

# Final Evaluation Findings

## New Hampshire Coastal Management Program

October 2016 to November 2023

Published March 2024



Office for Coastal Management  
National Ocean Service  
National Oceanic and Atmospheric Administration  
United States Department of Commerce

# Table of Contents

|  |    |
|--|----|
| Summary of Findings.....               | 1  |
| Program Review Procedures .....        | 3  |
| Evaluation Findings .....              | 5  |
| Program Administration.....            | 5  |
| Offshore Wind Energy.....              | 7  |
| Coastal Resilience.....                | 9  |
| State Planning and Legislation.....    | 9  |
| Coastal Flood Risk Summary .....       | 10 |
| Coastal Adaptation Workgroup.....      | 10 |
| Building Community Resilience .....    | 11 |
| Building a Flood Smart Seacoast .....  | 13 |
| Coastal Habitat.....                   | 14 |
| Resilient Tidal Crossings .....        | 15 |
| Salt Marshes.....                      | 17 |
| Living Shorelines.....                 | 18 |
| Dam Removal .....                      | 19 |
| Evaluation Metrics .....               | 20 |
| New Hampshire Evaluation Metrics ..... | 20 |
| Conclusion.....                        | 25 |

## Summary of Findings

The Coastal Zone Management Act requires the National Oceanic and Atmospheric Administration (NOAA) to conduct periodic evaluations of the performance of states and territories with federally approved coastal management programs. This evaluation examined the operation and management of the New Hampshire Coastal Program administered by the New Hampshire Department of Environmental Services, the designated lead agency, for the period from October 2016 to November 2023. The evaluation focused on three target areas: offshore wind energy, coastal resilience, and coastal habitat.

The findings in this evaluation document will be considered by NOAA in making future financial award decisions concerning the New Hampshire Coastal Program. The evaluation came to these conclusions:

### *Findings for Program Administration*

**Accomplishment:** The New Hampshire Coastal Program has had exceptional success in competing for grants and coastal fellows. The coastal program works closely with other department bureaus and its partners, often incorporating joint work into the funded projects, which greatly extends the coastal program's impact in building community and habitat resilience in the state.

**Recommendation:** The New Hampshire Department of Environmental Services and New Hampshire Coastal Program are encouraged to consider opportunities for building "bench strength" around coastal habitat, particularly the Resilient Tidal Crossings Initiative. Opportunities could include an informal staff working group to jointly support the technical and regulatory responsibility for effective tidal and stream crossing projects and additional staff support at the coastal program or other involved organizations.

### *Findings for Offshore Wind*

**Accomplishment:** The New Hampshire Coastal Program has become the state leader in supporting New Hampshire's engagement in offshore wind development. This has been achieved by supporting the state legislature's development of policies to solidify the coastal program's role in implementing federal consistency; working with NOAA to update its federally approved program; increasing stakeholder understanding of offshore wind issues; enhancing effective engagement with a broad group of constituents; improving data development to inform decisions; and strengthening interstate collaboration, all to best prepare the state for the offshore wind development process in the Gulf of Maine.

### *Findings for Resilience*

**Accomplishment:** The New Hampshire Coastal Program has provided extensive funding and staff support to plan for and address coastal risks and hazards in the state. These efforts have

led to new legislation being passed to better incorporate flood risks into decision-making and updating information on flood trends every five years.

**Accomplishment:** The New Hampshire Coastal Program provides extensive funding, technical assistance, and project management support for its state, regional, local, and neighborhood partners to build coastal resilience. The coastal program has supported the growth of the Coastal Adaptation Workgroup, including securing a coastal management fellow to guide the workgroup through a planning process to further grow the group's impact. The coastal program partnered with New Hampshire Sea Grant, Great Bay National Estuarine Research Reserve, and others to pilot a research project working directly with lower wealth communities to increase their ability to prepare for and respond to flooding and erosion.

### ***Findings for Habitat***

**Accomplishment:** The New Hampshire Coastal Program has successfully led its Resilient Tidal Crossing Initiative and worked with partners to update state regulations to include criteria for tidal crossings and create a protocol and assess tidal crossings. This groundbreaking work has enabled the state to prioritize crossings in need of repair or replacement, create a pipeline of priority projects that have completed preliminary engineering designs and permitting, and obtain funding for three high priority culvert replacements.

**Accomplishment:** The New Hampshire Coastal Program has worked with partners to map and assess the vulnerability of the state's salt marshes, prioritize areas for restoration, and pursue funding and staff to support future restoration and land acquisition.

**Accomplishment:** The New Hampshire Coastal Program successfully managed three coastal dam removal projects in support of the New Hampshire Department of Environmental Services Dam Removal and River Restoration Program. The removal of the dams has opened up new sections of the Exeter and Bellamy Rivers to fish migration, restored floodplain wetlands, and reduced flooding risks.

**Recommendation:** The NOAA Office for Coastal Management encourages the Department of Environmental Services and New Hampshire Coastal Program to continue to build partnerships and pursue joint projects with complementary agencies key to the success of coastal resilience, particularly the Department of Safety, Division of Homeland Security and Emergency Management, and Department of Transportation.

This evaluation concludes that the State of New Hampshire is successfully implementing and enforcing its federally approved coastal management program, adhering to the terms of the federal financial assistance awards, and addressing coastal management needs identified in section 303(2)(A) through (K) of the Coastal Zone Management Act.

## Program Review Procedures

Section 312 of the Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1451 *et. seq.*), requires that state coastal zone management programs be evaluated periodically. Section 312 of the Coastal Zone Management Act and its implementing regulations found at 15 C.F.R. Part 923, Subpart L, require NOAA to periodically evaluate a state coastal program concerning the extent to which the state has 1) implemented and enforced the state coastal program approved by the secretary of commerce; 2) addressed the coastal management needs identified in section 303(2)(A) through (K) of the Coastal Zone Management Act; and 3) adhered to the terms of any grant, loan, or cooperative agreement funded under the Coastal Zone Management Act.

The National Oceanic and Atmospheric Administration (NOAA) evaluated the New Hampshire Coastal Program in 2023. The evaluation team consisted of Carrie Hall, evaluation team lead; Kate Swails, program liaison; Betsy Nicholson, northeast regional director; and Anastasia Dulskiy, coastal hazards mitigation specialist, 2023 Sea Grant Knauss fellow. The support of the New Hampshire Coastal Program staff members was crucial in conducting the evaluation, and this support is most gratefully acknowledged.

NOAA published a notice in the *Federal Register* on September 20, 2023, in which it announced it would evaluate the New Hampshire coastal management program and host a public meeting, and requested public comments (88 FR 64887). The coastal program posted a notice of the public meeting and opportunity to comment in the *Portsmouth Herald/Foster's Daily Democrat* on October 30, 2023.

The evaluation process included a review of annual federal financial assistance award reports, Coastal Zone Management Act section 309 assessments, and information provided by the program documenting how they are implementing their program and addressing the programmatic requirements of the act. A survey of interested parties was also conducted. The review and survey were used to help identify three target areas for the evaluation: offshore wind energy, coastal resilience, and coastal habitat. A site visit was conducted November 6-9, 2023. The evaluation team held meetings with staff members and group discussions with program partners and staff members about the target areas. In addition, a virtual and in-person public meeting was held on November 6, 2023, to provide an opportunity for members of the public to express their opinions about the implementation of the coastal program. No members of the public attended the meeting.

Interested parties and members of the public were also given the opportunity to provide written comments via email through November 17, 2023. No comments were received. The NOAA Office for Coastal Management then developed draft evaluation findings, which were provided to the New Hampshire Department of Environmental Services. The state's comments were considered in drafting the final evaluation findings.

Final evaluation findings for all coastal management programs highlight their accomplishments in the target areas and two possible types of findings that may require action by the program.

**Necessary Actions** address programmatic requirements of the Coastal Zone Management Act or its implementing regulations at 15 C.F.R. Part 923, and of the federally approved state coastal management program, and the terms of any grant or cooperative agreement funded under the Coastal Zone Management Act. Necessary actions must be carried out by the date specified. Failure to address necessary actions may result in a future finding of non-adherence and the invoking of interim sanctions, as specified in the Coastal Zone Management Act.

**Recommendations** are actions that the office believes would improve the program but which are not mandatory. The state is expected to have considered the recommendations by the time of the next evaluation or dates specified.

## Evaluation Findings

### Program Administration

Throughout the evaluation period, the coastal program has continued to strategically advance coastal management issues particularly around coastal resilience and coastal habitat. The program has supported state and Department of Environmental Services efforts regarding offshore wind energy development, and now serves in a leadership role. The coastal program also works closely with other department bureaus such as Dams, Wetlands, Drinking and Groundwater, and Watershed Management to implement and support several initiatives. The coastal program demonstrates strong leadership in the state through long-term strategic pursuit of goals and objectives, convening and facilitating partners, providing top notch technical expertise, obtaining competitive funding, attracting consistent legislative support, and implementing projects to address timely and complex coastal issues. Partners cited the program's collaborative approach, openness to experimentation, and ability to address concerns, such as grant match, as key to helping them develop and implement projects.

The coastal program is widely regarded as a "can do" partner by the many organizations it works with and provides financial and technical assistance in the state. In addition, the coastal program has earned a reputation of serving as a trusted peer and leader among other coastal states within the region and nationally. As a result, the coastal program has strong brand recognition inside and outside of New Hampshire, and yet, despite this earned reputation, is careful and appropriate in representing itself as part of the Department of Environmental Services, where staff are team players and help link partners to other department resources. This balance of branding and reputation is a tribute to the professionalism and humility of the coastal program team.

The coastal program has been very successful in competing for funds to support its initiatives; for example, the program's Project of Special Merit grant applications were selected every year for funding. The coastal program often collaborates with other partners on grants, including other bureaus within the department, other state agencies, local government organizations, and universities.

The coastal program has been challenged in its ability to access match funds to leverage grant opportunities when match is required, limiting its capacity to bring in additional funding. The previous evaluation findings (2017) called for the coastal program to identify additional opportunities to leverage state match dollars for competitive grants to benefit New Hampshire's Seacoast region. In 2021, the state established a separate Coastal Fund that allows the Department of Environmental Services to identify additional opportunities to leverage state match dollars for competitive grants to benefit the Seacoast. The fund is managed by an agency advisory board to oversee the Department of Environmental Services on its fund distribution. The fund can apply for and accept, from any source, gifts; donations of money; grants; and federal, local, private, and other matching funds and incentives and interests in land. The funds

are to be used for mitigating impacts to wildlife, natural resources, ecosystems, and traditional or existing water-dependent uses, including but not limited to commercial and recreational fishing, including aquaculture and transit lanes. (New Hampshire Revised Statutes 485.1:4).

States are seeing new federal funding through the Infrastructure Investment and Jobs Act, Inflation Reduction Act, America the Beautiful Act, and American Rescue Plan Act to support infrastructure and climate resilience. The coastal program has been very strategic in positioning itself and the state to benefit from this increase in federal grant funds and shifting its staffing structure to support the new work. The coastal program has moved to a new distributed staffing structure that empowers staff to lead and participate in programs with flexibility and responsibility. Staff coordinators have been given a bigger leadership role, and more autonomy and decision-making responsibilities. This has both boosted staff morale and created a flatter leadership structure for greater efficiency. The coastal program has added new permanent and grant-funded staff positions to enable the program and state to manage the additional federal funding. The coastal program created a coastal resilience and habitat specialist position in 2021 to create additional salt marsh restoration capacity. To build the program's capacity to manage its increased grant funding, the coastal program created a new position and hired a coastal resilience grants manager in 2023. This has allowed other staff to focus on program implementation. The grants manager model has been so successful that other bureaus in the agency are looking to create similar positions. Finally, the coastal program brought on a new grant-funded environmentalist III position to manage the American Rescue Plan Act funding, and created two temporary grant-funded positions, but has been challenged with retaining staff in the temporary positions.

The coastal program is also working with, and supporting, its partners in building capacity and has written grants to fund new positions with these partner organizations. Collectively, these staff increases in the coastal management community have helped position the state to take on the challenge of obtaining and managing additional funds for timely initiatives while continuing to ensure effective coordination and implementation across these partnerships.

The coastal program has been exceptionally successful in matching with fellows through the two-year NOAA Coastal Management Fellowship program with fellowships starting in 2015, 2017, 2019, and 2022. The fellows have completed a range of projects, including integrating social science into ecosystem management, supporting living shorelines, and boosting staff capacity to support climate resilience. In New Hampshire, the coastal fellowships have often been shared across agencies, helping to build partnerships and synergies, which reflects the coastal program's collaborative values.

**Accomplishment:** The New Hampshire Coastal Program has had exceptional success in competing for grants and coastal fellows. The coastal program works closely with other department bureaus and its partners, often incorporating joint work into the funded projects, which greatly extends the coastal program's impact in building community and habitat resilience in the state.



Although thoughtfully positioned to manage additional funding, the coastal program and department are encouraged to continue considering all opportunities to strengthen coastal program capacity in light of current and future workload. This could include continuing to take advantage of coastal fellowships, hiring consultants, using cross-agency work groups to further expertise and engagement across the state, facilitating the development of key positions by partners (for example, NERACOOS-Sea Grant shared offshore wind position), and opportunities for better retention of staff in temporary grant-funded positions. The coastal program has some depth of bench for most initiatives, but in particular, the cross-agency Resilient Tidal Crossings Initiative relies extensively on the expertise of one staff member.

**Recommendation:** The New Hampshire Department of Environmental Services and New Hampshire Coastal Program are encouraged to consider opportunities for building “bench strength” around coastal habitat, particularly the Resilient Tidal Crossings Initiative. Opportunities could include an informal staff working group to jointly support the technical and regulatory responsibility for effective tidal and stream crossing projects and additional staff support at the coastal program or other involved organizations.

## Offshore Wind Energy

The coastal program, particularly the federal consistency coordinator, provides key staffing support for the department’s efforts to prepare for, and engage in, offshore wind energy development in federal waters. The coastal program supports the efforts of the assistant director of the Water Division at the Department of Environmental Services, the agency lead for offshore wind energy.

As the federal government has moved forward with wind energy development in the Gulf of Maine, the state has taken a number of steps to prepare:

- In 2019, the Bureau of Ocean Energy Management established a Gulf of Maine Task Force at the request of the New Hampshire governor for better coordination, including representation from New Hampshire, Massachusetts, Maine, and federally recognized tribes in the area.
- In 2020, the state passed legislation establishing the Commission to Study Offshore Wind and Port Development that includes representatives from government, labor, and the business community.
- In 2021, the state established and funded the Office of Offshore Wind Industry Development at the Department of Energy to help coordinate efforts.
- In 2023, the New Hampshire Department of Energy released the assessment, *Potential Environmental, Economic, and Energy Impacts in New Hampshire from Development of Offshore Wind in the Gulf of Maine*. ([bit.ly/4alhrhf](https://bit.ly/4alhrhf))

The coastal program took a proactive look at its federally approved program and considered whether any program changes were needed to ensure that the state was able to use federal consistency to bring its voice to the table. The coastal program submitted a request to correct citations and more precisely describe the activities within the scope of the current listing by the

state for these authorizations. The state also revised certain enforceable policies of the New Hampshire Coastal Program used for Coastal Zone Management Act review purposes. The changes were for the purpose of clarifying that effects to coastal uses are reviewable, as well as those to coastal resources. The program change was approved by NOAA in 2019. The coastal program also requested to use the procedures described in 15 C.F.R. Part 930, Subpart D (“Consistency for Activities Requiring a Federal License or Permit”), when reviewing energy activities in New Hampshire’s coastal zone requiring a federal license or permit. This change ensured the coastal programs’ process was consistent with changes to New Hampshire Revised Statutes Annotated 162-H that have occurred since NOAA’s approval of the New Hampshire Coastal Program document. This change was approved by NOAA in 2021. To further address potential concerns, the agency worked with the attorney general and legislature to draft legislation that codified the coastal management program in state statute; identified the coastal program as the lead agency for federal consistency; called for the coastal program to develop a geographic location description for submission to NOAA; and created the Coastal Fund.

The Department of Environmental Services and coastal program are also collaborating and coordinating with the Northeast Regional Ocean Council, Bureau of Ocean Energy Management, other New Hampshire state agencies, and Gulf of Maine states to identify and review priority data sets, and improve the public participation processes. The coastal program’s strong leadership in developing the Northeast Ocean Plan under the Obama Administration laid the groundwork for those best practices in data development and thoughtful engagement to be applied now. The coastal program has worked with the Northeast Regional Ocean Council to customize its data portal for use by state stakeholders to hold informed discussions and develop comments solicited for the Bureau of Ocean Energy Management’s Wind Energy Area designation process. New Hampshire Sea Grant has been particularly helpful in engaging commercial and recreational fishing communities with these best practices and tools. The department and coastal program were highlighted by partners for their efficient coordination and convening of stakeholders to be better informed to engage in this process.

**Accomplishment:** The New Hampshire Coastal Program has become the state leader in supporting New Hampshire’s engagement in offshore wind development. This has been achieved by supporting the state legislature’s development of policies to solidify the coastal program’s role in implementing federal consistency; working with NOAA to update its federally approved program; increasing stakeholder understanding of offshore wind issues; enhancing effective engagement with a broad group of constituents; improving data development to inform decisions; and strengthening interstate collaboration, all to best prepare the state for the offshore wind development process in the Gulf of Maine.

As the department and coastal program consider additional capacity for offshore wind and transmission literacy and engagement in the months to come, they are encouraged to leverage existing interstate partnerships like the Northeast Regional Ocean Council to benefit from federal funding and trusted relationships and expertise in ocean planning. It will be instrumental for the coastal program and department to continue to use these regional and

also national fora for knowledge exchange with other states undergoing offshore wind development. The coastal program is commended for its attention and care in giving New Hampshire constituents a voice in the planning for this major new ocean infrastructure and its compatibility with existing uses.

## **Coastal Resilience**

The coastal program works closely with regional planning commissions, local communities, and other partners to build coastal resilience. The coastal program's ability to contribute federal and state funding; staff support through coastal management fellows; and consistent annual financial and technical support to core partners have all been key in assisting local governments and state agencies build coastal resilience. In 2019, the U.S. Environmental Protection Agency formally recognized coastal program staff as being national leaders in climate adaptation planning.

### ***State Planning and Legislation***

The coastal program provided funding and technical assistance to the state's Coastal Risk and Hazards Commission, created in 2013 to recommend legislation, rules, and other actions to prepare for and reduce risks related to coastal watershed hazards. The commission's final report, *Preparing New Hampshire for Projected Storm Surge, Sea-Level Rise, and Extreme Precipitation* ([bit.ly/4aMYUjW](http://bit.ly/4aMYUjW)), was published in November 2016, the beginning of the evaluation period. The report identifies risks associated with coastal storms, sea-level rise, and extreme precipitation, including mapped vulnerability to sea-level rise and storms for all coastal zone communities.

The report's recommendations led to new laws being passed. Coastal program staff provided testimony on two bills discussed further in the findings.

- Chaptered Law 195 – Senate Bill 452 (2016) requires certain state agencies, including the Department of Environmental Services, to conduct an audit of laws governing coastal regions to enable authorities to take appropriate actions and to consider the Science and Technical Advisory Panel Report projections in actions. The analysis for the Department of Environmental Services (2018) was performed by coastal program staff. Future coastal flood risks were incorporated into several department rules and other agency policies, including new wetlands rules in partnership with the Wetlands Bureau.
- Chaptered Law 121 – Senate Bill 374 (2016) requires the Department of Environmental Services to update coastal flooding trends (storm surge, sea-level rise, precipitation, and other relevant projections) at least every five years. The coastal program worked with multiple state agencies and other organizations to develop the 2019 Coastal Flood Risk Synthesis.

The coastal program has also provided assistance to state efforts such as the New Hampshire Multi-Hazard Mitigation Plan update in 2018. Coastal program staff helped incorporate new

sea-level rise data and recommendations from the New Hampshire Coastal Risk and Hazards Commission.

### ***Coastal Flood Risk Summary***

The coastal program was awarded a 2018 Project of Special Merit for the SUSTAIN (Science Update, Social and Technical Approaches, and Incentives) Project for Coastal Resilience. This project advanced implementation of Coastal Risk and Hazards Commission recommendations to prepare the state and coastal zone municipalities for projected increases in coastal flooding and to fulfill the requirements of New Hampshire Revised Statutes Annotated (RSA) 483-B:22 to update risk summary information every five years. The department convened a Science and Technical Advisory Panel steering committee composed of multiple state agencies, including the Department of Transportation, Department of Safety's Division of Homeland Security and Emergency Management, Rockingham and Strafford Regional Planning Commissions, University of New Hampshire, coastal municipalities, and the Coastal Adaptation Workgroup to assist with this effort.

Coastal program staff coordinated the development and external review of two documents. In 2019, the New Hampshire Coastal Flood Risk Summary Part I: Science (2019) (<https://scholars.unh.edu/ersc/210/>) was published. It provides a synthesis of the state of the science relevant to coastal flood risks in New Hampshire, including updated projections of sea-level rise, coastal storms, groundwater rise, precipitation, and freshwater flooding for coastal New Hampshire. A companion document, New Hampshire Coastal Flood Risk Summary Part II: Guidance for Using Scientific Projections (2019) (<https://scholars.unh.edu/ersc/211/>) was also published to provide users with a step-by-step approach to incorporate the science into coastal land use planning and decision-making. Webinars and summary materials were provided for municipal staff, boards, professionals, and the general public.

Recently, the state legislature funded the development of a new hydrodynamic coastal flood risk model that will develop a science-based approach to identify risks in 17 coastal communities and model impacts for 2030, 2050, 2070, and 2090 to inform short- and long-term planning on issues like transportation and infrastructure. The model should be complete in 2024 and will inform the next update of the Coastal Flood Risk Summary. The coastal program is managing the project and was able to use this funding as a match for a National Fish and Wildlife Foundation grant to apply the model at various project sites.

**Accomplishment:** The coastal program has provided extensive funding and staff support to plan for and address coastal risks and hazards in the state. These efforts have led to new legislation being passed to better incorporate flood risks into decision-making and updating information on flood trends every five years.

### ***Coastal Adaptation Workgroup***

The coastal program has been an active member of the state's Coastal Adaptation Workgroup (CAW) since its initiation in 2010. CAW is a collaboration of over 35 organizations that works to

ensure that coastal watershed communities are resourceful, ready, and resilient to extreme weather and long-term climate change through provision of resources, facilitation, and guidance. The group also provides significant professional development benefits to its early career members, helping to connect them with mentors.

The coastal program is deeply engaged with and supportive of CAW and also benefits from the expertise of CAW members. The coastal program has engaged with the collaborative on a number of successes discussed further in the findings, including the Tidal Crossing Assessment, Wagon Hill Farm Living Shoreline Project, Living Shoreline Suitability Assessment, and the Dover Equity Project.

The coastal program has been able to support CAW's growth as an organization over the years, and most recently by successfully competing for a NOAA Coastal Fellow (2022-2024) to lead the workgroup through a visioning and planning process to guide the members' collective work. In 2023, the workgroup developed a series of guiding principles to communicate shared values and guide CAW's collective decisions. Their four intentions were identified as evolving our practice, pausing and learning and growing; advancing knowledge and the field and allowing for exchange of information among all involved; catalyzing principled climate adaptation through collaboration; and enabling a thriving workgroup.

### ***Building Community Resilience***

The coastal program administers the Coastal Resilience Grants Program which provides small grants for community and habitat resilience projects. The program is designed to support the state's 17 coastal communities, and applicants include coastal municipalities, quasi-governmental organizations, nongovernmental organizations, academic institutions, and state agencies. A match of 4:1 is suggested but not required. Stakeholders noted that this lower match requirement has been a great help for eligible applicants who often struggle to meet match requirements. The coastal program funded 20 projects from 2016 to 2021, which often support the exploration of opportunities and development of information that leads to larger projects. For example, in 2022, the Town of Exeter received funding to complete a feasibility study to identify options to bring the Pickpocket Dam into compliance with the department's dam safety rules and reduce associated flood risk and environmental harm. Many of these grants are setting up communities to obtain additional funding to complete larger infrastructure projects in the future.

The coastal program provides ongoing financial support to the Strafford and Rockingham Regional Planning Commissions, New Hampshire Sea Grant, and Seabrook-Hamptons Estuary Alliance and works closely with them and other partners through the Coastal Adaptation Workgroup to provide support to municipal governments and communities. The partners work closely together to maximize their efforts in the Seacoast.

The coastal program was successful in obtaining a 2016 Project of Special Merit grant to fund the New Hampshire Setting SAIL (Science, Assessment, Implementation, Legislation) project to

support state and municipal implementation of the Coastal Risk and Hazards Commission’s 2016 report. Project activities raised state agency and municipal awareness of the commission’s recommendations; assisted Great Bay municipalities in prioritizing and implementing recommendations that met community needs; and provided financial capacity for state agencies to complete inventories of vulnerable state assets and coastal resilience audits of agency statutes and administrative rules. Examples of completed projects include the following:

- The Town of Durham amended the town’s floodplain ordinance to require 2 feet of freeboard for all new construction or substantial improvements in the 100-year floodplain.
- The Town of Newmarket developed recommendations to update the town’s site plan and subdivision regulations based on the draft Southeast Watershed Alliance model stormwater standards.
- The Town of Newington conducted outreach to businesses in high flood risk areas and prepared climate adaptation and resilience language and recommendations for its master plan update.
- The City of Dover developed a climate adaptation master plan chapter with a steering committee of citizens and board members and public input. The chapter was adopted in early 2018 and won the New Hampshire Planning Association plan of the year award.
- The Town of Greenland and Town of Stratham drafted a Coastal Hazards and Adaptation Master Plan chapter.

The coastal program provided financial and technical support to a Strafford Regional Planning Commission effort to engage Dover’s historically underserved communities in climate change conversations and to better understand the social equity implications of climate impacts and adaptation options. The project team members interviewed service providers and held workshops with residents at two housing authority locations and adult students to better understand their concerns and barriers to participation. The team used this feedback to evaluate the town’s planning processes and identify how to reorient them to be more equitable and increase access to decision-making. The team developed a set of recommendations and actions and invited everyone from the outreach network they developed to a wrap-up meeting to prioritize the list of recommendations and actions, with a survey sent to those that could not attend. The report has gained interest in the state and has catalyzed more initiatives at the regional planning commission.

The coastal program also served on a technical advisory committee that provided technical support for the innovative Groundwater Rise Mapping project that aimed to identify future vulnerabilities from rising groundwater and saltwater intrusion on Durham’s public and private drinking water, private septic systems, and contaminated sites. The project was funded through the State of New Hampshire Clean Water State Revolving Fund Loan program and builds on information in the Coastal Flood Risk Summary (2019). The final report, “Sea Level Rise Impacts on Groundwater Levels and Water Quality: A Vulnerability and Planning Study in Durham, New Hampshire” ([bit.ly/3St1yTn](https://bit.ly/3St1yTn)) discusses the modeling results and next steps. There is interest in expanding this effort in the region if funds are available.

The Seabrook-Hamptons Estuary Alliance was formed by concerned citizens to heighten awareness and bring stakeholders together to support the health of the estuary. The coastal program has provided ongoing support that has been used for efforts such as the creation of the Hamptons Coastal Adaptation Team. The coastal program helped secure a grant that funded the team's outreach and building of community knowledge. The team was able to hire a planner who helped the team assess the town's vulnerability and develop 19 recommendations for building resilience. The recommendations were incorporated into the town's most recent plan. The alliance is now piloting a similar program in Seabrook. The alliance representative who met with the evaluation team discussed the important role the coastal program played as a sounding board, the importance of its flexible coastal program grant funding, its encouragement for creative solutions, and assistance in making connections and partnerships with others. The representative noted that the coastal program's technical expertise and awareness of funding opportunities makes it a particularly valuable partner. The alliance also expressed appreciation of the coastal program's leadership in forming the Hampton Seabrook Estuary Coalition, a group of local organizations and state and federal agencies that worked to reach consensus on priority knowledge gaps and seek funding for coordinated action to improve the health and vitality of the estuary and its communities.

The coastal program and Piscataqua Region Estuaries Partnership partnered to assist the City of Dover in establishing and convening an ad hoc committee to study stormwater and flood resilience funding. The committee was supported by a coastal fellow as they assessed current and future stormwater management and flooding challenges, analyzed the costs of services, and explored funding options. In early 2022, the committee voted to recommend that the city council consider pursuing a stormwater and flood resilience utility and presented its findings to the council. The council voted to accept the recommendations and directed city staff to begin a public outreach and education plan focused on the recommendations.

The coastal program also helped convene local, regional, and state partners to establish a Seacoast Corridor Advisory Committee to complete Seacoast Transportation Corridor Vulnerability Assessment and Plans for the Rockingham Planning Commission. The project looked at how the road system would function at four different sea level rise scenarios and identified priority sites and adaptations options, and made recommendations. The project built on the New Hampshire Flood Risk Summary discussed below. The project included public outreach and raised awareness of future transportation risks. The completion of the project also positioned the region to take advantage of additional federal infrastructure funding. The project was funded through a 2019 Project of Special Merit award.

### ***Building a Flood Smart Seacoast***

The coastal program and Seabrook-Hamptons Estuary Alliance partnered to implement "Building a Flood Smart Seacoast," which included a series of three informative workshops held in 2018. The workshops were designed to provide a broad range of information about various aspects of the impacts of coastal flooding on properties and structures. The goal of the workshops was to inform property owners and town officials, and to help those affected property owners make better-informed decisions about how to make their property more flood

resilient. The alliance also created The Flood Smart Roundtable, an ongoing series of informal discussions with coastal property owners and residents on a wide range of topics related to the causes and impacts of coastal flooding from sea level rise and storm surges held several times a year.

This project led to New Hampshire Sea Grant creating a Landowner Technical Assistance Program. Coastal program staff have helped support this program by providing technical assistance to interested coastal landowners to help understand potential coastal flood risks and restoration opportunities, clarify goals for managing their property, and identify conceptual options that may enhance the resilience of their properties,' neighborhoods,' and communities' natural resources. The focus is on using nature-based approaches to mitigate erosion and flood risk and restore natural habitats to enhance the resilience of native ecosystems.

This work helped to inform Flood Ready Neighborhoods, a pilot research project that seeks to bring residents of six lower wealth communities together to increase their neighborhoods' ability to prepare for and respond to worsening coastal and stormwater flooding and erosion. The project is funded through a NOAA Adaptation Sciences grant and is led and supported by staff from New Hampshire Sea Grant, the coastal program, and the Great Bay National Estuarine Research Reserve. State staff are also broadening their skills and ability to work with different types of communities and regularly meet with a consultant with expertise in community organizing who coaches and advises the team. Communities work with staff who help them co-develop information about flood risks and options for preparing for and responding to flooding. This results in collaboratively developing neighborhood plans of action to address flood issues specific to the community and their needs. The work is very time and capacity intensive, and does not produce deliverables at the time scale of many grant funding cycles. To further this work in the state, the coastal program may consider opportunities to continue to build relationships with other community partners such as SeaCoast Health Network, Workforce Housing Initiative, and housing authorities and to pursue grant funding from other sources more closely aligned with this type of community engagement.

**Accomplishment:** The New Hampshire Coastal Program provides extensive funding, technical assistance, and project management support for its state, regional, local, and neighborhood partners to build coastal resilience. The coastal program has supported the growth of the Coastal Adaptation Workgroup, including securing a coastal management fellow to guide the workgroup through a planning process to further grow the group's impact. The coastal program partnered with New Hampshire Sea Grant, Great Bay National Estuarine Research Reserve, and others to pilot a research project working directly with lower wealth communities to increase their ability to prepare for and respond to flooding and erosion.

## **Coastal Habitat**

The coastal program is very successful in supporting restoration and habitat protection, particularly through its resilient tidal crossings and salt marsh initiatives and support of living shorelines and dam removals. The program won a Visionary Award from the Gulf of Maine



Council in 2019 for exemplary work and leadership in the coastal watershed region's most significant restoration efforts, including the Resilient Tidal Crossings Project as well as dam removal projects. The coastal program is encouraged to share its habitat work and successes nationally with other coastal programs, national estuarine research reserves, and Sea Grant. In particular, the coastal program's Resilient Tidal Crossings and Salt Marsh initiatives can serve as a model for other programs.

### ***Resilient Tidal Crossings***

The state of New Hampshire has approximately 120 tidal stream crossings. The crossings play a critical role in the ecological integrity of the state's estuaries, the ability of tidal marshes to migrate with rising sea levels, and public safety. The coastal program has worked for over a decade to improve the state's management of tidal crossings. The coastal program has worked with a broad group of partners and leveraged funds from multiple sources to develop an assessment protocol, prioritize sites, conduct initial site planning for priority sites, and begin implementing stream crossing replacements. The Resilient Tidal Crossings Initiative is successfully addressing both ecological and community concerns.

In the coastal program's Assessment and Strategy 2011-2015 (2010) the coastal program proposed a wetland strategy entitled, "Adapt Freshwater Stream Crossing Design Criteria for Tidal Crossings." The coastal program researched the issues, interviewed experts, and coordinated with partners to identify potential solutions. In 2014, the coastal program issued a memo to the department's Wetlands Bureau entitled, "Considerations for Incorporating Tidal Stream Crossings into NHDES Wetlands Bureau Regulation." In 2017, the department was ready to move ahead with a large rule rewrite. The coastal program used a competitive Project of Special Merit grant to fund staff time to work with the Wetlands Bureau to incorporate tidal crossings into the existing rule structure for culvert replacement. In December 2019, the new rules went into effect. They include new Tier 4 standards, which create new regulatory design criteria for the replacement and repair of culverts and bridges affected by tidal flow. Tier 4 crossings require similar levels of engineering and environmental due diligence as Tier 3 site freshwater stream crossings, with a focus on tidal information, and require that tidal crossings accommodate a 100-Year 24-hour storm, prevent a restriction of tidal flows, account for channel morphology, and consider sea level rise.

The coastal program initiated a Resilient Tidal Crossings Project to identify and prioritize tidal crossings for replacement. The coastal program partnered with the Nature Conservancy and University of New Hampshire to develop the "New Hampshire Tidal Crossing Assessment Protocol" (2017) ([bit.ly/4aHC8d0](https://bit.ly/4aHC8d0)). The partners then assessed the state's tidal crossings based on the criteria that focused on public safety and habitat resilience. A report, "Resilient Tidal Crossings: An Assessment and Prioritization to Address New Hampshire's Tidal Crossing Infrastructure for Coastal Resilience" ([bit.ly/4aMXEx4](https://bit.ly/4aMXEx4)), was published in 2019 and the data is available through an online mapping tool on the New Hampshire Coastal Viewer ([bit.ly/47zr6Uh](https://bit.ly/47zr6Uh)). The information is being used by the coastal program and partners, including community officials and road managers, to strategically repair or replace tidal crossing

infrastructure and to identify high priority restoration and conservation opportunities. The coastal program is also working with the University of New Hampshire to further develop a tool that will enable local governments and other entities to integrate the information with other data and customize results to reflect their priorities.

The coastal program and the Nature Conservancy then worked with the municipal and state road managers of the state's five highest priority tidal crossings to develop preliminary engineering designs and obtain permits. This project created a pipeline of projects for implementation and was funded through a grant obtained by the coastal program from the National Fish and Wildlife Foundation–National Coastal Resilience Fund.

The coastal program then developed an Infrastructure Investment and Jobs Act grant request, which was awarded in 2023. The \$2.9 million grant will be used for replacement of three of the five undersized tidal culverts in the Towns of Stratham and Rye. The projects are scheduled for completion in 2025 and provide an opportunity to demonstrate best practices through all phases of project development.

As part of this effort, the coastal program has built a stronger partnership with New Hampshire Department of Transportation, which is encouraging for future projects where the state could continue to align resilient resource-based projects with transportation projects. The Department of Transportation recently included the tidal crossing work in its 10-year transportation plan, which will enable culvert replacements that might not otherwise be completed.

The habitat coordinator serves as the key point person in this effort, and state and local officials and partners all look to the coordinator for expertise. As discussed in the program administration section, there is a need to build more depth of bench in this area. There is a need to further engage and build relationships with the Department of Transportation and Department of Safety, Division of Homeland Security and Emergency Management, to ensure that this work becomes part of their ongoing processes.

**Accomplishment:** The New Hampshire Coastal Program has successfully led its Resilient Tidal Crossing Initiative and worked with partners to update state regulations to include criteria for tidal crossings and create a protocol and assess tidal crossings. This groundbreaking work has enabled the state to prioritize crossings in need of repair or replacement, create a pipeline of priority projects that have completed preliminary engineering designs and permitting, and obtain funding for three high priority culvert replacements.

**Recommendation:** The NOAA Office for Coastal Management encourages the Department of Environmental Services and New Hampshire Coastal Program to continue to build partnerships and pursue joint projects with complementary agencies key to the success of coastal resilience, particularly the Department of Safety, Division of Homeland Security and Emergency Management, and Department of Transportation.

## ***Salt Marshes***

The coastal program partnered with the Great Bay National Estuarine Research Reserve, NOAA, the University of New Hampshire, and New Hampshire Fish and Game Department and other partners to map and systematically assess the state's 5,790 acres of salt marsh habitat. This project builds on a National Estuarine Research Reserve System habitat mapping project. Habitat data were combined with high resolution land cover, shoreline, sea level rise, and other data sets to map salt marsh and establish a baseline against which future map updates can be compared. The maps were used to conduct a statewide salt marsh resilience assessment that examined current conditions, vulnerability, and capacity of individual marshes to adapt. This resulted in the New Hampshire Marsh Plan, a suite of products that provide a comprehensive look at the resilience of the state's tidal marshes ([bit.ly/3Hy9UEm](https://bit.ly/3Hy9UEm)).

The plan serves as a screening tool to show where restoration, experimental science, land conservation, and land use planning can be most effective in protecting salt marshes based on current condition, vulnerability, and adaptation potential. The plan is providing a framework for the coastal program and partners to strategically invest in actions to restore and protect marshes that are likely to persist and provide benefits over time. Project partners, including NOAA, published a peer-reviewed research article, "Marsh Migration and Beyond: A Scalable Framework to Assess Tidal Wetland Resilience and Support Strategic Management" (2023) ([bit.ly/3vshz4n](https://bit.ly/3vshz4n)). Going forward, the project partners plan to conduct outreach, plan for future restorations, and have recently created a Salt Marsh Task Force.

The coastal program has provided key financial and technical support to the Seabrook-Hampton Estuary Alliance efforts to improve marsh management. The alliance developed an estuary management plan (2023) and created a database for restoration projects in the region. A big goal of the alliance is to remediate the over 375 miles of farm and mosquito ditching to help ensure the resilience of the 4,000-acre Hampton-Seabrook Estuary salt marsh. The alliance is also focused on monitoring restoration efforts to better understand what makes a successful restoration.

With funding from a National Coastal Resilience Grant, a joint program of the National Fish and Wildlife Foundation and NOAA, the Town of Hampton identified four areas in the Hampton-Seabrook Estuary salt marsh for a 14-acre demonstration project showcasing ditch remediation, through mowing grasses adjacent to ditches and attaching the grasses to the bottom of the ditches with twine as a nature-based solution to flooding. The project was constructed in 2023 with support from the department. The coastal program was invited by the Northeast Association for Fish and Wildlife Agencies to submit a \$2 million America the Beautiful grant application focused on tidal wetlands, which will increase the scale of implementation to 120 acres, and this was recently awarded.

The coastal program partnered with Odiorne Point State Park and Rockingham County conservation district to provide financial and technical support to restoration efforts, including development of an invasive species plan, high resolution marsh habitat mapping, and

restoration of a coastal salt pond and maritime swamp. The site, including the Fairhill Marsh to the south, also has extensive ditching and control structures. The conservation district is bringing together partners to look at restoration priorities and to create a management plan, and the high-resolution salt marsh maps will help inform the process. In addition, the reserve is helping to create even more detailed maps, and the coastal program will assist with the necessary fieldwork to better understand the current state of the marsh.

A major challenge to marsh restoration in New Hampshire is that the marsh is often privately owned and approximately 20 percent of parcels have unclear ownership. The coastal program successfully competed for a 2023 Project of Special Merit to work with Hampton-Seabrook Estuary partners to identify these parcels and develop strategies for determining ownership. The project will also support the creation of a land conservation strategy and development of procedures for land acquisitions.

**Accomplishment:** The New Hampshire Coastal Program has worked with partners to map and assess the vulnerability of the state’s salt marshes, prioritize areas for restoration, and pursue funding and staff to support future restoration and land acquisition.

### ***Living Shorelines***

The coastal program has worked to promote the use of living shorelines as a method to stabilize the coast and provide habitat for wildlife. The coastal program identified the need for a living shorelines suitability model and successfully competed for a NOAA Coastal Fellow to develop the model. The fellow led the development of the report, “New Hampshire Living Shoreline Site Suitability Assessment” (2019) (<http://bit.ly/48llib3>), and created an ARCGIS Viewer ([bit.ly/3txawH2](http://bit.ly/3txawH2)) that can be used by planners and project proponents to identify sites suitable for living shorelines in order to address erosion issues along the tidal shoreline.

As part of the 2019 Department of Environmental Services rule update, the coastal program worked with the Wetlands Bureau to update the regulations to incentivize living shoreline approaches to stabilization and coastal protection. The coastal program worked with the Wetlands Bureau to update the state’s wetlands regulations. The coastal program was also able to partner with the Wetlands Bureau to present on the new wetlands rules’ coastal vulnerability assessment and living shoreline requirements, including information related to the Coastal Flood Risk Guidance, at a variety of trainings from 2020-2021 through the 2019 Project of Special Merit grant.

In 2020, the coastal program was awarded a \$257,000 National Coastal Resilience Fund Grant, “Living Shoreline Stabilization for Communities and Tidal Wetlands in the Great Bay Estuary,” to create a pipeline of living shoreline projects that protect salt marsh habitat and coastal communities from erosion, sea level rise, and flooding, prioritized using the Shoreline Site Suitability Assessment. Several projects were selected for 50 percent engineering designs.

The coastal program partnered with the Town of Durham and University of New Hampshire on the Wagon Hill Living Shoreline Project. The coastal program funded the initial planning through

a Coastal Resilience grant and worked with partners to obtain additional funding for the living shoreline installation and an extension that will be installed in 2024. The living shoreline has served as a model project that has helped interest other coastal communities and contractors in living shorelines. The coastal program has hosted events for contractors to provide them with information on living shorelines. During the evaluation site visit, the Town of Durham highlighted the value of the project in helping allay citizen concerns regarding a contentious project to remove Mill Pond Dam that would require some similar techniques. Town officials appreciated being able to point to Wagon Hill as an example of what the project could look like, helping to reassure citizens that the end project would be a success.

### ***Dam Removal***

The coastal program provides support to the department's Dam Bureau which regulates the repair, reconstruction, maintenance, and operation of dams and issues decisions regarding new dams. The state has 2,600 registered dams and many unregistered dams. The program is staffed by one person and relies heavily on partners such as the coastal program.

The coastal program provided project support for the removal of three coastal dams, including obtaining grant funding and managing the project and funds. The 2016 removal of the Exeter River Dam included adjusting the Town of Exeter's water supply intake and restoration of 7.8 miles of fish passage. The project required extensive adaptive management to work through issues, and based on this learning experience, adaptive management is now incorporated into the state's dam removal permitting process. The dam removal has been a success with 6,000 herring traveling up river in the first run and 238,000 in 2023. The river is also seeing increased recreational use.

The Upper and Lower Sawyer Mill Dams on the Bellamy River were found to be high hazard risks in 2009. After a decade-long planning process, the upper dam was removed in 2019 and the lower dam was removed in 2020. The project opened up the river to migrating fish, restored 21 acres of floodplain wetlands, and the dam removal will reduce flood elevations by over seven feet during a 100-year storm. The river runs under an old industrial building that has since been converted into apartments. The project required the removal of 3,000 cubic yards of contaminated river-bottom sediment beneath the building. In order to address impacts on fish passage under the apartment building, the coastal program provided funding to build resting pools for herring. The coastal program helped acquire and manage funding from 19 different sources. The coastal program was commended by its partners as always having a "we can do this" approach, noting "we can find funding for this." The coastal program is continuing to work with the Dam Bureau to pursue funding for the removal of other high hazard dams.

**Accomplishment:** The New Hampshire Coastal Program successfully managed three coastal dam removal projects in support of the New Hampshire Department of Environmental Services Dam Removal and River Restoration Program. The removal of the dams has opened up new sections of the Exeter and Bellamy Rivers to fish migration, restored floodplain wetlands, and reduced flooding risks.

## Evaluation Metrics

Beginning in 2012, state coastal management programs began tracking their success in addressing three evaluation metrics specific to their programs. The evaluation metrics include a five-year target and provide a quantitative reference for each program about how well it is meeting the goals and objectives it has identified as important to the program. In 2018 and 2023, coastal programs began new five-year periods and set targets specific to their programs for two performance measures from the existing Coastal Zone Management Performance Measurement System and the coastal hazards performance measure.

### *New Hampshire Evaluation Metrics*

#### Metrics 2012-2017

##### Metric 1

**Goal:** Informed and resilient coastal communities.

**Objective 1:** By 2017, five communities in the coastal zone are informed about the threats of coastal hazards and what resources are available to help plan for the impacts of storm surge, sea level rise, and increased flooding.

**Performance Measure:** The number of communities in the coastal zone that have conducted at least one outreach project in their town to raise awareness of coastal hazards as a result of technical or financial assistance from the coastal management program.

**Target:** Five communities in the coastal zone have conducted at least one outreach project in their town to raise awareness of coastal hazards as a result of technical or financial assistance from the coastal management program, during the five-year review period 2012-2017.

##### Results:

Year 1 (2012–2013) = 1 community (Portsmouth)

Year 2 (2013–2014) = 3 communities (Rye, Rockingham, Durham)

Year 3 (2014–2015) = 3 communities (Seabrook, Hampton, Hampton Falls)

Year 4 (2015–2016) = 3 communities (Durham, Hampton, Seabrook)

Year 5 (2016–2017) = 1 community (Hampton Falls)

**Total: 11 communities completed outreach projects**

**Discussion:** The coastal program exceeded its goal with 11 communities counted toward this measure and seven unique communities were reached. In 2017, the coastal program worked with partners to support the Climate in the Classroom Program in a sixth-grade class in Hampton Falls.

##### Metric 2

**Goal:** Informed and resilient coastal communities.

**Objective 2:** By 2017, coastal zone communities have completed four projects to reduce risk from coastal hazards.

**Performance Measure:** The number of completed projects to reduce future damage from hazards as a result of technical or financial assistance from the coastal program.

**Target:** 4 projects to reduce future damage from hazards as a result of technical or financial assistance from the coastal program, completed during the five-year review period 2012-2017.

**Results:**

- Year 1 (2012–2013) = 2 projects
- Year 2 (2013–2014) = 0 projects
- Year 3 (2014–2015) = 1 project
- Year 4 (2015–2016) = 1 project
- Year 5 (2016–2017) = 2 projects

**Total: 6 projects**

**Discussion:** The coastal program exceeded its target. In 2017, the coastal program supported the Rockingham Planning Commission and Strafford Regional Planning Commission’s work with 10 municipalities surrounding the Great Bay Estuary. As part of the Climate Risk in the Seacoast project, vulnerability assessment reports and map sets detailing potential coastal flooding impacts to transportation systems, critical facilities and infrastructure, and natural resources associated with projected increases in storm surge, sea level, and precipitation were completed.

### **Metric 3**

**Objective 3:** By 2017, coastal zone communities have completed four projects to reduce flooding and pollution risk from stormwater runoff.

**Performance Measure:** The number of completed projects to reduce stormwater runoff as a result of technical or financial assistance from the coastal program.

**Target:** Four projects to reduce stormwater runoff as a result of technical or financial assistance from the coastal program, completed during the five-year review period 2012-2017.

**Results:**

- Year 1 (2012–2013) = 1 project
- Year 2 (2013–2014) = 0 project
- Year 3 (2014–2015) = 1 project
- Year 4 (2015–2016) = 1 project
- Year 5 (2016–2017) = 2 projects

**Total: 5 projects**

**Discussion:** The coastal program exceeded its target and worked with communities to improve stormwater runoff and reduce flooding risks. In 2017, this included support of research at the University of New Hampshire Stormwater Management Center and funding to the town of Exeter for a feasibility assessment and design of green infrastructure.

## Metrics 2018-2023

### Metric 1

**Goal:** Improve resilience to coastal hazards.

**Objective:** To develop a coastal resilience program with a dedicated coastal program staff person that provides technical assistance and outreach to coastal zone communities and state agencies, resulting in plans and policies that better address the coastal risks and hazards that are exacerbated by climate change in New Hampshire.

**Strategy:** The Coastal Resilience Technical Assistance Program will provide a central source for assessments and information, technical assistance, community outreach, and coordination for reducing coastal risks and hazards in New Hampshire. The Coastal Resilience Coordinator and Coastal Resilience Specialist within the coastal program will coordinate the program, bringing together the combined resources and knowledge of the New Hampshire Coastal Adaptation Workgroup members, coastal program staff, and other local, state and federal sources to provide assistance and training to communities and state agencies, support the implementation of the New Hampshire Coastal Risk and Hazards Commission’s recommendations, and administer coastal resilience grant projects. Between 2018 to 2023, a) 2 state-level policies and plans; b) 1 local-level policies and plans; c) 5 projects completed at the state-level; and d) 5 projects completed at the local level to reduce future damage from coastal hazards with assistance from coastal program funding or staff.

**Performance Measure:** Between 2018 to 2023, number of a) state-level policies and plans; b) local-level policies and plans; c) projects completed at the state-level; and d) projects completed at the local-level to reduce future damage from coastal hazards with assistance from coastal program funding or staff.

**Target:** Between 2018-2023, a total of 13 a) state-level policies and plans; b) local-level policies and plans; c) projects completed at the state-level; and d) projects completed at the local level to reduce future damage from coastal hazards will be completed with assistance from coastal program funding or staff.

**Results:**

- Year 1 (2018–2019) = 8 state or local policies, plans, and projects
- Year 2 (2019–2020) = 0 state or local policies, plans, and projects
- Year 3 (2020–2021) = 6 state or local policies, plans, and projects
- Year 4 (2021–2022) = 6 state or local policies, plans, and projects
- Year 5 (2022–2023) = 8 state or local policies, plans, and projects

**Total: 28 state or local policies, plans, and projects**

**Discussion:** The coastal program exceeded its target in year three. The coastal program supported the development of 2 state policies/plans; 10 local policies/plans; 8 state projects; and 8 local projects.



## Metric 2

**Goal:** Increase understanding and capacity to address coastal hazards.

**Objective:** To develop a coastal resilience program with a dedicated coastal program staff person that provides outreach, information and capacity-building opportunities to coastal zone communities and state agencies, resulting in training to minimize coastal risks and hazards that are exacerbated by climate change in New Hampshire.

**Strategy:** The Coastal Resilience Technical Assistance Program will provide a central source for information, technical assistance, and community outreach as well as play a pivotal coordination role in the New Hampshire Coastal Adaptation Workgroup and outreach sub-group, including the coordination of the annual Climate Summit. In addition, through the maintenance of a web-based coastal resilience hub, coastal program staff fills the need for a centralized platform that organizes, consolidates, and disseminates information about resilience efforts and tools focused in the Coastal Zone. Lastly, by expanding the application of the Preparing for Climate Change workshop series, staff will provide capacity-building, communication, outreach, and training opportunities.

**Performance Measure:** Between 2018-2023, the number of training events related to Coastal Hazards offered by the coastal program through coastal program funding or staff.

**Target:** Between 2018-2023, 20 training events related to coastal hazards will be offered by the Coastal Program through coastal program funding or staff.

**Results:**

- Year 1 (2018–2019) = 7 training events
- Year 2 (2019–2020) = 4 training events
- Year 3 (2020–2021) = 6 training events
- Year 4 (2021–2022) = 3 training events
- Year 5 (2022–2023) = 42 training events

**Total: 64 training events**

**Discussion:** The coastal program met its target in year four. The coastal program has supported training including Coastal Flood Risk Guidance Training, Living Shorelines, New Hampshire Best Practices for Effective Floodplain Management, trainings during the monthly Hampton Coastal Hazards and Adaptation Team meetings, and the annual New Hampshire Coastal Climate Summit coordinated with coastal program assistance.

## Metric 3

**Goal:** Improve coastal habitat.

**Objective:** To implement a Restoration Program with a dedicated coastal program staff person that provides technical assistance to partners to improve, coordinate and fund restoration activities.

**Strategy:** Through the New Hampshire Coastal Program Restoration Program, staff will provide technical support to local and regional organizations to develop, implement, and evaluate

activities that affect coastal habitat. Restoration requires a significant level of staff coordination and information exchange to prioritize projects and leverage resources to obtain better outcomes for natural resource management decisions. The coastal program will play an important role in shaping, improving and funding activities that protect and restore coastal habitat, with a focus on tidal rivers. Examples of this work include dam removals and culvert replacements. (The performance measure includes 8b+8d+8f+8h.)

**Performance Measure:** Between 2018-2023, the number of acres of coastal habitat under restoration with assistance from coastal program funding or staff.

**Target:** Between 2018-2023, 50 acres of coastal habitat will be under restoration with assistance from coastal program funding or staff.

**Results:**

- Year 1 (2018–2019) = 10.5 acres coastal habitat restored
- Year 2 (2019–2020) = 54 acres coastal habitat restored
- Year 3 (2020–2021) = 0 acres coastal habitat restored
- Year 4 (2021–2022) = 39.6 acres coastal habitat restored
- Year 5 (2022–2023) = 0 acres coastal habitat restored

**Total: 104.1 acres of coastal habitat restored**

**Discussion:** The coastal program met its target in year two. The coastal program has supported restoration of a variety of coastal habitat types including upland forest and tidal and freshwater wetlands.

## Conclusion

This evaluation concludes that the State of New Hampshire is successfully implementing and enforcing its federally approved coastal management program, adhering to the terms of its federal financial assistance awards, and addressing coastal management needs identified in section 303(2)(A) through (K) of the Coastal Zone Management Act.

These evaluation findings contain two recommendations that must be considered before the next regularly scheduled program evaluation but that are not mandatory at this time. Recommendations that must be repeated in subsequent evaluations may be elevated to necessary actions.

This is a programmatic evaluation of the New Hampshire Coastal Program, which may have implications regarding the state's financial assistance awards. However, it does not make any judgment about or replace any financial audits.

---

Jeffrey L. Payne, Ph.D.  
Director, NOAA Office for Coastal Management

---

Date