

Residents in Delaware Bay communities from Broadkill Beach north to Kitts Hummock are about to find out what the long-term plans are to save their part of the coastline from sea-level rise.

A series of proposals will be outlined at a meeting Friday, with price tags ranging from \$1.6 million to \$200 million over the next three decades.

Which proposal is eventually chosen will likely guide coastal management in the area and the state's role for decades to come.

The plans were developed by Delaware Bay Beach Work Group, which includes state lawmakers who represent the area along with federal, state and county officials. The recommendations come years after the Beach 2000 report, which was completed in 1998 and covered the state's Atlantic coastline.

Unlike the earlier assessment, the proposals take a property-by-property approach to vulnerability. They estimate property losses over the next 30 years if the state does nothing or adopt two "retreat" scenarios that stop short of the sand-pumping and beach-widening commitments needed to protect every property through 2041.

Groupmembers plan to meet at 10 a.m. Friday in the Senate Hearing Room at Legislative Hall in Dover to review a report on costs and benefits. They will also discuss ways to pay for the work.

"We do have some short-term opportunities to do some work," to protect bayside communities, said Department of Natural Resources and Environmental Control Secretary Collin P. O'Mara. "For the long-term, we're going to have to have conversations about cost-sharing and sources of that cost-sharing.

"We're not proposing to lock ourselves into a decision over the next 30 years," he added. "If we see an increase in the rate of sea-level rise, we'll be able to adjust."

### Forecast not good

The meeting follows the release on Thursday of a landmark DNREC study on Delaware's vulnerability to the rising sea level. The report found that 8 to 11 percent of the state's land area could be flooded by the end of the century under moderate forecasts for global sea-level rise. That would affect 3,000 to 17,000 homes as well as inundate 116 to 484 miles of roads and bridges.

DNREC's estimate was based on forecasts of a 1.6- to 5-foot rise in Mid-Atlantic coast sea-levels by 2100, a change that scientists have said will be driven by past and ongoing releases of heat-trapping carbon dioxide and other pollutants into the atmosphere.

"Sea-level rise is not just a problem for beach-front homeowners," said Sarah W. Cooksey, advisory committee chair and administrator of DNREC's Delaware Coastal Programs. "It is an issue that will affect every Delawarean."

Storm-driven flooding already causes problems along the Delaware Bay beaches from Kitts Hummock south to Broadkill — flooding access roads and homes. In addition, erosion is eating away at the shoreline. In some areas, the beach is as narrow as 13 feet at high tide.

At stake is the future of more than 1,600 structures and more than 2,300 mostly residential buildings and lots — some valued at more than \$1 million — between Pickering Beach, east of Dover, and the sprawling series of waterside communities that includes Prime Hook Beach and Broadkill north of Lewes. The study area also includes the municipalities of Bowers Beach and Slaughter Beach as well as the unincorporated settlements of Kitts Hummock and South Bowers.

DNREC already has adopted — without funding — a shorter-term management scheme for the region, based on a 10-year beach replenishment cycle that could cost up to \$16 million.

State officials typically budget about \$1 million to spend annually on smaller beach repair projects. With that money and an in-house beach crew, state officials managed to minimize the short-term erosion effects.

But things started to change over the last several years, said Anthony P. Pratt, the state's shoreline administrator. “We lost our capacity to do these projects in-house,” he said.

And there were environmental concerns that year-round sand pumping projects had the potential for a higher effect on fisheries in Delaware Bay — a concern that limited the times when sand could be pumped, Pratt said.

In recent years, sands has been trucked in for some small scale beach repair projects where the need was very high, he said.

#### Policy lacking

But the state hasn't had a detailed policy for shoreline management.

The work group plan takes the closest look yet at the effect of sea-level rise and coastal erosion on some of the most vulnerable properties in the state. The proposal has scenarios that include beach replenishment, do nothing or engage in a systematic retreat.

There are two, widely different retreat scenarios. Each option considers the costs over 10-year cycles but it does not include the cost of emergency repairs after storms.

Over the long-term, the work group recommendation could scale back or expand each plan, based on beach-by-beach decisions. Through 2041, up to 453 structures could be affected and up to 81 lost entirely, depending on the state's decision on what action to take.

Interest in the effort has sharpened amid debate over flooding caused by breaches in the protective bayside dunes at Prime Hook National Wildlife Area. The new openings have sent tidal flooding far into the inland, swamping large areas of freshwater marshland as well as farmland. The floodwater has at times closed access roads used by residents in Prime Hook and southern sections of Slaughter Beach.

Some residents are pressing for state or federal action to close the breaches to protect nearby homes from further storm-surge flooding. Environmental groups have argued for letting the wildlife area naturally convert to saltwater marsh or open water as sea levels rise.

“Since the breaches, not only is a lot of land not able to be used, the water lays in there a lot longer, and if we get any significant rain or weather, it washes over the road,” said Michael Erisman, a Slaughter Beach resident.

“It doesn't take too much now to turn the town of Slaughter Beach into an island,” he added.

#### Out of picture

Although the Army Corps of Engineers does plan to use some shipping channel spoils to build up Broadkill Beach, the federal agency no longer routinely finances beach replenishment beyond Delaware's Atlantic Coast.

DNREC chief O'Mara has suggested that a local funding source such as a Tax Ditch District may be one way to pay for the work.

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