Conference Abstract

Coastal septic tank inventory: data resources for future wastewater management planning

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Background: 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. As coastal infrastructure is increasingly threatened by recurrent flooding, extreme weather events, and future sea level rise, coastal communities will need to assess the adequacy of their wastewater management systems and plan for future changes.

Methods: Through funding from the Coastal Resource Division of the Department of Natural Resources, UGA's Marine Extension has completed digitization of historic septic tank records into the Digital Health Department database in five coastal counties. This presentation will discuss how septic tank records have been linked to unique parcel identification numbers; the methodology for identification of potential undocumented septic tanks; and online, interactive GIS mapping features to allow expanded access and applications of the data. The septic tank inventory offers two primary benefits. First, digitization of septic tank records increases the efficiency of local public health departments in fulfilling information requests. Second, mapping the septic tank data 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.

Results and Conclusions: This presentation will focus on enhancing awareness of the data resource that has been created and potential uses in local wastewater management planning that incorporates climate considerations. This presentation will also demonstrate how other relevant GIS datasets can be integrated with the septic tank inventory.

Key words: wastewater management, septic tank, water quality, climate change, GIS

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