

EEES 3900

Where would you build your island house?

Your team is going to build a house on a natural, unspoiled barrier island on the Atlantic coast of the United States. By law, no structures can be placed in the ocean to block the natural processes of wave action and sand transport (i.e. no jetties, breakwalls, etc.). Every few years, the island experiences strong storms (either hurricanes or “nor’easters”), when powerful winds shift the sand and send huge ocean waves crashing in, sometimes over the tops of the dunes. The dunes provide some protection against wind and wave action, especially after they have been stabilized by dune grasses, shrubs, and other natural vegetation. However, development of beachfront property, if unwisely placed, is destructive to the dunes and their mantle of protective vegetation, as well as your investment.

Your team’s assignment is to design and place a house in a location that will maximize its lifespan and cause the least amount of damage to the island ecosystem. Please address the following issues:

1. Where would you place your home? Why?
2. How should your home be designed to maximize its lifespan and minimize damage during storms (draw a house plan). Be prepared to explain and justify this design.
3. How would you provide beach access for swimming, beachcombing, etc.?

