Appendix I: CCMP Development and Update Process

Development of the Ecosystem-based 2012 CCMP

Each of the 28 National Estuary Programs (NEPs) is charged with developing and implementing a Comprehensive Conservation and Management Plan (CCMP) that establishes priorities for the estuary under the Clean Water Act. Each CCMP is based on a scientific characterization of the estuary and is developed and approved by a broad coalition of stakeholders. A CCMP is intended to serve as a strategic guide to future decisions and addresses a wide range of environmental protection issues. APNEP's initial CCMP was developed in 1994. Since then, many new issues have arisen that were not addressed in the original CCMP. Additionally, as developments in natural resource conservation and ecosystem science progressed, the 1994 plan became increasingly dated. APNEP staff began the process of developing a second CCMP in 2008 with assistance from its advisory committees, numerous partners, and the EPA.

The planning process involved seeking initial counsel from a broad array of stakeholders. A CCMP steering committee was created to define issues of importance for the region, which informed the development of the new plan. After several meetings a core set of issues emerged, and draft objectives were developed. However, the objectives appeared disjointed for lack of a comprehensive watershed management approach necessary for protecting and restoring the Albemarle-Pamlico estuarine ecosystem. An overview of NEPs and ecosystem-based management (EBM) was presented to the Policy Board (now Leadership Council) in June 2009.

After much consideration, program staff, with the assistance of the Science & Technical Advisory Committee (STAC), investigated current practices among partners regarding their use of EBM principles. Following the summer 2009 STAC meeting, staff drafted a proposal for Policy Board consideration outlining EBM use as the foundation for the new CCMP. To provide guidance in development of the EBM proposal, the staff assembled an EBM Proposal Team. The team included representatives from the Policy Board, STAC, and the U.S. Fish and Wildlife Service. Working together, the Team developed a proposal that was approved by the Policy Board in December 2009.

To provide guidance in plan development, APNEP recruited an EBM Transition Team in early 2010, which included representatives from the NC Department of Environment and Natural Resources, the U.S. Fish and Wildlife Service, APNEP's Policy Board and each of the advisory committees (STAC & CAC). The team was later expanded to include select faculty from the Virginia Institute of Marine Sciences Center for Coastal Resources Management (CCRM) whose expertise includes EBM theory. The Team implemented the steps necessary for effective ecosystem-based planning and management. During

regular intervals, they sought further advice and input from each of APNEP's advisory committees. Early in the process, staff suggested a CCMP format like the *2008 Puget Sound Action Agenda*.

As a first step in developing the 2012 CCMP, the Team crafted desirable ecosystem *goals* and more explicit ecosystem *outcomes* for each associated goal. In essence, these goals and outcomes are qualitative statements that define a "healthy" Albemarle-Pamlico ecosystem (CCMP Question 1). The Team selected three ecosystem goals relating to the support of 1) human communities, 2) native species and 3) clean and available water. These goals were more specifically articulated through the 12 ecosystem outcomes found in the plan. Efforts to achieve these outcomes sometimes conflict, particularly when balancing human interests with ecosystem needs. Therefore, the EBM approach required engagement with various regional interests to develop new ideas and find areas for compromise.

Next, in the absence of a tested quantitative ecosystem model of the Albemarle - Pamlico ecosystem, the Team developed a conceptual (qualitative) ecosystem model. To do this, explicit *factors,* or the various elements that influence ecosystem outcomes, were identified. The factors were assigned into biological, chemical, physical, and human categories, and, when considered together, represent the Team's conceptual understanding of the primary influences on the Albemarle-Pamlico ecosystem.

The factors selected vary in scale and reflect APNEP's traditional focus on a watershed approach to a healthy estuary and clean water. Each factor addressed manageable aspects of the environment, not stressors. The regular refinement of this model is necessary to ensure an explicit linkage between human activities, management actions, and environmental outcomes is possible.

Third, factors which had the greatest impact on a particular outcome, were deemed *high impact* and were addressed in the CCMP. Systems approaches dictate that the thorough management of many factors is often required to achieve the desired environmental outcomes presented in the plan. Therefore, for each desired outcome, the Team selected several of the most influential factors for management actions. These factors were considered in terms of both their importance and manageability.

Finally, *low impact* and *low success* factors due to unmanageable influences such as extreme weather events and some potential climate change impacts were removed from consideration, and management ***actions*** were drafted for each *high/ medium-impact* and *high/ medium* success factors (CCMP Question 4). Key organizations were identified and consulted regarding implementation of the actions. Over 50 partner plans were investigated to assess potential collaborations in implementing the CCMP. Additional input was requested from many of the partners. In many cases, representatives from

these organizations were able to clarify or improve upon APNEP's original suggested actions.

Once management actions were drafted based on the aforementioned approach, APNEP staff reconsidered their ongoing management actions that were not elicited as part of the ecosystem-based planning process. In some cases, current management actions had a moderate effect on many ecosystem factors. These cumulatively significant actions were mapped back to the ecosystem factors and incorporated into the plan. Other actions were deemed low priority by the Management Conference and phased out as the new CCMP was adopted.

Finally, actions generated through the process were organized into *objectives* and then objectives were aggregated into *themes (Identify, Protect, Restore, Engage, and Monitor*) that build upon APNEP's mission. This grouping of management actions was intended to provide clarity for environmental managers and illuminates opportunities for complimentary management initiatives in the region.

As is apparent in the plan, a single action can address many ecosystem outcomes (see Table 1 in CCMP). Furthermore, in this complex ecosystem, each ecosystem outcome is necessarily dependent on many successful management approaches. By tracking management actions and ecosystem outcomes, APNEP hopes to both refine its ecosystem model and determine the relative importance of the many actions in the plan. Unsuccessful or relatively un-impactful approaches will be discontinued, and program resources will be rededicated to proven or promising actions.

Revising and updating the CCMP

APNEP began the revision process almost immediately upon approval of the CCMP in 2012 as part of its EBM/adaptive management approach. Action Teams began work on assessing the status of many of the CCMP actions as the first step in implementation. A new NC Executive Order (EO #133) authorizing APNEP and its Management Conference was issued in November 2012.

A formal review began in February 2017 with a joint Leadership Council and STAC meeting with open discussion on the CCMP and review of a needs assessment. Discussion centered on APNEP's adaptive management process and setting priorities. The meeting resulted in consensus that the Partnership should keep moving forward with the 2012 CCMP Goals, Objectives, & Actions.

In November 2017, APNEP received a new NC Executive Order (#26) for the APNEP Management Conference and renewed support from the host entity, NC DEQ. This Order changed the name of Policy Board to the Leadership Council. Additionally, in 2017, APNEP facilitated a Memorandum of Understanding (MOU) between the NC Department

of Environmental Quality (DEQ), NC Department of Natural and Cultural Resources (DNCR), and the VA Secretary of Natural Resources to renew their shared commitment to collaboratively addressing environmental issues in the shared river basins between the two states that flow into Albemarle Sound.

In 2018, the EPA found APNEP to be making progress on CCMP implementation through its routine Program Evaluation. Although the CCMP was written with the "*asking climate question"* in mind, in 2019 the partnership conducted a formal initial a*ssessment of climate impacts to CCMP* to address EPA concerns. In 2019, the Leadership Council had several discussions regarding CCMP implementation and program priorities. Additionally, APNEP staff revisited the 2012 model and factor analysis to determine any changes in the factors relative to the CCMP ecosystem outcomes. A reassessment of partner roles in implementation was conducted as well.

In the fall of 2019, APNEP began working with CoastWise Partners to conduct interviews with Management Conference members and staff for an internal strategic assessment. In January 2020, the Leadership Council and STAC leadership met for a 2-day strategic planning workshop in Beaufort, NC. The workshop was facilitated by CoastWise Partners and built upon months of work to understand strengths, weaknesses, and opportunities for growth for the Partnership.

Following the workshop, APNEP leadership was able to establish program priorities that would provide focus for the Partnership and guide the next version of the CCMP. The focus areas developed were water quality, wetlands, SAV and resilience. Additionally, the council directed staff to increase North Carolina-Virginia collaborations and build greater relationships with local governments in the program area.

APNEP immediately began implementing the programmatic and administrative recommendations. In mid-March 2020, APNEP hosted a workshop on SAV and water quality interactions. Following the SAV-water quality workshop, and despite the challenges created by the COVID-19 pandemic beginning in March 2020, staff worked with the Management Conference to enact the recommendations.

During this period, staff collaborated with the Management Conference and partners to maintain operations, shifting to remote work, and holding virtual meetings as needed. The Partnership remained focused on the CCMP's key areas and activities as directed by the Leadership Council, and by mid-July the program had implemented many of the recommendations from the strategic planning workshop. In August 2020, after months of discussion, the Leadership Council adopted a Diversity, Equity, and Inclusion Statement to assist in guiding the partnership.

Continuing to build on the strategic planning recommendations, APNEP was able to facilitate a new Memorandum of Understanding (MOU) among NC Department of

Environmental Quality, NC Department of Natural and Cultural Resources, NC Department of Agriculture and Consumer Services, NC Wildlife Resources Commission, and Secretaries of Natural Resources and Agriculture and Forestry for the Commonwealth of Virginia for the support of Cooperative Conservation and Management of the Albemarle-Pamlico Region. This MOU provides for the continued and expanded support for implementation of the CCMP towards the protection and restoration of water and ecosystem resources throughout the Albemarle-Pamlico watershed.

In October 2020, the EPA recommended through its *NEP Funding Guidance*, that individual NEPs review and assess their CCMP and associated documents (monitoring, habitat, funding, and communication plans) every three to five years to determine the extent of revision and updating needed to keep the CCMP relevant. The EPA also recommended that each NEP revise its CCMP and associated documents at least once every ten years.

EPA expects NEPs to make the changes necessary to their CCMP and associated documents to agree with the Content Checklist of the NEP CCMP Revision and Update Guidelines as outlined in the 2020 Guidance. In early 2021, APNEP staff again assessed the status of all 2012 CCMP actions for Leadership Council review. Under guidance from the Leadership Council, APNEP staff began work on a revision to the CCMP in the form of an addendum.

In early 2022, the NEP announced that the NEPs would be eligible for supplemental funds to support CCMP implementation from the "Infrastructure Investment and Jobs Act of 2021" (IIJA), generally known as the " Bipartisan Infrastructure Law " (BIL). The Act specifically identified the National Estuary Program (NEP) as a key partner for implementation of funding and provided 132 million dollars split equally amongst the NEPs for five years (2022-2026), providing approximately $915,000 in annual funding to each NEP.

In September 2022, after extensive discussions among EPA HQ, Regions III & IV, APNEP staff and the Leadership Council Chair about CCMP format, it was decided that the Partnership could create a CCMP Revision rather than an update/addendum that would align with its EBM approach and build upon the 2012 CCMP, while reflecting current priorities. Soon after, the Leadership Council adjusted its normal quarterly meeting schedule to a monthly meeting to advance the revision process.

As the Partnership was working on the updated CCMP, the Leadership Council revisited its focus areas established in 2020 to ensure alignment with the BIL funding opportunity. In January 2023, a strategic planning meeting was held to identify CCMP and BIL priority areas based on the 2012 CCMP carry forward actions as drafted at the time. The revised BIL foci included all the CCMP foci except oyster habitat. During the remainder of 2023

the Leadership Council worked with staff and the advisory committees to revise and refine the draft actions. In 2024, staff continued to refine, organize, and revise the CCMP with regular consultation with the Management Conference and began working on the narrative portions of the plan. During this time, staff also consulted with a variety of partners and EPA Regions III and IV, along with EPA Headquarters. In October 2024, the Leadership Council approved the draft CCMP to be posted for public comment. Upon review of the draft by the EPA, staff added additional information to ensure the plan complied with the EPA funding guidance and amendments under the *2021 Protect and Restore America's Estuaries Act*.

On November 12, 2024, the EPA released new funding guidance (October 2024) to the NEP Directors that outlined new requirements for CCMP updates effect January 1, 2025.

Next Steps

The transition to an ecosystem-based management process was difficult, and the road thus far has included a few detours. Nevertheless, this summary provides a condensed version of the steps APNEP took to incorporate ecosystem-based management into its CCMP for the Albemarle-Pamlico region. APNEP will continue to draw upon lessons learned from the planning process in both the development of annual work plans (implementation) and in future iterations of the CCMP.

To fully implement an ecosystem-based management framework, APNEP will need to associate indicators, targets, and benchmarks with both its ecosystem outcomes and its management actions. This work is ongoing. APNEP will continue to update and assess the impacts of CCMP implementation, to incorporate new actions and metrics directly into the plan.

Each of these metrics will need to be monitored, and APNEP is currently developing a monitoring strategy necessary to support its ecosystem-based management approach. Both the implementation of management actions and the resulting ecosystem changes will be tracked by the Albemarle - Pamlico integrated monitoring network. Where actions are not fully implemented, future assessments will note barriers to implementation. Where actions are implemented but environmental improvement is lacking and thus benchmarks are not achieved, APNEP and its partners must reevaluate the ecosystem model underpinning the plan.

Appendix II: Crosswalk Table for 2025 and 2012 CCMP Objectives and Actions

2025 #	2025 Objective and Actions	2012 #	2012 Objectives and Actions	Change to Objective or Action by 2012 CCMP Number	Reason for Change
A1	**Assess the condition of and potential impacts to targeted ecosystems**	**A1**	**Develop and refine a conservation atlas**	Objectives A1 and A2 revised and combined	Revised to clarify activities and conciseness
		A2	**Assess the impacts of targeted threats on the ecosystem**		
A1.1	Facilitate mapping the distribution of significant ecological, hydrologic, bathymetric, geologic, demographic, and cultural features	A1.1	Facilitate the mapping of significant ecological, bathymetric, geologic, demographic, and cultural features	Text revised	Revised to clarify activities
A1.2	Facilitate improved projections of land and water use, and climate related impacts on the ecosystem to enhance the coordination of multi-scale planning, management, and community resilience. (BIL Priority)	A1.2	Facilitate the refinement and use of online conservation planning tools	Combined with Action A2.2 and text revised	Revised to clarify activities and combined for conciseness
		A2.2	Create and improve projections of land use and climate change related impacts on the regional ecosystem	Combined with Action A1.2 and text revised	Revised to clarify activities and combined for conciseness

A1.3	Develop and refine a regional ecosystem assessment and supporting assessments such as indicator metric reports and syntheses.	New	N/A	New action	New Action to support EBM integration
B1	**Protect and restore areas containing significant natural communities and habitats**	**B2**	**Protect and manage areas containing significant natural communities and habitats**	Revised text	Combine with "restore"
B1.1	Refine and implement a submerged aquatic vegetation (SAV) protection and restoration strategy	B2.2	Develop and implement a submerged aquatic vegetation (SAV) protection strategy.	Revised text and combined with C3.2	Combine with "restore" action
		C3.3	Develop and implement a submerged aquatic vegetation restoration strategy.	Revised text and combined with B2.2	Combined with "protect" action
B1.2	Refine and implement a regional wetland protection and restoration strategy	C3.2	Develop and implement a coordinated wetland restoration strategy	Revised text	Revised to include protection activities
B1.3	Protect and restore targeted natural communities, habitats, and ecosystem processes	B2.3	Facilitate the development of incentives for protection and management of targeted natural communities and habitats	Revised text and combined with D1.2	Revised for conciseness & to include partner activities
		D1.2	Facilitate efforts to improve collaborations to protect and restore ecosystem processes.	Revised text and combined with B2.3	Revised for conciseness & to include partner activities

B1.4	Facilitate the development of policies to minimize dredge and fill activities in naturalized areas and sensitive habitats	B2.4	Facilitate the development of policies to minimize dredge and fill activities in naturalized areas and sensitive habitats	No change	No change
B1.5	Refine for federal approval and facilitate the implementation of a North Carolina Aquatic Nuisance Species (ANS) Management Plan	B2.6	Minimize and rapidly respond to the introduction of invasive species through the development and implementation of integrated prevention and control strategies	Revised to focus on NC Aquatic Nuisance Species Management Plan development, integrates B2.6, C3.1 & D1.3	Revised to focus on NC Aquatic Nuisance Species Management Plan development
		C3.1	Develop and refine integrated invasive species eradication and control strategies		
		D1.3	Coordinate outreach and engagement efforts regarding the impacts of invasive species		
B1.6	Facilitate the construction of new native oyster habitats	C5.1	Construct new oyster habitats	Text revised	Text revised to be more inclusive of partner roles
B2	**Protect and restore water quality by minimizing or eliminating targeted sources of water pollution**	**B1**	**Minimize the introduction of additional water pollution sources**	Text revised and combined with Objective C1	Alignment of protect and restore similar actions
		C1	**Restore water quality by eliminating targeted sources of water pollution**	Text revised and combined with Objective B1	Alignment of protect and restore actions

B2.1	Support the development of water quality standards and any subsequent development of new management strategies for estuarine waters	C1.1	Establish contaminant management strategies for waters not meeting water quality standards	Revised text	Revised for conciseness and support of implementation partners
B2.2	Facilitate the implementation of existing contaminant management strategies	C1.2	Facilitate the implementation of existing contaminant management strategies	No change	No change
B2.3	Protect, restore, and enhance targeted shorelines and riparian buffers to reduce and treat runoff, and to support ecosystem function/services	B1.3	Facilitate the protection of natural riparian buffers to reduce runoff	Revised text and combined with C1.3, C.2	Revised text for clarity
		C1.3	Facilitate the restoration of riparian and estuarine shorelines	Revised text and combined with B1.3, C.2	Revised text for clarity
		C2.2	Facilitate the development of incentives to replace hardened estuarine shorelines with living shorelines	Revised text and combined with B1.3, C1.3	Revised text for clarity
B2.4	Facilitate voluntary retrofitting of existing development and infrastructure to reduce runoff	C1.5	Facilitate voluntary retrofitting of existing development and infrastructure to reduce runoff	No change	No change
B2.5	Minimize the introduction of toxics into receiving waters by facilitating the use of approved best management to marinas,	B1.1	Minimize the introduction of toxics from targeted sources	Revised text	Revised text for clarity and focus

	boatyards, stormwater discharges and wastewater facilities				
B2.6	Minimize contaminant loads to receiving waters through wastewater management and system upgrades	B1.2	Minimize the introduction of pathogens from targeted sources	Revised text and combined with C1.4	Revised and combine text for comparability and conciseness
		C1.4	Reduce unregulated discharge from wastewater treatment systems	Revised text and combined with B1.2	Revised and combine text for comparability and conciseness
B2.7	Facilitate the use of approved best management practices (BMPs) on targeted agricultural and silvicultural lands to improve water quality for the protection, and restoration of SAV and oyster habitats	B1.5	Facilitate the use of best management practices on agricultural and silvicultural lands	Revised text	Revised to focus on SAV, Water Quality, and oyster habitats
B3	**Ensure hydrological processes in rivers and estuaries support significant natural communities and ecosystem functions**	**C2**	**Restore hydrological processes in rivers and estuaries to support significant natural communities and ecosystem functions**	Text Revised	Revised text for clarity and focus
B3.1	Facilitate the development and implementation of coordinated landscape-scale hydrological restoration strategies	C2.1	Facilitate the development and implementation of coordinated landscape-scale hydrological restoration strategies	No change	No change

B3.2	Facilitate the hydrologic restoration of floodplains and streams	C2.3	Facilitate the hydrologic restoration of floodplains and streams	No change	No change
B3.3	Develop and refine ecological flow requirements for each major river for inclusion in basin-wide water management plans	A3.3	Develop and refine ecological flow requirements for each major river	Revised text and combined with D3.2	Text revised for clarity combined for conciseness
		D3.2	Facilitate the development and implementation of basinwide water management plans to ensure no less than minimum in-stream flows are maintained	Revised text and combined with A3.3	Text revised for clarity combined for conciseness
B4	**Restore spawning areas for diadromous fish**	**C4**	**Remove in-stream barriers and restore spawning areas for diadromous fish**	Revised text	Revised text to be more reflective of actions
B4.1	Facilitate the installation of fish bypass infrastructure and operations protocols on existing dams and other permanent barriers	C4.1	Install fish ladders and eel-ways on existing dams and other permanent barriers	Revised text	Revised text includes partner roles
B4.2	Facilitate the removal of dams, culverts, and other in-stream barriers	C4.2	Facilitate the removal of dams, culverts, and other in-stream barriers	No change	No change
B4.3	Restore degraded anadromous fish spawning habitats.	C4.3	Restore degraded anadromous fish spawning habitats	No change	No change

C1	**Foster watershed stewardship.**	**D1**	**Foster environmental stewardship**	Text revised	"Watershed" replaced with "Environmental" be cover broader engagement area
C1.1	Communicate the importance of stewardship and offer opportunities for volunteerism to further APNEP's mission	D1.1	Communicate the importance of stewardship and offer opportunities for volunteerism to further APNEP's mission	No change	No change
C1.2	Provide and promote opportunities for outdoor experiences that connect individuals with the Albemarle-Pamlico ecosystem.	D2.1	Provide and promote opportunities for outdoor experiences that connect individuals with the Albemarle-Pamlico ecosystem	No change	No change
C2	**Conduct targeted environmental education efforts regarding estuarine habitats, water quality, and ecosystem services**	**D2**	**Conduct targeted environmental education efforts regarding sustainable use, habitats, and ecosystem services**	Text revised	Text revised for APNEP focus areas
C2.1	Provide environmental education training opportunities for educators	D2.2	Provide environmental education training opportunities for educators in the region.	Text revised	Text revised for clarity
C2.2	Increase public understanding of the relationship between ecosystem health and human health advisories relating to water, fish, and game	D2.3	Increase public understanding of the relationship between ecosystem health and human health advisories relating to water, fish, and game	No Change	No Change

C3	**Provide tools and training to support ecosystem-based management.**	**D3**	**Provide tools and training to support ecosystem-based management**	No change	No Change
C3.1	Develop and implement a strategy to improve decision-makers' understanding of the return on investments in environmental protection, restoration, planning, and monitoring	D3.1	Develop and implement a strategy to improve decision-makers' understanding of the costs and benefits of environmental protection, restoration, planning, and monitoring.	Combined with Action D3.3 and text revised	Text revised for clarity

C3.2	Enhance the coordination of targeted ecosystem management by federal, state, regional, Tribal, and local governments, and communities by assisting with the incorporation of resilience, climate change and sea level rise considerations into planning processes	D3.3	Provide assistance to state, regional, and local governments to incorporate climate change and sea level rise considerations into their planning processes.	Combined with Action D3.1 and text revised	Text revised for clarity and conciseness

D1	**Develop and maintain an integrated monitoring network to collect and disseminate information for assessment of ecosystem outcomes and management actions associated with CCMP implementation**	**E1**	**Develop and maintain an integrated monitoring network to collect information for assessment of ecosystem outcomes and management actions associated with the implementation of the CCMP**	No change	No Change
D1.1	Facilitate the development and implementation of an integrated monitoring network through the guidance of regional monitoring and assessment teams	E1.1	Facilitate the development and implementation of an integrated monitoring network through the guidance of regional monitoring and assessment teams	I*ntegrated with Action E1.2 (2012)*	APNEP will continue its collaborative development of integrated ecosystem monitoring to support implementation of the CCMP

		E1.2	Assess the value of information for measuring ecosystem and CCMP implementation outcomes	In*tegrated with Action E1.1 (2012)*	
D1.2	Facilitate the expansion of volunteer monitoring into a core element of the integrated monitoring network	E1.3	Facilitate the expansion of volunteer monitoring into a core element of the integrated monitoring network	No Change	No Change
D1.3	Develop and maintain an online resource that clearly conveys regional information in support of ecosystem-based management.	**E2**	**Develop and maintain a comprehensive spatial database for pertinent environmental data and modeling information**	Objective E2 revised and combined with Action E2.2	Objective combined with action for clarity and conciseness
		E2.2	Develop and maintain an online resource that clearly conveys regional information in support of ecosystem-based management	Text revised and combined with Objective E2	Action combined with Objective for clarity and conciseness

RETIRED OBJECTIVES & ACTIONS					
		A2.1	Facilitate the development of protocols and conduct rapid assessments to determine presence and potential threat of invasive species	Retired	Action complete or partner Lead: APNEP conducted an initial development of a rapid assessment protocol in 2013. Limited capacity and infrastructure to continue work, not a priority issue for region.
		A2.3	Support research on adapting to impacts associated with climate change and sea level rise.	Retired	Complete or Partner Lead: Role for APNEP topic has diminished over the past 10 years.
		A2.4	Facilitate risk assessments of targeted personal care and pharmaceutical products in the aquatic system	Retired	Beyond APNEP and active partner capacity. EPA and states have begun new risk assessments.
		A2.5	Facilitate risk assessments of heavy metals and other toxic contaminants in sediments	Retired	Beyond APNEP and active partner capacity.

		A3	**Assess current natural resource policy, laws, and regulations according to ecosystem-based management principles**	Retired	Objective completed. Also see Action A3.3 (2012) revised and incorporated into Action B3.3 (2025)
		A3.1	Assess the effectiveness of policies and regulations to minimize wetland loss	Retired	Complete or Partner Lead: See NC Wetland Program Plan and VA Wetland Program Plan
		A3.2	Assess the effectiveness of policies and regulations regarding riparian buffers	Retired	Complete or Partner Lead: See NC DEQ Buffer Report and NC Conservation Network/Sound Rivers Buffer Report
		B1.4	Facilitate the development of state and local policies that support the use of low impact development (LID) practices to reduce runoff	Retired	Complete or Partner Lead – LID guidance from NCDEQ and VA DEQ
		B2.1	Facilitate the development and implementation of an integrated freshwater habitat protection strategy	Retired	Beyond APNEP / active partner capacity. See Wildlife Action Plans for NC an VA.

		B2.5	Facilitate protection of designated anadromous fish spawning areas and inland primary nursery areas from marina impacts	Retired	Complete or Partner Lead - Not a significant threat issue to be addressed at present. See NC and VA Wildlife Action Plans and NC Coastal Habitat Protection Plan
		B3	**Utilize natural and constructed "living" shorelines to maintain estuarine and riverine ecosystem processes**	Retired	Objective completed. Also see Action B2.3
		B3.1	Assist local governments in the development of incentives for protecting natural shorelines	Retired	Complete or Partner Lead: A NC general permit has been developed as an incentive. See materials and information from the NC Division of Coastal Management
		B3.2	Develop and distribute educational materials encouraging landowners to protect natural shorelines	Retired	Complete or Partner Lead: See materials from NC Division of Coastal Management, NC Coastal Reserve, and North Carolina Coastal Federation

		B3.3	Facilitate the development of requirements for living shoreline stabilization projects that optimally protect estuarine aquatic and shoreline habitats while minimizing regulatory requirements	Retired	Complete or Partner Lead: See materials from NC Division of Coastal Management, NC Coastal Reserve, and North Carolina Coastal Federation
		C3	**Facilitate collaborative and integrative restoration programs and projects**	Retired as Objective	Actions reassigned under Objective B1
		C4.4	Facilitate research to improve fish passage	Retired	Complete or Partner Lead: APNEP has funded several projects to identify and support targeted fish passage. Also see NC and VA Wildlife Action Plans and the NC Coastal Habitat Protection Plan, Southeast Aquatic Connectivity Program.
		C5	**Restore oyster habitats to improve water quality and other ecosystem functions**	Retired as Objective	Only one action, incorporated into Action B1.6
		C5.2	Reduce the adverse impacts of harvests to existing oyster habitat	Retired	Beyond APNEP / active partner capacity

		C5.3	Facilitate research to improve oyster restoration technologies and methods	Retired	Complete or Partner Lead: APNEP has funded research studies to support oyster restoration techniques. Not a pressing issue at present
		D1.4	Coordinate outreach efforts regarding the proper application of fertilizers to reduce nutrient runoff	Retired	Non-Priority: Beyond APNEP / active partner capacity
		D1.5	Increase opportunities for public access to waterways, public lands, and trails	Retired	Non-Priority: _Complete or partner Led - Not needed. DMC, DMF, DPR and DCM have active programs.
		E2.1	Facilitate the design and content acquisition of a regional database based on partners' data and information needs	Retired	Not a regional priority. See action D1.3 (2025)