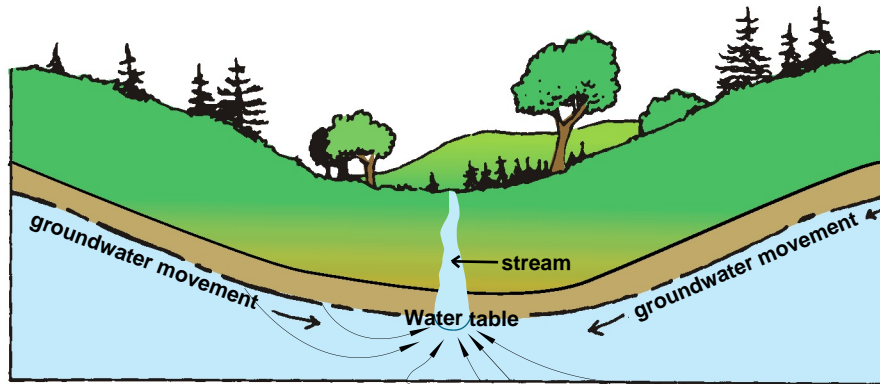


That's the second trick: the water table is almost never level. The water table often mimics the ground surface above it, so the water table has "hills" and "valleys" in it, too.

Where the ground surface dips (like a valley), the water table will often dip, too. But the water table can have valleys for other reasons. The water table around a well, for instance, will dip in a cone-shaped "valley."

Remember the spray pump in the cup of gravel and water? As you pump water out, the water table falls. It falls more rapidly around the well than it does farther away from the well because that's where the well is pumping water out, and the replacement water cannot move in as quickly as the well water is withdrawn.



*Groundwater, like surface water will flow "downhill" or down gradient. Because groundwater flows from gravity and pressure differences, it can actually flow "up hill".*

## Hydrologic Cycle

Recycling isn't anything new. The water (and all other matter) on earth has been recycled for millions and millions of years.

There's no telling where the water you use today was 1,000 years ago. Or a million years ago. Or 300 million years ago. Someone once observed that the water coming out of our faucets today may have been part of a pool that a dinosaur drank from. It may have been hauled out of a well hundreds of years ago. It may have flowed down a river or been part of a vast ocean.

Water is recycled through what we call the "hydrologic cycle." Hydrology comes from Latin roots: "Hydro" meaning water and "logia," meaning science of. It's a continuous cycle, so there isn't really a starting point. But let's start with rain anyway.

When moisture in the atmosphere condenses and falls to the earth as snow or rain, we call it "precipitation."

Some of the rain or snow will soak into the earth. That's what becomes groundwater. What doesn't soak in either "runs off" and joins creeks and rivers or oceans, or evaporates back into the atmosphere.

Some of the rain is used by growing plants. Plants then give off moisture which is evaporated back into the atmosphere. That's called "transpiration." The groundwater the plants don't use flows through the earth until it comes back out to the surface in springs or wells or creeks or lakes. Then it is surface water that flows to the ocean and also gradually evaporates back to the atmosphere.

When water has transpired or evaporated into the atmosphere, it can condense and we have RAIN ready to cycle through again and again and again and again and...well, you get the picture.