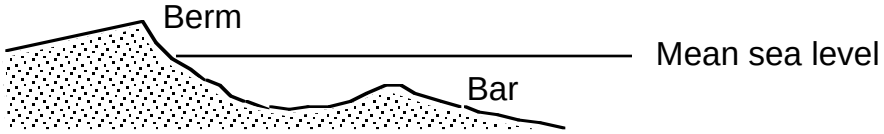
COASTAL LANDFORMS (32)

I Main topics
- A Sediment sources and sinks
- B Beaches and coastal landforms

II Sediment budget
- A Where sediment input > sediment loss: accretion
- B Where sediment loss > sediment input: erosion
- C Coastal landforms reflect long term geologic history and sediment budget

III Beaches and coastal landforms
- A Beach: Accumulation of rock fragments that can be moved by ordinary wave action
  - 1 Berm: The above water portion of a beach
  - 2 Bar: The below water portion of a beach; bars typically extend to depths of ~10m below low tide level
  - 3 Effect of seasons on bars and berms



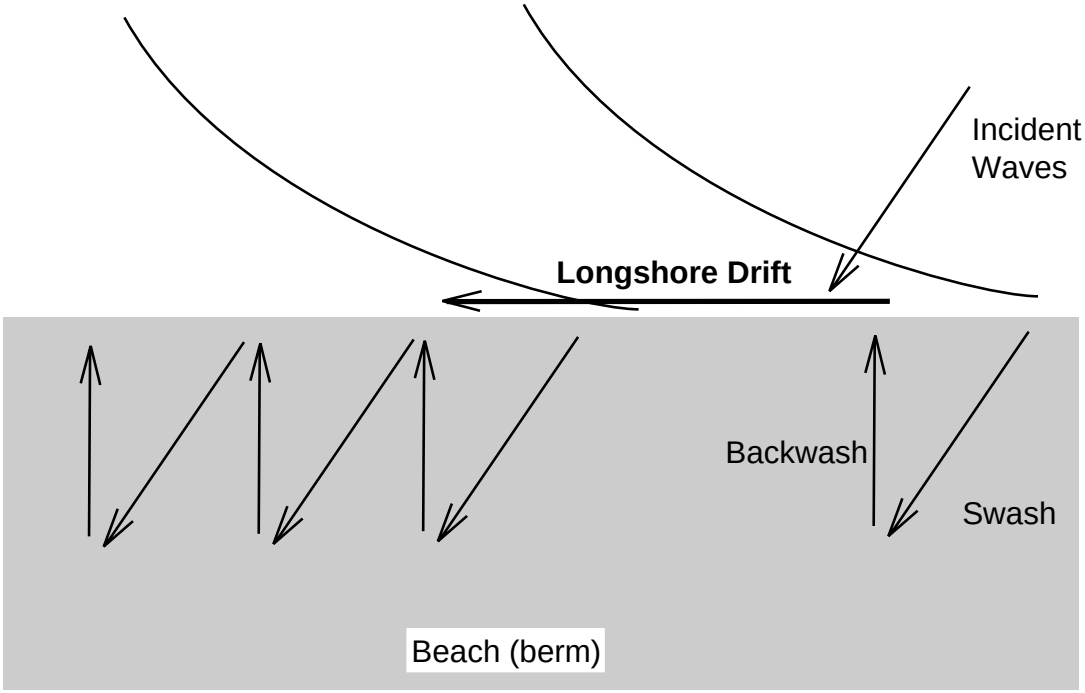
- B Wave-cut platform/bench (e.g.,, Hanauma Bay)
- C Wave-cut terrace: result from sea-level fall or land rise
- D Deltas: sedimentary bodies deposited at a river mouth
  - 1 Sediment sources
  - 2 Marine influences
    - a Currents and delta shapes
      - i Stream-dominated (“birdfoot”): Distributaries prominent
      - ii Wave-dominated: beaches prominent
    - b Tides and tide flats
- E Spits: attached, shore-parallel ridges form where there is a supply of sand, a transporting current, and a dumping ground (see D.2.a.ii)

F Barrier islands: low, elongate, shore-parallel islands (see D.2.a.ii)
  1 Emergence of offshore bars
  2 Submergence of beaches and beach dunes
G Lagoons: protected elongate or circular bay
H Reefs
  1 Indicate approximate level of sea level at the time of reef formation
  2 Elevated reefs indicate former sea level highstands or coastal emergence
  3 Submerged reefs indicate former sea level lowstands or coastal subsidence

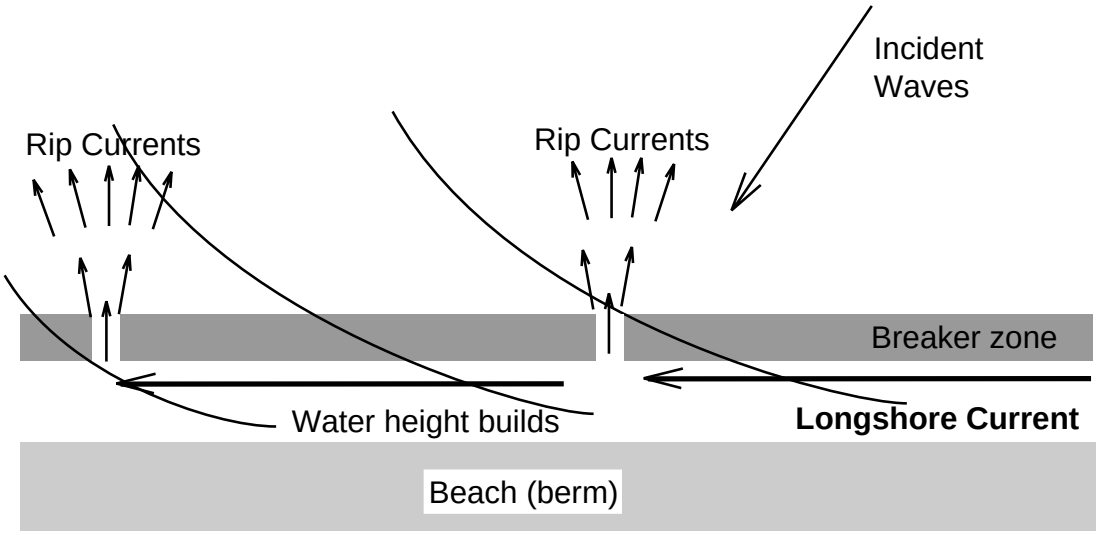
I Estuaries: inundated stream valleys

J Fjords: inundated glacial valleys

LONGSHORE DRIFT OF BEACH SAND



LONGSHORE CURRENT



Modified from Press and Siever, 1978