

Madam Chair and Members of the Committee, thank you for inviting me here today. My name is Shawn Gillen and I am the City Manager of Tybee Island Georgia. I would like to speak with you today about some of the steps the City of Tybee Island has taken to address the current and future impacts of climate change on our beach and within our community.

In each of the past five years Tybee Island has been impacted by hurricane activity in the Atlantic. In 2016 Hurricane Matthew caused massive wind in a flooding damage. Less than twelve months later, Hurricane Irma hit Tybee Island flooding nearly 700 houses and disrupting numerous businesses. Tybee Island also saw impacts from Hurricanes, Michael, Florence and Dorian.

In 2016 Tybee Island completed a Sea Level Rise Adaptation Plan. During the process of completing that plan we looked at tidal gauge data from 1980 to 2015. We discovered that the frequency of tidal events in excess of 9.2 feet has steadily increased. This translates to more frequent flooding of the one road on and off Tybee Island. From 1935 to 2010 the tidal Gauge at Fort Pulaski has recorded approximately 10 inches of sea level rise.

Couple this data with the recent increase in Atlantic hurricane activity impacting Tybee Island and one can understand our sense of urgency.

Since the completion of the plan and Hurricanes Matthew and Irma, Tybee Island has taken a three-pronged approach to address the impacts of sea level rise, Defend, Adapt, and Retreat.

We have been aggressive in our building of seaward defenses of the Island. Through a cooperative effort of the City, the US Army Corps of Engineers and the State of Georgia, we have renourished our beach and for the first time incorporated the construction of sand dunes as part of the renourishment project. The challenge we are faced with now is our federal beach nourishment project with the US Corps of Engineers expires in 2024 and, under the current Corps models, our beach does not qualify for an extension. In essence, the federal government is seeing significantly reduced damages from a partnership that it now plans to terminate.

It must be noted that a study done by the US Corps of Engineers research arm, ERDC, concluded that 78% of the erosion on Tybee was a result of the Savannah shipping channel. With the uncertainty of the future of our partnership with the Corps of Engineers we have been exploring the possibility of beneficial reuse of dredge material as an alternative approach. This is less than an ideal approach, but one that we are forced to pursue.

As successful as we have been on defending the seaward side of the Island, we struggle with the marsh side. Through a National Fish and Wildlife grant we are studying how to defend the City from flooding from the marsh side of the island. The results of this study will likely call for innovative approaches to help us to adapt to serious flooding that has occurred in the past.

We are currently adapting our Island by raising houses above the flood level. The City has achieved a rating of 5 in FEMA's Community Rating System which offers our residents a 25% discount on their insurance premiums. We have also been successful in procuring FEMA Hazard Mitigation funding to move forward with the raising of 12 houses. We are waiting to

hear if we will receive funding for 49 more homes. We are entering our fourth year of this process, and as you can imagine the homeowners are getting anxious as are City leaders.

Increasing the speed and efficiency of these grant programs would go a long way to helping cities like Tybee Island adapt. Speed and efficiency of the approval process are not the only improvements that could be made. We also need increased flexibility of the program to allow for the purchase of properties where frequent flooding occurs, turn those properties into greenspace that can absorb the flood waters, and make the City more resilient to frequent flooding events.

Retreat can only work if we have a partner in the US Government to help us get over the financial burden that a city like Tybee Island could never afford. Regrettably, the federal government's investment in resilience is much less than it should be. Cities will be the leaders in climate adaptation, and the federal government needs to provide them with technical and financial assistance to implement solutions that are based on sound science.

Our "defend, adapt and retreat" approach means we will be able to absorb a blow and bounce back quickly. This is how we define resilience on Tybee Island. This will only be possible with continued partnerships with the USACE and FEMA, as well as our partners in the State of Georgia.

I thank you for allowing me to speak here today on behalf of my community.

Thank you, Madam Chair

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NOAA, 2015, Tide Gauge, National Weather Service, Advanced Hydrologic Prediction Service. <http://water.weather.gov/ahps2/hydragraph.php?gage=fpkg1&wfo=chs>. Accessed June 12, 2015

Channel Impact Study (ERDC/CHL TR-08-5 iii)