



- ❖ Precipitation is the transfer of water from the atmosphere back to earth.
- ❖ Water may flow in one of two ways, either as laminar flow or as turbulent flow.
- ❖ The streams velocity is a primary factor that determines whether the flow is laminar or turbulent. Laminar flow is possible only when water is moving very slowly through a smooth channel. If the velocity increases of the channel becomes rough, laminar flow changes to turbulent flow.
- ❖ When the movement is laminar, the water particles flow in straight-line paths that are parallel to the channel. The water particles move steadily down-stream without mixing.
- ❖ By contrast, when the flow is turbulent, the water moves in a confused and erratic fashion that is often characterized by swirling, whirlpool-like eddies.
- ❖ The movement of water in streams is usually fast enough that flow is turbulent. The multidirectional movement of turbulent flow is very effective both in eroding a stream's channel and in keeping sediment suspended within the water so that it can be transported downstream.
- ❖ Flowing water makes its way to the sea under the influence of gravity. Some sluggish streams flow at less than 1 kilometre per hour, whereas a few rapid ones may exceed 30 kilometres per hour.

- ❖ When the channel is straight, the highest velocities occur in the centre just below the surface. It is here that friction is least. Minimum velocities occur along the sides and bottom (bed) of the channel where friction is always greatest.



- ❖ When a stream channel is crooked or curved, the fastest flow is not in the centre. Rather, the zone of maximum velocity shifts toward the outside of each bend. (Earth An Introduction To Physical Geology, Sixth Edition, International Edition Tarbuch & Lutgens).

