

Topic 3 - Fresh Water Systems

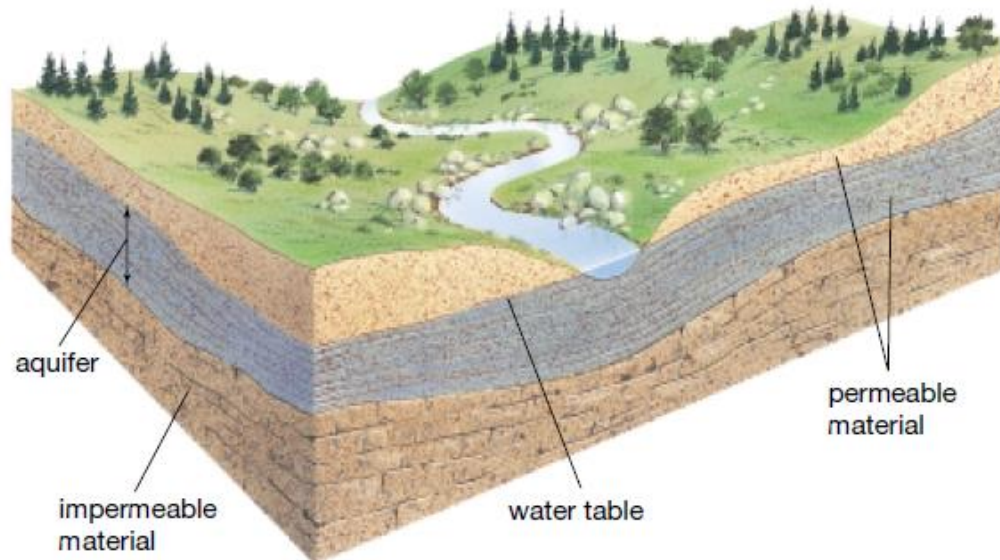
Page 409 #'s 1, 2, 4-6

1. Imagine you are a watershed manager. Describe some of your tasks and responsibilities.

Your answers may include:

- Collect and monitor data/maps that show changes in land use.
- Set policies that will protect the watershed.
- Plant grass and other vegetation to reduce erosion.
- Measure streamflow.
- Analyze water quality.
- Predict drought and flood conditions.
- Design irrigation and drainage projects.
- Monitor sediment and groundwater for pollutants.

2. Make a sketch of the drawing below into your notebook. Label the parts of a groundwater system.



4. Explain what is meant by "aquifer depletion." How can this problem be solved or reduced?

Aquifer depletion happens when too much water is used, leaving none or little in the aquifer. Creeks, springs, and wells go dry, and there is not enough water for local plants and wildlife. Using less water is the best way to reduce or solve this problem.

5. Rainwater in southern Alberta can end up in the Gulf of Mexico. How is this possible?

Southern Alberta is on the side of the Continental Divide that drains southward and empties into the Gulf of Mexico. All water that falls into this area will flow southward through a series of connecting rivers until it reaches the Gulf of Mexico.

6. **Thinking Critically** "A watershed reflects the health of the surrounding ecosystem." Do you agree or disagree with this statement? Explain your answer.

Your answer should include reasons for your position. Most likely you'll agree with this statement, explaining that a well-managed watershed will support a diversity of life, both plant and animal, as well as human populations, and the needs of all will be met.