

5-3.4 Explain how waves, currents, tides, and storms affect the geologic features of the ocean shore zone (including beaches, barrier islands, estuaries, and inlets).

Beaches



The *ocean shore zone*, or coast, is the area where the land meets the ocean. Some shorelines are rocky. Shorelines made of sand are called *beaches*. Shorelines are always changing because of wind and water.

Waves can wear away the land and expose a rocky shore or the waves can deposit sand along the shore and form a beach. If the waves reach the beach at an angle, the sand is moved along the coast.

CURRENTS

Flowing streams of water that move continually through the ocean in a specific direction are called *currents*.

Some currents flow at the ocean's surface and some are found deeper in the ocean.

Currents, called longshore currents, along the shoreline can move sand from one location to another.

Surface currents are caused by the movement of Earth and by the force and direction of wind.

The movement of Earth and winds cause these currents to flow along curved paths.

Warm water and cold water are moved to different regions on Earth as a result of currents.

Warm surface currents are driven by Earth's rotation from the tropics to higher latitudes.

Cold surface currents are driven by Earth's rotation from the polar latitudes toward the equator.

Currents



The Global Ocean Realm

What creates ocean currents?