

NEW YORK SEA GRANT COLLEGE PROGRAM

**2024 – 2027
STRATEGIC PLAN**



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New York Sea Grant Strategic Plan 2024-2027

Our Vision

To empower people of New York, Indigenous Nations, and all guests and visitors to make informed decisions to enhance and sustain healthy coastal ecosystems, communities and economies.

Our Mission

“Bringing science to the shore” through high quality research, extension, and education that fosters informed collaboration among individuals, communities, businesses, and decision-makers to collectively conserve, utilize, and restore coastal resources to support sustainable and resilient environments, economies, and cultures.

Our Commitment

New York Sea Grant (NYSG) is committed to a diverse, equitable, inclusive, and just workplace as well as research, education and extension programming that is informed by and serves the diverse populations throughout New York State and Indigenous Nations, regardless of race, citizenship, class, gender, identity, or religion. NYSG integrates diverse perspectives, viewpoints, and knowledge (including traditional and local) in order to pursue its vision and mission, effectively and efficiently. NYSG, including through its host institutions, the State University of New York and Cornell University, strongly promotes diversity, equity, inclusion, and justice as fundamental elements of all it does.



Our Values and Principles

Diversity (1): NYSG values and recognizes differences between people, acknowledging that these differences are a vital asset, and that striving for diverse representation is a critical step towards equity.

Equity (1,2)¹: NYSG strives for the consistent and systematic fair, just, and impartial treatment of all people, considering one-size does not fit all, and perspectives, needs, challenges, and histories may be different.

Inclusion(1): New York Sea Grant builds programs, partnerships, teams, and staff through authentic and empowered participation, with a true sense of belonging and full access to opportunities, and fosters meaningful involvement in programming, planning, and other engagement processes, and student and research opportunities.

Justice (3): New York Sea Grant promotes equitable access to and enjoyment of healthy coastal ecosystems and economies, empowering all individuals and communities in a diverse society to engage and have a voice in decision-making processes.

Excellence, Objectivity, Integrity and Responsiveness: New York Sea Grant exercises excellence, objectivity, integrity, and responsiveness through its funding of community and partner-driven research, extension, outreach, and education activities to inform and empower coastal constituents.

Stewardship and Sustainable Development: NYSG promotes the use of science-based decision-making to support the informed stewardship and sustainable development of coastal resources.

Collaboration and Partnership: NYSG fosters collaborative partnerships to ensure inclusion of diverse perspectives, knowledge, cultures, and identities for coastal problem solving and to take maximum advantage of combined experiences, resources, and energies to address local needs.

Education and Continuous Lifelong Learning for Positive Change: NYSG provides formal and informal education programming designed to enhance environmental literacy and a working knowledge of coastal science, technologies, policies, and economies.

Professional and Objective Competence: NYSG's highly trained and experienced staff are committed to lifelong education that helps NYSG respond to high priority and emerging coastal resource needs with integrative, innovative, relevant, and timely activities. NYSG as a neutral party maintains a commitment to objective, unbiased, and non-advocacy research and programming, including in the development and delivery of trusted information, tools, and services.

1:Adapted from:

2: from *Race Forward: The Center for Racial Justice Innovation Race Reporting Guide*

3: from *Executive Order on Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (EO 13985)*.

4: from the US EPA's definition for environmental justice



Context and Cross-Cutting Principles

The State of New York (NY) hosts 3,400 miles of coastline including two Great Lakes (Lake Ontario and Lake Erie); the St. Lawrence and Niagara Rivers; the Hudson River - tidally influenced from New York City to Troy; the Atlantic Ocean; the Long Island Sound, and several other estuaries on Long Island. NY's population is nearly 20 million, with 81% living in its coastal areas. Over 7.5 million people are employed along the coasts of NY, with cumulative income of approximately \$566 billion, translating to nearly \$1.4 trillion in gross domestic product (source: NOAA Office for Coastal Management, 2018).

NYSG supports research and provides extension, education, and outreach in these environments and associated coastal communities (**Note – the term coastal herein is inclusive of the Great Lakes, estuarine, and marine coastlines, waterbodies, and associated watersheds**). New York is the only state with significant borders on both Great Lakes and marine coastlines, and NYSG is the only program active in three different Sea Grant regions (the Mid-Atlantic, the Northeast, and the Great Lakes). We work with constituencies such as individuals, communities, governments, and academia across diverse topical areas, including coastal resilience, recreation and tourism, seafood, water quality, and environmental literacy and workforce development, among others. As such, NYSG's program portfolio is large, dynamic, and diverse, and its collaborators and constituents equally so.

NYSG, in collaboration with multiple partners, strives to be innovative and responsive to the diverse set of environmental, social, cultural, and economic needs of coastal communities. In the face of climate change, and other drivers of variability (e.g. pandemics, marketing and consumer shifts), programming needs to be nimble. In addition, State policies and priorities are also ever evolving. NYSG, as a neutral party, works closely with partners, constituents, and communities to navigate this landscape by providing clarifying guidance on science, legislation, regulations, and procedures; funding community and partner-driven university-based research that is extended to coastal constituents; and supporting the next generation of coastal stewards and decision-makers through teacher and student trainings and curriculums as well as undergraduate and graduate fellowship and research scholar opportunities.

NYSG is committed to ensuring equitable and just inclusion of diverse individuals and communities in our programming. This includes in our student opportunities, our research portfolio, and our outreach, extension, and education work, as well as our staffing, Board, and Advisory Councils and Networks. We strive to cultivate a safe and inclusive platform for collaboration across diverse perspectives, cultures, identities, and forms of knowledge. We also seek the same to inform NYSG's priorities and overall program.

These cross-cutting principles of innovative and inclusive collaboration are weaved through the program objectives and focus areas (and associated goals, actions, outcomes) defined below. Similarly, maintaining our role as a non-advocacy, unbiased partner and source of trusted science-based information and tools of relevance to all of NYSG's audiences is fundamental to all we do.

Strategic Planning Process

NYSG's 2024-2027 Strategic Plan is framed around three interrelated program objectives and four non-mutually exclusive Focus Areas designed to achieve the objectives. Within each of the four focus areas there are associated Goals, Actions, and Outcomes. While the structure of the plan aligns with that of the Strategic Plan of the National Sea Grant College Program, NYSG's strategic plan is fully informed by and developed with input from NY's coastal communities and partners. Thus, the goals, actions, and outcomes are specific to NY and represent priorities specified by NYSG's coastal constituents.

NYSG collected input to develop the strategic plan through a series of active engagement processes. Following an initial brainstorming exercise with staff (using a digital interactive platform and breakout groups by focus area), NYSG Extension Specialists conducted direct conversations with members of their Program Advisory Networks (PANs) and electronically sent a set of focused questions (developed collectively by staff) to inform priorities for the plan. In addition, NYSG held an interactive workshop with its Program Advisory Council (PAC) to collect input during focus area specific breakouts. For PAC members unable to make the workshop, individual calls were subsequently held to ensure their priorities were included in the planning process. In addition to input from NYSG's PANs and PAC, a survey was developed to solicit broader constituent and partner input. This survey was disseminated as a featured news item in the spring edition of NYSG's electronic newsletter, Coastlines, as well as via multiple social media channels and posts. It was also shared with NYSG's researcher and student scholars and fellow listservs. NYSG's Board of Governors (the Board) was briefed on the process at their spring meeting and initial feedback provided. An initial draft of this plan was also provided to the National Office for review.



Information from these efforts was compiled, reviewed, and incorporated into an initial draft plan by NYSG leadership. This draft was then shared with the rest of NYSG's staff for review and revision. It was also shared with the PAC for their review and revision. Finally, NYSG's Board provided review of the draft and then final approval of the revised (considering all staff, PAC, Board, and Program Office review) Plan for submission to the National Office.



Program Objectives

NYSG has three integrated program objectives, which provide direction to drive the program forward. The program objectives are presented separately but they are closely connected and do not stand alone. Some of the most important outcomes of NYSG activities are those which lead to progress on more than one Program Objective simultaneously. The program objectives are achieved through the goals, actions, and activities of the Program's four focus areas.

I. Coastal environmental resilience and sustainability: NYSG will assist coastal and ocean communities in ensuring the long-term health, sustainability, and resilience of their coastal environments by providing scientific and technical information, resources, and tools to mitigate the impacts from many different human interactions with the coastal and ocean environment, including recreational, commercial, and watershed impacts.

II. Coastal economic vitality: NYSG will support coastal communities and businesses in protecting and promoting economic vitality in a manner consistent with coastal sustainability by providing research and extension programming that addresses tourism, recreational activities, fisheries, seafood, and other sustainable waterfront businesses that are resilient to economic change.

III. Coastal citizens' awareness and understanding: NYSG will engage NY's diverse coastal communities through education and training programs and student opportunities to measurably improve awareness and literacy related to our four focus areas; the understanding of sustainable coastal environments and economies; and train, educate, and inspire the next generation of coastal residents, stewards, coastal businesses, researchers, policy- and decision-makers, and educators.

Focus Areas

Focus Area A: Healthy Coastal Ecosystems

Goal 1: Coastal habitats, ecosystems and the services they provide are protected, enhanced, and/or restored.

ACTION 1: Co-develop, improve, and share knowledge, decision-support tools, technologies, and approaches to protect, enhance, and/or restore ecosystems.

DESIRED OUTCOMES:

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

Goal 2: Diverse communities, agencies, and individuals apply science, tools, and services to manage land, water, and living resources in order to protect, enhance, and restore coastal habitats, ecosystems, and the services they provide.

ACTION 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:

- Inclusive collaborations with diverse partners and other interested parties support planning, research, and innovative solutions to address coastal resource management needs, especially for vulnerable communities.
- Community science initiatives are utilized and contribute to improving our knowledge with respect to stewardship of ecosystems and their contributions to coastal communities and economies.
- Coastal communities and resource managers have access to and use science, data, tools, and training opportunities to effectively plan and make decisions.
- Coastal communities and resource managers understand the risks, options, trade-offs, and impacts of their decisions.

ACTION 2: Identify and advance successful strategies that enhance the function of ecosystems and watersheds in the context of changing conditions, including environmental variability and climate change.

DESIRED OUTCOMES:

- Coastal communities and resource managers share, access, understand, and use science, data, tools, and training opportunities to make informed decisions regarding projected changes and related impacts within ecosystems.
- 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 B: Sustainable Fisheries and Aquaculture

Goal 1: Domestic fisheries, aquaculture, and other coastal and freshwater natural resources supply food, jobs, and economic and cultural benefits.

ACTION 1: Promote and support harvest and processing techniques that lead to safe, sustainable, high-quality food as well as economic, social, and ecosystem benefits.

DESIRED OUTCOMES:

- Coastal residents and U.S. seafood consumers understand the benefits of New York produced seafood, both wild and farmed, for human and environmental health.
- Coastal resource industries employ technologies and reinforce strategies to ensure safe, sustainable, and high-quality seafood and products.
- Coastal resource industries employ technologies and strategies that balance economic, community, cultural, and conservation goals.

ACTION 2: Support the development of a trained and diverse workforce and enhance technology transfer and implementation in a manner that recognizes a variety of methodologies and approaches, including those based on traditional and local knowledge.

DESIRED OUTCOMES:

- Increased understanding and technological solutions aid management, production, and processing.
- Engagement with interested parties and partnerships enable the industry to adapt and build resilience to current and future challenges through innovative technologies and knowledge transfer.



Goal 2: Natural resources are sustainably managed to support economically viable fishing communities and industries, including commercial, recreational, subsistence fisheries, and aquaculture.

ACTION 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:

- Commercial and recreational fishers and aquaculturists are knowledgeable about alternative species for production, harvest, and consumption.
- Commercial and recreational fishers and aquaculturists are knowledgeable about efficient, sustainable, and responsible tools, techniques, and uses of marine and freshwater resources.
- 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.
- Consumers understand the benefits of New York produced seafood and use that knowledge to inform their seafood purchasing decisions.

FOCUS AREA C: Resilient Coastal Communities and Economies

GOAL 1: The recreation, tourism, water-dependent business, and maritime history industries are resilient to changing environmental conditions, extreme events, coastal hazards, economic disruptions, while also protective of coastal ecosystems.

ACTION 1: Develop and provide training and opportunities for knowledge transfer about best management practices, innovative tools, and emerging technologies to increase awareness of changing environmental conditions and coastal hazards, and their potential impacts to individuals and their businesses.

DESIRED OUTCOMES:

- Recreation, tourism, water-dependent business, and maritime history industries use best management practices, innovative tools, and emerging technologies to increase resilience to changing conditions and extreme events.

ACTION 2: Provide boaters, beachgoers, and customers of water-focused businesses the knowledge, tools, and training needed for safe recreation and to be stewards of water resources, wildlife, and habitat.

DESIRED OUTCOMES:

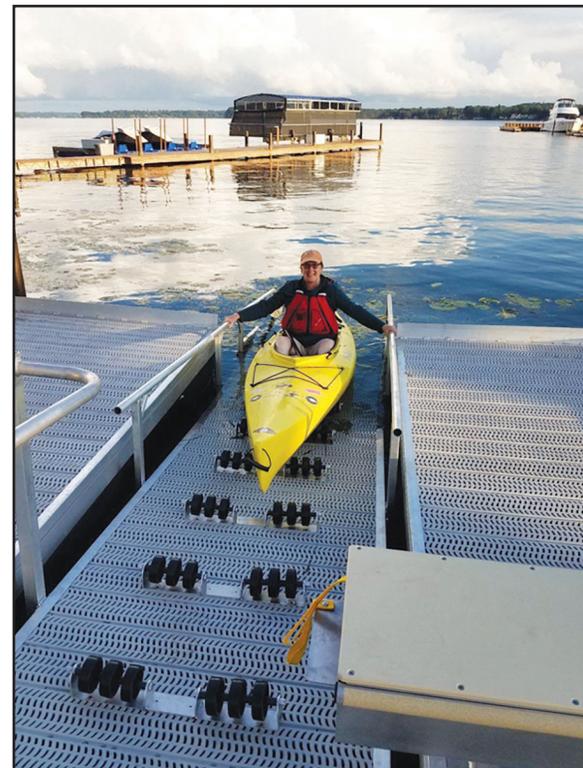
- Safe and healthy water-based recreation occurs.
- People who engage in water-based recreation do so in a manner that protects local habitat, wildlife, and resources.
- Water-dependent businesses operate in an economically viable manner that protects local habitat, wildlife, and resources.



ACTION 3: Develop mechanisms and opportunities to assist in knowledge transfer about traditional, social, recreational, and commercial uses of natural resources that define New York’s coastal maritime heritage, culture, and history.

DESIRED OUTCOMES:

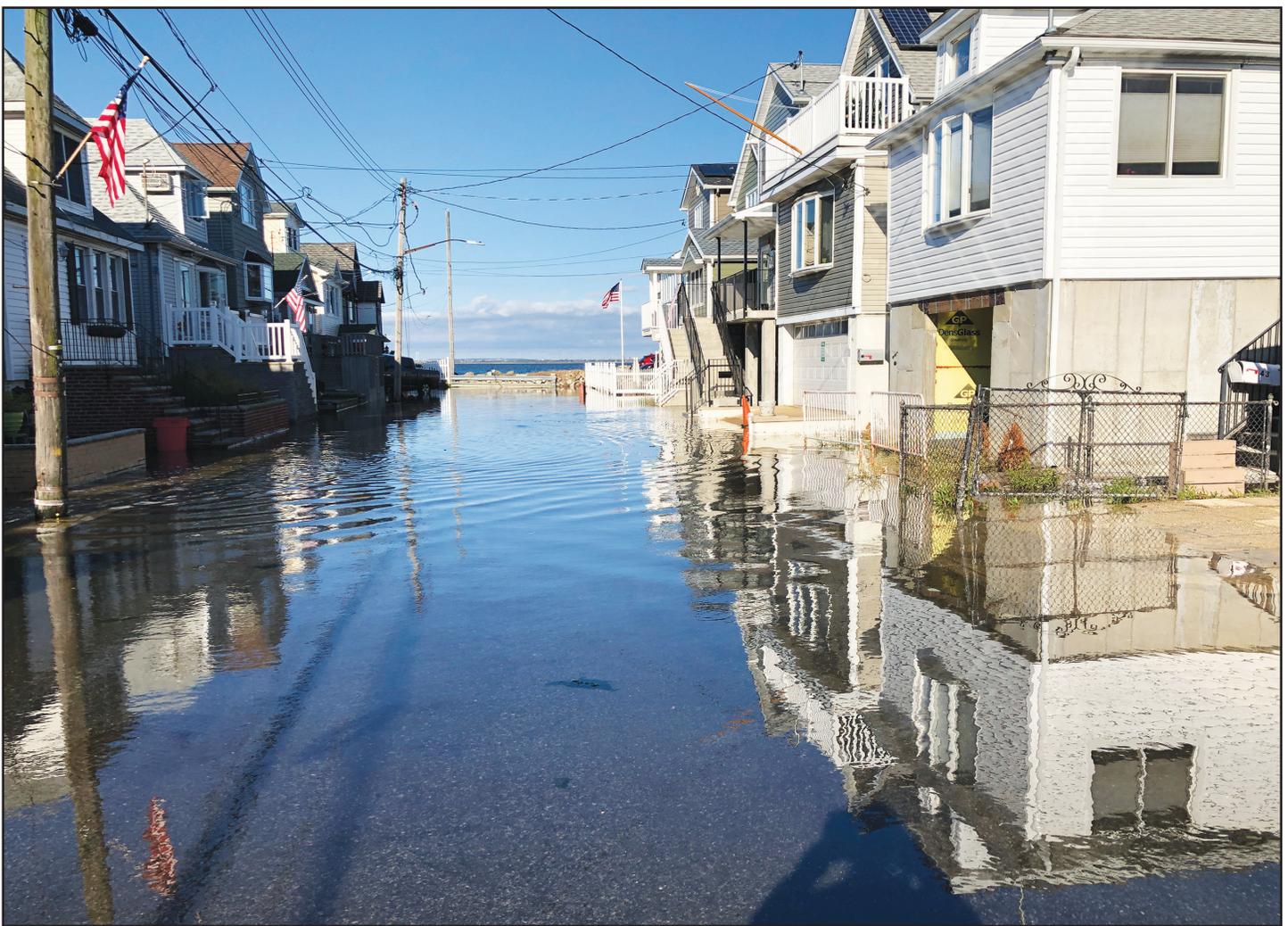
- Community members and visitors understand coastal maritime heritage, culture, and history.
- Maritime history industries and associated businesses thrive with visitors curious about maritime heritage, culture, and history.



ACTION 4: Develop and deliver extension, outreach, and research related to the plethora of recreational fishing opportunities, including in multiple languages.

DESIRED OUTCOMES:

- Anglers have resources in multiple languages.
- Subsistence and recreational anglers understand health risks and benefits from fish consumption.
- Recreational and subsistence anglers have social and economic information related to their needs.



Goal 2: Coastal communities (e.g. local governments, resource managers (including property owners), inhabitants) have the capability and research-based resources to prepare for and adapt to extreme and chronic weather and coastal hazards, climate change, economic disruptions, and other challenges to community health and well-being.

ACTION 1: Improve and expand exchanges of knowledge to better identify the diverse needs of communities (including research and extension programming) and to increase the public's understanding of changing conditions and related impacts.

DESIRED OUTCOMES:

- Scientific understanding, including traditional and local knowledge, provides foundational information, and all community members understand the impacts of changing conditions (including climate-induced human migration).
- Community leaders improve their understanding of changing conditions and coastal hazards and their capability to implement mitigation and adaptive strategies.

ACTION 2: Work with communities to advance collaborative comprehensive planning, actionable science, and adaptive management strategies.

DESIRED OUTCOME:

- Inclusive collaborations with diverse interested parties and partners support mitigation and adaptation efforts built on knowledge from, and are responsive to, the needs of all, especially the most vulnerable.
- Communities have the capability and resources (including co-produced research) to prepare, respond, and adapt to coastal hazards.
- Communities have increased resilience to weather, coastal hazards, climate change, and other disruptions as well as the ability to address climate-driven migration.

ACTION 3: Work with communities, agencies, businesses, and individuals to conserve, utilize, protect, and/or manage coastal and offshore resources with science-based information in order to support diversification, increased resilience, sustainability, and social equity within coastal economic sectors, including offshore energy production.

DESIRED OUTCOMES:

- Coastal communities have access to and share knowledge, tools, services, and technologies to manage offshore resources.
- Coastal agencies and businesses sustainably and equitably manage offshore resources.
- Coastal communities have access to and share knowledge, tools, services, and technologies to adapt and grow resilient economies.
- Leaders in coastal economic sectors understand how they can become more resilient through diversification including expanded renewable, regenerative, and green practices.

Goal 3: Water resources are enhanced, sustained, and protected to meet existing and emerging needs of the communities and economies that depend on them.

ACTION 1: Use engagement and information exchange to advance the understanding of how actions impact water quality, quantity, and availability.

DESIRED OUTCOME:

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

ACTION 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:

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



FOCUS AREA D: Environmental Literacy and Workforce Development

GOAL 1: A diverse, environmentally literate public participates in a continuum of lifelong formal and non-formal learning opportunities.

ACTION 1: Create and implement educational resources and opportunities that are accessible to all formal and nonformal learners in a diverse society to explore multiple ways of learning and knowing and to develop their curiosity and learning abilities throughout their lives.

DESIRED OUTCOME:

- Individuals consider themselves environmentally literate lifelong learners who utilize knowledge to support, build, and restore healthy natural and human communities.
- Individuals have access to educational opportunities and experiences in their communities and businesses.

ACTION 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:

- Educators, students, and lifelong learners have current information and innovative tools that meet or exceed relevant standards and practices.
- People know and can act on coastal issues that impact their lives, communities, and environments.
- Community members use their knowledge to remove barriers to and act in support of resilience during changing economic, environmental, and social conditions.

ACTION 3: Strengthen the ability of individuals, organizations, and communities so they have the knowledge, skills, and abilities to acquire, synthesize, and use knowledge to make informed and responsible decisions about coastal environmental issues.

DESIRED OUTCOMES:

- Individuals, organizations, and communities create innovative opportunities, businesses, and communities that respect diverse ways of knowing and learning.
- Coastal communities are sustainable, healthy, and diverse centers of tradition, innovation, resilience, and prosperity.

GOAL 2: A resilient, diverse, and skilled workforce is engaged and enabled to address critical local, regional, and national needs through traditional and innovative careers.

ACTION 1: Develop and implement training and learning opportunities to advance and benefit sectors that support the needs of coastal communities and ecosystems so that New York’s diverse population is connected to and prepared for the range of career paths that support the needs of coastal communities.



DESIRED OUTCOME:

- Diverse, skilled individuals participate in a variety of occupations that are essential to sustain coastal communities, economies, and ecosystems.
- Employment within coastal communities expands and diversifies.
- The existing and future workforce is able to adapt and thrive in changing environmental, social, and economic conditions.

ACTION 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:

- Sea Grant student opportunities provide increased literacy, experience, and preparedness in critical disciplines, skills, and issues.
- Students from all backgrounds and with diverse needs are thoughtfully and intentionally supported through, and have access to, formal and experiential learning, training, and research experiences.



APPENDIX: 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

Cross Cutting National Performance Metrics (continued)

Number of Attendees at Sea Grant- Sponsored/ Organized Events

Number of Public or Professional Presentations

Number of Attendees at Public or Professional Presentations

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)





See www.nyseagrant.org/nysgstaff for New York Sea Grant's locations and staff throughout the State.

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