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Watch Hill talk focuses on dangers of sea level rise

By Dale P. Faulkner Sun staff writer Aug 13, 2019 Updated 8 hrs ago

WESTERLY — More than 100 people gathered Monday at Lanphear Livery in Watch Hill to listen to two experts discuss the impact of sea level rise and storm surge on the region and steps the state is taking to help prospective builders protect their investments.

The talk was offered by the Watch Hill Conservancy and conducted in the Chaplin B. Barnes Reading Room at the livery, located at One Bay Street Center.

Bryan Oakley, associate professor of environmental geoscience at Eastern Connecticut State University, delivered an address he called "Sea Level Rise 101" and Teresa Crean, a community planner and coastal management extension specialist with the Coastal Resources Center and Rhode Island Sea Grant at the University of Rhode Island's Graduate School of Oceanography, reviewed online mapping tools that the state Coastal Resources Management Council has made available to determine inundation risk for all areas of the state's coastline, including Watch Hill and the rest of Westerly.

In the last 25 years, scientists have determined, the sea level has risen globally an average of one centimeter every three years, Oakley said. During the same time period, the National Oceanic and Atmospheric Administration tide gauge in Newport has documented increases of 4.1 milliliters per year, slightly higher than the global average, Oakley noted.

"The trillion dollar question is how much will relative sea level rise and what will we see on the coastline?" Oakley said.

Relative sea level rise is the phrase scientists use to describe sea level rise at a specific location.

The U.S. Army Corps of Engineers projects a 5-foot sea level rise by 2100 relative to the year 2000 for the Newport area. NOAA's more conservative projections are for 9 to 11 feet of sea level rise. Oakley explained that projections for higher levels are considered "more conservative" because planning based on the higher projections would likely result in more resilient buildings and infrastructure.

The rate of ice sheets melting in places such as Greenland and Antarctica is a variable that makes predicting sea level rise difficult, Oakley said. He also noted that scientists observed melting of ice sheets of a tenth of a milliliter in a one-week period last month in Greenland. "To me that's a staggering takeaway," Oakley said.

Oakley also discussed the effect of storms and tides. He displayed a photograph depicting the parking lot adjacent to the Watch Hill Yacht Club flooded with sea water in May and said projections show the parking lot will be similarly flooded every day in about 20 years. The flooding was tidal-related, not storm-related, Oakley said. "That's almost every high tide in a couple of decades," he said.

The state, Crean said, has adopted NOAA's projections as the basis for statewide planning to respond to sea level rise. As such, the state anticipates sea level to rise by 3 feet by 2050. "Over the life of a 30-year mortgage," Crean said.

State officials are using the NOAA projections, maps, and graphs to "make sure we're not taken off-guard or surprised by water levels that are higher than that red curve," Crean said, referring to a NOAA graph.

Developers looking to build on the Rhode Island coast are required, Crean said, to submit plans that outline the building's design life in relationship to sea level rise projections. To assist with planning, CRMC has developed STORMTOOLS, an interactive computer-based system to show property owners and potential buyers the projected effect of storms and sea level rise.

Peter V. August, the Watch Hill Conservancy and University of Rhode Island Napatree Point science advisor, said Monday's session grew out of a forum the conservancy conducted last winter.

"We knew this was too important for the community and thought we have to get the word out," August said.

Following the workshops, community leaders and members of the business and conservancy sectors resolved to collaborate on developing plans to enhance the resilience of the Watch Hill community, August said.

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