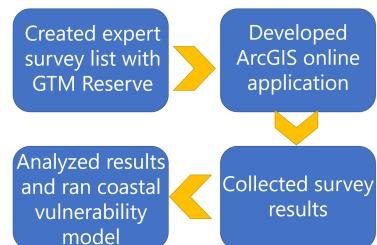


## Gathering novel estuary boat wake information in the GTM Research Reserve using virtual surveys

PRESENTER:  
**Philip F. Yang**

**BACKGROUND:** Anthropogenic activities, like boating and the wakes they produce, can increase processes like bank erosion. Boat wakes could damage coastal ecosystems that provide many important ecosystem services to the GTM Reserve in Northern Florida. We sought to spatially quantify boat wake height in the GTM Reserve using an ArcGIS online application. The data collected from this virtual survey will feed into a larger coastal vulnerability index InVEST model of the GTM Research Reserve.

### METHODS



### RESULTS

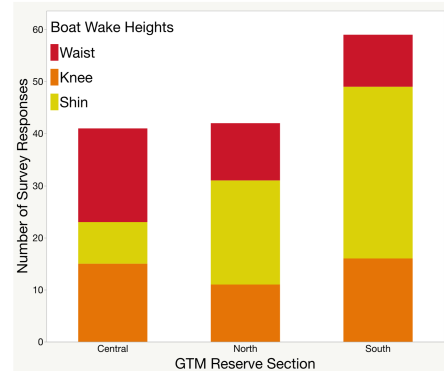


Figure 2. Bar graph of boat wake survey responses for three different boat wake heights.

# Boat wake height is higher in the central zone near St. Augustine than the northern or southern sections

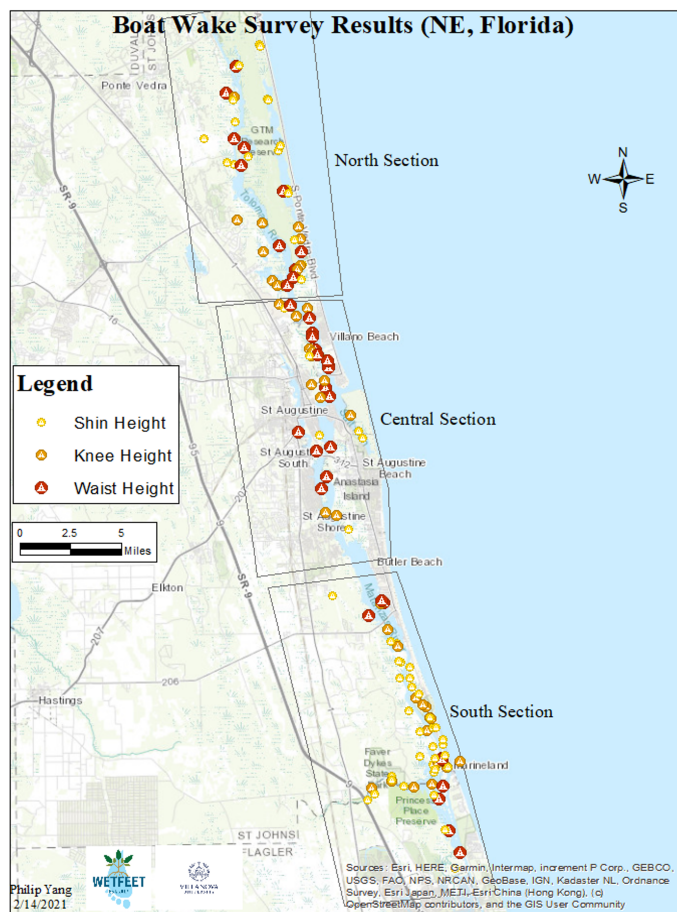


Figure 1. Map of boat wake data points from the ArcGIS online application. The Reserve is split into 3 sections: North, Central, and South.

### ArcGIS Online Application

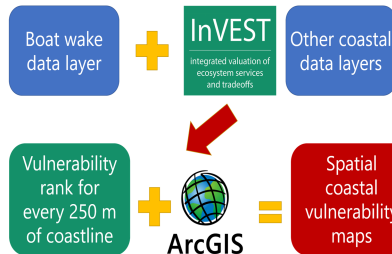
With the help of ESRI employee and Villanova alum, Eric Wagner, I was able to create a custom survey application using ArcGIS Online. Here is the QR code and link if you are interested:



<https://villanova.maps.arcgis.com/apps/View/index.html?appid=8127a9a081d7425cb035d4a3117d1b09>

The application works best on a computer interface.

### Coastal Vulnerability Index Model



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