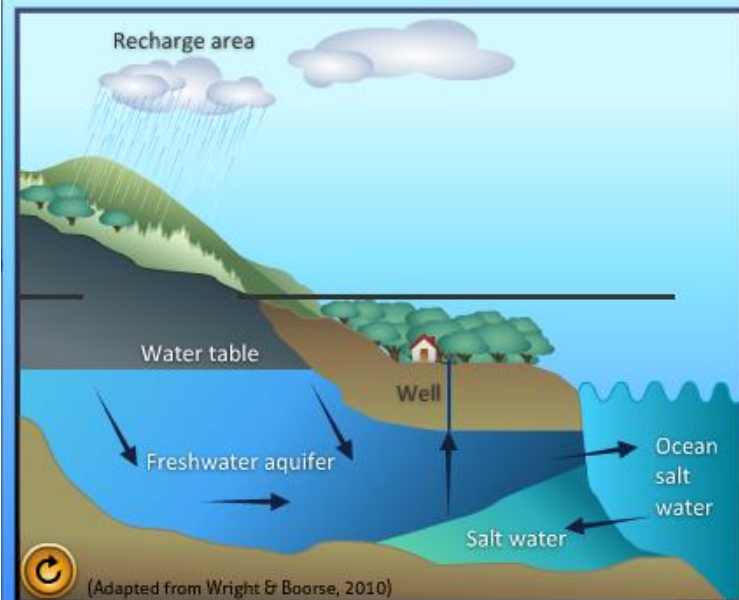


Background Information

Conditions

Impacts

Background Information



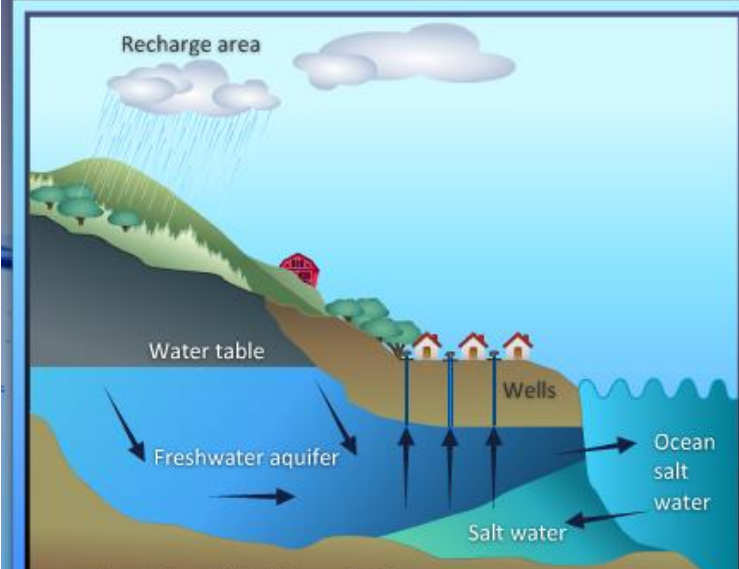
Planet Earth's surface is over 70% water, but less than 1% of the water on Earth is considered accessible, usable freshwater for sustaining humans' and other organisms' lives. Of the accessible freshwater, approximately 99% is located in aquifers, natural underground water chambers, and other groundwater sources. Unfortunately, humans are depleting the aquifers faster than they can be recharged by the hydrological cycle. Therefore, three quarters of groundwater is considered nonrenewable.

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People are using groundwater resources mainly for drinking and irrigation. As a result, this not only decreases an important source of freshwater—it also can cause pollution of that groundwater by saltwater intrusion. The recharge rate of groundwater is further hindered by land clearing and deforestation caused by human development. When land is cleared for human development, more flooding occurs, the *transpiration rate* (the amount of water evaporating into the atmosphere from plants) is reduced, and rainwater is inhibited from adequately *percolating* (penetrate the soil) into the ground to allow for aquifers and groundwater to be recharged.

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(Adapted from Wright & Boorse, 2010)

Forty percent of the world's food is produced via irrigation. As a result, if the current rate of groundwater usage continues, food production could be drastically reduced worldwide. This reduction in food supply would be detrimental in sustaining the projected worldwide human population of over 10 billion within the next 50 years.

Click the Forward arrow to continue.

1800s
←
Instructions

| Impact on Forest | Groundwater Levels | Saltwater Intrusion | Farming | Industrial Development | Population |
|------------------|---------------------|-------------------------|-------------|------------------------|-----------------|
| Large forests | Lots of groundwater | No salt water intrusion | Small farms | No cities | Limited housing |

1800s
1900s
2000s

(Adapted from Wright & Boorse, 2010)

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