U.S. Coastal Research Program

2024 Request for Proposals Informational Webinar

USCRP
US COASTAL RESEARCH PROGRAM

January 19, 2024

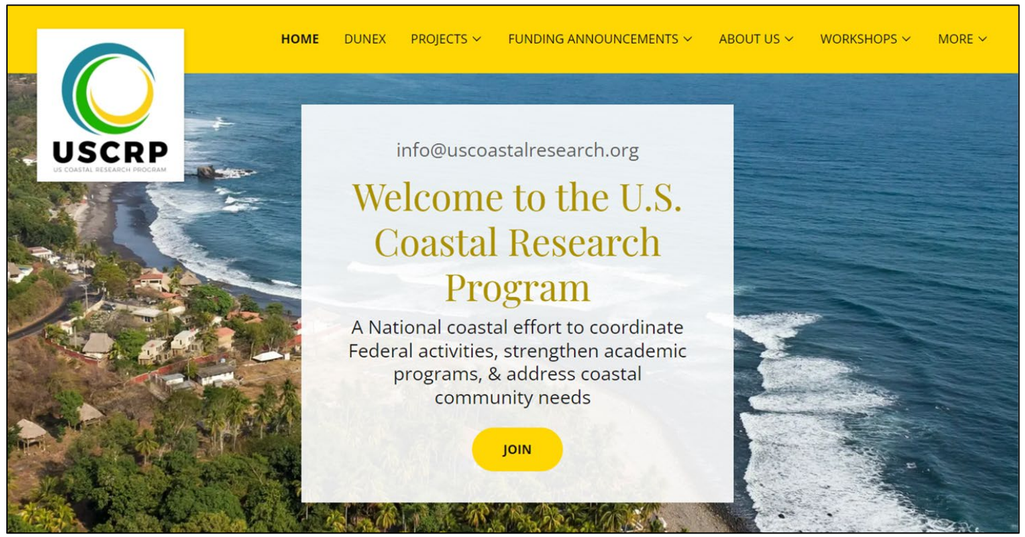
This webinar will be recorded, slides will be posted to the USCRP website.
https://uscoastalresearch.org/2024-awards-info

USCRP 2024 Request for Proposals: Agenda

1. Introduction to USCRP
2. Timeline and Proposal Process Overview
3. Eligible Applicants
4. Research Topics and Prioritized Needs
5. Pre-Proposal and Proposal Content, Evaluation Criteria
6. Questions

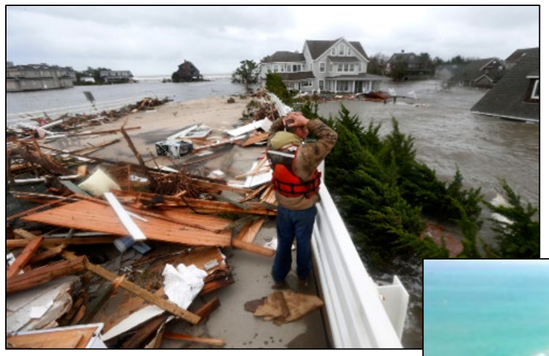
What is USCRP?

- Multi-agency led effort to coordinate federal activities, strengthen academic programs, and address coastal community needs.
  - Identifying coastal research priorities
  - Enhancing funding for coastal academic programs
  - Fostering collaboration
  - Promoting science translation
- Guided by priorities of coastal leaders in federal agencies, academics, and non-governmental organizations and by the overarching framework and needs as identified in the seminal 2014 Nearshore Report.



USCRP Research Themes

Complex issues require integrated approaches and provide opportunities for unique, and new partnerships



Extreme events: storm-induced flooding, coastal erosion, community impacts, natural recovery

Long-term processes and coastal response: sea level changes, future storms, sediment supply, land use changes, human interventions

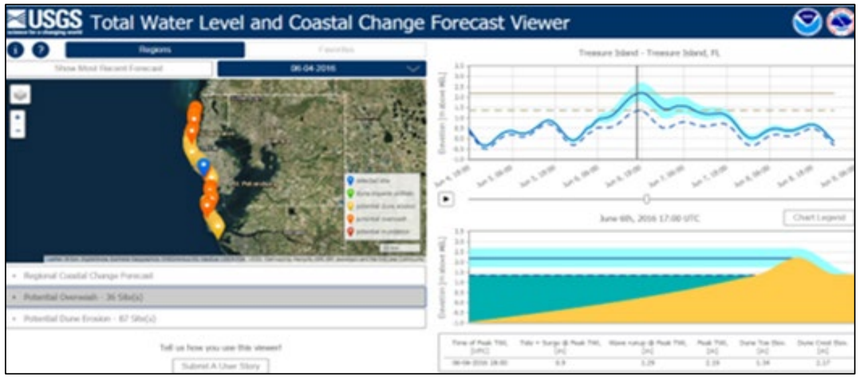
Biological, chemical, physical processes that impact human and ecosystem health.

Nearshore Report:
https://uscoastalresearch.org/publications

USCRP Enabling Infrastructure

Observations: Development of new sensors and methods, focused programs, and expanded nearshore observing systems; provide test beds to compare and improve models.

Modeling: Improved process representation, better model coupling, incorporation of data assimilation techniques, and testing of real-time models.



Coordination/Collaboration: Collaboration between academia, government, and industry will enable efficient transfer of results and predictive tools to stakeholders, supporting informed decisions that will improve diverse aspects of coastal management.

USCRP

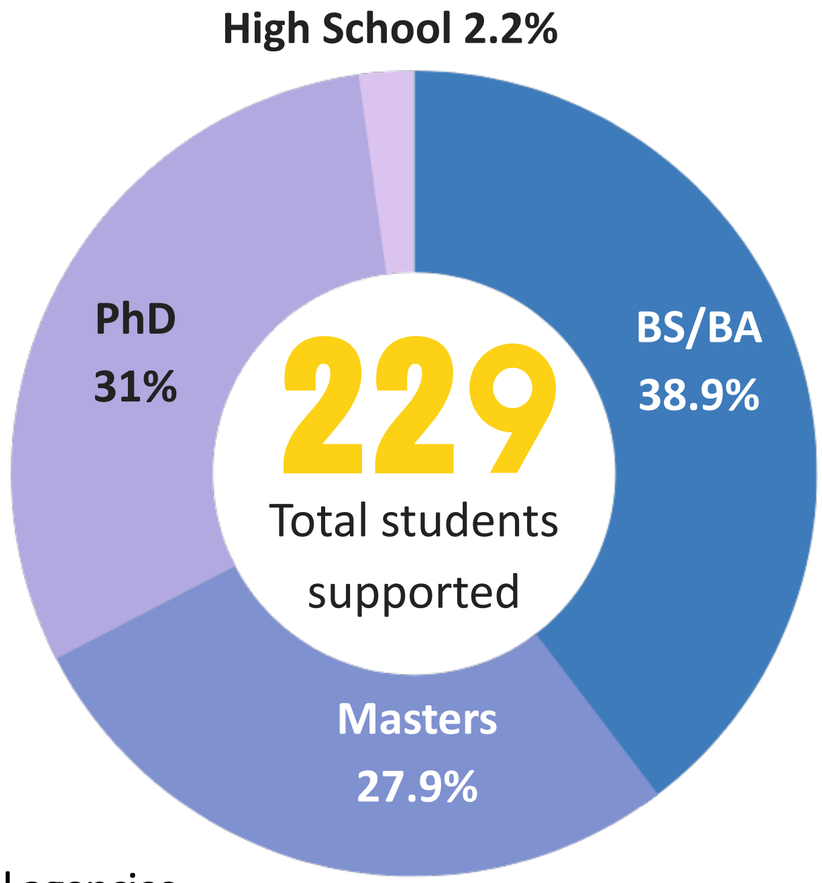
THE FIRST FIVE YEARS OF FUNDING 2016-2021

62 Research proposals funded across **21** states totaling $14.6 million

19 Federal agencies engaged

95 Non-federal organizations including NGOs, State Agencies, Corporations, Local Businesses, State Sea Grants, and Municipalities.

114 Students matriculated to academia, stakeholder organizations, and **8** federal agencies.



OUR PARTNERS

USCRP

USCRP

THE FIRST FIVE YEARS OF OUTCOMES 2016-2021

462 TANGIBLE OUTCOMES

50% OF ALL OUTCOMES INVOLVE STUDENTS

ACADEMIC ADVANCEMENTS: 340

- Peer-reviewed Publications: 111
- Technical Presentations: 229

DATA & INFORMATION: 38

- Public Datasets: 30
- Reports & Regulatory: 8

TOOL ADVANCEMENTS: 41

- Software: 18
- Innovation - Tech & Other: 23

PUBLIC OUTREACH: 43

- Public Engagement: 32
- External Publicity: 11

USCRP 2024 Request for Proposals

- Subject to the availability of federal funding in FY24, it is anticipated that approximately $4M may be available to fund academic projects. The amount of the individual awards should not exceed $500K.
- Applicants may submit proposals with a period of performance of up to 2 years
- Awards will be multi-year contracts funded incrementally. Multi-year contract funding is subject to the availability of future federal funding.

2024 Request for Proposals: Proposal Process Overview

- A pre-proposal (max 5 pages) that addresses at least one of the USCRP research priorities of long-term coastal processes, extreme events, or human and ecosystem health by leveraging existing data and resources to continue analysis or explore new science questions, hypotheses, and challenges should be submitted to the USCRP.
  - To be eligible to submit a full proposal, pre-proposals must be submitted by 11:59 PM (EST) on February 1, 2024

- Full research proposals (max 10 pages) are due by March 1, 2024, at 11:59 PM (EST).

- Pre-proposals and full proposals should be submitted to the USCRP RFP posted on the USCRP website (submit proposal button)

2024 Request for Proposals: Timeline

Anticipated Dates	Task
February 1, 2024	Pre-proposals due to USCRP (No more than 5 pages)
March 1, 2024	Full research proposals due to USCRP (No more than 10 pages)
March - April 2024	Proposals reviewed
April 1, 2024	Proposals recommended for funding; researchers notified
April 15, 2024	Recommended proposals submitted through the USACE Broad Agency Announcement (BAA) process
August - September 2024	Awards made, Anticipated project start

2024 Request for Proposals: Eligible Applicants

- PIs should be a researcher at a U.S. institution of higher learning and in a role that includes educating and supervising graduate students.
  - The USCRP encourages support and leadership roles, as appropriate, for STEM undergraduates into the coastal field.
- Preference will be given to researchers and students who are U.S. citizens. Collaborations with international academics is acceptable.
- Academic collaborations of interdisciplinary teams are highly encouraged.
- Applicants must be in good standing with previous USCRP awards to receive FY24 funds.
- Disbursements of funding should be handled by the lead university, who will receive the USCRP award, and detailed in the proposed budget including overhead for the collaborating universities.

2024 Request for Proposals: Research Topics and Prioritized Needs

- Proposals that address at least one of the USCRP research priorities of long-term coastal processes, extreme events, or human and ecosystem health by leveraging existing data and resources to continue analysis or explore new science questions, hypotheses, and challenges.

- Though the data should be from a previous collection effort (USCRP is not funding new data collection for this RFP), the data do not need to be from previously funded USCRP projects (although highly encouraged).

- Previous data sets not collected by USCRP projects must address at least one of the USCRP research priorities of long-term coastal processes, extreme events, or human and ecosystem health

2024 Request for Proposals: Research Topics and Prioritized Needs

- **Potential example topics include:**
  - Strategic investment in extending previously funded collaborative studies (Duck 82, Duck 85, SuperDuck, DUNEX, etc)
  - Analyze existing long-term datasets
  - Combine existing datasets to explore interdisciplinary topics
  - Use existing data to run/evaluate numerical models
  - Use existing data to train machine learning models
  - Explore follow on research topics as highlighted from next-steps of previous research projects
  - Use existing data to transition tools and technology
  - Use existing data to address new/current stakeholder needs

2024 Request for Proposals: Pre-Proposal Content

- **Pre-proposals must provide the following information (maximum of 5 pages):**
  - Project title and names, titles, affiliations, and contact information (email and phone number) of PIs (lead and co-PIs)
  - Duration of the project
  - Estimated overall cost (i.e., labor costs, material costs, burdens, etc.)
  - Statements describing the objective(s) or goal(s) of the working hypothesis, if appropriate.
  - Executive summary describing the background, scope of work, project plan, and expected results and deliverables.
  - One or more paragraphs describing the nature of the existing dataset (where/when from, how/who collected, products derived from dataset to date, etc.) and the proposed work that is new, novel, transformational, etc.
  - A one-page curriculum vitae of the lead principal investigator.
- **Pre-proposals will be used to allow the USCRP to gauge interest in projects that may be submitted for full consideration. Feedback will not be sent on pre-proposals, unless a pre-proposal does not meet eligibility requirements.**

2024 Request for Proposals: Proposal Content

- Proposals should describe the research plan, show how the work aligns with prioritized needs, specify the graduate student(s) role, present a detailed budget.

- **Priority will be given to proposals that emphasize:**
  - Training the next generation of coastal engineers and researchers
  - Collaboration across departments and disciplines
  - Working with underserved communities and minorities

- Clear description of the dataset to be used in the research:
  - Who collected the data, where the data was collected, why was the data originally collected (as part of what project), who funded the data collection, what data was collected and how, what products were derived from the original dataset (i.e., publications), etc.

2024 Request for Proposals: Proposal Content

Proposals must be no more than 10 pages (single-spaced, 12-point font):

- Research Proposal Overview
- Goal and Objectives
- Societal Relevance
- Scientific and Technical Approach
- Deliverables
- Qualifications
- Partners
- Project Budget

Additional Items (not counted towards 10-page limit):

- Diversity Statement (Required)
- Data Management Plan (Required)
- Works Cited (Required)
- CVs (Required, 2-page limit per CV)
- *Letters of Support (Optional, 2-page limit per letter)*

2024 Request for Proposals: Evaluation Criteria

Evaluation Criteria	Value
Scope	20%
Scientific and Technical Merit	20%
Experience/Research Team/Partners	20%
Deliverables	10%
Student Opportunities	15%
Timeline	5%
Budget	10%

2024 Request for Proposals: Proposal Process

- Applicants should submit pre-proposals to USCRP by February 1 and full proposals to USCRP by March 1, 2024

- Successful proposals will receive a letter of recommendation from the USCRP and then will be asked to submit their proposal with any suggested revisions through the USACE Broad Agency Announcement (BAA) process.

- Details on how to apply through the BAA process will be described in the letter of recommendation from USCRP, however the BAA process can be accessed at any time.

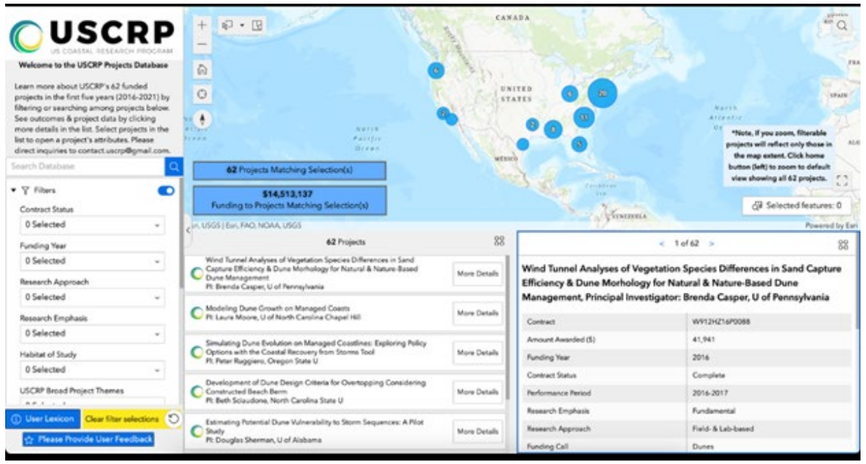
USCRP Resources

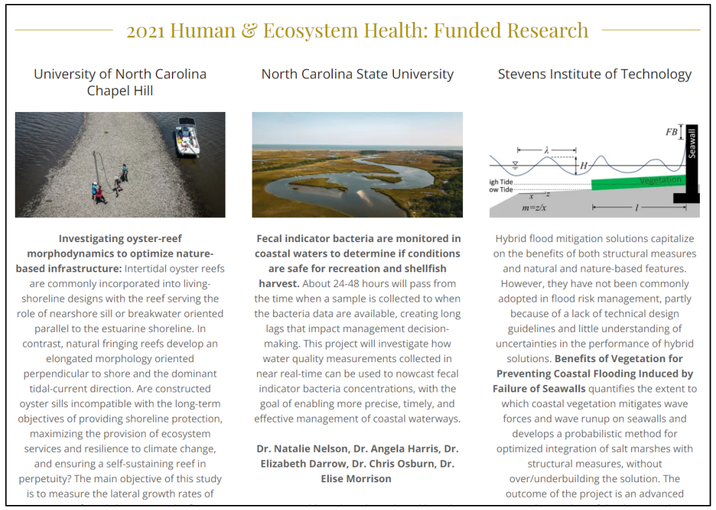
USCRP Project Database:

https://experience.arcgis.com/experience/5cdde7ccea1a44d6a170e9c8ca0da775/

USCRP Research Highlights: USCRP website → Projects

USCRP Story Map: https://bit.ly/uscrp-projects





2021 Human & Ecosystem Health: Funded Research

University of North Carolina Chapel Hill

Investigating oyster-reef morphodynamics to optimize nature-based infrastructure: Intertidal oyster reefs are commonly incorporated into living-shoreline designs with the reef serving the role of nearshore sill or breakwater oriented parallel to the estuarine shoreline. In contrast, natural fringing reefs develop an elongated morphology oriented perpendicular to shore and the dominant tidal-current direction. Are constructed oyster sills incompatible with the long-term objectives of providing shoreline protection, maximizing the provision of ecosystem services and resilience to climate change, and ensuring a self-sustaining reef in perpetuity? The main objective of this study is to measure the lateral growth rates of

North Carolina State University

Fecal indicator bacteria are monitored in coastal waters to determine if conditions are safe for recreation and shellfish harvest. About 24-48 hours will pass from the time when a sample is collected to when the bacteria data are available, creating long lags that impact management decision-making. This project will investigate how water quality measurements collected in near real-time can be used to nowcast fecal indicator bacteria concentrations, with the goal of enabling more precise, timely, and effective management of coastal waterways.

Dr. Natalie Nelson, Dr. Angela Harris, Dr. Elizabeth Darrow, Dr. Chris Osburn, Dr. Elise Morrison

Stevens Institute of Technology

Hybrid flood mitigation solutions capitalize on the benefits of both structural measures and natural and nature-based features. However, they have not been commonly adopted in flood risk management, partly because of a lack of technical design guidelines and little understanding of uncertainties in the performance of hybrid solutions. **Benefits of Vegetation for Preventing Coastal Flooding Induced by Failure of Seawalls** quantifies the extent to which coastal vegetation mitigates wave forces and wave runup on seawalls and develops a probabilistic method for optimized integration of salt marshes with structural measures, without over/underbuilding the solution. The outcome of the project is an advanced

Questions

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Additional questions: contact.uscrp@gmail.com

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