

The faces of coastal erosion

by Roger Amato, and Will Waske

Walk along a beach in summer and you will see a significantly wider area than on the same beach in winter.

This happens because of a geological occurrence known as coastal erosion.

The beach system is one that is considered to be in dynamic equilibrium. That is; sand is moved from one beach location to another never leaving the same general beach area.

“For example,” says Barry Drucker of MMS, “winter storms which generate large waves, may remove large amounts of sand, creating steep narrow beaches. In summer, gentle waves return the sand, widening beaches and creating gentle slopes.”

The energy in the wave determines the size and amount of sand that will move and how far it will go.

Gentle waves move fine sand while storm generated waves can move rocks and boulders.

The Minerals Management Service is continually working with local states to help them with their beach renourishment projects. Much of the sand used is from federal waters so the agency is a key player in beach renourishment efforts.



Homes threatened by coastal erosion (above and below) MMS File photos



A healthy beach benefits all: vacationers, businesses, and the animals that live or nest there.

photo by
John Rowland,
MMS