

Project to restore beach at Mispillion Harbor

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Molly Murray

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(Photo: JASON MINTO/THE NEWS JOURNAL)

It was high tide at Mispillion Harbor east of Milford Tuesday afternoon, and Lighthouse Road, the only way in and out, was flooded under a foot of water.

It is a regular event during full and new moons, said Jeremey Ashe, a state fish and wildlife biologist and Delaware Bay habitat restoration coordinator. And it is perfect timing for a \$4.5 million project designed to create habitat for shorebirds and shield the area from storms and waves.

By next spring, this rock wall, called a groin, should be much more substantial, and a sandy beach will be created to the west along the banks of the Mispillion.

A narrow rock wall that divides Delaware Bay and the Mispillion River was just high and wide enough to allow heavy equipment to work as waves from Delaware Bay lapped at the rocks.

It is here that shorebirds, including the robin-sized red knot, stop each May to feed on horseshoe crab eggs. The small birds are a federally threatened species, and the population decline has been linked to over harvests of horseshoe crabs in Delaware Bay. The problem is there are too few eggs to support a healthy population.

Habitat loss is a growing concern along the bayshore as sea levels rise and storms and lunar high tides cause increased erosion, flooding and breaches that can change the hydrology in an area overnight.

"There will be a beach out there," Ashe said. "Right now, there is no habitat for horseshoe crabs and shorebirds."



Crews work on raising and extending a stone dike at the Mispillion inlet near the DuPont Nature Center in Milford to restore beach habitat for horseshoe crabs and provide foraging for shorebirds, specifically the red knot. (Photo: JASON MINTO/THE NEWS JOURNAL)

Mispillion Harbor has been fragile since a fast-moving winter storm in January 1992 caused significant damage and erosion. Several major storms since then, including a Mother's Day weekend nor'easter in 2008, Hurricane Irene in 2011 and Hurricane Sandy in 2012, caused more sand loss and damage.

Money for this restoration project comes from the [National Fish & Wildlife Foundation](#) through a Hurricane Sandy restoration grant.

Ashe said the project won't stop flooding on Lighthouse Road but without it, there is concern that other major storms could significantly damage what little beach remains at the north end of Mispillion Harbor.

If Delaware Bay breached this last remaining sand spit and the man-made Greco Canal was inundated, it could significantly alter the water flows in the entire region, including the recent, \$38 million federal restoration at Fowler Beach to the south, Ashe said.

That project was also intended to build a more resilient shoreline and protect habitat at Prime Hook National Wildlife Refuge to the south. Hurricane Sandy broke through the dunes there and altered the marsh and cause significant flooding in adjacent, residential communities.

Over the last two decades, state and federal officials and conservation groups have worked to bring back both horseshoe crab and shorebird populations amid worries that the crab-to-egg-to-bird food web was the critical link in recovery.



Crews fill a barge with stone for raising and extending a stone dike at the Mispillion inlet near the DuPont Nature Center in Milford to restore beach habitat for horseshoe crabs and provide foraging for shorebirds, specifically the red knot. (Photo: JASON MINTO/THE NEWS JOURNAL)

Now, rapidly eroding Delaware bayshore beaches are a concern because without habitat, horseshoe crabs are limited in where they can spawn and that could mean fewer feeding places for shorebirds, including red knots, to feed.

Thirty years ago, the birds and crabs spread from Woodland Beach south to Lewes and the epicenter was a wide swath from Port Mahon south to Slaughter Beach.

But over the last decade, crab spawning and bird feeding has concentrated at Mispillion Harbor.

Ashe said when the project is complete – the deadline is April 2017 – the rock groin that separates the Delaware Bay and Mispillion River will be six feet tall and there will be a three-foot restored beach to the west.

"There is no dredging with this project," Ashe said.

Computer models were used to determine how high the rock wall needed to be to avoid being topped or breached during a storm, he said.

The rock is being trucked in from a quarry in Maryland, and once the wall work is complete, the sand will be trucked in, too.

"We're adding over 4 acres of potential new horseshoe crab spawning habitat and shorebird foraging habitat," Ashe said. "This is a hotspot for Delaware. This is the spot for red knots, horseshoe crabs in Delaware Bay. This is the largest concentration of horseshoe crab eggs and spawning anywhere in the Delaware Bay. And the habitat is almost gone so we're getting it restored just in time."

Contact Molly Murray at (302) 463-3334 or mmurray@delawareonline.com. Follow her on Twitter [@MollyMurraytnj](https://twitter.com/MollyMurraytnj).