GEORGIA'S COASTAL SEPTIC TANK INVENTORY: MAPPING WASTEWATER SYSTEMS TO ENHANCE CLIMATE READINESS

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The US Environmental Protection Agency estimates that more than one in five homes are served by decentralized wastewater treatment systems—commonly known as septic tanks. In coastal areas where it is impossible to extend sewer service due to either financial or hydrogeological constraints, septic tanks are an integral part of wastewater treatment. When maintained adequately and installed under appropriate conditions, septic tanks remove excess nutrients and dangerous pathogens from wastewater. When not appropriately maintained, septic tanks pose a threat to human and environmental health. Further, changing climactic conditions increase the likelihood of septic tank failure. Due to increasing incidences of recurrent flooding and extreme weather events and future inundation from sea level rise, areas where septic tanks could function adequately in the past might not be able to rely on this method of wastewater treatment in the future. Through funding from the Coastal Resource Division of the Department of Natural Resources, UGA's Marine Extension has completed digitization and mapping of historic septic tank records in five coastal Georgia counties. This presentation will focus on the data management processes used to comprehensively catalog septic tanks and discuss the advantages and limitations of the completed data products. We will also highlight the challenges that we faced in creating a standardized dataset from county-level records based on variable data recording and inspection processes. The septic tank inventory offers two primary benefits. First, digitization of septic records increases the efficiency of local public health departments in fulfilling information requests. Second, mapping septic tanks allows for identification of areas in the county where septic tanks might be at the highest risk of failure or where targeted water sampling might be beneficial. By presenting this data resource, we intend to increase awareness and stimulate more research using the septic tank inventory data.

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