Sea Grant

Maryland

Maryland Sea Grant College

Proposal Guidance

Funding Period
February 1, 2018–January 31, 2020

SUMMARY OF PROPOSAL SUBMISSION REQUIREMENTS

Principle Investigators (PI) must follow the instructions about proposal format as explained in this guidance document or risk the proposal being rejected. Details for completing all components of the proposal are in the section "***Detailed Proposal Submission Requirements"*** section of these guidelines.

Full proposals must be submitted by **June 16, 2017 at 5:00 PM EDT.**

Submit one PDF file of the complete proposal (all components) online at ww2.mdsg.umd.edu/rfp/submit/.

Each proposal must include, in this sequence, the following:
- Signature cover sheet
- Project summary form (90-2)
- Sea Grant budget form (90-4)
- Budget justification
- Sea Grant Data Management Plan form
- Project narrative **(15 pages max)**
    - Introduction / Background / Justification
        - Background and relevance
        - Objectives and description
    - General Work Plan and Milestones
        - Methodologies
        - Project milestone chart
    - Outcomes
        - Anticipated benefits
        - Deliverables
    - Coordination with other program elements
        - Project leadership and personnel
        - Project partners
        - Facilities
- Outreach plan **(2 pages max)**
- References
- Curricula vitae
- Current and pending support
- Accomplishments of current and previously funded Maryland Sea Grant projects **(1 page max)**
- Letters of support (optional)
- Reviewers and conflicts

PIs are required to use the Maryland Sea Grant online proposal worksheets for their project summary form, NOAA budget form, and budget justification. All PIs encouraged to submit a full proposal will be provided access to the budget worksheets via email. PIs who submitted a pre-proposal that was not encouraged to go onward are still eligible to

submit a full proposal. Please contact research@mdsg.umd.edu or call 301-405-7500 and speak with either Mike Allen or Jenna Clark to request an account or be reminded of your existing log in information. Access the proposal worksheets at http://ww2.mdsg.umd.edu/worksheets/.

Please note that the National Sea Grant Office has not issued guidance for the format and contents of proposals to be submitted by the state Sea Grant offices for the 2018-2020 competition. As such, proposals selected for funding through this competition may require modification or additional information before being forwarded to the National Office. In particular, information will be needed to comply with the National Environmental Policy Act (NEPA) requirements.

DETAILED PROPOSAL SUBMISSION GUIDELINES

SCHEDULE FOR PROPOSAL PREPARATION AND REVIEW

Request for Proposals issued …………………………………………….December 6, 2016
Pre-proposals due   …………………………………………………………….January 27, 2017
Full proposals due   ………………………………………….June 16, 2017 at 5 PM EDT
Final proposal selection, PIs notified   ………………………………Mid-September 2017
Early October – Accepted proposal modifications, if required, due   ………Early October
Omnibus proposal to NOAA ……………………………………………November 1, 2017
Funding cycle   …………………………………………February 1, 2018 to January 31, 2020

PROPOSAL SUBMISSION

The full proposal should be submitted electronically on the Maryland Sea Grant website by **June 16, 2017 at 5:00 PM EDT.** The submission system shuts down automatically at that time. Adobe Acrobat is required for creating the required PDF of your full proposal.

- Submit one PDF FILE of the complete proposal (all components) online at ww2.mdsg.umd.edu/rfp/submit.
- Maryland Sea Grant does not require an original signature on submitted proposals. Electronic signatures are acceptable. However, researchers should conform to the submission policies of their host institutions with regard to obtaining institutional endorsements and requirements for the signature pages.
- Maryland Sea Grant does not require hard copies of proposals be submitted to us. Your electronic submission through our website is your official submission.

PROJECT DURATION

Proposed projects should be for a 24-month duration. Funds are awarded on an annual basis. A yearly progress report is essential for evaluation of the project and for assessing whether sufficient progress has been made to warrant continued funding. All

PIs must submit annual progress reports and a final report at the completion of the project. Reports are submitted electronically through the MDSG website.

EXPLANATION FOR COMPLETING FULL PROPOSAL COMPONENTS

Specific formatting instructions are described in the "Full Proposal Formatting" section of these guidelines. Complete information about the RFP can be found on the web at http://www.mdsg.umd.edu/maryland-sea-grant-request-proposals-2018-2020. Form templates can be downloaded from http://www.mdsg.umd.edu/proposal-forms-and-worksheets.

PIs are required to use the Maryland Sea Grant password protected, online proposal worksheets to complete their project summary (90-2), budget (90-4), and budget justification forms and to generate the PDFs to submit with their other proposal components. This system **does not** automatically submit the information to Maryland Sea Grant.

All PIs encouraged to submit a full proposal will be provided access to the budget worksheets via email. PIs who submitted a pre-proposal that was not encouraged to go forward are still eligible to submit a full proposal. Please contact research@mdsg.umd.edu or call 301-405-7500 and speak with either Mike Allen or Jenna Clark to request account access. Access the proposal worksheets at http://ww2.mdsg.umd.edu/worksheets/.

To submit final proposal PDF online go to: ww2.mdsg.umd.edu/rfp/submit/

Signature Cover Sheet

Principal Investigators are responsible for routing the proposal through their institution's research administration and for obtaining all required institutional endorsements prior to submitting. You may use your own signature form or Maryland Sea Grant's template. A sample signature template is in Appendix D.

Project Summary Form (90-2)

This form, used by all Sea Grant offices, is a record of each Sea Grant proposal submitted. Go to http://ww2.mdsg.umd.edu/worksheets/ and enter your name and login information that you received from Maryland Sea Grant and select the "Continue" button. After you login, you will be directed to the "Beginning Page."

Affiliation is the lead PI's home institution.

ICode corresponds to the grantee institution and is set automatically after the Affiliation is entered.

Proposal Title is generally 16 words or less. Generally this is the same title as the pre-

proposal. Please keep title consistent throughout the proposal. <u>If you have already used the online system, select your proposal title from the drop down box and click on the "Go On" button.</u> Otherwise, leave "New" selected and click on the "Go On" button and enter the Project Title in the space provided on the Project Summary (90-2) page.

Grant/Project Number ignore.

Project Status select "New".

Duration select years of project duration (2).

Start Date is automatically filled in for you.

Co-Principal Investigator enter all Co-PIs and their affiliations by selecting the + symbol to expand the list and entering the information.

Budget Assignments are used to create different budgets for Co-PIs and/or to create a subcontract for a Co-PI. Multi-institution proposals should include budgets or subcontracts for each institution receiving funds. Contact us if you require further clarification.

Partners are non-PI/Co-PI institutions associated with the project. Use the lookup function.

Sea Grant Strategic Plan Classification Codes. Select one to three codes for the proposal.

Keywords should not exceed five.

Project Abstract
Provide a one page (maximum) Project Abstract. This abstract must include the rationale for the project, the scientific or technical objectives and/or hypotheses to be tested, a brief summary of work, and accomplishments to be completed. This abstract may be used for public dissemination.

Data Sharing Plan
You must fill out the Sea Grant Data Management Form separately (see below). In this space, provide a brief summary (1 paragraph) of your plan or indicate: "No environmental data will be collected by this project".

Save the Worksheet
Select the appropriate button. Selecting the "save" button will save your work and return you to the "Beginning Page" where you can then log off or continue work to complete the budget form (90-4) and the budget justification.

Sea Grant Budget Form (90-4) and Budget Justification

After you complete the Project Summary Worksheet (90-2) and you return to the "Beginning Page" radio buttons should appear for completing the budget worksheet(s). The available budget worksheets are determined by how you completed the "Budget Assignments" on the Project Summary Worksheet. If there are multiple investigators on a proposal and you selected different budgets for them, then you should see multiple budget worksheets indicated on the "Beginning Page." To complete a budget form, select the appropriate radio button and click on "Go On."

Make sure that the correct title for your proposal appears in the "Proposal Title."

The budget worksheets will allow you to complete forms for each year and a cumulative summary form for all years for the PI and Co-PIs. **Explanation** and **show** and **hide** are gray colored links to information on completing and expanding the budget form. For entering "Other Personnel" or "Other Direct Costs" data, click **show** on the left side of the line in which you wish to enter information. Further details are on the form.

Budget Justification
For every dollar value you enter into your budget, you are required to enter a justification for that line item. Failure to do so may compromise your proposal submission. The budget justification must be a detailed description of each cost item in the 90-4 budget page. A box is provided next to each budget line for you to complete the budget justification. The justification must sufficiently address the questions described in the proposal worksheets for each item in the budget. Differences in budget items for the two years must be noted and explained. Provide detailed explanations of any subcontract work in the budget justification box in the subcontract line. Guidance documents are also available as links from the "Beginning Page". Inadequately detailed budget justifications will hinder the review and selection process.

Sea Grant Research Fellow
Under a _separately funded, competitive fellowship program_, Maryland Sea Grant offers two years of support for graduate students working on Sea Grant funded projects as part of their work towards a graduate degree. Fellowships provide a stipend, tuition remission, and other benefits. Fellows are required to participate in several activities sponsored by Maryland Sea Grant that are designed to help fellows develop an understanding of the link between science and outreach. These activities will not deflect from the primary research focus of the fellowship; rather, they are designed to enhance it in a meaningful way. Funds for these students are limited, *and not every project supported by Maryland Sea Grant can be awarded a Fellow*. PIs also have the option of including student support as a line item in their budgets and should include all associated costs incurred. **If you would like to request a Sea Grant Research Fellow, please check the box at the end of the Budget Form (90-4).** Do not include the cost of a Fellow in the estimated budget for your project.

Matching Funds
A 50 percent match (e.g., a $70K budget must have a match of $35K) is sought on all Maryland Sea Grant proposals. Please contact the Maryland Sea Grant office if any questions arise about the eligibility of matching funds.

Note that it is important to specify match contributions in the budget and justification to clearly demonstrate sources and amounts. Any match contributions identified by investigators are subject to federal audit that may result in additional costs to the institution. Match may be in the form of selected "in-kind" services or additional funds from a specified institution, agency, industry, or non-federal program. No funds from federal agencies can be used as match.

Save the Worksheet
Select the appropriate button. Selecting the "save" button will save your work and return you to the "Beginning Page" where you can then log off or continue work.

Completed Forms
After you have completed all of the forms to your satisfaction, from the "Beginning Page" you can create PDFs of all the forms by selecting the "Create PDFs" radio button and clicking on "Go On." Please follow the instructions on the "Creating PDFs" page so that your worksheets are saved in the correct form.

You must make PDFs of these worksheet forms and combine them with the rest of your proposal submission components to be submitted as one PDF.

Completing the forms on our online proposal worksheet system <u>DOES NOT</u> automatically submit the forms to Maryland Sea Grant.

<u>Sea Grant Data Management Plan Form</u>

The America COMPETES Act requires the federal government to ensure that data from federally supported research is accessible to the public in a timely manner. NOAA requires Sea Grant programs to have mechanisms in place to meet these data access requirements. As a condition of all research grants, projects funded by Maryland Sea Grant must have a data management plan in place that will allow for the information collected to be freely available for public use. Specifically, NOAA requires that:

> 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).

> Timely means no later than publication of a peer-reviewed article based on the data, or two years after the data are collected and verified, or two years after the original end date of the grant (not

including any extensions or follow-on funding), whichever is soonest.

Final pre-publication manuscripts of scholarly articles produced entirely or primarily with NOAA funding will be required to be submitted to NOAA Institutional Repository after acceptance, and no later than upon publication. Such manuscripts shall be made publicly available by NOAA one year after publication by the journal.

For more information on NOAA and Maryland Sea Grant's data management and sharing policies, visit:
Maryland Sea Grant: http://www.mdsg.umd.edu/data-management-and-sharing
NOAA Environmental Data Management: https://nosc.noaa.gov/EDMC/PD.DSP.php

To comply with these requirements, proposers must complete a Data Management Plan for making environmental data and results accessible and interpretable within two years of collection. Download and fill out the "Sea Grant Data Management Plan Form" from our forms page (http://www.mdsg.umd.edu/proposal-forms-and-worksheets). Additional instructions are provided on the form.
Storing data on local servers or external drives without public access or noting that data will be available "upon request to the PI" are no longer sufficient options. Note you will be required to list data sets created and how to access them when reporting on your project. If funding is required for archiving data, please include this in the project budget.

Project Narrative

The project narrative contains the description and graphical components of the proposal (including the milestones chart). Your proposal should use the following headings in the order listed. These headings reflect NOAA requirements. **A 15 page limit** applies to the narrative and includes any tables and figures. Failure to adhere to these guidelines is grounds for return without review. The project title and the name, position, and affiliation of the PI and each Co-PI should be presented at the top of the first page of text. Before formatting the proposal consult the instructions under "Full Proposal Formatting." Proposals must adhere to these instructions.

Introduction / Background / Justification

Background and Relevance

This is the introduction to your proposal. Readers should obtain a complete understanding of the context in which the effort is being proposed, its direct connection to questions in the original RFP, its relevance to Maryland Sea Grant, and the nature of the specific problem being addressed. This section should demonstrate your familiarity with previous and ongoing work relevant to the proposed effort.

Objectives and Description

Provide a general description of the project. State the goal(s) and/or hypothesis(es) of your proposed effort and the objectives for each year of funding.

General Work Plan and Milestones

Methodologies

This section should outline the methodologies, techniques, or actions for achieving each of the project objectives. Describe the experimental designs, techniques, and analyses to be used. Be specific. Include an explanation of how the data will be analyzed using appropriate statistical procedures. If appropriate, include a labeled site map. Provide a description of major project components and outputs. The proposed approach should be clearly outlined so that the reader can determine how the proposed objectives will be met. This section and the previous section should convince peer reviewers of your understanding of the current, state-of-the-art technologies and methodologies as well as the merit of your technical approach towards conducting your proposed research. Make sure that the research contributions of specific individuals on the team are clearly defined and integrated.

Project Milestone Chart(s)

Each proposal must include a project milestone chart that outlines each proposed year of funding. A milestone is a point at which an accomplishment is made or a decision reached with respect to executing the project. Two templates for milestone charts are available in Appendix D; however, you may develop any chart format to present your milestones. This section may include explanatory text for the chart as long as the page limit is not exceeded.

Outcomes

Anticipated Benefits

Describe the outcomes of the project and implications of the anticipated results. This section should respond to questions such as:
- What will be the immediate products and outcomes from the project?
- How does this research advance this field of science?
- Who will use this information or the products developed from it?
- Have you communicated with potential users? (It is strongly recommended that you do so before submitting the proposal. Letters of support appended to your proposal are appropriate.)
- What are the future applications of the proposed work?
- How might the results of this research be applied to the management of Maryland's coastal environment and its resources?
- Who is the target audience of your outreach effort?

Deliverables

PIs are required to track their progress and report annually on information, products, and services rendered as a result of their work. Project deliverables include academic

products, outreach products, presentations, workshops, tools, etc. Some of these deliverables will be tracked as performance measures. Please review the list of Maryland Sea Grant performance measures described in Appendix E.

Provide a description of all deliverables that will be developed through this project. Include appropriate MDSG performance measures that are applicable to the project.

Coordination with Other Program Elements

Project Leadership and Personnel

Briefly describe how the project will be managed and the role that each person (PIs, Co-PIs, other senior personnel, graduate students, etc.) will be conducting in the project. (Detailed background information on PIs and Co-PIs should be included in the curricula vitae rather than described here.)

Project Partners

List and describe the purpose/role of the project partners involved in the research or outreach components of the proposal such as industry, agencies, and/or other organizations. Letters of support from these partners are strongly encouraged.

Facilities

List all facilities and/or equipment available and/or necessary for the project.

<u>Outreach Plan</u>

An essential component of Maryland Sea Grant's mission is to fund research that meets the needs of many audiences whom we serve. To that end, we require investigators to develop a **two-page maximum** outreach plan that describes how the project will engage with constituencies that may benefit from the research and describes the ways the work will help solve problems and advance public understanding in Maryland and, possibly, beyond. We strongly encourage proposals to include funding to support outreach efforts.

Please read the description of the Outreach Plan in Appendix C before completing this section. Your outreach plan should include a clear communication strategy that supports the outreach effort and address some or all of the following bullets:

- Describe the products and scientific outputs and outcomes of the proposed study that will be applicable to your outreach effort.
- Describe the non-peer end users for the products/outcomes.
- Describe the outreach mechanisms you will use to reach end peer users.
- Present a timeframe for developing and implementing this outreach plan.

- Describe the intended impact of these efforts with particular emphasis on how the impacts align with the RFP focus areas and research emphases.

References

To achieve consistency in the final program proposal, we ask that all PIs use the Limnology and Oceanography format for their list of references. Arrange alphabetically by author's surname and do not underline titles of books.

Article citation
Fenchel, T. 1986. Protozoan filter feeding. Prog. Protistol. 1: 65-113.

Article citation with a DOI
De Pol-Holz, R., O. Ulloa, L. Dezileau, J. Kaiser, F. Lamy, and D. Hebbeln. 2006. Melting of the patagonian ice sheet and deglacial perturbations of the nitrogen cycle in the eastern South Pacific. Geophys. Res. Lett. 33: L04704, doi:10.1029/2005GL02447

Citation for a part of a book, proceedings or technical collection
Codispoti, L. A. 1983. Nitrogen in upwelling systems, p. 513-564. In E. J. Carpenter and D. G. Capone [eds.], Nitrogen in the marine environment. Academic.

Book citation
Stumm, W., and J. Morgan. 1981. Aquatic chemistry, 2nd ed.Wiley.

In text citation
When citing an author within the text of the proposal, use format shown in the following sample paragraph:

The overwhelming importance of disease was illustrated dramatically by the onset of infection by the haplosporidium *Minchinia nelsoni* (MSX) (Haskin et al. 1966), which decimated oyster populations in Delaware Bay in 1957-1958 (Haskin et al. 1965; Haskin et al. 1966, 1967). Otto et al. (1975, 1976) have stated that …

Curricula Vitae

Provide a **two page maximum** curriculum vitae for PIs and Co-PIs. Use the format of a National Science Foundation Biographical Sketch. An example is included in Appendix D. Explicit guidance can be found in NSF's Grant Proposal Guide: https://www.nsf.gov/pubs/policydocs/pappg17_1/pappg_2.jsp#IIC2f.

Current and Pending Support

This list specifies projects in which PIs and Co-PIs are currently involved that are funded by Sea Grant programs and other agencies, or are under consideration for such funding, including the proposal being submitted to this competition. The total award amount for the entire award period covered (including indirect costs) must be shown as

well as the number of person-months per year to be devoted to the project, regardless of source of support. Please provide a brief explanation of any overlap between this proposal and any of those listed. Include a separate list for each PI/Co-PI. Format should be as follows:

Funded

"Evaluation of Food Sources for Striped Bass," U.S. Fish and Wildlife Service, Contract no. FWS 14-16-0008-2138 with the Horn Point Laboratory, UMCES; 15 June 2016 – 14 June 2018; $52,000; 1 mo/yr.

"Copper, Striped Bass and Patapsco River System," National Science Foundation, Office for the IDOE, Grant GX-41953 with the Horn Point Laboratory, UMCES; 6 Feb 2016 – 6 August 2018; $80,000; 1.5 mo/yr.

Pending

"International Maritime Laws and the Atlantic Striped Bass Fishery," National Science Foundation, Office for the IDOE; 1 May 2018 – 30 April 2019; $150,000; 6 mo/yr.

Accomplishments of Current and Previously Funded Maryland Sea Grant Projects

Principle Investigators who have been funded by Maryland Sea Grant since 2009 are requested to submit a **one-page maximum** summary of the accomplishments of their previous Maryland Sea Grant funded research. Information on research findings and publications, outreach efforts, and students supported as part of the research should be highlighted in the one page summary. Details of how previous work may be relevant to the current proposal should be provided.

Letters of Support (Optional)

Include letters of support from partners or agencies that can substantiate the need for the research or use of the results or outreach.

Reviewers and Conflicts

Provide a list of four individuals from **outside** the Chesapeake Bay region (MD, VA, DC) that are knowledgeable and competent in your field of inquiry. Include complete addresses, e-mail, and phone number, if possible.

Following this list, provide the list of conflicts of interest (COIs) for each of the PIs and Co-PIs. Provide the list of COIs as identified in the NSF Biographical Sketch "Collaborators & Other Affiliations" section. Collaborators, Co-Editors, Advisors, and Advisees (with affiliations) may be included in a continuous alphabetical list for each PI. Do not provide a separate page for each PI.

APPENDIX A: FULL PROPOSAL FORMATTING

In order to produce a uniform Sea Grant proposal volume for NOAA that integrates proposals, area summaries, and program information in a consistent format to submit through grants.gov, we require that you follow the guidelines listed in this section.

TYPEFACE OR FONT

When formatting your proposal, use Arial font. The type sizes should be: Main Head, 18 point; name and title of PI, 12-point; all other text, including subheads and body text, 12-point. (Example follows this section.)

Sample, Arial Character Set (size, 12-point):
ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz
123456789=!@#$%&*+

PROPOSAL FORMAT

Type proposals single spaced, left justified (a ragged right margin), with a full line of space between paragraphs. All margins should be 1". The body of the project narrative should be typed continuously (do not start a new page for each new heading). However, all major sections (Project narrative, Outreach plan, References, CVs, etc.) should start on a new page. Number continuously starting at 1 on the first page of the project narrative (center, bottom).

HEADINGS

Do not number the different levels of headings. Follow format of headings shown in the example on the following page, including title, authors, major headings, subheadings, etc.

LISTS

Use bullets for lists. When typing lists, indent left margin flush under first letter of each item, as shown below:

- To determine the nature and pattern of variable developmental rates seen in sibling larvae of two-parent broods.
- To begin a light and electron microscopic examination of the successive developmental stages of larvae from rapid and slow growth/developmental groups.

LATIN TERMS

Please type Latin genus and species names in italic.

Morphological, Physiological and Biochemical Aspects of Variable Developmental and Growth Rates in Oyster Larvae (Title in Arial Bold, 18-point)
(2 blank lines)

Jason Smith, Professor (Name, Title in Arial, 12-point)
Department of Zoology, University of Maryland (Affiliation in 12-point Arial Italic)
(1 blank line)
John Williams, Associate Professor
Department of Chemistry, University of Maryland
(5 blank lines)

INTRODUCTION / BACKGROUND / JUSTIFICATION

(Major headings should be Arial Bold, 12-point, all caps, centered)
(All major heads, subheads and rest of text should be Arial, 12-point)
(Skip 2 blank lines before each major heading and 1 blank line after)

Delay of Metamorphosis (Subhead one—use Arial Bold Italic)

Baseline Data (Subhead two—use Arial Bold)

Once the baseline data on metamorphic delay are obtained, subsequent cultures will be monitored for changes in growth rate (shell and biomass) following metamorphic competence. Pechenik . . .

Growth Rates (Subhead three—use Arial Italic)

Subsequent cultures will be monitored for changes in growth rate (shell and biomass) following metamorphic changes:

- To determine the nature and pattern of variable developmental rates seen in sibling larvae of two-parent broods.
- To begin a light and electron microscopic examination of the successive developmental stages of larvae from rapid and slow growth/developmental groups.

APPENDIX B: PROPOSAL REVIEW PROCESS

After full proposals are received, they will be sent out for external electronic peer review. In addition, a technical review panel, consisting of researchers and faculty with expertise in the disciplines represented by proposals under consideration, and an extension panel, will be convened. Based on the technical panel's own reviews, the extension panel reviews, and the external written reviews, the technical panel will recommend proposals for Maryland Sea Grant to support in 2018. Depending on funding constraints and reviewers' comments, Maryland Sea Grant may ask PIs to revise their proposed budgets and scope of work.

Maryland Sea Grant will select projects for inclusion in the 2018-2020 Maryland Sea Grant College funding request based on the following criteria:

- Scientific and technical merit of the proposed study
- Relevance, as articulated in the original RFP, as well as the goals and strategies of Maryland Sea Grant's 2018-2021 strategic plan
- Principal investigators' expertise and publication record
- Potential for successful completion of the work within the proposed budget and timeframe
- Thoughtful, strategic outreach plans
- Synergy with existing investments (federal, state, local) in monitoring and infrastructure
- Appropriateness of Maryland Sea Grant support relative to support from other sources

APPENDIX C: OUTREACH PLAN INFORMATION

All full proposals must include the Outreach Plan section. Investigators are strongly encouraged to contact the Maryland Sea Grant office to discuss potential outreach approach and audiences (which could include industry, policy-makers, the broad researcher community, and the public). Discussions with Sea Grant Extension Program agents and specialists are encouraged in the early stages of proposal development. A list of Sea Grant Extension personnel can be found at: http://www.mdsg.umd.edu/our-office.

Why Ask About Outreach?

Sea Grant has a broad mission to contribute to the sustainable and wise use of our coastal resources. To accomplish this we uses three tools: research, education, and outreach. Our outreach products are useful to society and incorporate science as the basis for the messages we convey. To ensure that the research we fund is as effective as it can be in serving our broad mission, we require investigators receiving support to demonstrate that they have a plan for translating their findings into a form that is useable by the individuals and organizations that the research intends to benefit.

What is Outreach?

In our research proposals, principal investigators must describe reasonable anticipated benefits of the research to be undertaken over short to long time scales and to various "end users" of the information or technologies developed. Since very few end users will read peer-reviewed journal articles or attend professional meetings, outreach must employ different

Potential End Users
• Environmental managers
• Decision makers
• Commercial fishermen
• Environmental NGOs
• K-12 students
• Targeted groups within the general public

and appropriate vehicles to convey the research findings to end-users in a readily understandable manner. Many different tools can be used provided there is a clear target audience and a logical outcome from the research effort. **Articulating a plan to get this information to end users is a vital part of successful Sea Grant proposals**.

What is not "Outreach" (for MDSG's purposes)?

The following are all important products of the research process, but they do not qualify as outreach to constituents or end users.
- Undergraduate and graduate education
- Peer-reviewed journal articles
- Presentations at scientific meetings

What is an Outreach Plan?

A Maryland Sea Grant outreach plan describes how specific end users will learn about

research outcomes so that they can use the information when making decisions (e.g., about coastal resources or land use policy). An outreach plan describes what methods and/or products the project team will create to communicate results as well as how the end users will get the information. In addition, the plan should predict, within reason, the impact of the research and outreach effort on the targeted end-users. For example:

- Will managers be able to make a better decision regarding a specific issue?
- Will a new method to manage a specific problem be developed and disseminated?
- Will a key group have new tools and training to address an important issue pertaining to Chesapeake Bay management?
- Will a policy or behavior of individuals change?

A general distribution of information to wide audiences in the general public (e.g., via a website) can be useful but is most likely not sufficient in and of itself. An outreach effort should lead to outcomes that can be evaluated as products of the funded project.

The following bullets form the framework for a Maryland Sea Grant Outreach Plan. They are designed to guide investigators as they develop plans and will serve as the reference for evaluating outreach efforts over the lifetime of funded projects.

- Describe the products and scientific outcomes of the proposed study that will be applicable to your outreach effort.
- Describe the non-peer end users for the products/outcomes.
- Describe the outreach mechanisms you will use to reach end peer users. Include appropriate partners and how they will be engaged.
- Present a timeframe for developing and implementing this outreach plan.
- Describe the intended impact of these efforts on end users, with particular emphasis on how those impacts align with the focus areas and research emphases outlined in the RFP.

These efforts often require funds and as such an appropriate, justified funding request should be included in the project budget.

Outreach Assistance and Examples

The key to a successful outreach effort is defining a strategy for how specific users can **learn about and make use of** the results and products of the proposed research. Below are some resources you may consult during the development of your proposal and during the implementation of your outreach plan.

- **Contact Maryland Sea Grant Extension Faculty**: Our Extension educators and specialists have a variety of expertise and are actively working with many of the groups that are potential beneficiaries of your research. http://www.mdsg.umd.edu/our-office
- **Engage the Maryland Sea Grant communications team**: Maryland Sea Grant staff regularly writes and publishes online news articles and our magazine *Chesapeake Quarterly.*

- **Serve on or connect with a committee or working group**: Some researchers, as part of their research programs or service activities, are directly and actively engaged with end user communities. These groups help to inform the direction of the proposed research and provide a built-in audience for the results when they become available.
- **Partner with industry or non-governmental organizations**: Some researchers collaborate with environmental consultants or other interested constituencies to develop research questions and/or to disseminate pertinent results.
- **Involve citizens in research**: Incorporate interested volunteers or environmental groups in the collection of data.

Describing engagement with specific groups and the specific activities to be conducted related to the project being proposed is as valid an outreach plan as one that directly involves Maryland Sea Grant staff, faculty, and products. The key is defining a strategy for how specific users can learn about and make use of the products of your research.

APPENDIX D: FORMS & EXAMPLES

Signature cover sheet, milestone charts, and curriculum vitae are available as electronic templates on the web at:
http://www.mdsg.umd.edu/proposal-forms-and-worksheets.

The project summary (90-2), budget (90-4) and budget justification forms must be completed online using the proposal worksheet system at:
http://ww2.mdsg.umd.edu/worksheets/

SIGNATURE COVER SHEET

Due June 16, 2017 at 5:00 PM EDT

Proposed Title:

Amount requested: Amount Matched:

Grant Period: February 1, 2018 – January 31, 2020

Principal Investigator:
Institution and Unit:
Telephone:
Address:
Email:

Co-Principal Investigator:
Institution and Unit:
Telephone:
Address:
Email:

Department Chair/Dean/Institutional Representative:
Institution and Unit:
Telephone:
Address:
Email:

_____   _____
Principal Investigator Signature/Date   Institutional Authority/Representative
                                               Signature/Date

MULTI-YEAR MILESTONE CHART

Timetable for initiation, performance, and completion of tasks included in the program for the two-year funding period

Work Plan Tasks:	2018	2019	2020
1.			
2.			
3.			
4.			
5.			

YEARLY MILESTONE CHART

Work Plan Tasks:	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												

SAMPLE CURRICULUM VITAE

ADAMS, JANE M.

Professor, Department of Biology
University of Maryland
College Park, MD 20740
adams_j2@umd.edu

PROFESSIONAL PREPARATION

University of Michigan, B.S. Biology, 1986
University of Michigan, M.S. Biology, 1988
University of Washington, Ph.D. Biology, 1993

APPOINTMENTS

Professor of Biology, University of Maryland, College Park, MD, 2012-present.
Associate Professor of Biology, University of Maryland, College Park, MD, 1999-2012.
Assistant Professor of Biology, University of Maryland, College Park, MD, 1995-1999.

PRODUCTS *(NOTE: up to 10 related or other significant products)*

Adams, J.M. 2017. Pages 307-308 in Microbiology. Aquatic microbial ecology. Amer.
    Soc. Microbiol. Publ., Wash., D.C.
Adams, J.M. 2016. Pages 377-379 in Microbiology. Human pathogens in the
    environment. Amer. Soc. Microbiol. Publ., Wash., D.C.
Acceptable products must be citable and accessible including but not limited to
publications, data sets, software, patents, and copyrights. Unacceptable products are
unpublished documents not yet submitted for publication, invited lectures, and additional
lists of products.

SYNERGISTIC ACTIVITIES

A list of up to five examples that demonstrate the broader impact of the individual's
professional and scholarly activities that focuses on the integration and transfer of
knowledge as well as its creation. Examples could include, among others: innovations in
teaching and training (e.g., development of curricular materials and pedagogical
methods); contributions to the science of learning; development and/or refinement of
research tools; computation methodologies and algorithms for problem-solving;
development of databases to support research and education; broadening the
participation of groups underrepresented in STEM; and service to the scientific and
engineering community outside of the individual's immediate organization.

Appendix E: Maryland Sea Grant Performance Measures

Cross-Cutting Performance Measures
- Economic (market and nonmarket; jobs and businesses created or sustained) impacts derived from Sea Grant activities
- Number of Sea Grant tools, technologies and information services that are used by our partners/customers to improve ecosystem-based management

Healthy Coastal Ecosystems (HCE)
- Number of resource managers who use ecosystem-based approaches in the management of land, water, and living resources as a result of Sea Grant activities
- Number of acres of coastal habitat protected, enhanced or restored as a result of Sea Grant activities

Sustainable Fisheries and Aquaculture (SFA)
- Number of fishermen, seafood processors and aquaculture industry personnel who modify their practices using knowledge gained in fisheries sustainability and seafood safety as a result of Sea Grant activities

Resilient Communities and Economies (RCE)
- Number of communities that adopt / implement sustainable economic and environmental development practices and policies as a result of Sea Grant activities
- Number of communities that adopt / implement hazard resiliency practices to prepare for and respond to / minimize coastal hazardous events as a result of Sea Grant activities

Effective Environmental Science Education (EESE)
- Number of Sea Grant products that are used to advance environmental literacy and workforce development
- Number of people engaged in Sea Grant supported informal education programs
- Number of Sea Grant-supported graduates who become employed in a job related to their degree within two years of graduation