Funding cycle: February 1, 2018–January 31, 2020

Preliminary proposals must be received by 5:00 p.m. PDT, March 13, 2017.

Full proposals must be received by 5:00 p.m. PDT, June 1, 2017.

Sea Grant
Washington

Washington Sea Grant
2017 Request for Proposals

I. Schedule for Proposal Submission and Review

2017

Investigator briefing on outreach ....February 13

Preliminary proposal due date ....March 13

Notification of preliminary proposal review outcome .... April 14

Full proposal due date .... June 1

Peer review and project selection.. June through September

Notification of funding decisions...Late September

2018

Project start date ....February 1

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Washington Sea Grant (WSG) requests proposals for one- to two-year projects from investigators at academic, research and education institutions throughout the state of Washington. Funded projects will contribute to WSG and state priority information needs and advance knowledge in one of four focus areas: healthy coastal ecosystems; sustainable fisheries and aquaculture; resilient communities and economies; and ocean literacy and workforce development. Selected projects will have a start date of February 1, 2018.

Applicants are required to submit both a preliminary proposal and a full proposal through *eSeaGrant*, the WSG online proposal submission system (*esg.wsg.washington.edu*). Please note, this is a new system — be sure to allow ample time for online proposal submission.

About $2 million will be available over a two-year period to support an estimated eight to ten projects. Project budgets may range in size from $50,000 to $140,000 annually; also, a 50 percent non-federal cost share or match is required. This year for the first time, investigators may apply for a graduate research fellow to participate in their research project.

This document provides information and guidance for preliminary and full proposal development and submission.

Cover artwork by Ray Troll

II. Program and Project Priorities

WSG has served the Pacific Northwest and the nation by funding marine research and education and working with communities, managers, businesses and the general public to strengthen understanding and sustainable use of ocean and coastal resources. Based at the University of Washington (UW) College of the Environment, WSG is part of a national network of 33 Sea Grant programs administered by the National Oceanic and Atmospheric Administration (NOAA) and funded through federal–university partnerships.

This year, WSG is requesting proposals to implement its 2018–2022 Strategic Plan (*https://wsg.washington.edu/Draft-WSG-2018-22-Strategic-Plan*). Applicants may propose to conduct projects that align with any of four critical program areas laid out in the WSG Strategic Plan. However, the proposal must identify the areas addressed and explain how the project contributes to WSG strategic goals. Critical program areas are not mutually exclusive and successful proposals often fit into more than one. The four areas are explained in greater detail in the strategic plan and summarized below:

1. Healthy Coastal Ecosystems

Located within one of the world's most productive marine regions, Washington's ocean and coastal resources support diverse cultural, economic and ecological services. Today, population growth, regional development and environmental change create stresses on and challenges for those services throughout Puget Sound and the coastal Pacific. Research is needed to improve understanding of ecosystem structure and function, identify and prioritize emerging threats, rebuild depleted marine populations, restore coastal habitats, and address threats like ocean acidification, harmful algal blooms, hypoxia and aquatic invasive species.

2. Sustainable Fisheries and Aquaculture

Washington's marine resource economy — commercial and recreational fishing, aquaculture and seafood processing — is an $8 billion industry, providing 15,000 jobs with more than $1 billion in annual wages. Marine waters support a vigorous aquaculture industry, producing more farmed clams, oysters and mussels than any other state, and maintain a longstanding tradition of recreational and subsistence harvests. Potential foci include tools and approaches to improve fisheries management, productivity and ecological sustainability, as well as sustainable aquaculture operations and shellfish harvest.

3. Resilient Communities and Economies

Nearly 7 out of 10 Washington residents live in the state's 15 coastal counties, with the vast majority living in large Puget Sound urban centers. In contrast, the Pacific coast is characterized by small natural resource–based communities. Regional population and economic trends often put pressure on traditional maritime sectors, creating user conflicts and degrading environmental quality through practices such as shoreline armoring, water pollution and increased vulnerability to natural hazards. WSG supports natural and social science projects that help local communities and businesses, improve coastal management, encourage sustainable development and build resilience to hazards and climate change.

4. Ocean Literacy and Workforce Development

Despite the geographic proximity of many residents to the Washington coast, few are knowledgeable about aspects of this central environmental feature in their lives, including its resources, industries or declining health. At the same time, state maritime activity continues to grow an average of 6.4 percent a year, and today it provides jobs with substantially better pay than the average for all industries. Maritime industries are facing shortages in well-trained workers, which is due to both industry growth and retirement of experienced workers. WSG priorities focus on novel approaches to promote education for learners of all ages and strengthen workforce capacity.

In addition to WSG's critical program areas, investigators are encouraged to align with priorities identified by state, regional, tribal and national organizations. Examples of documents detailing such priorities include the following:

- Puget Sound Partnership 2016-18 Biennial Science Work Plan *www.psp.wa.gov/science-biennial-science-workplan.php*
- The West Coast Ocean Acidification and Hypoxia Science Panel: Major Findings, Recommendations, and Actions, 2016 *westcoastoah.org/recommendations-and-actions/*
- Climate Change and Our Natural Resources: A Report from the Treaty Tribes in Western Washington *nwifc.org/w/wp-content/uploads/downloads/2017/01/CC_and_Our_NR_Report_2016-1.pdf*
- Strategic Plan for NOAA's Office of Oceanic and Atmospheric Research *research.noaa.gov/sites/oar/Documents/OARStrategicPlan.pdf*

III. General Application Information

Project award information

WSG is funded primarily through four-year federal omnibus grants that integrate research, education, public engagement and administrative activities. The next omnibus period runs from February 1, 2018, through January 31, 2022. This request for proposals covers the first half of the period, and projects will be conducted primarily in calendar years 2018 and 2019. Projects may be scheduled to begin in 2018 or 2019 and may be of one or two years in duration.

WSG anticipates that eight to ten projects will be selected for the 2018–2020 funding cycle. Successful proposals will combine scientific merit and a focus on problems and opportunities facing ocean and coastal users, managers and educators. While WSG enjoys a longstanding tradition of research excellence, projects that employ innovative approaches to engage diverse students and audiences are welcome. Current projects are described on the WSG website at *wsg.washington.edu/research*.

Awards are contingent on the availability of funds to WSG through NOAA's National Sea Grant Office. Proposals may request annual budgets up to $140,000 for a total project cap of $280,000. While there is no minimum budget requirement, the smallest annual budget awarded has been about $50,000.

Required cost share or match

Federal law requires that WSG provide a non-federal cost share (match) of 50 percent or one dollar for every two dollars of federal funds awarded. For WSG competitive projects, cost share is the applicant's responsibility in all but a few exceptional cases. Cost share sources must be clearly identified; projects selected for funding will be required to provide documentation that supports the funds claimed. Cost share must be expended during the same time period as the project and may be provided in kind or as cash.

Examples of cost share sources include non-federal salaries, wages and benefits of those working on the project; expendable supplies and equipment; ship time; and donated volunteer time, supplies, space or equipment. Foundation, state and local grants and other state funds are eligible sources of cost share funds with documented approval from those sources. While cost share of more than 50 percent is not encouraged, identification of leveraged resources that contribute to a project will be a positive factor in evaluating project costs.

Investigator eligibility

Project principal investigators (PIs) must be affiliated with a university, two- or four-year college, museum, research laboratory or other nonprofit or tribal institution in Washington State. Project co-principal investigators (Co-PIs) may be affiliated with the above-listed Washington institutions, institutions outside of Washington, state and federal agencies and for-profit and foreign organizations. Individuals from state and federal agencies and for-profit and foreign organizations are discouraged or prohibited from requesting direct support, with few exceptions. However, their contributions may be eligible as cost share or leveraged support for the project.

WSG encourages applications from investigators in the natural, social and education sciences, as well as projects that fill priority knowledge gaps that fall outside typical definitions of "science." WSG is especially interested in supporting collaborative projects, interdisciplinary partnerships and early career investigators. Partnerships among academic and research institutions, agencies, industry and user-groups are encouraged. For projects that address regional issues, engage investigators outside of Washington and involve other Sea Grant programs, please consult the WSG director to explore joint submittal and funding procedures.

WSG discourages PIs from submitting more than two preliminary proposals. If a PI submits multiple preliminary proposals that are encouraged for development as a full proposal, he or she will be limited to submitting a single project in the full proposal stage.

PIs who have received WSG funds previously and have not completed reporting requirements are ineligible for future funding until all delinquent reports have been submitted and approved.

Student and post-doctoral support

Student education and involvement is a vital component of WSG projects and only in exceptional cases will research projects be funded that lack significant involvement of students or post-doctorates. WSG encourages projects that promote exploration of research and employment opportunities by students from diverse backgrounds, and include direct student support in proposed budgets. This may include support for undergraduate and graduate students, research fellows and post-doctoral researchers. One growing challenge in meeting this long-term WSG program goal is the rising cost of graduate student support, which consumes an increasing portion of limited project budgets.

Sea Grant research fellowships

In light of the budget challenge and recognizing an opportunity to offer graduate students a broader network of peers and mentors, this year WSG is initiating a new graduate research fellowship program. It will be patterned after California Sea Grant's successful research traineeships and should provide a more cost-effective approach for engaging graduate students in projects. Sea Grant research fellows must be full-time registered graduate students who are working toward an advanced degree related to marine or coastal sciences. To justify inclusion of a fellowship, the project should provide the fellow with the basis for a thesis. The fellowship will offer up to eight quarters of a graduate student stipend over a two-year project that must be included in the project budget. The stipend will be set at the amount paid to a 50 percent-time graduate student at the host university's approved rate, but may not exceed $32,000 per year inclusive of benefits. The fellowship stipend cannot cover graduate student tuition and fees, which if requested should also be included in project costs. The fellowship stipend, graduate student tuition and fees will not be subject to indirect costs per Sea Grant's federal implementing regulations found at 15 CFR 917.11. If an investigator is interested in applying for a fellow, that interest should be stated clearly in the preliminary proposal.

Engagement plan

Each proposal must provide an engagement plan that describes how broader audiences can use anticipated results. A project's broader impacts are an important consideration in advancing the WSG mission — to improve the translation of scientific information into knowledge for use in the marine environment. PIs are encouraged to work with WSG outreach, communications and education staff and to identify and contact communities, individuals and organizations that will benefit from project outcomes.

While WSG staff may participate as part of a project team, the cost of their participation should not be included in project budgets; rather they are funded separately through the WSG outreach budget. Staff also are available to facilitate interaction with potential project partners and participants and to discuss specific outreach, communications and education ideas.

On February 13, 2017, from 1:30 p.m. to 4 p.m., WSG will host an Outreach Workshop to brief potential PIs on the Sea Grant program, introduce WSG staff, and facilitate collaborative and innovative plans for outreach and engagement. Investigators are strongly encouraged to attend. Please RSVP at:

https://catalyst.uw.edu/webq/survey/chelkahn/323987.

Conflicts of interest, human subjects and animal care

All projects undertaken through WSG must be conducted in full compliance with applicable federal and state laws pertaining to conflicts of interest. The UW's Significant Financial Interest (SFI) disclosure policy applies to all UW participants in grants and contracts and is available at *www.washington.edu/research/osp/gim/gim10.html*. Please note: this policy requires that any UW personnel who are responsible for the design, conduct or reporting of university research on any project selected for funding are required to electronically complete a disclosure before the WSG omnibus grant can be submitted to NOAA. Project members at other participating institutions will be expected to follow the policies of their home institution in accordance with state codes and federal policies. For situations in which institutions do not have formal policies, the UW policy will apply.

For projects that involve research on vertebrate animals or human subjects, it is the PI's responsibility to identify and ensure compliance with all applicable federal, state and institutional requirements. PIs must identify use of vertebrate animals or human subjects in full proposal submissions. UW PIs should contact the Office of Animal Welfare, *depts.washington.edu/oawhome*, or the Human Subjects Division, *www.washington.edu/research/hsd*/. Other investigators should contact the relevant divisions at their institution. Project funds will not be awarded without appropriate approvals.

IV. Preliminary Proposal Guidance

Preliminary proposals must be submitted electronically through the WSG *eSeaGrant* system by **5:00 p.m. on March 13, 2017**. Preliminary proposals received after the deadline will not be considered; the system will shut down automatically and lock out further submissions. **Please note, while the *eSeaGrant* name is the same, this is a new online proposal submission system. Please be sure to allow ample time for online proposal completion and submission.**

Each preliminary proposal must contain the following components:

1. Proposal information

Project title, keywords, and project initiation and completion dates. The proposed project end date may not extend past January 31, 2020.

2. Investigator records and resumes

Online record and resume of **no more than** two pages for each of the senior personnel on the project. A WSG resume template is available in *eSeaGrant.*

3. Focus area alignment and Sea Grant classification

Identification of relevant WSG critical program areas and Sea Grant classification code.

4. Project narrative

(4-page maximum; Times New Roman 12-point or greater, 1-inch margins)

The following elements should be covered:

- alignment of the project with the strategic critical program areas listed previously;
- summary of the project and methods;
- identification of expected outcomes and potential benefits; and
- an engagement plan (see previous for details).

The project narrative may include references, which **do not** count in the four-page limit.

5. Sea Grant research fellow request

Request for fellow and number of quarters each year.

6. Budget

A completed budget worksheet for each year of the project. Detailed budget instructions are provided in *eSeaGrant.* Although numbers are preliminary estimates, the budget should reasonably approximate final project costs. Budget justifications are not required for preliminary proposals.

7. Suggested reviewers

Contact details for **at least three** scientific peers **outside** Washington State who are qualified to provide independent and knowledgeable review of your project. Suggested reviewers cannot be beneficiaries of the proposed project; colleagues the investigators have worked with in the last three years as project co-investigators; or former mentors, advisors or students of investigators.

V. Full Proposal Guidance

Only investigators who submit preliminary proposals are eligible to submit full proposals. Full proposals must be submitted electronically through the WSG *eSeaGrant* system by **5:00 p.m. on June 1, 2017**. Full proposals received after the deadline will not be considered; the system will shut down automatically and lock out further submissions.

Each full proposal must contain the following components:

1. Proposal information

Project title, keywords, and project initiation and completion dates. The proposed project end date may not extend past January 31, 2020.

2. Investigator records and resumes

Completed online record and resume of no more than two pages for each of the senior personnel on the project. A WSG resume template is available in *eSeaGrant.*

3. Focus area alignment and Sea Grant classification

Identification of relevant WSG critical program areas and Sea Grant classification code.

4. Project summary

Used during the proposal review process, the project summary should provide a clear and concise description of the project in terms that are understandable by individuals who are not experts in your field.

- **OBJECTIVES** *(2000 character limit including spaces)* — Briefly and clearly state the short-term and long-term objectives of the proposed work related to WSG goals and strategies. Incorporate both the scientific and societal purposes of the project in these objectives.
- **METHODOLOGY** *(2000 character limit including spaces)* — Succinctly describe the methods and approach to be used in accomplishing the objectives.
- **RATIONALE** *(2000 character limit including spaces)* — Concisely state the problem or opportunity addressed. Indicate why the project is important, appropriate for WSG support and why the proposed approach is necessary. Identify the expected outcomes of the project and potential project users.

5. Project narrative

(17-page maximum; Times New Roman 12-point or larger, 1-inch margins)

The project narrative is the primary basis for funding decisions. Documentation must be complete and provide adequate information for evaluation of project technical merits and its contribution to WSG's mission and strategic priorities. The following elements should be covered:

- **GOALS AND OBJECTIVES —** Describe in the narrative the specific project goals and objectives to be achieved for each year of the work plan presented. The project outcomes should be clearly stated.
- **BACKGROUND —** Provide sufficient background information for reviewers to independently assess the significance of the proposed project and relevance to the WSG strategic plan. Summarize the problem, need or opportunity to be addressed and critically evaluate existing knowledge and previous work pertaining to the problem or opportunity.
- **APPROACH —** Provide a work plan that fully describes the project structure and design; identifies specific tasks to be accomplished; explains the methods that will be used to accomplish the tasks; identifies the roles of team members and partners; and discusses potential challenges to successful completion of the project. In all projects that involve students, fellows or post-doctorates, show how the proposed effort will provide training for these individuals and in what capacity they will be involved.
- **ENGAGEMENT PLAN —** Describe your target audiences and participant groups; the outreach, communications or education approaches to be used; anticipated outcomes; and estimated costs. Engagement activities may include use of project results in education or resource management settings; technical training and assistance; development of publications, presentations and other outreach products for public audiences or specific user groups; and involvement in teaching, citizen science and volunteer networks. Ensure outreach costs are included in your budget in the applicable budget categories.
- **REFERENCES**

6. Time schedule

Details of project activities and key milestones. A WSG timeline template is available in *eSeaGrant*.

7. Additional information

Complete the following:

- request for fellow and number of quarters each year
- project use of vertebrate animals
- project use of human subjects
- required permits

8. Budget

Completed budget worksheet for each year of the project. Detailed budget instructions are provided in *eSeaGrant*. All subawards will require full project documentation (narrative and budget) and official approvals from subawardee organizations or institutions.

9. Budget justification

Separate detailed justification for each budget item must be added to each budget worksheet. Detailed budget justification instructions and an example are provided in *eSeaGrant*. Subawards require additional scope of work and budget worksheet documents, added as attachments in the subaward budget justification.

10. Current and pending support

Planned and ongoing research funding for all investigators. All current and pending support records must provide the investigator name and affiliation, and the following information for each record:

- support status (current, pending, submission planned in near future)
- project/proposal title
- source of support
- total award amount
- award period
- project location
- person-months committed to project

    A WSG current and pending support template is available in *eSeaGrant*. This information will be used to assess capacity to complete the proposed project.

11. Support letters

Letters from collaborating institutions, contributors of cost share or leveraged funds, and organizations that will benefit from project results. Each organization providing third-party cost share contributions in the proposal must provide a letter of commitment, on their letterhead, acknowledging the commitment and dollar amount. All letters should be combined into a single PDF file for upload in *eSeaGrant*.

12. NOAA data sharing plan

(6000 character limit with spaces)

A data sharing plan that meets requirements established by the NOAA environmental sharing policy at *www.nosc. noaa.gov/EDMC/PD.DSP.php*. Additional information on NOAA data sharing plan requirements is provided in *eSeaGrant*. Projects selected for funding will be required to report on implementation of the data sharing plan.

National Environmental Policy Act (NEPA)

Note: NEPA will be required for all projects selected for funding — Environmental Compliance Questionnaire for NOAA Federal Financial Assistance Applicants' (OMB Control No. 0648-0538). Additional information will be provided.

VI. Review Process and Project Evaluation Criteria

A multiple-step process is followed for selecting WSG competitive projects:

1. The call for preliminary proposals is widely distributed across the state and submitted applications are screened to ensure that eligibility criteria are met. The WSG director convenes a review panel to evaluate preliminary proposals and identify projects for which full proposals should be encouraged. Proposals are evaluated on the basis of project evaluation criteria, without regard to institutional affiliation. Full proposals are encouraged for those projects that rate highly in all evaluation criteria, considering the funding level that is likely to be available.

2. Each submitted and complete full proposal is distributed to external reviewers for written evaluation and comments. At the completion of the review process, PIs are given the opportunity to respond to reviewer comments.

3. The WSG director convenes a scientific and technical review panel comprising experts in the range of disciplines proposed across the submitted full proposals. Panel members are provided with copies of the proposal, all merit reviews and the investigator response to those reviews. The panel discusses each proposal individually and develops recommendations for funding. Summaries of proposals recommended for funding are provided to members of the WSG Advisory Committee, who evaluate the project's contribution to the WSG program and make recommendations regarding priorities for funding.

4. WSG applies criteria in project evaluation in the chart below. Evaluation criteria are the same for preliminary and full proposals, but there are differences at each stage with respect to relative weighting.

5. The director and research staff review all information available and make final decisions on projects for inclusion in the WSG omnibus grant. Proposals selected for funding may be returned to applicants for revision prior to submission to the National Sea Grant Office.

6. A letter of intent is submitted to the National Sea Grant Office, describing the proposed projects and the rationale for their selection. Once the letter is approved, final proposals are submitted as part of the WSG 2018–2022 omnibus proposal to the National Sea Grant Office, NOAA, U.S. Department of Commerce. Contingent on the availability of funds and satisfaction of any animal care and human subjects requirements, projects will be funded and implemented on February 1, 2018.

CRITERIA	WEIGHTING		DESCRIPTION
	Preliminary Proposal	Full Proposal	
Project contribution	40%	25%	Importance, relevance and applicability of proposed project to WSG goals; application to problems or opportunities with societal relevance; and contribution to student and postdoctoral support and partnerships at all levels.
Technical and scientific merit	20%	35%	The degree to which the activity will advance understanding and whether the approach is technically sound and innovative; uses appropriate methods; includes clearly stated measurable objectives and mechanisms to evaluate success; and is likely to achieve anticipated results in the time proposed.
Engagement plan	15%	15%	Effective plan for ensuring that targeted groups learn about and benefit from project outcomes through outreach, communications and education activities. Degree to which Sea Grant outreach staff and potential users of the results have been and will be included in project planning and implementation.
Qualification of applicants	10%	10%	Applicants possess the necessary education, experience, training, facilities and administrative resources to accomplish the project, with consideration to career stage and past performance.
Project costs	15%	15%	Budget is realistic and commensurate with the project needs and timeframe, reasonable given the availability of program funds, and effectively leverages other resources to achieve project objectives.

Washington Sea Grant
Outreach Workshop

Monday, February 13, 2017 • 1:30 – 4:00 p.m.

NHS Hall (Northwest Horticultural Society)
Center for Urban Horticulture,
University of Washington
3501 NE 41st StSeattle, WA 98105

RSVP at *https://catalyst.uw.edu/webq/survey chelkahn/323987*

VII. Contacts and Additional Information

Investigators are encouraged to discuss proposal ideas with the WSG director. To arrange a time to talk or for any questions, please contact WSG at *wsgres@uw.edu* or 206.543.6600.

Penny Dalton, *Director*

Kate Litle, *Assistant Director for Programs*

Chelsea Kahn, *Research and Education Specialist*