North Atlantic Coast
Cooperative Ecosystem Studies Unit
Self-Assessment Report FY2019–FY2023

Prepared by:

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Introduction

The North Atlantic Coast Cooperative Ecosystem Studies Unit (NAC CESU) was established in June 1999 following a competitive process managed by the CESU National Network, with University of Rhode Island (URI) as host university, University of Maryland Eastern Shore as a partner university, and two federal agency participants (National Park Service [NPS], US Geological Survey [USGS]). The NAC CESU cooperative agreement was renewed in June 2004, June 2009, June 2014, and June 2019, following the successful review of renewal documents submitted by the host university, non-federal and tribal partners, and participating federal agencies. It is noted that over the past 25 years the NAC CESU has grown substantially, now composed of the Narragansett Indian Tribe, 38 academic institutions and non-profit research organizations, and nine federal agencies (Table 1). The non-federal and tribal partners are spread throughout eight coastal states of the northeastern US from Maine to Virginia.

The CESU National Network Office provided detailed guidance for the required five-year review and renewal of each CESU within the Network. This five-year self-assessment report, responding to specific questions contained within the renewal guidance, reports on the activities and accomplishments of the NAC CESU during the Federal Fiscal Years FY19 to FY23. The self-assessment was prepared by the host university and represents a compilation and synthesis of information provided by federal, non-federal, and tribal partners.

This report is completed with deep appreciation for the cooperation of our partners, and the many Principal Investigators who completed an exceptional array of projects. Sincere acknowledgement is also extended to the National Park Service personnel duty-stationed at the University of Rhode Island.

Figure 1. Map of the North Atlantic Region and NAC CESU Non-Federal and Tribal Partners.

Table 1. NAC CESU Partners. Italic type indicates the 13 partners that have joined during the FY19-23 assessment period.

CESU Partner	Year Joined
Non-Federal Partners	
University of Rhode Island (host university)	1999
University of Maryland Eastern Shore	1999
Rutgers University	2001
University of Massachusetts at Amherst	2002
Maryland Coastal Bays Program	2003
Stony Brook University	2003
University of Maine	2005
City University of New York (CUNY)	2006
College of the Atlantic	2007
SUNY-School of Environmental Science and Forestry	2008
Columbia University	2009
Bates College	2010
University of Massachusetts at Boston	2010
Cornell University	2011
Provincetown Center for Coastal Studies	2011
Biodiversity Research Institute	2012
Northeastern University	2012
Harvard University	2013
Manhattan College	2013
Marine Biological Laboratory	2013
Schoodic Education and Research Center	2013
University of New England	2013
University of Connecticut	2014

CESU Partner	**Year Joined**
University of Maryland Center for Environmental Science	2014
Virginia Aquarium and Marine Science Center Foundation, Inc.	2015
American Turtle Observatory	*2019*
Brown University	*2019*
Bryn Mawr College	*2019*
Mansfield University	*2019*
Natural Areas Association	*2019*
Stevens Institute of Technology	*2019*
Stockton University	*2019*
Vermont Center for Ecostudies	*2019*
Woods Hole Oceanographic Institution	*2019*
Yale University	*2019*
New Jersey Audubon	*2019*
Wildlife Management Institute	*2021*
Boston University	2023
Tribal Partner Narragansett Indian Tribal Historic Preservation Office	2013
Federal Partners	
National Park Service (NPS)	1999
U.S. Geological Survey (USGS)	1999
Natural Resources Conservation Service (NRCS)	2004
US Army Corps of Engineers	2008
US Fish and Wildlife Service (USFWS)	2009
National Oceanic and Atmospheric Administration (NOAA)	2010
Bureau of Ocean Energy Management (BOEM)	2011
US Department of Defense (DOD)	2013

CESU Partner	Year Joined
Bureau of Indian Affairs (BIA)	2016

Self-Assessment

The self-assessment is organized around three categories of questions: A) Federal Responsibilities, B) Host University Responsibilities, and C) Participation of all Partners. The overall guidelines for the self-assessment can be found on the CESU National Network website.

Below follows short responses to each question outlined in the National CESU Network renewal process guidelines.

Self-Assessment Category A: Federal Responsibilities

Did each federal agency in the CESU:

1) *Provide opportunities for coordinated, collaborative scientific and scholarly activities (i.e., research, technical assistance, and education) that inform stewardship of, and education about, public trust heritage resources in alignment with CESU, agency, and partner mission goals, pro- grammatic objectives, and authorities?*

Provide details, including reference to agency-support (or lack thereof) and activities over the current five-year term (e.g., number of projects; types of projects; management issues, topics, or subject matter areas).

Funding in support of agency-sponsored cooperative research, technical assistance and education was awarded by seven (out of nine) federal agency partners - providing 165 awards totaling over $26 million (Table 2). The range of topics addressed by the project investigators (see Appendix 1 for a listing of projects organized by agency and non-federal partner) reflects the extraordinary diversity of disciplines that are represented by the NAC CESU academic and research institutions. All aspects of coastal science (e.g., ecology, geomorphology, water quality, modeling), wildlife biology, rare species management, habitat restoration, ecosystem response to climate change, and other research, management topics have been addressed over the five-year period. Investigations related to cultural landscapes, ethnographic assessments, and archaeological and historic site evaluations are also fundamental to the NAC CESU activities, along with outreach, science communication, student education, internships, and technical assistance.

Table 2. NAC CESU project awards by each federal agency during federal FY2019 through FY2023.

Federal Agency	Number of Awards	Funds Awarded
Department of Defense	12	$1,250,243.00
National Oceanic and Atmospheric Administration	3	$3,423,935.52
National Park Service	102	$11,897,882.37
Natural Resources Conservation Service	15	$6,010,761.49
US Army Corps of Engineers – Civil Works	3	$513,143.00
US Fish and Wildlife Service	11	$777,721.87
US Geological Survey	19	$2,882,000.30
Total	**165**	**$26,755,687.55**

2) *Provide funds for basic support and salary for the CESU host university (or other non-federal partner institution) faculty/personnel, as appropriate? How have federal partners provided sup- port to the host university over the current five-year term (both financial and in-kind) specifically to support CESU operations?*

Provide details regarding support (e.g., support by agency, fiscal year, instrument/mechanism) and associated expenditures.

FY19	$16,000
FY20	$9,000
FY21	$16,200
FY22	$14,400
FY23	$16,200
5-year total	**$71,800**

Box 1. *NAC CESU Host University Support Received from NPS*

The University of Rhode Island received a total of $71,800 from the National Parks Service for basic support and salary to host the NAC CESU (details provided in Box 1). During the FY19-FY23 assessment period these funds supported NAC CESU operations (e.g., travel to CESU events, graduate student support, consultants related to web development and maintenance, and database management). It should be noted that the funding received covered less than a quarter (22%) of the funds required to run the CESU. Costs associated with the NAC CESU Director, Administrative Coordinator, graduate students, and consultants were funded at $257,030 leveraged from URI institutional resources (see Appendix 2; NAC CESU Host University financials, FY19-FY23). URI also received a separate award of $140,807 to develop, maintain, and facilitate a NAC CESU experts database and environmental emergency response network. These funds were a requisite to develop the database because the annual funding received to host the NAC CESU network in combination with resources leveraged from URI are only sufficient to provide minimal support, such as attending CESU partner meetings, following up with partner requests and application, coordinating requests for proposals, organizing annual NAC CESU meetings, and providing basic administrative support. If funding was increased, the URI team would have been able to engage in networking with federal, tribal, and non-federal partners, increase communications, provide student opportunities, maintain a Management Committee, and offer educational and training opportunities.

The resident NPS scientists at URI provide in-kind operational assistance related to website content, project database management, meeting planning, correspondence with partners, and other operations tasks. As noted in the response to question A.5, the NPS scientists that are duty-stationed at URI also provide considerable in-kind support related to teaching, mentoring students, and other collaborations at no cost to the university.

3) *Make available federal personnel to serve on the CESU Federal Managers Committee? Did all federal technical representatives actively participate in CESU Federal Managers Committee activities, CESU partner meetings, and other CESU activities (e.g., communication, planning, re- porting)? Provide details, including reference to consistent agency participation (or lack thereof) over the current five-year term (identified by agency, as appropriate).*

The federal partners have been active on the Federal CESU Federal Managers Committee. Before her retirement, the previous NAC CESU Director, Judith Swift, represented the CESU Directors on the Federal Managers Committee. All federal technical representatives are actively responding to communications while some have attended CESU partner meetings. The most important aspect of feedback and participation from the federal partners is ensuring a current point of contact. In cases where federal partners were unresponsive, the reason was most often that we did not have the correct contact information. The National Parks Service and U.S. Army Corps of Engineers representatives communicate funding opportunities directly to the NAC CESU Director, while other federal partners tend to use other vehicles (e.g. grants.gov).

4) *Comply with CESU Network, host university, and nonfederal partner institution rules, regulations, and policies (e.g., professional conduct; health and safety; use of services and facilities; use of animals, recombinant DNA, infectious agents or radioactive substances) and ensure its employees follow the Code of Ethics for U.S. Government Employees? Provide details, including examples of best practices or areas of concern (identified by agency, as appropriate).*

There are no concerns to report. NPS scientists that are duty-stationed at URI frequently use university facilities (e.g., labs, libraries, meeting rooms) and are diligent in adhering to university rules, regulations, and policies.

5) *Did federal agency employees actively participate in the activities of the host university and nonfederal partner institutions, including serving on graduate student committees or teaching courses? Provide details, including examples of courses or other service activities.*

In association with the NAC CESU cooperative agreement there are several NPS scientists that are resident at the host university, and they are fully engaged in the research and intellectual atmosphere of their respective academic departments. NPS scientists, their agency programs, and university departmental affiliations include:

- NPS NAC CESU Research Coordinator, Dr. Brian Mitchell (Dept. of Natural Resources Science)
- NPS Climate Change Response Program Coordinator, Dr. Amanda Babson (Graduate School of Oceanography)
- NPS Northeast Coastal and Barrier Network Coordinator, Sara Stevens (Dept. of Natural Resources Science)
- NPS Northeast Coastal and Barrier Network Staff: Dennis Skidds, Scott Rasmussen, Holly Plaisted, Robin Baranowski, and Cathy Johnson (Dept. of Natural Resources Science)

Brian Mitchell, the NPS NAC CESU Research Coordinator is a critical part of the URI NAC CESU team. He is actively involved in supporting CESU activities, including attending and presenting at the annual North Atlantic Coast CESU meeting, representing the CESU at national CESU meetings, assisting potential partners with the membership process, facilitating agreement processing between partners and the NPS, supporting reporting and the renewal application (e.g., compiling NPS projects and asking other agencies for their project lists), overseeing the NPS-funded experts database project, and helping get NPS project data into the CESU's new projects database.

Several of the NPS staff are URI alumni and they continue to hire students into internships, terms, and permanent positions. It should be noted that Dennis Skidds and Scott Rasmussen no longer work for the Northeast Coastal and Barrier Network, but the team will bring on new staff and interns in 2024. That team is supporting a Direct Hire Authority Summer remote sensing intern for 12 weeks, summer 2024, and that intern will be stationed at URI, and most likely be a graduate student from the Master of

Environmental Science and Management (MESM) program. This person will have the opportunity to be hired non-competitively hire into an NPS position anywhere in the US, once they graduate.

The research coordinator and other NPS staff at URI support the broader CESU goals by guest lecturing, teaching, mentoring, and serving on graduate committees. See Appendix 3 for more information.

6) *Take responsibility for their respective agency's role in administering the CESU agreement, transferring funds, and supervision of agency employees? Provide details, including examples of best practices or areas of concern (identified by agency, as appropriate).*

The seven federal agencies that transferred funds to NAC CESU partners during the assessment period (see Table 2) appeared to efficiently implement all administrative aspects including, announcing the availability of funds, selecting project investigators, requesting, and reviewing proposals, awarding funds, paying invoices, and overseeing project progress and completion.

The federal technical representatives who responded to the NAC CESU federal partner self-assessment survey, stated that point of contact (POC) turnover among the federal agencies is an issue and that CESU unit personnel need to be more aggressive in tracking down federal partner POCs. In general, the federal partners maintained that they are responsive to requests for reporting.

7) *Provide administrative assistance, as appropriate, necessary to execute the CESU agreement and subsequent amendments or modifications (e.g., timely processing, signatures)? Provide details, including reference to consistent and/or effective assistance (or lack thereof) over the current five-year term (identified by agency, as appropriate).*

The National Parks Service provides adequate administrative assistance to execute the NAC CESU and its various agreements, amendments, and modifications. Modifications are processed timely. Brian Mitchell, the NAC CESU Research Coordinator/Science Advisor is doing a fantastic job – coaching potential new partners, forwarding funding opportunities, coordinating with federal partners, advocating for the NAC CESU, etc. There is a lot of paperwork involved in running the CESU, especially when it comes to adding new partners. It would be worthwhile to simplify this process if possible.

Federal Agency Response Only:

8) *What percentage of projects were conducted successfully (e.g., project tasks completed, products/outputs accepted by the sponsoring agency)? What percentage of projects were unsuccessful (e.g., project tasks incomplete, products/outputs not accepted by the sponsoring agency)? Provide details (e.g., what factors influenced/contributed to project success or failure)?*

Prior to preparation of this five-year assessment report, all participating federal agencies were contacted and asked this question. Project managers for NPS-funded projects that started or ended between FY19 and FY23 were asked about successes, failures, and contributing factors. None of the responses noted any unsuccessful projects, concluding that NPS has a 100% project success rate. Factors that respondents noted as contributing to project success include: 1) the ability to develop long-term partnerships that allow new projects to build from previous successful projects (e.g., P18AC01352 built on a previous project, P14AC01111), 2) interdisciplinary teams that are able to leverage other work to provide site-specific information needed by resource managers (e.g., vulnerability assessments and interpretive components produced for three parks through P18AC01406 and P19AC00971), and 3) projects that are true partnerships (close communication and collaboration) between NPS and the cooperator and that incorporate interdisciplinary teams (e.g., the park faunal community assessment at Minute Man NHP, P23AC00064).

The only agency that reported unsuccessful projects was the USDA NRCS, which reported that 10% of

the projects were unsuccessful. A major challenge was the COVID19 pandemic, which had a significant impact on the projects funded during the first half of the self-assessment period. Furthermore, instances of communication breakdowns between the funding agency and recipient impeded some project success.

Self-Assessment Category B: Host University Responsibilities

1. *Did the host university…Allow and encourage its faculty to engage in participating federal agency sponsored research, technical assistance and education activities related to the CESU objectives? Provide details, including description of faculty engagement and two highlighted/example projects.*

URI administration (Provost's Office, Deans, Department Chairs, Coastal Institute Director) and faculty have been supportive of this very productive 25-year cooperative relationship. Research accomplishments include publications, opportunities for student funding and experiential learning, the federal duty stationed employees' commitment to teaching, and mentoring, and university service. URI has implemented 29 NAC CESU awards in the FY19-FY23 timeframe, and they have all involved URI faculty members. Several URI colleges, academic departments, centers, and institutes have been involved in NAC CESU projects and activities over the assessment period reflecting the breadth of disciplines that are addressed by the host university (Department of Natural Resources Science, Department of Marine Affairs, Department of History, Graduate School of Oceanography, and Coastal Institute). Two examples of projects that have involved URI faculty members are: 1) The Habitat Restoration and Enhancement for Roseate and Common Terns on Great Gull (PI Peter Paton, Department of Natural Resources Science) funded by DOI/US Fish and Wildlife Service and 2) Conducting a vulnerability assessment at George Washington Birthplace National Monument and identifying options to increase resilience at multiple parks (PI Glenn Ricci, Coastal Resources Center, URI Graduate School of Oceanography) funded by the National Parks Service.

Two examples of projects implemented by the broader NAC CESU during the self-assessment period (2019-2024) are:

Assessing Nor'easter vulnerability for three New England parks (NPS Task agreement P18AC01406 with the University of Rhode Island, PI I. Ginis, in collaboration with the Schoodic Institute at Acadia National Park). This project worked with Acadia National Park, National Parks of Boston, and Cape Cod National Seashore to explore and develop interpretive products to enhance public understanding of storm surge and coastal flooding and how communities can prepare for and adapt to changing conditions. Products, including articles, videos, and web content, and have informed formal and informal education and citizen science programs. Although the research portion of the project experienced significant delays due to the COVID-19 pandemic, the team adjusted methods and timelines to keep parks engaged. The team produced a video about Nor'easters, the research project, and how NPS is responding. The team also created web content and began engaging students and the public in monitoring King Tides and storms, and initiated development and implementation of a regional strategy to improve coastal climate communication to park visitors and local communities across the Northeastern U.S. This successful partnership is continuing with the research PIs and funding from the NOAA Effects of Sea Level Rise program.

Curating Boston African American National Historic Site Archeology Collections: Practical guidance on implementing preservation standards and strategies (2018-2023) (NPS Task Agreement P18AC00972, PI D. Landon, UMass Boston). This project cataloged over 17,000 artifacts from the Boston African American National Historic Site excavations. Cataloging was conducted in a manner compatible with the

Box 2. *Team for P18AC00972 poses near an*

Omeka database used by their ultimate repository, the Boston City Archaeology Lab. The team ensured proper preservation of the artifacts according to National Park Service standards and facilitated easier access to the collections by researchers and by park staff. The innovative partnership focused on providing a hands-on, project-based learning opportunity for participants who had limited exposure to archeological collections management. It was specifically useful for those with no formal collections management training, who were nearing graduation and about to enter the professional world of archeology and considering a career focused on managing and/or caring for archeological collections. The main teaching and learning goals were to:

- Provide participants with an overview of preventive conservation; collections management policies and procedures; and the tasks associated with managing archeological collections.
- Teach participants about their roles and responsibilities as they relate to archeological collections, to ensure that curation is effectively considered at each stage of the archeological process.
- Offer solutions and resources that participants can refer to as they encounter collections management scenarios.

2. *Provide basic administrative and clerical support over the current five-year term (i.e., in support of CESU* operations)? Provide details (e.g., nature and level of support).

a. *How much did it cost the host institution to support the CESU over the current five-year term? Provide details (e.g., CESU-specific costs, Director and/or staff time, % FTE, travel, facilities, administrative services, equipment, supplies, communications, printing, web hosting*).

In-kind support provided by the URI Coastal Institute, the home of the NAC CESU Director, totaled $257,030 over the course of the assessment period. This covered CI Director time to run the NAC CESU and engage with the National CESU Network, Administrative Coordinator time, graduate student support, and consultants. The URI NAC CESU Directors (Swift and Torell) have served on several National CESU committees:

- Participation in the Ad Hoc Committee to promote student engagement in all CESU projects. Judith Swift wrote a guiding document provided to Tom Fish, National CESU Network Director.
- Judith Swift participated in the DEI Committee, focused on active engagement of BIPOC and LGBTQ+ engagement in CESU projects.
- Judith Swift was appointed to CESU National Council of Federal Partners.
- Judith Swift participated in the Planning Committee for Annual CESU Network Meeting 2022
- Elin Torell participated in a committee to prepare a proposal for sustainable CESU host university support.
- Elin Torell is currently collaborating with fellow CESU Directors to plan a lecture series to celebrate the CESU 25th anniversary.

URI engaged Charles Roman (previous NPS Research Coordinator) to support the outgoing Coastal Institute Director with CESU matters during the transition to the new CI and NAC-CESU Director. URI also provided staff time for website development and general research coordination and administration. In addition, the university provides office space for NPS staff. Facilities for meetings, workshops, conferences, and symposia are provided at no cost.

Surveyed federal partners stated that considering the limited funding provided by federal agencies to support the CESU, the staff at the University of Rhode Island do an excellent job as the North Atlantic

Coast CESU host. This is further evidenced by Judith Swift, the former NAC CESU Director, winning the National CESU Excellence Award in 2022. The CESU National Network Office awards individuals and CESU programs for outstanding contributions to the CESU Network on an annual basis. With additional support from agencies, it would be possible to do more, particularly in the areas of communications (including highlighting successful projects), providing internships and opportunities with federal agencies, promoting multi-partner projects and collaborations, and supporting diversity, equity, and inclusion (e.g. through internships for members of under-represented populations and encouraging membership for tribes and minority-serving institutions).

b. Where is the CESU Director's office officially stationed within the host institution (e.g., Office of the President, School of Natural Resources, Department of Forest Resources)? Provide details (e.g., location relative to other departments, schools, greater organization), as appropriate.

The NAC CESU is hosted by the URI Coastal Institute. The Director of the Coastal Institute serves as Director of the NAC CESU and reports to the Vice President for Research and Economic Development. The Coastal Institute is the ideal home for the NAC CESU as it integrates across all the University's academic colleges, departments and programs that are relevant to NAC CESU research, technical assistance, and education endeavors. The Coastal Institute Director corresponds frequently with Deans and faculty associated with the College of Environment and Life Sciences, College of Arts and Sciences, College of Pharmacy, College of Engineering, and Graduate School of Oceanography.

3. Provide access for CESU federal agency personnel (e.g., CESU Research Coordinator) to campus facilities, including library, laboratories, and computer facilities? Provide details and examples.

All NPS staff members that are resident at URI have complete access to the university library system (including on-line search capabilities), computer facilities (e.g., internet, large-format printers, data storage, IT services) and other routine privileges in accordance with the same policies that are followed by university faculty and staff. NPS resident scientists do not have laboratories dedicated exclusively to their research needs; however, all research projects are conducted collaboratively with university faculty and laboratory needs are shared with the collaborating faculty.

4. Provide suitable office space, furniture and laboratory space, utilities, computer network access and basic telephone service for CESU federal agency personnel (e.g., CESU Research Coordinator) to be located at the Host University? Provide details (e.g., challenges, successful approaches, examples).

All senior level NPS personnel resident at URI have offices and support services (e.g., telephone, internet), following the same standards provided to university faculty and senior staff. Temporary office space is also available for federal employees and/or colleagues that visit the NAC CESU for several days, or longer. The NPS Research Coordinator's office is located next door to the Coastal Institute's main office on the Narragansett Bay Campus. This facilitates frequent communication and collaboration. The Coastal Institute and NAC CESU Research Coordinator also share an office on the URI Main Campus. This office is adjacent to the offices of other NPS staff duty-stationed at URI.

The Coastal Institute supported the renewal of a formal General Agreement between the University of Rhode Island and the National Park Service. The General Agreement defines the terms of the mutually beneficial relationship and secures NPS-duty stationed researchers usage of URI office space and access to URI systems. The CI also coordinates with URI duty-stationed staff to periodically produce and distribute partnership reports that capture the contributions of NPS researchers to the URI academic community and highlight the mutually beneficial relationship between the two agencies.

5. *Offer educational and training opportunities to participating federal agency employees, as appropriate? Provide details (e.g., number of trainings, number of people, course dates, course descriptions).*

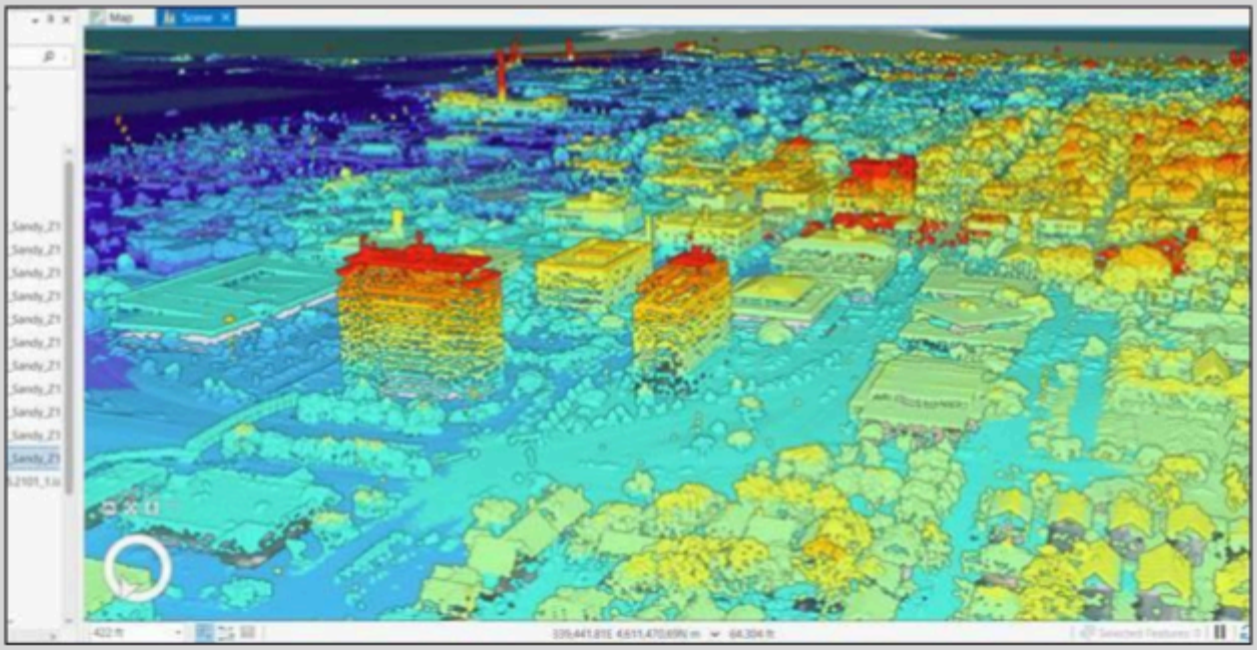
Federal agency employees have participated in numerous education and training opportunities offered by URI during the assessment period. Activities include but are not limited to:

- Engagement in the SSEER Workshop (Scientific Support for Environmental Emergency Response) organized by the Coastal Institute and the RI DEM Office of Emergency Response (annually, spring)
- URI Coastal Institute Senior Fellows Field Trips and Networking Events (twice annually, summer, winter)
- Dozens of seminars or webinars annually, including the Coastal Institute Nixon Lecture, Shoreline Change SAMP, Metcalf Annual Public Lecture Series, GSO Oceanography Seminars, DEI Seminars
- NRS 402 Quantitative Wildlife Ecology (spring 2019)
- Participation in the Inclusive SciComm Symposium, hosted by the URI Metcalf Institute (9/27-28/2019)
- Serve on committees, including the Honors Colloquium for the Sustaining Our Shores (2022)
- Seminar: Emergence of PFAS as an Environmental Toxicant (9/8/2023)

Box 3. *Greg Bonynge, URI Environmental Data Center and SSEER Lead, facilitating a tabletop drill in spring 2023.*

As an NPS partner, the URI Environmental Data Center (EDC) has routine participation in national NPS GIS committees, initiatives, and meetings on behalf of IR1 GIS, reporting back on both technical and policy issues in regular communication with the regional GIS staff and partners. This includes:

- Develop presentations to educate URI teams.
- Meet with partners to discuss current states of GIS availability at national parks and near national monuments.
- Participation on the USGS Coastal Storm Team (daily, leading up to and immediately after a hurricane or major storm event) and attend the annual ESRI International User Conference.



Box 4. *The Geospatial Repository and Data Management (GRiD) System was developed in partnership between U.S. Army Corps of Engineers (USACE) Cold Regions Research and Engineering Laboratory (CRREL) and the National Geospatial Intelligence Agency (NGA) to serve as the National System for Geospatial-Intelligence (NSG)'s enterprise level database for geospatial data. GRID is designed to store, process, visualize, and disseminate a variety of geospatial datasets, such as 3D point-cloud data (e.g., Light Detection and Ranging (LIDAR)) and associated geospatial products, as well as Elevation Models (i.e., Digital Terrain Models (DTMs), Digital Surface Models (DSMs)). Much of this secure system is available for use by NPS. Above: Example point-cloud downloaded from the GRID system for an area in proximity to the New Bedford Whaling Museum, Massachusetts.*

6. *Coordinate activities, as appropriate, with the CESU federal, tribal, and nonfederal partners and develop administrative policies for such coordination? Provide details.*

a. *Was a CESU Managers Committee maintained and convened, at least annually? Please provide details (e.g., meeting dates, meeting agendas, number/affiliation of participants, meeting minutes).*

The NAC CESU has <u>not</u> maintained and convened a stand-alone CESU Managers Committee. Federal technical representatives were invited to the annual partners meeting, although participation was low. The NAC CESU team also kept in touch with federal technical representatives via email. They were also surveyed as part of the self-assessment.

b. *Were periodic meetings of the CESU partners convened, at least annually, for the purpose of collaboration and coordination of CESU activities? Provide details (e.g., meeting dates, meeting agendas, level of participation, affiliation of participants, meeting minutes).*

Two annual meetings have been held during the self-assessment period (March 30, 2022, and February 8, 2023) and one is planned for March 2024. Due to COVID-19, no meetings were held in 2019, 2020, and 2021. The 2023 meeting was attended by 17 individuals, representing 12 non-federal partners and one federal partner (NPS). The 2022 and 2023 meetings were held virtually. The reason for holding the meetings virtually was to maximize participation of NAC CESU partners, which do not have funding set

aside to travel to attend such meetings. The annual meetings included participant introductions, updates from the National Parks Service (made by the Research Coordinator and Tom Fish), topics of interest (e.g. an experts database presentation), federal funding outlooks, communications protocols, and facilitated discussions about how to improve the management of the NAC CESU. As per feedback from the NAC CESU partners, the 2024 meeting will also be virtual. In addition to the annual meeting, there was an active communication between partners via email and ad hoc virtual meetings. The NAC CESU projects and expert databases are being populated and the website is continuously updated with news and funding opportunities.

c. *What efforts were made to communicate each tribal and nonfederal partner institution's strengths and expertise to the federal partners (e.g., listing investigators on the CESU web site, expertise database, meetings)? Provide details (e.g., challenges, successful approaches).*

The NAC CESU website provides information about each tribal and nonfederal partner (https://naccesu.uri.edu/). The website provides a short blurb about each partner as well as contact information for the technical and administrative representatives. Each representative has been advised that, upon request, one of their responsibilities is to provide the names of appropriate investigators for specific agency project needs. The NAC CESU has developed an experts database that is meant to make it easier for federal and non-federal partners to find collaborators (https://naccesu.uri.edu/experts-database/). One challenge has been to get non-federal partner PIs to populate the experts database and provide information for the projects database. Updates are also provided to federal partners during the annual CESU partner meeting as well as the annual CESU directors meeting.

d. *How were federal funding announcements and/or other opportunities communicated to partners across the CESU? Provide details (e.g., challenges, successful approaches).*

Agency funding announcements are sent by the federal agencies to the NAC CESU Director. The Director promptly emails the funding announcement to the technical representative from each non-federal partner for distribution to their respective institution. The representatives have been advised that this is among the most important of their responsibilities. The NAC CESU Director and the NPS Research Coordinator also conduct weekly scans of Grants.gov to identify CESU opportunities that should be communicated to the non-federal and tribal partners. All funding announcements are prominently posted on the NAC CESU website.

Self-Assessment Category C: Participation of all Partners

1. *What efforts did the host university, tribal, nonfederal, and federal partners undertake to engage students in projects and other activities of the CESU? Provide details (e.g., challenges, best practices, statistics for graduate and undergraduate student involvement, example projects).*

Student education is a cornerstone of the CESU Network. Through collaboration with university faculty, agency scientists, and agency project managers, many students have acquired hands-on experiences that will support their career ambitions. A survey sent to all non-federal partners as part of the self-assessment found that all non-federal partners with CESU funded projects have involved students. Brown University reported that they have implemented a project focused on providing housing and support for graduate and undergraduate students. The funding allowed the students to participate in NSF funded projects that they would not otherwise have had the ability to join. The State University of New York College of Environmental Science and Forestry reported that students work on all CESU projects and that all graduate students working on CESU projects are using the data and project for their thesis/dissertation research. Some undergraduate students are using the research for honors theses and others to obtain

degree- and career-related training and experience in environmental science. CESU projects provided excellent opportunities for students to work off-campus with a sponsor. The NPS staff duty stationed at URI mentored and provided opportunities for many students over the assessment period. See Appendix 3 for details. There were no reported challenges in engaging students in projects.

> *Student involvement is the norm in CESU projects, as it is in most grants of similar or larger magnitude. Our researchers report no unique issues in facilitating student involvement within the CESU relationship.* - University of Maine Technical Representative

2. *Did all partners actively participate in CESU activities (e.g., meetings, phone calls, signing amendments, strategic planning, reporting)? Provide details (e.g., if not, why not? Participation statistics, challenges to participation, successful approaches, best practices).*

Partners have been responsive, for the most part, to routine NAC CESU communications (e.g., request for amendment signatures and requests to endorse new partner applications). The non-federal partners reported that they have participated in the annual meeting, signing amendments, and responding to polls related to new member acceptance. The self-assessment survey indicated that URI has done a good job communicating funding opportunities and making the non-federal partners feel welcome.

> *Communication and guidance have been top notch with partners.* - Bates College

> *URI has been great about making activities accessible and welcoming. Thank you.* - Woods Hole Oceanographic Institution

Feedback related to what NAC CESU could do to improve partner participation included providing opportunities to present relevant work to federal partners and contacting additional potential agency partners.

> *I participated in one virtual meeting. Receiving information about funding opportunities is useful. Increasing MBL's participation is probably more about what additional effort I could make rather than things that NAC CESU could do differently*. - Marine Biological Laboratory

Moving forward, it would be great to increase the participation of non-federal partners. It is possible that some partners are unaware how CESU works and the responsibilities that partners assume when they join the network. The responsibilities are reasonable, but some partners may not be willing to commit the necessary time (e.g., participate in CESU meetings, share agency requests for proposals throughout the institution, provide project highlights and pictures for the website, periodically populate the NAC CESU project database with products, engage students, others). These responsibilities will be communicated to each partner via the website, email, and Managers Committee meetings.

3. *What percentage of partners received funding through the CESU over the current five-year term? Provide details (e.g., partner funding statistics, notable barriers, successful approaches).*

More than half of the non-federal partners (55% or 21 out of 38) received funding through the NAC CESU during the assessment period (Table 3). It is noted that several institutions have received no funding administered through the NAC CESU since their membership in the program began. All non-federal and tribal partners receive the agency funding opportunity announcements, and perhaps some of these institutions have responded to funding announcements but have not been selected for support by the agency. The host university has and will continue to emphasize to each partner's technical representative the value of notifying investigators within their institutions of NAC CESU funding opportunity announcements.

Table 3. NAC CESU federal agency funding awarded to partners during the FY19-FY23 assessment period.[1]

Non-Federal Partner	Agency	Number of Awards	Funds Received
American Turtle Observatory			
Bates College			
Biodiversity Research Institute	DOD NPS	8 1	$945,080.00 $45,000.00
Boston University			
Brown University	NPS	3	$255,043.00
Bryn Mawr College			
City University of New York	NPS	2	$120,424.33
College of the Atlantic			
Columbia University	USGS	1	$91,482.00
Cornell University	NPS NRCS	7 1	$847,012.34 $141,544.00
Harvard University			
Mansfield University			
Manhattan College			
Marine Biological Laboratory			
Maryland Coastal Bays Program			
New Jersey Audubon			
Natural Areas Association			
Northeastern University	NPS USACOE USGS	1 1 1	$58,750.00 $240,000.00 $105,892.00
Provincetown Center for Coastal Studies	NPS	9	$1,430,501.00
Rutgers University	NPS USGS USFWS USACOE	12 3 1 1	$1,434,183.03 $853,189.00 $118,066.00 $248,143.00
Schoodic Institute	NPS	6	$1,126,842.41

[1] Project details (title, partner, start/end dates, amount) are provided in Appendix 1. Key to agencies; DOD (Department of Defense), NPS (National Park Service), USACOE (US Army Corps of Engineers), USGS (US Geological Survey), NRCS (Natural Resources Conservation Service).

Non-Federal Partner	Agency	Number of Awards	Funds Received
SUNY-School of Environmental Science and Forestry	DOD NPS USACOE	1 23 1	$84,273.00 $2,307,485.43 $25,000.00
Stevens Institute of Technology	USGS	1	$208,518.00
Stockton University			
Stony Brook University	NPS	3	$258,337.00
University of Connecticut	USGS NRCS	2 2	$79,999.00 $862,425.00
University of Maine	NPS USGS DOD USFWS NRCS	7 3 3 4 4	$330,530.22 $507,747.00 $220,890.00 $185,794.00 $1,661,508.00
University of Maryland Center for Environmental Science			
University of Maryland Eastern Shore	NPS NRCS	2 1	$69,256.00 $499,995.00
University of Massachusetts at Amherst	NPS USGS USFWS NRCS	5 3 1 1	$393,121.10 $350,448.04 $185,516.00 $289,565.49
University of Massachusetts at Boston	NPS	7	$997,259.99
University of New England			
University of Rhode Island	NPS USGS USFWS NOAA NRCS	14 3 3 3 6	$2,224,136.52 $429,746.26 $143,345.87 $3,423,935.52 $2,555,724.00
Vermont Center for Ecostudies			
Virginia Aquarium and Marine Science Center Foundation, Inc.			
Woods Hole Oceanographic Institution	USGS	1	$200,000.00
Wildlife Management Institute	USFWS	2	$145,000.00
Yale University	USGS	1	$54,979.00
Tribal Partner			

Non-Federal Partner	Agency	Number of Awards	Funds Received
Narragansett Indian Tribal Historic Preservation Office			
Total		**165**	**$26,755,687.55**

4. *What efforts were made to encourage and broaden participation in the CESU by all partners (e.g., HBCUs, tribal colleges, small academic institutions, state, and local government agencies)? Provide details (e.g., participation statistics, challenges to participation, successful and/or novel approaches).*

The NAC CESU host and partners do not have the funding or bandwidth to engage in activities to broaden participation in the CESU. New partners are recruited based on interest from the partners rather than the NAC CESU host scanning and contacting potential new partners. However, the NAC CESU has increased the diversity of partners during the assessment period. At the time of writing the assessment report, NAC CESU is in communication with the Mashpee Wampanoag Tribe about joining the CESU. The NAC CESU already includes the Narragansett Tribe as well as two MSIs: University of Maryland Eastern Shore and UMass-Boston. Non-federal partners that are not MSIs reported that they strive to broaden participation by disseminating funding opportunities to faculty and students directly and via social media.

5. *What is the date of the most current version of the CESU's strategic plan? How well do the activities of the CESU reflect the priorities and objectives outlined in the plan? Provide details (e.g., challenges, best practices, example projects).*

The NAC CESU latest strategic plan covers the time period 2019-2024. The plan defines what constitutes a NAC CESU activity, identifies general research and technical assistance themes, and highlights the education role (student education and collaborative education opportunities for federal scientists and managers) and avenues to facilitate information exchange and outreach. Although the NAC CESU has grown substantially since the latest version of the Strategic Vision, the research, technical assistance, and education objectives for the NAC CESU seem relevant to- day. Only minor modifications would be required of a revised Vision Statement.

6. *Did the participating federal agencies, host university, tribal, and nonfederal partners develop and follow annual work plans to guide the activities of the CESU? Provide details (e.g., challenges, successful approaches, example projects).*

The NAC CESU does not develop annual work plans. Most of the research, technical assistance and student support activities are dictated by availability of federal funds, with federal priorities for projects determined by the agencies. However, there is input from the non-federal NAC CESU investigators through close collaboration on projects with federal scientists and managers and through this interaction there are often discussions on next steps to pursue toward addressing a particular issue. As well, many of the project final reports submitted to federal agencies contain a section on future research needs. These collaborations are often the genesis of new funding opportunities.

7. *Have partners successfully obtained the tribal, federal, state, or local government permits and/or permissions from private landowners necessary to execute projects under the CESU agreement over the current five-year term? Provide details (e.g., challenges, successful approaches, examples).*

Study proposals or work plans, approved by the supporting federal agency, are required prior to the obligation of funds to the non-federal partner. It is assumed that the non-federal and federal agency review and approval processes will ensure that necessary permits and/or permissions have been obtained. The NAC CESU Director's office has not been informed of any problems regarding this issue. It is noted that researchers are made aware that the NPS requires all CESU-supported project investigators to obtain a research permit through the "Research Permit and Reporting System" (https://irma.nps.gov/ rprs/). Other agencies may have similar requirements.

8. *What instances exist where projects, programs, or partners have derived benefit as a result of the established CESU relationship, independent of federal awards administered through the CESU (i.e., where simply being a partner in the CESU aided furtherance of other efforts; without/outside direct funding through a CESU project award)? Provide a brief description of any such examples.*

The NAC CESU partners reported that the CESU mechanism allows increased awareness of federal opportunities as well as the ability to build and strengthen relationships with the funding agencies. On a project level, the reduced overhead allows us to meet the required match in many cases more easily than we would otherwise have been able to. They also reported that it is informative to see the project solicitations and staying abreast of the various projects implemented through the NAC CESU. Positive results from CESU projects have generated other academic products and follow-on projects, including student master's theses.

Appendix 1: NAC CESU Funded Projects Actively Implemented During the Assessment Period

Table 4: NAC CESU Funded Projects FY19-23

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
National Park Service	Biodiversity Research Institute	Guilbert, J.	Conduct research, technical assistance, and education to protect bats in Acadia National Park, Maine	$45,000.00	2019	5/14/2019-3/31/2024
National Park Service	Brown University	Smith, K.	Enhance understanding of federal collections from National Park Service lands in northwest Alaska	$232,013.00	2021	9/21/2021-12/31/2023
National Park Service	Brown University	Kartzinel, T.	Training youth to evaluate dietary overlap of large herbivores using DNA barcoding	$11,280.00	2022	5/1/2022-1/31/2023
National Park Service	Brown University	Kartzinel, T.	Training youth to evaluate dietary overlap of large herbivores using DNA barcoding	$11,750.00	2023	5/1/2023-1/31/2024
National Park Service	Center for Coastal Studies	Borrelli, M.	Collaborative planning and implementation support for Cape Cod National Seashore priorities	$65,994.00	2015	8/12/2015-7/31/2020
National Park Service	Center for Coastal Studies	Borrelli, M.	Coastal ecosystem evolution along Cape Cod National Seashore from Long Point to Race Point: Multi-tiered, science-based management of natural resources and infrastructure	$340,223.00	2016	8/25/2016-8/31/2021
National Park Service	Center for Coastal Studies	Costa, A.	Water quality analysis of Cape Cod National Seashore estuarine and freshwater samples	$106,790.00	2017	7/17/2017-12/31/2022
National Park Service	Center for Coastal Studies	Nichols, O.	Assessing the benthic community in a partially restored lagoon to improve management decision-making	$105,571.00	2017	9/11/2017-9/30/2023
National Park Service	Center for Coastal Studies	Legare, B.	Develop science-based management practices for white shark behavior at Cape Cod National Seashore	$389,656.00	2021	6/25/2021-12/31/2025
National Park Service	Center for Coastal Studies	Macort, C.	Develop marine debris display and outreach at Cape Cod National Seashore	$21,000.00	2022	7/6/2022-9/30/2023
National Park Service	Center for Coastal Studies	Macort, C.	Cape Cod National Seashore estuarine and freshwater water quality analysis	$70,040.00	2022	8/27/2022-8/31/2024
National Park Service	Center for Coastal Studies	Castagno, K.	Coastal ecosystem evolution along Cape Cod National Seashore at Duck Harbor and the Herring River	$230,002.00	2023	3/7/2023-12/31/2027
National Park Service	Center for Coastal Studies	Borrelli, M.	Predicting coastal erosion hotspots for natural resource protection and secure visitor access	$101,225.00	2023	4/21/2023-9/30/2027

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
National Park Service	City University of New York	Shanley, D.	Expand internship program and research-based education and teacher professional development program	$48,215.00	2014	9/22/2014-12/31/2018
National Park Service	City University of New York	Branco, B.	Engage youth in climate resilience education and employment	$72,209.33	2021	8/6/2021-9/30/2022
National Park Service	Cornell University	Rice, A.	Passive acoustic monitoring for fish population restoration and climate mitigation	$241,000.00	2016	9/1/2016-9/30/2020
National Park Service	Cornell University	Bassuk, N.	Condition assessment of and development of best management practices for the National Mall's elm tree panels	$69,786.00	2017	5/25/2017-6/30/2019
National Park Service	Cornell University	Manning, S.	Geophysical survey of fossil trackways and lake formations	$30,122.00	2017	6/6/2017-10/31/2019
National Park Service	Cornell University	Manning, S.	Geophysical survey of cultural and natural resources at White Sands	$110,438.00	2020	8/25/2022-4/30/2027
National Park Service	Cornell University	Manning, S.	Alaska Geophysical Survey and Training for Identifying Sub-Surface Resources	$214,473.34	2022	8/25/2022-4/30/2027
National Park Service	Cornell University	Tomlan, M.	Communicating downscaled climate projection evaluations	$121,208.00	2023	6/21/2023-11/30/2025
National Park Service	Cornell University	Ashdown, C.	Geophysical Data Processing, Development and Cultural Resources Support	$59,985.00	2023	8/10/2023-9/30/2027
National Park Service	Northeastern University	Cain, V.	Documentation of Longfellow House at Washington's Headquarters National Historic Site	$58,750.00	2016	9/14/2016-12/31/2018
National Park Service	Rutgers, The State University of New Jersey	Psuty, N.	Reporting, monitoring and development of the three-dimensional protocol for landform evolution, Gateway National Recreation Area	$115,055.00	2016	7/15/2016-1/31/2019
National Park Service	Rutgers, The State University of New Jersey	Slater, L.	Geophysical and archeological survey at Fort Hill, Morristown National Historical Park	$76,536.00	2016	9/20/2016-7/31/2019
National Park Service	Rutgers, The State University of New Jersey	Winfree, R.	Forest bee and plant network assessment at Great Lakes Network parks	$98,992.00	2017	9/14/2017-9/30/2021

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
National Park Service	Rutgers, The State University of New Jersey	Psuty, N.	Evaluation of dune and beach restoration and resilience at selected sites in the Mid-Atlantic Region	$650,296.00	2017	9/21/2017-9/30/2022
National Park Service	Rutgers, The State University of New Jersey	Maslo, B.	Monitoring and management of white-nose syndrome affected bats	$54,206.00	2018	7/24/2018-7/31/2020
National Park Service	Rutgers, The State University of New Jersey	Handel, S.	Assessment of vegetation condition in long-term deer exclosures	$30,000.00	2018	7/30/2018-1/31/2020
National Park Service	Rutgers, The State University of New Jersey	Psuty, N.	Coastal geomorphological monitoring and change analysis: Application of the monitoring protocols at Gateway National Recreation Area; trend reports at Assateague Island, Gateway, and Fire Island; and evaluation of impacts at Gateway	$167,431.00	2019	8/12/2019-2/28/2023
National Park Service	Rutgers, The State University of New Jersey	Maslo, B.	Habitat use and foraging of white-nose syndrome affected bats in Morristown National Historical Park	$42,500.00	2020	5/1/2020-12/30/2022
National Park Service	Rutgers, The State University of New Jersey	Psuty, N.	Off-road vehicle regulations to support resilience of the foredune-beach system	$31,724.00	2020	8/18/2020-9/30/2021
National Park Service	Rutgers, The State University of New Jersey	Handel, S.	Trajectory of vegetation structure under contrasting stressors over a 26-year period	$29,993.92	2021	3/22/2021-12/31/2022
National Park Service	Rutgers, The State University of New Jersey	Handel, S.	Resurvey vegetation plots in large exclosure to provide findings concerning deer herbivory and invasive plant spread	$25,000.00	2021	7/26/2021-6/30/2023
National Park Service	Rutgers, The State University of New Jersey	Winfree, R.	Inventory of Pollinator Species at Minute Man National Historic Site (MIMA) and Boston Harbor Islands (BOHA)	$112,449.11	2023	7/27/2023-3/30/2026
National Park Service	Schoodic Institute	Fisichelli, N.	Assessing the factors affecting the condition of vegetation in eastern National Park Service parks	$535,976.75	2018	9/4/2018-9/3/2023

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
National Park Service	Schoodic Institute	Fisichelli, N.	Provide technical assistance for invasive species assessment to protect park resources and increase public awareness	$32,670.00	2018	9/5/2018-12/31/2019
National Park Service	Schoodic Institute	Fisichelli, N.	Forest condition and management in eastern United States National Park Service units	$211,024.89	2019	9/9/2019-6/30/2023
National Park Service	Schoodic Institute	Fisichelli, N.	Support interpretive component of nor'easters study for three New England parks	$14,847.51	2019	9/10/2019-3/31/2023
National Park Service	Schoodic Institute	Fisichelli, N.	Apply remote sensing methods to map tree species and tree health for species of management concern in Acadia National Park and Katahdin Woods and Waters National Monument	$61,930.00	2022	5/26/2022-3/31/2024
National Park Service	Schoodic Institute	Fisichelli, N.	Assessing the factors affecting the condition of vegetation in eastern National Park Service parks	$270,393.26	2023	8/4/2023-10/14/2025
National Park Service	State University of New York College of Environmental Science and Forestry (CESF)	Auwaerter, J.	Document, evaluate and prescribe treatment of cultural resources at Fredericksburg National Cemetery	$72,500.00	2016	8/1/2016-12/31/2019
National Park Service	State University of New York CESF	Auwaerter, J.	Document, evaluate and prescribe treatment of cultural resources at Wilderness Battlefield National Military Park	$60,000.00	2016	8/1/2016-12/31/2018
National Park Service	State University of New York CESF	Farrell, S.	Fall migration, swarming and hibernation ecology of northern long-eared bats at Cape Cod National Seashore, and implications for ameliorating impacts of white-nose syndrome	$199,569.00	2016	9/22/2016-9/30/2021
National Park Service	State University of New York CESF	Auwaerter, J.	Research, inventory, and evaluate cultural landscape of Blow-Me- Down Farm, Saint-Gaudens National Historic Site	$65,000.00	2017	6/12/2017-5/31/2019
National Park Service	State University of New York CESF	Auwaerter, J.	Assist with ongoing cultural landscape planning at Harriet Tubman National Historical Park	$87,000.00	2017	8/22/2017-9/30/2020
National Park Service	State University of New York CESF	Auwaerter, J.	Provide cultural landscape inventory and preservation technical assistance to National Park Service Northeast Region parks	$93,000.00	2017	9/21/2017-12/31/2019

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
National Park Service	State University of New York CESF	Hai, P.	United States Man and the Biosphere Program assistance	$23,522.65	2017	9/20/2017-7/30/2022
National Park Service	State University of New York CESF	Tierney, G.	Assessment of natural resource conditions for Martin Van Buren National Historic Site	$50,011.00	2017	9/21/2017-6/30/2020
National Park Service	State University of New York CESF	Auwaerter, J.	Landscape preservation planning for Saint-Gaudens National Historical Park	$134,260.87	2018	7/26/2018-12/31/2020
National Park Service	State University of New York CESF	Auwaerter, J.	Provide landscape preservation training and technical assistance	$97,505.60	2019	9/23/2019-9/30/2021
National Park Service	State University of New York CESF	Auwaerter, J.	Document the design and construction of the Flight 93 National Memorial landscape	$113,948.00	2019	9/23/2019-8/15/2022
National Park Service	State University of New York CESF	Auwaerter, J.	Develop landscape history and evaluation for Memorial Amphitheater Grounds, Arlington National Cemetery	$125,057.00	2019	9/23/2019-9/30/2022
National Park Service	State University of New York CESF	Tierney, G.	Climate change trends, impacts and vulnerabilities for Martin Van Buren National Historic Site	$21,860.00	2020	7/6/2020-9/30/2021
National Park Service	State University of New York CESF	Underwood, B.	Determine abundance and distribution of white-tailed deer	$149,904.00	2020	6/16/2020-6/1/2023
National Park Service	State University of New York CESF	Auwaerter, J.	Complete cultural landscape treatment and maintenance plan for the Flight 93 National Memorial landscape	$80,000.00	2020	8/27/2020-9/30/2023
National Park Service	State University of New York CESF	Auwaerter, J.	Develop landscape history and National Register evaluation for the Elizabeth Cady Stanton House	$85,000.00	2020	8/27/2020-9/30/2023
National Park Service	State University of New York CESF	Auwaerter, J.	Landscape preservation student training and technical assistance	$80,000.00	2020	8/27/2020-12/31/2022
National Park Service	State University of New York CESF	Auwaerter, J.	Develop landscape treatment recommendations for Memorial Amphitheater Grounds, Arlington National Cemetery	$77,745.00	2021	4/23/2021-6/30/2023
National Park Service	State University of New York CESF	Auwaerter, J.	Support National Park Service Interior Region 1 cultural landscape inventory, technical assistance, and training	$130,000.00	2021	5/11/2021-9/30/2023
National Park Service	State University of New York CESF	Auwaerter, J.	Cultural landscape report for the defense of Rose Ridge and Houck's Ridge (Area 11), Gettysburg National Military Park	$128,500.00	2022	8/31/2022-12/31/2024

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
National Park Service	State University of New York CESF	Auwaerter, J.	National Park Service Interior Region 1 technical cultural landscape preservation assistance and training	$108,000.00	2022	8/31/2022-9/30/2024
National Park Service	State University of New York CESF	Underwood, B.	Restore forest health by implementing best management practices in the National Park Service National Capital Region	$216,102.31	2023	6/20/2023-6/30/2028
National Park Service	State University of New York CESF	Auwaerter, J.	Women's Rights Hunt House research and Interior Region 1 technical assistance	$109,000.00	2023	8/28/2023-8/31/2025
National Park Service	Stony Brook University	Peterson, B.	Monitoring estuarine condition at Fire Island National Seashore and Gateway National Recreation Area	$136,375.00	2018	6/28/2018-6/30/2022
National Park Service	Stony Brook University	Flagg, C.	Continuation of post-Hurricane Sandy physical monitoring of the Old Inlet breach, Fire Island National Seashore	$9,635.00	2018	8/13/2018-4/30/2020
National Park Service	Stony Brook University	Peterson, B.	Monitoring estuarine condition at Fire Island National Seashore and Gateway National Recreation Area	$112,327.00	2022	5/4/2022-6/30/2024
National Park Service	University of Maine	Nelson, P.	Mapping lichen cover and biomass in the western caribou arctic herd home range	$31,119.16	2015	9/9/15-9/30/2019
National Park Service	University of Maine	Nelson, S.	Great Lakes Network dragonfly project	$30,000.00	2016	9/2/2016-12/31/2021
National Park Service	University of Maine	Barton, A.	Assessment of temporal changes in forest conditions in the Chisos Mountains of Big Bend National Park	$40,883.00	2018	6/18/2018-12/31/2020
National Park Service	University of Maine	Blomberg, E.	Conserving white-nose syndrome affected bat populations in Acadia National Park: The case for continued studies, monitoring, information sharing, and proactive mitigation	$44,912.00	2018	8/6/2018-12/31/2021
National Park Service	University of Maine	Klemmer, A.	Environmental correlates of rocky intertidal community structure	$120,348.00	2020	5/6/2020-11/30/2023
National Park Service	University of Maine	Hayes, D.	Map and image the Acadia National Park intertidal zone during low tide	$40,000.00	2020	8/3/2020-12/31/2023
National Park Service	University of Maine	Carver, D.	Oral history of the Katahdin Region	$23,268.06	2020	8/28/2020-1/1/2022
National Park Service	University of Maryland Eastern Shore	Pitula, J.	Assateague Island student internship	$37,014.00	2014	8/14/2014-8/14/2019

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
National Park Service	University of Maryland Eastern Shore	Stevens, B.	Assess the feasibility of oyster restoration at Assateague Island National Seashore	$32,242.00	2018	9/20/2018-2/28/2021
National Park Service	University of Massachusetts Amherst	Mabee, S.	Evaluate potential National Natural Landmarks	$27,000.21	2014	8/14/2014-9/30/2019
National Park Service	University of Massachusetts Amherst	Hill, M.	Ethnographic overview and assessment for Mount Rushmore National Memorial, South Dakota	$192,121.00	2015	8/10/2015-6/30/2019
National Park Service	University of Massachusetts Amherst	Brabec, E.	Ethnographic overview and assessment for Fort Stanwix National Monument	$75,000.00	2015	9/21/2015-12/31/2018
National Park Service	University of Massachusetts Amherst	Jordaan, A.	Buck Island Reef National Monument acoustic array collaboration	$45,000.00	2016	8/1/2016- 12/31/2020
National Park Service	University of Massachusetts Amherst	Glassberg, D.	Produce special history on the Outdoor Recreation Resources Review Committee	$53,999.89	2018	9/18/2018-6/30/2023
National Park Service	University of Massachusetts Boston	Mrozowski, S.	Inventory and monitor endangered archeological sites at Great Island and Great Beach Hill, Cape Cod National Seashore, Wellfleet, Massachusetts	$79,988.00	2017	8/25/2017-9/30/2020
National Park Service	University of Massachusetts Boston	Hannigan, R.	Internships to enhance diversity among natural resource professionals	$66,434.99	2018	9/18/2018-9/18/2023
National Park Service	University of Massachusetts Boston	Landon, D.	Curating Boston African American National Historic Site archeology collections: Practical guidance on implementing preservation standards and strategies	$312,855.00	2018	9/4/2018-9/3/2023
National Park Service	University of Massachusetts Boston	Woods, C.	Ethnographic overview and assessment for Werowocomoco	$103,400.00	2019	9/13/2019-12/31/2023
National Park Service	University of Massachusetts Boston	Woods, C.	Ethnographic overview and assessment of the Blackstone River Valley	$182,225.00	2020	8/27/2020-6/30/2025

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
National Park Service	University of Massachusetts Boston	Stevenson, R.	Assess Condition of Faunal Communities at Newly Acquired Barrett's Farm Unit	$30,000.00	2023	11/23/2022-5/30/2024
National Park Service	University of Massachusetts Boston	Landon, D.	Catalog and curate archaeological collections for Interior Region 1 parks	$222,357.00	2023	3/28/2023-3/31/2024
National Park Service	University of Rhode Island	Wang, Y.	Resource based geospatial and enterprise GIS support to the Northeast Region of the National Park Service	$581,977.00	2015	9/1/2015-9/30/2020
National Park Service	University of Rhode Island	Menezes, S.	Northeast Coastal and Barrier Network science communication	$110,487.00	2016	8/9/2016-9/30/2018
National Park Service	University of Rhode Island	August, P.	Development of a web-based system to geoenable Northeast Region parks and programs	$35,000.00	2017	9/15/2017-9/30/2018
National Park Service	University of Rhode Island	Ricci, G.	Conducting a vulnerability assessment at George Washington Birthplace National Monument and identifying options to increase resilience at multiple parks	$144,674.00	2018	9/20/2018-12/30/2022
National Park Service	University of Rhode Island	Ginis, I.	Assessing nor'easter vulnerability for three New England parks	$268,246.19	2018	9/26/2018-3/31/2023
National Park Service	University of Rhode Island	Karraker, N.	Identifying activity periods of an endangered salamander to facilitate fuels treatments	$116,358.22	2019	7/15/2019-12/31/2022
National Park Service	University of Rhode Island	King, J.	Regional scale benthic habitat mapping at Northeast Region coastal parks using the Coastal and Marine Ecological Classification Standard (CMECS)	$75,000.00	2019	8/13/2019-3/1/2022
National Park Service	University of Rhode Island	King, J.	Benthic habitat characterization and mapping	$109,999.00	2020	7/16/2020-12/31/2022
National Park Service	University of Rhode Island	Wang, Y.	Integrating geospatial capacity with management and operations in National Park Service Interior Region 1	$452,320.00	2020	8/11/2020-10/31/2024
National Park Service	University of Rhode Island	Swift, J.	Cooperative Ecosystem Studies Unit network 20-year program characterization and evaluation	$48,668.15	2020	8/20/2020-9/30/2022
National Park Service	University of Rhode Island	Swift, J.	Development, maintenance, and facilitation of the North Atlantic Coast Cooperative Ecosystem Studies Unit experts database and environmental emergency response network	$140,807.37	2022	9/14/2022-9/13/2027

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
National Park Service	University of Rhode Island	Karraker, N.	Assess fuels treatment impacts and develop recovery actions for an endangered terrestrial salamander	$89,400.00	2023	6/12/2023-12/31/2025
National Park Service	University of Rhode Island	Torell, E. C.	NOAT CESU - Leadership, Coordination, and Administrative Oversight for the North Atlantic Coast Cooperative Ecosystem Studies Unit HOST AGREEMENT 2022-2027	$34,999.59	2022	8/1/2022-7/31/2027
National Park Service	University of Rhode Island	Swift, J. M.	NOAT CESU - Leadership, Coordination, and Administrative Oversight for the North Atlantic Coast Cooperative Ecosystem Studies Unit HOST AGREEMENT 2022-2027	$16,200.00	2022	8/1/2022-7/31/2027
United States Geological Survey	Columbia University	Madajewicz, M.	Assessing pluvial-coastal flood risk and potential climate inequities in New York City	$91,482.00	2023	9/1/2023-8/31/25
United States Geological Survey	Northeastern University	Chen, Q. J.	Hydrodynamic and water quality modeling of canal backfilling restoration at Jean Lafitte National Historical Park and Preserve	$105,892.00	2022	2/15/2022-2/14/2024
United States Geological Survey	Rutgers University	White, J	Truncating the competitive ability of Phragmites by targeting microbial endophytes	$507,247.00	2021	3/24/2021-3/23/2026
United States Geological Survey	Rutgers University	Mortlock, R.	Reconstruction of tropical storm activity in the western Atlantic during the late Holocene and late Pleistocene sea-level supported with U-series dated fossil corals	$45,942.00	2021	6/1/2021-5/31/2024
United States Geological Survey	Rutgers University	Wilkin, J.	Advancing a coupled ocean-wave modeling system to predict coastal storm impacts	$300,000.00	2022	8/1/2022-7/31/2025
United States Geological Survey	Stevens Institute of Technology	Orton, P.	Assessing pluvial-coastal flood risk and potential climate inequities in New York City	$208,518.00	2022	9/1/2022-8/31/24
United States Geological Survey	University of Connecticut	Brandt, J.	Investigating selenium and mercury dynamics and influence on aquatic food webs of the western United States	$49,999.00	2022	2/21/2022-2/20/23
United States Geological Survey	University of Connecticut	Zhu, Z.	A sample-based approach for analyzing the driver of coastal tidal wetland changes	$30,000.00	2023	7/25/2023-7/24/24
United States Geological Survey	University of Maine	Kamath, P.	Dynamics of winter tick-parasite interactions in moose	$129,958.00	2023	9/1/2023-8/31/2025

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
United States Geological Survey	University of Maine	Dill, G.	An Integrated Approach to Tick Surveillance, Management, and Outreach in Northern New England: Maine Partner	$333,332.00	2023	9/1/2023-8/31/2025
United States Geological Survey	University of Maine	Klemmer, A.	Linking Freshwater Mercury Concentrations in Parks to Risk Factors and Bio-Sentinels: A National-Scale Research & Citizen Science Partnership	$44,457.00	2019	7/1/2019-6/30/2020
United States Geological Survey	University of Massachusetts Amherst	Bradley, B.	Northeast Climate Adaptation Science Center: Climate Fellows Research Initiative	$179,147.04	2022	3/1/2022-2/29/24
United States Geological Survey	University of Massachusetts Amherst	Bernardin, T.	Web application for forecasting avian influenza risk in poultry populations	$71,301.00	2023	8/14/2023-8/13/24
United States Geological Survey	University of Massachusetts Amherst	Bradley, B.	Developing a macroecological understanding of invasive plant impacts based on abundance and trait data	$100,000.00	2022	5/1/2022-4/30/24
United States Geological Survey	University of Rhode Island	Couret, J.	Ecology and environmental management of emerging zoonotic Ixodes-borne pathogens	$237,094.47	2022	4/1/2022-3/31/24
United States Geological Survey	University of Rhode Island	Karraker, N.	Influence of wildfires on anurans and their habitats in Alaska	$74,955.79	2021	8/20/2021-8/19/23
United States Geological Survey	University of Rhode Island	Couret, J.	Structured decision making in tick and tick-borne disease management in New England	$117,696.00	2023	7/26/2023-7/25/24
United States Geological Survey	Yale University	Lauenroth, W.	The current and future state of big sagebrush ecosystems	$54,979.00	2023	5/15/2023-5/16/24
United States Geological Survey	Woods Hole Oceanographic Institution	Ralston, D.	Connecting sediment transport, wind waves, storm surge and marsh vegetation in Jamaica Bay under varying forcing conditions	$200,000.00	2022	8/1/2022-7/31/24
Department of Defense	Biodiversity Research Institute	Yates, D.	Protected and At-Risk Species Survey Assistance at Naval installations in Maine	$84,007.00	2019	9/30/2019-3/29/2021
Department of Defense	Biodiversity Research Institute	DeSorbo, C.	Bat and High Elevation Bat Surveys	$14,172.00	2019	9/28/2019-3/24/2021
Department of Defense	Biodiversity Research Institute	Meattey, D.	Listed Terrestrial Species, Monitoring	$126,000.00	2023	9/21/2023-9/22/2024

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
Department of Defense	Biodiversity Research Institute	Meattey, D.	Monitoring, Listed Terrestrial Species, R&D	$62,400.00	2023	9/21/2023-9/14/2024
Department of Defense	Biodiversity Research Institute	Yates, D.	Protected and At Risk Species Surveys	$138,401.00	2020	9/29/2020-3/1/2022
Department of Defense	Biodiversity Research Institute	Meattey, D.	Species Survey Assistance at Naval Installations in Maine	$190,000.00	2021	9/21/2021-9/21/2022
Department of Defense	Biodiversity Research Institute	Meattey, D.	Species Survey Assistance at Naval Installations in Maine	$153,000.00	2022	9/21/2022-9/20/2023
Department of Defense	Biodiversity Research Institute	Meattey, D.	Natural Resources Fauna Surveys	$177,100.00	2022	9/15/2022-9/14/2024
Department of Defense	State University of New York	Evans, D.	Pollinator Survey	$84,273.00	2019	4/1/2019-10/30/2020
Department of Defense	University of Maine	Roth, A.	Migratory Birds	$65,739.00	2023	8/9/2023-8/8/2024
Department of Defense	University of Maine	Roth, A.	Migratory Birds	$63,000.00	2023	8/9/2023-8/8/2024
Department of Defense	University of Maine	Roth, A.	Golden-Winged and Blue-Winged Warbler Habitats and Populations	$92,151.00	2022	9/9/2022-9/8/2023
Natural Resources Conservation Service	Cornell University		Northeast Regional Climate Center SCAN network web-based platform project	$141,544.00	2018	9/28/2018-8/31/2022
Natural Resources Conservation Service	University of Connecticut		Enhance soil health assessments in the Northeast to respond to emerging information needs for climate change adaptation.	$299,981.00	2022	9/15/2022-8/14/2024
Natural Resources Conservation Service	University of Connecticut		The CZSS Focus Team is requesting the University of Connecticut to complete time-sensitive and project-specific soil sample analyses in their labs along with research activities.	$562,444.00	2022	9/30/2022-9/30/2025
Natural Resources Conservation Service	University of Maine		Provide outreach, education, and technical assistance and expertise on climate smart agriculture and forestry (CSAF) and urban agriculture (UA) to historically underserved customers in Maine.	$266,270.00	2022	9/22/2022-8/31/2025
Natural Resources Conservation Service	University of Maine		Soil Health Collaboration and Demonstration	$1,000,000.00	2023	9/28/2023-9/30/2025

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
Natural Resources Conservation Service	University of Maine		Develop protocols for regional ES groups for use in DSM and productivity interpretations for soil survey	$300,000.00	2023	9/22/2023-9/30/2026
Natural Resources Conservation Service	University of Maine		New England Pollinator Partnership Assessments	$95,238.00	2023	9/23/2023-12/31/2026
Natural Resources Conservation Service	University of Maryland Eastern Shore		Dynamic Soil Properties for Soil Health Assessment	$499,995.00	2020	9/3/2020-9/15/2024
Natural Resources Conservation Service	University of Massachusetts Amherst		Use lidar to map the microtopographic & morphologic features that are good predictors of tidal wetland soil characteristics	$289,565.49	2020	9/16/2020-3/31/2023
Natural Resources Conservation Service	University of Rhode Island	Stolt, M.	Develop a functional approach for sampling & mapping tidal marsh soils to accurately inventory these soil resources and improve understanding	$499,989.00	2020	9/16/2020-9/30/2023
Natural Resources Conservation Service	University of Rhode Island		The CZSS Focus Team is requesting the University of Rhode Island to complete time-sensitive and project-specific soil sample analyses in their labs along with research activities	$703,444.00	2022	9/26/2022-1/31/2025
Natural Resources Conservation Service	University of Rhode Island	Stolt, M.	Improve Soil Taxonomy to meet the NRCS goals of providing soils information for use and management of the land.	$197,697.00	2022	9/14/2022-8/1/2025
Natural Resources Conservation Service	University of Rhode Island	Alm, S.	Assess plant and pollinator response to practices installed through the New England Pollinator Partnership in RI and CT	$555,252.00	2022	9/1/2022-12/31/2025
Natural Resources Conservation Service	University of Rhode Island	Stolt, M.	Integrate all major approved changes to Soil Taxonomy into a publication of a 3rd edition	$499,342.00	2022	9/14/2022-7/31/2026
Natural Resources Conservation Service	University of Rhode Island	Mcwilliams, S. R.	Forestry Support to NRCS	$100,000.00	2022	10/1/2022-9/30/2023
United States Fish and Wildlife Service	Rutgers University	Maslo, B.	Sustaining Piping Plover Recovery Achievements Through Science-based Habitat Conservation Strategies And Partnerships	$118,066.00	2023	04/28/2023-03/30/2026
United States Fish and Wildlife Service	University of Maine	Blomberg, E.	Further Evaluating the American Woodcock Singing Ground Survey and Structure of Woodcock Populations in the Central Management Region	$49,979.00	2023	08/01/2023-07/31/2026

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
United States Fish and Wildlife Service	University of Maine	Roth, A.	Current and future migration and winter distribution of four at-risk forest bird species	$56,157.00	2022	10/1/2022-9/30/2024
United States Fish and Wildlife Service	University of Maine	Blomberg, E.	Merging genomics, stable isotopes, and satellite-telemetry to delineate range-wide population structure of American woodcock	$49,978.00	2021	8/1/2021-7/31/2024
United States Fish and Wildlife Service	University of Maine	Blomberg, E.	Evaluating timing, connectivity, & stopover of American woodcock migration in eastern North America	$29,680.00	2019	9/1/2019-7/31/2022
United States Fish and Wildlife Service	University of Massachusetts Amherst	Senner, N.	Determining migration patterns of Alaska breeding shorebirds to inform flyway conservation	$185,516.00	2022	10/1/2022-1/1/2026
United States Fish and Wildlife Service	University of Rhode Island	Paton, P.	Habitat Restoration and Enhancement for Roseate and Common Terns on Great Gull	$128,355.97	2022	6/1/2022-6/1/2024
United States Fish and Wildlife Service	University of Rhode Island	McGreevy Jr, T. J.	New England Cottontail Population Estimate at Ninigret National Wildlife Refuge	$10,000.00	2023	9/1/2023-12/31/2024
United States Fish and Wildlife Service	University of Rhode Island	McGreevy Jr, T. J.	New England Cottontail Survival and Home Range Size Monitoring at Ninigret National Wildlife Refuge	$4,989.90	2021	9/1/2021-4/1/2022
United States Fish and Wildlife Service	Wildlife Management Institute	Williamson, S.	At Risk Species Habitat Project	$77,000.00	2017	11/29/2017-12/31/2020
United States Fish and Wildlife Service	Wildlife Management Institute	Williamson, S.	At Risk Species Habitat Project	$68,000.00	2020	02/10/2020-12/31/2022
United States Army Corps of Engineers	Northeastern University	Chen, Q. J.	Updating USACE's Nearshore Coastal Numerical Model, CSHORE, to Calculate Benefits of Vegetated Shorelines	$240,000.00	2018	7/2/2018-7/1/2021
United States Army Corps of Engineers	Rutgers University	Munroe, D.	Understanding the Crossroads of Human and Ecosystems Health: Back Bay Shellfish Farms as a Model for Studying Coastal Ecosystem Feedback Systems	$248,143.00	2019	12/11/2019-12/12/2022
United States Army Corps of Engineers	State University of New York			$25,000.00	2023	
National Oceanographic and Atmospheric Administration	University of Rhode Island	Ginis, I.	Quantification and optimization of Nature-Based solutions for mitigating coastal vulnerability and risk	$360,425.00	2023	
National Oceanographic and Atmospheric Administration	University of Rhode Island	Ginis, I.	Visualizing, and Communicating Nor'easter and Hurricane Threats with Sea-level Rise to Support Coastal Management within New England	$1,525,059.00	2021	2021-2025

Agency	Non-Federal Partner	PI	Project Title	Total award	FY Start	Start Date - End Date
National Oceanographic and Atmospheric Administration	University of Rhode Island	Palter, J.	mCDR 2023: An opportunity to study Ocean Alkalinity Enhancement, CDR, and ecosystem impacts coastal liming	$1,538,451.52	2023	9/1/2023-8/31/2026

Appendix 2: NAC CESU Host University Financials, FY19 - FY23

Table 5: NAC CESU Budget vs. Actual Expenses 10/1/2018-9/30/2023

	FY19 Budget	FY19 Actual	FY20 Budget	FY20 Actual	FY21 Budget	FY21 Actual	FY22 Budget	FY22 Actual	FY23 Budget	FY23 Actual
Funds Awarded	$16,000	$18,625	$9,000	$12,046	$16,200	$10,977	$14,400	$13,953	$16,200	$16,422
Total Personnel Costs	$2,090	$10,212	$7,110	$1,602	$5,400	$4,698	$4,470	$628	$9,899	$10,660
Total Fringe Benefits		$781	$550	$123	$413	$1,373	$342	$302	$757	$285
Total Salary and Fringe	$2,090	$10,994	$7,660	$1,725	$5,813	$6,071	$4,812	$930	$10,656	$10,945
Other										
Travel/Annual Meeting/Other Events	$2,427	$832	-	-	$1,974	-	$1,693	-	$3,131	$2,637
Consultant (website)	$7,000	$4,025	-	$7,590	$4,500	$3,710	$5,000	$10,390	-	-
Software (web hosting)	-	-	-	-	-	$116	$750	-	-	$418
Computer Equipment	-	-	-	$937	$1,500	-	-	-	-	-
Honoraria	$2,100	-	-	-	-	-	-	-	-	-
Total Other Costs	$11,527	$4,857	-	$8,527	$7,974	$3,826	$7,443	$10,390	$3,131	$3,055
Total Direct Costs	$13,617	$15,851	$7,660	$10,252	$13,787	$9,896	$12,255	$11,321	$13,787	$14,000
Indirect Costs	*$2,383*	*$2,774*	*$1,341*	*$1,794*	*$2,413*	*$1,081*	*$2,145*	*$2,632*	*$2,413*	*$2,422*
Total	**$16,000**	**$18,625**	**$9,001**	**$12,046**	**$16,200**	**$10,977**	**$14,400**	**$13,953**	**$16,200**	**$16,422**

Table 6: In-kind Support by University of Rhode Island for CESU Operations

Budget Category	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Total FY19-FY23**
CI Director effort*	$38,333	$39,483	$40,667	$41,888	$13,976	$174,347
CI Administrative support**	$11,491	$11,835	$12,191	$12,556	$4,150	$52,223
Consultant services (technical assistance, website & database maintenance)	$825	$2,190	$170	$844	$24,339	$28,368
Travel	$1,273					$1,273
Computers, software, internet						
Printing, supplies & meeting costs	$158	$527			$134	$819
Annual Totals	**$52,080**	**$54,035**	**$53,028**	**$55,288**	**$42,599**	**$257,030**

**15% of salary & fringe for J. Swift salary FY19-FY22 and 8% of E. Torell salary for FY23*

*** 10% of salary & fringe for A. Neville FY19-FY22 and 5% of J. Witterschein for FY23*

Appendix 3: National Park Service Duty Stationed Staff Members' Contribution to URI Teaching and Student Mentoring

Sara Stevens Nerone—NPS Senior Program Manager (URI Grad Alumni)

Classes:

NRS Senior Colloquium, NPS professional representative, annually 2016-present

NRS 200, NPS guest lecturer, annually 2008-present

LAR 350, NPS guest lecturer, annually 2018-present

Student Mentoring:

Professional Student Mentor, supporting students with their resumes, cover letters and Job Application Preparation and Opportunities, 2001-present.

Each year Sara mentors 10-15 NRS undergraduate students related to their resumes and job searches within the government. She meets with each student, edit, and work with them to improve their resumes, write recommendations, and review their job applications before they submit them to USAJobs and Internship Programs. Sara reminds each student when deadlines for the NPS summer positions are coming up and help them prepare and refer them to NPS opportunities in the parks.

Sara worked with the following students in 2023:

- Noah Goldthwait, NRS Undergraduate, 2023.
- Sophia Delmonte, NRS Undergraduate, 2024
- Kaitlyn Eriksson, NRS Undergraduate, 2025
- Kaitlyn White, NRS Undergraduate, 2024
- Molly Ahern, NRS Undergraduate, 2023
- Jeffrey Bodendorf, NRS Undergraduate, 2023
- Maddie Reagan, NRS Undergraduate, 2023
- Griffin Gilchrist, NRS Undergraduate, 2023
- Eddie Casella, NRS Graduate Student and previous NPS Intern. Graduate student project support, 2023-2024 focusing on remote sensing and salt marsh monitoring at NPS sites.
- Sarah Heavren, graduate student NRS. We will be bringing Sarah on as a permanent employee of my program in 2024 when she graduates. She has Direct Hire Authority.

Dennis Skidds, NPS Data Manager, Geospatial Professional and Biologist (URI Grad Alumni)

Classes:

NRS 524 – Application of Advanced Spatial Analysis
- Instructor 2011-2014; 2016, 2018, 2020
- 8-10 hours per week each semester

NRS 200 – Seminar in Natural Resources, Guest speaker 2012; 2015
BES 600 – Graduate Seminar, Guest speaker
NRS 480 – Senior Colloquium, Guest speaker
LAR 302 – GIS Applications for Landscape Architecture
- With Sara Stevens and Holly Plaisted, prepared a real-world, ten-year seagrass monitoring dataset and accompanying geospatial data

Student Mentoring:

- Beth Decellis (2009-2010) – Database design
- Mike Narcisi (2009-2010) – Vernal pool ecology
- Mark Chistiano (2011) – GNSS; database design
- Angelica Murdakieva (2011) – LiDAR data prep
- Bianca Ross (2014) – Vernal pool ecology; GNSS/GIS
- Charles Clarkson (post-doc) 2015-2019 – Database design
- Colby Kresge (2022) – GNSS/GIS
- Steve Morillo (2023) – GNSS/GIS
- Ethan Eastwood, prospective URI grad student (2022) – GIS; graduate school, career opportunities
- Isabelle Dolicino, prospective URI grad student (2023) – GIS; graduate school opportunities

Faculty/Staff Assistance

- Carol Trocki – GNSS use
- Serena Moseman-Valtierra – GNSS use with Sediment Elevation Table monitoring

Scott Rasmussen, NPS Assistant Data Manager, Geospatial Professional and Coastal Geomorphologist (URI Grad Alumni)

Classes:

GEO 210 Landforms: Origins and Evolution
- Guest Speaker 2021-2023,
- Field Trip Leader 2023, coastal geomorphology, demonstrating, collecting, and processing GNSS data with students.

LAR 302 GIS Applications for Landscape Architecture
- Guest Speaker 2021-2023,
- Field Trip Leader 2022 and 2023, coastal geomorphology, demonstrating, collecting, and processing GNSS data with students.

URI GIS Panel Discussion
- Panelist 2022

Student Mentoring

Assists with using GPS and total station surveys for the Dept of Natural Resources Science Dam removal projects on the Pawcatuck River:
- Install a temporary vertical control monument using GPS, surveyed stakes using a total station.
- Assisted the Grad student working on this project with GIS and technical writing on the GPS work provided.
- Potter Mill, 2022, GPS survey of water level wells. Assisted the Grad student working on this project.

Testing and demonstrating SX12 scanner for the use of long-term monitoring of salt marsh elevations. NPS staff and NRS graduate student, Sarah Heavren, who is current an NPS Scientist in the Parks Intern. Fox Hill Marsh, Jamestown, RI

Robin Baranowski, NPS Biologist/Botanist (URI Undergraduate Alumni)

Classes:

BIO/NRS 323 Field Botany & Taxonomy 13 years of support

- Instructor, Fall – (2019-2022) over 8+hrs/week. Summer – (2014-Current) NPS created a furlough position for Robin to be able to teach this call for URI. In addition, the NPS allowed Robin to work park-time so she could teach this class.
- During the pandemic, NPS provided full time hours to Robin to create the fully online curriculum for NRS 323, so that the class could continue to be offered throughout the pandemic.
- NRS 323 Guest Instructor, Fall – (2015-2018) filling in for fall instructor and TA, helping with projects and final exams.
- NRS 323 TA--Summer (2010-2013)

Student Mentoring

- Vegetation surveys for the Dept of Natural Resources Science dam removal projects on the Pawcatuck River: Assisted the MESM grad student working on this project with vegetation survey and identification.
- Vegetation surveys for the Dept of Natural Resources Science forestry project on Gilbert Stuart Road: Assisted Research Associate working on this project with vegetation survey and identification.
- Herp surveys for the Dept of Natural Resources Science salamander project at Alton Jones: Assisted herp class working on this project with salamander monitoring.
- Mentoring students: Mentored various MESM and Wildlife Bio students (check resumes, job advice, write letters of recommendation for awards and jobs).

Penelope Pooler, Previous NCBN Quantitative Ecologist

NRS 520--Quantitative Techniques in Natural Resource Research, 2012-2013.This course and all teaching material was fully developed by NPS staff for the NRS department. Dr. Pooler left her position with the NPS in 2014. All teaching materials were provided to the chair of the NRS department for use by another professor.