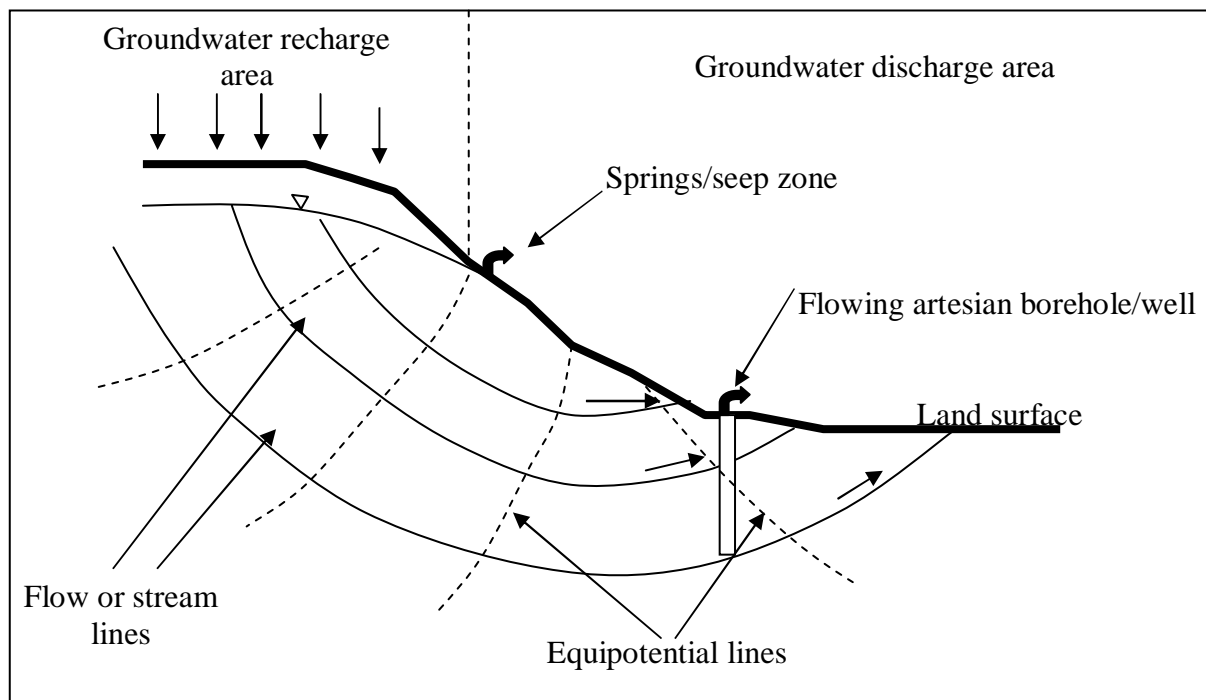


## River Basins and Groundwater Catchments

A **river basin** is an area of land, within which all rain falling will flow towards a single point. A network of streams and rivers carries water from all parts of the basin to a central drainage point, which can be a bigger river that carries the water to the sea. Groundwater catchments are similar – they are also areas of land within which all water sinking below the surface of the ground will flow towards a single point.

Basins or catchments are usually defined by topography, such as hills or mountains, and the water flows from the higher parts of the land to the valleys. This is why valleys often have rivers in them, and also why valleys are places where groundwater tends to accumulate. Groundwater tends to sink into the ground in the higher areas, where it moves downwards. These areas are often called **recharge areas**. Groundwater comes out of the ground again, perhaps as springs or baseflow to rivers, in the lower parts of the catchment. These areas are called **discharge areas**. Sometimes discharge areas can form muddy, swampy ground or even lakes.

Basins and catchments are often drawn on maps, and they are the main unit



of hydrological planning. People often estimate the amount of rainfall that

falls over a catchment. The total rainfall falling on the catchment must equal the outflows from the catchment via evaporation, rivers and groundwater discharges. This is called a water balance:

$$\mathbf{\textit{Inflows = Outflows (plus any change in storage)}}$$

Source: J Davies et al (2002) Development of a curriculum and training of supervision teams in borehole construction in Malawi. British Geological Survey Internal Report CR/02/219N