

Evaluation Findings

Pennsylvania Coastal Resources Management Program

October 2010 to November 2019

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Executive Summary

The Coastal Zone Management Act requires the National Oceanic and Atmospheric Administration's Office for Coastal Management to conduct periodic evaluations of the performance of states and territories with federally approved coastal management programs. This evaluation examined the operation and management of the Pennsylvania Coastal Resources Management Program by the Pennsylvania Department of Environmental Protection for the period from October 2010 to November 2019. The evaluation focused on three target areas: public access to coastal waters, resilience to coastal hazards, program administration.

The findings in this evaluation document will be considered by the NOAA Office for Coastal Management in making future financial award decisions concerning the coastal program. The evaluation came to these conclusions:

Accomplishment: The Pennsylvania Coastal Resources Management Program has provided the foundation for coastal access projects to be successful along the rivers of the Delaware Estuary.

Accomplishment: The Coastal Resources Management Program has worked with partners to develop crucial information about community resiliency and made it readily available to local governments and coastal residents.

Accomplishment: The Coastal Resources Management Program has been effective in ensuring that communities in the Lake Erie and Delaware Estuary coastal zones are more resistant to natural hazards.

Accomplishment: Coastal Resources Management Program staff is highly valued by both external stakeholders and state agency partners.

Recommendation: The NOAA Office for Coastal Management recommends that the Pennsylvania Department of Environmental Protection examine the Coastal Zone Grant application process to reduce the internal review times within the Department.

Recommendation: The Pennsylvania Department of Environmental Protection is encouraged to augment existing Coastal Resources Management Program staff capabilities by seeking alternative low-cost alternatives to creating full time positions, such as fellowships for post-graduates.

Recommendation: The NOAA Office for Coastal Management recommends that the Pennsylvania Department of Environmental Protection consider the expansion of the coastal zone boundaries in areas where the impacts of climate change and sea level rise may extend beyond the current coastal boundaries.

Recommendation: The NOAA Office for Coastal Management recommends that the Pennsylvania Department of Environmental Protection work with NOAA to develop a schedule for submitting program changes to ensure that current laws and regulations may be used in implementing the state's coastal resources management program.

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

Program Review Procedures

The NOAA Office for Coastal Management evaluated the Pennsylvania Coastal Resources Management Program in fiscal year 2019. The evaluation team consisted of Ralph Cantral, evaluation team lead; Diana Olinger, site liaison; Heather Stirratt, Great Lakes regional lead; and Christine Hirt, Knauss Sea Grant Fellow all from the NOAA Office for Coastal Management. The support of the Pennsylvania Coastal Management Program staff was crucial in conducting the evaluation, and their support is most gratefully acknowledged.

NOAA sent a notification of the scheduled evaluation to Patrick McDonnell, Secretary, Pennsylvania Department of Environmental Protection, on March 21, 2019, and published a notice of “Intent to Evaluate” in the *Federal Register* on September 20, 2019. The Pennsylvania Coastal Resources Management Program posted a notice of the public meeting and opportunity to comment in the Pennsylvania Bulletin on October 26, 2019.

The evaluation process included a review of relevant documents and a survey of stakeholders, which helped identify three target areas for the evaluation: public access to coastal waters, resilience to coastal hazards, and program administration. A site visit was conducted November 11-14, 2019 and the evaluation team held meetings with staff members and group discussions with stakeholders and program staff members about the target areas. In addition, a public meeting was held on November 12, 2019 at 6:30 p.m. at the Ridley Township Marina, 500 North Lane, Ridley Park, PA 19078, to provide an opportunity for members of the public to express their opinions about the implementation of the coastal program.

Stakeholders and members of the public were given the opportunity to provide written comments via email or U.S. mail through November 22, 2019. No written comments were received from the public or interested parties. The Office for Coastal Management then developed draft evaluation findings, which were provided to the coastal program for review, and the coastal program’s comments were considered in drafting the final evaluation findings.

Final evaluation findings for all coastal programs highlight the coastal program’s accomplishments in the target areas and include recommendations that are of two types:

Necessary Actions address programmatic requirements of the implementing regulations of the Coastal Zone Management Act (CZMA) and of the state coastal program approved by NOAA. These must be carried out by the dates specified. Failure to address necessary actions may result in a future finding of non-adherence and the invoking of interim sanctions, as specified in CZMA §312(c).

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

Evaluation Findings

The Pennsylvania Coastal Resources Management Program is a bi-coastal networked program led by the Pennsylvania Department of Environmental Protection. The program focuses on both the Lake Erie and the Delaware Estuary shorelines. Due to the distance between the two coasts, the evaluation site visit focused almost exclusively on the Delaware River shoreline. Nevertheless, this programmatic review has considered the activities of the program on both coasts during the evaluation period.

One difference between the two coastal zones that should be pointed out is that the communities abutting the Delaware Estuary are larger, and have more advanced land use planning and regulation programs than the Lake Erie coastline. Local governments in Pennsylvania have primary authority for land use regulation, which places larger governments with more resources in a better position to plan for their future. The Coastal Resources Management Program has devoted a great deal of attention to helping the communities in the Lake Erie coastal zone develop and implement local plans to address coastal resource management. Assistance to the larger local governments in the Delaware Estuary is more focused on specific issues related to coastal resource protection and community resilience.

Target Area 1: Public Access to Coastal Waters

Access to public waters has been a major focus of the Pennsylvania Coastal Resources Management Program throughout the evaluation period. It has been rated as a high priority in the two most recent Section 309 assessments and strategies.

Examples of Key Efforts

The Coastal Resource Management Program provides annual funding for public access planning along both the Delaware Estuary and Lake Erie shorelines. The Delaware Valley Regional Planning Commission coordinates planning and development related to both the Schuylkill Banks Trail and the Delaware River Trail, both key components of the East Coast Greenway. In the Lake Erie coastal zone, the Erie County Planning Department coordinates efforts through the Erie County Greenways Program to preserve and enhance opportunities for public access to coastal resources.

Public access in coastal areas and especially in an urban setting can be a very expensive proposition, one that exceeds the ability of the relatively small Coastal Resources Management Program grants (< \$75K) to be the only source of funding. The coastal program has been successful in providing “first in” funding on many projects. These grants provide for planning and design for projects that will receive much greater funding for construction and implementation.

An excellent example of this type of funding is the Schuylkill Banks trail, which was recognized as the Nation's Best Urban Trail by USA Today in 2015. Coastal resources management program funds have been used for planning, design, and engineering for major portions of the trail, including reuse of an old rail trestle that crosses the Schuylkill River. The trestle is a crucial link in the trail as well as in the East Coast Greenway that will enable residents of a disadvantaged community, who have had no safe pedestrian or bicycle access across the river, to commute to Center City. In addition, the trail will allow residents and visitors to City Center to visit the historic Bartram's Garden, a historic site that provides boat access and educational and agricultural opportunities to that community.

Coastal program grants have also been used to support activities such as youth kayak programs, development of fishing piers, and construction of environmental amenities such as drainage improvements (bio-swales and rain gardens) and a composting restroom along the Schuylkill Banks Trail in partnership with the City of Philadelphia and the Schuylkill River Development Corporation. The grants have ensured that these projects also provide signage to educate the public about the value of reducing runoff to coastal waters.

Along the Delaware River, traditional uses such as long-abandoned wharves are being redeveloped as "finger parks." The transition of these properties from abandoned industrial brownfields to trails and open space has been a very complex process. Coastal Resources Management Program funding has been crucial to support planning, acquisition and development by the Delaware River Waterfront Corporation and the Riverfront North Partnership.

Accomplishment: The Pennsylvania Coastal Resources Management Program has provided the foundation for coastal access projects to be successful along the rivers of the Delaware Estuary.

Public access is also a significant focus of the Coastal Resources Management Program in the Lake Erie Coastal Zone. The program provides annual funding to the Erie County Planning Department and works in partnership with the Department of Conservation and Natural Resources, the Pennsylvania Game Commission and the Pennsylvania Fish and Boat Commission to address Lake Erie access issues.

Physical access to the Lake Erie shoreline is becoming more difficult as shoreline erosion and bluff recession undermine the number of accessways. Two state parks and a state gameland currently provide public access to the shorefront, but the height of the bluffs limits the number of places where visitors can reach the water's edge. Persistent erosion is further reducing the opportunities. At Presque Isle State Park, one of the most heavily used parks in Pennsylvania, structural stabilization and sand replenishment are an annual expense to ensure that the beaches, trails, and lagoons are available to the public. The Coastal Resources Management Program supports these access efforts by maintaining control points along the shoreline and sharing erosion information with local governments and private landowners. The program's Bluff Vegetation Best Management Practices manual has been widely praised and shared with other coastal management programs in the Great Lakes.

Target Area 2: Resilience to Coastal Hazards

Resilience to coastal hazards and climate change must be addressed in both the Lake Erie and the Delaware Estuary coastal zones, despite facing differing challenges. In the past, the majority of the Coastal Resources Management Programs coastal hazards work has focused on bluff erosion along the Lake Erie shoreline.

Examples of Key Efforts

The current Section 309 Assessment and Strategy adopted by Pennsylvania Department of Environmental Protection in 2016 seeks to improve the program's capacity to address coastal hazards associated with climate change in the Delaware Estuary. Flooding throughout the coastal plain has been a long-standing problem and priority among local partners. Recent climate trends and forecasts indicate an increased frequency of heavy precipitation events and larger more powerful storm systems, which will exacerbate flooding problems. Sea level rise will add additional threats. The 2016 assessment found that the program needed to focus more on climate adaptation issues and help build internal and local capacity for climate adaptation and resiliency planning.

The Coastal Resources Management Program has joined with the Delaware Valley Regional Planning Commission to assess local municipal needs and provide resources for planning to implement the Building Capacity to Facilitate Climate Adaptation Planning and Community Resiliency 309 strategy. As part of this initiative, climate resiliency products and projections such as the *Coastal Effects of Climate Change in Southeastern Pennsylvania* story map have been made available through a Pennsylvania Climate Resiliency portal on Delaware Valley Regional Planning Commission's website. This interactive map provides a wealth of information about flooding scenarios, chronic inundation areas, infrastructure at risk and property value risk to the many local governments throughout the Pennsylvania portion of the Delaware Estuary. By putting this information in a web-based portal, residents of the coastal zone can better understand their personal risks, as well.

Accomplishment: The Coastal Resources Management Program has worked with partners to develop crucial information about community resiliency and made it readily available to local governments and coastal residents.

The *Coastal Effects of Climate Change in Southeastern Pennsylvania* mapping project illustrates that inundation beyond the existing coastal zone delineation boundary in the Delaware Estuary will occur under all sea level rise scenarios. During this evaluation period, expansion of the coastal zone boundary has been discussed in both the Delaware Estuary and Lake Erie coastal zone areas during this evaluation period. This issue will be discussed in more detail under Target Area 3: Program Administration.

Climate change, such as an increased frequency of heavy precipitation events, will also affect rates of bluff recession and the frequency of large episodic events in the Lake Erie coastal zone. The Coastal Resources Management Program implements the Bluff Recession and Setback Act, and its implementing regulations to manage development along Lake Erie bluffs within formally designated bluff recession hazard areas. The enforcement authority is delegated to the municipalities along Lake Erie, however, and thus the Coastal Resources Management Program must maintain strong working relationships with the local governments to ensure that the law is enacted uniformly across the coastal zone. To that end, program staff maintain consistent aerial photographic records of the bluff crest; provide ongoing surveillance and fieldwork; and provide annual training for municipal officials and zoning officers who are charged with direct implementation of the act.

In addition to bluff recession and shoreline management, the Coastal Resources Management Program also supports partnerships to restore natural resources that serve to support community sustainability. As an example, management of invasive species is specifically mentioned in the 2018 State Hazard Mitigation Plan. The program has also supported long-term efforts to restore coastal watersheds, such as the Cascade Creek watershed in a very urbanized portion of Erie County. The coastal program has funded design and engineering work for the Cascade Creek Restoration Project that is being led by Pennsylvania Sea Grant and the Lake Erie Arboretum Foundation. The creek has been encroached upon for many years by urban development, and, although the stream is less than five miles long, it is more than one-quarter of the watershed of Presque Isle Bay. The restoration project will improve habitat and reduce sedimentation into the bay, especially during major storm events.

The Coastal Resources Management Program provides grants for research and local government efforts to plan for and adapt to coastal hazards and the consequences of climate change along the Delaware Estuary. Projects with the Partnership for the Delaware Estuary to advance the Freshwater Mussel Recovery Program that works to conserve and restore native freshwater mussels in the Delaware Estuary. Funding from the coastal program was used to conduct comprehensive surveys of Pennsylvania's portion of the tidal Delaware River and involve the public in restoration efforts. Survey results from the urban corridor, showing both strong abundance and diversity, received considerable positive media attention. This work paved the way for a 2017 grant to the Partnership for the Delaware Estuary from the Pennsylvania Infrastructure Investment Authority for up to \$7.9 million dollars to construct a hatchery and produce approximately 4.3 million mussels annually. A robust mussel bed creates a living shoreline that can help stabilize erosion and improve habitat conditions for many other plants and animals. Mussels from the hatchery will be used in the Delaware Estuary to benefit both shoreline resilience and water quality.

The coastal program also collaborated with the Pennsylvania Department of Conservation and the Pennsylvania Fish and Boat Commission to study shoreline erosion at Neshaminy Creek State Park and prepare a plan for shoreline habitat improvements. Plans for a living shoreline and wetlands restoration at the park can serve as a model for restoration throughout the

estuary, where more than 95 percent of Pennsylvania's historic tidal wetlands have been destroyed.

Accomplishment: The Coastal Resources Management Program has been effective in ensuring that communities in the Lake Erie and Delaware Estuary coastal zones are more resistant to natural hazards.

Target Area 3: Program Administration

One of the strong attributes of the Pennsylvania Coastal Resources Management Program is a dedicated staff that has developed strong relationships with local and regional governments and organizations in both the Lake Erie and Delaware Estuary coastal zones.

Examples of Key Efforts

The Coastal Resources Management Program has created an inclusive application process for funding projects in the coastal zones. A hallmark of the grants program has been advisory committees that recognize the need for continuing commitment to projects that contribute to larger scale improvements. The program is fortunate to have two dedicated citizens' advisory committees: the Delaware Estuary Advisory Committee, led by the Delaware Valley Regional Planning Commission, and the Lake Erie Advisory Committee facilitated by the Erie County Planning Department. Grant applications are also reviewed by the Coastal Zone Advisory Committee composed of representatives of relevant state agencies, to ensure that projects meet state, as well as local or regional objectives.

Stakeholders shared their views that the grant application process is very well run. They especially appreciate the diligence of the staff as they conduct annual workshops making the application process available to all eligible recipients. Staff was also cited for offering technical assistance throughout the grant application and implementation phases. There was, however, concern from several partners that the lengthy internal review process makes it difficult to develop multi-year projects. Often the grant awards are not announced until after the start of the next year's application process, leaving the partners in the dark as to whether to resubmit an application that had not yet received approval or to submit an application for further work based on the anticipated completion of the first year's project.

Under the current scenario, grant workshops are held in July and August with applications due on October 15. Although the regional advisory committee's meet in the fall and the state's Coastal Zone Advisory Committee meets in January, the grant awards are often not announced prior to the October 1 (of the next year) start date for the grants or the October 15 deadline for the grant applications. If the review period could be reduced, improved outcomes from grant projects could be achieved, as any time shaved from internal processes could be helpful to applicants planning larger and more impactful projects.

Recommendation: The NOAA Office for Coastal Management recommends that the Pennsylvania Department of Environmental Protection examine the Coastal Zone Grant application process to reduce the internal review times within the Department.

The Urban Waterfront Action Group is a group of federal, state, and local regulatory agencies with responsibilities for development in the coastal zone created by the Coastal Resources Management Program. The group discusses proposals on a purely voluntary basis and is open to anyone interested in developing a waterfront project of the Delaware Estuary. In addition to the coastal program, the participating groups include the Pennsylvania Department of Environmental Protection, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. EPA, Delaware River Basin Commission, U.S. Coast Guard, Pennsylvania Fish and Boat Commission, and various county and local planning departments. The Delaware Valley Regional Planning Commission receives annual funding from the coastal program to manage the group.

Partner agencies commented that the Coastal Resources Management Program staff is very eager to include their agencies in collaborative efforts. They also explained that the Coastal Zone Advisory Committee is one of the few places in state government where they feel that their opinions are truly valued. Staff has actively worked with the agencies to ensure that they have all the necessary information prior to decision making and that they are always available to answer questions.

Accomplishment: Coastal Resources Management Program staff is highly valued by both external stakeholders and state agency partners.

Stakeholders expressed their admiration of staff for doing as much as they do, but expressed a desire for even more assistance. The Coastal Resources Management Program has a relatively small staff that undertakes management activities and provides assistance in two coastal areas that are six or seven hours separated. The staff currently journeys from their offices in Harrisburg to Erie and Philadelphia on a regular basis. In light of the fact that having a small staff allows for additional funding available for projects, creative approaches will be needed to provide additional services. One avenue available is to seek post-graduate fellows or interns through various partnerships with universities.

NOAA's Coastal Management Fellowship provides on-the-job education and training opportunities in coastal resource management and policy. The program provides opportunities for postgraduate students and provides project assistance to state coastal zone management programs on projects proposed by the host and selected by the fellowship sponsor, the National Oceanic and Atmospheric Administration (NOAA) Office for Coastal Management. This two-year opportunity offers a competitive salary, medical benefits, and travel and relocation expense reimbursement. The program also provides fellows with professional mentoring and training.

Recommendation: The Pennsylvania Department of Environmental Protection is encouraged to augment existing Coastal Resources Management Program staff capabilities by seeking alternative low-cost alternatives to creating full time positions, such as fellowships for post-graduates.

During this evaluation period, boundary expansion was a topic considered in both the Lake Erie and Delaware Estuary coastal zones. A NOAA program enhancement grant was focused on exploring the interest in expanding the coastal zone boundary to include all of the lands within the Pennsylvania Coastal Nonpoint Pollution Control Program. In the Lake Erie Coastal Zone, the Coastal Resources Management Program collaborated with Pennsylvania Sea Grant on public outreach efforts regarding a possible coastal zone boundary expansion. The initiative involved a major outreach effort including public meetings, questionnaires, newspaper articles, and discussions with many partners explaining the nature of boundary expansion and benefits of the coastal zone grant program within an expanded boundary. Positive feedback and letters of support demonstrated the vast majority of municipal officials, citizens and state legislators in favor of boundary expansion. Due to uncertainty around the issue of regulatory jurisdictions, unanimous support of the affected municipalities was not received, and the effort to expand the boundary was abandoned. Efforts in the Delaware Estuary met a similar fate.

New information sources identifying potential inundation areas beyond the coastal boundary in the Delaware Estuary, including the *Coastal Effects of Climate Change in Southeastern Pennsylvania* story map, point to the need to re-examine boundary expansion in the light of community resilience. Communities could benefit greatly from coastal program knowledge, funding, and expertise to plan for future flooding events, including from sea level rise. Boundary expansion could allow for the provision of technical and management focused assistance without triggering the need to expand regulatory programs or permitting jurisdictions.

Recommendation: The NOAA Office for Coastal Management recommends that the Pennsylvania Department of Environmental Protection consider the expansion of the coastal zone boundaries in areas where the impacts of climate change and sea level rise may extend beyond the current coastal boundaries.

Local governments and organizations in the coastal zone expressed their need to have timely information about funding opportunities outside of the Coastal Zone Grants program for undertaking coastal resource restoration or enhancement. Stakeholders feel that the Coastal Resources Management Program is a reliable source of technical assistance and information, and could serve the role of distributor of this type of information. The Coastal Resources Management Program may want to consider how it might provide such services.

The last previous evaluation of the Pennsylvania Coastal Resources Management Program in 2010 contained a program suggestion regarding the need for developing a plan for submitting program changes to NOAA. Program changes ensure that the state can use its most up to date set of laws and regulations in the federal consistency process. A plan was submitted to NOAA [Do we have a date for this?], fulfilling that recommendation, but, for a variety of reasons, the plan was not implemented. The most recent program change request approved by NOAA only reflects legislative and regulatory changes through October 31, 2006.

Recommendation: The NOAA Office for Coastal Management recommends that the Pennsylvania Department of Environmental Protection work with NOAA to develop a schedule for submitting program changes to ensure that current laws and regulations may be used in implementing the state's coastal resources management program.

Evaluation Metrics

Beginning in 2012, state coastal management programs began tracking their success by tracking three activities specific to their programs. The evaluation metrics include a five-year target and provide a quantitative reference for each program about how well it is meeting the goals and objectives it has identified as important to the program.

Metric 1: Habitat Connectivity

Goal: Develop, maintain, and protect wildlife corridors that facilitate ecosystem connectivity, mitigate fragmentation, and improve biodiversity.

Objective: By 2017, increase habitat connectivity within the Erie Coastal Zone and the Delaware Estuary Coastal Zone by at least 8 projects.

Strategy: This goal will support NOAA's 2011 Coastal Management Act Coastal Habitat Performance Measure and DEP Coastal Management Program priorities described in the Program Technical Guidance #394-0300-001 (Policy 4.1: Wetlands) and the Section 309 Assessment and Strategy (Coastal Wetlands and Cumulative and Secondary Impacts). The state places a high priority on ecosystem connectivity and wildlife corridors because of the vital roles they play in wildlife migration, preserving green spaces, building resiliency, and fostering biodiversity. The Pennsylvania Coastal Resources Management Program leads projects and provides financial and technical assistance to others to accomplish projects that meet this goal and objective. To be counted, a project must impart identifiable habitat and ecosystem value relating to connectivity or fragmentation mitigation. The project must achieve one or more of the following: create patches of new greenspace, connect existing patches with greenspace corridors, or contain design elements specifically intended to restore or facilitate wildlife passage and/or hydrologic connections.

Examples of connectivity projects are those that:

- Remove existing barriers to wildlife passage.
 - Example: Removal of an elevated stream culvert and restoration to streambed to facilitate fish and macroinvertebrate passage.
- Contain design elements specifically intended to facilitate wildlife passage through an existing or new barrier.
 - Example: The development of a wildlife passage under a highway stream or road overpass.
- Protect existing habitat patches or corridors.
 - Example: Easement or acquisition of a wooded lot or field.
- Restore degraded or add new habitat patches to the ecosystem network.

- Example: Brownfield reclamation project for cleanup and conversion to habitat or park.
- Increase the size of existing habitat patches.
 - Example: Acquisition or easement and protection of parcels contiguous to an existing patch.
- Create or protect greenspace corridors and/or hydrologic connections between new or existing patches.
 - Example: Land acquisition for the development of a nature trail between two existing parks.

Support for separate, distinct projects that are part of a larger plan will be counted separately (e.g., a grant awarded to support the acquisition of a new habitat patch and a separate grant awarded to support the construction of a greenspace corridor to connect it to an existing patch network will each be counted individually). Projects that create new patches by fragmenting an existing patch do not meet the requirements for this metric.

Performance Measure: Number of habitat connectivity projects completed by 2017 for which design or implementation support was provided by the Pennsylvania Coastal Resources Management Program through funding, technical assistance, or CRM-led projects.

Target: Eight habitat connectivity projects completed by 2017 for which design or implementation support was provided by the Pennsylvania Coastal Resources Management Program through funding, technical assistance, or CRM-led projects.

Year 1: 2

Year 2: 0

Year 3: 3

Year 4: 0

Year 5: 2

Cumulative Data: 7 (87.5%)

Discussion: The Pennsylvania Coastal Resources Management Program plays a key role in providing design and implementation support for projects that can often be quite large and very costly. It is very difficult to predict when individual projects will be completed. In the case of projects funded through competitive grants, project selection also relies on what types of projects are submitted by partners.

Metric 2: Tidal Wetland Creation

Goal: Increase the total acreage (extent) of estuarine and freshwater tidal wetlands within Pennsylvania.

Objective: Support the creation of estuarine and tidal wetlands within Bucks, Philadelphia, and Delaware Counties.

Strategy: The scarcity, importance, and vulnerability of freshwater tidal wetlands are well documented. The science and management community of the Delaware River Estuary have consistently ranked extent and condition of tidal wetlands as a top priority and as one of the leading environmental indicators. Historically, Pennsylvania’s tidal wetlands have been heavily impacted, and less than 5% of pre-colonial acreage remains. Built-out communities, with steep slopes and hardened shorelines, limit opportunities for tidal wetland creation or natural migration. With a local focus and momentum toward redeveloping the urban waterfront for better access and a reconnection of people to the river, current opportunities exist to include tidal wetland creation as a synergistic part of these projects. CRM hopes to take advantage of this timely opportunity to support the creation of tidal wetlands.

Although condition assessment remains a goal to be pursued, this metric specifically measures acreage of tidal wetland created in excess of any permitted fills. For this metric, “created” means that a project to create a wetland is completed and not just approved or is in the process of being completed. It also means that wetlands established by the removal of historical fills will be considered created. The CRM program will communicate the CRM Program’s prioritization for projects that result in on-the-ground, measurable acreage of created tidal wetlands with partners and stakeholders in the Delaware Estuary. The CRM program will work with steering and advisory committees to change grant-scoring sheets to prioritize tidal wetland construction projects. When the CRM program reports on this metric in the second semi-annual performance progress report for each cooperative agreement award during the five-year reporting period, it will also report on the total number of tidal wetlands required as mitigation for permitted fills associated with a Pennsylvania Chapter 105 or Federal Section 404 permit to confirm the excess acreage reported.

Performance Measure: By 2017, acres of tidal wetlands created in excess of mitigation required for permitted fills associated with a Pennsylvania Chapter 105 or Federal Section 404 permit

Target: By 2017, six acres of tidal wetlands created in excess of mitigation required for permitted fills associated with a Pennsylvania Chapter 105 or Federal Section 404 permit.

Year 1: 0

Year 2: 0

Year 3: 0

Year 4: 0.06

Year 5: 0

Cumulative Data: 0.06 acres (1%)

Discussion: This was a very optimistic goal, as it relied on changing the grants ranking criteria as well as on the projects submitted for funding and the lag time between project identification and project completion. Outcomes should improve as time goes by.

Metric 3: Public Access to Coastal Waters

Goal: Maximize the public's ability to access waterfront areas within the Delaware River Estuary and its selected tidal tributaries.

Objective: By 2017, increase the number of miles of shoreline available for public access within the Delaware Estuary, including tidal portions of the Schuylkill River, Darby Creek, Cobbs Creek, Neshaminy Creek, Chester Creek, Crum Creek, Frankford/Tacony Creek, Pennypack Creek, Poquessing Creek, Mill Creek, Biles Creek, Martin's Creek, Marcus Hook, and Ridley Creek by ten percent of existing public access.

Strategy: The state places a high priority on ensuring that the public is provided with access to the waterfronts associated within the Delaware Estuary. The tributaries includes the tidal portions of the Schuylkill River, Darby Creek, Cobbs Creek, Neshaminy Creek, Chester Creek, Crum Creek, Frankford/Tacony Creek, Pennypack Creek, Poquessing Creek, Mill Creek, Biles Creek, Martin's Creek, Marcus Hook, and Ridley Creek.

Performance Measure: Number of additional miles of shoreline constructed and/or made available for public access within the Delaware River Estuary and its selected tidal tributaries completed by 2017 for which design or implementation support has been provided by the Pennsylvania Coastal Resources Management Program through funding, technical assistance, or CRM-led projects.

Target: Three (3) additional miles of shoreline projects constructed and/or made available for public access within the Delaware River Estuary and its selected tidal tributaries completed by 2017 for which design or implementation support has been provided by the Pennsylvania Coastal Resources Management Program through funding, technical assistance, or CRM-led projects.

Year 1: 0.8

Year 2: 0.2

Year 3: 0.12

Year 4: 0.2

Year 5: 0.7

Cumulative Data: 2.0 miles (67%)

Discussion: As with Measure #1, the Pennsylvania Coastal Resources Management Program plays a key role in providing design and implementation support for projects that can often be quite large and very costly. It is very difficult to predict when individual projects will be completed. Along the Delaware and Schuylkill Rivers in urban Philadelphia, progress in developing public water access is very costly, often relying on funding from numerous partners. Improving access to two additional miles of shoreline is a huge achievement. The target for this measure is overly optimistic and does not reflect the success of the work.

Conclusion

For the reasons stated herein, I find that the State of Pennsylvania Department of Environmental Protection is adhering to the programmatic requirements of the Coastal Zone Management Act and its implementing regulations in the operation of its approved Pennsylvania Coastal Resources Management Program.

These evaluation findings contain 4 recommendations and no necessary actions. The recommendations must be considered before the next regularly scheduled program evaluation, but they are not mandatory at this time. Program recommendations that must be repeated in subsequent evaluations may be elevated to necessary actions.

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

signed by Keelin S. Kuipers
Keelin S. Kuipers
Deputy Director
NOAA Office for Coastal Management

dated July 1, 2020
Date

Appendix A: Response to Written Comments

No written comments were received.