Interaction between surface water (stream) and ground water (aquifer) Surface water (streams) and ground water (aquifers) are interconnected in that one water source is used to recharge the other.Porous and permeable materials include soil (if not too clay rich), sand, sandstone, limestone, fractured igneous and metamorphic rock.Confining beds referred as Aquiclude, restrict the movement of ground water into and out of adjacent aquifers.aquifer , aquiclude and aquitard Porous means having void spaces between grains.Aquifer: is a saturated permeable beds that will yield a usable quantity of water to a well or spring.Aquiclude: is confining bed which is relatively impermeable and does not yield usable quantities of water.The most productive aquifers, whether confined or unconfined, are generally in sand and gravel deposits.Impermeable materials include clay, shale, non-fractured igneous and metamorphic rocks.Porous/permeable layers are called aquifers; nearly impermeable layers called aquicludes.Porous/permeable layers are called aquifers; nearly impermeable layers called aquicludes.Diagrammatic sections showing influent and effluent streams.Rocks with large openings such as solution cavities or fractures can also be highly productive aquifers.During times of the year when the water table is high (mainly during rainy parts of the year), the ground water flows into the streams.This basic level of water is called baseflow (Figure 4a) and the stream is referred to as a gaining stream.Figure: Interaction between surface water (stream) and ground water (aquifer).Interaction between surface water (stream) and ground water (aquifer).Generally, the smaller the grain size or the less fracturing, the less water aquifer will produce.This is because there are fewer void spaces for holding water.During times of the year when the water table is low, the water in the stream flows into the ground water (Figure 4b).This type of stream is referred to as a losing stream. a) Gaining stream; b) Losing stream.Permeable means the voids are connected so water can pass through.Aquifer: Permeable to water flow.Aquiclude : Impermeable to water flow.Acts as a barrier (i.e. shale).Aquitard : .intermediate condition.These tend to have large void spaces for holding water.Fig