



NATIONAL SEA GRANT COLLEGE PROGRAM

**2024-2027
STRATEGIC PLAN**

All Hands On Deck



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Images credits: Oregon Sea Grant (Lynn Ketchum and Tiffany Woods), Georgia Sea Grant and Alaska Sea Grant



EXECUTIVE SUMMARY

The National Sea Grant College Program Act calls for a strategic plan to be developed at least every four years that establishes priorities for the National Sea Grant College Program (Sea Grant) and provides an appropriately balanced response to local, regional and national needs. 33 USC §1123(c)(1). At the beginning of 2022, Sea Grant, a partnership between NOAA and 34 university programs in every coastal and Great Lakes state, Puerto Rico and Guam, undertook a three-phase process of engagement to fulfill its statutory mandate of periodically developing a strategic plan in order to guide its programming, this time for 2024-2027.

In its initial development of this plan, NOAA's National Sea Grant Office (NSGO) offered a series of eleven public listening sessions via webinar, complemented by individualized targeted engagements with certain interested parties inside NOAA and Sea Grant or with partner groups. The gathered commentary was shared in a summary document at the end of this phase, in part to inform the individual programs' own concurrent and iterative planning efforts. A first draft plan was posted to the national Sea Grant website and subsequent feedback was considered while refining this document.

At the national level, the NSGO determined that the four national focus areas it adopted with its 2018-2023 plan are still effectively providing the necessary umbrella framework under which the network of 34 programs can continue to successfully align its work and capture national, regional and local priorities for the 2024-2027 period. Goals, Actions, and Desired Outcomes beneath each of those Focus Areas—**Environmental Literacy and Workforce**

Development; Healthy Coastal Ecosystems; Sustainable Fisheries and Aquaculture; and Resilient Communities and Economies—have been thoughtfully refined to ensure they reflect forward-thinking intentions to appropriately guide the work of Sea Grant in the third decade of the 21st century and the sixth decade of Sea Grant's existence.

With this plan, Sea Grant redoubles its commitment to taking action to promote diversity, equity, inclusion, justice and accessibility (DEIJA) across its broad range of activities. One of two Cross-Cutting Principles, **Enhancing DEIJA**—along with **Cultivating and Sustaining Partnerships**—undergirds all of the actions taken to meet the goals of our Focus Areas. This builds on several years of work and thought by Sea Grant's DEIJA [Community of Practice](#) and marks Sea Grant's intention to continue its leadership in promoting opportunities for all in the many communities it works in.

I would like to thank Kelly Samek for leading the 2024-2027 strategic planning process as well as the numerous contributors from the NSGO, the Sea Grant Network and our partners from NOAA and beyond who contributed to the development of the 2014-2027 National Sea Grant Strategic Plan.

Sincerely,

Jonathan R. Pennock
Director, National Sea Grant College Program

INTRODUCTION

The National Sea Grant College Program Act calls for a strategic plan to be developed at least every four years that establishes priorities for the National Sea Grant College Program (Sea Grant) and provides an appropriately balanced response to local, regional and national needs. 33 USC §1123(c)(1). The National Sea Grant College Program 2024-2027 Strategic Plan was developed in 2022 by the National Sea Grant Office (NSGO) of the National Oceanic and Atmospheric Administration (NOAA) in consultation with the National Sea Grant Advisory Board (Board) and the 34 university-based Sea Grant programs. As called for in the legislation, this plan is reflective of integration with the relevant portions of the strategic plans of NOAA, the U.S. Department of Commerce (DOC) and the Administration.

The process to develop this national strategic plan was iterative and integrative with the development of individual plans for each of the 34 Sea Grant programs, with the national plan serving as an umbrella framework to guide the direction of Sea Grant at a higher level. The national process used the National Sea Grant

College Program 2018-2023 Strategic Plan as a starting point for engagement led by NSGO staff, who collected and reviewed relevant information from a range of resources, including draft program plans, listening sessions, topical experts, and numerous external partners. This review also included consideration of national priorities identified in documents such as the DOC 2022-2026 Strategic Plan, the NOAA Oceanic and Atmospheric Research 2020-2026 Strategy, the NOAA Blue Economy Strategic Plan 2021-2025 and the Sea Grant network's visioning documents.

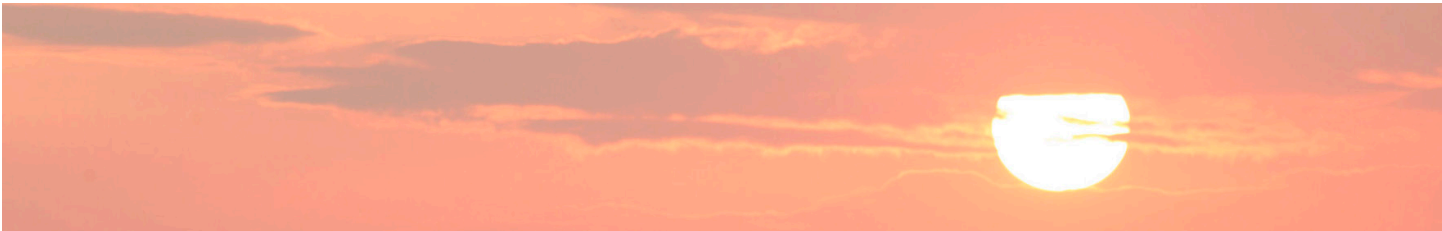
At a minimum, the plans of the 34 Sea Grant programs are expected to align to the national strategic plan and national performance measures. This iterative and integrative planning process enables the network to harmonize their plans at all levels: local, regional and national. The programs' strategic plans guide and inform their four-year award applications for core funding from NOAA; thus, the plans inform the programs' requests for proposals and other research, outreach and education activities. In addition, the programs' strategic plans are used as the

basis for program evaluation. Sea Grant program plans are expected to be developed through an inclusive process engaging interested parties and in collaboration with the assigned Federal Program Officer.

Sea Grant is continually examining policies, procedures and needs that will shape future plans and programs to enhance the value we deliver to the nation. We will build upon Sea Grant's historic impacts, our short-range achievements and long-range visioning efforts with partners to support those initiatives that have been successful and identify innovative new approaches to ensure continued progress in the future.



Oregon Sea Grant (Trav Williams)



VISION

Sea Grant envisions diverse, thriving coastal communities and ecosystems that are supported by an engaged, environmentally-literate public and informed decision-makers.

The Sea Grant vision complements the vision articulated in the DOC Strategic Plan, NOAA's strategic plan and the NOAA Oceanic and Atmospheric Research Strategy.

MISSION

Sea Grant's mission is to enhance the use and conservation of coastal, marine and Great Lakes resources to create a strong and sustainable economy, a healthy environment and resilient and inclusive communities.

Sea Grant & The Blue Economy

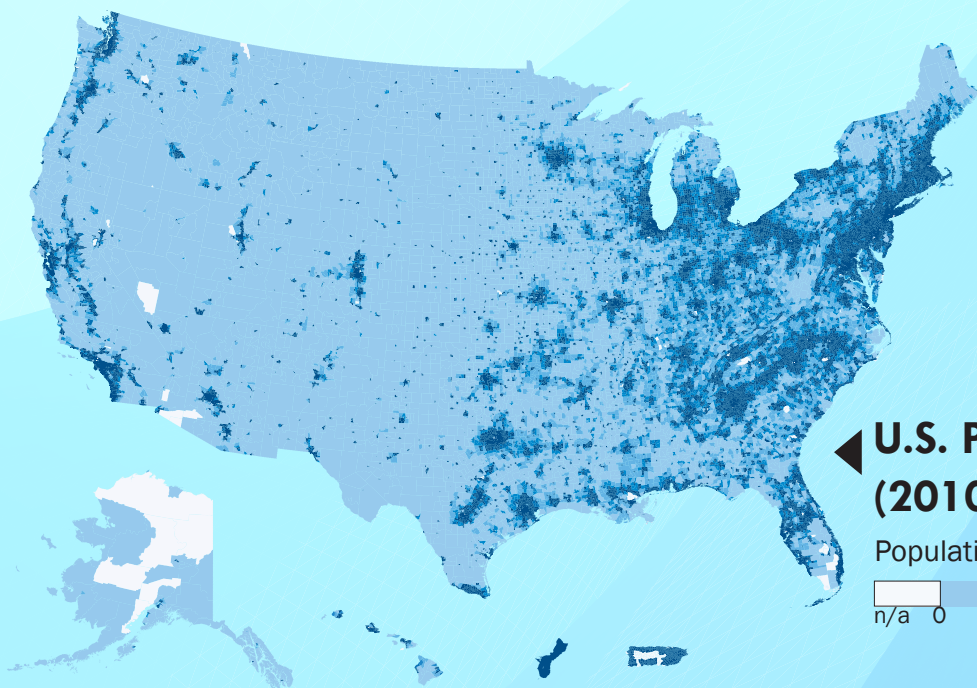
For more than 50 years, Sea Grant has advanced community progress in creating a sustainable economy across its national focus areas, growing what has become known as the blue economy. Our local presence provides support for pressing needs like job retention, workforce development, business continuity, and research results that improve livelihoods and support coastal and ocean ecosystem health. In the last four years, Sea Grant programs have contributed economic benefits totaling 1.7 billion dollars in the form of increased revenues, ecosystem services, cost avoidance, cost savings, and capacity building that improve the vitality and resiliency of the communities they serve.



Florida Sea Grant (Tyler Jones)

THE ENVIRONMENT IN WHICH WE WORK

Sea Grant works in a diverse and dynamic environment—our nation’s coastal communities and their environments are changing rapidly. Our nation encounters changes in demographics, weather, water, and climate that affect every coastal businesses, community, and ecosystem. It is imperative that Sea Grant consider these trends with respect to all the national focus areas in which we engage.



U.S. Population Density (2010)²

Population Density (persons/sq. mi)

n/a 0 25 50 75 100 >100

40%
of the U.S. population lives in coastal communities

OUR COASTAL ASSETS

1.9
million

HOMES within 6 feet of sea level with an estimated property value of \$882 billion³

COASTAL WETLAND AREA that provide nurseries for commercially harvested fish and refuge for migratory birds (excluding Alaska)⁴

88k
sq. mi.

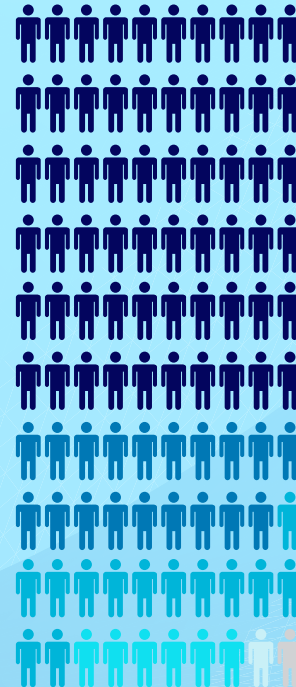
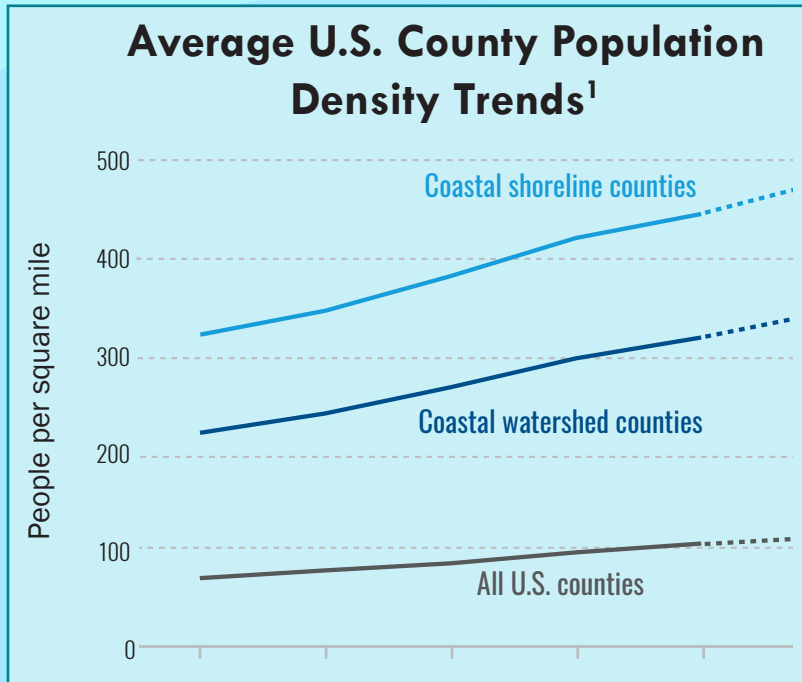
9.5
trillion

in **GOODS AND SERVICES** produced by coastal counties annually⁵

PEOPLE EMPLOYED annually in coastal counties nationwide⁵

58.3
million

THE PEOPLE ON OUR COASTS



40%

of Americans in coastal counties fall into an elevated hazard risk category⁷

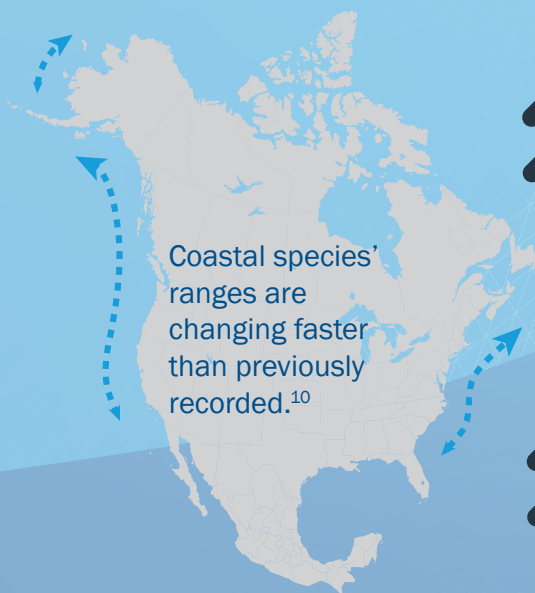
50%

of the nation's children are expected to be part of a minority race or ethnic group by 2020⁸

20%

of the nation's population is expected to be over 65 years old by 2030⁹

COASTAL CHANGES



PRECIPITATION

Both heavy precipitation events and the length of dry spells are projected to increase across the U.S.¹¹



STORM INTENSITY

The number of Category 4 and 5 hurricanes in the North Atlantic is expected to increase.¹²



OCEAN ACIDITY

Ocean acidification is expected to increase 15-100% globally by 2100.¹³



HARMFUL ALGAL BLOOMS

Every U.S. coastal state has suffered a harmful algal bloom event in the last decade.¹⁴

The changes to our environment present our greatest opportunities and challenges. Sea Grant will continue to focus its resources to help coastal communities prepare for, respond to, and thrive in this changing environment by *“putting science to work for America’s coastal communities.”*

Data Sources: [1] National Coastal Population Report, NOAA, 2013. [2] U.S. Census Bureau, 2010. [3] Zillow & NOAA, 2016. [4] State of the U.S. Coast, NOAA, 2012. [5] Total Economy of Coastal Areas, NOAA, 2019. [6] U.S. Census Bureau Population Quickfacts, 2021. [7] 2014 to 2018 American Community Survey, U.S. Census Bureau, 2019. [8] U.S. Census Bureau Population Projections, 2014. [9] “An Aging Nation: The Older Population in the United States.” U.S. Census, 2014. [10] NCA3: Ecosystems, 2014; Staudinger et al., 2013. [11] NCA3: Water, 2014 [12] NCA3: Oceans, 2014 [13] IPCC AR5, 2013. [14] Harmful Algal Blooms, NCCOS, 2016.

HOW WE WORK

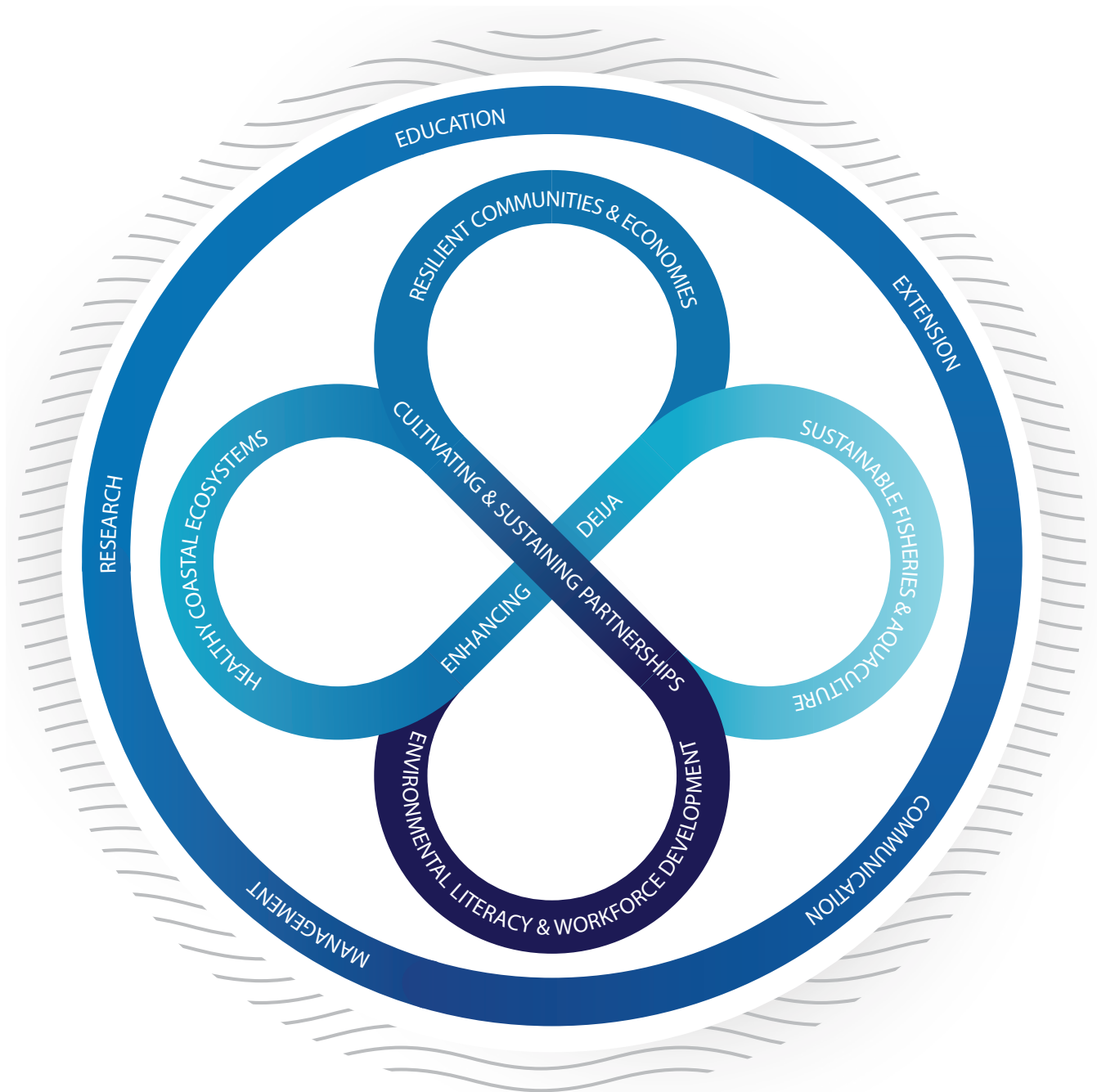
Sea Grant was created by the U.S. Congress in 1966 to be a highly leveraged federal and state partnership harnessing the intellectual capacity of the nation's universities and research institutions to solve problems and generate opportunities with coastal communities and partners. Sea Grant is a national network consisting of the NSGO, 34 university-based Sea Grant programs, the Board and hundreds of participating research institutions. Through this network, Sea Grant engages individuals, communities, educators, scientists, lawyers, organizations, industries and governments to tap into the best available science and technology, policy and resource management knowledge and trusted, long-standing community connectors in order to sustain and enhance the vitality, value and use of the nation's coastal resources. Administered and supported by NOAA and matched by the state institutions and other sources, Sea Grant provides interested parties unique access to scientific, legal and engagement expertise through the university-based Sea Grant programs located throughout the nation to co-produce, generate, translate and deliver cutting-edge, unbiased science-based information to address complex issues. Sea Grant's alliance with major research universities not only provides access to thousands of today's best scientists, students and outreach professionals, it supports the development of the next generation of critically important professionals—the scientists,

educators, attorneys, community leaders, policy makers and resource managers needed to research, inform and guide the responsible use and conservation of our nation's coastal resources into the future.

Sea Grant serves America's communities along the coasts of the Atlantic, Pacific, Gulf of Mexico, Great Lakes and the United States' territories. Sea Grant is broad and nimble, with the access and ability to tap into to the depth and knowledge of the nation's academic institutions in order to provide communities and individuals information, tools and services for making informed decisions about important, and sometimes controversial, issues in a factual and timely manner without advocating for specific positions or policies. Sea Grant integrates its science and engagement programs regarding watersheds, coastal and ocean ecosystems and highlights the vital connections between these systems and the well-being of the nation's coastal communities. Sea Grant's presence in the academic community gives it the ability to engage in a broad diversity of topics, mobilizing local, regional and national expertise while maintaining the ability to address unforeseen needs. Sea Grant's presence in coastal communities gives it the ability to respond to local needs by working directly with knowledge networks and decision-makers.



HOW WE WORK, CONTINUED



Sea Grant's four Focus Areas and five Functional Areas are not individual boxes or silos with crisp delineations. They are an integrated system, overlapping and connecting with each other. The Focus Area cycle is turned by the efforts of the Functional Area wheel. No one is more important or valuable, as the absence of even one element would lessen the whole. In this plan and graphic, we have placed Environmental Literacy as the foundation of the Focus Area system. With an environmentally literate public and workforce, there will be a demand for Healthy Coastal Ecosystem, Sustainable Fisheries and Aquaculture, and Resilient Communities and Economies, and people with the skills to achieve the goals in each area. In turn, resilient communities and economies, fed by sustainable resources and set within healthy ecosystems, will create opportunities for people to expand their environmental literacy, continuing the cycle.

HOW WE WORK, CONTINUED

Sea Grant programs integrate their efforts across the following functional areas, which represents how Sea Grant generates, transmits, translates and transitions knowledge to address critical issues with partners and other interested parties:

Research The generation of new knowledge is a core part of Sea Grant, providing answers to key questions about our ocean, coasts, watersheds and Great Lakes. Scientific and legal research may be conducted by Sea Grant staff or through extramural research that has been reviewed for merit and that is often competitively selected.

Education Facilitating learning through formal and nonformal activities which help people integrate knowledge into their behaviors is central to the transformational nature of Sea Grant's work.

Extension The exchange of knowledge and its application by communities, governments, NGOs, business and industry—often accomplished through direct interaction, technical assistance, and demonstration projects—is at the heart of Sea Grant's operational model.

Communication The transmission of information to targeted audiences through a variety of media to create awareness and engagement complements traditional extension and education activities.

Management Establishing and maintaining the infrastructure and partnerships needed to support the activities of a Sea Grant program is an essential task. This function allows programs to exist, grow and serve.



Michigan Sea Grant

Outreach, Engagement and Other Ways of Connecting

The functions of Education, Extension and Communication are related, though distinct. For a variety of reasons, some Sea Grant programs combine two or more of these functions in their programming. Others may refer to “Advisory Services” instead of “Extension.” Regardless of whether they are distinct or combined or how they are labeled, each of these functions happens in every Sea Grant program.



Mississippi-Alabama Sea Grant Consortium (Sonia Vedral)



New Hampshire Sea Grant (Tim Briggs)

CORE VALUES

Sea Grant’s core values are essential and enduring tenets that influence the organization and support its mission. The core values support a culture of integrity and scientific neutrality enabling Sea Grant to serve as a trusted broker of information.

VISION

Advancing creative, innovative solutions that address emerging and chronic challenges through engagement, science and stewardship.

SUSTAINABILITY

Advancing environmental stewardship practices and communicating the value of the services that the coastal, watershed, ocean and Great Lakes ecosystems provide to the nation.

COLLABORATION

Seeking and sustaining partners with whom we leverage each other’s strengths, and responsively, respectfully integrating diverse expertise and perspectives to reach shared goals.

ACCOUNTABILITY

Operating with integrity and transparency while maintaining quality and relevance in all functional areas, including program management.

NON-ADVOCACY*

Maintaining a commitment to objective research and programming that avoids bias and advocacy in the development and delivery of information, tools and services.

DIVERSITY, EQUITY, INCLUSION, JUSTICE AND ACCESSIBILITY

Proactively engaging with the range of identities, cultures, communities and capacities present throughout our areas of work, with respect and sensitivity to each person’s experiences, history and systemic challenges.

*Listing “non-advocacy” among Sea Grant’s core values may appear counterintuitive in a plan that otherwise promotes specific concepts such as healthy coastal ecosystems and environmental literacy. But the term as we use it has a particular meaning: in engaging people as they make decisions, Sea Grant seeks to provide verifiable information rather than opinions to assist them. For further reading see [Fundamentals of a Sea Grant Extension Program](#) and [Advocacy in Sea Grant: A Primer](#).



BRINGING SEA GRANT'S WORK INTO FOCUS FOR 2024-2027

After consultation with the Sea Grant program leadership in Autumn of 2021, the NSGO agreed to retain the four 2018-2023 national focus areas as a starting point for the 2024-2027 national strategic plan, subject to modification based on input and deliberations during NSGO's initial engagement and development phase for the plan. Concurrent with this phase of national planning, individual Sea Grant programs were expected to undertake the bulk of their planned stakeholder engagement.

A critical aspect of the strategic planning process is to ensure that Sea Grant is addressing the most important issues facing individual states and the nation in areas consistent with Sea Grant's legislative mandates. Ultimately, the NSGO determined that the national focus areas were effectively providing the necessary umbrella framework under which the network of programs could continue to successfully align its work and capture national, regional and local priorities for the 2024-2027 period. Similarly, the Cross-Cutting Principles of the 2018-2023 are retained and built upon, strengthening Sea Grant's commitment to diversity, equity, inclusion, justice and accessibility and reiterating its belief in the

power of collaborative partnerships.

The strategic plans for individual programs are expected to align significantly with this national strategic plan, the national focus areas and the national performance measures associated with the national focus areas herein. However, flexibility remains for programs to address state-specific priorities that might not be explicitly mentioned within the national plan.

Specifics of implementation to advance the strategic goals identified in the national and individual program strategic plans will be articulated in the 34 programs' "omnibus" awards and their other relevant project scopes of work. Taking into account the resources made available through their NOAA awards and other sources, programs will set targets for performance measures and metrics listed in Appendix B and revisit those targets in the course of implementation and reporting. Measurement of impacts and success will be monitored through annual program and grant progress reporting as well as an evaluation process at the conclusion of the 2024-2027 cycle. ([Read more on Sea Grant Reporting and Evaluation](#))

CROSS-CUTTING PRINCIPLES

These concepts provide a common foundation for all of the following Focus Areas and the work Sea Grant conducts. Recognizing these Cross-Cutting Principles enhances Sea Grant's capabilities in order to meet future national needs. In the course of implementing the 2024-2027 National Strategic Plan, Sea Grant will:

Cultivate and sustain **partnerships** by integrating the expertise and capabilities of partners from international, federal, tribal, state and local communities as well as from academia, nongovernmental organizations and industry.

Enhance **diversity, equity, inclusion, justice and accessibility** by seeking and integrating diverse perspectives to advance cultural understanding and enable the network to pursue its vision and mission with, and for, all audiences. We will actively create mechanisms to allow all people to participate in network activities. Bringing a range of perspectives, values and tools together to find solutions that are more innovative, creative, inclusive and responsive will help us be successful in tackling problems facing coastal and Great Lakes communities.

FOCUS AREA OVERVIEW

National focus areas enable Sea Grant to concentrate capabilities, programs and resources to address and respond to the nation’s most urgent ocean, coastal and Great Lakes needs. By addressing the following focus areas, Sea Grant aims to prepare communities to address risks from events such as drought, flooding, hurricanes and declines in fisheries as well as other changing conditions that may affect a community’s resilience and sustainability.

A national framework of focus areas describes Sea Grant’s overarching priorities based on national, regional and local needs and initiatives. The focus areas also provide a structure to organize relevant accomplishments, impacts and outcomes with applicable priority. Each Sea Grant program contributes to the national focus areas and goals. Program strategies are aligned with the national framework, but participation in individual focus areas and goals are determined after consultation with local and regional interested parties and advisors, allowing local-level input to identify and develop methods to address emerging and chronic issues.

Focus areas provide an order to the wide expanse of Sea Grant’s topical interests. In practice, we recognize focus areas are interrelated and that a single activity may advance the goals of multiple focus areas. Additionally, no focus area is structured to align with a single Sea Grant functional area or another. Rather, we expect each focus area will be fulfilled through effort in each of the functional areas.

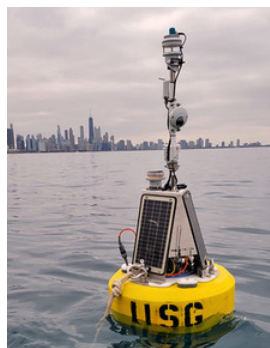


Image credits: Louisiana Sea Grant, Georgia Sea Grant, Illinois-Indiana Sea Grant and Washington Sea Grant (Joseph Sudar)

FOCUS AREA: ENVIRONMENTAL LITERACY AND WORKFORCE DEVELOPMENT

GOAL 1: A diverse, environmentally literate public participates in lifelong formal and nonformal learning opportunities.

ACTION 1.1

Create and implement educational resources and opportunities that are diverse, equitable, inclusive, just and accessible for formal and nonformal learners to explore multiple ways of learning and knowing and to develop their curiosity and learning abilities throughout their lives.

DESIRED OUTCOME:

1.1.1 Individuals consider themselves environmentally literate lifelong learners who utilize knowledge to support, build and restore healthy natural and human communities.

ACTION 1.2

Develop, provide and assess research, curricula, tools and other resources for educators, students and lifelong learners to support personal choice, participatory decision-making and community planning processes.

DESIRED OUTCOMES:

1.2.1 Educators, students and lifelong learners have current information and innovative tools that meet or exceed relevant standards and practices.

1.2.2 People know and can act on issues that impact their lives, communities and environments.

1.2.3 Community members use their knowledge to remove barriers and act for personal and social resilience and adaptation to changing economic, environmental and social conditions.

ACTION 1.3

Strengthen the ability of individuals, organizations and communities so that they have the knowledge, dispositions, skills and abilities to make informed and responsible decisions regarding coastal and Great Lakes environmental issues.

DESIRED OUTCOMES:

1.3.1 Individuals, organizations and communities create innovative opportunities, businesses and communities that respect diverse ways of knowing and learning, address systemic problems in equitable and just ways, and integrate traditional and novel cultures.

1.3.2 Coastal and Great Lakes communities are sustainable, healthy, diverse centers of tradition, innovation and prosperity.



Image credits: Oregon Sea Grant (Casey Henley and Lynn Ketchum), Mississippi-Alabama Sea Grant Consortium and Woods Hole Sea Grant (Lindsey Williams)

FOCUS AREA: ENVIRONMENTAL LITERACY AND WORKFORCE DEVELOPMENT

GOAL 2: A diverse, skilled and environmentally literate workforce that is engaged and able to build prosperous lives and livelihoods in a changing world through traditional and innovative careers.

ACTION 2.1

Identify and remove barriers to accessing training and learning opportunities so that the nation’s diverse population is connected to and prepared for the range of career paths that support the needs of coastal and Great Lakes communities.

DESIRED OUTCOME:

2.1.1 All members of a community are enabled to explore and pursue the variety of occupations that are essential to sustain coastal and Great Lakes communities, economies and ecosystems.

ACTION 2.2

Increase opportunities for students at all levels (P-12, undergraduate, graduate, post-graduate and technical and vocational) to gain knowledge and experience addressing issues that are important to our ocean, coasts and Great Lakes and their respective watersheds.

DESIRED OUTCOMES:

2.2.1 Sea Grant student opportunities provide increased literacy, experience and preparedness in critical disciplines, skills and issues.

2.2.2 Students from all backgrounds and with diverse needs are thoughtfully and intentionally supported in and have access to formal, nonformal and experiential learning, training and research experiences.

ACTION 2.3

Develop and carry out programs that help people discover, create and grow within careers that support the current and future needs of coastal communities and ecosystems and to adapt and thrive in changing conditions.

DESIRED OUTCOMES:

2.3.1 Employment in coastal, Great Lakes and watershed communities expands and diversifies.

2.3.2 The existing and future workforce is able to adapt and thrive in changing environmental, social and economic conditions.



Image credits: Georgia Sea Grant, California Sea Grant, Virginia Sea Grant (Aileen Devlin) and Sam Chin

GOAL 3: Coastal and Great Lakes habitats, ecosystems and the services they provide are protected, enhanced and/or restored.

ACTION 3.1

Co-develop, improve and share knowledge, decision-support tools, technologies and approaches to protect, enhance and restore ecosystems.

DESIRED OUTCOMES:

- 3.1.1 Communities have greater awareness and understanding of ecosystem functions and the services they provide.
- 3.1.2 Coastal and Great Lakes ecosystem science and conservation needs are identified and prioritized through diverse participation by interested parties.
- 3.1.3 Evidence-based science, traditional and local knowledge and innovative solutions inform and improve the management and conservation of coastal habitats.
- 3.1.4 Coastal and Great Lakes biodiversity, habitats and ecosystem functions and services are restored and sustained.
- 3.1.5 Collaborative and inclusive planning and decision-making leads to enhanced stewardship and community benefits, especially for the most vulnerable.



Image credits: Guam Sea Grant, New Hampshire Sea Grant (Rebecca Zeiber) and Ohio Sea Grant

GOAL 4: Land, water, and living resources are managed by applying science, tools and services to sustain resilient coastal and Great Lakes ecosystems.

ACTION 4.1

Support a science- and management-driven framework that integrates research, observations, monitoring and modeling and that includes community engagement and traditional and local knowledge to provide a scientific basis for informed decision-making.

DESIRED OUTCOMES:

- 4.1.1 Inclusive collaborations with diverse partners and other interested parties support planning, research and innovative solutions to address coastal and Great Lakes resource management needs, especially for vulnerable communities.
- 4.1.2 Community science initiatives are utilized and contribute to improving our knowledge with respect to stewardship of ecosystems and their contributions to coastal and Great Lakes communities and economies.
- 4.1.3 Coastal and Great Lakes communities and resource managers have access to and use science, data, tools and training to be effective in planning and decision-making processes.
- 4.1.4 Resource managers understand the risks, options, tradeoffs and impacts of their decisions.

ACTION 4.2

Identify and advance successful strategies that enhance resilient ecosystems and watersheds in the context of changing conditions, including environmental variability and climate change.

DESIRED OUTCOMES:

- 4.2.1 Communities share, access, understand and use information regarding projected changes and related impacts within ecosystems.
- 4.2.2 Communities can apply knowledge from case studies, training and tools to improve their ability to plan, prepare and adapt to environmental variability and climate change.

FOCUS AREA: SUSTAINABLE FISHERIES AND AQUACULTURE

GOAL 5: Domestic fisheries, aquaculture and other coastal and freshwater living resources supply food, jobs and economic and cultural benefits.

ACTION 5.1

Promote and support harvesting, culturing and processing techniques that lead to safe, sustainable, high-quality food as well as economic, social and ecosystem benefits.

DESIRED OUTCOMES:

5.1.1 Coastal and Great Lakes residents and U.S. seafood consumers understand the benefits of domestically-produced seafood, both wild and farmed, for individual and environmental health.

5.1.2 Coastal and Great Lakes resource industries employ technologies and reinforce strategies to ensure safe and sustainable seafood and products.

5.1.3 Coastal and Great Lakes resource industries employ strategies that balance economic, community, cultural and conservation goals.

ACTION 5.2

Support development of a trained and diverse workforce and enhance technology transfer in a manner that recognizes a variety of methodologies and approaches, including those based on traditional and local knowledge.

DESIRED OUTCOMES:

5.2.1 Increased understanding and technological solutions aid management and production.

5.2.2 Engagement with interested parties and partnerships enable the industry to acquire innovative technologies and adapt to changing conditions.



Image credits: Virginia Sea Grant (Aileen Devlin) and North Carolina Sea Grant

FOCUS AREA: SUSTAINABLE FISHERIES AND AQUACULTURE

GOAL 6: Natural resources are sustainably managed to support coastal communities and working waterfronts, including commercial, recreational, subsistence fisheries and aquaculture.

ACTION 6.1

Ensure the best available science, services and tools are available to and trusted by resource managers, the fishing and aquaculture communities and consumers.

DESIRED OUTCOMES:

6.1.1 Commercial and recreational fishers and aquaculturists are knowledgeable about efficient, sustainable and responsible tools, techniques and uses of coastal and freshwater resources.

6.1.2 Resource managers and fishing and aquaculture communities have access to and share diverse knowledge and tools to increase their capability to adapt to changing resource management needs, including those driven by climate change.

6.1.3 Consumers understand the health and sustainability benefits of domestically produced seafood and use that knowledge to inform their seafood purchasing decisions.



New Hampshire Sea Grant (Tim Briggs)

FOCUS AREA: RESILIENT COMMUNITIES AND ECONOMIES

GOAL 7: Coastal and Great Lakes communities have the capability and resources to prepare for and adapt to extreme and chronic weather and coastal hazards, climate change, economic disruptions and other threats to community health and well-being.

ACTION 7.1

Improve and expand exchanges of knowledge to better identify the diverse needs of communities and to increase the public's understanding of changing conditions and related impacts.

DESIRED OUTCOMES:

7.1.1 Scientific understanding, including traditional and local knowledge, provides foundational information, and all community members understand the impacts of changing conditions and coastal hazards and have the capability to prepare, respond and adapt.

7.1.2 Community leaders improve their understanding of changing conditions and coastal hazards and their capability to implement mitigation and adaptive strategies.

ACTION 7.2

Work with communities to advance collaborative comprehensive planning, actionable science, and adaptive management strategies.

DESIRED OUTCOME:

7.2.1 Inclusive collaborations with diverse interested parties and partners support mitigation and adaptation efforts built on knowledge from and responsive to the needs of all, especially the most vulnerable.

ACTION 7.3

Work with communities to explore and support diversification, strengthening, sustainability and social equity within coastal economic sectors and the blue economy.

DESIRED OUTCOMES:

7.3.1 Coastal and Great Lakes communities have access to and share knowledge, tools, services and technologies to adapt and grow resilient economies.

7.3.2 Leaders in coastal and Great Lakes economic sectors understand how they can become more resilient through diversification including expanded renewable, regenerative and clean practices.



FOCUS AREA: RESILIENT COMMUNITIES AND ECONOMIES

GOAL 8: Water resources are enhanced, sustained and protected to meet existing and emerging needs of the communities and economies that depend on them.

ACTION 8.1

Use engagement and information exchange to advance the understanding of how actions impact water quality, quantity and availability.

DESIRED OUTCOME:

8.1.1 Community members understand watershed and coastal functions and the ecosystem services they provide, understand how their actions will impact water resources, and are able to make informed decisions.

ACTION 8.2

Collaborate with diverse partners and interested parties, especially the most vulnerable, to advance plans and management practices for protecting and managing water resources.

DESIRED OUTCOMES:

8.2.1 Communities work with knowledge networks to share and access science, data, tools and services to anticipate changes in water resources, to protect and sustain water resources, and to make informed decisions.

8.2.2 Communities have diverse, sustainable economies and industries that support existing and emerging water resource needs.



Image credits: Texas Sea Grant, Lake Champlain Sea Grant, Virginia Sea Grant (Aileen Devlin) and Washington Sea Grant (Kevin Goodrich)

WHERE WE WORK



APPENDICES

APPENDIX A: DEFINITIONS

Accessibility: The quality of being reachable or easily obtainable

Action: A tactic or means used to achieve desired outcomes

Adaptive management: A systematic approach for improving resource management by monitoring and learning from management outcomes. An adaptive management approach provides a framework for making informed decisions in the face of critical uncertainties and a formal process for reducing uncertainties so that management can improve over time

Blue economy: The use of coastal and Great Lakes resources for the production of goods and services

Coastal communities: Marine, coastal, island, Laurentian Great Lakes, and Lake Champlain communities that represent a variety of interests (e.g., individuals, government, business, education, industry, research, non-governmental organizations, etc.) served by the National Sea Grant College Program

Community science: Place-based research, outreach and education strategy providing inclusive, and equitable opportunities for diverse participants and partners to advance science and inform decision-making

Comprehensive planning: A formal planning process resulting in an official document adopted by a local government setting forth goals, policies and guidelines for current and future development within its jurisdiction

Core values: Values that guide behavior and actions of the National Sea Grant College Program

Cross-cutting Principles: Fundamental propositions embraced by the National Sea Grant College Program that will strengthen the organization as it implements its strategic plan

Diversity: The full representation of and collaboration between people with different identities, knowledge sets, experiences and perspectives

Ecosystem: A dynamic and complex association of plant, animal and human communities and associated non-living physical components interacting as a functional unit

Environmental literacy: The possession of knowledge and understanding of a wide range of environmental concepts, problems, and issues; cognitive and affective dispositions toward the environment; cognitive skills and abilities; and appropriate behavioral strategies to make sound and effective decisions regarding the environment. It includes informed decision making both individually and collectively and a willingness to act on those decisions in personal and civic life to improve the well-being of other individuals, societies and the global environment

Equity: The allocation and accessibility of resources for fair distribution of services, benefits and burdens

Focus Areas: Areas of emphasis that are shaped to address the nation's most urgent ocean, coastal and Great Lakes needs

Formal education: Classroom-based learning provided by trained educators

Goal: An aspirational concept that inspires a level of success in a focus area and broadly describes a desired future state

APPENDIX A, CONTINUED

Inclusion: The creation of an open and welcoming environment that recognizes and affirms the value and dignity of all people

Justice: The systematic removal of barriers, which results in equitable opportunities and outcomes for every individual in a diverse society

Knowledge network: Formal or nonformal social networks that enable the transfer of traditional and local knowledge

Lifelong learner: Any person who learns through all or much of their life using both formal and nonformal learning opportunities in order to foster the continuous development and improvement of the knowledge and skills needed for employment and personal fulfillment

Lifelong learning: All learning activity, formal and nonformal, undertaken throughout life, with the aim of enhancing knowledge, skills, and competencies from a personal, civic, social, or employment-related perspective

Mission: Communicates the purpose of the organization

National Sea Grant College Program: Includes the National Sea Grant Office, 34 Sea Grant programs, and the National Sea Grant Advisory Board

Nonformal education: Learning that happens outside the classroom, in after-school programs, community-based organizations, museums, or libraries

Outcome: An intended result or consequence

Performance Measures and Metrics: Indicators used to gauge program performance

Resilience: The ability to prepare and plan for, absorb, recover from and more successfully adapt to adverse events and changing conditions (e.g., severe weather, climate change, economic disruptions, demographic shifts, ecosystem changes)

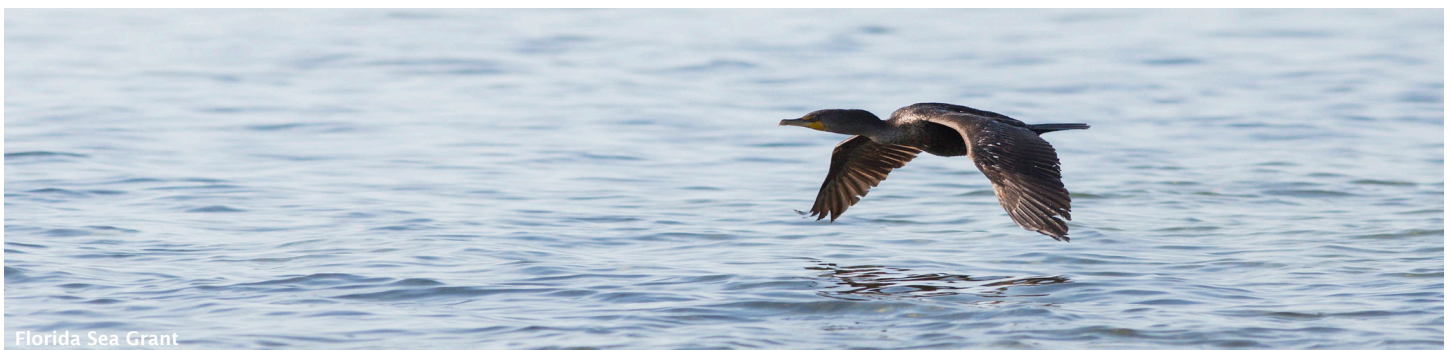
Restoration: Activity to assist the recovery of something that has been damaged or destroyed

Sustainable: Able to be maintained

Traditional and local knowledge: Ways of knowing, including Indigenous knowledge, that are passed down through generations (often through oral tradition) and/or reflects the observations and experiences of people living in a region and that often emphasizes interconnectedness between humans and their environment

Vision: A description of a future state that explains the basis for developing a strategic plan

Vulnerable: Indicating a higher risk for negative impacts as a result of the barriers to social, economic, political and environmental resources



APPENDIX B: NATIONAL SEA GRANT COLLEGE PROGRAM PERFORMANCE MEASURES AND METRICS

National Performance Measures by National Focus Areas

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 fishers, seafood processors, aquaculture industry personnel or seafood consumers 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

Annual number of communities that adopt/implement hazard resilience practices to prepare for and respond to/minimize coastal hazardous events

Environmental Literacy and Workforce Development (ELWD)

Number of Sea Grant products that are used to advance environmental literacy and workforce development

Number of people (youth and adults) engaged in Sea Grant-supported nonformal education programs

Number of Sea Grant supported graduates who become employed in a job related to their degree within two years of graduation

Cross Cutting National Focus Area Measures

Number of Sea Grant tools, technologies and information services that are used by our partners/customers to improve ecosystem-based management

Economic and societal impacts and benefits derived from Sea Grant activities market and non-market; jobs and businesses created or sustained; patents)

Cross Cutting National Performance Metrics

Sea Grant Staffing: Number of individuals and full-time equivalents (FTEs) devoted to Sea Grant

Core Funding Proposals: Number and Origination of Core Funding Pre- and Full-Proposals

Number of Volunteer Hours

Number of Postsecondary Students and Degrees Financially-Supported by Sea Grant in Higher Education Programs (Undergraduate, Graduate)

Number of P-12 Students who participated in Sea Grant-supported formal education programs

Number of P-12 Students Reached Through Sea Grant-Trained Educators

Number of educators who participated in Sea Grant-supported professional development programs

Number of Sea Grant-Sponsored/Organized Events

Number of Attendees at Sea Grant-Sponsored/Organized Events

Number of Public or Professional Presentations

Number of Attendees at Public or Professional Presentations

APPENDIX B, CONTINUED

Cross Cutting National Performance Metrics, Continued

Number of Marinas Certified as “Clean Marina” by the Clean Marina Program as a result of Sea Grant Activities

Number of individuals certified or recertified in Hazard Analysis Critical Control Point (HACCP) as a result of Sea Grant activities

Number of peer-reviewed publications produced by Sea Grant

Visitor Attendance: Number of people that visit museums, aquariums, and other informal education institutions hosting NOAA-supported exhibits or programs (NEW; Pilot)

Environmental Actions: Number of people participating in environmental actions through NOAA education programs (NEW; Pilot)

APPENDIX C: NATIONAL SEA GRANT COLLEGE PROGRAM SEA GRANT COLLECTION AT THE NOAA LIBRARY

Following study by an Information Services and Publications Review Committee of the National Sea Grant Advisory Board, in 2021, responsibility for maintaining the official archive for the National Sea Grant College Program transitioned from the National Sea Grant Library at the University of Rhode Island to the NOAA Central Library at the agency's headquarters in Silver Spring, MD. New submission procedures for the Sea Grant Collection at the NOAA Central Library became effective January 1, 2022.

In addition to peer-reviewed publications (a performance metric; see Appendix B), the following documents are accepted to the Sea Grant Collection at the NOAA Library:

Conference Proceedings | Workshops

Technical Reports

Handbooks | Manuals | Guidelines

Strategic/Program Documents (Program Reports may also fall into this category)

Annual/Biennial Reports

Educational Materials (i.e. lesson plans, teacher guides, curricula, packaged workbooks)

Newsletters (will be grouped together into one record when possible)

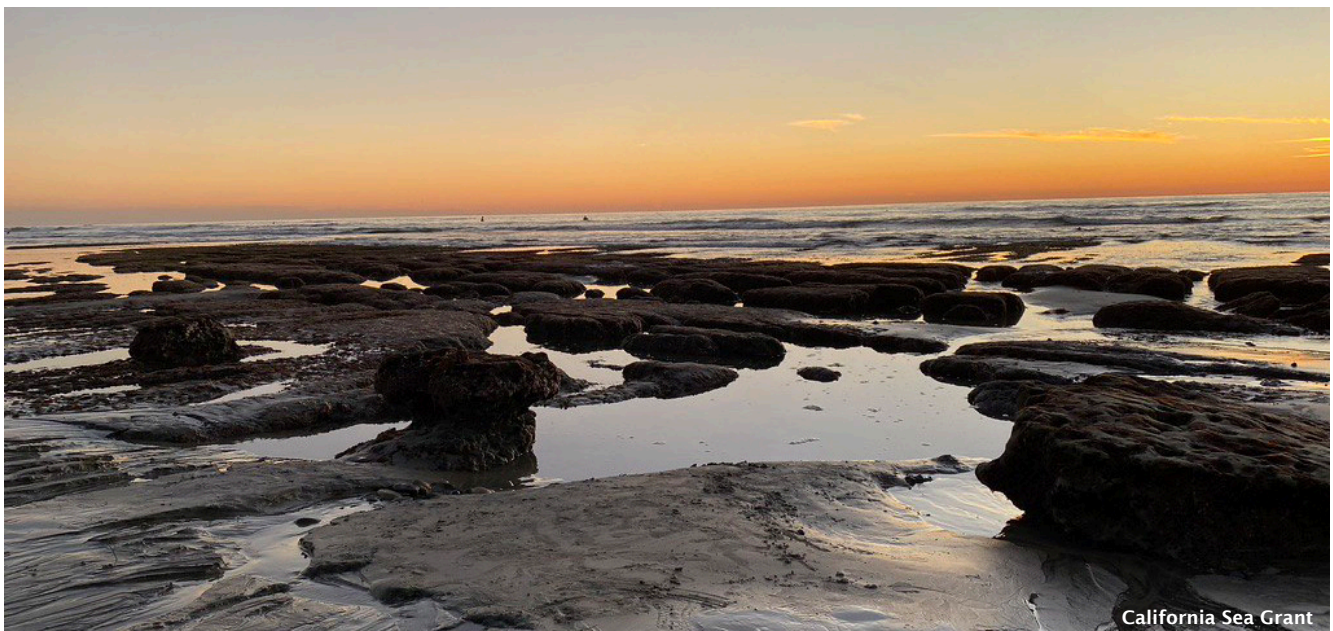
Sea Grant-Authored Books

Sea Grant-funded Theses/Dissertations

Bibliographies

Maps | Atlases | Charts

Additional documents that do not fall into the categories listed above are submitted to the National Sea Grant Office.



California Sea Grant

