

Name: \_\_\_\_\_ Unit 3: THE HYDROSPHERE

NOTES: 3.01

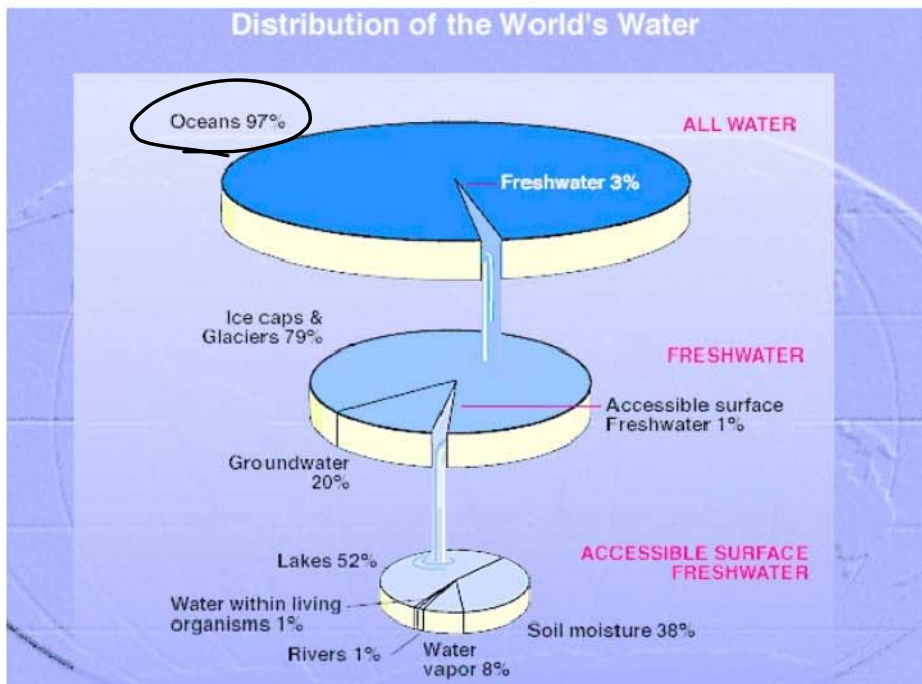
**FOCUS:** The Structure of the Hydrosphere

**ESSENTIAL QUESTION:** Can you explain what is meant by the term "hydrosphere"? Can you describe how water is distributed in Earth's hydrosphere?

**What is meant by the term "hydrosphere"?**

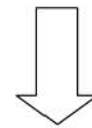
- Hydro = water
- Sphere = sphere/ball 3-D circle
- The hydrosphere describes all of the water found in, on, and around the earth.

**How is water distributed in Earth's hydrosphere?**



SALTWATER = 97%

FRESHWATER = 3%



ICE = 79%

GROUND = 20%

SURFACE = 1%

$$.52 \times .01 \times .03 =$$

$$.015\%$$

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So, where is most water in the hydrosphere?

- 71% of the Earth is covered with water, but it is considered a precious and valuable resource Why?

- Most of the water in the hydrosphere is found in the ocean, which contains only saltwater (undrinkable).

- Most of the freshwater in the hydrosphere is locked up in the form of ice.



- icebergs: large pieces of freshwater ice floating in the open ocean.
- glaciers: large masses of ice that move slowly over land
- ice caps: permanent areas of ice/snow coverage at the poles and on mountaintops.

- Most of the liquid freshwater on Earth is found in the form of groundwater

○ Groundwater: the water found in cracks and pores in the rock below the earth's surface.

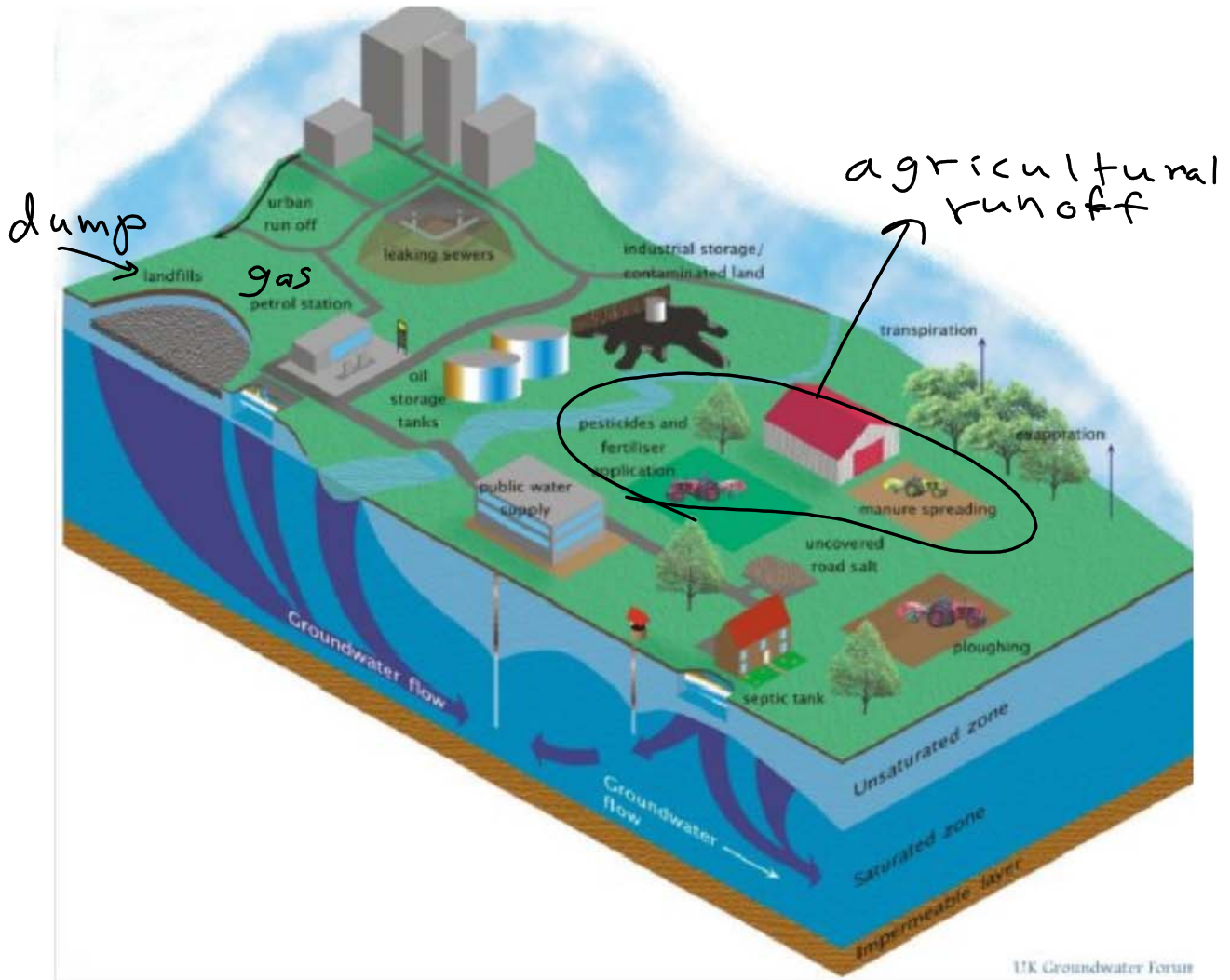
○ Most groundwater is stored in aquifer.  
 ▪ Aquifer: porous rock layer underground that serves as a reservoir for water.

- Groundwater is only usable if it's tapped into with a drilled well.

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**What about all those lakes, ponds, streams, rivers, and wetlands?**

- Only 1% of all the freshwater on Earth (0.03% of the hydrosphere) is accessible as liquid water on Earth's surface.
- This includes lakes, ponds, streams, rivers, wetlands, water vapor, moisture in surface soil, and water within plants & animals, and is called surface water
- Surface water resources provide most of the drinking water resources used in America.

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• Local surface water supplies:

- Hillsborough drinking water source: Eno River
- Carrboro-Chapel Hill drinking water source: Cane Creek Reservoir
- Mebane drinking water source: Graham-Mebane Lake
- Durham drinking water source: Little River Reservoir & Lake Michie Reservoir,

Surface Water Distribution

- Drinkable surface water is both unequally distributed worldwide and unequally used worldwide.
- Water availability depends on climate, location, and socioeconomic status.

- The average U.S. citizen uses 340 L of water per day. 90 gallons
- The average Haitian citizen uses 15 L of water per day. 4 gallons

Water Use per Country

