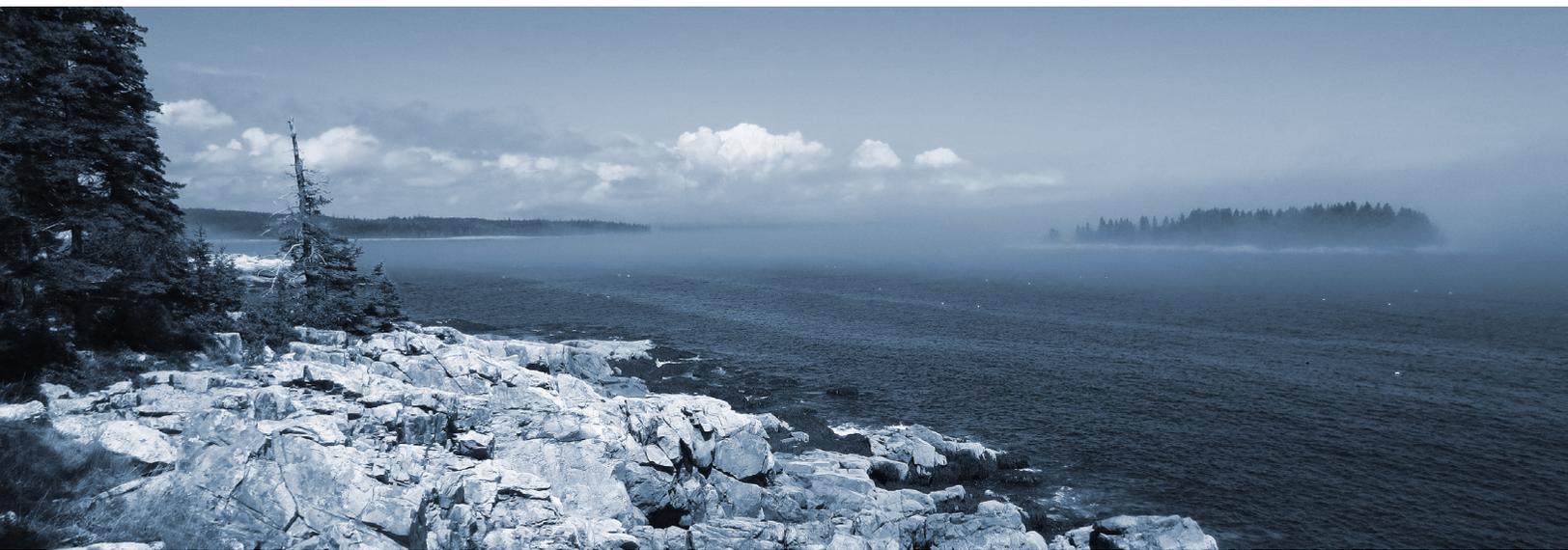


NeCSA

Northeastern Coastal Stations Alliance



A Strategy for Research, Innovation, and Discovery
2016–2026

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Who We Are

Member stations of the Northeastern Coastal Stations Alliance (NeCSA) span the Gulf of Maine from Appledore Island, ME to Bon Portage Island, Nova Scotia, Canada. These facilities support field-based research and are committed to collecting long-term environmental data, and to training students of all ages. We are working to integrate our efforts with others in New England, and to effectively communicate scientific findings to the communities in which we are embedded. We care deeply about the Gulf of Maine and are aware of climate-change impacts affecting both fundamental ecosystem processes and coastal communities.

Vision Research, innovation, and discovery enhanced by collaboration across the Gulf of Maine.

Mission To interpret nearshore environmental change and foster transformative understanding of the Gulf of Maine.

What We Do

RESEARCH: Our work supports and enhances existing research efforts by offering place-based, fine-scale data across the spatial extent of the Gulf of Maine. We are committed to using uniform sensors and standardized protocols, and to making our collective data accessible to partner organizations, individual researchers and larger institutions. We anticipate both joint publications and trans-disciplinary findings that propel scientific knowledge and understanding of environmental change in the Gulf of Maine particularly, and more generally in the coastal zone.

TRAINING: We provide students with opportunities to gain the knowledge and skills to develop an understanding of coupled human and natural systems within and across the Gulf of Maine. Our aim is to foster a regional perspective by training cohorts of students at field stations with differing habitat types and research programs, and by engaging in on-going projects at specific sites. Our approach emphasizes field studies and longitudinal observations with opportunities for civic engagement, and an ethical focus on science for the public good.

OUTREACH: Coastal communities are unique in their devotion to place. As field stations, we are embedded in these communities and residents are curious about our work. We are committed to communicating our findings to local citizens and surrounding communities and to state and local decision-makers. More broadly, we are committed to building public awareness and understanding of coastal change in the Gulf of Maine.



First NeCSA meeting on Hurricane Island, September 2015

NeCSA Goals & Initiatives, 2016–2026

Member institutions are committed to three overarching goals. These goals and initiatives will be revisited and revised as needed to achieve the Alliance’s mission and vision, and to promote adaptive responses to staffing, funding, and research findings.

GOAL 1. Coordinated monitoring and research to document and discover patterns of environmental change in the Gulf of Maine.

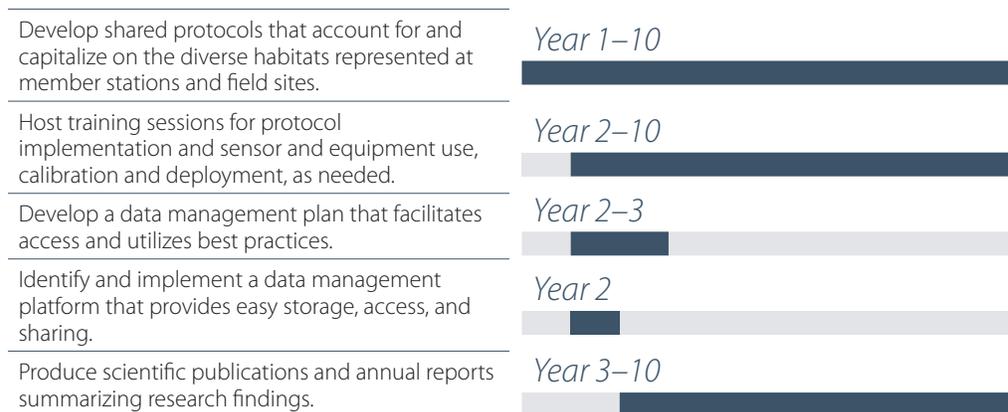
Coordinated monitoring and research across the spatial extent of our member institutions provides opportunities for integrating place-based data sets, developing broad and systemic perspectives, and conducting innovative research.

What success looks like in 2026

Member stations have implemented a shared monitoring program for close to ten years. The protocols, sensors and equipment are standardized so that results may be easily accessed and integrated, and used to support further research questions at broader scales. Member stations have adopted and utilized best practices for data management and sharing.

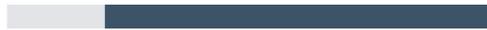
New patterns of change are becoming apparent with longitudinal data sets utilized to develop a regional understanding, with additional and complimentary studies occurring at networked field sites, and with interdisciplinary approaches to scientific questions. An annual report updates the public about our findings and other publications appear in appropriate scientific journals.

Specific activities to achieve this goal include:



Host an annual meeting to share observations and results and maintain network connections.

Year 3–10



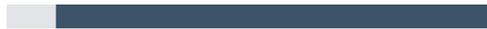
Develop research projects benefiting from our spatial distribution and habitat types, (e.g. sea and shorebird studies or lobster trap distribution and density studies)

Year 2–10



Develop a strategy to strengthen communications between members and other coastal researchers and managers

Year 2–10



GOAL 2: Innovative and field-based approaches to coastal studies, community engagement and climate change communications

Inspiring the next generation of field scientists, conservationists, and environmental stewards requires developing and providing creative programming and training. The geographic distribution of member institutions inherently offers opportunities for innovative research and analysis with respect to coastal change.

What Success looks like in 2026

The summer undergraduate training program is well established and widely known. Eight to ten students from member institutions attend the Gulf of Maine Summer Institute for Field Studies each year. Students learn from a variety of researchers working at member stations and within differing habitats. A portion of the Institute’s annual training includes monitoring intertidal sites, yielding longitudinal data that provide baselines for a range of innovative research questions being pursued by advanced students and scientists. Students and researchers conduct their research and monitoring with community members and frequently present findings to community-based audiences.

Specific activities to achieve this goal include:

Establish a training program for undergraduate students

Design a unique summer program curriculum by leveraging the geography, diversity and capacity of member stations

Year 2–10



Apply for appropriate funding source

Year 3–10



Form annual cohorts of students for summer field research and monitoring

Year 4–10



Develop a database of potential research questions for NeCSA training program

Year 3–10



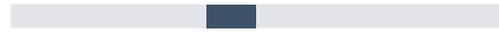
Increase the diversity of participants in programs

Year 4–10



Design and produce shared outreach materials that emphasize regional scope, research findings, and the importance of place-based data.

Year 5



Provide training to field station staff, students and citizens

Year 3–10



Offer public education opportunities on climate change understanding and impacts in the Gulf of Maine

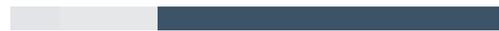
Develop an artists-in-residence program emphasizing sense of place, coastal change and communication

Year 6–10



Support collaborative and applied research projects with community members and organizations addressing questions of high priority to coastal communities

Year 4–10



GOAL 3: Shared funding, fiscal sustainability and network longevity.

Although most of NeCSA’s field stations and marine labs are affiliated with larger institutions, the work we are proposing to do will require dedicated funding for staff, equipment, data management and outreach efforts. We anticipate support from a variety of funding sources.

What success looks like in 2026

We pursue and implement multi-institutional grants and have identified a range of potential revenue streams to support the work of the consortium. Private foundations are compelled by and supportive of our efforts.

Specific activities to achieve this goal include:

Define a collaborative structure that supports the mission and vision of the Alliance.	
Form steering committee	Year 2
Establish long-term funding strategy	Year 2–5
Support existing working groups and develop additional groups as needed	Year 1–10
Develop a network governance structure and organizational by-laws	Year 2
Identify a membership model that promotes inclusivity and ensures value of the Alliance to participating stations	Year 2–4
Identify staffing needs to attain long-term success and sustainability.	
Determine staffing need for data management	Year 2
Determine need for a NeCSA Coordinator	Year 2
Encourage subgroup and partnership organization for particular projects or initiatives that are aligned with NeCSA’s priorities and goals.	Year 2–10
Develop a strategy to strengthen communications between members and other coastal researchers and managers	Year 3–4
Create an interactive web presence	Year 3–4
Create opportunities for member institutions to meet in-person on an annual basis.	Year 2–10
Encourage working groups to hold quarterly conference calls or meetings.	Year 2–10

The Strategic Planning Process

In March 2014, Bowdoin College hosted a workshop for initial conversations focused on the possibility of coordinating research activities amongst the small field stations in the Gulf of Maine. In 2015, Bates College and the Hurricane Island Foundation's Center for Science and Leadership (HICSL) obtained a National Science Foundation Field Station and Marine Laboratories Planning Grant (#1522498) to support three in-person meetings to develop a strategic plan. The first meeting was held on Hurricane Island in Penobscot Bay, ME. Field station directors, researchers and others discussed existing monitoring and research, and identified knowledge gaps and synergies with respect to current efforts. Meeting outcomes included:

- Consensus on potential joint monitoring projects, and
- The formation of collaborative working groups.

The second meeting was held at the Bates College Coastal Center at Shortridge, in Phippsburg, ME. Meeting participants discussed monitoring priorities and implementation, data management and shared training programs. Outcomes from the meeting included:

- Plans to pursue joint funding as a network, and
- Identification of staffing needs to formalize NeCSA.

The group met for a third time at the University of Maine's Darling Marine Center in Walpole, ME in March 2016. Discussion focused on the mechanics of establishing an active network. Outcomes included:

- Agreement to initiate a pilot nearshore water temperature monitoring project in summer 2016,
- Progress in developing specific shared protocols for transects in rocky intertidal and salt marsh habitats, and
- Formation of a 6-member steering committee, including representatives from Bates and Bowdoin Colleges, the University of Maine (The Darling Marine Center), the University of New Hampshire (Shoals Marine Lab), The Hurricane Island Center for Science and Leadership, and Schoodic Institute.