

DRAFT

National Sea Grant College Program 2018-2021 STRATEGIC PLAN

Charting a course for the future



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Preface

Consistent with the National Sea Grant College Program (Sea Grant) legislation ((Public Law No: 110-394) § 1123 C (1)) the National Sea Grant Office (NSGO), on behalf of the Secretary of Commerce, initiates a process to develop a strategic plan every four years that establishes priorities for Sea Grant, provides an appropriately balanced response to local, regional and national needs. This plan is reflective of integration with the relevant portions of the strategic plans of the National Oceanic and Atmospheric Administration (NOAA), Department of Commerce (DOC), and of the Administration. The 2018-2021 National Sea Grant College Program Strategic Planning process was conducted by the NSGO in consultation with the National Sea Grant Advisory Board (NSGAB) and the 33 university-based Sea Grant programs.

Vision

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

The Sea Grant vision complements the vision articulated in the Department of Commerce's Strategic Plan and the NOAA Administrator's priorities.

Department of Commerce Strategic Plan

Strategic Goal 3 Environment: Help communities and businesses prepare for and prosper in a changing environment.

Objective 3.1 Advance the understanding and prediction of changes in the environment

Objective 3.3 Strengthen the resiliency of communities and regions

NOAA: Next Generation Strategic Plan Priority Focus Areas

Make communities more resilient

Evolve the Weather Service

Invest in observational infrastructure

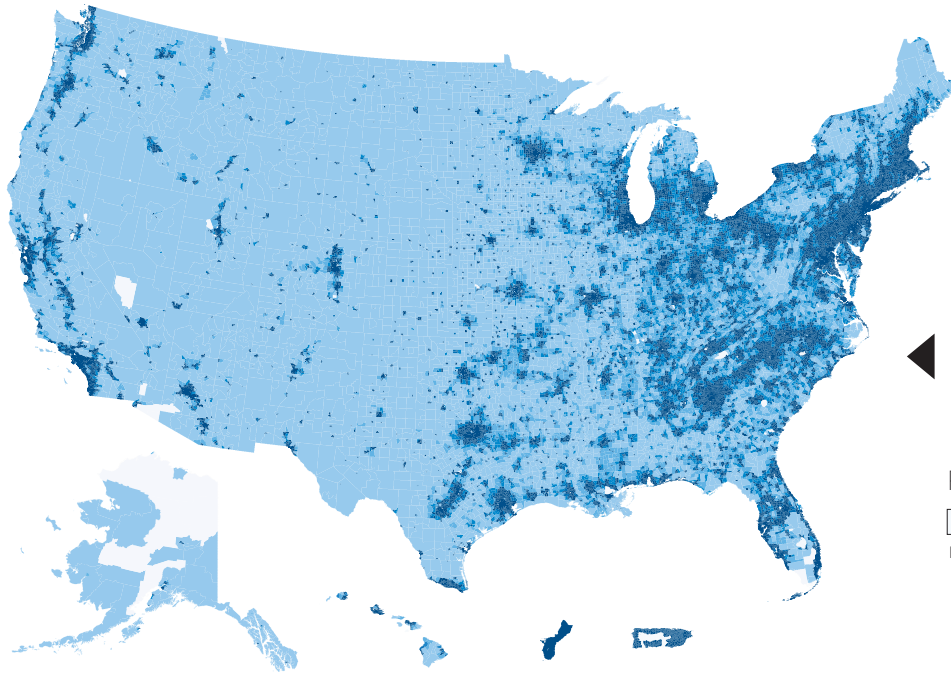
Achieve organizational excellence

Mission

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

THE ENVIRONMENT IN WHICH WE WORK

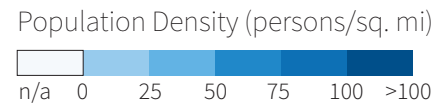
Sea Grant works in a diverse and dynamic environment—our nation’s coastal communities and their environments are changing rapidly. Our nation encounters changes in demographics, weather, water and climate that affect every coastal businesses, community and ecosystem. It is imperative that Sea Grant consider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



52%

of the U.S. population lives in coastal communities.¹

U.S. Population Density (2010)²



OUR COASTAL ASSETS

1.9 million

HOMES

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



88,569 sq. mi.

COASTAL WETLAND AREA

provides nurseries for commercially harvested fish and refuge for migratory birds (excluding AK)⁴



\$276 billion

ECONOMIC IMPACT

of commercial/recreational fisheries and aquaculture (2014)⁵



42%

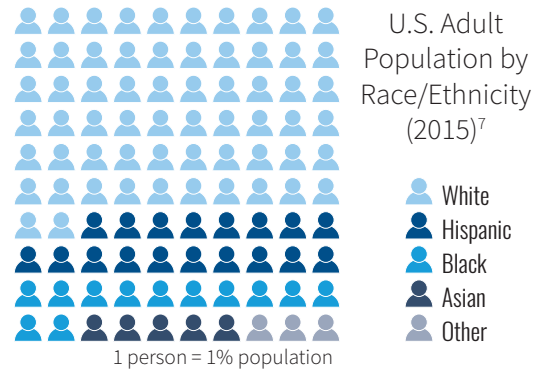
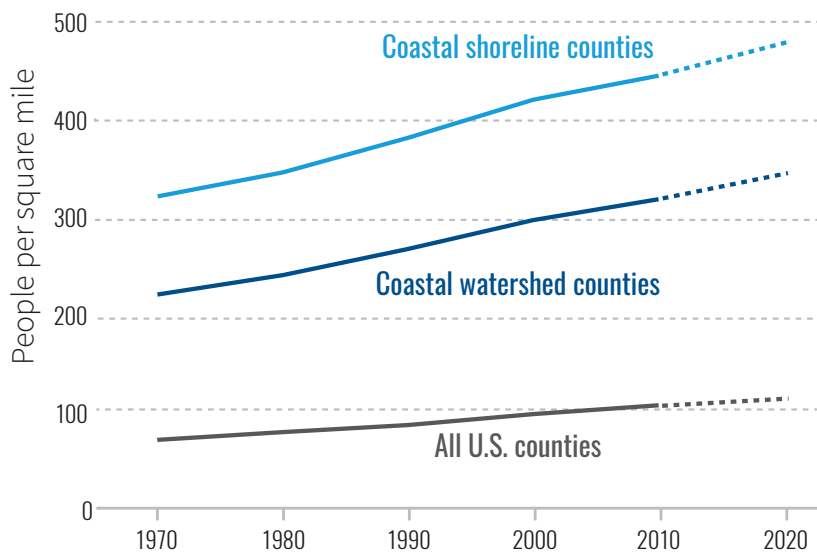
U.S. LABOR FORCE

employed in coastal watershed counties⁶



DEMOGRAPHIC SHIFTS

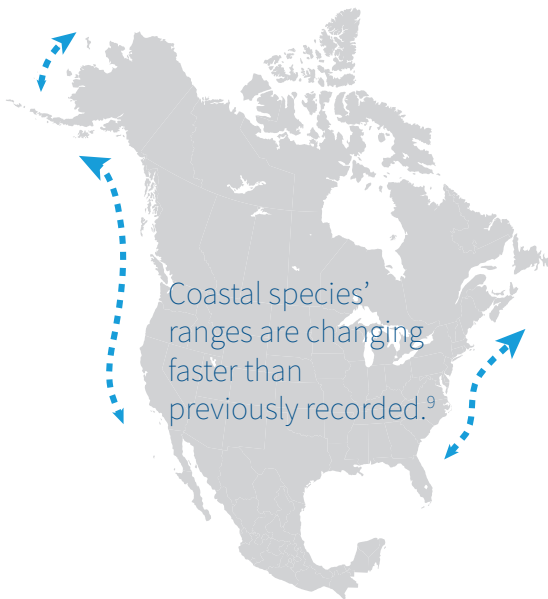
Average U.S. County Population Density Trends¹



By 2020, **over 50%** of the nation's children are expected to be part of a **minority race or ethnic group.**⁷

By 2030, **over 20%** of the nation's population is projected to be **65 and older.**⁸

PHYSICAL CHANGES



PRECIPITATION

Both heavy precipitation events and the length of dry spells are projected to increase across the U.S.¹⁰

STORM INTENSITY

The number of Category 4 and 5 hurricanes in the North Atlantic is expected to increase.¹¹

OCEAN ACIDITY

Ocean acidification is expected to increase 15-100% globally by 2100.¹²

HARMFUL ALGAL BLOOMS

Every U.S. coastal state has suffered a harmful algal bloom event in the last decade. In some locations like Lake Erie, these events have been steadily increasing.¹³

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] Fisheries Economics of the U.S., NOAA, 2014. [6] State of the U.S. Coast and Ocean Economics, National Ocean Economics Program, 2016. [7] U.S. Census Bureau Population Projections, 2014. [8] "An Aging Nation: The Older Population in the United States." U.S. Census, 2014. [9] NCA3: Ecosystems, 2014; Staudinger et al., 2013. [10] NCA3: Water, 2014 [11] NCA3: Oceans, 2014 [12] IPCC AR5, 2013. [13] 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 to harness the intellectual capacity of the nation's universities and research institutions to solve problems and generate opportunities in coastal communities. Sea Grant engages citizens, communities, scientists, organizations, industries and governments to sustain and enhance the vitality, value and practical use of the nation's coastal resources. Administered and supported by NOAA and matched by the state institutions, Sea Grant provides unique access to scientific expertise and to new discoveries through the 33 university-based Sea Grant programs located throughout the nation. Sea Grant generates, translates and delivers cutting-edge, unbiased science-based information to address complex issues.

Sea Grant is a national network consisting of NSGO, 33 university-based Sea Grant programs, the NSGAB, the National Sea Grant Law Center, the National Sea Grant Library and hundreds of participating research institutions. This network enables NOAA and the nation to tap into the best science, technology and expertise to balance human use and environmental and socioeconomic issues in coastal communities. Sea Grant's alliance with major research universities provides access to thousands of scientists, students and outreach professionals. Sea Grant's 33 university-based programs are fundamental to the development of critically important professionals, such as scientists, educators, community leaders and resource managers, needed to research, inform and guide the responsible use and conservation of our nation's coastal resources. With its strong research capabilities, local knowledge and on-the-ground workforce, Sea Grant provides an effective network (encompassing national, regional, state and local levels) to rapidly identify and capitalize on opportunities and to generate timely, practical solutions to real problems in real places.

Coastal communities

Marine, coastal, island and Laurentian Great Lakes communities that represent a variety of interests served by the National Sea Grant College Program

Sea Grant serves America's communities along the coasts of the Atlantic, Pacific, Gulf of Mexico, Great Lakes and the United States' territories. To address issues that face coastal communities, Sea Grant provides the information, tools and services to ensure coastal communities are sustainable. Sea Grant integrates its science and outreach 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.

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 an honest broker. Sea Grant will continue to be:

- ***Visionary***-- Advance innovative solutions that address emerging challenges (science and stewardship) and encourage creativity, initiative and innovation.
- ***Collaborative*** – Seek partnerships that leverage our strengths. Be responsive and accessible, respect partners, integrate diverse expertise and provide the science and knowledge needed to inform stakeholders.
- ***Dedicated to Sustainability*** - Communicate the importance of good stewardship and the value of the services that the coastal, ocean and Great Lakes' ecosystems provide to the Nation.
- ***Accountable*** - Operate with integrity and transparency; maintain quality and relevance in administration, management and oversight.

Cross-cutting Principles

Sea Grant will strive to address two specific areas that deserve the network's attention to enhance the Program's capabilities in order to meet future national needs. In the course of implementing the 2018-2021 National Strategic Plan, the Sea Grant will:

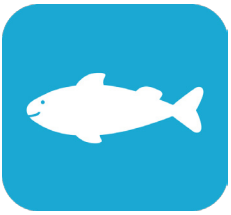
- **Cultivate Partnerships** by integrating the expertise and capabilities of partners from the international, federal, tribal, state, and local communities as well as from academia, nongovernmental organizations and industry.
- **Enhance Diversity and Inclusion** by seeking and welcoming diverse perspectives to enhance cultural understanding and enable the network to pursue its vision and mission with respect to all audiences.

Overview: Focus Areas, Goals

National focus areas enable the 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 sustainability.

A national framework of focus areas describes the network's overarching priorities based on national and regional needs and initiatives. The focus areas provide a structure to organize relevant accomplishments, impacts and outcomes with applicable priority. Sea Grant is broad and nimble with the depth of knowledge of the nation's academic institutions. Sea Grant's close connection with the academic community gives it the ability to engage in a broad diversity of topics, mobilizing local, regional and national expertise while also conserving the ability to address unforeseen needs.

Each university-based Sea Grant program contributes to the national focus areas and goals. Program strategies are aligned with the national network, but participation in individual focus areas, goals and performance measures are determined after consultation with local and regional stakeholders and advisors. This iterative and flexible planning process allows for local level input to identify and develop methods to address emerging issues while assuring alignment with the national strategic plan.



Focus Area: Sustainable Fisheries and Aquaculture

Goal: Fisheries, aquaculture and other coastal and freshwater natural resources supply food, jobs and economic and cultural benefits.

ACTION: Develop a trained workforce and enhance technology transfer in domestic aquaculture.

- DESIRED OUTCOME: Increased understanding and technological solutions aid aquaculture management and production.
- DESIRED OUTCOME: Partnerships enable the aquaculture industry to adapt and acquire innovative technologies.

ACTION: Promote and support harvest and processing techniques that lead to safe, sustainable, high-quality food, as well as, economic and ecosystem benefits.

- DESIRED OUTCOME: Coastal resource industries employ technologies and reinforce strategies to ensure safe and sustainable seafood and products.
- DESIRED OUTCOME: Coastal resource industries employ strategies that balance economic, community, cultural and conservation goals.

Goal: Natural resources are sustained to support fishing communities and industries, including commercial, recreational, subsistence fisheries and aquaculture.

ACTION: Ensure sound science, services and tools are available and accessible to resource managers, the fishing and aquaculture communities and consumers.

- DESIRED OUTCOME: Commercial and recreational fishermen and aquaculturists are knowledgeable about efficient, sustainable, and responsible tools, techniques and uses of coastal and freshwater resources.
- DESIRED OUTCOME: Resource managers and fishing and aquaculture communities have access to science and tools to increase their capability to adapt to future resource management needs.
- DESIRED OUTCOME: Consumers understand the health benefits of seafood and purchase/harvest safe and sustainable products.



Focus Area: Healthy Coastal Ecosystems

Goal: Habitat, ecosystems and the services they provide are protected, enhanced and/or restored.

ACTION: Develop and share scientific understanding, decision-support tools, technologies and approaches to protect and restore ecosystems.

- DESIRED OUTCOME: Scientific understanding and technological solutions inform and improve the management and conservation of natural resources.
- DESIRED OUTCOME: Ecosystem science and conservation priorities developed through stakeholder participation are addressed.
- DESIRED OUTCOME: Greater awareness and understanding of ecosystem functions and services they provide improves stewardship efforts.
- DESIRED OUTCOME: Biodiversity, habitats and ecosystem functions and services are restored and sustained.
- DESIRED OUTCOME: Improved collaborative planning and decision-making leads to enhanced stewardship.



Focus Area: Healthy Coastal Ecosystems

Goal: Land, water, and living resources are managed by applying sound science, tools and services to sustain ecosystems.

ACTION: Support a sound science- and management-driven framework that integrates observations, monitoring, local and knowledge, research and modeling to provide a scientific basis for informed decision-making.

- **DESIRED OUTCOME:** Collaborations with partners and stakeholders support planning, research and technological solutions to address resource management needs.
- **DESIRED OUTCOME:** Citizen-science initiatives are utilized and contribute to improving our knowledge with respect to coastal communities, economies and ecosystems.
- **DESIRED OUTCOME:** Communities have access to and use sound science, data, tools, and the training to be effective in planning and decision-making processes.
- **DESIRED OUTCOME:** Resource managers understand the risks, the options, tradeoffs and impacts of their decisions.

ACTION: Identify and promote case studies and strategies that enhance resilient ecosystems and watersheds in the context of changing conditions.

- **DESIRED OUTCOME:** Communities have access to and use information and understand projected changes within coastal ecosystems and how changes will impact coastal ecosystems.
- **DESIRED OUTCOME:** Communities can access and apply knowledge from case studies, training and tools to improve their ability to plan, prepare and adapt to future ecosystem conditions.



Focus Area: Resilient Communities and Economies

Goal: Coastal communities use their knowledge of changing conditions and risks to prepare for and adapt to extreme weather and environmental events, economic disruptions and other threats to community well-being.

ACTION: Use innovative tools to increase the public's awareness of changing conditions and the potential impacts their communities, economies and ecosystems may encounter.

- **DESIRED OUTCOME:** Members of the community, including the underserved, are aware of and understand changing conditions and hazards and the expected impacts on their communities, and are prepared to respond, and adapt.
- **DESIRED OUTCOME:** Through existing and innovative training programs and strategies, community leaders improve their understanding of changing conditions in their communities and implement adaptive strategies.

ACTION: Utilize comprehensive planning and adaptive management strategies to enhance community resilience and adapt to hazards and changing environmental and socioeconomic conditions.

- **DESIRED OUTCOME:** Communities have access to information needed to understand the factors impacting ecosystems and participate in adaptive management planning.
- **DESIRED OUTCOME:** Communities employ adaptive management strategies and apply tools to engage diverse members of the community to improve resilience and community sustainability.

ACTION: Increase the resilience of coastal communities through diversification, growth, and strengthening of coastal economic sectors.

- **DESIRED OUTCOME:** Members of the community, including the underserved, have access to information needed to understand how coastal economic activities and trends will impact environmental and community well-being.
- **DESIRED OUTCOME:** Communities have access to tools, services and technologies to adapt and grow resilient economies.
- **DESIRED OUTCOME:** Leaders in coastal economic sectors understand how they can become more resilient through diversification and through conservation of ecosystem resources and the services they provide.



Focus Area: Resilient Communities and Economies

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

ACTION: Inform community members about how actions impact water quality and availability.

- DESIRED OUTCOME: Community members understand watershed functions and the ecosystem services they provide that support communities and economies.
- DESIRED OUTCOME: Community members understand how actions will impact water quality and quantity and are able to make informed decisions.

ACTION: Collaborate with stakeholders to develop and share best management practices (BMPs) and measures to protect and manage water resources.

- DESIRED OUTCOME: Communities have access to sound science, data, tools and services to understand and anticipate changes in water quality and quantity.
- DESIRED OUTCOME: Communities have access to science, tools and technologies to protect and sustain water resources and make informed decisions.
- DESIRED OUTCOME: Communities have diverse, sustainable economies and industries that support the existing and emerging water resource needs



Focus Area: Environmental Literacy and Workforce Development

Goal: An environmentally literate public that reflects the range of diversity of the nation's coastal communities is informed by lifelong formal and informal learning opportunities.

ACTION: Enable the public to engage in informed decision-making and community planning processes enabling adaptation to changing conditions by providing the best available information.

- DESIRED OUTCOME: Communities are knowledgeable and equipped with the best available science and technology to make informed decisions and contribute to adaptive management planning processes and stewardship.

ACTION: Develop and provide curriculum and other resources to pre-school through 12th grade formal and informal educators to support more effective environmental literacy instruction.

- DESIRED OUTCOME: Teachers and students are better informed in science, technology, engineering, and mathematics fields and can employ their knowledge to support sustainable practices within their communities.

ACTION: Increase effective environmental literacy communication to stakeholders, including how ecosystem change affects economic, social and cultural values as well as implications for conservation and management.

- DESIRED OUTCOME: Stakeholders develop a sense of awareness, understanding and stewardship in order to sustain watershed, coastal and marine ecosystems and resources.
- DESIRED OUTCOME: Communities implement sustainable strategies when managing natural resources and make decisions based on information acquired through informal science education.



Focus Area: Environmental Literacy and Workforce Development

Goal: A diverse and skilled workforce is engaged and enabled to address critical local, regional and national needs.

ACTION: Grow awareness among the nation's diverse population of career paths that support the needs of the nation's coastal communities.

- DESIRED OUTCOME: All members of a community are enabled to explore and pursue the variety of occupations that are essential to sustain the nation's coastal communities, economies and ecosystems.

ACTION: Increase opportunities for undergraduate and graduate students, and post-graduates to gain knowledge and experience in the science and management of watershed, coastal and marine resources.

- DESIRED OUTCOME: College level courses, internships and post-graduate fellowships provide increased literacy, experience, and preparedness in areas of watershed, coastal and marine ecosystems for all students including those from underrepresented groups.
- DESIRED OUTCOME: Undergraduate and graduate students including those from underrepresented groups, are supported and have access to formal and experiential learning, training and research experiences.

ACTION: Prepare a responsive and diverse workforce to advance and benefit from sectors that support the needs of the nation's coastal communities and ecosystems (e.g. industry, research, government), and to adapt and thrive in changing conditions.

- DESIRED OUTCOME: Employment in sectors of the U.S. coastal resource enterprise expands and diversifies.
- DESIRED OUTCOME: The existing and future workforce is able to adapt and thrive in changing environmental, social, and economic conditions.

“The future well-being of ... the nation as a whole depends on the ability of today's youth to succeed in tomorrow's labor force.”

--William H. Frey, in Diversity Explosion

Strategic Planning Process

Every four years, Sea Grant develops a National Strategic Plan. In 2016 the acting Sea Grant Director appointed a Strategic Plan Steering Committee in consultation with the NSGAB and the Sea Grant Association (SGA), the non-profit organization representing the 33 university-based Sea Grant programs. The Steering Committee was comprised of representatives from the NSGO, SGA, NSGAB and Network Advisory Committee. The Steering Committee was charged with providing guidance to the NSGO with respect to the development of the National Strategic Plan which included defining the scope and objectives of the planning process, reviewing relevant source material, providing progress updates and presenting the draft National Strategic Plan to the Sea Grant Director for approval.

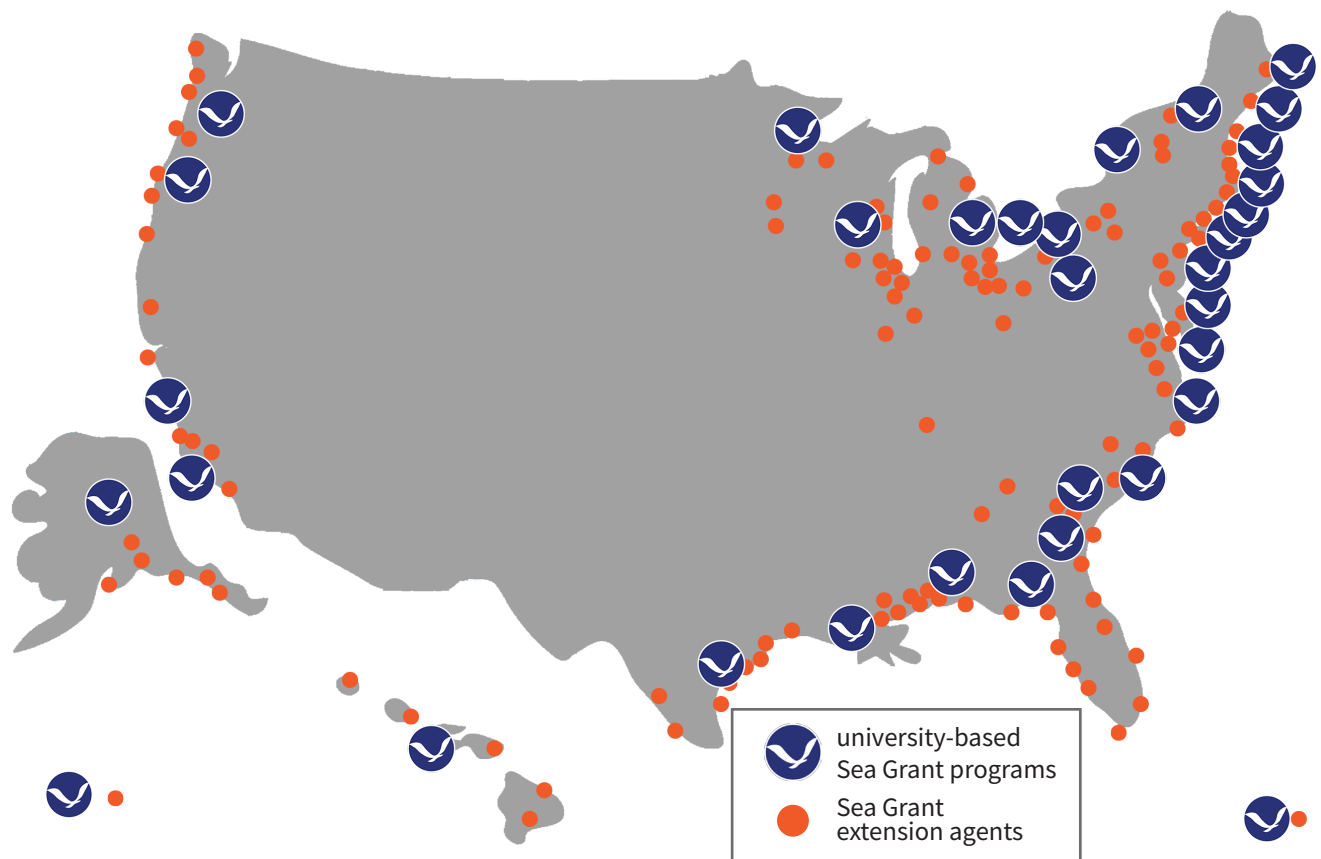
The National Ocean Policy, DOC's and NOAA's strategic plans, NOAA's Five Year Research Plan and other relevant national plans provided guiding priorities during the development of the National Strategic Plan. The process to develop the National Strategic Plan was iterative and integrative. The process included the analysis of input received from the state programs and partners as well as the integration of national priorities identified in documents noted above. In preparation for developing the 2018-2021 National Strategic Plan, the Sea Grant network was surveyed regarding proposed priorities for 2018-2021 based on each program's stakeholder input. The survey responses were reviewed by the Steering Committee. The SGA survey responses and other resources listed in the previous paragraph provided a basis to develop drafts of the National Strategic Plan that were reviewed by the Steering committee and the 33 Sea Grant Directors.

The 2018-2021 National Strategic Plan serves as the framework for the university-based programs to develop their strategic plans. At a minimum, the university-based program plans 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 strategic plans of the 33 university-based programs guide and inform the requests for proposals (RFPs) and all other, research, outreach and education activities. In addition, the program plans are used as the basis for program evaluation. All plans for the 33 university-based programs are expected to be developed through an inclusive stakeholder process and in collaboration with the assigned Federal Program Officer.

Long Range Planning

In addition to the 2018-2021 National Strategic Plan, Sea Grant will aim to address future opportunities and needs beyond 2018-2021. A long-range planning process will be explored to prepare and react to socio-economic and environmental changes and develop strategies to position the Sea Grant in order to achieve long-range goals. Sea Grant will examine policies and procedures that will shape Sea Grant's future plans and programs. The long-range planning process will build upon Sea Grant's short range achievements and preserve those initiatives that will ensure continued progress in the future.

Where We Work



Appendix A: Definitions

33 university-based Sea Grant programs: By our normal nomenclature and our regulations, we have 29 Sea Grant College Programs, two Institutional Programs (USC and WHOI) and two Coherent Area Programs (Guam and Lake Champlain), all of which are based at universities.

Action: The tactic or means used to achieve the desired outcomes.

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

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

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

Cross-cutting Principles: Main beliefs or ideologies embraced by the National Sea Grant College Program that will strengthen the organization as it strives to implement the strategic plan.

Diversity: A collection of individual attributes that together help an organization pursue objectives effectively and efficiently.

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

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

Goal: An aspirational concept that inspires a level of success in a focus area and describes the desired broad long-term outcome.

Hazard Analysis and Critical Control Point (HACCP) Certification: An international standard defining the requirements for effective control of food safety, as well as identifying pathways that may introduce invasive species in an ecosystem. Various tools and techniques are used to examine, question, evaluate, and report on the potential hazards.

Inclusion: An organizational culture that aims to connect all individuals to the organization.

Minority race or ethnic group: Self-identification data items in which census-takers choose the race or races with which they most closely identify, and indicate whether or not they are of Hispanic or Latino origin (the only categories for ethnicity) (ref. United States Census Bureau)

Mission: Communicates the purpose of the organization.

Outcome: An intended result or consequence.

Performance Measure: A quantitative way of measuring the achievement of a result.

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

Underserved community: a community with inadequate services and/or facilities which may affect the community's rates of poverty, unemployment, and/or population loss.

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

Appendix B: 2018 – 2021 National Performance Measures and Metrics

Sea Grant is committed to careful planning and evaluation at both the state and national program levels in order to ensure that Sea Grant has continued local, state and national impacts. Each university-based Sea Grant program reports on the performance measures and metrics listed in this appendix, as well as any additional state-specific measures chosen by each program. Planning, Implementation and Evaluation Resources (PIER), an online reporting database, provides a platform to track the national performance measures and metrics.

Healthy Coastal Ecosystems

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

Number of fishermen, seafood processing or 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

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

Environmental Literacy and Workforce Development

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

Appendix B, continued

Cross cutting performance measures

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

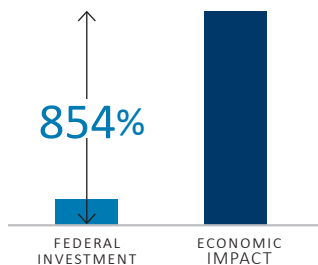
Economic and societal impacts derived from Sea Grant activities (market and non-market; jobs and businesses created or sustained)

Cross cutting output metrics

- Number and origination of core funding pre- and full proposals
- Number of marinas certified as “Clean Marina” by the Clean Marina Program as a result of Sea Grant activities
- Number of individuals certified in Hazard Analysis Critical Control Point (HACCP) due to Sea Grant efforts
- Number of peer-reviewed publications produced by Sea Grant
- Number of individuals and full-time equivalents (FTEs) supported by Sea Grant
- Number of postsecondary students and degrees financially-supported by Sea Grant in higher education programs (undergraduate, graduate)
- Number of P-12 Students reached through Sea Grant-trained educators or directly through Sea Grant education programs
- Number of P-12 educators who participated in Sea Grant education programs
- Number of volunteer hours
- 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

SEA GRANT BY THE NUMBERS

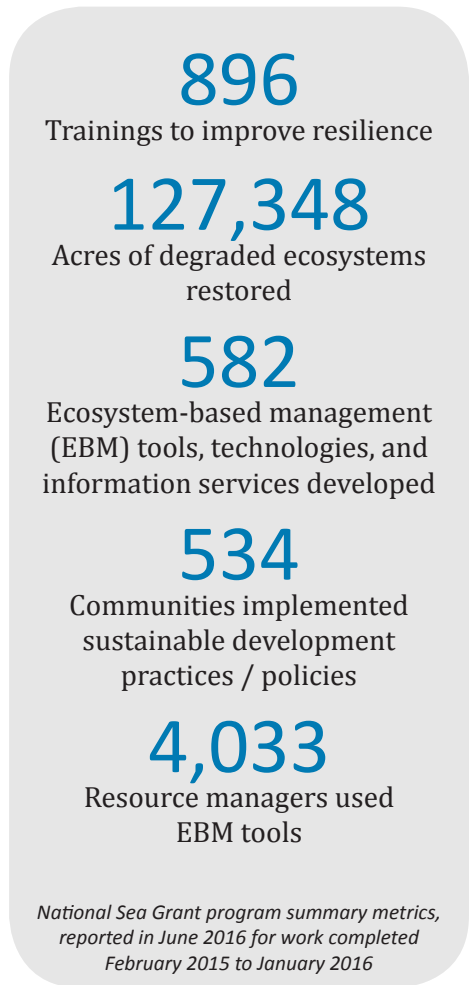
Sea Grant is a federal-local partnership program operated primarily through 33 university-based programs across the U.S.



\$575 million
in economic impact, 854% in economic benefit of \$67.3 million federal investment in 2015

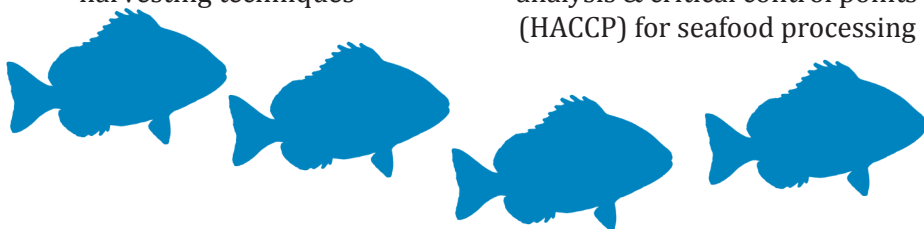
Sea Grant
50
YEARS

RESEARCH
EXTENSION
EDUCATION



40,243

Fishers adopted sustainable harvesting techniques



1,956

Professionals trained in hazard analysis & critical control points (HACCP) for seafood processing

265,602 Volunteer hours completed

1,108 Graduate students and fellows supported

860 Undergraduate students supported



APRIL 2017



National Sea Grant College Program
1315 East-West Ave
Silver Spring, MD 20910

seagrant.noaa.gov