National Estuarine Research Reserve System Science Collaborative

2017 Collaborative Research and Integrated Assessment Request for Pre-Proposals

Integrated Assessment Track

December 7, 2016

Contents

About this Request for Pre-Proposals

The National Estuarine Research Reserve System (NERRS) Science Collaborative solicits pre-proposals for funding to support end user[1] driven research projects and integrated assessments that adopt a collaborative approach to produce outputs that meet a reserve management need. For more information on the current management needs of individual reserves, see the 2017 Reserve Management Needs[2].

The goal of these projects is the production or assessment of science-based information that readily informs decision making related to at least one reserve management need. The ability to achieve this goal is greatly enhanced when researchers understand and are responsive to the needs of the relevant end users; likewise, the application of knowledge increases when end users help to identify research questions and plan to incorporate the new information into their decision processes. A collaborative process that engages end users in project development and implementation is therefore critical to achieving usable outputs, but it is what a project team does in response to the end user's input that defines the success of these projects.

This request for pre-proposals (RFP) is split into two tracks based on project type:

1) <u>Collaborative research projects</u> (maximum award: $250,000 per year, for **up to 2 years**) – conducting new applied science using an end user driven, collaborative process that results in research, data, tools, or other products that will inform decision making related to a reserve management need; and

2) <u>Integrated assessments</u> (maximum award: $250,000 total, for up to 2 years) – in collaboration with end users and stakeholders, aggregating and analyzing existing data or products for the purpose of evaluating a suite of management or policy options related to a reserve management need.

The review process, evaluation criteria, and due dates are identical for both pre-proposal tracks.

To help you determine which project type is best suited for your idea, please refer to the decision tree at http://graham.umich.edu/water/nerrs/funding. Please also feel free to contact us by phone or email.

All RFP supporting documents can be found at http://graham.umich.edu/water/nerrs/funding/research-ia.

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[1] End user is defined as a person or group in a position to apply the information or tools being produced, evaluated, or transferred through a Science Collaborative project in a way that is of direct consequence to the ecological, social, or economic integrity of a reserve(s) and/or surrounding watershed(s). Examples of end users include, but are not limited to, reserve staff, and public, private, or non-governmental decision/policy makers, including landowners, resource managers, land use planners, and educators at all levels.

[2] This document is a compilation of the current management needs for each of the 28 reserves within NOAA's NERRS. Management needs are submitted by reserve managers to NOAA and are updated on an annual basis.

Key Dates

Date	Activity
December 14, 2016 at 1pm EST and January 11, 2017 at 3pm EST	Webinar: Research and Integrated Assessment RFP Questions & Answers (two offerings)
February 1, 2017 by 11:59pm EST	Pre-proposals due
February 8, 2017	Manager pre-proposal assessments due
March 27, 2017	Invitations to full proposal
May 15, 2017 by 11:59pm EST	Proposals due
May 22, 2017	Manager proposal assessments due
August 2017	Funding notifications
November 2017	Anticipated project start date

About the NERRS Science Collaborative

The University of Michigan Water Center and partners are working with the National Oceanic and Atmospheric Administration (NOAA) to coordinate the NERRS Science Collaborative. The Science Collaborative's primary goal is to support the co-development and application of relevant and usable knowledge and assessment information to address critical coastal management issues identified by the NERRS in order to improve the long-term stewardship of the nation's valuable estuaries.

The Science Collaborative works to achieve this goal through regular funding opportunities, project support and management, and an adaptive approach to program implementation that fosters ongoing learning and improvement. Consistent with the NERRS strategic plan, NOAA has identified the following focus areas for the Science Collaborative: climate change, water quality, habitat restoration, shoreline stabilization, ecosystem service valuation, and the application of data from the NERRS System-wide Monitoring Program (SWMP) and Sentinel Sites.

Required Elements

Collaboration and End User Integration

Collaborative research projects and integrated assessments must clearly identify, engage, and be responsive to the interests and needs of end users—the intended users of the project outputs. A collaborative process that engages end users in project development and implementation is the mechanism by which a research project or integrated assessment team is able to achieve usable outputs. The number of and specific end users engaged in a project may shift as the project matures, and more end users is not always better; however, a set of primary, representative end users must be engaged from the beginning of project development to ensure that the project is responsive to their needs. Examples of end users include, but are not limited to, reserve staff and public, private, or non-governmental

decision/policy makers, including landowners, resource managers, land use planners, and educators at all levels.

To this end, each pre-proposal must:

- Identify the primary end user(s) and their needs;

- Describe how the end user's input helped to shape the project;

- Describe a clear process that will accommodate iterative engagement with the end user(s), including a mechanism(s) for being adaptive and responsive to their input; and

- Identify an individual who will be responsible for leading the collaborative process—the collaborative lead3—and describe her/his relevant experience and skills.

Note: Teams invited to submit full proposals will need to demonstrate that sufficient time and resources are dedicated to support a collaborative, end user engagement process throughout their projects. Pre-proposal total budget requests should take into account resources needed for these efforts.

The Science Collaborative has resources available for your use as you design your end user engagement process, including key considerations for engaging end users effectively and efficiently, which is particularly important during the proposal development phase of a project. [4]
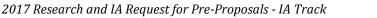
Reserve Engagement

All collaborative research and integrated assessment projects must address one or more reserve management needs and have the full support of the relevant reserve manager(s).

Relevant reserve managers and appropriate staff must be consulted and engaged in the development of project pre-proposals and full proposals. **It is the responsibility of the applicant to ensure that the reserve manager and other appropriate staff are engaged sufficiently in project development**.

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[3] The collaborative lead is someone who is responsible for the full engagement of end users by helping to develop and manage a process that ensures iteration with them, including mechanisms for being adaptive and responsive to their input. This person should have the appropriate experience and skills to design and implement a collaborative process that provides the team with the end user input necessary to produce outputs that are responsive to their needs.

[4] These resources are available at http://graham.umich.edu/water/nerrs/funding/research-ia. This includes tools for characterizing end users and key considerations for end user engagement throughout the course of a project as well as a summary of a webinar on end user engagement.

For each pre-proposal and full proposal that engages their reserve, managers will submit an assessment of how well the proposal meets the following criteria:

1) The proposal addresses a reserve management need for your reserve.

2) The proposing team engaged reserve staff sufficiently during the proposal development process.

3) You agree with the proposed allocation of resources to the reserve, and/or proposed allocation of reserve staff time or other resources if not covered in the budget.

These assessments will be submitted by reserve managers directly to the Science Collaborative, independent of all proposals. **Applicants must provide a copy of their final pre-proposal to the relevant reserve manager(s)**. Relevant managers are those whose reserves will be directly engaged in project implementation and, as a result, should be able to answer each of the three criteria above definitively. If a reserve is not directly engaged in the proposed work, that reserve <u>should not</u> be listed as a partner on the project title page and the manager will not be expected to submit a proposal assessment.

Data Management

NOAA requires that environmental and social science data collected and/or created under NOAA grants and cooperative agreements be made visible, accessible, and independently understandable to general users, free of charge or at minimal cost, and in a timely manner (typically no later than two (2) years after the data are collected or created), except where limited by law, regulation, policy, or security requirements.

If invited to submit a full proposal, applicants that propose the collection of new data will be required to develop and include a Data Sharing Plan (DSP) as a part of their proposal package. This plan must address elements such as methods and protocols for data collection, data quality control/quality assurance (QA/QC) procedures, metadata, data access, and data archival. A valid data sharing plan may include only the statement that no detailed plan is needed, as long as the statement is accompanied by a clear justification, e.g. no new data are being collected.

At the pre-proposal stage, applicants must account for the costs associated with implementing a data sharing plan in their budget estimate. Additional guidance and details for support in developing a DSP will be provided to those teams invited to submit full proposals.

Eligibility

Projects must address one or more reserve management needs that are consistent with Science Collaborative focus areas and have the full support of the relevant reserve manager(s), as demonstrated in reserve manager proposal assessments.

This funding opportunity is open to applicants from United States academic, non-government organizations, or non-federal public sectors working in partnership with NERRS staff.

Each pre-proposal must designate a single fiscal agent. The person in this role must be a project team member from the reserve, agency, institution, or friends group who will receive the award, if granted. Researchers from institutions outside the U.S. cannot serve as the fiscal agent, but can be included in the project and be funded by sub-awards through an eligible U.S. entity. Federal employees and agencies are not eligible to receive funding from the Science Collaborative program, but they can participate as unfunded project team members.

Integrated Assessments

The remainder of this document provides guidelines for developing an integrated assessment pre-proposal. Guidelines specific to collaborative research projects can be found [here](#).

Integrated assessment (IA) offers an effective way to frame and inform decisions for sustainability problems that lack consensus on the cause or solution. This approach is most relevant for situations where considerable information exists but it has not yet been integrated and synthesized in ways that are useful to end users, e.g. decision or policy makers, in their evaluation of management or policy options. These grants are intended to support a robust stakeholder engagement process and an iterative analysis of existing data, rather than new field work or experimentation.

IA projects are eligible for up to $250,000 total funding for up to two years.

Integrated assessments focus on a particular management or policy question of concern related to a [reserve management need](#), and aim to clarify the issue, build consensus, and help evaluate options for action, such as different strategies for natural resource management, permitting, or land use planning. Projects are typically guided by an advisory group that includes end users (individuals with authority to implement identified options) and representative stakeholders that have unique or competing views on the issue. Integrated assessments include an external technical review to ensure credibility and acceptance of project results.

Most integrated assessments follow a process that includes the following elements:

1) Collaboratively define the focal question;
2) Clarify the history, causes, and consequences of the issue;
3) Identify and evaluate potential options; and
4) Develop information to guide decisions.

As noted in the [Required Elements](#) section above, all integrated assessments must:

- Clearly identify, engage, and be responsive to the interests and needs of end users;
- Directly involve at least one reserve, address one or more reserve management needs, and have the full support of the relevant reserve manager(s); and
- Plan for the costs associated with implementing a Data Sharing Plan.

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Outputs

Project outputs are specific products that are developed during or upon project completion. IA outputs must address end user and reserve management needs. IA outputs must include:

- A synthesis and analysis of available data or other information related to the focal question, which will be used to inform the development and analysis of policy or management options;

- A set of potential policy or management options, an analysis of the trade-offs associated with each option, and technical guidance for implementation;

- A report that summarizes the assessment, examines the focal question, describes the external technical review findings, and presents an analysis of options; and

- An activity that shares the project results with the broader NERRS community, such as a poster or session at a conference, like the NERRS Annual Meeting, a system-wide webinar, or a NERRS sector meeting.

Outcomes

Project outcomes are the expected impacts of the project process and outputs. IA outcomes may include:

- An improved capacity to address the identified question;

- Stronger collaborative relationship among reserve staff, partners, and end users; and/or

- Better understanding of the context in which researchers, stakeholders, and end users operate, including their unique constraints, contributions, and needs.

For more information on IAs, see http://graham.umich.edu/water/nerrs/resources/ia.

Pre-proposal Requirements

Pre-proposals must be provided as a single pdf file using 12 point Times New Roman font, no less than single spaced, with one-inch margins and be organized using the headers below. Pre-proposals must include a title page, 5 page maximum narrative, and appendices as outlined below. **Pre-proposals not meeting these requirements, including budget and header requirements, will be removed from the competition without further review.**

Pre-proposals must be submitted by **11:59pm EST on February 1, 2017** at http://graham.umich.edu/application-request/39904.

You will receive an email confirming successful submission; if you do not receive this email, your application was not submitted properly and you should resubmit or contact us directly at nerrs-info@umich.edu.

Title Page (up to two pages):
Organize your narrative using the following headers:

1) <u>Project Title</u>

2) <u>Project Type</u> – Collaborative research project or integrated assessment.

3) <u>Project Lead / Principal Investigator (primary contact for the project)</u> –

    a) Title / Position

    b) Institution

    c) Telephone Number

    d) Postal Mailing Address

    e) E-mail Address

4) <u>Additional Team Members</u> (anyone receiving project resources or contributing significant resources to the project) – Name, institution, telephone, e-mail, and nature of contribution, e.g., project lead, collaboration lead, technical lead, end user, team member, etc. **Note: Project, collaborative, and technical leads are required.** One person can serve multiple roles. See team section for definitions of these roles.

5) <u>Fiscal Agent</u> – Provide the name of the fiscal agent. If different than the project lead, please include contact information.

6) <u>Name of Reserve(s)</u> – Identify the reserve(s) that are directly engaged in the project. See the Reserve Engagement section for a detailed definition of "directly engaged reserve."

7) <u>Budget Request</u> – Requested dollar amount; may not exceed $250,000 total. Note: If invited to submit a full proposal, a detailed budget and budget narrative will be required; the total request in the full proposal detailed budget may not exceed the pre-proposal budget estimate.

8) <u>Project Duration</u> – Anticipated project start date should be November 1, 2017 and the end date can be up to two calendar years later.

9) <u>Project Summary</u> – Provide a 200-word summary of the proposed project that is suitable for a non-technical audience. Please include the project's objectives, responsiveness to end user needs, and planned outputs/outcomes.

Project Narrative (5 page maximum):
Before proceeding with the development of your pre-proposal, please refer to the Integrated Assessment Primer. The primer describes essential elements of an IA process, tips for developing competitive proposals for this funding opportunity, and requirements for a final integrated assessment report. The primer is available at
http://graham.umich.edu/media/files/NERRS_IA_Primer.pdf.

Organize your narrative using the following headers:

1) <u>Problem Statement and Response to End User Needs</u> – Describe the issue(s) the project will address, discussing the importance and context, with particular emphasis on how the project will address one or more reserve management needs. Identify the project end user(s) and their needs. Describe how the end user's input helped to shape the project and how the IA is designed to meet their needs. Identify previous and ongoing attempts to address the focal problem, and the technical and non-technical barriers that hinder an effective response. Demonstrate why the IA approach is appropriate for this issue at this time.

2) <u>Outputs and Outcomes</u> – Clearly distinguishing between the two, provide a list of the planned outputs and anticipated outcomes. Describe these briefly, clearly stating how the outputs meet the end user and reserve management needs discussed in the "problem statement" and how the outputs will help lead to the anticipated outcomes.

   a) *Output* – a specific product that is developed during or upon project completion; there may be several outputs associated with a project. Outputs must address end user and reserve management needs. See required IA outputs provided above.

   b) *Outcome* – an expected impact of the project process and outputs; there may be several outcomes associated with a project. See example outcomes provided above.

3) <u>Project Approach</u> – Referencing the IA process outlined in the [Integrated Assessment Primer](), briefly describe the planned project approach. Your approach should include the following elements:

    i. *Collaboratively define the focal question.* Clearly state a draft focal question for the assessment, recognizing that this question will evolve as the project is further developed and your end user consultation process expands. If funded, the team should allow a larger group of stakeholders to offer feedback on the focal question and project approach. Outline your approach for identifying, engaging, and incorporating input from end users and stakeholders, including individuals that may have unique or competing views on the issue and potential solutions.

    ii. *Clarify the Issue.* Projects should examine and clarify aspects of the focal issue that are uncertain and are impeding action. This may include an analysis of the current status, historical trends, root causes, and implications of the issue. Briefly outline your proposed analysis methods. Identify and demonstrate access to appropriate data sources for the planned analyses.

    iii. *Identify and evaluate potential options.* Integrated assessments help end users compare a suite of potential options for addressing the focal issue. Briefly describe how your team will evaluate different options and indicate the type of options that will be considered, e.g., management actions, regulations, legislation, education/outreach programs, or a combination of these and other initiatives.

    iv. *Develop information to guide decisions.* Integrated assessment results should be summarized so that they are accessible and usable by end users and stakeholders. Identify any resources that will be aggregated or developed by the project, either as part of, or as a complement to, the required integrated assessment report.

4) <u>Team</u> – Identify each team member and explain how the team and its expertise are well qualified to implement the project, including the collaborative approach. Describe the role(s) of the various team members, e.g., project lead, collaboration lead, technical lead, end user, team member, etc. **Note: Project lead[5], collaborative lead[6], and technical lead[7] are required.** One person can serve multiple roles. Two-page resumes for all team members must be included as an appendix.

5) <u>Budget Estimate</u> – Provide an estimated total budget request for the project. **Please provide only the total budget figure in the pre-proposal.** When developing the budget estimate, be sure to take into consideration all potential project costs, such

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[5] The project lead ensures all elements of the project are being implemented.
[6] The collaborative lead is responsible for the full engagement of end users by helping to develop and manage a process that ensures iteration with them, including mechanisms for being adaptive and responsive to their input.
[7] The technical lead ensures the quality of the science.

as data management[8], personnel, fringe benefits, equipment, supplies, travel, convening and engaging with team members and end users, contractual costs, and indirect costs. If invited to submit a full proposal, a detailed budget and budget narrative will be required; **the total request in the full proposal detailed budget may not exceed the budget estimate in the pre-proposal**.

Appendices:

1) <u>Resumes</u> – Two-page resumes for each team member are required. Resumes will be used by pre-proposal review panelists to determine whether the team has the requisite technical and collaborative skills and experience to undertake the project successfully.

2) <u>Reviewers</u> – Identify 3-4 qualified technical reviewers who could review your project if invited to full proposal. You may also list up to 4 persons you would prefer not review your project if invited to full proposal and indicate why. Whether or not these suggestions will be used is at the discretion of the Science Collaborative.

3) <u>References</u> – Up to 2 pages of references may be included.

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[8] For budget allocation guidance, it is anticipated that at least 10% to 15% of the overall budget should go to support data management activities.

Review Process

The review process for both collaborative research projects and integrated assessments is as follows. A more detailed summary of the review process, including decision points, inputs to each decision, and a summary of the process participants can be found here.

1) **Minimum requirements assessment** – Science Collaborative staff will review all submitted pre-proposals to ensure that they meet the requirements as described in this RFP, including all pre-proposal elements, the budget request, and adherence to header requirements. Pre-proposals not meeting these requirements will be removed from the competition without further review.

2) **Pre-proposal panel review:**

    a) *Written review* – Pre-proposals that meet the minimum requirements will be reviewed by a panel of experts in collaborative research and/or estuarine science representing diverse geographic regions of the U.S. Each research and IA pre-proposal will be matched to non-conflicted panel members who will conduct written reviews. In the written review, reviewers will be asked to rate and provide comments according to the pre-proposal evaluation criteria listed below.

    b) *Panel meeting* – Panelists will convene for an in-person panel meeting to discuss the outcomes of the written reviews and the pre-proposal assessments provided by relevant reserve managers. The goal of this meeting will be to identify the top pre-proposals to advance in the competition. Applicants will receive a brief summary of the panel discussion along with the blinded written reviews for their pre-proposal.

3) **Invitations to submit full proposals** – Based on the recommendations of the panel, a subset of pre-proposals will be invited to submit full proposals.

4) **Written full proposal technical review** – Collaboration and subject matter experts will conduct written technical reviews of invited full proposals. These technical reviewers are individuals who are not sitting on the panel at the pre-proposal stage. The technical review will consist of written evaluation by experts from the specific content area of the proposed work and collaboration practitioners with experience working on natural resource issues. Reviewers will be asked to rate each proposal according to the evaluation criteria provided in the full proposal requirements.

5) **Panel consultation** – The panel convened at the pre-proposal stage will be consulted to consider the written technical reviews and which proposals to invite to the full proposal panel meeting.

6) **Invitations to full proposal panel meeting** – Invitations to the full proposal panel meeting will be based on the outcomes of the written technical reviews, reserve manager assessments, and consultation with the panel.

7) **Full proposal panel meeting (tentative date: 7/12-13/2017)** – The panel will be convened in-person to hear virtual presentations from invited teams. The panel will consist of pre-proposal panelists plus non-conflicted NERRS representative(s). At least one representative end user MUST be available to answer questions from the panel; likewise, team members should be prepared to answer any questions regarding the more technical aspects of the project. Panelists will identify the strongest projects as input to a final Science Collaborative program decision.

8) **Response to panel** – Finalists will work with the Science Collaborative to address any specific questions or clarifications requested by the review panel.

9) **Funding notifications** – Final decisions will be made by Science Collaborative staff, with input from the NOAA program officer, based on the recommendations of the panel and available budget. Funding notifications are expected in August 2017.

Pre-proposal Evaluation Criteria

Pre-proposals must comply with all submission instructions and guidelines to be considered for funding. Pre-proposals will be evaluated based on how well they meet the following, equally weighted, criteria:

- Management Need: The pre-proposal clearly articulates and addresses at least one reserve management need as confirmed by the relevant reserve manager(s).

- Responsiveness to End User(s): The pre-proposal identifies the end users, their needs, and articulates how planned outputs will meet those needs. The pre-proposal clearly describes how end users have shaped the project to date.

- Approach: The approach addresses a well-defined question (research question or integrated assessment focal question), includes a collaborative process that integrates the end users, and is likely to produce the planned outputs. Integrated assessment pre-proposals must identify appropriate data sources for the planned analyses.

- Team: The team has the appropriate expertise and experience needed to implement end user engagement and the proposed technical methods.

- Potential Impact: The proposed process and outputs are feasible and likely to lead to the identified outcomes.

Environmental Compliance Review

Applicants should be aware of the following environmental compliance requirements:

NOAA requires that, prior to award, every Science Collaborative project recommended for funding undergo review for potential impacts to the environment and/or cultural resources. This initial review process by NOAA takes a minimum of 30 days.

Projects that are identified by NOAA as potentially impacting the environment and/or cultural resources, e.g., involve field work, and/or are conducted in areas where historic or archeological artifacts might be present, will require further review by the agency. NOAA will be reviewing for compliance with the National Historic Preservation Act (NHPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), and the Magnuson-Stevens Fishery Conservation and Management Act related to essential fish habitat (EFH). If the proposed project is placing fixed structures in the environment, consultation with the U.S. Army Corps of Engineers may also be required. NHPA, ESA, MMPA, and EFH reviews take a minimum of 30 days to complete, but can often take 60 to 90 days.

Questions regarding this requirement should be directed to Dwight Trueblood (603-862-3580, Dwight.Trueblood@noaa.gov).

Proprietary Information & Intellectual Property

Applicants should be aware that the disclosure of patentable ideas, trade secrets, and privileged, confidential, commercial, or financial information can hinder an applicant's chances to secure patents, trademarks, or copyrights.

Proprietary information of this kind should only be included in proposals when it is necessary to convey an understanding of the proposed project. Applicants must mark proprietary information clearly in the proposal with appropriate labels, such as, "The following is (proprietary or confidential) information that (proposing entity) requests not be released to persons outside the NERRS Science Collaborative, except for purposes of review and evaluation."

Please protect your intellectual property rights at the pre-proposal preparation stage as appropriate. This will allow you to speak freely about ideas and avoid the inadvertent loss of intellectual property rights. You should contact you institution's technology transfer or intellectual property office to determine the best way to protect your intellectual property.

Questions Regarding this Request for Proposals?

Question and Answer Webinars

The Science Collaborative will host question and answer webinars at the following times:

- **December 14, 2016 at 1pm EST**. To register for the December 14 webinar, go to: https://attendee.gotowebinar.com/register/2415801148035489028

- **January 11, 2017 at 3pm EST**. To register for the January 11 webinar, go to: https://attendee.gotowebinar.com/register/2675999475237162500

The purpose of these webinars is to provide an opportunity for applicants to ask questions about this RFP and the application process. Audio recordings, questions, and responses from the webinars will be posted online at http://graham.umich.edu/water/nerrs/funding/research-ia.

Email

The Science Collaborative will accept and reply to written questions regarding this request for proposals until January 29, 2017. Questions should be submitted to nerrs-info@umich.edu.

Phone

The Science Collaborative will also accept questions via phone regarding this request for proposals. Questions should be directed to Maeghan Brass (734-763-0727) or Melissa Zaksek (734-763-0034).

Question and Answer Record

Responses to all questions, without reference to project specifics, will be posted on a rolling basis for all interested applicants to view online at http://graham.umich.edu/water/nerrs/funding/research-ia.

Other Information

More information about the NERRS Science Collaborative can be found at http://graham.umich.edu/water/nerrs.