SAMPLE LAY SUMMARY FOR A GENERAL AUDIENCE

(The M.K. Pentecost Committee, which makes funding decisions, determined that this was one of the best lay summaries that they had seen and are hoping for students to offer this kind of summary to receive funding in the future.)

What we liked:

- *Includes personal stories: short, not the main point, but something to draw in the reader*
- *Specifically indicates how this project will help with coastal conservation, the main focus of M.K. Pentecost grants*
- *Uses little "technical" language and clearly defines in lay terms any that must be used, like "wrack"*
- *This is not simply a scientific proposal summary, but something that could be published in a church or nonprofit newsletter or adapted for the newspaper. (a high school student with little science background should be able to understand the project)*

Docks are one of the most common sights along the tidal creeks and rivers that wind through coastal towns. Like many who grew up or live along the coast, I spent an unfathomable number of hours exploring, swimming, and admiring the marsh from a community or friend's dock. However, despite the opportunities docks provide for recreation and leisure, these structures may be damaging the marsh they are built to help people enjoy. That damage is caused because docks trap wrack, floating piles of dead plant stems that smother and kill living vegetation. In the absence of docks, wrack naturally washes out to sea or settles along the top edge of the marsh. Docks trap wrack along their length, causing it to accumulate deeper into the marsh than it naturally would. You can see this in the picture below, where a 980-foot dock in Savannah has trapped a massive amount of wrack (outlined in black), killing around five acres of marsh ("Wrack inundation puts focus on long docks", Savannah Morning News, July 20, 2012).

My research

My research proposal is to use a drone to photograph the marsh throughout Hilton Head, Savannah, and Brunswick, to understand the ways in which docks affect wrack. By photographing areas with and without docks biweekly over the course of the summer, I will be able to track wrack with more precision than has ever been done before. Aside from identifying how docks change where wrack settles in the marsh, these photos will also allow me to determine if docks cause wrack to settle more frequently or stay in the same place for longer periods of time, damaging more marsh plants in the process.

Importance

Aside from recreation, marshes provide vital habitat for several culturally and economically important species such as blue crabs, oysters, and shrimp. Salt marsh vegetation, particularly the dominant plant *Spartina alterniflora*, stabilize sediment and diminish wave strength, protecting coastal areas from erosion and extreme weather. Add to this the natural beauty of the marsh that soothes the soul, raises property values, and supports tourism. Collectively, the thousands upon thousands of docks that dot the Georgia and South Carolina coast may be trapping an unsustainable amount of wrack, smothering the marsh that bolsters coastal economies and protects our homes from hurricanes and erosion. Identifying how docks affect the way wrack settles in marshes can help engineers and dock-builders design and orient docks in ways that minimize their impact on our marshes. Taken all together it is clear that we must work to protect these valuable and fragile ecosystems, as healthy marshes are a central part of our economy and way of life.