

## Task 2

**Project activity:** Shoreline Modification Econometric Analysis

**Objective:** Identify factors that influence property owners when making shoreline management decisions.

**Methods:** This analysis uses the VMRC permit database of shoreline modification permit applications to assess the factors that drive property owners to make particular shoreline modification decisions. The analysis combines the VMRC permit data with cadastral data which includes property assessments and building information. Using geographic information systems (GIS) data, these data can be combined with data on shoreline length, the distance from the primary building to the shoreline, land use cover, bank height, fetch, special flood hazard areas, and hurricane storm surge inundation.

I conduct a number of econometric regressions on this database: 1) a simple cross-sectional analysis of whether a property owner has requested any shoreline modification since 1990; 2) a multinomial logit analysis of the particular type of modification adopted; and 3) and a pooled cross-section analysis of the effect of neighbors' previous modifications and weather and flooding events on the type of modification.

**Progress to date:** I have conducted the analysis for Gloucester County and presented it at a conference this summer. I am planning on running the same analysis for Norfolk as soon as I have compiled the necessary dataset. I may combine the two localities into one analysis or keep them separate depending on the findings. If I decide to keep them separate, I will likely submit a paper on the Gloucester analysis later this fall.