



# MASS MOVEMENT, WIND & WAVES

How does mass movement, wind and waves help shape Earth?

# MASS MOVEMENT, WIND & WAVES

- Mass Movement - the pulling of rock and sediment downhill by the force of gravity
- Characteristics: unsorted sediment



# MASS MOVEMENT, WIND & WAVES

- Examples: avalanches, landslides and/or mudslides



# MASS MOVEMENT, WIND & WAVES

- Mass movement involves two forces:
  - Gravity - the force of attraction where objects fall towards the center of the Earth
  - Friction - the rubbing of one object against another
- When rain weakens the force of friction gravity then pulls rock and sediment down a slope

# MASS MOVEMENT, WIND & WAVES



# MASS MOVEMENT, WIND & WAVES



# MASS MOVEMENT, WIND & WAVES



# MASS MOVEMENT, WIND & WAVES





# MASS MOVEMENT, WIND & WAVES



# MASS MOVEMENT, WIND & WAVES



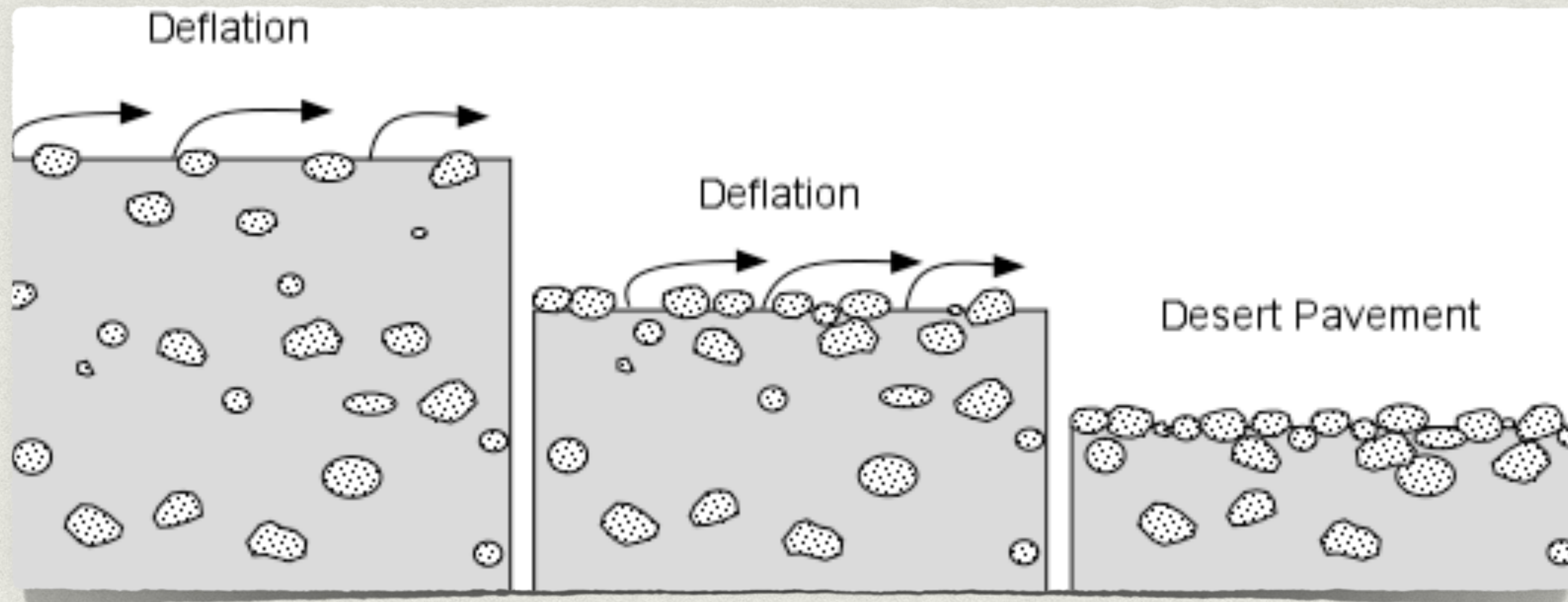
# MASS MOVEMENT, WIND & WAVES

- Wind - air that is moving horizontally that transports loose sediments [sands and silts] to a new location



# MASS MOVEMENT, WIND & WAVES

- Deflation - wind blows away loose sediment lowering the land surface until there is no more loose sediment to erode

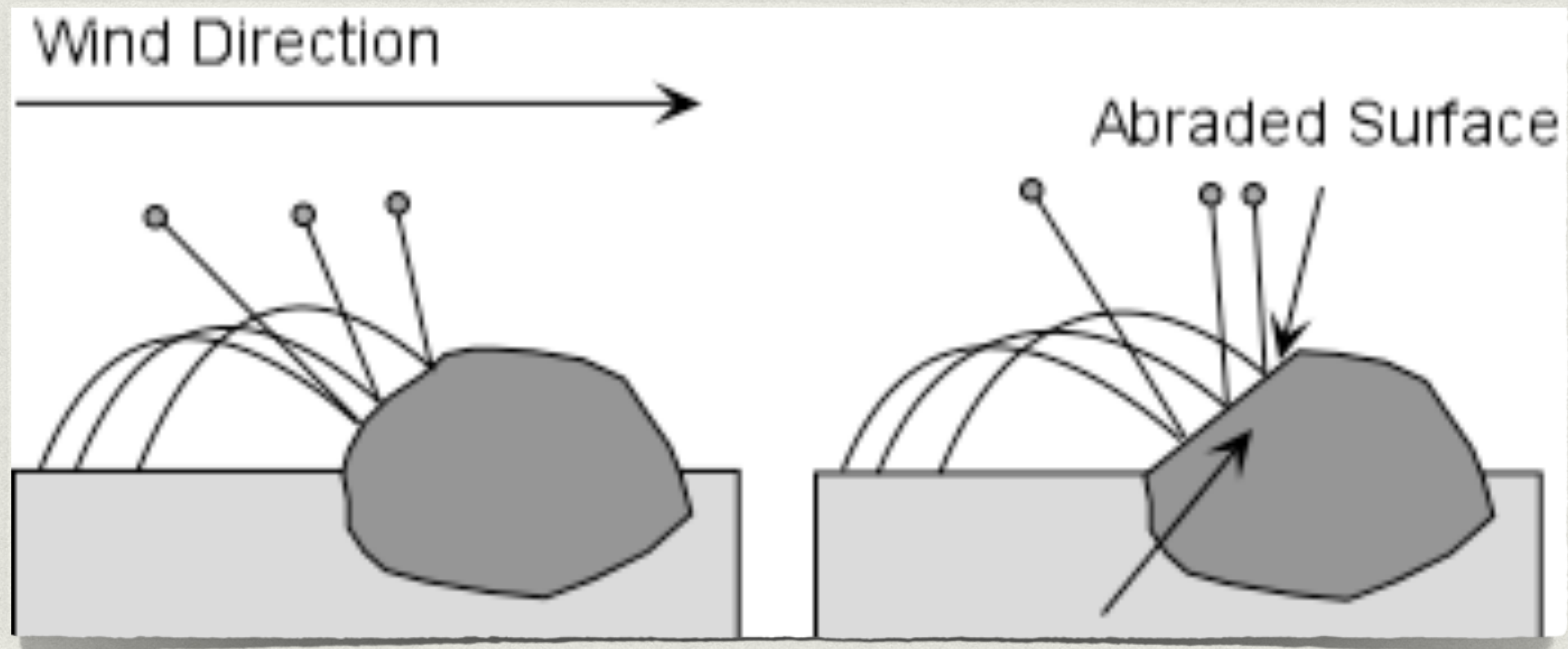


# MASS MOVEMENT, WIND & WAVES



# MASS MOVEMENT, WIND & WAVES

- Abrasion - wind picks up and blows smaller sediment against another surface wearing it down



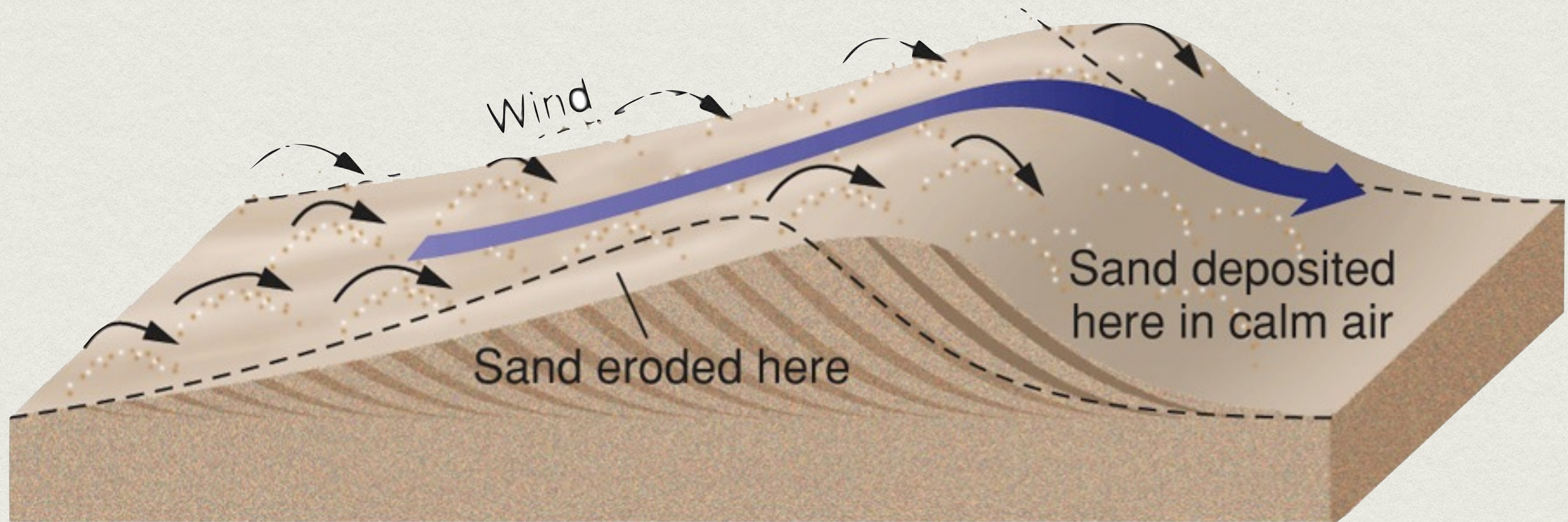


# MASS MOVEMENT, WIND & WAVES

- Sand Dune - depositional feature when sand is deposited in layers or mounds
  - Windward side: gentle slope
  - Leeward side: steep slope



# MASS MOVEMENT, WIND & WAVES



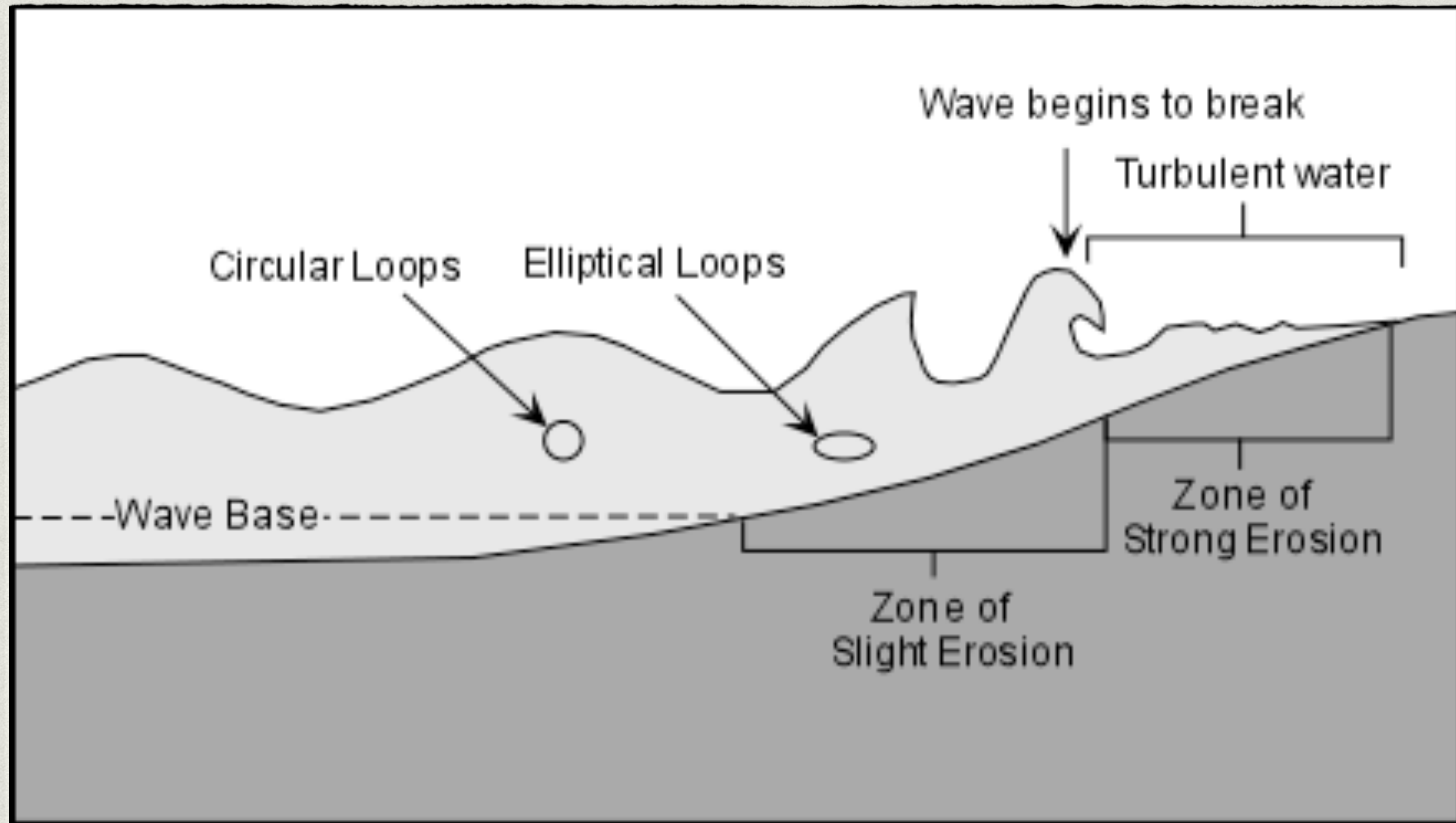
# MASS MOVEMENT, WIND & WAVES

- Waves - the up and down motion of water in the ocean or lake; usually caused by wind
- As wind pushes a wave towards the shore, it drags along the bottom of the ocean floor
- The dragging slows the bottom of the wave, but the top continues at the same speed
- Eventually the wave becomes unstable and “breaks”

# MASS MOVEMENT, WIND & WAVES

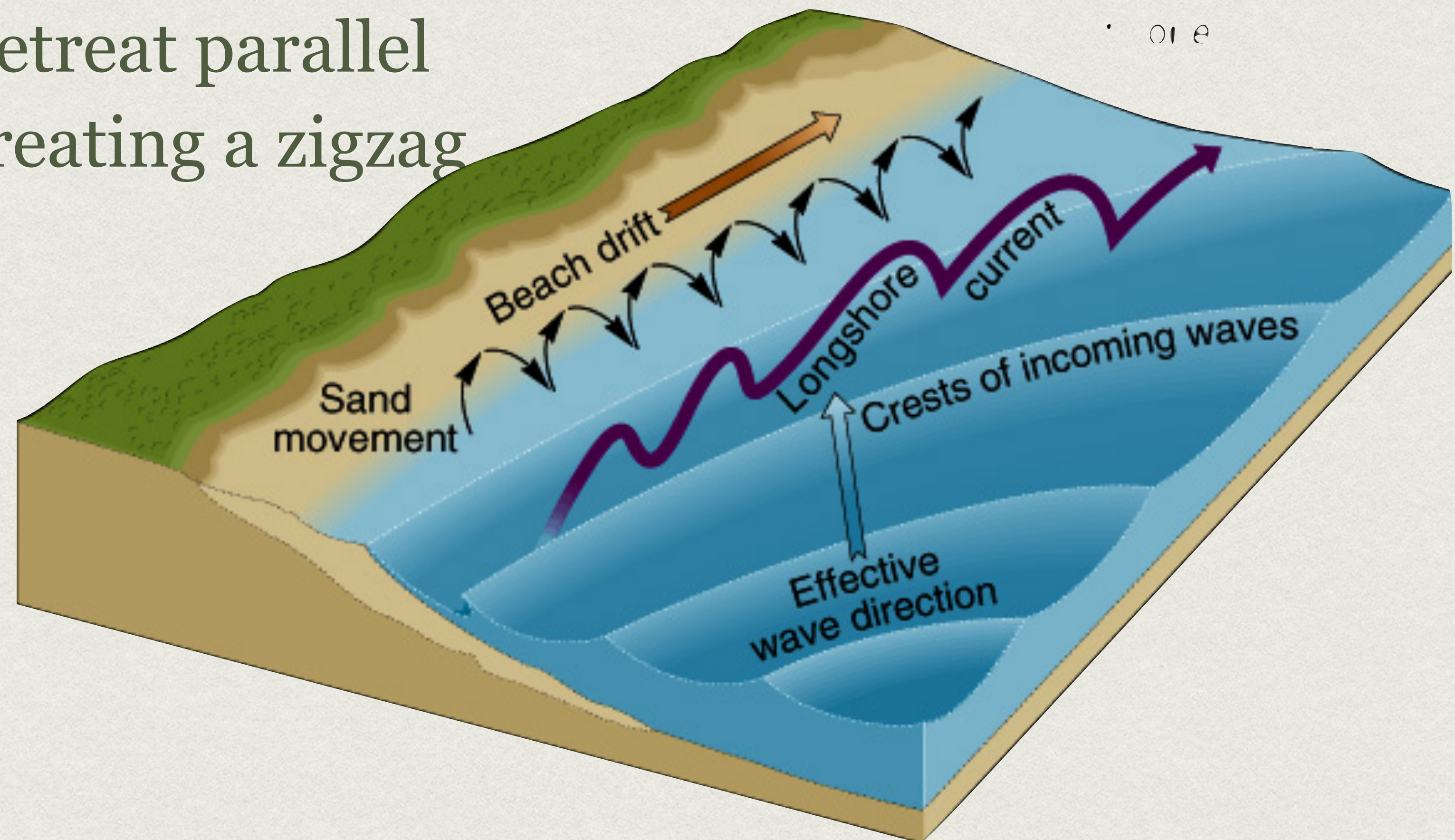
- Wave Formation:
  - As wind pushes a wave towards the shore, it drags along the ocean floor
  - The dragging slows the bottom of the wave, but the top continues at the same speed
  - Eventually the wave becomes unstable and “breaks”

# MASS MOVEMENT, WIND & WAVES



# MASS MOVEMENT, WIND & WAVES

- Waves approach the shore at an angle, but retreat parallel to the shore, creating a zigzag pattern



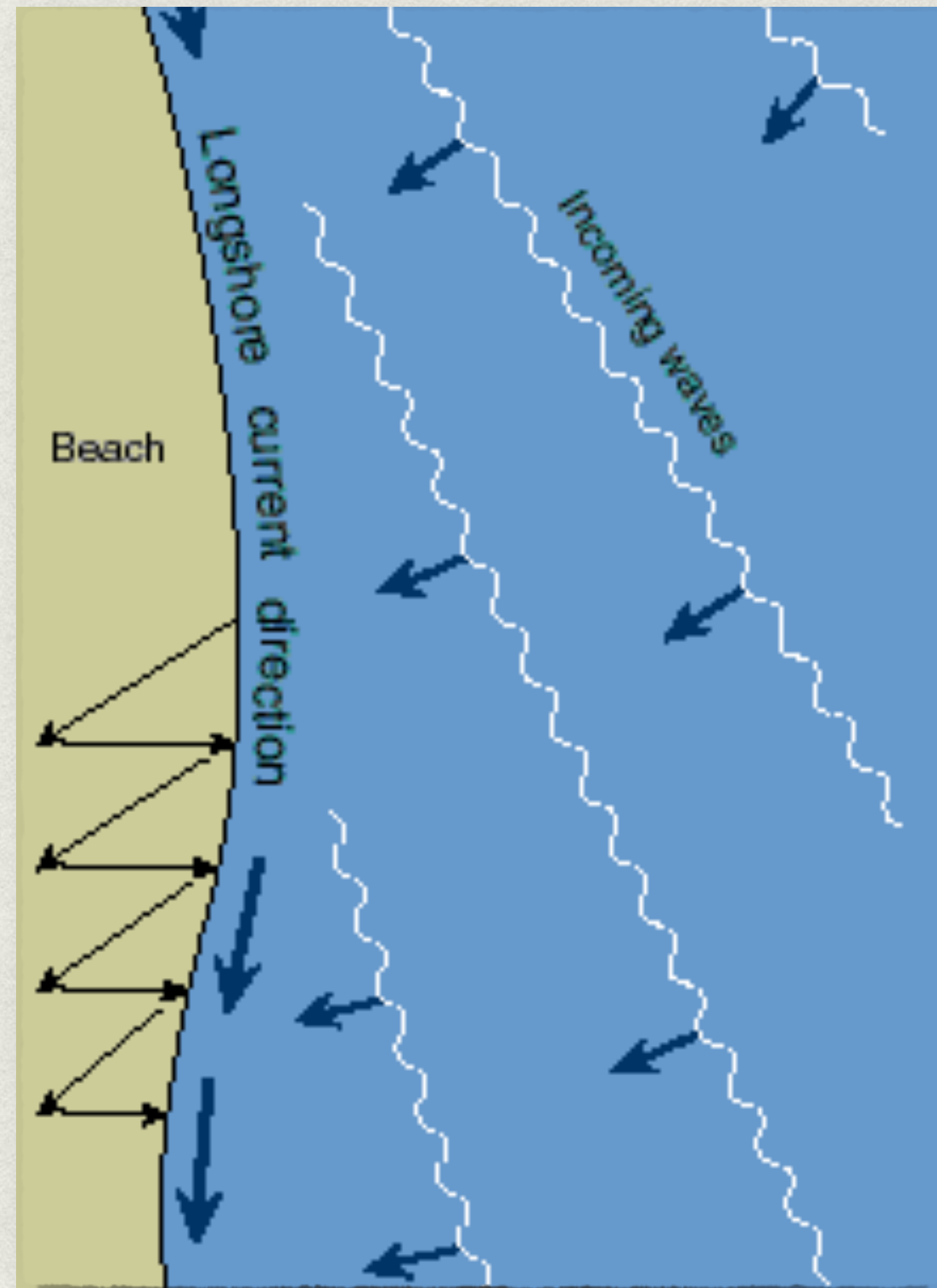
# MASS MOVEMENT, WIND & WAVES

- The zigzag pattern carries sand parallel to the shore

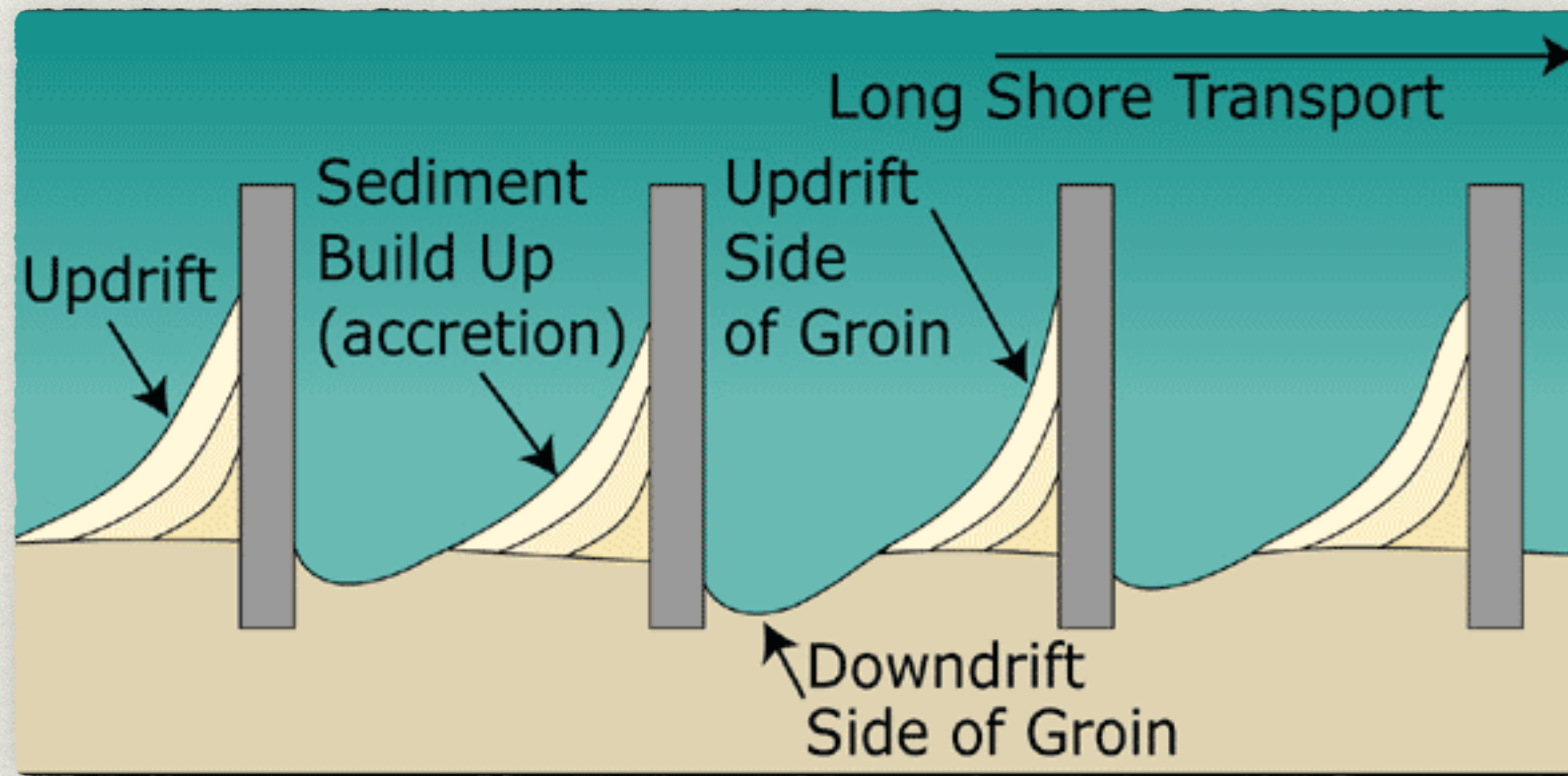


# MASS MOVEMENT, WIND & WAVES

- Long Shore Current - ocean current that flows parallel and close to the shore

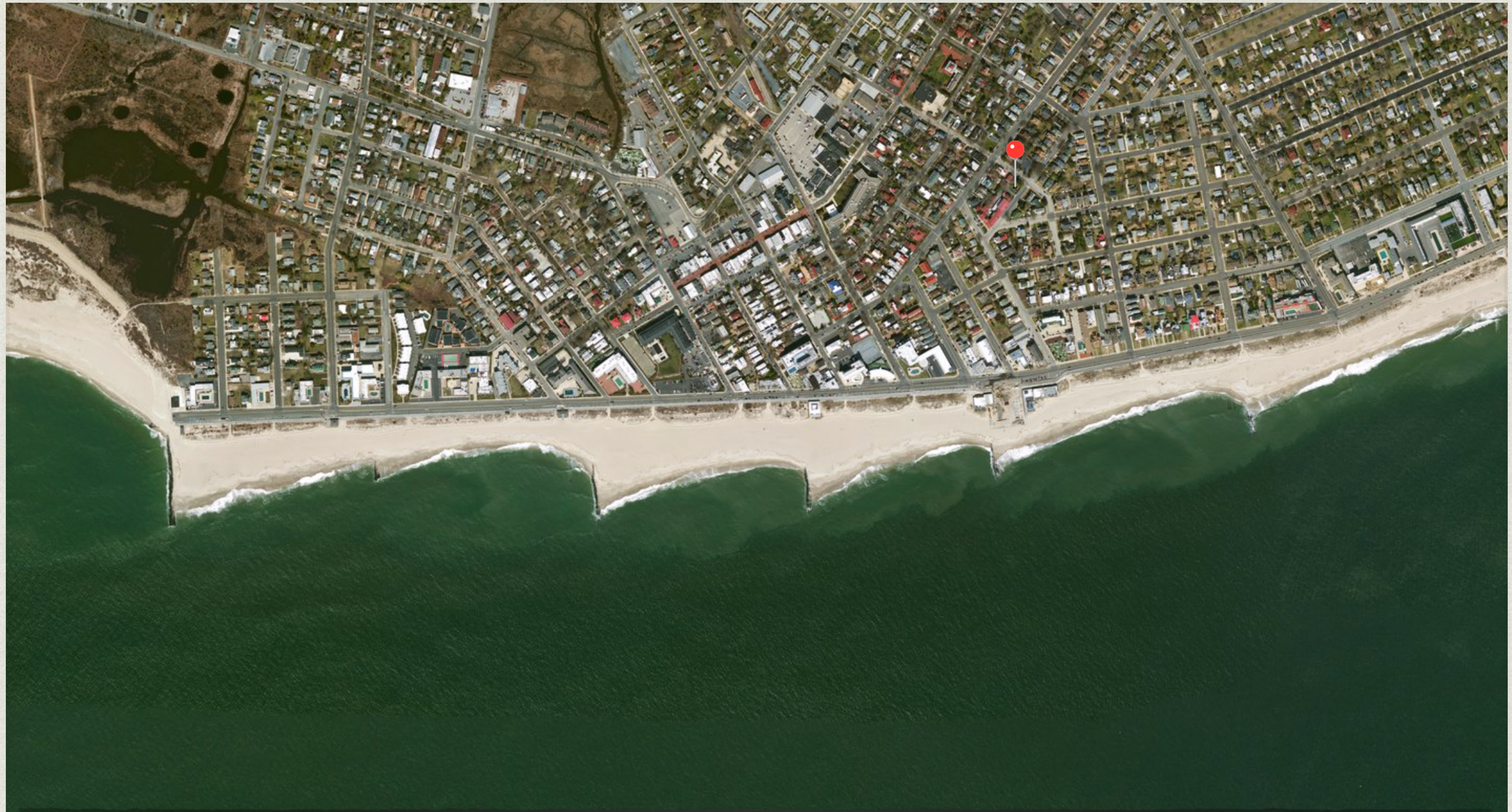


# MASS MOVEMENT, WIND & WAVES





# MASS MOVEMENT, WIND & WAVES



# MASS MOVEMENT, WIND & WAVES



# MASS MOVEMENT, WIND & WAVES

