

**North and South Rivers Watershed Association (NSRWA)**  
**DRAFT Scope of Work, July 1, 2019 – June 30, 2020**  
**as South Shore Regional Service Provider for the MassBays National Estuary Program**

The Massachusetts Bays National Estuary Program's (MassBays') Workplan for Federal Fiscal Year 2019 is the first implementation workplan for MassBays' Comprehensive Conservation and Management Plan (CCMP). Actions for the coming year are driven by the following Goals and Strategies described in our Revised CCMP:

**Goal 1. MassBays provides new resources to support research and management in the Bays.**

- Strategy 1.1 Address data gaps
- Strategy 1.2 Support valid (QA/QC) data collection and use

**Goal 2. MassBays reaches all planning-area municipalities with actionable information about coastal habitats**

- Strategy 2.1 Support research to inform policy and actions
- Strategy 2.2 Technical support and communications
- Strategy 2.3 Increase influence of underserved communities on decisionmaking

**Goal 3. MassBays provides regular and locally informed State of the Bays reporting that reflects the unique characteristics of MassBays assessment units (embayments, rocky shore, barrier beach), and documents progress toward target conditions.**

- Strategy 3.1 Establish target conditions
- Strategy 3.2 Guide local action for expanded habitat and improved water quality

Through implementation of these strategies, MassBays anticipate achieving the following Outcomes:

- Sustainable NEP
- Improved habitat continuity and restored hydrology
- Improved water quality
- Resilient coastal habitat, including nature-based coastal protection
- Restored natural communities
- Robust interagency and interdisciplinary collaboration and partnerships
- Well-informed, multisector input to decisionmaking which includes underserved communities

NSRWA will implement the programs and projects below, developed and approved by the South Shore Local Governance Committee (LGC), to make progress toward these overarching outcomes. A South Shore Regional Coordinator (RC) will lead NSRWA's efforts.

In addition to the region-specific Actions below, the RC and NSRWA will assist MassBays' overarching efforts to implement the CCMP by:

- Attending quarterly MassBays Management Committee meetings, providing updates on progress under each Strategy prior to each meeting.
- Participating in periodic Regional Coordinators' meetings and conference calls.
- Participating on at least one Management Committee Subcommittee.
- Responding to requests for information from Central Staff in a timely manner.

Reporting requirements are listed under the final section below, *Invoices, Reporting, and Deliverables*.

## Strategy 1.1 Address data gaps

<b>Action 1</b>	<b>Monitor diadromous fish runs</b>	
<b>Description/Objective</b>	Provide local, state and federal fisheries managers with population estimates of river herring at monitored runs to inform protection, restoration and management efforts. Monitoring by volunteers also supports citizen stewardship of runs. RC will support citizen monitoring of fish runs by providing partners and volunteers with training, data management, QA/QC, reporting, and other assistance.	
<b>CCMP Outcome</b>	Improved Habitat Continuity and Hydrology	
<b>Project partners &amp; roles</b>	DMF, NOAA Fisheries, River Herring Network: method collaboration and data sharing South Shore towns: herring run monitoring and maintenance	
<b>Budget &amp; level of effort</b>	\$250 (100 hrs)	
<b>NSRWA Actions</b>	<b>Deliverable</b>	<b>Timing (Q1-Q4)</b>
Recruit and train volunteers	Outreach and training: River Herring Network participation in Fall, Spring 2019 training sessions for volunteers, outreach materials	Q2-Q4
Compile 2019 herring count data	Final data report for 2019 herring counts submitted to DMF	Q2
Investigate the feasibility of installing a camera system in a South Shore run	Test camera in South River	Q3
Conduct Spring 2020 herring counts	Draft data report for 2020 counts	Q4
<b>Action 2</b>	<b>Water quality monitoring</b>	
<b>Task Description</b>	Continue citizen monitoring (“Riverwatch”) in coastal waters to identify potential for remediation and source control.	
<b>CCMP Outcome</b>	Improved Water Quality	
<b>Project partners &amp; roles</b>	Towns of Duxbury/Kingston/Plymouth: monitoring plan development	
<b>Budget &amp; level of effort</b>	\$14,250 (100 hrs)	
<b>NSRWA Actions</b>	<b>Deliverable</b>	<b>Timing (Q1 - 4)</b>
Coordinate volunteer sampling efforts as part of MassDEP grant	Volunteer monitoring completed	Q1
Coordination of water quality monitoring in Duxbury/Kingston/Plymouth	Monitoring plan for DKP	Q3

<b>Action 3</b>	<b>Assessing Coastal Acidification in Duxbury Bay</b>	
<b>Description/Objective</b>	RC will work with MassBays Central Staff, UMass Boston, and EPA's Office of Research and Development to assess coastal acidification conditions in Duxbury Bay, a center for shellfish aquaculture industry in Massachusetts	
<b>CCMP Outcome</b>	Improved water quality	
<b>Project partners &amp; roles</b>	UMass Boston: probe development EPA: sample analysis	
<b>Budget &amp; level of effort</b>	40 hrs	
<b>NSRWA Activities</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Develop QAPP for discrete sample collection	Approved QAPP	Q1
Develop and implement training for volunteers to maintain CA logger and ensure maintenance is occurring	List of citizen scientists; step-by-step training manual.	Q2
Collect monthly discrete samples and deliver to EPA's Narragansett Lab for analyses	Monthly samples collected at low and high tidal levels.	Q1-Q4
Conduct outreach about ocean acidification	community lecture	Q4

<b>Action 4</b>	<b>Monitoring Long-term Salt Marsh Vegetation Change</b>	
<b>Description/Objective</b>	Work with volunteers to monitor salt marsh vegetation changes through the Salt Marsh Sentinels program	
<b>CCMP Outcome</b>	<b>Resilient coastal habitat, including implementation of nature-based coastal protection measures</b>	
<b>Project partners &amp; roles</b>	Dock owners: data collection	
<b>Budget &amp; level of effort</b>	75 hrs	
<b>NSRWA Activities</b>	<b>Deliverable</b>	<b>Timing (Q1 - 4)</b>
Recruit and support dock owners in collection of salt marsh data	Report on findings and project participation	Q2

<b>Action 5</b>	<b>Conducting Horseshoe Crab Spawning Surveys</b>	
<b>Description/Objective</b>	Conduct horseshoe crab spawning surveys in Duxbury Bay to assess the population	
<b>CCMP Outcome</b>	Restored natural communities	
<b>Project partners &amp; roles</b>	DMF: data coordination and technical oversight	
<b>Budget &amp; level of effort</b>	100 hrs	
<b>NSRWA Activities</b>	<b>Deliverables</b>	<b>Timing (Q1 – 4)</b>
Conduct horseshoe crab monitoring surveys (field work)	FY19 data submitted to DMF	Q1
Recruit, train, and schedule volunteers	FY20 surveys completed	Q4

<b>Action 6</b>	<b>Monitoring Marine Invasive Species</b>	
<b>Description/Objective</b>	Monitor established field sites for non-native species in cooperation with CZM	
<b>CCMP Outcome</b>	Restored natural communities	
<b>Project partners &amp; roles</b>	CZM: coordination	
<b>Budget &amp; level of effort</b>	100 hrs	
<b>NSRWA Activities</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Organize and train volunteers	number of volunteers	Q1
Conduct monthly MIMIC monitoring July- October 2019	data submitted to CZM	Q2
Participate in Rapid Assessment Survey Summer 2019	photodocumentation	Q1

### Strategy 1.2 Support valid (QA/QC) data collection and use

<b>Action 7</b>	<b>Reviewing and testing AquaQAPP and WQX templates</b>	
<b>Description/Objective</b>	Participate in beta-testing for online QAPP generator and data upload tool	
<b>CCMP Outcome</b>	Improved water quality	
<b>Project partners &amp; roles</b>	Mass Rivers Alliance: workshop hosting	
<b>Budget &amp; level of effort</b>	20 hrs	
<b>NSRWA Activities</b>	<b>Deliverable</b>	<b>Timing (Q1 – 4)</b>
Onsite assistance for beta testing and train-the trainer workshops	Comments on AquaQAPP and WQX data upload tool	Q2-Q3

**Strategy 2.1 Support research to inform policy and actions**

<b>Action 8</b>	<b>Implementation and Monitoring Dam Removals</b>	
<b>Description/Objective</b>	Work with regional communities and other partners to assess feasibility and seek funding for removal of dams and other barriers and collect ecological data pre- and post-restoration	
<b>CCMP Outcome</b>	Improved Habitat Continuity and Hydrology	
<b>Project partners &amp; roles</b>	Sea Run Brook Trout Coalition, DFG: antennas and tagging assistance Hanover Mall, NOAA Fisheries, DER, Town of Marshfield, Town of Duxbury: dam removal project technical assistance and management	
<b>Budget &amp; level of effort</b>	\$470,640 (275 hrs)	
<b>NSRWA Activities</b>	<b>Deliverables</b>	<b>Timeline (Q1-Q4)</b>
Assist with efforts to tag and track eastern brook trout in Third Herring Brook	Results of tagging efforts and antenna status	Q4
Support final design and removal process at Peterson Pond Dam	Annual progress report based on funding agency	Q4
Work with Marshfield and Duxbury to make progress at Temple Street Dam and Veterans Memorial Park Dam (South River)	Next steps based on initial data collection	Q4

<b>Action 9</b>	<b>Investigating Eelgrass Conditions in Duxbury-Kingston-Plymouth Bays</b>	
<b>Description/Objective</b>	In coordination with DMF and MassBays Central Staff, and informed by an expert group, implement a rapid assessment protocol with citizen scientists to conduct more frequent monitoring and understand the causes of eelgrass loss.	
<b>CCMP Outcome</b>	Restored natural communities	
<b>Project partners &amp; roles</b>	DMF: volunteer training and technical support	
<b>Budget &amp; level of effort</b>	\$20,000 (150 hrs)	
<b>NSRWA Activities</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Conduct training of citizen scientists	Volunteer training materials, number of volunteers trained	Q1, Q2
Data analyses and reporting	Technical report describing findings and including data.	Q2

<b>Action 10</b>	<b>Assessing Green Crab Management</b>	
<b>Task Description/Objective</b>	Understand green crab impacts and management through surveys and trapping	
<b>CCMP Outcome</b>	Restored natural communities	
<b>Project partners &amp; roles</b>	CZM: technical assistance	
<b>Budget &amp; level of effort</b>	40 hrs	
<b>NSRWA Activities</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Conduct snorkel surveys for green crabs	Brief report on snorkel survey results	Q2
Implement and support green crab trapping program	Summary of trapping results	Q2

### Strategy 2.2 Provide technical support and communications

<b>Action 11</b>	<b>Advancing stormwater remediation</b>	
<b>Description/Objective</b>	Provide outreach and technical support re: stormwater management, including LID	
<b>CCMP Outcome</b>	Improved water quality	
<b>Project partners &amp; roles</b>	MassDEP: technical assistance South Shore towns: outreach	
<b>Budget &amp; level of effort</b>	20 hrs	
<b>NSRWA Activities</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
MS4 outreach in communities	Documentation of support provided	ongoing
Provide grant proposal scoping and writing support	Documentation of support provided	ongoing

<b>Action 12</b>	<b>Representing MassBays to relevant networks</b>	
<b>Description/Objective</b>	Convene and provide input to existing working groups on topics relevant to MassBays' desired outcomes	
<b>CCMP Outcome</b>	<b>Robust Interagency and Interdisciplinary Collaboration and Partnerships</b>	
<b>Project partners &amp; roles</b>	Watershed Action Alliance, New England Estuarine Research Society, others: collaboration	
<b>Budget &amp; level of effort</b>	200 hrs	
<b>NSRWA Activities</b>	<b>Deliverable</b>	<b>Timing (Q1 - 4)</b>
Identify and engage with networks conducting work relevant to and/or with the potential to advance CCMP implementation	List of networks that include MassBays as a member	Q4

<b>Action 13</b>	<b>Conducting Watershed and Coastal Science Education</b>	
<b>Description/Objective</b>	Engage diverse learners in watershed and coastal science education, bring new audiences to MassBays' mission, participate in classroom and field professional development for teachers	
<b>CCMP Outcome</b>	Well-informed, multisector input to decisionmaking which includes underserved communities	
<b>Project partners &amp; roles</b>	MassAudubon: collaboration and outreach Marshfield Community Television: videos and podcast technical support Cohasset Center for Student Coastal Research: student coordination	
<b>Budget &amp; level of effort</b>	175 hrs	
<b>NSRWA Activities</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
For all outreach efforts, facilitate new participation by underserved communities	list of accommodations made, sample notices to new audiences	Q1 - Q4
Participation in MassAudubon NOAA BWET Grant as project ecologist	Documentation of professional development and student events	Q4
Provide lessons on coastal topics to informal and formal student groups	Documentation of education and outreach efforts	Q4
Support Watershed Stewardship Curriculum	Videos on coastal topics	Q4
Produce Estuarine Gradient podcast	Links to podcast episodes	Q4
Communication to varied audiences	List of publications and presentations by title, venue or publication, and date	Q4

**Strategy 3.2 Guide local action for expanded habitat and improved water quality**

<b>Action 14</b>	<b>Maintaining Adequate Streamflow</b>	
<b>Task Description/Objective</b>	Support the Town of Scituate in the effort to raise their reservoir and provide adequate streamflow in the First Herring Brook	
<b>CCMP Outcome</b>	Improved Habitat Continuity and Hydrology	
<b>Project partners &amp; roles</b>	Town of Scituate: project management and implementation DER: technical support	
<b>Budget &amp; level of effort</b>	215 hrs	
<b>NSRWA Activities</b>	<b>Deliverables</b>	<b>Timeline (Q1-Q4)</b>
Provide regular feedback for streamflow management	Brief report on pilot season of streamflow management tool	Q2

Support Town of Scituate in permitting and outreach for project	Documentation of support provided	ongoing
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<b>Action 15</b>	<b>Supporting municipal and regional actions that promote resilient coastal habitats and communities</b>	
<b>Description/Objective</b>	Coordinate South Shore Climate Group for joint outreach and education efforts, support Commonwealth MVP	
<b>CCMP Outcome</b>	Resilient coastal habitat, including implementation of nature-based coastal protection measures	
<b>Project partners &amp; roles</b>	South Shore towns, CZM, MAPC: outreach coordination	
<b>Budget &amp; level of effort</b>	\$28,500 (75 hrs)	
<b>NSRWA Activities</b>	<b>Deliverables</b>	<b>Timing (Q1 - 4)</b>
Assist communities in planning MVP projects, attend MVP workshops	Documentation of MVP community support provided	Q4
Coordinate South Shore Climate Group	SSCG meeting agendas	Q4

	<b>Reporting for EPA</b>	
<b>Description/Objective</b>	Reporting to MassBays Central Staff, engaging LGCs & regional stakeholders; promoting MassBays in local communities; attending staff and management committee/ subcommittee meetings; assisting the LGC with meetings and activities; and addressing requests for technical assistance or outreach.	
<b>RC level of effort (hrs):</b>	20 hrs	
<b>NSRWA Activities</b>	<b>Deliverable</b>	<b>Timing (Q1 - 4)</b>
Maintain workflow according to scope of work	Reports and deliverables to MassBays central staff	monthly
Provide updates to MC	Quarterly reports to MassBays central staff, coinciding with MC meetings	Q1-4
Participate in MassBays MC and RC meetings	Attendance and participation in meetings	bimonthly
Participate on at least one MC Subcommittee		ongoing
Participate in NEPORT reporting	Spreadsheet with data for acres of habitat restored and funds leveraged	Q1
Seek input from LGC on progress and proposed workplan	Proposed FFY2020 workplan	Q4
Represent MassBays in regional associations and societies	List of associations and societies where MassBays is represented	Q4
Promote MassBays in local community settings	List of presentations and publications	Q4



## **Invoices, Reporting, and Deliverables**

**Invoices** on official letterhead detailing reimbursable expenditures for each line item included in the Budget should be submitted to MassBays Central Staff at least quarterly, and preferably monthly. Invoices should include accounting of match (estimated match associated with tasks below), with a running total (year-to-date) for both expenditures and match. NSRWA should retain records documenting sources of both direct and project-specific match to be provided in the case of a Federal audit.

**Reporting to EPA** on “leveraged funds” and “habitat protected/restored” is required twice yearly. These data are used to justify continued Congressional investment in the National Estuary Program. MassBays Central Boston staff will solicit relevant data from NSRWA as necessary; the scope of work includes responding to requests for this and other reporting information in a timely manner, and as completely as feasible.

**Deliverables** included in this scope should be provided as each task is completed, labeled for ready cross-reference to the task number.

**Status reports** on each task included here should be provided quarterly, along with descriptions of changes in scope, timing, or deliverables.

**Acknowledgment** of MassBays funding (including the NSRWA website) will cite “Massachusetts Bays National Estuary Program” or “MassBays,” and include relevant EPA grant number(s).