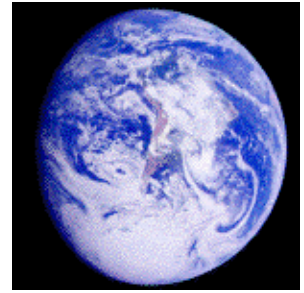
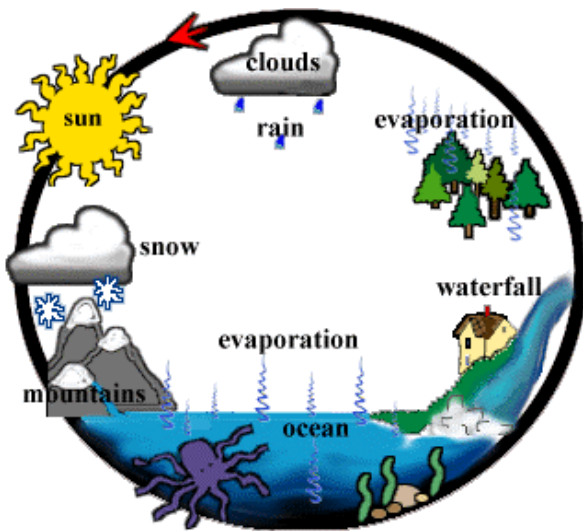


# WATER

Water is necessary to every living creature on earth. About 70 percent of the earth's surface is covered by water. The unique nature of water allows it to take different forms. These forms include the water we drink, the ice we use to treat muscle injuries, and the steam we use to make electricity.



## THE WATER CYCLE



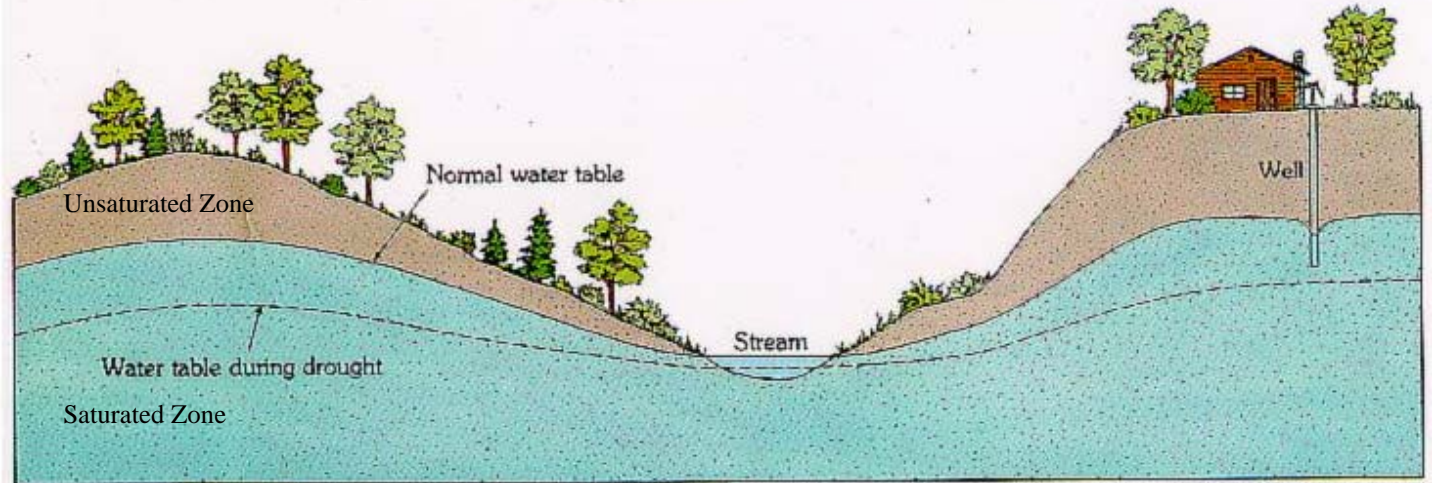
The water cycle starts with evaporation (water changing to vapor) from the earth, plants, and water surfaces. Heat from the sun makes water evaporate. Water vapor rises into the air and forms clouds. The clouds release water as precipitation (rain, hail, sleet, snow, etc.). The water falls onto the land. Some of the water is absorbed into the ground or is used by plants and some of it runs along the surface to oceans, lakes, and ponds. Then the cycle starts again.

## DRINKING WATER

Drinking water is usually supplied by a combination of surface water and underground water (groundwater) sources.

- Surface water includes rivers, lakes, and reservoirs.
- Groundwater lies under the surface of the land, where it travels through and fills openings in rocks.

# UNDERGROUND WATER



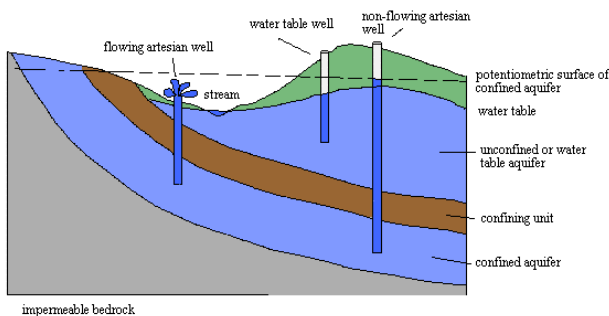
Groundwater is stored in the tiny open spaces between rock, sand, soil, and gravel under the land's surface. It is found in two zones.

- The **unsaturated zone** is immediately below the land surface and contains both water and air in the open spaces.
- The **saturated zone**, under the unsaturated zone, contains water in all the open spaces.

## WATER TABLE

The **water table** is on top of the saturated zone. The **water table** is not flat. It often follows the shape of the land. When the **water table** meets the ground's surface it forms springs, lakes, swamps, or rivers. The amount of water in the table varies.

## AQUIFER



An **aquifer** is a layer of soil and rock under the ground's surface that allows water to pass through easily. Groundwater can be pumped from an aquifer by wells to the earth's surface for household use.

# MAN'S IMPACT ON GROUNDWATER

## FERTILIZER

Fertilizer or pesticide application on farm lands or on lawns and gardens can affect the groundwater. Rain can wash these materials into the groundwater.



## LAND-SURFACE DISTURBANCE



Disturbing the land's surface by construction or logging, can affect the groundwater. Land disturbances increase erosion and change drainage patterns affecting replenishment of groundwater.

## LANDFILLS

Disposal of garbage and trash at community landfills has the potential for affecting groundwater. Because of this, many automobile products, such as gasoline and brake fluid, and household chemicals like cleaning solutions and turpentine, should not be placed in landfills.



## PARKING LOT RUNOFF



Oil and grease from automobiles, sand, gravel, salt, and other substances accumulate on parking lots and streets. These substances can be washed onto the soil during large storms and get into the groundwater.