centers, and regional offices, with the specific goal of improving operational services.

The names, affiliations, and phone numbers of relevant focal points are provided.

Prospective applicants should communicate with these focal points for further information on priorities. Focal points cannot assist in the conceptual design and specific elements to be included in a proposal. Applicants must submit completed proposals to the NOAA/NWS through the grants.gov portal rather than to individual focal points.

1. NWS Eastern Region Science Priorities

Warn on Forecast for High Impact Events

Development of improved, region-specific conceptual models for tornado, hail, high wind (both convective and synoptic), flash flood, and localized heavy snow events. Such development should include detailed investigation of the roles of mesoscale phenomenon such as gravity waves, thermal and moisture boundaries, and localized instabilities during these events.

Development of improved detection and warning techniques for low-topped severe convection and associated tornado development, and pulse convection events

Improved understanding and modeling of cloud physics and associated microphysical processes associated with fog, ceilings, clouds bases, cloud tops, and surface visibility, and associated advanced techniques for forecasting these phenomena

Improved forecasts and warnings of severe weather and heavy precipitation during tropical cyclone events.

Next Generation Forecast System

Development of forecast techniques to improve forecasting of high resolution aviation fields such as ceiling, visibility, and winds.

Development of new techniques to more effectively and efficiently utilize information from ensemble prediction systems in the forecast process.

Development of techniques to incorporate the effects of the region's unique geomorphic features such as the Appalachian Mountains, Atlantic Seaboard, and the Great Lakes into operational forecast and warning services. This includes the impacts of these features on the type, amount, and intensity of precipitation, and the interaction of these terrain features with

large scale weather systems such as winter storms, hurricanes, and closed lows.

Improved understanding of cloud physics and microphysical processes associated with determining precipitation type, snowfall efficiency, and extreme rainfall rates and the development of associated advanced techniques for forecasting these phenomena.

Improved understanding and modeling of snow melt and river ice formation and break-up processes.

Integrated Observing and Analysis System

Development of new techniques to utilize high resolution surface analysis grids to verify and evaluate digital forecasts.

Development of new techniques to utilize lightning information in the forecast and warning process.

Development of methods to observe or derive boundary layer fields.

Decision Support Information Systems

Improved wind and wave forecasts for the Atlantic coastal zone (within 60 nm including the various bays and sounds along the Atlantic seaboard), and the Great Lakes.

Improved forecasts and warnings of storm surge and flooding during tropical cyclone and extratropical storm events, including geospatial depictions of inundation.

Development of innovative approaches to formulate, produce, display, and deliver high resolution digital forecasts and products for the heavily populated eastern United States.

Integrating Social Science into Weather and Water Research and Operations

Development of innovative methodologies to communicate forecast uncertainties to a wide variety of users.

FOR FURTHER INFORMATION CONTACT: Kenneth Johnson, NOAA/NWS/Eastern Region Scientific Services Division, 631-244 0136, or by email at Kenneth.Johnson@noaa.gov.

2. NWS Southern Region Science Priorities

Warn on Forecast for High Impact Events

Develop methodologies to help forecasters effectively utilize new dual-polarization radar data to improve severe weather warnings (mainly hail detection) and flash flood forecasting (through better quantitative precipitation estimates).

Investigate methods and techniques to utilize high resolution analysis and modeling capabilities to extend short-term prediction of severe convective storms out to 30 minutes to an hour ("Warn on forecast").

Improved methodologies to predict the onset and duration of low clouds and restrictions to visibilities resulting in adverse effects on marine and aviation interests.

Improved methodologies for detection and warning of "tropical" tornadoes associated with inland moving tropical cyclones.

Next Generation Forecast System

Development of "smart systems" to improve first-guess population of forecast grids and intelligently monitor the local WFO gridded database.

Development of techniques to improve hydrologic modeling and prediction for Southern U.S. rivers and streams, including calibration of models, improved distributive modeling techniques, and improved soil moisture accounting.

Decision Support Information Systems

Development of improved techniques for the prediction of freezing and frozen precipitation events in the NWS Southern Region, including timing, areal extent, intensity and amount

Development of techniques to produce and implement effective short term cloud-to-ground lightning "alerts", particularly for use by public safety officials.

Improved understanding and monitoring/forecasting of extreme rainfall events associated with weak tropical cyclones or remnants of tropical cyclones.

Development of improved techniques to observe and forecast near-shore wind and waves in the coastal environment.

Improved understanding of the influences of the topographical surface forcing in the southern Appalachians, the Texas Hill Country, the Mexican Plateau, the Gulf Coast and the mountains of Puerto Rico on weather problems such as type, amount, duration and intensity of precipitation and resultant flash flooding.

FOR FURTHER INFORMATION CONTACT: David "Rusty" Billingsley, NOAA/NWS/Southern Region Scientific Services Division, 817-978-1300, or by email at david.billingsley@noaa.gov.

3. NWS Central Region Science Priorities

Warn on Forecast for High Impact Events

Development of improved methods for forecasting severe convective storms (specifically tornado development, hail 1 inch diameter or greater and convective winds in excess of 60 mph).

Development of improved methods for forecasting low-topped severe convection.

Development of improved methods for forecasting non-supercell tornadoes.

Development of methodologies for the use of dual-polarimetric Doppler weather radar and/or other multi-sensor technologies to detect precursor conditions and enhance forecast capabilities for improved warnings.

Next Generation Forecast System

Development of improved methods for forecasting cloud-to-ground lightning.

Development of improved methods for forecasting precipitation type and winter precipitation accumulation amounts.

Development of improved methods for forecasting the onset and dissipation of conditions contributing to IFR flying conditions and low level wind shear.

Development of improved methods for forecasting high impact weather events through the use and development of numerical models, and the application of model ensemble techniques in the forecast process

Integrated Observing and Analysis System

Development of methodologies for the use of dual-polarimetric Doppler weather radar

and/or other multi-sensor technologies to detect precursor conditions and enhance forecast capabilities for improved warnings.

Development of improved diagnostic methodologies to interrogate remotely sensed data (radar, satellite, etc.).

Decision Support Information Systems

Develop improved methods for providing 2-way, interactive decision support tools for decision makers and forecasters .

Integrating Social Science into Weather and Water Research and Operations

Develop improved methods for communicating weather and water information to the public and decision makers which incorporates forecast uncertainty.

FOR FURTHER INFORMATION CONTACT: Peter Browning, NOAA/NWS/Central Region Scientific Services Division, 816 268 3110, or by email at

Peter.Browning@noaa.gov

4. NWS Western Region (WR) Science Priorities

In addition to the five broad goals described in the overall mission: 1) Warn on Forecast for High Impact Events 2) Next Generation Forecast System 3) Integrated Observing and Analysis System 4) Decision Support Information Systems and 5) Integrating Social Science into Weather and Water Research and Operations, WR has a few unique issues listed below:

Improve acquisition and use of non-NWS observational networks, such as mesonets.

Improve analysis through better assimilation systems that produce more realistic analysis in complex terrain and coastal areas.

Identify and help improve the relationship of public safety and economic impacts due to significant meteorological and hydrological events in the mountainous western U.S.

In the West, water is a critical and closely managed resource. Improve operational precipitation (snow/rain as it varies with elevation) and hydrological forecasts in complex terrain across a wide range of western U.S. meteorological regimes.

Improve hydrological modeling, through use of emerging techniques, such as distributed hydrologic modeling, of rain/snow melt processes in complex terrain.

Improve fire-weather forecasts and smoke dispersion in the western United States.

FOR FURTHER INFORMATION CONTACT: Andy Edman, NOAA/NWS/Western Region Scientific Services Division, 801-524-5131, or by email at andy.edman@noaa.gov.

5. NWS Alaska Region Science Priorities

Warn on Forecast for High Impact Events

Develop a mesoscale modeling environment for improving smoke and Air Quality forecasts

Develop a modeling environment to forecast volcanic ashfall with sufficient operational lead time with model outputs for generating NWS watch, warnings, and advisories to inform the aviation community and the general public.

Develop an operational, coupled sea ice forecast model capability

Develop forecast assistance tools based on ensemble information (both short and long range)

Next Generation Forecast System

Develop a 4D weather visualization and manipulation system to aid in the forecasting of aviation related fields integrating numerical model guidance and observational analysis information

Improve numerical guidance downscaling techniques in areas of rough terrain and in the arctic taking advantage of statistical methods and climatology

Develop robust icing, turbulence, cloud and visibility guidance for aviation, taking advantage of high resolution mesoscale modeling

Improve the quality of numerical model analyses and forecasts in the North Pacific and over Alaska, including improved data assimilation techniques, characterization of the arctic and marine boundary layers, and processes related to the ocean-atmosphere-cryosphere interfaces

Integrated Observing and Analysis System

Develop an improved analysis and verification system that integrates statistical methods to help fill in the gaps with data sparse coverage, especially in areas of rough terrain integrating leading edge remote sensing techniques

Develop methods to derive volcanic ash volume and particle type using dual-polarimetric Doppler weather radar and/or other multi-sensor technologies data

Optimal design of a robust Mesonet capability in a remote environment

Analysis of satellite derived soundings to characterize the Arctic atmosphere (e.g., soundings as substitutes and/or adjuncts to raobs; comparison of soundings to raobs in spatial and temporal terms, etc.)

Utilization of UAV technology as observing system for volcanic ash characterization

Integration of particulate and/or gas sensors on surface observations systems to assist in the analysis of volcanic ash cloud evolution

Decision Support Information Systems

Development of interactive collaboration support tools between forecasters and decision makers

Development of numerical and statistical guidance in direct support of decision makers for specific high impact impacts.

Develop a climatology of sea ice, ocean waves, air and water temperature, wind speed and direction, and permafrost to aid in forecasting impacts of storms on coastal erosion in Alaska.

Integrating Social Science into Weather and Water Research and Operations

Investigate improved methods of communicating weather information to our customers, particularly for high impact events and forecast uncertainty information

Investigate methods to provide weather information to people in sparsely populated areas with limited communication means.

Develop improved methods for communicating weather and water information to the public and decision makers which incorporates forecast uncertainty.

FOR FURTHER INFORMATION CONTACT: Gary Hufford, NOAA/NWS/Alaska Region

Environmental and Scientific Services Division, 907-271-3886, or by email at gary.hufford@noaa.gov.

6. NWS Pacific Region Science Priorities

Use Geographic Information Systems technology to display, analyze, and process hydrometeorological forecast and observational data.

Develop techniques to assess and improve forecasts of tropical cyclone intensity in the Pacific.

Optimize the utility of new and existing observing systems, with emphasis on satellites and their use in providing precipitation estimations.

Develop, optimize, and utilize local high resolution modeling capabilities aimed at providing operational real time guidance as well as a tool for locally conducted research.

Conduct Pacific Basin synoptic climatological studies, with emphasis on flash-flood and high wind events.

FOR FURTHER INFORMATION CONTACT: Bill Ward, NOAA/NWS/Pacific Region Environmental Scientific Services Division, 808-532-6415, or by email at bill.ward@noaa.gov.

7. NWS National Centers for Environmental Prediction Science Priorities

Warn on Forecast for High Impact Events

Improve use of all sources of surface marine observations in data assimilation for numerical weather prediction.

Improve numerical weather prediction of marine boundary layer.

Develop guidance for tropical cyclone genesis that exhibits a high probability of detection and a low false alarm rate, and/or provides probability of genesis

Improve understanding and forecast methodologies for extreme rainfall events, including application of high-resolution modeling and ensemble approaches.

Develop mesoscale and stormscale numerical prediction models, ensemble approaches, and verification techniques to improve forecasts of the initiation and evolution of deep moist convection and other high impact mesoscale weather events and their associated hazards

Next Generation Forecast System

Accelerate improvements in the CFS and the GFS.

Develop multi-model ensemble prediction systems for all time scales

Improve numerical space weather prediction of geomagnetic storms, solar particle events, and specification of the radiation belts.

Develop guidance for tropical cyclone intensity change, especially for the onset, duration, and magnitude of rapid intensification events, as well as for over-water rapid weakening events.

Develop improved techniques to assess aspects of daily model forecasts (6h - 7day lead times), including model initializations, forecast trends, physical realism, and bias.

Integrated Observing and Analysis System

Improve use of all sources of solar-terrestrial observations in data assimilation for numerical

space weather prediction.

Improve capability to observe the tropical cyclone and its environment to support forecaster analysis and model initialization.

Apply observational data to diagnose and forecast long transports of concentrated moisture (i.e. atmospheric rivers).

Develop three dimensional mesoscale and storm scale analysis techniques, observing systems, expert systems or statistical guidance, robust conceptual models, and scientific understanding to support high impact forecast decisions.

Decision Support Information Systems

Develop climate forecast products for time scales from weeks to years.

Investigate the feasibility and develop methods for integrating space weather products into operation data processing and display systems.

Perform evaluation and analysis of model and ensemble diagnostic fields specific to enroute aviation forecasts (e.g., Ellrod index, TKE, CIP, FIP, GTG, RAP ICE, etc.)

Develop enhancements to the operational environment (e.g., ATCF, AWIPS-II) to increase forecaster efficiency, by expediting analysis, forecast, coordination, and/or communication activities

Develop better techniques to incorporate uncertainty derived from short and medium range ensembles forecasts into the forecast process and convey this uncertainty to users of HPC products.

Develop better understanding and application of climate-weather connections (e.g., MJO, NAO, PNA, etc.) to improve medium range forecasts.

Create improved decision support information for user community through creation of probabilistic hazardous mesoscale weather impact information that incorporates meteorological risk forecasts with demographic and geographic datasets.

Integrating Social Science into Weather and Water Research and Operations

Develop improved and enhanced public products conveying information on the forecast tropical cyclone track, intensity (peak wind), size (extent of damaging wind), and storm surge

Explore and apply social science knowledge to improve communication of uncertainty and risk associated with hazardous mesoscale weather, both with weather enterprise partners and with the Public.

(Note: In all instances, projects are encouraged which not only address the priorities of NCEP service centers but also address aspects of the NCEP/Environmental Modeling Center's goals for improving data assimilation and numerical modeling of the atmosphere, oceans, and Earth's surface.)

FOR FURTHER INFORMATION CONTACT: Lauren Morone, NOAA/NWS/NCEP, 301-763-8000 ext. 7010, or by email at lauren.morone@noaa.gov.

C. Program Authority

Authority for the CSTAR program is provided by the following: 15 U.S.C. 313; 49 U.S.C. 44720 (b); 33 U.S.C. 883d; 15 U.S.C. 2904; 15 U.S.C. 2934.

II. Award Information

A. Funding Availability

The total funding amount available for proposals is anticipated to be approximately \$250,000. However, there is no appropriation of funds at this time and no guarantee that there will be. Individual annual awards in the form of cooperative agreements are limited to a maximum of \$125,000 per year for no more than three years. We anticipate making 1-3 awards.

B. Project/Award Period

This program announcement is for projects to be conducted by university investigators for a 1-year, 2-year, or 3-year period, with an anticipated start date of May 1, 2011 unless otherwise directed. When a proposal for a multi-year award is approved, funding will initially be provided for only the first year of the program. If an application is selected for initial funding, the NWS has no obligation to provide additional funding in connection with that award in subsequent years. Funding for each subsequent year of a multi-year proposal is at the discretion of the NWS. It will be contingent upon satisfactory progress in relation to the stated goals of the proposal to address specific science needs and priorities of the NWS and the availability of funds. Applications must include a scope of work and a budget for the entire award period.

C. Type of Funding Instrument

The funding instrument for extramural awards will be a cooperative agreement since one or more NOAA/NWS components--forecast offices, NCEP service centers, or regional headquarters--will be substantially involved in implementation of the project. Examples of substantial involvement may include, but are not limited to, proposals for collaboration between NOAA scientists and a recipient scientist and/or contemplation by NOAA of detailing Federal personnel to work on proposed projects. NOAA/NWS believes its warning and forecast mission will benefit significantly from a strong partnership with outside investigators. Current program plans assume the total resources provided through this announcement will support extramural efforts through the broad academic community.

III. Eligibility Information

A. Eligible Applicants

Eligible applicants are institutions of higher education and federally funded educational institutions such as the Naval Postgraduate School. This restriction is needed because the results of the collaboration are to be incorporated in academic processes which ensure academic multidisciplinary peer review as well as Federal review of scientific validity for use in operations.

B. Cost Sharing or Matching Requirement

No cost sharing is required under this program.

C. Other Criteria that Affect Eligibility

Since a goal of this announcement is to foster long-term collaborative interactions between a university and NWS operational offices/NCEP service centers, a proposal must be submitted by at least two principal investigators (PIs) from the same college or university. In addition, collaboration with PIs at different universities is allowed, but there must be a single application from a lead university (with at least two PIs from the lead university) with subawards to the participants from other institutions. Other arrangements will not be considered. At least one of the PIs within this program must be a full, assistant, or associate college or university professor with substantial documented involvement in the proposal. Proposals should clearly state the role of each PI in the project. Except for researchers who are associate, assistant, or full professors at the Naval Postgraduate School or other federally funded educational institutions, federal government employees are not allowed to be listed as PIs or receive funding, although collaboration between the academic community and NOAA within the project is required.

IV. Application and Submission Information

A. Address to Request Application Package

The standard application package is available at <http://www.grants.gov>. For applicants without internet access, an application package may be received by contacting Sam Contorno, NOAA/NWS, 1325 East-West Highway, Room 15330, Silver Spring, Maryland 20910, Phone: 301-713-3557, ext. 150, email: samuel.Contorno@noaa.gov.

B. Content and Form of Application

Proposals should total no more than 30 pages in length, single spaced. It is strongly recommended that Times New Roman 12 point font, or an equivalent, be used. Federally mandated forms, tables of contents, and any letters of support are not included within the page count, but all other information is.

Multi-year proposals up to a maximum of three years will be considered; however, funding beyond the first year will be dependent upon satisfactory performance and the availability of funds. May 1, 2011, is to be used as the proposed start date on proposals unless otherwise directed by the NOAA Program Officer.

The application elements listed below are required before an award can be made. Failure to submit elements 1, 4, and 5 by the deadline will result in the application not being reviewed if the omissions are not corrected prior to the deadline. The program office will make an effort to notify the applicant of any omissions, but there is no guarantee this can occur prior to the application deadline. The aforementioned application elements are as follows:

1. Title Page. The title page must be officially authorized by the institutional representative. The PIs and institutional representative should be identified by full name, title, organization, telephone number, and address. It is requested that the title page clearly indicate which project areas are being addressed and the total amount of requested Federal funds be listed for each budget period.

2 Abstract Page. An abstract should be included and should contain an introduction of the problem, rationale, and a brief summary of work to be completed. The abstract should appear on a separate page, headed with the proposal title, institution's investigators, total proposed cost, and budget period.

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

4. Project description. The proposed project must be completely described, including identification of the problem; scientific objectives; proposed methodology; relevance to the priorities of NWS Regions or NCEP service centers; operational applicability; scientific merit; proposed technology transfer; past collaborations with operational hydrometeorologists; cost effectiveness of research; and the program priorities listed above. Benefits of the proposed project to the general public and the scientific community should be discussed. A year-by-year summary of proposed work must be included.

5. Budget and Proposed Budget Justification. Applicants must submit a Standard Form (SF) 424, Application for Federal Assistance, including a detailed budget using the SF 424A, Budget Information--Non-Construction Programs. (The forms are available on grants.gov.) Pay careful attention to show the yearly budget breakout on the SF 424A for multi-year proposals. In addition, the body of the proposal should include a separate table showing total and annual budgets (if multi-year) corresponding with the project description. Additional text to justify expenses should be included as necessary.

6. Vitae. Abbreviated curriculum vitae are sought with each proposal. Reference lists should be limited to all publications in the last three years with up to five other relevant papers.

7. Current and Pending Support. For each investigator, submit a list which includes project

title, supporting agency with grant number, investigator months, dollar value, and duration. Requested values should be listed for pending support. This program does not require any NEPA questions to be answered as part of the application.

C. Submission Dates and Times

Full Proposals must be received by www.grants.gov, postmarked, or provided to a delivery service by 5:00 p.m. (EDT) on October 15, 2010. Use of U.S. mail or another delivery service must be documented with a receipt. No facsimile or electronic mail applications will be accepted. 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. Proposals received after the deadline will be rejected/returned to the sender without further consideration.

D. Intergovernmental Review

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

E. Funding Restrictions

Funding beyond the first year will be dependent upon satisfactory performance and the continued availability of funds.

F. Other Submission Requirements

None.

Proposals should be submitted through www.grants.gov. For those organizations without internet access, proposals may be sent to Sam Contorno, CSTAR Program Manager, NOAA/NWS, 1325 East-West Highway, Room 15330, Silver Spring, Maryland 20910.

V. Application Review Information

A. Evaluation Criteria

The evaluation criteria and weighting of the criteria are as follows:

1. Importance/Relevance and Applicability of Proposal (35 percent): This criterion ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, federal, regional, state, or local activities. For the CSTAR competition this includes:
What is the likelihood of the proposed science activities to improve operational hydrometeorological services?
Are proposed research activities easily transferred to forecast operations in a reasonable time frame?

What is the degree of collaboration with multiple operational units throughout the project?
What is the level of planning by researchers to integrate results into operations successfully and efficiently?

2. Technical/Scientific Merit (30 percent): This criterion assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear project goals and objectives. For the CSTAR competition this includes:

What is the intrinsic scientific value and maturity of the subject and the study proposed as they relate to the specific science priorities?

Were focused scientific objectives and strategies, including data management considerations, project milestones, and timeliness used?

3. Overall Qualification of Applicants (20 percent): This criterion ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project. For the CSTAR competition this includes:

- a. Do PIs clearly document past scientific collaborations with operational meteorologists?
- b. Have past interactions been successful?
- c. Are researchers likely to maintain effective and consistent interactions with operational forecasts throughout the course of the proposed research program?
- d. Have researchers demonstrated the ability to conduct successful research?

4. Project Costs (15 percent): This criterion evaluates the budget to determine if it is realistic and commensurate with the project needs and time-frame. For the CSTAR competition this includes:

Do researchers demonstrate the ability to leverage other resources?

Is there a high ratio of operationally useful results versus proposed costs?

5. Outreach and Education (0 percent): This criterion assesses whether the project provides a focused and effective education and outreach strategy regarding NOAA's mission to protect the Nation's natural resources. The CSTAR competition does not use this criterion.

B. Review and Selection Process

An initial administrative review/screening is conducted to determine compliance with requirements/completeness. All proposals will be evaluated and individually ranked in accordance with the assigned weights of the above evaluation criteria by an independent peer panel review. Three to ten NOAA experts, primarily representing NWS Regions and Centers, may be used in this process. The merit reviewers' ratings are used to produce a rank order of the proposals. The Selection Official selects proposals after considering the peer panel reviews and selection factors listed below. In making the final selections, the Selecting Official will award in rank order unless the proposal is justified to be selected out of rank order based upon one or more of the selection factors.

C. Selection Factors

The Merit review ratings shall provide a rank order to the Selecting Official for final funding recommendations. 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 by a) geographical balance, b) type of institutions, c) type of partners, d) research areas, and e) project types.
3. Duplication of other projects funded or considered for funding by NOAA/federal agencies.
4. Program priorities and policy factors.
5. Applicant's prior award performance.
6. Partnerships with/Participation of targeted groups.
7. Adequacy of information necessary for NOAA staff to make a NEPA determination and draft necessary documentation before recommendations for funding are made to the Grants Officer.

Regarding Selection Factor 2b, while a university may submit more than one application, the selecting official may limit the awards to only one per university.

D. Anticipated Announcement and Award Dates

Subject to the availability of funds, review of proposals will occur during November and December 2010, and funding should begin during May of 2011 for most approved projects. May 1, 2011, should be used as the proposed start date on proposals, unless otherwise directed by the Program Officer.

VI. Award Administration Information

A. Award Notices

Successful applicants will receive notification that the application has been recommended for funding to the NOAA Grants Management Division. This notification is not an authorization to begin performance of the project. Official notification of funding from the NOAA grants Officer is the authorization that allows the project to begin. Notification will be issued to the Authorizing Official and the PI of the project either electronically or in hard copy. Unsuccessful applicants will be notified that their proposals were not selected for recommendation.

B. Administrative and National Policy Requirements

1. The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements: Administrative and national policy requirements for all Department of Commerce awards are contained in the Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained in the Federal Register notice of February 11, 2008 (73 FR 7696). A copy of the notice may be obtained at <http://www.gpoaccess.gov/fr/search.html>.

2. Limitation of Liability: In no event will NOAA or the Department of Commerce be responsible for application preparation costs if these programs fail to receive funding or are canceled because of other agency priorities. Publication of this announcement does not oblige NOAA to award any specific project or to obligate any available funds.

3. 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.osec.doc.gov/bmi/daos/216-6.htm>, 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 feasible measures to reduce or avoid any identified adverse environmental impacts of their proposal. The 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.

C. Reporting

Award recipients will be required to submit financial and performance (technical) reports. These reports are to be submitted electronically through the NOAA Grants Online system on a semi-annual basis unless the recipient does not have internet access, in which case hard copy submissions will be accepted. All financial reports are routed directly to the NOAA Grants Officer. Performance reports are routed to the NOAA Program Officer.

VII. Agency Contacts

The point of contact is Sam Contorno, NOAA/NWS; 1325 East-West Highway, Room 15330; Silver Spring, Maryland 20910-3283, or by phone at 301-713-3557 ext. 150, by fax to 301-713-1253, or via email at samuel.contorno@noaa.gov. Questions concerning this announcement must be made via email to samuel.contorno@noaa.gov. Questions and NOAA responses will be made public via the web at <http://www.nws.noaa.gov/ost/cstar.htm>

VIII. Other Information

To use grants.gov, applicants must have a Dun and Bradstreet Data Universal Numbering System (DUNS) number and be registered in the Central Contractor Registry (CCR). Allow a minimum of five days to complete the CCR registration. [Note: Your organization's Employer Identification Number (EIN) will be needed on the application form.] Applicants are strongly encouraged not to wait until the application deadline date to begin the application process through grants.gov.