

**STATE OF RHODE ISLAND
WETLANDS PROGRAM PLAN
2020-2025**



Prepared by the
Rhode Island Department of Environmental Management

For the
Environmental Protection Agency, Region 1

Rhode Island Wetlands Program Plan

The Rhode Island Wetlands Program Plan provides a framework for enhancing state programs responsible for the stewardship of freshwater and coastal wetlands in the state. It describes priority activities for the period of 2020-2025 associated with State management programs administered by the Rhode Island Department of Environmental Management (DEM), the Rhode Island Coastal Resources Management Council (CRMC) and their partners. These activities are aimed at protecting and restoring wetland resources for their environmental, economic and human health benefits. This plan builds on *FY17-FY19 Core Elements Plan (DEM, 2016)* and for continuity reflects certain activities that have been undertaken since 2019 as well as outlining planned and recommended actions through FY2025.

Consistent with state water resource management policy (Water Quality 2035) and law, the overarching goal of the plan is to protect and restore the beneficial functions and values of Rhode Island's wetland resources. In support of this goal, and consistent with updated Environmental Protection Agency (EPA) guidance, the plan is organized into four sections: Monitoring and Assessment, Regulation, Voluntary Protection and Restoration and Water Quality Standards for Wetlands. The activities in these sections are aimed at improving the management of wetlands through the generation of information about the quantity and condition of the resources, the strengthening of regulatory programs, preservation of unique wetland habitats, integration of wetland protection with watershed and resiliency planning and the facilitation of voluntary protection and restoration actions.

This plan reflects additional emphasis and alignment with RI goals and priorities related to both climate change and environmental justice. It is consistent with overarching goals articulated in the recent RIDEM Strategic Plan FY24-26. That plan includes objectives related to these topics that are relevant to this plan including, but not limited to, the two noted below. As articulated, DEM will:

- Demonstrate leadership by integrating climate change considerations into all levels of decision-making including policies, permitting, plans, regulations, and projects by utilizing best available science and research.
- Incorporate environmental justice considerations when making decisions regarding permitting, inspections, grant funding, and completing regulatory reviews.

Regarding climate change, the DEM chairs the RI Executive Climate Change Coordinating Council and is actively working on both mitigation and adaptation strategies. The RI Coastal Resources Management Council is one of 12 additional state and quasi-state agencies that comprise the Council and also extensively involved in climate change assessment and adaptation activities. In 2018, RI released *Resilient Rhody – An Actionable Vision for Addressing the Impacts of Climate Change in Rhode Island* that was statewide in scope. That document both describes the vulnerabilities of coastal and freshwater wetlands to climate change and recommends climate resiliency actions that are incorporated into or otherwise consistent with the actions and activities outlined in this plan.

Regarding environmental justice, DEM updated and released its environmental justice policy in September 2023 to guide all programs within the Department. This policy was created by DEM to represent the Department’s commitment to the inclusion of equity and justice within all programs. With the support of other funding, the DEM Office of Water Resources is assessing its water quality programs with respect to equity. DEM has also retained a fulltime Climate Justice Specialist to foster engagement with underserved communities.

Please note the years labeled in the tables of this plan refer to calendar years. The “X” represents the time period in which the work has or is anticipated to be undertaken subject to the availability of resources.

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CORE ELEMENT: MONITORING AND ASSESSMENT

Goal: Assess the condition of the State's wetlands to understand the cumulative impacts of human activities on wetlands and to improve their protection and management.

Monitoring and assessment of wetland conditions provides important information for resource managers. The information produced through monitoring and assessment can be used to assess the effectiveness of existing management strategies, identify emerging issues and provide a sound technical basis for policy and program development. With respect to wetlands, Rhode Island embraces the three-tier framework reflected in EPA guidance that includes assessment at varying scales including a landscape level (Tier 1), rapid assessment (Tier 2) and intensive site assessment (Tier 3). With support of EPA Wetland Program Development Grants, Rhode Island has previously developed rapid assessment methods for both freshwater wetlands and salt marshes. Additional Tier 1 and Tier 3 work has also been pursued. The prior work has been accomplished through a partnership among DEM, CRMC, the Narragansett Bay National Estuarine Research Reserve (NBNERR) and the Rhode Island Natural History Survey (RINHS). Tasks related to salt marsh monitoring are organized as the Salt Marsh Restoration Assessment and Monitoring Program (RAMP) and coordinated via a formalized interagency salt marsh workgroup. Program development for freshwater wetland monitoring and assessment was previously developed through several DEM work groups involving governmental and non-governmental partners as well as academic researchers. Freshwater monitoring and assessment work has continued through a series of targeted projects carried out in partnership with the RINHS and overseen by the DEM Office of Water Resources. Project specific work groups have been and will continue to be used to coordinate partners, e.g., vernal pool work group. Looking forward, there continues to be a need to build capacity to fully implement monitoring and assessment strategies desired for management and routinely adapt those strategies to new science concerning climate change.

Rhode Island's identified actions related to wetland monitoring and assessment in part reflect the following Agency priorities: (1) Characterizing condition and the impacts of a changing climate on salt marshes; and (2) Reducing the data gap regarding the location of vernal pools; and (3) Providing information on freshwater wetlands conditions useful in watershed planning and related activities. Additionally, Rhode Island plans to carry-out assessment of additional urban wetlands including DEM identified environmental justice areas.

| Action 1. Review and update wetland monitoring strategies for freshwater wetlands and saltmarshes integrating considerations of climate change and environmental justice. Update goals and objectives to align with management decision-making needs. | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Activities | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| A. Finalize an update of the <i>Freshwater Wetland Monitoring and Assessment Plan</i> . Ensure RI activities are aligned with regional data collection strategies relating to climate change, aquatic ecosystems, and water quality. | | | | | X | X |
| B. Update, as needed, the <i>Strategy for Developing a Salt Marsh Monitoring and Assessment Program for the State of Rhode Island</i> . | | | | | | X |
| C. Update Standard Operating Procedures and Quality Assurance Project/Program Plans to maintain compliance with DEM Quality Management Plan and EPA requirements | X | X | X | X | X | X |
| D. Investigate and seek additional funding sources to build capacity and support wetland monitoring and assessment activities. | X | | X | X | X | X |
| E. Continue development of data management tools to support wetlands monitoring data analysis and facilitate data-sharing with partners. | | | X | X | X | X |
| F. Prepare Wetlands Status and Trends report and provide content to DEM Integrated Reports on Water Quality | | X | X | | X | |
| Action 2. Develop and implement wetland monitoring and assessment tools and projects to provide needed information on the quantity and quality of wetland resources to management programs. | | | | | | |
| Activities | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| <i>Freshwater Wetlands</i> | | | | | | |
| A. Refine freshwater wetland rapid assessment methods (RIRAM) by applying the method to additional sites and using data to continue to define reference conditions, build out/refine | X | | | | | X |

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|---|-------------|-------------|-------------|-------------|-------------|-------------|
| existing condition gradients and ensure scientific validity. | | | | | | |
| Activities continued | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| B. Utilize RIRAM to assess freshwater wetlands and buffers to support watershed planning and management decision-making including assessment of vulnerable and high ecological value wetlands and riparian buffers and floodplains. | | | | | | X |
| C. Utilize RIRAM to assess freshwater wetland sites, including restoration sites, in targeted watersheds. | | | | | | X |
| D. Develop and design a freshwater wetland long-term trend network for the purpose of assessing impacts of climate change. | | | | | | X |
| E. Apply RIRAM to assess conditions in urban freshwater wetlands and buffers. | | | | | | X |
| F. Working with a project team, research and evaluate mapping methods to identify and verify vernal pools. Use LiDAR and new aerial imagery in the methods development. Carry out pilot projects to assess new methods and generate new data on vernal pools. | X | | X | X | X | |
| G. Map potential vernal pools on a prioritized watershed basis. Refine inspection protocols for verifying vernal pool locations. (Contingent on funding) | | | | | | X |
| <i>Coastal Wetlands</i> | | | | | | |
| A. Continue development, refinement and validation of rapid assessment method for salt marshes (MarshRAM). | X | | X | X | | |

| Activities continued | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| B. Apply MarshRAM to an expanded number of salt marshes to build baseline data, assess habitats and evaluate management practices to prioritize future actions and support tracking of changes in condition over time. | X | | | X | X | |
| C. Apply MarshRAM and other monitoring methods to unassessed salt marshes adjacent to environmental justice areas. | | | | | X | |
| D. Apply MarshRAM to assess salt marsh restoration sites and evaluate the effectiveness of restoration approaches. | X | | | X | X | X |
| E. Develop a MarshRAM User Manual and conduct training workshops. | X | | | | | |
| F. Develop Tier 3 salt marsh monitoring protocols. | X | X | X | | | |
| G. Establish an expanded sentinel monitoring network for salt marshes for long-term assessment of salt marsh conditions. | | | | X | X | |
| H. Assess the outcomes of beneficial reuse of sediment to increase marsh platform elevations. | | | | X | X | X |
| I. Periodically update Tier 1 GIS analysis of coastal wetlands as updated aerial photography is made available. | | | | | | X |
| J. Analyze marsh edge change over time. | | | | X | | |
| K. Continue to assess vulnerability of salt marshes to climate change including sea level rise and storm surge. Update the Statewide models, such as the Sea Level Affecting Marshes Model (SLAMM), to identify opportunities for restoration and assist in planning for future marsh migration. | | | | X | X | X |

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| L. Develop and test methods for more detailed assessments of uplands having high potential for supporting salt marsh migration. | | | | X | X | |
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| Action 3. Build and collaborate in partnerships to advance wetland monitoring and assessment science and facilitate use of monitoring data in research, watershed planning and management activities. | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Activities | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| A. Continue to participate in the New England Biological Assessment of Wetlands Workgroup (NEBAWWG) including work on common metrics with the Mid-Atlantic region. | X | X | X | X | X | X |
| B. Continue participation in the Rhode Island Environmental Monitoring Collaborative which provides a forum for collaboration and information exchange, coordination of monitoring activities and prioritization of monitoring gaps. | X | | X | X | X | X |
| C. Continue collaboration with Narragansett Bay Estuary Program on development and refinements of wetland indicators, including saltmarshes, and on program coordination, e.g., Salt Marsh Working Group. | X | | | X | X | X |
| D. Share project results through presentations via workshops, conferences or webinars and through updated website content. | X | X | X | X | X | X |

CORE ELEMENT: REGULATION

Goal: Avoid and minimize alterations and losses of wetlands and buffers for protection of the important functions and values they provide and facilitate effective restoration.

Rhode Island has implemented regulatory programs governing projects and activities that might alter freshwater and coastal wetlands since 1972. These programs are administered by the RI Department of Environmental Management (DEM) and the RI Coastal Resources Management Council (CRMC). In 2015, Rhode Island state laws were amended to significantly expand the State's jurisdiction over land around freshwater wetlands while curbing the authorities of municipalities to specify wetland buffer requirements and setbacks in their local land use ordinances. An extensive rule development process was undertaken that culminated in adoption of new state freshwater wetland regulations that went into effect July 1, 2022. The rules, which established a common set of wetland buffer and setback standards, are administered and enforced by both DEM and CRMC within their respective agency authorities and jurisdictions. A protective buffer requirement is assigned to *all* freshwater wetland resources and generally ranges from 25 to 200 feet. With limited exceptions, the buffer requirement must be taken into account on applications involving new projects or activities filed under the new rules. Applicants proposing to disturb regulated vegetated buffer areas are subject to a variance process. Four general permits covering project and activities of limited impact were issued in the fall of 2022.

Implementation of wetlands regulations is coordinated among DEM, CRMC, the Army Corps of Engineers – New England and EPA. The ACOE general permit applicable to certain smaller size projects was reissued in 2022 and is proposed for additional modifications in 2023.

A priority for the DEM Freshwater Wetlands Program is the modernization of the database system that supports statewide permitting. In planning and development for several years, DEM is actively collaborating with the RI Division of Information Technology to replace its current system with a cloud-based modern data system that will be integrated with Geographic Information Systems (GIS) and aligned with related systems including other DEM permitting programs as well as the on-line building permit system utilized by most RI communities. The modernization effort will result in changes in processes with the potential for online application filing and other changes that are expected to improve the permitting process. Full funding for this multi-million information technology project and a vendor contract was secured in 2022. It is also envisioned that information systems used by CRMC will be integrated into the new platform in a second phase of IT modernization.

| Action 1. Develop and implement freshwater wetland regulations to strengthen protection of wetlands, buffers and floodplains. | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Activities | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| A. Develop draft regulations to implement statewide standards for freshwater wetland buffers and setbacks in accordance with revised state law. | X | X | X | | | |
| B. Coordinate stakeholder input process and public review of draft freshwater wetland regulations. | X | X | X | | X | X |
| C. Promulgate revised DEM and CRMC freshwater wetland regulations. Phase in implementation in accordance with rules effective July 1, 2022. | | X | X | | | X |
| D. Support implementation of new rules by developing and distributing guidance and public outreach materials. Develop and conduct training for target audiences including municipalities and consultants. | X | X | X | X | X | X |
| E. Utilize the DEM website to provide on-going access to training videos and related content on the new freshwater wetland rules. Update as needed. | | | X | X | X | X |
| F. Develop and issue general permits governing certain activities that present limited potential for impacts to wetlands, buffers or floodplains. | | | X | X | X | X |
| G. Develop guidance on specific topics to support implementation of the freshwater wetland regulations: Vernal pools, homeowner exemptions and other topics as needed. | X | X | X | X | X | X |
| H. Update the new rules as needed for clarification, enhanced efficiency, to support implementation of a modernized data system. See Action 2. | | | | X | X | |

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|--|-------------|-------------|-------------|-------------|-------------|-------------|
| I. Review wetland rules for needed changes as new science on climate change becomes available. | | | | | X | X |
| J. Coordinate with the New England District Army Corps of Engineers regarding reissuance of ACOE General Permit for RI. | | X | X | X | X | |
| Action 2. Modernize the data management systems supporting freshwater wetland permitting. | | | | | | |
| Activities | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| A. Develop and implement new permitting data systems supporting freshwater wetland permitting and related DEM programs. Project design and implementation is coordinated with the RI Division of Information Technology. | | | X | X | X | |
| B. Complete DEM migration of wetland permitting data and staff training to fully operationalize modernized data system. | | | | X | X | |
| C. Integrate CRMC wetlands permitting into the modernized wetland permitting platform. (Additional funding required). | | | | | X | X |
| D. Enhance record-keeping by digitization of additional wetland permit and enforcement records. (Contingent on funding). | | | | | X | X |
| E. Develop protocols and build capacity for expanding use of technology in wetlands fieldwork (permitting and compliance) through the use of tablets or other devices. | | | | X | X | X |
| F. Identify, design and implement improvements to the permitting process facilitated by data system modernization including but not limited to facilitating data exchange with local governments, applicants and the public. | | | | X | X | X |
| G. Develop tools and projects to enhance compliance with state wetland rules | | | | | | X |

| Action 3: Protect wetlands through improved management of stormwater. | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Activities | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| A. Implement the <i>Rhode Island Stormwater Design and Installation Manual</i> and Low Impact Development (LID) w/ Coastal Resources Management Council (CRMC) including integrating permitting reviews. | X | X | X | X | X | X |
| B. Update the <i>Rhode Island Stormwater Design and Installation Manual</i> with a focus on climate change considerations and new science regarding performance of stormwater best management practices. (Funding required) | | | | | X | X |
| C. Update state stormwater rules to reflect new science and any other changes needed to support an efficient permitting process. | | | | X | X | |
| D. Update and refine policies to support implementation of the Stormwater Manual related to wetland permitting including evaluation of new information about BMPs and BMP performance. | | | | | X | X |
| E. Develop and provide training on updated Stormwater Manual and Erosion and Sedimentation Control Handbook for RI. | | | | | | X |
| F. Coordinate with RIDOT on prioritization, design and implementation of stormwater projects including retrofitting that will better protect wetlands. | | X | X | X | X | X |
| Action 4: Modify regulations to facilitate wetland restoration and mission aligned beneficial projects. | | | | | | |
| Activities | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| A. Convene working group to identify ways to reduce regulatory burdens and facilitate certain types of projects aligned with DEM's overall mission that have limited potential for impacts to wetlands and buffers. | | | | | | X |
| B. Develop general permit for certain trail projects. | | | | | | X |

CORE ELEMENT: PROTECTION AND RESTORATION

Goals: Protect and restore the quantity and quality of wetlands to sustain their many beneficial functions and values. Prevent degradation of wetland functions and values.

Effective wetland protection and restoration requires actions beyond those available through regulatory programs. As reflected below, multiple strategies are needed to continue to make progress toward conserving, protecting and restoring both freshwater and coastal wetland resources. The importance of doing so is reinforced by the evolving science concerning climate change and recognition of the important functions wetlands provide in terms of watershed resiliency. Working in partnerships, RI State programs are working to build capacity on both the state and local levels to advance priority conservation and restoration projects. DEM recently organized an Ecological and Community Resiliency (ECR) Team that is expected to be of assistance to partners in planning, securing funding and management of wetland restoration projects. Public investment by both the federal and state governments have provided a historic level of funding opportunities for ecological restoration work which will deliver benefits to RI’s wetlands resources. CRMC and its partners have advanced state resiliency planning and developed planning tools for municipalities and other others to use in devising adaptation strategies for climate change, in particular sea level rise and storm surge in the coastal zone. Among activities outlined below, land conservation is also highlighted as it provides very strong, long-term protection of wetland resources including the potential for protection of larger expanses of upland buffers than the areas that fall under state regulatory jurisdiction. Over 45 land trusts currently operate across Rhode Island including 18 run by municipal governments.

| Action 1: Update state wetland protection and restoration strategies to enhance integration with other watershed-based planning activities. | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Activities | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| A. Develop an updated Freshwater Wetlands Restoration Strategy. | | | | | | X |
| B. Integrate wetland protection strategies and actions into watershed- based plans being developed by OWR surface water quality programs. | X | X | | X | X | |

| Activities continued | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|------|------|------|------|------|------|
| C. Develop enhanced mechanisms or tools for integrating information from various forms of watershed plans (local, state, federal), hazard mitigation plans and state and municipal resiliency plans. Build enhanced capacity to prioritize and track protection and restoration projects associated with wetland resources. | | | | | X | X |
| D. Update the <i>RI Coastal Wetlands Restoration Strategy</i> to reflect new scientific understanding and other programmatic developments. | | | | | | X |
| E. Develop protocols to facilitate the use of wetland resource information in state open space acquisition and management activities. | | | | | X | X |

Action 2. Develop, prioritize and implement saltmarsh restoration strategies to facilitate voluntary restoration actions. Collaborate with partners to build capacity for wetland restoration activities.

| Activities | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|--|------|------|------|------|------|------|
| A. Develop projects to support prioritization and planning for coastal wetland restoration projects consistent with the <i>RI Coastal Wetland Restoration Strategy</i> . | | X | | | X | X |
| B. Develop refined criteria for prioritization of state coastal wetland restoration and conservation actions including acquisition of lands to support marsh migration using updated SLAMM modeling. | | | | | X | X |
| C. Identify opportunities for infrastructure removal on publicly owned properties, which can serve as demonstration sites for salt marsh and shoreline adaptation. Continue to work with partners to develop demonstration projects. | | | | | | X |
| D. Build capacity to project development and management through newly DEM | | | | X | X | X |

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| established Ecological and Community Resilience Team initiated with NOAA funding. | | | | | | |
| Action 3. Promote riparian buffer protection and restoration by identifying and prioritizing projects that provide important co-benefits for fish and wildlife habitat, water quality, and flooding mitigation and watershed resiliency. | | | | | | |
| Activities | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| A. Identify and assess inland riparian buffers on a watershed basis (e.g., using aerial photos and field reconnaissance). Use the assessments to identify and prioritize areas for buffer restoration and protection, including acquisition of at-risk floodplain parcels, taking into account information from hazard mitigation and local resiliency plans. (Contingent on resources). | | | | X | X | X |
| B. Award and administer funding through state programs to projects that prevent and mitigate flooding through ecological restoration actions. | X | X | X | X | X | X |
| C. Coordinate and implement the Water Quality/Wetland Restoration Team to provide technical pre-application assistance to water quality and restoration project applicants. | X | X | X | X | X | X |
| Action 4: Promote adoption of local strategies and voluntary actions to protect wetlands | | | | | | |
| A. Collaborate with DEM Division of Fish and Wildlife on outreach and technical assistance to communities on topics involving protection of aquatic habitats, including wetlands.* | X | X | X | X | X | X |
| B. Develop guidance materials and trainings that promote stewardship of wetlands including but not limited to protection of isolated vernal pools and riparian buffers. | | | X | X | X | X |

| Activities continued | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| C. Provide access to data and information to support local open space acquisition planning that protects wetland habitats, including those of high ecological value (Examples: vernal pools, coastal fens). | | | | | X | X |
| D. Devise and implement demonstration projects of adaptation strategies in the coastal region that support salt marsh migration. | | | | | X | X |
| Action D: Enhance Wetland Data Systems Capabilities to Report Key Metrics | | | | | | |
| A. Develop and implement an improved means to automate the reporting of wetland habitat restoration outcomes. | | | | X | X | |
| B. Develop and implement an improved means to report on acreage of wetlands and adjacent buffers that are permanently conserved through acquisition. | | | | X | X | |

(*) Specific protection actions are also reflected in the RI State Wildlife Action Plan (2015).

CORE ELEMENT: WATER QUALITY STANDARDS FOR WETLANDS

Goal: RI wetlands resources are protected from the adverse impacts of anthropogenic pollutants.

RI state law and DEM rules governing water quality currently provide authority to address the pollution of wetlands. The State Water Quality Rules will be undergoing a triennial review as prescribed by the federal Clean Water Act in a process that will be initiated in FY24. This review period provides a timely opportunity to review consider whether any changes would be appropriate to RI's current regulatory standards framework.

| Action 1: Review state water quality regulations for adequacy relative to preventing pollution of wetland resources. | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Activities | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
| A. As part of the EPA required triennial review of DEM water quality rules, assess the adequacy of the existing RI framework relative to protecting and preventing the pollution of wetland resources. | | | | | | X |