



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 4 2018

OFFICE OF WATER

Dr. William L. Crowell, Jr.
Director
Albemarle-Pamlico National Estuary Partnership
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Dear Dr. Crowell:

Thank you, Bill, and the Albemarle-Pamlico National Estuary Partnership (APNEP) staff, as well as your many partners, for contributing to a successful 2018 PE process. We recognize that everyone involved put considerable effort into both the PE package and the responses to our follow-up questions. We also appreciate your facilitation of the PE Review Team's site visit that enabled the Review Team to meet your staff and visit projects and people in your program area. The purpose of this letter is to provide the results of the Environmental Protection Agency's (EPA) 2018 Program Evaluation (PE), which covers a review period from July 1, 2012 through June 30, 2017.

I would like to note that your evaluation benefited from the voluntary participation of Dr. Duane De Freese, Executive Director of the Indian River Lagoon National Estuary Program (IRLNEP), who served in an ex-officio capacity on the PE Review Team. Dr. De Freese's participation provided the Review Team members with an invaluable National Estuary Program (NEP) perspective. Dr. De Freese also shared information about the Indian River Lagoon NEP that may be useful for your Partnership, and took several lessons learned back to his NEP.

The primary purpose of the EPA PE is to help EPA determine whether the 28 programs included in the NEP are making adequate progress implementing their Comprehensive Conservation and Management Plans (CCMPs). The evaluation process has considerably enhanced EPA Headquarters and Regional knowledge of each individual NEP and promoted sharing of innovative projects and approaches across all 28 NEPs. In addition, EPA uses the evaluation process to assess how the NEPs support Clean Water Act (CWA) core programs and to evaluate the extent and effectiveness of the NEPs' contributions to achievement of one relevant EPA 2016 - 2020 *Strategic Plan* goal--Goal 2: Protecting America's Waters, Objective 2.1, Protect Human Health and Objective 2.2, Protect and Restore Watersheds and Aquatic Ecosystems.

Based on the PE Review Team's findings, we believe your Partnership continues to make significant progress in implementing the APNEP CCMP. *We are pleased to announce that you have passed the 2018 PE and are eligible for funding authorized by CWA §320.*

2018 Program Evaluation Findings

The following summary highlights the Review Team's key findings by identifying APNEP's: (I) Progress Made in the Areas Highlighted in the 2013 Program Evaluation, (II) Support of CWA Core Programs, (III) Strengths, and (IV) Challenges. This summary is intended both to recognize the Partnership's successes and to recommend efforts to further strengthen the Partnership. The Partnership's response to these recommendations will be evaluated in the next PE cycle.

I. Progress Made in the Areas Highlighted in the 2013 Program Evaluation Review

Program Implementation and Reporting - Maintaining Visibility and Independence

2013 letter recommendations:

- APNEP should maintain current staffing levels (Director, Project Manager, Program Scientist, Policy and Engagement Manager, Coastal Habitat Coordinator)
- The Host Agency (formerly NCDENR, now NCDEQ) should provide APNEP with direct administrative support

During a portion of the review period (2014-2016), APNEP staff was reduced to Director, Program Scientist, and Coastal Habitats Coordinator. Additionally, the Director and Coastal Habitats Coordinator positions were reduced to half time in order to support North Carolina Clean Water Management Trust Fund operations. This is contrary to the 2013 recommendation to maintain 2013 staffing levels; however, towards the end of the review period (Spring 2017), APNEP was allowed to fill vacancies and is now staffed at the level recommended by the Policy Board in 2014. The staff positions, all approved by the Policy Board, include Ecosystems Analyst, Communications and Outreach Specialist, and a new position of Watershed Manager. It is our understanding that the Virginia position has now been filled as well.

APNEP's host agency was reorganized by the North Carolina General Assembly from the North Carolina Department of Environment and Natural Resources (NCDENR) into the North Carolina Department of Environmental Quality (NCDEQ) in 2015. With this reorganization, NCDEQ moved APNEP into the Planning Section of the Division of Water Resources within NCDEQ. During this restructuring period, APNEP lacked direct administrative support, but was able to maintain limited autonomy and continued to fulfill its mission via active engagement of the Policy Board, Science and Technical Advisory Committee (STAC), and its partners. The Review Team's positive interactions with the leadership from NCDEQ's Office of the Secretary during the site visit are hopeful indications that as APNEP's host entity, NCDEQ reaffirms its administrative and fiduciary responsibilities as called out in the EPA-APNEP cooperative agreement.

Though technically outside the review period for this Program Evaluation, the Review Team would like to acknowledge the new NC Governor's Executive Order (EO), signed in November 2017. This new EO prescribes that APNEP will be housed within NCDEQ's Office of the Secretary, establishes a new Leadership Council (replacing the Policy Board), and details programmatic support from Executive Branch agencies and Council of State agencies as well as state universities to ensure they work cooperatively with APNEP in implementing the CCMP. In addition to the EO, a cooperative Memorandum of Understanding (MOU) between the State of North Carolina and the Commonwealth of Virginia was also signed in the Fall of 2017. These two documents illustrate continued commitment to APNEP's role as a visible, trusted, independent source of information for the communities and partners within the region.

Ecosystem Status and Trends - Need for Assessment and Monitoring

2013 letter recommendations:

- Develop long-term monitoring plan and indicators of ecosystem and socio-economic conditions
- Leverage support from NCDEQ senior leadership as well as other state and federal partners

Development and implementation of a monitoring plan or strategy have been requested by the EPA since the 2002 Program Evaluation. Over the years, multiple efforts at finalizing indicator development have been attempted (2004-2006, 2006-2007, 2012-2013) but never quite materialized into a strategy or plan. APNEP published an Ecosystem Assessment in 2012 that contained the core indicators for the bi-state estuary system to accompany their new CCMP based on an Ecosystem Based Management (EBM) approach, and some monitoring

and assessment work was performed during the review period, including submerged aquatic vegetation (SAV) mapping and intensification of the National Aquatic Resource Survey in 2015. However, the need for a robust monitoring strategy and development of ecosystem and socio-economic indicators was not fully met during this review period.

Although implementation of this goal stalled during the review period, APNEP has made significant progress since 2017. APNEP has formed several Monitoring and Assessment Teams, which include STAC members, that are on track to provide indicators to the Management Conference for review in 2018. The Review Team encourages APNEP to continue to leverage support from NCDEQ leadership and other state and federal partners to prioritize limited resources and strategize monitoring efforts over APNEP's large program area.

Ecosystem Restoration and Protection - Need to Measure and Report on Short-term Project Outcomes

2013 letter recommendations:

- Develop protocol to measure short-term outcomes of projects
- Establish project baselines to measure, track, and report on project progress

APNEP is currently developing an outcome tracking protocol that includes baseline data from funded projects to better assess their effectiveness. These metrics will then be compiled together for APNEP management to make long-term decisions about overall effectiveness in implementing the CCMP. Because APNEP is still developing ecosystem and management indicators, they were not able to report out on the collective status of short-term project outcomes during the review period. However, the Review Team is encouraged that the Partnership will continue to request metrics information in future project requirements. Additionally, the Review Team encourages APNEP to better align funded projects to meet programmatic outcomes that also lead to measurable environmental results.

Ecosystem Restoration and Protection - Need to Address Nutrient Criteria

2013 letter recommendations:

- Work with partners to collect water quality monitoring data
- Support the development of models
- Facilitate stakeholder involvement in nutrient management
- Investigate relationships between contaminant loads and living resources
- Propose scientifically-based targets that DWR may consider as numeric criteria

The Review Team commends APNEP leadership, particularly the STAC, for taking a leadership role in convening scientists, stakeholders, and agency staff to build consensus on appropriate water quality nutrient criteria parameters. A series of nine meetings took place between 2014 and 2016, and the workgroup utilized NC's Nutrient Criteria Development Plan (NCDP) to facilitate their deliberations. While ultimately no criteria recommendations emerged from this effort, the workgroup identified many research priorities which the state lead, NC Division of Water Resources, is currently undertaking. Nutrient management is central to APNEP's many CCMP objectives. The Review Team encourages APNEP to cultivate and sustain continued engagement with the NC Scientific Advisory Council and the Nutrient Criteria Implementation Committee on this issue during the next cycle of criteria evaluation.

Program Implementation and Reporting - Financial Strategy for Communications

2013 letter recommendations:

- NCDEQ to assist APNEP in leveraging other NCDEQ program resources
- Develop a strategy and funding plan for communication efforts

- Identify a tool for assessing impacts of investment in communication plan

APNEP continues to rely on the strong support of its partners to leverage communication and engagement activities throughout the region. Its communication plan serves as an effective guide for reaching out to a variety of audiences, partnering with the NC Environmental Education and Public Affairs Office to help spread the word about APNEP's wide-ranging activities. The Review Team commends the Partnership for developing a new communications strategy – the 2018 Engagement Strategy – that refines their engagement approach. The Review Team is pleased that APNEP is in the process of assessing the impact of its investments in communications and outreach efforts to better identify areas for improvement or new opportunities.

II. Support of CWA Core Programs

Addressing Diffuse, Non-Point Sources of Pollution

APNEP played a primary role in providing approximately \$75,000 of FY2013 EPA Section 320 funds to support a restoration project that enabled storage and filtration of surface runoff from 3,700 acres of cropland in Hyde County, NC. One water control structure, ten swales, and 8,750 feet of dike were cored as part of this project. This investment resulted in diverting approximately 100 million gallons of runoff generated by a 24-hour rain event through restored wetlands and away from the Alligator River, Long Shoal River, and Pamlico Sound. In addition to improved water quality benefits, this landscape-scale effort helps reverse decades of hydrological modifications and eventually restore these waters with a thriving shellfish population. A project of this magnitude also demonstrates effective, non-traditional partnerships among environmental organizations such as the NC Coastal Federation (the project lead); academia (NC State University); federal government (U.S. FWS, USDA-NRCS); and private landowners (Mattamuskeet Ventures).

Supporting Sustainable Wastewater Infrastructure

APNEP provided \$12,000 to the towns of Columbia and Manteo in 2013 to quantify risks posed by rising sea levels on the towns' wastewater infrastructure. The project team used the EPA Climate Risk Evaluation and Assessment Tool (CREAT) under the EPA's Climate Ready Water Utilities initiative. The project team provided technical and financial recommendations for the towns to improve resiliency to coastal hazards and made suggestions for the towns to consider in their capital improvement planning.

III. Strengths Related to:

Program Implementation and Reporting - Program Planning and Administration

The EPA commends APNEP and its leadership for sustained focus on performance. Seventy-nine Section 320-funded projects contributed to restoring and protecting nearly 75,000 acres of habitat during the review period. APNEP also maintained its reputation as a trusted source for information sharing throughout the region. APNEP's strength during this review period was demonstrated in its strong leveraging capacity; it collaborated with partners to deliver 6:1 in primary leveraging and 13:1 overall. Much of the credit goes not only to its diverse network of partners but also to strong support from its Management Conference and staff, effectively returning APNEP to full staff capacity in a year.

Program Implementation and Reporting - Outreach and Public Involvement

APNEP's outreach during this review period is one of its biggest accomplishments due to its multiple approaches for stakeholder engagement. Programs such as Shad in the Classroom and the Teacher Institute have encouraged greater environmental stewardship from both students and educators. The partnership with the

North Carolina Office of Environmental Education and Outreach is vital to the continued success of these programs.

APNEP hosted a 2013 symposium to report on the overall status of APNEP's natural habitats and resources and also led topical discussions (Low Impact Development Summit, Oyster Summit, Living Shorelines Workshop) meant to foster greater discussions and knowledge transfer among academia, research, and businesses.

Two Economic Valuations (2012 and 2016) were published with the goal of assisting APNEP in communicating the important economic and societal contributions made by the natural resources in the APNEP region. Above all, APNEP's excellent mechanism for sharing news and available resources, particularly through online media, assures that their stakeholders have access to the most current information. APNEP has a new draft Engagement Strategy which outlines even more methods for information sharing and stakeholder engagement.

While APNEP no longer has a dedicated Citizen Advisory Committee per se, the Review Team looks forward to seeing how the newly-formed Implementation Committee integrates the general public's input into the decision-making process.

Ecosystem Status and Trends - NCCA 2015 Coastal Intensification Survey

Every five years, the EPA's National Coastal Condition Assessment (NCCA) typically includes some sites within NEP boundaries in its survey design. In 2015, APNEP was the first NEP to participate in an intensification survey in which additional sites were added for better statistical estimates of the condition of its waters. This meant having to conduct training, coordinate sampling logistics, and procure needed supplies and equipment in a relatively short period of time. Since much of the current monitoring around the APNEP region has been focused in tributaries, the 2015 NCCA intensification survey complemented limited efforts along the Sounds, even in the absence of an APNEP monitoring strategy. You also gave a presentation on APNEP's experience and efforts during the national EPA-NEP workshop in March 2018. The Review Team commends the Partnership for taking this leadership opportunity and serving as a model for other NEPs that may choose to participate in the next NCCA survey in 2020.

IV. Challenges Related to:

Program Planning and Administration - Develop a Common APNEP Vision to Promote its Program Identity

While APNEP has successfully formed productive alliances over the years, the reviewers noted that APNEP lacks a strategic direction with clear year-to-year goals and objectives that focus its efforts. APNEP has a recent CCMP, but its implementation depends on EBM-based indicators that are still being developed. Developing a strategic plan would allow the Partnership to be recognized by the public and to receive appropriate credit for all the efforts it puts into CCMP implementation.

Over the course of the next review period, the EPA recommends that APNEP develop a vision statement, informed by its entire Management Conference and approved by its newly-formed Leadership Council, that articulates its exact role and explains APNEP's value to this bi-state estuary system. This statement should serve as a guiding principle for showcasing what the Partnership can offer and for elaborating how its partners can better support the APNEP brand in implementing the CCMP. This vision should also direct APNEP in prioritizing its limited resources to serve the large area within its boundaries.

Financial Management - Explore Additional Opportunities for Funding CCMP Implementation Activities

APNEP has successfully leveraged much of its non-federal match in the form of in-kind support from staff (Coastal Habitats Coordinator, Watershed Manager) and expenditures by the Clean Water Management Trust Fund and the Division of Water Infrastructure. The extensive list of partners throughout this large watershed has not translated to additional revenue for CCMP implementation. This means that a considerable portion of APNEP's base funding is used to support state staff, leaving limited EPA Section 320 base funds available to cover other important implementation activities.

Because APNEP has not yet developed a long-term funding strategy that enables it to target diverse funding sources, the EPA recommends that APNEP take steps to develop such a strategy to identify priorities, catalog potential funding sources, and obtain funds. APNEP should consider integrating strategic financial planning (i.e., cost-benefit analysis) into its current annual workplan process so it can better identify projects with the most likelihood of delivering environmental results. The EPA also recommends that APNEP use economic valuations to communicate the value of the estuary to the state(s) and encourage more direct financial support.

Assessment and Monitoring - Finalize Completion of a Monitoring Strategy

The Review Team is aware that an initial suite of indicators is being considered for Management Conference approval by the end of 2018 now that APNEP has returned to full staff capacity. These indicators should be linked to a robust monitoring strategy, which serves as both a scientific tool and a decision-making tool that informs policy.

Given the increased public-sector emphasis on accountability and government stakeholder requests to demonstrate environmental results, APNEP leadership--from the Monitoring and Assessment Teams (MATs) and STAC to the Leadership Council--should prioritize completion of a monitoring strategy which reflects the Partnership's implementation priorities. Implementation of the monitoring strategy should begin by 2020, ahead of making revisions to the CCMP. To ensure timely delivery of the monitoring strategy, the Review Team requests that a progress report on its status be submitted to EPA to accompany APNEP's semi-annual reporting. To help meet this challenge, the EPA recommends that APNEP consult the latest NEP Funding Guidance for directions on developing a monitoring strategy. The Review Team also encourages APNEP to take advantage of technical resources from the EPA that can better inform the role of citizen science in APNEP's monitoring strategy.

Reporting - Better Communicate Programmatic Accomplishments and Environmental Results

As previously mentioned in Section I, identifying metrics to gauge the effectiveness of short-term outcomes is critical for determining continued support of implementation projects. Even in the absence of measurable environmental results, CCMP activities should still demonstrate that APNEP is directly benefiting from these investments because they support its overall programmatic priorities. In the first iteration of the narrative section in the PE package, the significance of the projects chosen to highlight accomplishments in support of the six workplan elements (Habitat, Water Quality, Living Resources, Healthy Communities, Trainings, Direct Assistance) was not readily apparent to the Review Team because content was lacking in detail. The subsequent revision and multiple interactions at the site visit further illustrated the important role that partners play in advancing APNEP's mission through their own work.

It is important that programmatic milestones and environmental results be communicated to the public and to APNEP stakeholders to continue building long-term support for the Partnership. In addition to highlighting projects in the annual work plan, the EPA recommends the Partnership enhance its website by dedicating prominent space to more clearly emphasize accomplishments. This would supplement APNEP's other means of communication (mail list, blogs, social media) and could also help attract potential partners who might be interested in knowing how funds have been used to date and any plans for additional funding. The EPA also

recommends publishing an annual comprehensive report on projects and accomplishments to distribute to the public.

Program Planning and Administration - Revise CCMP Before 2022

One key theme that has emerged from other NEPs undergoing CCMP revision is the value of using the revision process to better identify existing and emerging impediments to effective implementation. As APNEP will likely have the next iteration of its CCMP in place before the next PE review, it is crucial that the Partnership consider how it can continue benefiting from its current suite of investments while positioning itself for long-term success.

The Review Team recommends that APNEP conduct a formal revision of its CCMP before 2022 by developing a process for assessing its priorities and identifying measurable environmental goals and targets. The revised CCMP should also include specific criteria for evaluating which projects are implemented over the next five to ten years. APNEP is reminded to consult the NEP Funding Guidance for directions and other deadlines pertaining to CCMPs.

Thank you again for participating in the PE process. We welcome any additional thoughts you may have either about the evaluation process itself or about EPA's involvement in the implementation of APNEP's CCMP. If you have any questions or comments, please contact me at (202) 566-2954 or Vince Bacalan at (202) 566-0930.

Sincerely,



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