

Appendix: Water Table

The water table is the elevation of the top of the saturated zone in Loudoun's unconfined aquifer.

The USGS definition of the water table refers to the upper surface of the zone of saturation, where the ground is permanently saturated with water. It separates the groundwater zone below from the unsaturated zone above. The water table fluctuates with seasonal changes and can be influenced by factors such as precipitation, evaporation, and human activities like groundwater pumping

From National Geographic: A water table describes the boundary between water-saturated ground and unsaturated ground. Below the water table, rocks and soil are full of water. Pockets of water existing below the water table are called aquifers. An area's water table can fluctuate as water seeps downward from the surface. It filters through soil, sediment, and rocks. This water includes precipitation, such as rain and snow. Irrigation from crops and other plants may also contribute to a rising water table. This seeping process is called saturation. Sediment or rocks that are full of water are saturated. The water table sits on top of what experts call the zone of saturation, or phreatic zone.

The following images are typical of the water table in Loudoun County.

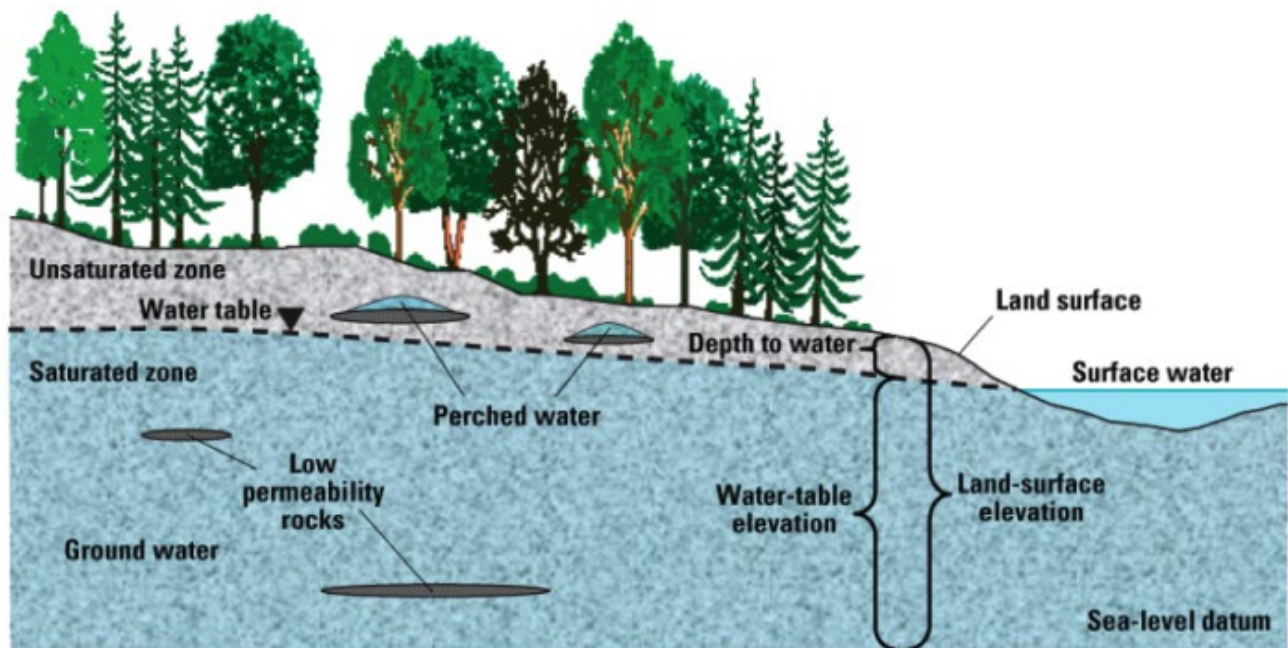
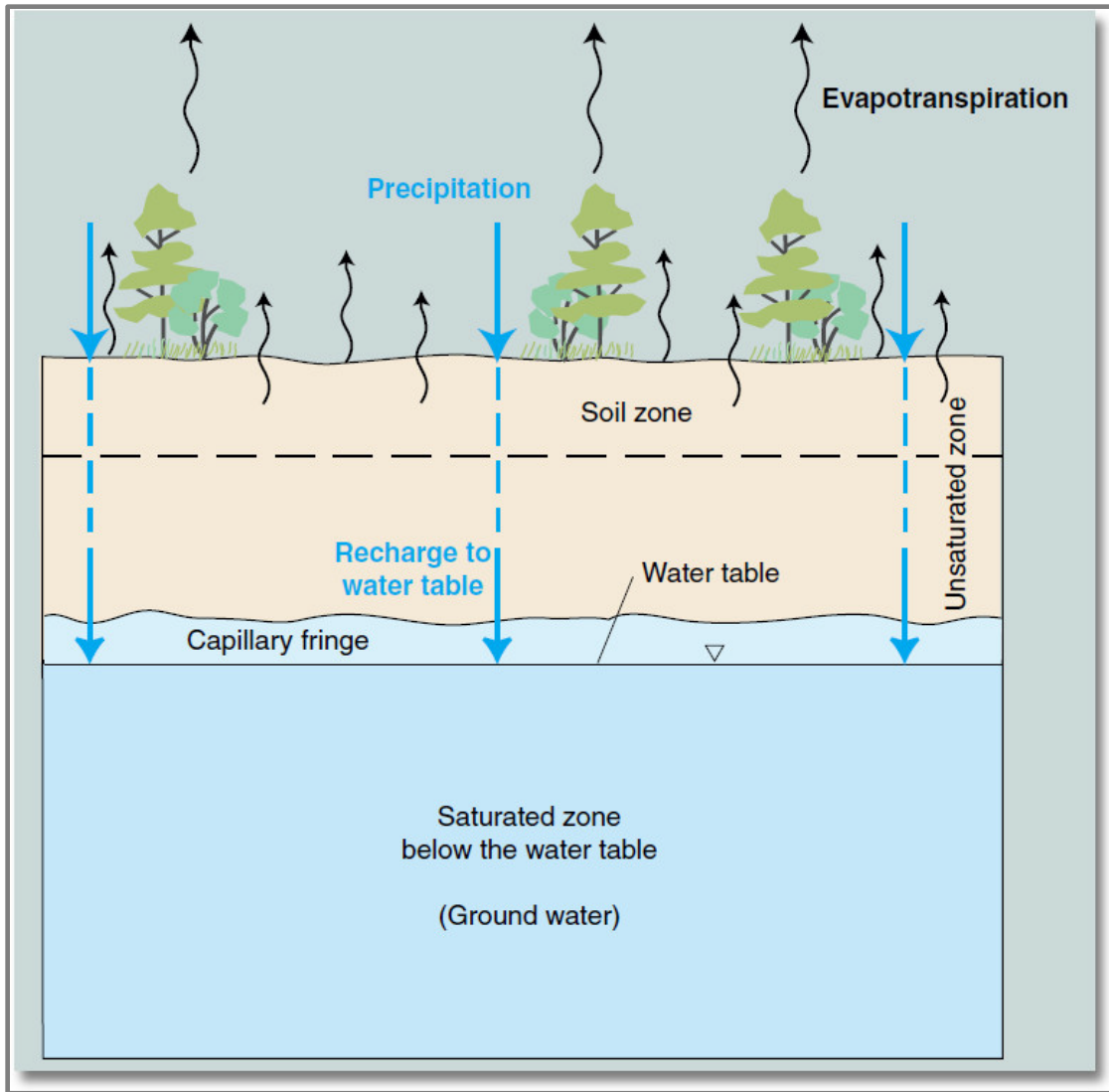
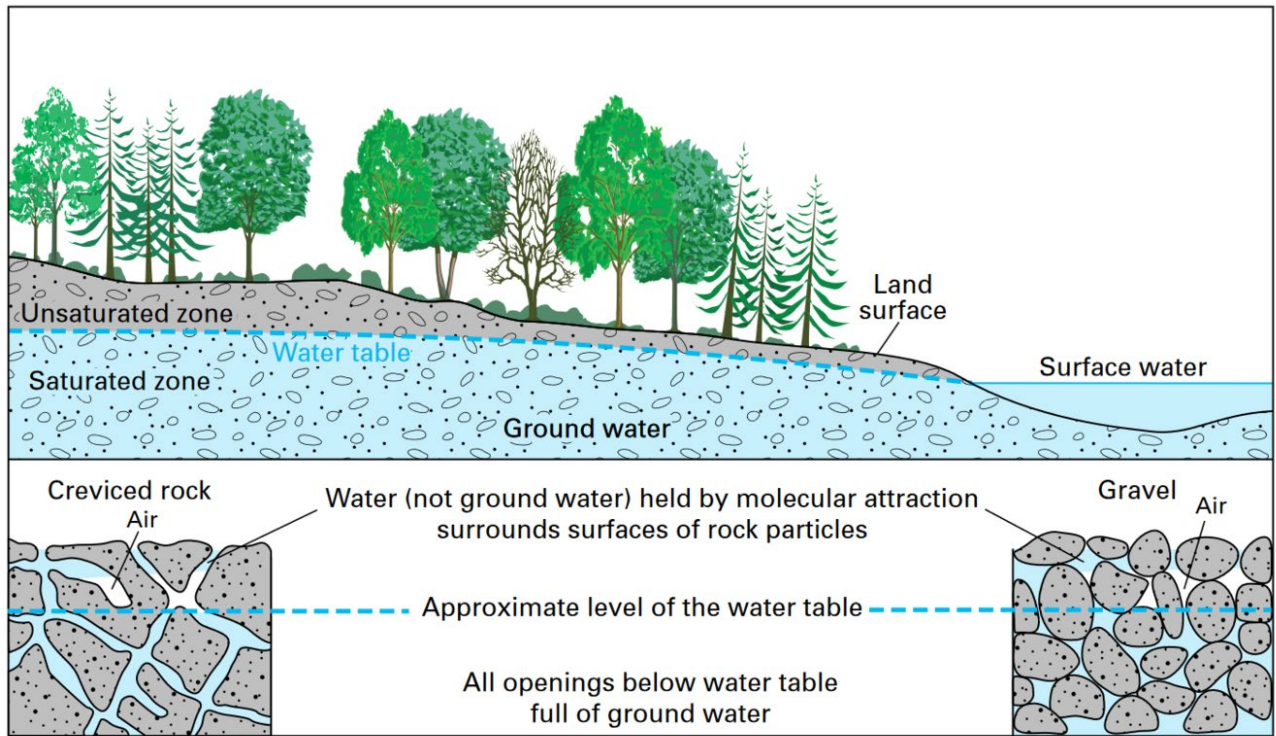


Figure 2. Occurrence of ground water, the position of the water table, and the relation between depth-to-water table and water-table elevation.

Source: D.T. Snyder, U.S. Geological Survey Scientific Investigations Report 2008-5059, [Estimated Depth to Ground Water and Configuration of the Water Table in the Portland, Oregon Area](#)



Groundwater is the area underground where openings are full of water | U.S. Geological Survey



How ground water occurs in rocks.

[Groundwater is the saturated zone of soil/rock below the land surface | U.S. Geological Survey](#)