SEA GRANT RESEARCH COORDINATORS
GOOD PRACTICES AND OTHER IDEAS FOR RUNNING COMPETITIONS

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This document is intended to provide guidance to new and continuing Research Coordinators (RC) within the Sea Grant network and share best practices for the planning, evaluation, and recommendation of competitive projects. This document is not an official handbook and the following guidance is not part of the National Sea Grant Competition Policy. However, this document does outline a number of good practices that may be helpful to those looking to start or revise a competitive research program. This is a living document that is frequently updated by the RC Network and periodically reviewed by the National Sea Grant Office (NSGO). The NSGO approves use of this document by the Sea Grant Network to inform and improve the competition process in accordance with National Sea Grant policies.

For the official policies governing Sea Grant competitions, please refer to the NSGO documents on Inside Sea Grant Implementation Page:

● Sea Grant General Application Guidance
● National Competition Policy

State Sea Grant program competitions typically consist of 4 phases: Developing a Request For Proposals (RFP), Pre-proposal submission and evaluation, Full proposal submission and review (including written external peer reviews and panel reviews), and Award notification and follow-through.

Developing the Request for Proposals (RFP)

RFP strategies, structure, and content
The RFP must align with the state strategic plan as described in the National Competition Policy; however, it can be as broad or narrow as the state program desires. One approach is to issue very broad RFPs, accepting proposals across multiple research and focus areas. Another is to focus research RFPs on 1-5 areas of interest (e.g., shellfish disease; HAB ecology; socioeconomic impacts of sea level rise; shoreline dynamics; etc.). These areas of interest typically change from cycle to cycle as programs respond to local priorities. Providing focus to an RFP tends to result in manageable levels of Principal Investigator (PI) interest (e.g., 25 or so proposals), allows greater ability to direct research into areas of need/interest on behalf of stakeholder communities, and often allows greater potential for interaction with SG program specialists. At the same time, a focused call may work best for well-established research programs (i.e., researchers in a given state are well aware that Sea Grant is a source of funding), and a repeated focus on the same areas of interest may not be desirable.

There are also options for soliciting particular types of projects in a given RFP. As an example, several programs have issued calls for integrated assessment proposals, which typically span across research disciplines and include requirements such as "No generation of new data" or "Working closely with stakeholder group X". Michigan Sea Grant has a long history of issuing integrated assessment RFPs and may be available to answer questions from programs wishing to include this type of project in an RFP. Another example is to provide seed funding, or funding for pilot data or initial investigations, that will feed into a larger proposal to an external funding agency.

Regional competitions are possible, though different models for soliciting projects, conducting reviews, and delivering funding can be used. For example, joint regional projects may require at least one PI from each participating state, and funding for the joint project is awarded separately by state (i.e., directly from each state SG program to their respective project partner(s)). Alternatively, programs may pool money that is ultimately distributed to the most competitive proposals regardless of where PIs are situated, with responsibility for coordinating the entire RFP process shifting from program to program with each cycle. RCs interested in exploring new options are encouraged to ask questions of the RC Network.

Finally, the structure of the RFP and content included within the RFP vary greatly across programs. Some programs include details on the entire competition process in the RFP, including instructions for submitting a pre- and full-proposal all at once. Other programs use a two step approach, with the initial RFP explaining the topical focus and objectives of the competition, but only providing detailed instructions on how to submit a pre-proposal. While there is an outline of the full proposal process, the full application guidance is developed as a separate document and shared with all PIs after the pre-proposal process is complete. If the two-step approach described above is employed, both documents must be approved by the NSGO program officer at the start of the competition process. In addition, all applicants who meet guidelines laid out at the pre-proposal phase are eligible to submit a full proposal, even if they are not encouraged to do so (i.e., a program cannot tell someone who followed the instructions at the pre-proposal phase that they are not allowed to submit a full proposal). The language can be as blunt as you like in terms of the likelihood for success, but anyone who follows the steps of the RFP process is allowed to submit a full proposal. It is again important to note that programs cannot outright deny applicants the possibility of submitting a full proposal.

Additionally, some programs choose to include within the RFP, some or all of the research policies that would be required of any funded investigator, such as reporting requirements, publication acknowledgements, change in scope/budget requirements, allowable costs, etc.; whereas other programs develop a stand-alone research policy document, which lives on their website and is agreed upon by all funded researchers when accepting the Sea Grant award. Still others choose to let the requirements stand within the subaward agreement crafted by the sponsored programs office, and instead develop a website with useful tools, tips, documentation, templates, etc. for funded researchers. All are acceptable.

Timing

Programs should plan ahead and think through the time needed for the entire competition process. This is best done by planning backwards from the date needed to submit the full package of selected projects to the NSGO. Several programs publish RFPs roughly twelve (12) months prior to the due date to NSGO, while other programs publish much closer to the due date, and truncate the process. Recommended timing needed for each step of the review process is discussed in the sections below. To the extent possible, programs should provide maximum time for PIs to develop collaborative, well-thought-out proposals. Programs should also be aware of the time needed for university administrative processing as part of the submission process.

Evaluation criteria

Evaluation criteria should be crafted to allow programs to effectively garner recommendations and scores from reviewers to address programmatic priorities, goals, and objectives. Common evaluation criteria include: Importance/relevance and applicability (i.e., relationship to Sea Grant priorities), Technical/scientific merit, Overall qualifications of applicants, Project costs, and Outreach/Education. These five aforementioned criteria are the criteria elements NOAA requires the NSGO use for National Competitions; however, programs are permitted to edit and adapt criteria as needed.

Many programs already include evaluation criteria specific to societal relevance (outreach/engagement/extension or societal impacts). Programs should also consider including criteria related to how the proposal will engage with students and stakeholders from a diversity of backgrounds. Below are some examples:

- *"Does the proposal describe how it will engage individuals from groups that are underresourced or historically underrepresented, including Black or African-American, American Indian or Alaska Native, Hispanic or Latino, female, first-generation college students, veterans, LGBTQ+, and individuals with disabilities?"*
- *"Outreach Component The National Sea Grant College Program recently initiated a new evaluation process for its 33 state programs. A major emphasis of the review process relies on the impacts of the federal investment in the program and its strategic focus areas, not just in terms of research but also placing greater emphasis on delivery of the research products to coastal stakeholders. Consequently, in this year's proposal process, we are asking Wisconsin PIs to work with our outreach and education staff to develop outreach/education components for their project. We would like our PIs and their graduate students to take a more active role in delivering information about their work and research findings to public audiences or key policy-makers who might benefit from science support for decision-making. The outreach staff can help you identify possible target audiences, venues, media and methodologies to achieve this goal. In addition, we encourage PIs to engage potential end users of their research prior to submitting a proposal. The goal of these initial conversations should be to not simply inform end users of project goals, but rather to engage them in discussion to determine what questions, content, and form of end products would be most useful for them. External reviewers will be asked to evaluate the outreach component of the proposal."*

<u>*Selection Criteria*</u>
The National Competition Policy states that programs must include selection criteria when outlining the evaluation process in the RFP. Selection criteria provides flexibility to recommend a proposal out of rank order at the end of the panel, and should encompass all considerations a program may take when determining funding recommendations. Selection criteria can include, but are not limited to: written external peer review scores, panel comments/recommendations, program priorities/needs, availability of funding, applicant's prior award performance, balance/distribution of funds across topic areas or institutions, etc. One example of selection criteria language is below:

- *The XX Sea Grant leadership team will conduct a final review of the proposals and consider the review panel's recommendation and interview committee's advice. The Sea Grant director has final discretion to select Graduate Research Fellowship projects based on the panel recommendations, interview committee advice, diversity and balance of proposals, availability of funding, and programmatic objectives, needs and priorities.*

<u>*Justice, Equity, Diversity and Inclusion language for eligible applicants*</u>
Most Sea Grant programs include brief language within their RFPs encouraging applicants from diverse backgrounds. As a network, we can strengthen this language by clearly stating Sea Grant's commitment to Justice, Diversity, Equity, and Inclusion (collectively referred to as DEI throughout this document)

The following template incorporates language from the Diversity, Equity and Inclusion [DEI) Vision document](#) and can be used in different parts of a state RFP to (i) define Sea Grant's DEI vision, (ii) broaden participation by encouraging diverse applicants; and increasing engagement with PIs, students, and postdocs from diverse backgrounds, and (iii) help researchers demonstrate societal relevance of their research related to underrepresented groups and coastal communities. Please feel free to use this language (or aspects of this language) as you see fit during RFP development.

- *"The National Sea Grant College Program champions diversity, equity, and inclusion (DEI) by recruiting, retaining and preparing a diverse workforce, and proactively engaging and serving the diverse populations of coastal communities. Sea Grant is committed to building inclusive research, extension, communication and education programs that serve people with unique backgrounds, circumstances, needs, perspectives and ways of thinking. We encourage applicants of all ages, races, ethnicities, national origins, gender identities, sexual orientations, disabilities, cultures, religions, citizenship types, marital statuses, education levels, job classifications, veteran status types, and income, and socioeconomic status types to apply for this competitive research opportunity."*
- *"The XX State Sea Grant program encourages applicants to recruit and engage with students and fellows from underrepresented racial and ethnic groups, individuals with disabilities and individuals from economically or educationally disadvantaged backgrounds that have inhibited their ability to pursue a career in STEM."*

- *"The XX State Sea Grant program encourages applicants to clearly identify how this research will have broader societal impacts on the coastal community including stakeholders from underrepresented or underserved communities."*

JEDI/DEI-related BMPs

Clearly articulate and emphasize in the RFP that community engagement and societal relevance are critical to Sea Grant. This seems to help PIs invest a fair bit of time into being more thoughtful about their extension/outreach/engagement section.

Ensure that your programs' definition of broader impacts is clearly defined. For example are you looking for societal relevance, outreach/engagement, or both? Be sure that your definition of broader impacts and what you expect in an extension/outreach/engagement plan is clearly understood.

- For example, *Societal relevance and rationale*: The clarity with which the proposed activity addresses an important issue, problem, or opportunity in development, use, or management of marine or coastal resources. Some questions to consider—Does the proposed work appear to lead to real solutions to real problems? Is the proposed work likely to make a positive difference to society and stakeholders? Does the proposed work seem likely to influence resource/coastal/ocean management by businesses and agencies? Does the proposed work appear to be applicable beyond a specific local community? Can it raise public awareness/education about the problem/solutions addressed? Does it align with Sea Grant thematic areas and research objectives?

Consider asking researchers to state how they will engage with students and stakeholders from a diversity of backgrounds to achieve Sea Grant's goal of increasing DEI. This can be part of the Broader Impacts section or a separate statement of DEI.

- For example, the Climate Program Office uses the following language (Note that this language is only an example, it must be tailored to the particular Sea Grant program): *"In this section, describe how well the proposed activity broadens the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.). Examples could include, but are not limited to, full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM)."*

Consider developing targeted RFPs to sponsor research on issues of underrepresentation, and consider ways to assist PIs with the matching fund requirements, which is often a hindrance to research faculty, new faculty, and applicants from smaller universities including many Historically Black Colleges and Universities (HBCUs) and Minority Serving Institution (MSIs). Programs could consider offering smaller RFP awards, as it might be easier to find matching funds for smaller awards. Alternatively, if possible, programs could use match from other non-federal sources and consider offering 'match-free' research dollars. This may require developing strategic partnerships with organizations that can provide match, such as philanthropies, or state/local governments.

<u>*NEPA, Environmental Permits and IRB approval language*</u>
It is important to communicate the need for proper permits and institutional approvals to potential PIs, as failure to provide documentation of permits may result in slower access to funds and/or require revisions to the scope of work. Working with potential PIs early on helps ensure they will pass the review stage (including language in your RFP and/or full proposal guidance may be a good start). Here is some language that may be helpful to include in your RFPs or guidance for applicants:

- *"Per the requirements in the Abbreviated Environmental Questionnaire, potential PIs must include with their full proposal a list of all state and federal permits required to complete the project, including whether these permits have already been acquired. If a partner institution will be responsible for acquiring permits, this should be stated in the application. The responsibility for acquiring permits lies with the funded PI, and failure to secure permits may result in delayed receipt of funds or changes to the scope of work proposed. Funded PIs are required to share with the Sea Grant program proof that all required permits and permissions have been granted prior to expending funds on the work covered by the permit. Funds may be expended on portions of the project that do not require permitting, such as student support, statistical work, and project planning. This is typically accomplished by providing copies of the permits. Absence of required permits will result in the NSGO placing restrictions on the award until those permits are provided, and host institutions may have additional restrictions on such funds, per their own policies."*
- *"Sea Grant-funded research projects are subject to local, state, and/or federal environmental permitting requirements associated with the work being proposed. Examples of such projects include but are not limited to: aquaculture projects; projects that will conduct any sampling in sensitive areas, including state or national parks, or private property and/or deploy equipment long-term; projects on or in the area of threatened or endangered species, or any vertebrate species."*
- *"Potential PIs who plan to conduct human subjects research must state whether the proposed research is subject to Institutional Review Board (IRB). No work involving human subjects may be undertaken, conducted, or costs incurred and/or charged for human subjects research, until appropriate documentation is approved in writing by IRB. Potential PIs should provide a copy of IRB approval if completed prior to full proposal submission. If the PI intends to seek IRB approval after selection, a copy of IRB approval must be provided prior to commencing human subjects research. Absence of IRB approval at the time of submission will result in the NSGO placing restrictions on the award until those permits are provided, and host institutions may have additional restrictions on such funds, per their own policies."*

Information in the Abbreviated Environmental Questionnaire is subject to federal laws and your NSGO program officer will work with NOAA analysts to ensure that all regulations are being followed. IRB approval is required as part of the granting agreement between your Sea Grant Institution (e.g., home university) and the NSGO. While the ultimate responsibility for ensuring practices are followed is slightly different, the end result is the same: failure to provide proper documentation can lead to delays and headaches.

Throughout the entire process: it is helpful to know what the hot topics are in your state so you can easily identify projects that may require additional approvals.

Sexual harassment language
Several programs have added a Term and Condition to their awards in case of accusations of sexual harassment related to project awardees. RCs are encouraged to check with their home institutions to see what policies exist for sub-awardees. If policies are deemed insufficient, Sea Grant programs may consider implementing something akin to Virginia Sea Grant's Terms and Conditions, outlined here (as of August 22, 2020): https://drive.google.com/drive/folders/14uB7SrtseDCAdYTWd0sXBoabgzqex1Mz.

Pre-proposal submission and evaluation

The main purpose of the pre-proposal stage is to assess relevance of the proposed research to the RFP as well as the State and National Strategic Plan goals. Many state programs include a pre-proposal phase and note in the RFP that a PI cannot submit a full proposal if they have not submitted a pre-proposal.

Outreach to potential PIs, with a view toward inclusivity
Many programs present "Prospective Researcher Webinars" before pre-proposals are due. The purpose of these webinars is to inform potential PIs of the goals of the Sea Grant Program, especially as related to the current RFP. Through these webinars, Sea Grant programs can strongly request all potential researchers to connect with Sea Grant personnel as they develop a pre-proposal, to discuss potential research projects and determine broader impacts. Similarly, some programs ensure a good fit between research pre-proposals and strategic plan goals by encouraging PIs to contact their program *before* submitting a pre-proposal. Whichever format is chosen, requirements should be explicitly spelled out in the RFP. Below are examples of steps programs have taken to inform new PIs of the process, and encourage diverse applicants:

- Encourage co-PIs from other institutions that have an easier time finding match on competitive research funding applications.
- Facilitate interaction between extension personnel and potential PIs before the proposal submission process. This is likely to improve the quality of proposals.
- Ensure that diverse institutions are aware of, have access to, and can participate in Sea Grant's biennial call for proposals.
- Host webinar(s) or in-person meeting(s) to inform potential PIs about Sea Grant's RFP process; and support new PIs and PIs from diverse backgrounds.

Components of a pre-proposal
Most State Sea Grant programs ask PIs to submit a 2-4 page narrative describing the proposed work along with a rough budget. Some programs request additional information, e.g., two-page CVs for all key personnel. In general, the intent of the proposed research should not change substantially between the pre- and full proposal submissions (with some exceptions – see below).

Budget concerns

Pre-proposals often include a budget estimate rather than a fully-executed budget largely to alleviate work on the part of PIs. Most Sea Grant programs allow for flexibility in the budget estimate between pre- and full-proposal stages. However, it may be wise to ask PIs to break estimated costs down into categories outlined on NSGO-required budget forms (Sea Grant 90-4 budget form as of September 2020). All NSGO forms are available here: http://seagrant.noaa.gov/insideseagrant/Forms-and-Templates). Similarly, if a Sea Grant program requires 50% non-federal match, they might ask potential PIs to explicitly state that they will provide this match, even at the pre-proposal stage.

Timing

A best practice is to allow at least six (6) weeks of lead time between the date the RFP is released and the date pre-proposals are due.

Evaluation

Most Sea Grant programs solicit feedback on pre-proposal documents from a combination of internal Sea Grant staff (especially extension staff), Sea Grant Advisory Committee members, and external reviewers. It is preferred that the review process have at least a mix of internal and external input as this may lead to the strongest set of relevant proposals. External reviewers are typically subject experts that have in-depth knowledge of the issue of local importance, e.g., Connecticut Sea Grant may involve experts who work in and around Long Island Sound; Illinois-Indiana Sea Grant may involve experts who are familiar with the southern basin of Lake Michigan. Most Sea Grant programs convene a panel discussion for the pre-proposal review process. Some programs solicit written reviews as well as panel reviews. And some programs (generally those with a very large number of pre-proposal submissions) request different feedback from different review groups, e.g., advisory committee assesses relevance, external panel assesses technical merit. RCs are encouraged to reach out to the entire network (as of September 2020, the way to do this is via Basecamp) if they would like further details on a particular process.

Reviews must be strictly free of conflict of interest (COI). While conflicts of interest are a real possibility, especially when panelists are from in-state, the conflict of interests must be noted and avoided during the review process. The definition of a COI should be communicated to all who serve as reviewers, and reviewers should be asked to complete and sign a COI form (Appendix A). RCs leading panel discussions must request that individuals who have a COI with a particular proposal leave the room or call while that proposal is being discussed.

While the main purpose of this evaluation step is, again, to assess fit with the RFP and relevance of the proposed work to the Sea Grant Strategic Plan and RFP priorities, reviewers are typically also asked to provide general feedback on the technical merit of the proposed work. Programs typically also consider the potential for strong extension components of the research. Specific examples of language that could be used in review forms is included in Appendix C.

Feedback to potential PIs

During the pre-proposal evaluation process, many Sea Grant programs will need to decide which proposals to encourage to full proposal and which to not. Most Sea Grant programs encourage full

proposals at a rate of at most 50% success rate (i.e., encourage at least two times the number of full proposals than the program expects to fund). Per National Competition Policy, all PIs who submitted pre-proposals are eligible to submit full proposals, even if they are not encouraged. The language you use *must* indicate that all applicants are eligible to apply, and careful language should be used when communicating with potential PIs (e.g., terms like "encourage to develop into full proposal" or "do not encourage" are preferable to "invite" or "welcome").

- Sample language to use: *"[The applicant] is [encouraged/discouraged] from submitting a full proposal; however, all applicants are eligible to submit to the full-proposal process."*

In order to maintain a manageable number of full proposals, RCs might consider communicating the likelihood of success to PIs whose pre-proposals are not encouraged to full proposal (e.g., *"Pre-proposals that are not encouraged to submit a full proposal are unlikely to be successful at the full proposal stage. All PIs who intend to submit a full proposal are encouraged to strongly consider addressing reviewer concerns."*). Pre-proposal encouragement/discouragement should be made on the advice of those who provided reviews, but it is important for Sea Grant programs, panelists, and reviewers to be equitable in their recommendations. In order to make the review process as useful as possible to all applicants, many programs prepare written comments and recommendations to provide to potential PIs. Often, lead reviewers on a particular proposal are asked to prepare summary paragraphs of the panel discussion and recommendations. In some cases, Sea Grant staff may supplement these summary paragraphs with additional recommendations to the potential PIs. PIs are strongly encouraged to consider these recommendations as they prepare their full proposal documents. Sample language to use in making these recommendations is: *"We suspect reviewers will need strong justification for X, Y, or Z."* or *"Please be sure to fully justify how this project aligns with our RFP priorities."* Pre-proposals should not necessarily be negatively impacted by panel recommendations that could easily be addressed (e.g., fixing typos, addressing some points for which a lot of information is available).

<center>**Full proposal submission and evaluation**</center>

Full research proposals should describe in detail the work to be completed. They are evaluated for technical and scholarly merit as well as fit with Sea Grant program objectives. Any PI who submitted a pre-proposal is eligible to submit a full proposal, regardless of whether they were encouraged to do so.

Components of a full proposal
Research proposals are submitted to the NSGO as part of your Omnibus package either at initial application phase, or as part of an Award Action Request (AAR) to address a future competed placeholder Specific Award Condition (SAC) for research projects. Typically, each research proposal should include a project summary form (90-2), budget form (90-4) plus narrative, plan of work, data management plan per the latest NOAA data sharing directive (or statement indicating that no environmental data will be generated; Appendix B), an Abbreviated Environmental Compliance Questionnaire, and supporting documents, e.g., Curriculum Vitae for investigators, support letters from stakeholders, and relevant permits that have been acquired. Others in the RC Network, your NSGO program officer, or your Sea Grant program Director should be able to help identify the most up-to-date list of required components for

proposals. The length of the plan of work can vary with award amount, but typically ranges from 5-20 pages (not including references and supporting information). The full proposal should have Fiscal Officer involvement to make sure the PI receives all the guidance for budget development. In many cases, fiscal personnel are included in the instructions as a point-of-contact for budget questions.

It is recommended that programs work with PIs to develop clear and concise project titles. Project titles submitted to the NSGO may be used to share with agency leadership and/or Congress. Titles should use professional, clear, concise, and informative language. Where possible, please remove acronyms or shorthand language in project titles.

Timing
In general, it is good to allow at least eight (8) weeks (preferably 12-15) between notification of pre-proposal status (i.e., encourage or do not encourage) and full proposal submission deadlines. PIs may need up to two (2) weeks for final versions of proposal documents to be approved by their home institutions Office of Sponsored Programs before submission is allowed, and quality proposal development takes time.

Feedback and instructions for PIs
As previously noted, many programs provide feedback to PIs based on evaluation of the pre-proposals. Sea Grant RCs also forward detailed instructions on full proposal preparation and submission to potential PIs, along with any recommendations. If the document that outlines full proposal preparation and submission also includes detailed information on the full proposal evaluation process, that is distinct from the initial RFP, per National Competition Policy you must send this to your Federal program officer for review at the time that your initial RFP is drafted (see RFP recommendations above), to allow for review of potential cumulative impacts or synergistic problems.

While programs often fund research projects that will clearly step toward an applied outcome and/or identify a stakeholder group who will benefit from the information, some programs facilitate more formal interactions with their Sea Grant extension personnel, for example by forwarding the name and contact information of the extension staff who would be best suited to assist the PI or hosting informational meetings (see below). Some programs have fellowship programs in place that may benefit potential PIs (e.g., Law Fellow, Graduate Student Fellow), and ensure that prospective PIs are aware of these options. As before, if you are interested in details on any of these processes, please reach out to the RC Network.

Many programs host an instructional seminar or webinar for prospective PIs. Some require attendance of all prospective PIs, some do not. During this meeting, Sea Grant staff may share submission instructions (including budget details, especially when matching funds are required), information on the review process, recent research program successes, and how to write a strong Sea Grant full proposal. A strong full proposal typically adequately describes relevant, exciting research, identifies clear end users of the information to be generated, and has a strong outreach plan for getting results to the users who want and need them.

Key to any prospective PI meeting is allowing potential PIs a chance to ask questions. A major benefit of having an in-person meeting is that you can invite Sea Grant extension, legal, communications, and/or education staff. Facilitating face-to-face meetings between non-research Sea Grant personnel and prospective PIs will hopefully lead to improved descriptions of broader impacts for the research projects. In addition, prospective PIs may identify other research collaborators during these meetings. Some programs may choose to connect two or more researchers who submitted similar or complementary pre-proposals and encourage them to work together on a full proposal, with a goal of improving final products.

Graduate student support
Some programs allow graduate student support to be included within the full proposals, whereas other programs keep a separate pool of funds for graduate student support. Depending on university agreements and costs, separating the funding for student related expenses from the greater research funding can aid in reducing overhead costs on the overall award. In these cases eligible PIs can either request a graduate student, or compete with other PIs for a graduate student to support their funded research. The NSGO provides flexibility in how the research and graduate fellowship funding is competed, so work with your NSGO program officer if you would like to explore some of these flexibilities for future competitions.

Submission options
One way to accept proposals is to have PIs email them to a certain address (spelled out in the RFP and/or in full proposal submission guidelines). If you choose this route, it may be simplest to request a single PDF that combines all proposal components. Some Sea Grant programs have developed their own software to facilitate the online submission process. Many programs use a program-specific version of the eSeaGrant submission portal software, which is a standalone system developed specifically for Sea Grant by Ecsion. In both the state-specific and the eSeaGrant software, key features include an automated ability to communicate with potential and funded PIs, organize proposal documents as well as requested and submitted reviews, manage the technical review panel, compile funded projects for submittal to NSGO, and ultimately annual and final reports from funded projects.

Evaluation structure
Per the National Competition Policy, full proposals must receive at least three written external peer reviews, and an expert panel should be used to evaluate proposals and provide funding recommendations to the Sea Grant program. Some programs may subject full proposals to additional stages of review (discussed below). The Sea Grant director and staff ultimately make funding recommendations to the NSGO based on this input (see "Letter of Intent" section).

a. *Written technical external peer reviews*
A strong recommendation is to have the three (or more) technical written external peer reviews solicited per proposal completed by subject experts on the proposal in question. It is recommended that Sea Grant programs use out-of-state (or even out of country) reviewers for the three written external peer reviewers to reduce the possibility of conflict of interest and provide a larger pool of potential reviewers. Given recent strains on the reviewer system, more and more RCs are soliciting international reviews (see "Finding Reviewers" below), or exploring the possibility of double-blind

reviews. Panelist reviews may be able to serve as a technical review (i.e., solicit two external reviews and allow the third review to come from panelists; alternatively have panelists serve as both technical reviewers and panelists). Reach out to the RC Network if you need reviewers for a particular subject area and are having trouble identifying reviewers.

The reviews should be forwarded (with or without identifying information of the reviewer stripped from the review) to the members of the panel before the panel takes place. If more than three reviews are received ALL reviews should be forwarded to the panelists (you may not pick and choose reviews to include). A goal may be to have written external peer reviews in hand at least three to four weeks prior to convening your panel discussion. As reviewers are often very busy and may forget to return a review (or not return the review at all), a safe practice is to allow at least two weeks between the requested-by date and the actual date you need reviews to be complete.

b. Panel review
The panel should be made up of individuals qualified to evaluate the proposals in question, and relevant Sea Grant program staff (*ex officio* members) including the director and the RC. Your federal NSGO program officer must also be invited to attend all panels (*ex officio* member). Most programs compile a panel of four to six out-of-state subject experts qualified to evaluate some subset of the proposals. Some programs include both technical experts that review the scientific rigor of proposals plus one or two "relevance experts" who represent stakeholder groups most likely to use research results. This may help better blend good research with practical application, where possible. Other programs may have two separate panels, a technical panel to assess the quality and innovativeness of the research, and a second panel composed of stakeholders or advisory board members, to assess the broader impacts and programmatic priorities of the proposed research. Some programs include individuals from their Management Teams, e.g., Extension or Education Program Leaders, and/or their Advisory Council as *ex officio* members of the panel. RCs may request that these individuals serve in an observing role only (i.e., not commenting on the merit of the proposed work).

To limit the ask to the research community, consider asking individuals such as fellowship program leaders from other programs to serve as panelists (when appropriate, and ensuring no conflicts of interest). Another option is to ask the panel to focus on relevancy of the work, and rely on the technical reviewers to provide all comments related to the quality of the science. Similarly, using double-blind reviewers at the technical review stage (telling those reviewers that a different group will review the project team's ability to complete the work) may allow access to an additional pool of reviewers that would not be available without blinding the proposal/project team.

The actual structure of the panel may vary; however, a popular set up is to assign a lead and secondary reviewer for each proposal. During the panel, ask the lead reviewer to summarize the proposed work plus pros and cons pointed out by the technical reviewers (and add in their own opinions), ask the secondary reviewer for additional comments, and then open the floor up to discussion. Appendix C lists examples of how to formally solicit feedback from panelists. A good practice is to have someone take notes during the discussion (if running a webinar, notes can be taken on screen so all panelists can see them; similarly, if the panel is in-person, notes could be

hand-written at the front of the room or projected from a computer onto a large screen in a conference room).

Sea Grant programs should have panels determine if they believe proposals are fundable as-written or not (and if not, what would need to be done in order for it to be fundable - see below). In addition to the 'fundable' determination, some Sea Grant programs choose to have panelists provide a numerical score as well as rank proposals. Typically, even if proposals are scored and ranked by the panel, prior to the conclusion of the panel, the Sea Grant program should revisit the "top" proposals to be sure there is consensus from the panel on what those projects should be. Universally, scientific rigor is the first hurdle to clear. If a project is not deemed scientifically-sound by technical reviewers and panelists, it is not considered for funding and can not be recommended for funding if future funds become available. These projects must be clearly defined as not fundable in the Letter of Intent (see "Letter of Intent" below). Past this, when making funding decisions Sea Grant programs consider both scientific relevance and innovation, and relevance to their strategic plan. Most Sea Grant program directors solicit input from their management team or advisory council in addition to the panel before making final funding recommendations to NSGO. It is important to note that, per National Competition Policy, how these decisions are made should be clear in the RFP. Any information gathered from the panel as to why a project is not fundable as written could be used internally by the Sea Grant program (e.g., if Program Development funds could potentially be given to help a project that fits very well with the strategic plan but was not recommended for funding; if a program wants to recommend that a particular PI works with one of their staff or partners to further develop an area of research).

c. JEDI-considerations when building panels
It is recommended that Sea Grant programs make special efforts to ensure that underrepresented groups are appropriately included among external peer reviewers and panelists, such that gender, race, and ethnic discrimination are not affecting project rankings.

Similar to the pre-proposal stage, all reviewers should be able to demonstrate that they do not hold a COI with the proposal(s) they are evaluating. If they do have a COI, e.g., they have a working professional relationship with a potential PI, Sea Grant RCs should consider whether they can ultimately be included in the review process (or if, for example, they can be asked to step off the line or out of the room as a particular proposal is discussed). This decision may be based on what is ultimately requested from the panel (i.e., ranking versus fundable/not fundable).

At some point, it may make sense to evaluate how responsive prospective PIs were to suggestions made at the pre-proposal stage. Some Sea Grant programs work this explicitly into their panel or technical reviews, while others may consider this at the program level. Similarly, Sea Grant Fiscal Officers should review proposals that are being considered for funding to ensure all necessary budget pieces are present (and identify any concerns).

Finding reviewers

Finding reviewers (written external peer reviewers and review panelists) can be a challenge, however, the search capabilities of Google Scholar or the ISI Web of Science can make things easier. Googling the subject of the proposal plus "Sea Grant" may be a benefit, as individuals may be willing to review a proposal for another Sea Grant program if they themselves have received SG funding. Extension staff within your Sea Grant program and/or RCs may be able to suggest adequate reviewers. Also, most good proposals display the proposed research in the context of the latest advancements in a field of research; therefore, authors of selected papers referenced in a well-developed proposal should be ideal written external peer reviewers. Another possibility is to ask PIs to suggest reviewers; however, not all PIs understand COI. It is not recommended to *only* use reviewers suggested by the PI, as they may suggest close colleagues or friends and you may not get a clear review of the research project. Existing resources within the Sea Grant Network may help (e.g., a listing of social science and economic experts compiled by MIT Sea Grant (updated 2017): https://seagrant.mit.edu/fishing_comm.php). Similarly, some programs develop an internal database of "good" reviewers or panelists (i.e., individuals who provided high quality feedback, returned paperwork in a timely manner). This may result in an easier review process over time; however, RCs should take care to ensure there are no long-term biases within their program (e.g., if particular reviewers who have been deemed "good" always respond positively to certain types of proposals, this potentially impedes growth of the program). Sea Grant programs may want to use out-of-state reviewers for the written peer reviews to reduce the possibility of conflict of interest and provide a larger pool of potential reviewers.

It is also recommended to use early career scientists and post doctoral students. For example, when reaching out to reviewers MN Sea Grant specifically states that reviewers may allow a senior student or postdoc to conduct the review, so long as the contacted reviewer oversees and approves the final review before submitting. Programs may also use staff from other Sea Grant programs.

Searching for reviewers outside of the United States is a best practice, as there is quite a bit of competition among all the Sea Grant programs with proposals due to individual programs at about the same time. **It is good to remember that searching for reviewers is a huge (but necessary) time investment.**

Joint/Shared panels

Given the strain placed on reviewers, Sea Grant programs might consider sharing panels whenever possible. Panels might share a particular expertise (e.g., social scientists) or a geographic area (e.g., lower level food web dynamics in Lake Michigan). In this case, programs should agree on the format of the panel. While one option is to evaluate each program's proposals separately, different evaluation methods may lead to confusion on the part of the panelists. Another option is to have a common evaluation rubric across programs.

PI rebuttals to reviewer comments

Many (but not all) Sea Grant programs allow some form of PI rebuttal to peer reviewer comments. Some programs solicit this before forwarding technical reviews to the panel, thus including both technical reviewer comments and PI suggestions in the overall panel discussion. Other programs solicit a response

from PIs only after proposals have been fully evaluated and are likely to be funded, for example if there are concerns that working in a different geographic area than that proposed would greatly improve the project, or if reviewers wondered if PIs would be able to revise analyses to make results more broadly relevant. In the latter case, the proposal would have typically reviewed very strongly as is and any additional comments are provided for PI consideration only. This may also be a time to request budget revisions, particularly on advice of your Fiscal Officer.

Letter of Intent
Per National Competition Policy, funding recommendations must receive concurrence from the NSGO *before* making announcements regarding funding to potential PIs. Programs must submit a formal letter from your program director to your NSGO program officer and wait for a response before notifying PIs. The Competition Policy outlines what must be included in the Letter of Intent, and a sample letter is included as Appendix D. As noted in the sample letter, programs must provide a fundable/not fundable determination for all full proposals submitted to the program, as well as a list of proposals the program recommends for funding at this time. Programs may consider noting which proposals they would support if additional funds become available. By doing this, the mechanics are already in place to fund additional projects and an additional competition is not needed.

Special subject panels
For broadly-written RFPs, it is possible that a small proportion of proposals submitted will be very different in terms of the type of research being conducted. For example, if most projects submitted to an RFP fall under the umbrella of social science, but two of the projects examine laboratory studies on fish stocks; or most projects are on food web structure and one examines economic impacts of shoreline erosion. Similarly, if a Sea Grant program issues calls for a particular type of project (e.g., education, integrated assessment, particular subject area that is of great importance this funding cycle), these may differ greatly in scope, total allowable funding request, and potential for broader impacts from a broader RFP. To ensure that all projects receive a fair review, it may be possible to hold a second review event within the competition and/or join forces with other Sea Grant programs to run a special, separate panel specialized to the outliers. Combined panels should be discussed with your NSGO program officer for their concurrence, so please engage your program officer early when making these decisions. While this can be a cost-saving measure that helps ensure a fair review, programs participating in such panels should take care that there are consistent evaluation criteria across panels/proposals (e.g., if a proposal reviews very well in the special panel but still falls short of the strongest reviewed proposals in another panel). One possibility is to standardize scores across all panel evaluations.

Award notification and follow-through

Tips for communicating with PIs
Typically, once the Letter of Intent to the NSGO receives concurrence by the NSGO program officer, PIs who submitted a full proposal are contacted with a *conditional* funding recommendation (yes or no) and a summary of the review panel deliberations. If a proposal is reviewed very well but was not recommended for funding, Sea Grant RCs may communicate that it is possible that additional funds will become available and if this happens the PI may be contacted about the possibility of proceeding with the work as

proposed. The funding is conditional until the NOAA Grants Management Division approves the award applications and the university accepts the award, which may take an additional one to three months. Most programs also forward verbatim blind (reviewer identifying information removed) reviews to all PIs.

If a PI's project has been recommended for funding, they are typically asked to complete or finalize all paperwork (e.g., fill in a NEPA questionnaire, ensure their data management plan is adequate, check or slightly modify their budgets). If critical issues were raised during the review process, the PI may be asked to address these in an addendum which becomes part of the funded proposal. Although the overall nature and goal of the project typically does not change, there may be changes to sampling or analyses conducted versus what was originally proposed. The NSGO will detail what constitutes an allowable amendment in their response letter confirming funding, and RCs are always welcome to ask clarifying questions. Awards can not be announced publicly until they have gone through final NOAA Grants Management Division approval.

NEPA: before submitting applications up to the NSGO

- Review the NEPA compliance guidance and examples at https://seagrant.noaa.gov/insideseagrant/Implementation.
- Work with your SG program's NEPA point-of-contact and the NSGO to ensure wording is as it should be for the work being proposed before you submit applications to the NSGO.
- Work with the PIs to ensure that work being described on the abbreviated questionnaire and within the proposal is intended to be FUNDED by the Sea Grant project. For example, if samples are collected using other sources of funds, Sea Grant is not required to review those actions, and the PIs should clearly state that within the proposal and questionnaire. Failure to be sufficiently clear will likely result in delays and unnecessary restrictions on the award.
- If you have questions, ask your NSGO program officer for help.

Specific Award Conditions (SAC)
The NSGO may place a SAC on to-be-funded research or fellowship projects, meaning an action must be completed before funding can flow to the Sea Grant program or the PI. As of spring 2020, these SACs are often related to permitting. Once the award has been accepted, ask your sponsored programs office, or Federal program officer for a report of all SACs on the award. Ensure that the conditions are met prior to allowing the PI to commence work on the research project.

When the work begins
Once work has begun, PIs are expected to submit annual progress reports which include publications, graduate students supported, news stories related to the work, updates to data management plans, and other criteria to be communicated to the NSGO. They are made aware that Sea Grant communications or extension staff may contact them about potential stories or outcomes. Some Sea Grant programs hold in-person meetings with funded researchers to kick-off the projects, discussing work and funding flow, and sometimes allowing for interactions with other Sea Grant staff. Some programs also share expectations for funded researchers to attend (or present) at noteworthy conferences or Sea Grant

program-specific research symposia. If a Sea Grant program has a fellowship-type program in place, additional instructions related to this are communicated in time (e.g., if a student is a graduate student fellow, there may be expectations to participate in training sessions or to present research).

Long-term tracking
Long-term tracking of project outcomes is a challenge. Suggestions to make this easier include:
- Collect Open Researcher and Contributor ID (ORCIDs) of funded researchers and track publications using these
- Follow funded researchers and their students or post-docs on ResearchGate, Google Scholar, LinkedIN
- Collect social media handles of funded researchers and their students or post-docs
- Set up a programmatic LinkedIN page - ask or require students and fellows to connect with the page
- Remind funded researchers that providing links to publications to the Sea Grant programs and NSGO (where the Sea Grant programs can help promote these via social media and other channels), will help raise altmetric scores and generally make research more discoverable
- Put aside some funds to help with publication costs for PIs, which will encourage them to connect with you as they publish
- At both the beginning and the end of the research project, send a document to your funded researchers describing policies and publication acknowledgements.
- Per page 38 of the [Department of Commerce Financial Assistance Terms and Agreement](#) (which all programs agree to when accepting the federal funds), "...Non-Federal entities are responsible for assuring that every publication of material based on, developed under, or otherwise produced pursuant to a DOC financial assistance award contains the following disclaimer:"

  > *"This [report/video/etc.] was prepared by [recipient name; State Sea Grant program] using Federal funds under award [number; NOAA award # for SG program] from [name of operating unit; National Oceanic and Atmospheric Administration's National Sea Grant College Program], U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the [name of operating unit] or the U.S. Department of Commerce."*

  > (NOTE: Red text is recommendation for how SG programs should fill in the gaps)

- Some more example text for communicating with PIs: *"As you continue to generate outcomes from this work, please ensure you have the correct grant number by contacting [contact] prior to publication. Research impacts sometimes need ten (10) or more years to realize their full potential. You will hear from our staff after your project is completed. Please be responsive to their requests."*

5.   **Additional tips**

Honorariums or gifts for panelists and reviewers
Reviewing proposals or serving on panels may take up a significant amount of time on the part of the individual. Many state programs choose to offer an honorarium or small gift to reviewers and panelists as thanks. For those who review a single proposal, some programs simply send a heartfelt thank you note while others may send a small item such as a pen (typically swag from their program). For those who review multiple proposals or serve on panels, programs may send a more substantial item (e.g., a book, a mug) or an honorarium. The size of the honorarium being offered may change depending on the number of proposals being reviewed and the estimated time being invested, and typically ranges from $50 to $500. Talk with your director about what budget you have available and what you feel is fair to offer. Offering to compensate reviewers and panelists can serve to recognize the time and expertise they contribute to our programs, and may make it easier to include early-career scientists and members of underrepresented groups as reviewers.

It is important to note that not all individuals can accept honorariums or gifts. As one example, federal employees typically cannot accept an honorarium though they often make great panelists or reviewers. Be sure to clarify what is allowed before you send something. A strategy is to include a line like the following in your initial invitation: *"If you are able to accept it, we can offer a $250 honorarium for your time."*

Where do responsibilities lie?
This document outlines several requirements for funded researchers that extend beyond what will have been described in the main portion of their proposal narratives. These include but are not limited to ensuring proper permits and institutional approvals are obtained (e.g., IRB, DNR collection permits) and making environmental data accessible. It is important to remember that State Sea Grant programs are subject to policies of their home institution, as sub-awardees are subject to policies of the granting agreement *and* their respective home institutions. For Sea Grant awards, all of these groups are also subject to NOAA and NSGO policies. When thinking about different possible scenarios, it can be tricky to ascertain where ultimate responsibility lies. This document includes recommendations to help RCs with due diligence for a number of requirements. If you have a question related to this topic, please don't hesitate to bring it up during an RC Network meeting and/or contact your NSGO program officer.

Evaluation of JEDI-related efforts and demographic analyses
Sea Grant programs should consider collecting voluntary baseline data on demographic aspects of Sea Grant-funded research projects, institutions, and principal investigators with a long-term goal of ensuring that research supports the diversity of the communities that the program seeks to serve.

Sea Grant programs can utilize any form approved by their institute, to collect voluntary demographic information, and if they desire to do so, they may share collected information with the NSGO. There is a standard federal demographic form (SF-424 R&R Personal Form) that any program is welcome to begin using.

Appendix A. Conflict of interest form that reviewers and panelists should sign and return to RC.

NATIONAL SEA GRANT COLLEGE PROGRAM
CONFLICT-OF-INTEREST STATEMENT FOR TECHNICAL PANELISTS

1.   As a technical panelist you are asked to review a research proposal or proposals for federal and/or matching funding. Your designation as a panelist requires that you be aware of potential conflicts of interest. Please read the examples of potentially biasing affiliations or relationships listed on the back of this form.

2.   If your designation gives you access to information not generally available to the public, you must not use that information for your personal benefit or make it available for the personal benefit of any other individual or organization. This is to be distinguished from the entirely appropriate general benefit of learning more about Sea grant or becoming better acquainted with the state of a given discipline.

3.   Sea Grant receives proposals in confidence and protects the confidentiality of their contents. For this reason, you must not copy, quote or otherwise disclose or use material from any proposal you review. The discussions of the panel are expected to remain confidential**.**

CERTIFICATION

I have read the list of affiliations and relationships on the back of this form that could prevent my participation in matters involving such individuals or institutions. To the best of my knowledge, I have no affiliation or relationships that would prevent my objectively executing the responsibilities of peer review. I also will not divulge any confidential information I may become aware of during my review.

Reviewer's Name:

Reviewer's Signature:

Date:

Title of Proposal(s):

NATIONAL SEA GRANT COLLEGE PROGRAM

CONFLICT-OF-INTEREST STATEMENT FOR SEA GRANT TECHNICAL PANELISTS

You may have a conflict if you have any of the following affiliations or relationships:

1. Your affiliations with applicant institution(s).
    - Current employment at the institution as professor adjunct professor, visiting professor, or similar position. (This includes other campuses of a multi-campus institution, but a waiver may be available. If you are in a multi-campus institution, let the program director who solicited your review know.)
    - Other current employment with the institution such as consulting or an advisory arrangement, or you are being considered for employment with the institution.
    - Formal or informal re-employment arrangement with the institution.
    - Ownership of the institution's securities or other evidences of debt.
    - Current membership on a visiting committee or similar body at the institution. (This is a conflict only for proposals or applications that originate from the department, school, or facility that the visiting committee or similar body advises.)
    - Any office, governing board membership, or relevant committee chairperson in the institution.
        - (Ordinary membership in a professional society or association is not considered an office.)
    - Current enrollment as a student. (Only a conflict for proposals or applications that originate from the department or school in which one is a student).
    - Received and retained an honorarium or award from the institution within the last 12 months.

2. Your relationships with an investigator, project director, or other person who has a personal interest in the proposal or other application.
    - Known family or marriage relationship. (Conflict only if the relationship is with a principal investigator or project director.)
    - Business or professional partnership.
    - Employment at the same institution within the last 12 months.
    - Past or present association as thesis advisory or thesis student.
    - Your collaboration on a project or on a book, article, report, or paper within the last 48 months.

3. Your other affiliations or relationships.
    - Interests of the following persons are to be treated as if they were yours: any affiliation or relationship of your spouse, of your minor child, or a relative living in your immediate household or of anyone who is legally your partner that you are aware of, that would be covered by items 1 or 2 above (except for receipt by your spouse or relative or an honorarium or award.)
    - Other relationship, such as close personal friendship, that might tend to affect your judgements or be seen as doing so by a reasonable person familiar with the relationship.

CONFIDENTIALITY OF PEER REVIEWS AND REVIEWER IDENTITIES

Sea Grant policy is that reviews and reviewer identities will not be disclosed except that verbatim copies of reviews (without the name and affiliation of the reviewer) will be sent to the principal investigator. Sea Grant considers reviews and reviewer identities to be exempt from disclosure, but cannot guarantee that it will not be forced to release them under terms of the Freedom of Information Act, or other laws. It may release a listing of all reviewers used within a specified period.

Appendix B. Example of data management plan templates, to be provided to PIs.

NOAA DATA SHARING DIRECTIVE POLICY

Data and information collected and/or created under NOAA grants and cooperative agreements must be made visible, accessible, and independently understandable to general users, free of charge or at minimal cost, in a timely manner (typically no later than two years after the data are collected or created), except where limited by law, regulation, policy or by security requirements. The requirement has two basic parts: (1) environmental data generated by a grant project must be made available after a reasonable period of exclusive use, and (2) the grant application must describe the plan to make the data available (Principal Investigators are expected to execute the plan).

If your project produces environmental data, it must conform to NOAA's Data Sharing Directive for Grants, Cooperative Agreements, and Contracts. For detailed guidance, you can view the current version of the policy, including a definition of environmental data (which can include socioeconomic and model data), download any updates and access additional implementation resources at the following permanent URL (Appendix B outlines requirements):
https://nosc.noaa.gov/EDMC/documents/Data_Sharing_Directive_v3.0.pdf.

Proposals submitted in response to this Announcement must include a Data Management Plan describing how these requirements will be satisfied. To comply with this requirement, the Principal Investigator must use the form below to explain how the data and metadata will be provided. Please complete the form, including information for all applicable datasets related to your project(s). If funding is required for data curation and archiving, please make sure that funds are budgeted in the project proposal for data management. All data generated through Sea Grant funded projects are required to be completely QA/QC'ed (Quality Assurance and Quality Control) and made publicly accessible **by two years after the end date of the project**. If the proposed research will not generate environmental data then a Data Management Plan will need to be stated as such: "*This project will not generate any environmental data.*"

Sea Grant Data Management Plan Form
Proposal Submission Phase

Title of the Proposal (required answer):

Name of the lead PI (required answer):

Contact Information (required answer):

Dataset Description(s) (required answer): *What data will the dataset(s) contain? This includes descriptive details on data types, inclusion of metadata, data format(s), collection times / date ranges, etc. What name(s), if any, will be designated to the dataset(s)?*

Do you agree to release all data no later than 2 years after the end-date of the project? (required answer):

Issues (required answer): *Are there any legal, access, retention, etc. issues anticipated for the dataset? If yes, please explain.*

Data Size: *What will be the estimated size of the dataset? Please report estimated number of MB, GB, TB, etc., collected.*

Data Format: *What format will the dataset utilize? (i.e., Excel file, model code, audio/video recording, etc.)*

Ownership (required answer): *Who will own the dataset, if not the lead PI's university?*

Post-Processing: *What post-processing, QA/QC will this dataset undergo? Who will be responsible for performing this post-processing and QA/QC to prepare the dataset for its deposition into a repository?*

Preservation Plan (required answer): *What data repositories will be used to host the dataset? If none, how will the data be preserved?*

Products: *Will any information or data products be developed from this dataset? How will the related costs be supported? Which organization(s) will be producing these products?*

Other Comments: *Are there any additional comments related to the data that will results from your Sea Grant-funded study?*

Sea Grant Data Management Form
Project Completion Phase

Date Submitted (required answer):

Title of the Proposal (required answer):

Name of the lead PI (required answer):

Contact Information (required answer):

Dataset Description(s) (required answer): What data do the dataset(s) contain? This includes details on data type, format, collection times / date range, etc. What name(s), if any, will be designated to the dataset(s)?

Issues: Are there any legal, access, retention, etc. issues existing for the dataset(s) (i.e.; IRB restrictions)?

Data Size: What is the estimated size of the dataset? Please report estimated number of MB, GB, TB, etc., collected.

Data Format: What format(s) do(es) the dataset(s) utilize? (i.e., Excel file, model code, audio/video recording, etc.)

Ownership (required answer): Who owns the data, if not the lead PI's university?

Post-Processing: What post-processing, QA/QC has this data undergone? What organizations performed this post-processing and QA/QC to prepare the data for its deposition into a repository?

Preservation Plan (required answer): What data repositories were used to host the dataset? If none, how was the data preserved? Please provide URL for any data repositories that were used to preserve this data and any necessary information needed to extract the data.

Keywords (required answer): Please provide a list of terms used to query the database.

Release Date (required answer): When will this dataset be available to the public? Reminder: the release date must be no later than 2 years after the end of the project.

Products (required answer): Have any information or data products been developed from this dataset? Which organization(s) produced these products? Please provide a location for any products that were produced as a result of this project.

Preferred Data and Product Citations (required answer): *How to reference data, publications, or any other project outcomes?*

Other Comments: *Are there any additional comments related to the data that you produced with your Sea Grant funding?*

Appendix C. Examples of how to formally solicit feedback from external peer reviewers or panelists.

Preproposal stage possibilities:

Evaluate 3 criteria: relevance (50%); technical merit (25%); and quality of extension/education plan (25%).
Comment on relevance, scientific merit, user engagement, dissemination of results, PI experience, budget adequacy.
For integrated assessment projects: assess context, underlying issues, approach and relevant data sources identified, as well as competency of the team to properly address the specific question outlined.
Answer the following: What question or issue does the proposed project address? What is the importance of that work for (state) and is it relevant to the priorities listed in the RFP? What is the scientific merit of the proposed project? Is there a well-conceived outreach plan? What are the likely outcomes or impacts (environmental, educational, social, economic, etc.) that could result from the proposed project? Describe any concerns and suggestions for improving the proposed project (bulleted list):
Assess technical feasibility and scope (rather than a full technical merit review), relevance to RFP and strategic plan, outreach and impact potential.
For external reviewers: look for fatal flaws, screen for lack of originality, pinpoint innovative ideas, and provide feedback to PIs; For SG Advisory Committee and program personnel: What are project strengths and weaknesses in terms of alignment with research objectives and program plan, and Societal Relevance?
Technical and Scholarly Merit: Proposals should indicate how the proposed work fits into and advances the current body of knowledge in its research focus area. Work that will result in peer-reviewed publications, and useful outreach tools and programs is desired. Fit with Core Topic Areas: Proposals should justify how and why the project is relevant to the SG RFP priority focus areas. Research Design: The experimental design should be sound and reasonable given budget and time constraints The design should be appropriate to achieve the stated objectives. Preparation and Knowledge of PI and Collaborators: Research partners should have the technical and scientific skills to complete the proposed work.

Full proposal stage possibilities:

Example 1.

Technical Merit: Includes novelty/originality; conceptual adequacy of hypotheses or research questions; clarity of objectives; adequacy/feasibility of methodologies; probability of success. Adequacy of the proposed budget to accomplish objectives and of the budget justification in explaining the need for resources.

Project Relevance: Relevance includes improved understanding, assessment, use, management, conservation, or restoration of marine and coastal resources. When assessing relevance, please also consider the primary theme areas detailed by [RFP] and relevance to the [current] strategic plan.

Outreach/Education: Appropriateness and impact of the outreach/education component outlined. Consider the methods by which the investigators propose to disseminate results to user groups and encourage positive impacts through extension, education, or communication activities.

Overall Priority: Considering technical merit, relevance, and outreach/education efforts what is your assessment of the priority that CTSG should give to this proposal, in terms of its relative potential for funding?   An overall priority rating of "Low" (1) or "Very Low" (2) should be given to proposals that, in your view, should <u>not</u> be funded. A rating of "High" (4) or "Very High" (5) should be given to proposals that, in your view, <u>should</u> definitely be funded. If you feel that you are unqualified to assess merit, relevance, or overall priority of a particular proposal, please check "Cannot Assess" in the appropriate row.

Example 2.
1. Scientific and technical merit:
- Clarity and attainability of the objectives detailed in the project description;
- Adequacy of the proposed methodology to test hypotheses and accomplish stated objectives, including the soundness of the technical approach, scientific design, methods, and data interpretation;

2. Significance of the problem, or rationale and importance of the work;

3. Technical capacity of the applicant to successfully carry out the proposed project taking into account such factors as the applicant's:
- Past performance in successfully completing projects of similar size, scope, and relevance to the proposed project,
- PI expertise/qualifications, PI knowledge, and resources to successfully achieve the goals of the project.

4. Integration/Inclusion of effective outreach and/or education.

5. Expected Outputs and Outcomes:

- Adequacy of the applicant's description of outputs and outcomes, which must be well-defined and results-oriented.
- Adequacy of applicant's data management plan to ensure data quality, long term archiving and public access.

6. Appropriate and Cost-effective Budget:
- Adequacy of the proposed budget to accomplish objectives and of the budget justification in explaining the need for resources.

Example 3.
- Rationale: Evaluate the degree to which the proposed activity addresses an important issue, problem, or opportunity in development, use, or management of marine or coastal resources.
- Scientific or Professional Merit: Evaluate the degree to which the activity will advance the state of the science or discipline through use and extension of state-of-the-art methods.
- Innovativeness: Evaluate the degree to which new approaches to solving problems and exploiting opportunities in resource management or development, or in public outreach on such issues will be employed; alternatively, the degree to which the activity will focus on new types of important or potentially important resources and issues.
- Qualification and Past Record of Investigators: Evaluate the degree to which investigators are qualified by education, training, and/or experience to execute the proposed activity; record of achievement with previous funding.
- Outreach: Evaluate the degree to which investigators have incorporated an outreach plan for the research findings or tools they plan to develop, the degree to which stakeholder or end-user awareness or buy-in has been sought, and the likelihood the work will inform the public and decision-makers as a result of the outreach efforts. [*New this year*].
- Summary Review: Please provide a brief summary of your overall evaluation of the merit of this proposal.
- Summary Rating: Please indicate how you would rate this proposal ranging from Excellent (5) to Poor (1)

Example 4.
Full proposals are evaluated on the basis of:
- Rationale (0-10 points)
- Scientific or professional merit (0-30 points)
- Innovativeness (0-10 points)
- Professional Qualifications of the PI/Co-PI (0-5 points)
- Responsiveness to program priorities (0-10 points)
- Programmatic value (0-5 points)
- Education (0-15 points)
- User relationship and outreach (0-15 points)

Based on points assigned by ad-hoc reviewers, we categorize all full proposals in terms of their ranking. Full proposals at/above the "scientifically-sound" cut-off limit are discussed during the technical panel review.

Example 5.
Peer Reviewers and Panelists
Rank 1-5 (poor to excellent) in 4 categories: Technical/scientific merit (35%), Qualifications and Past Record of Investigators (15%), Budget (15%), Outreach/Education/Extension and User Relationship (35%). Tech panel provides recommendation based on peer review and their own discussions (3 panelists per proposal).
Advisory Committee
Rank Societal Relevance as high - med - low.

Example 6.
Each of the following 10 categories is scored 1 to 5 and then summed. *Excellent* (45-50) – A truly meritorious research project; *Good* (35-44) – A project that clearly deserves support; *Adequate* (25-34) – A project that is good enough to be supported, with certain reservations; *Questionable* (15-24) – A project about which reservations are so serious that it should be supported only in exceptional circumstances; *Poor* (0-14) – A project that should not be funded under any circumstances.

- Rationale and relevance
- Scientific Merit
- Innovation
- Application
- Appropriate Methodology
- Successful completion in proposed timeframe
- Successful completion with available resources
- Qualifications of investigators
- Student involvement
- Outreach Plan

Appendix D. Sample text for a recommendation letter to be submitted to NSGO.

Dear [NSGO program officer],

During this research funding cycle, the [SG program] considered research proposals that [insert description of RFP].

We received X pre-proposals. Pre-proposals were reviewed by [describe the pre-proposal evaluation process]. We encouraged X full proposals and received X. Applications were evaluated through [describe the full evaluation process, including external merit reviews, panels, and other processes used to review the proposals].

A panel of X subject experts was convened on [date] (Table 1). The panel reviewed X projects (Table 2) and determined fundablity of each project. [If full proposals were not discussed at panel describe rationale here].

Of the fundable projects, [SG program] recommends funding X projects at this time (Table 2). The intended awards for the X proposals total $XX for FY2016 and $XX for FY2017. [If proposals were selected out of rank our describe rationale here].

All applicants will receive copies of peer reviews and panel summaries. The anonymity of the reviewers and panelists will be maintained. We believe [X, Y, Z, etc.] proposals address priority topics [more description]. If you have any questions or comments please let us know. We look forward to your review and approval.

Signature of Program Director

Tables
- Table 1: Panel Reviewer, names, affiliations, and contact information (email).
- Table 2: All full proposals received; Title, PI, University, Total federal funding request, Scores (if applicable), Fundability, aquaculture projects noted (if applicable), Recommendation for funding at this time.