

High Tides and Higher Hopes: How One Coastal Community is Mitigating Sea Level Rise

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As the sun rises over the Atlantic on a calm, cloud-free day, it is hard to think of Tybee Island as anything other than a paradise. At the Tybee Island Pier and Pavilion, the waves rhythmically lap against the pylons. Early morning fishermen cast their poles and chat with one another about their catches, fighting any seagulls who attempt to procure their fish. This coastal community of just over three thousand individuals sits at the mouth of the Savannah River near Georgia's border with South Carolina. Part of Georgia's string of barrier islands along the Atlantic coast, Tybee Island is Georgia's easternmost point. But there is a danger the island faces, lurking in the minds of residents. The sea level is rising.

According to the National Oceanic and Atmospheric Administration (NOAA), global sea levels have risen almost three inches in the last 25 years and the pace of rise is accelerating. Climate change causes sea level rise through three primary means: melting of glaciers and ice sheets, expanding ocean volume due to warmer waters, and declining water on land in aquifers, lakes, rivers, and soil moisture. For Tybee Island, the situation is even direr. As a low-lying barrier island, it already experiences widespread and frequent flooding. In 2015, US Highway 80, the only way onto the island, flooded twenty-three times due to high tides.

The impact on US 80 sparked the community's initial interest in developing a plan, according to Jill Gambill, the coastal resilience specialist with Marine Extension and Georgia Sea Grant at the University of Georgia. Gambill has been a part of the Tybee Island Sea Level Rise Adaptation Plan process since the beginning. Her background is unconventional in the field of climate resilience – she has degrees in philosophy and peace and conflict studies and has spent time working as a reporter in Venezuela. Gambill's office walls are filled with bright paintings of coastal scenes, almost making one forget that Gambill's office is in Athens, Georgia, and not on the coast.

As the team charged with developing the plan started in 2012, sea level rise had already become a polarizing issue. In North Carolina, for example, the state government passed a law banning policies based on sea level rise forecasts. Stakeholder buy-in was essential for ensuring that the plan was not polarizing on Tybee Island. "This meant that the community had to drive the conversation in the planning process," Gambill shared. Throughout the planning period, there were multiple community meetings,