Contaminants of Emerging Concern in the Coastal and Estuarine Areas of the U.S. East Coast

Announcement date: August 24, 2022

Closing Dates and Deadlines:

Letters of Intent: Letters of Intent are due September 23, 2022, by 5:00 PM Eastern Time.
Full proposals are due October 25, 2022, at 11:59 PM Eastern Time.

Eligibility:

This competition is open to researchers in the U.S. East Coast states (ME, NH, VT, MA, RI, CT, NY, NJ, PA, DE, MD, VA, NC, SC, GA and FL) that are served by Sea Grant Programs. All fieldwork must take place within the waterways of this region. A significant part of Sea Grant's capabilities and place-based engagement in the coastal environments along the East Coast involves partnering with State and local agencies and academic institutions to conduct management-related research. Continued engagement with Sea Grant partners will be an important aspect of this competition, and engagement with Sea Grant programs will be valued in the review process.

Award Time Frame:

The proposed start date should be April 1, 2023, with completion no later than September 30, 2024.

An application may be up to eighteen months in duration, however projects selected as part of a proposed competitive research program cannot extend past the end date of the overall proposal.

Funding Availability:

Approximately $**600,000** will be available to execute research projects to address contaminants of emerging concern. Each application may request up to $150,000.

This regional competition anticipates supporting 4-6 awards. Applications require the standard 50% non-federal match for Sea Grant projects.

Program Description:

Contaminants of emerging concern (CECs) are increasingly detected in groundwater and surface waters including streams, rivers, estuaries and oceans, posing risks to the nation's drinking waters and aquatic and terrestrial life. This broad class of chemicals and materials is characterized by the Environmental Protection Agency (EPA) for their perceived, potential, or demonstrated threat to human health and/or the environment but are often excluded from monitoring programs and are characterized by a lack of published health and/or water quality standards. CECs include, but are not limited to, personal care and pharmaceutical products (PPCP), brominated flame retardants (BFRs), household cleaning products, industrial chemicals (e.g., per- and polyfluoroalkyl substances (PFASs), nanomaterials, and lawn care and agricultural products.

Not surprisingly, as CECs are by definition emerging and not well regulated, no single governmental agency is tasked with managing CECs, and several agencies have programs related to CECs. Previous work as part of this overall project included a scoping exercise that has provided a better understanding of the national and regional landscape with regard to regulating and managing CECs and has identified a framework for Sea Grant strategic involvement in CECs that will not duplicate, but rather complement, ongoing efforts. The objectives of this funding opportunity are supported by the insights from this framework (https://seagrant.uconn.edu/wp-content/uploads/sites/1985/2022/05/Sea-Grant-CEC-Initial-National-Framework-1.pdf), as well as Congressional direction.

The overall goal of this initiative is to assess the impacts of CECs on ecosystem health, including human health. The ecosystem approach may include CECs input/source, transport/fate, distribution/uptake through food webs, and impacts on exposed animals and humans through linking exposure and effects. Projects must take a watershed approach that recognizes that ecosystems (aquatic food chain), commerce (fishing, aquaculture) and food (food security, food safety) are all very important and linked. Research projects can focus on the following themes:

1. Broad ecosystem/ecological impacts on biota and processes through linking exposure and effects.
2. The prevalence, transport, and biogeochemical transformations of CECs across a watershed or ecosystem, especially those with pathways that involve drinking water, air and/or wastewater;
3. Species of ecological importance, particularly those with strong socio-economic and/or human health dimensions (e.g., forage, subsistence, recreational, or commercial shellfish and/or finfish), as well as invertebrates, reptiles, birds, and marine mammals. The impact of CECs on fish could contribute and inform food (seafood) safety concerns.

Significantly changing environmental, climatic and development conditions in coastal ecosystems should be taken into consideration. In addition, furthering development of targeted and non-targeted analytical approaches are encouraged.

Proposals are required to merge associated extension and/or education efforts so that the results from research projects reach the relevant stakeholders. Although research is needed to understand sources and exposure (including levels of concern for CECs that cause deleterious health effects in wildlife and humans, since simple detection does not equate to harm), extension and education are equally needed to understand true versus perceived risk. Public outreach and engagement opportunities through Sea Grant programs in partnership with academic community members will expand the reach of Sea Grant impacts, as well as assure that the work reaches appropriate target audiences and accelerate technology transfer when relevant.

This competition welcomes combinations of natural and social science approaches. Integrative relationships with federal, state and local agencies, NGOs and other organizations are strongly encouraged to further opportunities and impacts, help tailor outcomes that lead to enhanced management (regulatory and/or non-regulatory) of CECs, and complement existing research initiatives. Interdisciplinary work will be critical, including the potential for working with legal and policy expertise. Prevention and policy interests should align with the research, extension, education, communication, and legal functions of Sea Grant, and bridge natural and social sciences.

Applicants should propose, where possible, to engage with, be sensitive to and bring awareness to underserved communities and communities with Environmental Justice concerns, who may be

disproportionally affected by CECs, as well as legacy pollutants, compounded by infrastructure and climate change considerations, thus requiring focused efforts to mitigate exposure risks.

Applicants should not be dissuaded from pursuing the priority needs of its stakeholder community, however, given the previously described guidance for the focus and scope of proposed projects, the following areas of research may be better suited through other Sea Grant funding mechanisms or by other federal funding sources:

- Individual chemical constituent studies (e.g., risk, screening, toxicity).
- The impact of CECs specific to human health outcomes, such as determining specific thresholds for human health effects
- Monitoring is important, yet it is a long-term commitment that is beyond what Sea Grant can support through this short-term opportunity.
- Marine debris (including microplastic), due to Sea Grant's upcoming investment from Provision 8 of the Infrastructure Investment and Jobs Act (IIJA) Spend Plan.
- Although Sea Grant recognizes the importance of harmful algal bloom (HAB) biotoxins, they are generally not considered CECs.

Letter of intent:

A letter of intent is required to be eligible to submit a proposal. The letter of intent must include the project title, the names of the PI (along with email address) and co-PIs, and a short paragraph describing the project goals. Letters of intent should be emailed to Stephen.jones@unh.edu, and are due September 23, 2022, by 5:00 PM Eastern Time. The letter of intent is solely for program managers awareness, and PI will receive an acknowledgement, but the letters of intent will not be reviewed for content. Please note that a proposal can't be accepted if a letter of intent has not been received by the deadline.

Proposal submission process via eSeaGrant.

Proposals must be submitted by **October 25, 2022 at 11:59 pm (EDT).** (FIRM DEADLINE). Proposals will be submitted through NH Sea Grant's eSeaGrant system at http://eseagrant.unh.edu. *New users to this system will need to first register in eSeaGrant and should do so early in the process to avoid potential problems and risk missing the deadline.* To establish login credentials:

1. Go to: http://eseagrant.unh.edu
2. Click the grey **register** button at the top right-hand corner of the window to make your account.
3. After you create your account, you will receive an email with login credentials. (If you do not receive a "Welcome" email with login credentials, please contact Sally Nelson at (sally.nelson@unh.edu)
4. Once you login with your credentials, you can change your password. To do so click your name in the upper-right corner of the screen and select "My Profile."

Existing users can log in using their previously established username and password. If you have forgotten your password, please use the "forgot password" feature to trigger a reset. *Start this submission process early to avoid potential problems and risk missing the deadline.*

To start a proposal, or revisit/edit an existing proposal:

1. Click on "Current Tasks" on the banner head.
2. Search for and click on the application labeled "**CECs in coastal areas of the US East Coast**".
3. Upon entering eSeaGrant, the Principal Investigator (PI) will be presented with a series of tabs located on the left side of the screen. Each tab represents a section of the proposal and requires the PI to add information either by uploading PDF files or entering information directly into a text box. See below for more information on each tab/section. Please be sure that PDF files **DO NOT** contain footers or headers containing file names or page number.

Proposal components within eSeaGrant correspond to the "Application Requirements" section (below).

Submission Preview: You will have the opportunity to view your proposal before you submit. Please carefully review and when satisfied, please click on the SUBMIT button located on the right side of the window. Proposals are accessible for edit/review up until you click on the SUBMIT button.

Questions or comments? Contact Sally Nelson, NH Sea Grant Program, (603) 862- 2987 or sally.nelson@unh.edu.

Application Requirements:

Applications must include the following elements. Failure to adhere to these provisions may result in a delay in award processing or rejection of the application, based on the extent of the noncompliance.

Letter of Intent Requirements

Applicants will be asked to submit a letter of intent (LOI) before a full proposal is submitted. Applicants that do not submit a LOI will not be eligible to submit a full proposal. Full proposals should not deviate greatly from the LOI. However, LOIs are not wholly binding and the applicant may tweak details of their project before submitting the full proposal as their research to application plan evolves. LOIs are meant to provide Sea Grant with metrics on the scope and size of the application pool to assist with reviewer recruitment and review event planning.

The letter of intent should be no longer than 2 pages and will include:

- Working project title
- PI Name(s)
- PI Position(s) and Affiliation
- Partnering Sea Grant program
- PI Contact Information
- Brief discussion of the focal topic and approach, and how it will be transformative within the proposal's scope of action
- The approximate funding to be requested

Full Proposal Requirements

1. **Project Narrative**. *The Project Narrative must include the following elements:*
   a. *Project Description.* The total number of pages in the project description should not exceed **10** pages. Excess pages will not be included in the review. Applicants do not need to use the entire 10-page maximum for each project. Depending on the complexity of the proposed activities, a shorter description may suffice. The works cited, CVs, letters of support, and current and pending support sections do not contribute to the page limit.

   b. *Cover page*
      * Project title and names, titles, affiliations, and contact information (email and phone) of co-PIs.
      * Budget overview - Total cost and annual breakdown of requested funding by partner.

   c. *Project Abstract* (1 page maximum)

   d. *Project Background*
      Explain the specific problem(s) this project seeks to address and its importance, provide specific alignment of the topic with the priorities of this call, as defined in the Sea Grant framework on CECs (https://seagrant.uconn.edu/wp-content/uploads/sites/1985/2022/05/Sea-Grant-CEC-Initial-National-Framework-1.pdf).

   e. *Project objectives*
      Provide a list of clearly defined objectives. For each objective, provide a concise statement explaining how it is aligned with one or more of the three major themes described in this funding opportunity's Program Description.

   f. *Project details* (include each subsection below with header)
      * Methods: Provide a careful explanation of the conceptual and methodological approaches you will use to address your project objectives.
      * Expertise and educational impact: Explicitly explain how this project leverages the expertise of both researchers and stakeholders. Include a description of the involvement in the proposed work by graduate/undergraduate students and/or by undergraduate or high school faculty.
      * Extension of Research Results: Specifically identify the end users of the research results and explain their role in the project and the nature of the benefits and impacts they will receive. Describe how public outreach and engagement through Sea Grant programs in partnership with academic community members will expand the reach of impacts, as well as assure that the work reaches appropriate target audiences and accelerate technology transfer when relevant.

   g. *Anticipated outcomes and results* – Provide a statement/explanation of the outcomes and results related to the creation of data products, tools, technologies, and management practices.

   h. *Outreach and technology transfer plan*

Describe the extension activities necessary to transfer the research results to end users. Provide a strategy that details how end users, beyond those who actively participate in the proposed work, will learn about the project's outcomes and results.

i.   *Project timeline*
Provide a timeline for accomplishing the proposed work, which covers the entire duration of the project. Include approximate dates for key milestones related to the proposed work, including the accomplishment of anticipated outcomes and release of results.

Applicants submitting proposals that involve the use of human test subjects should state so clearly in their application. These proposed research activities require approval of the applicant's Institutional Review Board (IRB) before such research can proceed. Applicants are responsible for obtaining IRB approval from their institution and providing that documentation to NOAA once the approval is obtained and prior to any NOAA-funded human subject testing. Proposals intending to use human test subjects should specify clearly in the timeline approximately when IRB approval will be obtained and when the testing is expected to occur. All funded projects that involve animal use/testing will require IACUC approval.

j.   *Diversity statement*
The National Sea Grant Office (NSGO) recognizes it has a particular and unique opportunity to support NOAA's commitment to diversity and inclusion by taking an intentional step that encourages applicants to consider diversity and inclusion as part of their scientific projects. This action has the potential to make an impact on not only the diversity and inclusion in science at NOAA, but also in the equity of services provided by NOAA. In this section, describe how the proposed activity broadens the participation of underrepresented groups (e.g., race/ethnicity, gender identities, sexual orientation, disability, geography, etc.) and communities with Environmental Justice concerns, and how they benefit from its outcomes. Applicants are encouraged to review Sea Grant's vision and priority action plan for advancing Diversity, Equity, Inclusion, and Justice: https://seagrant.noaa.gov/Portals/1/Network%20Visioing/DEI_VisionActions_2_0_Sea%20Grant.pdf

k.   *Works cited* (does not count towards page limit) All in-text citations should be listed here.

2.   **Biosketch for each co-PI** (does not count towards page limit)
Each person's biosketch should not exceed **2** pages. Excess pages will not be included in the review.

3.   **Letters of support and/or commitment** (OPTIONAL; does not count towards page limit)

4.   **Current and pending support** (does not count towards page limit) - Describe any current or pending sources of support if applicable.

5.   **Abbreviated Environmental Compliance** Questionnaire (OMB Control No. 0648-0538)
A separate Abbreviated NEPA Questionnaire must be completed for each relevant individual project in the application, following further details below. The Questionnaire can be found here: https://seagrant.noaa.gov/insideseagrant/Implementation. Applicants must ensure that the questionnaire is completed in full and includes detailed information regarding project location, methodology, and permits. Copies of all permits required for project activities should be included with application materials. If a permit is pending or planned, please provide this information.

Guidance on how to complete the Questionnaire and example Questionnaires for different types of projects can be found here: https://seagrant.noaa.gov/insideseagrant/Implementation.

The Abbreviated NEPA Questionnaire is required for ALL research projects (those whose project ID starts with "R/") even if the project is fully lab-based or relies on social science. The Abbreviated NEPA Questionnaire is also required for any project that meets the following criteria:

- Environmental permits, authorizations, or waivers
- Biological take and/or release
- Environmental sampling
- Hazardous or toxic substances and waste
- Permanent or temporary environmental effects
- Endangered or threatened species and/or protected areas
- Known or unknown risks to human health or the environment
- Controversial environmental subject matter

The NEPA Statement can be used instead of the Abbreviated NEPA Questionnaire for certain low-impact projects. If none of the project's activities will take place in the environment and the project is not research, you may include the NEPA Statement in place of the NEPA Questionnaire. However, NOAA has final responsibility to determine whether a project or action requires environmental compliance review. If NOAA determines that the NEPA Statement is not sufficient, staff may request that an Abbreviated NEPA Questionnaire be provided instead. Please use the following format for the NEPA Statement:

> "This project's activities include [list the activities]. Because no part of this project will take place in the environment or involve the collection of environmental data, the NOAA environmental compliance questionnaire is not needed."

6. **Data Management Plan** - All applications **must** include a Data Management Plan that is compliant with NOAA's Public Access to Research Results Plan. The Data Management Plan should not exceed 2 pages. The Data Management Plan should include descriptions of the types of metadata and data expected to be created during the course of the project, plans for disseminating the metadata and data to the broader community, and plans for long-term archiving of the metadata and data. The Data Management Plan is not included in the Project Description page limit.

   If proposed activities will not generate any environmental data, such as the scoping activities and research competition, please include the following statement at the end of your proposal: "Because this project will not generate environmental data, a Data Management Plan is not required."

7. **Budget Narrative and Justification.** The Budget Narrative must include the following documents (Sea Grant 90-4 Forms and Budget Justification) in that order and format. Additional budget narrative guidance can be found here.
   - *Sea Grant 90-4 Form* (OMB Control No. 0648-0362) - Sea Grant 90-4 Forms are required to provide budget breakdowns and budget justifications by year and object class for each project within the proposal. A completed Sea Grant 90-4 Form should be completed for each project year as well as a total budget for the entire project duration (i.e., Year 1, Year 2,

Year 3, and Years 1-3). Guidance on filling out these forms is located in the Sea Grant General Application Guide.

- *Budget Justification* - For each year of the project, a Budget Justification is required. Each Budget Justification should explain the budget items in sufficient detail to enable review of the appropriateness of the funding requested. Each Budget Justification should be attached as a PDF to each Sea Grant 90-4 Form, as appropriate. Guidance on completing the Budget Justification is located in the Sea Grant General Application Guide.

Application Evaluation Criteria:

Written and panel reviews will adhere to NOAA's policy on Conflicts of Interest (National Oceanic and Atmospheric Administration Policy on Conflict of Interest For Peer Review Subject to OMB's Peer Review Bulletin). Full proposals will be sent to three external reviewers who are experts on the topic(s) of the proposed research, who are free from conflicts of interest associated with the proposals and include, where possible, individuals from underrepresented groups. A Technical Review Panel will be assembled, made up of experts with both collective knowledge on the topics of all reviewed proposals and of regional research trends and needs. The panel will consider and discuss all aspects of each proposal, followed by a general review of the peer reviews and panel rankings of all proposals to inform the final decisions by the Project PIs. Panelists will be free from any conflicts of interest and will provide a proposal ranking order based on the evaluation criteria described below.

The point scale is as follows for criteria 1,2,3 (25 pts): the application is unclear and does not adequately address the expectation outlined above (0-6 points); the application adequately addresses expectations outlined above (7-15 points); the application exceeds expectations outlined above (16-25 points).

1. Importance/relevance and applicability of proposed projects to the program goals (25 pts). This criterion ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, federal, regional, state, or local activities. For this competition, this includes addressing the Project Description's three major activities of the funding opportunity (and the Sea Grant framework for CECs they were derived from), and the degree to which the proposal connects to societal needs.
2. Technical/scientific merit (25 pts). 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 this competition, this includes assessing the degree to which the goals, objectives, and deliverables are clearly stated and described; the methods are novel or creative; the technical approach is clearly explained; the technical approach efficiently and effectively transfers knowledge; and the proposal explains the technical approach to be taken that will advance previously funded science to a point that it is translatable into natural resource management actions.
3. Community Outreach and Education, including efforts to ensure inclusive and equitable engagement (25 pts). 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. For this competition, this means the degree to which the outcomes of the proposed work, specifically the knowledge and products that are responsive to U.S. coastal and Great Lakes stakeholders, will be shared beyond the project team (i.e., to other coastal stakeholders). This also includes identifying a strategy to work with stakeholders throughout the entire duration of the proposed work.

4. Overall qualifications of applicants (15 pts). This criterion ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project. For this competition, this includes demonstration of the appropriate experience, qualifications, and skill for successful completion of the project; the capacity necessary to complete the work, and the meaningful collaboration and partnerships with previously funded activities, if applicable.
    a. The point scale is as follows: the qualifications are unclear and do not adequately address the expectation outlined above (0-5 points); the qualifications adequately address expectations outlined above (6-10 points); the qualifications exceed expectations outlined above (11-15 points).
5. Project costs (10 pts). This criterion evaluates the budget to determine if it is realistic and commensurate with the project needs and time frame and provides a clear description of budget items.
    a. The point scale is as follows: the proposal is unclear and does not adequately address the expectations outlined above (0-3 points); the proposal adequately addresses expectations outlined above (4-6 points); the proposal exceeds expectations outlined above (7-10 points).
6. Additionally, projects will be recommended for funding only if they have a complete application package.

Selection criteria

Following the review process according to the evaluation criteria described above, the Project PIs will further consider the following factors in selecting proposals for funding:

1. Geographic diversity
2. Diversity of proposed CECs to be studied
3. Diversity of proposed approaches
4. Involvement of Sea Grant programs

Other Information: Reporting:

Annual progress reporting in the form of the Research Performance Progress Report (https://www.commerce.gov/sites/default/files/oam/RPPR%20Instructions%20and%20Privacy%20Statement.pdf) will be required.

Successful applicants will be required to participate in 3 meetings. The **first** PIs meeting at the beginning of the research projects will be held to enhance the mutual awareness of the funded projects, facilitate collaborations (including possible coordination of sampling if indicated) if/when relevant. A **second** PIs meeting will coincide with the 1-year progress report to continue to build awareness and coordination if relevant, and the **final** PIs meeting will take place at the end of the initiative to share results and conclusions. All PI meetings will be held virtually.

Once applications have been selected for funding, applicants must submit a Sea Grant 90-2 Project Summary Form (for each project within the application) through the 90-2 Webform portal. This is due within 30 calendar days after the applicant has been notified via email that their application has been selected for funding. A detailed step-by-step guide for completing the web-based 90-2 Form is available

on Inside Sea Grant. Once the project is approved and funded, that information will be publicly available and searchable on the National Sea Grant College Program public website.

All public-facing products produced with funding from the award(s)/project(s) must ensure compliance with Section 508 of the Americans with Disabilities Act.

Questions about this competition can be sent to Stephen.jones@unh.edu or sylvain.deguise@uconn.edu. Please specify that your question is related to this Competition in the subject line.

Fillable versions of required Sea Grant forms can be found here:

https://seagrant.noaa.gov/insideseagrant/Implementation

Guidance for completing these forms is located in the Sea Grant General Application Guidance Document: https://seagrant.noaa.gov/Portals/1/Guidance/SeaGrantGeneralApplicationGuide.pdf

This RFP can be found here: https://seagrant.uconn.edu/research/contaminants-emerging-concern/#