



Rhode Island news

Rising concern

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Over the years the ocean has steadily encroached on this area of Matunuck Beach Road in South Kingstown. With a projected rise of at least 3 feet in the sea level by the end of the century, the town is studying how it can protect the area.

The Providence Journal / Kris Craig

NARRAGANSETT

The Town of South Kingstown is spending \$100,000 to figure out how to protect Matunuck Beach Road from ocean waves that keep pounding closer and closer and threaten to cut off public access to hundreds of homes.

The town also is looking for another route for the water line that runs down Succotash Road. The bridge that carries the pipe over the outlet to Potters Pond has washed out in past storms.

Looking to future hazards, the town is perusing a new scientific report that shows how many hundreds of houses and miles of roads and utilities will be inundated if projections on sea-level rise hold true.

Town Manager Stephen A. Alfred says state and federal emergency responders are not planning for the consequences of sea-level rise, but his town is. It has lost 150 to 200 feet of its town beach to coastal erosion in the last 15 years, and he said he fully appreciates that much more is threatened by rising oceans.

“We need to keep up with the latest science,” Alfred said. “And we have to constantly figure out what our options are.”

South Kingstown was praised for doing some “extremely intelligent” planning by an emergency response planner during a daylong conference Tuesday on climate change and its potential effects on Rhode Island’s coastline.

About 150 people — from local homeowners to scientists and government employees — attended the conference at The Towers, sponsored by the Coastal Resources Management Council and the University of Rhode Island’s Coastal Institute.

Last fall, the CRMC became one of the first regulatory agencies in the country to officially recognize the likelihood of sea-level rise and write a policy to prepare for the consequences.

Grover Fugate, the CRMC’s executive director, said he still needs more data before writing new regulations in response to sea-level rise. For instance, houses near the water should be built higher off the ground; he’s not sure how much higher yet.

But he and others said it is clear there will be negative consequences to climate change and sea-level rise, regardless of how people react.

“We’ll see in Rhode Island a net loss of our shoreline,” Fugate said. “And here in Rhode Island we don’t have much room to move back.”

Fugate said the projected sea-level rise caused by global warming will cause more erosion, more saltwater intrusion of drinking water wells, more septic system failures and more storm damage from northeasters and hurricanes.

Whether global warming is causing sea-level rise is no longer being questioned by scientists, said Kate Moran, associate dean and professor of oceanography and ocean engineering at URI’s Graduate School of Oceanography.

“There is no more debate. Global change is unequivocal and we are the cause,” Moran said.

Sea ice that has covered the Arctic for 13 million years may be gone in 15 years, Moran said. That won’t directly raise water levels, but the loss of the ice means more of the sun’s energy will be absorbed in the Arctic, rather than reflected away.

Observations of sea-level rise already are running about double the rate of most models of the future, she said.

And the bigger fears, she said, are how rapidly will the massive ice sheets on Greenland and Antarctica melt. “Those are the number-one science topics in the world.”

She pointed out that a top scientist who specializes in ice sheet research at NASA, Robert Bindshadler, in a speech at URI last week, said most scientists agree that 3 feet of sea-level rise by the end of the century is a conservative estimate.

“We’ll see one meter by the end of this century, I have absolutely no doubt about that,” Bindshadler said in

a presentation. He warned that there is enough ice to raise sea levels by 200 feet if it all melted.

Moran said climate change will affect how people eat, how they travel and how they consume. She said she supports a multipronged response that includes improving energy efficiency, reducing consumption, controlling population, providing more solar energy and wind power, nuclear power and capturing carbon.

Someone in the audience asked Moran about a recent magazine article that said the debate over climate change is not over and that a growing number of Americans are skeptical that it is occurring.

“That’s astounding,” Moran responded. “The rest of the world that reads newspapers with science in them gets it. Stop reading Wall Street Journal editorials.”

Jon Boothroyd, a veteran geologist at URI, said breaking waves, not sea-level rise, have been eroding Rhode Island’s beaches. But sea-level rise is real, he said, and it will help push the state’s barrier beaches back.

“There will always be a beach,” he said. “It will just be someplace else.”

Janet Freedman, a coastal geologist at the CRMC, said she is concerned that rising sea levels will threaten salt marshes, bring new pathogens and invasive species, increase stresses on eel grass beds and shift fish habitats.

For information about the conference and copies of some of the presentations, go to: www.ci.uri.edu/ciip/projects/GCCinRI/.

For more information about CRMC activities, go to www.crmc.ri.gov.

For local evacuation maps, go to http://www.riema.ri.gov/hazards/hurricane_evac.php

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