RI COASTAL RESOURCES MANAGEMENT COUNCIL

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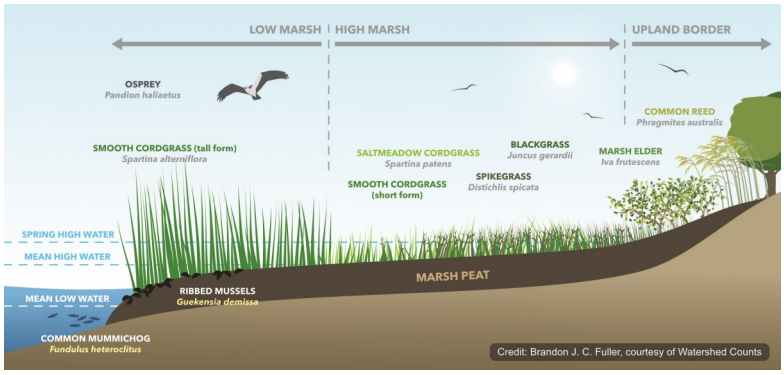
In focus: the future of RI's salt marshes

Rhode Island is new to the concept of buying salt marshes more time through thin-layer deposition and elevation enhancement, with a completed project at Ninigret and a new one to kick off in Quonochontaug this fall. The R.I. Coastal Resources Management Council (CRMC), the state lead on these efforts, is hopeful that these pilot projects will inform the scientific community about the changing dynamics in our coastal marshes.



"For the design we used the vegetation as a proxy for what our target flooding regime would be," said Caitlin Chaffee, policy analyst and habitat restoration project manager for the CRMC, of the project at Ninigret. "We took elevation data, vegetation data, coupled those two, looked at plant growth ranges and added some factors to account for compaction, and then there was a sea level rise factor added. Our maximum target elevation was about 6 inches higher than the existing observed mean higher high water elevation. The goal was to create areas built to that elevation in the center that would be gradually sloped down to the existing marsh surface. That way we would get a gradient of different elevations—some would support marsh vegetation now, and some would be areas that would convert to marsh in the near future."

In studying marshes along the Atlantic coast, from Maryland, New Jersey, New York and up to Maine, Dr. Neil Ganju of the U.S. Geological Survey at Woods Hole said those areas are accreting well (sediment deposit and decomposition of plants add volume and height to the marsh over time), but that lateral erosion is a cause for concern. Marshes in these areas, he said, are still accreting at a rate equal to or greater than the rate of sea level rise. Rhode Island is not as fortunate, however, and recent studies of accretion rates show that our marshes are generally "sediment starved" and not keeping up with sea level rise.

Learn more

CRMC adopts Beach SAMP, 1st climate change plan in US

The State of Rhode Island now has a roadmap to plan for impacts to homes, businesses, and vital infrastructure as a result of climate change-driven erosion, increased storms, and flooding from sea level rise: the newly adopted Rhode Island Shoreline Change (Beach) Special Area Management Plan, the only one of its kind in the nation.

With its June 12 adoption of the Beach SAMP, the R.I. Coastal Resources Management Council (CRMC) now has eight tailored regional plans that span most of the state, providing customized guidelines and regulations for addressing the specific needs of those areas. This SAMP seeks to address Rhode Island's constantly changing shoreline, and provide tools and guidance to our 21 coastal communities that are on the front line of sea level rise impacts.

"Nowhere else in the U.S. is there a management plan for tackling the complicated impacts associated with sea level rise, and Rhode Island is in a unique position to be a leader," said CRMC Executive Director Grover Fugate. "Here in the Northeast we are particularly susceptible to sea level rise impacts, and we're already seeing the effects of climate change in increased, more intense storms, accelerated erosion of our coastline, and damage to our infrastructure. This SAMP aims to provide tools to plan for the future."

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