

**Testimony of Mayor Kathleen Lock
Town of Slaughter Beach
Before the Senate Environment and Public Works Committee
Bethany Beach, Delaware Field Hearing
February 23, 2022**

Thank you Chairman Carper, Ranking Member Capito, and esteemed members of this committee. I am honored by your invitation to testify about the vital issues and challenges facing small coastal towns as we confront the dual challenges of sea level rise and violent coastal storms. On behalf of the Delaware Bay communities, I sincerely thank you for this opportunity.

Slaughter Beach is one of three incorporated beach towns on the Delaware Bay shore. As Mayor, I bring the perspective of a front-line community leader who daily lives with both the pleasures and threats of the sea.

While the many visitors who come to our beach and wetlands enjoy fair weather coastal experiences, as property owners and permanent residents we know that we can experience the next damaging storm or elevated tide as soon as tomorrow or next week, and that we can experience these extreme weather events frequently throughout the year. We live with the knowledge that sea level rise is occurring at a much faster pace than what was projected by scientists as little as a year ago. Fortunately, through sound science and good engineering there are many tools available to mitigate or offset damages for many years into the future.

I have recently worked with the mayor of Bowers Beach, Ada Puzzo, and the Mayor of Lewes, Ted Becker, on the Delaware Dredged Material Utilization project. We closely followed the progress of that U.S. Army Corps of Engineers study, and we were delighted by its inclusion in the Water Resources Development Act of 2020. A very special thanks goes to Senator Carper for his support and assistance in making this happen.

We on the coast count on our partnerships with county, state, and federal government officials to help us protect and sustain the thousands upon thousands of wonderful coastal communities throughout our country.

Perspective From a Small Coastal Town

Literally, from my window I watch the tide rise and fall every day, I see the waves on the Delaware Bay daily; some days barely

noticeable and other days so threatening that one would think there will be no land left following the waves breaking angrily on the beach. I see the beautiful productive wetlands protecting our community from flooding caused by those frightening waves and I'm grateful for the work that was done decades ago by the state and USACE to build and maintain those natural storm buffers. But maintenance of our dunes, our jetty and wetlands over the past 30 years has been sporadic and considerably less than what is required. With the exception of Lewes beach, the remainder of the Delaware Bay beach communities are experiencing severely deteriorated beaches and dunes. If these protective landforms are allowed to further deteriorate, we will see homes lost, and critical infrastructure such as water supply, sewer, septic systems, electric supply, and roads damaged, destroyed and service interrupted. We will also see wholesale loss of valued wetlands, upland forested lands, and productive agricultural lands.

Beach and dune work is also needed on Delaware Bay Beaches to protect threatened and endangered species. Our beaches are a primary breeding ground for horseshoe crabs and are an important Atlantic flyway stopover for migrating shorebirds who feed on horseshoe crab eggs, including the endangered red knot. Additionally, horseshoe crabs play a significant role in human health and wellness. I recently read about the critical role the blood of horseshoe crabs played in the development of the Covid-19 vaccine. Horseshoe crabs need sandy beaches to lay their eggs and we are losing sand at an alarming rate. Last fall we experienced a storm that washed away most of the protective dunes and every beach along the Delaware Bay shore was severely impacted.

The breaching of dunes in Prime Hook National Wildlife Refuge, approximately three miles to the south of Slaughter Beach, resulted in devastating damages to the Refuge's wetlands. Acres upon acres of trees were destroyed due to high saltwater tides travelling up stream beds, and many acres of farm fields were made fallow by saltwater intrusion. The U.S. Fish and Wildlife Service invested \$38 million to build back the protective beach and dunes in the Refuge and rehabilitate the wetlands landward of the beach and dunes. It has been estimated that if beach nourishment had been implemented soon after the breach occurred, severe beach erosion in the Refuge and the breakdown of the entire dune system could have been avoided and none of the additional problems would have developed. This should be a hard-earned lesson to all who are responsible for beach preservation. It serves as a perfect example of what not to do because the

estimated cost to conduct early beach repair was on the order \$3-5 million in comparison to the final cost of \$38 million. Sadly we, too often, ignore the science that identifies an emerging problem that could have been curtailed early on. Rather we often wait until the problem blows up then are compelled to respond to it at a far higher cost. Proactive work is almost always far less expensive than reactive work.

Another concern shared by all other coastal towns and communities that I am familiar with is our wholesale reliance on the U.S. Army Corps of Engineers to provide the guidance, the funding, and the engineering expertise to protect our communities. However, it is difficult to bridge the distance between those of us on the front line and the Corps of Engineers staff who are involved in so many issues that are vital to our communities. Primarily coastal flood damage reduction efforts mitigating the onset of sea level rise and the on-going maintenance of navigation channels are the issues that keep us up at night.

In Delaware, the Department of Natural Resources and Environmental Control is the nonfederal partner on Corps' projects, and it is our experience that communication between the Corps and the communities in need of Corps assistance for coastal mitigation or maintenance projects is limited at best. One exception to this, is when Senator Carper's staff arranged for a 'Corps 101' meeting for local communities in Delaware. That day, three years ago now, was extremely informative but had it not been for Senator Carper's staff's foresight that collaboration was desperately needed, I doubt Corps staff would have had the vision to coordinate the effort on their own. I suspect it will not happen again unless someone outside of the Corps arranges it. This needs to change. I implore Corps leadership to see their world through the lens of local elected officials who usually have no knowledge of how the Corps can help, and please keep in mind that front line community leadership changes hands on a very frequent basis. Please make it a priority to reach out to communities across the state to let them know about the good work you do and how you can help them address their water resources related challenges.

The increasing frequency and ferocity of coastal storms is unprecedented, and I do not need to tell this esteemed body that the ravages caused by climate change are occurring now - not in another 30 years as originally predicted. Today's leaders from both large and small communities, are faced with the need to respond to these changing conditions, oftentimes without a

comprehensive roadmap or the appropriate tools needed to mitigate the risk. Certainly, from the perspective of a small community, we must look to our federal and state governments for leadership on this very pressing issue. Individual communities, especially smaller coastal towns, do not have the knowledge-based, expertise or the funds to formulate and implement a comprehensive risk management plan that will protect and sustain our coastal and riverine communities from the effects of changes in weather patterns.

Anecdotally, The Mispillion jetty borders our town. The north wall was constructed by the U.S. Army Corps of Engineers in 1859 and the south wall was completed in 1908. The jetty has served as a breakwater protecting the town from nor'easters for over 160 years, but due to lack of funding, was allowed to fall into disrepair in this century. A 2010 engineering study of the Mispillion watershed performed by PBS&J, determined that due to the deterioration of the south jetty wall, detritus flowing from the Mispillion river channel to the Delaware bay lands on the northernmost shore of Slaughter Beach, and is the direct cause of a buildup of peat that is over 3.5 feet deep, covering over 5 acres of prime shorefront. This accumulation impairs sensitive beach habitat and restricts the safe recreational use of the area.

A Vision of Next Steps to Attain Resilience

From my vantage point I, along with my town council and community citizens, have a clear understanding of the natural hazard threats knocking on my community's door. These include the loss of beaches, dunes, and wetlands. I will share my thoughts on ways to improve our resilience and sense of community security.

- I hope for a more end-recipient friendly Corps, and an evolved Corps that anticipates the need for communication and education on their opportunities to help us.
- I hope to see all stake holders tasked with building more resilient coastal communities utilize a vision of the whole system. The interdependence of sea, beach, dunes, and wetlands, and the value they add to our quality of life and tourism-based economy, must be seen as whole system that is in dynamic balance. When seen as the system it is, then its management and stewardship must involve a systems-based resilience plan.

- I hope to see a Corps that is far less hidebound - one that has the authority to immediately respond to and assist communities damaged by coastal storms; a Corps that can be proactive in repairing the wetland and dune systems that are critical to sustaining our beautiful coastal areas; a Corps that can abate future damages when those damages are in their infancy and not after they have grown to unmanageable proportions.
- The Corps has proposed using sand dredged out of navigation channels for beach restoration to aid in reducing coastal flooding. Since the Corps is tasked to remove excess sediment in navigation channels, and is also tasked to replace sediment lost to erosion in valued coastal landforms, and yet again, is tasked to address the availability and capacity of Confined Disposal Facilities, it should be obvious that efficiencies can be found by addressing all three as parts as a single mission - not as three separate missions. It is the best way forward. However, I was amazed to learn not long ago that despite the overwhelming value of placing sand dredged from the Delaware River Main Channel on sand starved beaches along the adjacent shoreline, the Corps instead obtained permits to expand the under-water disposal site on the bottom of the Delaware Bay so dredged sand can be disposed of cheaper instead of more effectively. It appears to me that the Corps personnel responsible for dredging the channel are still significantly cordoned off from the Corps staff responsible for reducing the threat of coastal flooding. While the Corps talks about using dredged material to address a sediment loss problem it is still mostly talk.

I mentioned above the significant investment made by the U.S. Fish and Wildlife Service at Prime Hook National Wildlife Refuge. The rebuilt wetland area within the Refuge depends on Delaware Bay waters entering the marshes through the Mispillion Inlet at the north end of Slaughter Beach. This is a jettied inlet through which the Mispillion River and Cedar Creek enter the bay. Tidal water from the Delaware Bay that flows southward through Cedar Creek is the source water for the entire Prime Hook Refuge wetland system. We have watched the slow and steady disintegration of the inlet jetties. We have asked for and hoped for dredging to open the boat channels back to their design depths and configuration. We have watched, for decades now, as the Mispillion river continues to erode the riverbank north of the inlet as it pressures the shore toward a breakthrough entrance into the bay north of the inlet that was

designed to carry its water out. We have watched this happen before and we have seen the shoaling that quickly shuts off the jettied inlet. Imagine the cost to the environment and critical habitat if the water flow through the Mispillion Inlet, the water source for the USFWS \$38 million Refuge project, is severely reduced. Without that volume of water flowing south to the Refuge we can imagine it turning back into a giant phragmites fire hazard.

Benefits of The SHORRE Act

I am pleased with what I have seen in the SHORRE Act and want to specifically thank Chairman Carper for his decades of involvement in and concern for Delaware's coastal towns, beaches, dunes, and wetlands. His leadership spans decades of work from when he was our Representative in Congress, through being our Governor and now serving as our Senior Senator. As Chair of the U.S. Senate Committee on Environment and Public Works he is a national leader who truly understands the importance of our coastal communities and the vulnerability they endure as global climate warms, weather becomes more erratic, and seas rise at unprecedented rates. While greenhouse gas emissions are the subject for another day, today we focus on the effects of sea level rising more quickly and weather turning more severe. I thank all who have brought forward this legislation which envisions a better way for the nation to prepare for future needs to sustain our valued coastal lands.

The SHORRE Act is a valuable tool in modernizing the Corps and the way the Corps interacts with communities it is serving. I call out three specific inclusions that I am particularly happy about. First, the expansion of the Corps' existing river flood mitigation and restoration authority that now will include shoreline protection and restoration as a primary mission of the Corps. Second the identification of Delaware Bay Beaches as a priority area for implementation of projects under the amended authority. Finally, and perhaps the best news, Section 15 modifies the Delaware Dredged Material Utilization project to permit the use of alternative borrow sources to the Delaware River. This is expected to significantly reduce the costs to nourish the Delaware Bay beaches. This section also includes a special rule for the DMU project that allows the Corps, while alternative borrow sources are being identified, to carry out the nourishment of any of the Bay Beaches included in this project under an existing continuing authority for beneficial use of dredged material. These inclusions will result in increased opportunities to work with the Corps that we on the Delaware Bay shore have not enjoyed in the past.

Once again, thank you for providing me with the opportunity to speak on this very critical issue.