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PRESS RELEASE

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PDE Wins National Award for Living Shoreline Project

WILMINGTON — Partnership for the Delaware Estuary (PDE) is one of four agencies to receive top national honors for exemplary work in coastal restoration.

The American Shore & Beach Preservation Association (ASBPA) announced today that PDE is a winner of the 2019 Best Restored Shore award for “implementing creative solutions to eroding shores, rising seas, and degrading environmental conditions,” specifically for its living shoreline project at the DuPont Nature Center in Milford, Delaware. Projects in Texas, Louisiana, and Virginia also won the award.

“We are honored to be recognized by the ASBPA for our living shoreline project on the Mispillion River located in the Delaware Estuary,” PDE Executive Director Kathy Klein said. “Our science team has worked tirelessly on this and similar projects that have resulted in stabilizing coastal edges and creating habitat for living resources.”

“Living shoreline” describes a variety of nature-based techniques used for erosion control, water quality improvement, and/or habitat enhancement along shorelines experiencing erosion and/or ecological stress. As living shorelines develop, the services they provide, such as habitat for wildlife, shorebirds, and shellfish, increase. The Mispillion Living Shoreline Project is one of several that PDE has installed and monitored since 2008 throughout Delaware, Pennsylvania, and New Jersey.

PDE first installed the Mispillion Living Shoreline project in 2014 at the DuPont Nature Center and has maintained and monitored it ever since. The goals of the living shoreline were to enhance water quality and stabilize eroding portions of the shoreline adjacent to the nature center. To accomplish this goal, materials suitable for shellfish habitat, including recycled oyster shells and matter made of a composite of oyster shell and concrete, were arranged to provide a suitable home for young oysters and salt marsh mussels while intercepting waves and lessening energy impacts to keep the shoreline from eroding.

Shellfish feed by filtering materials from the water, making the water clearer and more suitable for underwater plants and reducing nutrients that can result in algal blooms. As the shellfish beds grow, the more material the



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shellfish can filter from the water.

Over the last five years, more than 70,000 oysters and mussels have made the living shoreline their home, resulting in a significant increase in water quality from shellfish filtration. There also has been a reduction in erosion due to the physical structure of the living shoreline materials and shellfish community as a whole. Monitoring the living shoreline on an annual basis has provided valuable information about the effectiveness of living shorelines, not only to meet goals related to shoreline stabilization but objectives associated with shellfish-mediated water quality improvements.

“The Mispillion Living Shoreline is a great example of how we can often use nature-based tactics to address multiple societal goals such as flood protection and clean water, avoiding expensive methods such as bulkheads that degrade the environment and don’t keep pace with sea-level rise,” said Dr. Danielle Kreeger, PDE’s science director. “It’s one thing to say a living shoreline can do these things, but it’s far more useful to actually show it by directly measuring project outcomes using scientific monitoring.”

The Mispillion Living Shoreline project serves as a vital source of information for agencies that regulate water quality. Furthermore, the project demonstrates the advantage of this approach for shoreline designers, builders, and the public.

The work that PDE performed in collaboration with partners at the Delaware Department of Natural Resources and Environmental Control, as well as the DuPont Nature Center, highlights the value of monitoring a project to see if it is meeting its goals. Because the first few years of the project — 2014 to 2016 — were so successful, the team installed a second phase to the shoreline in 2018. PDE is pursuing additional funding to sustain the monitoring into at least 2022.

“By installing and maintaining the appropriate habitat, we could see the shellfish community slowly develop over the first few years,” said Dr. Joshua Moody, PDE’s restoration programs manager. “This initial stage is a vulnerable time for young shellfish communities, as they are susceptible to outside forces such as erosion and predators. By creating the right type of habitat, you can provide refuge from these forces in early stages of development. As the community grows, it becomes more resistant to these forces. By year three, we could see the population stabilize with more, larger animals, and as a result, measure higher annual increases in their ability to filter water. The time it takes for these communities to develop highlights the importance of providing and maintaining the appropriate habitat in early stages of living shoreline development. If you can provide a foundation of proper, stable habitat, we will reap the rewards of the natural services provided by the animals the colonize them.”



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Best Restored Shore is a new award category in 2019 from the ASBPA, which makes PDE among its first recipients. ASBPA added this category to recognize innovative shore restoration projects and the hard work that goes into securing funds and ensures project success, thus encouraging other communities to undertake these efforts. It already gives awards for categories such as Best Restored Beach.

Moody will accept the award on behalf of PDE on Oct. 23 at the 2019 ASBPA National Coastal Conference in Myrtle Beach, South Carolina.

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The Partnership for the Delaware Estuary, host of the Delaware Estuary Program, leads science-based and collaborative efforts to improve the tidal Delaware River and Bay, which spans Delaware, New Jersey, and Pennsylvania.

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