



Delaware National Estuarine Research Reserve Request for Proposals for Coastal Research Grants

Request for Proposals

- I. Introduction and Project Descriptions
- II. Eligibility Requirements
- III. How to Apply
- IV. Selection Process
- V. Grantee Responsibilities
- VI. Contact Information

Delaware National Estuarine Research Reserve
Department of Natural Resources and Environmental Control

I. INTRODUCTION and PROJECT DESCRIPTIONS

Purpose of Solicitation:

The Delaware National Estuarine Research Reserve (DNERR) of the Department of Natural Resources and Environmental Control is announcing the availability grant funding for projects that help fulfill the DNERR Research Goal “To further the understanding of historic and current conditions and processes of the estuary to improve science-based decision making for proper management of the State’s estuarine resources”. This year’s RFP will focus on two specific projects; the first correlating meteorological and other coastal monitoring information to wave development in the Delaware Bay and the second on climate change trends in the Delaware Estuary.

Project Descriptions:

Project 1: Wave Buoy Data Analysis

The DNREC Coastal Programs has two TRIAXYS™ Directional Wave Buoys deployed in the middle and lower reaches of the Delaware Bay. The first buoy was deployed in February of 2007, the second later that year. These buoys collect hourly data on numerous factors of wave direction, period, and height. It is the desire of DNERR to have a statistical analysis of the wave data performed to determine any wave direction/height/period correlations between: 1) the two buoys described above, 2) NOAA Buoy 2906 in the Atlantic Ocean, and 3) with wind speed/direction data from nearby meteorological stations. This data will be used to characterize the waves in the Delaware Bay based on meteorological inputs; provide information for input into various coastal models and the DEOS Early Warning System (currently under development); and to determine the need for more or less buoys in the Delaware Bay to provide comprehensive analysis of wave characteristics in the Bay.

Specific Information and Data Availability

TRIAXYS™ Directional Wave Buoy Locations:

Middle Bay: 39.120N 75.255 W

Lower Bay: 38.882N 75.196W

Deployment Dates:

Middle Bay: 9/2007

Lower Bay: 2/2007

Data Collected: (on board storage) - 20 minute sampling period, hourly reports

Wave height – maximum, highest 10%, highest 33%, average

Wave period of wave height categories

Spectral wave periods – mean, peak, significant

Mean wave direction

Mean Wave spread

Water temperature

<i>Resolution/Accuracy</i>				
	<i>Range</i>		<i>Resolution</i>	<i>Accuracy</i>
<i>Heave</i>	± 20 m		0.01 m	<2%
<i>Period</i>	1.6 to 30 sec		0.1 sec	<2%
<i>Direction</i>	0 to 360°	3°		3°
<i>Water Temp</i>	-5 to 50° C		0.1°C	$\pm 0.5^\circ$ C

Data Collected: (real-time transmitted) - 20 minute sampling period, hourly reports

Wave height – maximum, highest 10%, highest 33%, average

Wave period of wave height categories

Mean wave direction

Mean wave spread

Water temperature

<i>Resolution</i>			
	<i>Range</i>		<i>Resolution</i>
<i>Heave</i>	± 20 m		0.2 m
<i>Period</i>	1.6 to 30 sec		0.5 sec
<i>Direction</i>	0 to 360°	3°	
<i>Water Temp</i>	-5 to 50° C		1°C

Data Availability

Lower Bay – High Resolution: 9/07-3/08, 8/08-10/09

Low Resolution: 2/07-4/07, 8/08-12/09

*Middle Bay – High Resolution: 6/07-1/08, 5/08-7/09, 5/10-12/10, 6/11-present**

Low Resolution: 7/08-11/09, 6/10-12/10, 6/11-present

** Storage module currently on-board deployed buoy, retrieval spring/summer 2012.*

Project 2: Climate Change Trend Analyses for the Delaware Bay Estuary

Various types of long-term environmental monitoring efforts have taken place in numerous locations around the Delaware Bay region. It is the desire of the DNERR that an examination of these monitoring datasets and other pertinent information, including historic photos and other records dating back almost 100 years, be performed to determine if any climate change trends can be derived from these datasets. Similar ongoing trend analyses include NOAA reports on sea level changes for their Delaware tidal stations. (http://tidesandcurrents.noaa.gov/sltrends/sltrends_station.shtml?stnid=8557380 Lewes, DE)

The objectives of this proposal are to identify; 1) statistically valid trends in climate patterns (i.e. rainfall amounts, storm frequency, intensity, temperature changes, temperature extremes, etc.) and 2) secondary impacts that correspond to changing climate patterns (i.e. increased flooding, crop losses, habitat change, energy usage). This information will be used in outreach and education efforts on local impacts of climate change. Local anthropogenic changes which may influence any trends in the data must be

considered and included in the analysis. For example, urbanization and increased impervious surface changes must be accounted for in examining increased downstream flooding. Other anthropogenic impacts to consider may include but not limited to; land use changes, deforestation, waterway management, and engineered structures.

Important Dates and Grant Schedule:

March 9, 2012	Proposals due to Delaware Coastal Programs office no later than 3:00 pm . <i>Applications received after that time will not be reviewed.</i>
On or before March 15, 2012	Grant awards announced and recipients notified
March 15, 2013	Project completion deadline

II. ELIGIBILITY REQUIREMENTS

Applicant Requirements:

Applicants may be any academic institution or not-for-profit organization working at the local level within the State of Delaware.

Award Information:

Funding for each project receiving a grant award in the 2012 grant cycle is anticipated to be around \$25,000. The Delaware National Estuarine Research Reserve is providing financial support for projects through the National Oceanic and Atmospheric Administration (NOAA). All award recipients are required to comply with all federal laws and guidelines pertaining to the use of federal funds.

Matching Requirements:

Funding received under this grant program must be matched dollar for dollar (a 50:50 cost share ratio) by non-federal, state, or local cash or in-kind services. For example, if \$25,000 in federal funds is requested, \$25,000 in state, local, or some other non-federal funds must be shown as match. A variety of expenses can be considered as match including in-kind services, waiving of graduate student tuition and or fees, student advisor time, volunteer hours, non-federal state or local cash. Deferral of overhead cannot be used as match. For additional information please contact the Delaware National Estuarine Research Reserve Office at (302) 739-3436

Ineligible costs:

Funds may not be used for construction costs, scholarships to individuals, deficit reduction activities, projects that have already been completed, or for those activities that constitute legally required mitigation for the adverse effects of an activity regulated or otherwise governed by state or federal law.

Project Duration:

Work conducted for the project is to be complete by March 15, 2013. Award recipients will be required to submit quarterly status reports and will be notified of specific reporting requirements in the grant award agreement.

III. HOW TO APPLY

Submission of Proposals:

One (1) signed original **AND** one (1) electronic copy of the proposal and any supporting materials must be submitted to Delaware Coastal Programs Office at the following address **no later than 3:00 pm, March 9, 2012.**

ATTN: DNERR Grant Application

Patricia Hoffman
Delaware Coastal Programs
Delaware National Estuarine Research Reserve
5 E. Reed Street, Suite 201
Dover, DE 19901

Grant Application:

Grant applicants must contain the following information to be considered a complete application:

Cover Page: The cover page should include the proposal title, Principal Investigator(s) including contact information, Beginning/completion date of project, requested amount of funding, technical and administrative contacts. This page should include the signature of the responsible party submitting the proposal.

Abstract: Include a short abstract of the project suitable for public distribution and federal grant reports. (1- 2 paragraphs)

Scope of Work: This section should concisely describe the outcomes of the proposal. It should describe in detail the methods and analyses that will be performed. All results must be statistically valid and defensible. (1-2 pages)

Time Schedule and Benchmarks: This section should break down the Scope of Work into tasks with target dates for completion of each task. It should list target milestones, and timelines. This information will also be used to develop payment schedule. (1 page)

Project Budget: This section should provide a detailed budget description and a brief narrative justification of the budget. It should include the amount requested and itemize all expenditures such as personnel, travel, equipment, supplies, contractual costs, indirect costs, and non-federal match sources and amounts. (1 page)

CV: Short (1-2 page) CV of all investigators listed on the proposal

Any project not containing the information outlined above may be disqualified.

IV. SELECTION PROCESS

Each project proposal will receive an initial screening by the Delaware National Estuarine Research Reserve to ensure the application meets basic eligibility criteria. A committee of resource experts will then review and rank the eligible proposals and will make recommendations for funding based upon those rankings.

Proposal Review and Ranking Criteria:

Technical merit (60%)

- Project will deliver tangible, defensible result
- Proposed outcomes meet the intent of the RFP
- Methods and analyses described are appropriate to meet the goal of the RFP

Cost effectiveness and budget detail (20%)

- Detailed budget
- Properly identified match
- Overall cost effectiveness

Investigator(s) Qualifications (20%)

- Investigator(s) have the knowledge and experience to successfully complete the project

V. GRANTEE RESPONSIBILITIES

Award recipients will be required to submit quarterly status reports and will be notified of specific reporting requirements in the grant award agreement. The Delaware National Estuarine Research Reserve is providing financial support for projects through the National Oceanic and Atmospheric Administration (NOAA). All award recipients are required to comply with all federal laws and guidelines pertaining to the use of federal funds.

VI. CONTACT INFORMATION

For further details regarding the Delaware National Estuarine Research Reserve Coastal Research Grant Program applicants may contact:

Robert Scarborough, Ph.D. DNERR Research Coordinator Bob.Scarborough@state.de.us (302) 739-9283 or (302) 739-3436	or	Kimberly Cole DNERR Manager Kimberly.Cole@state.de.us (302) 739-3436
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The Department of Natural Resources and Environmental Control solicits and encourages Minority Business Enterprises (MBE) and Women’s Business Enterprises (WBE) in all service contracts and is committed to affirmative action, equal opportunity, and diversity of its workforce.