Name: _____ Date: _____ Period: _____

GROUNDWATER FOUNDATION
Provide | Educate | Sustain

CONTAMINATION SCENARIO

The Situation

The small community of Appleton relies on Wells B, C, D, and E for drinking water. Recently, the community has experienced an underground storage tank leak near Well C. Due to the leak, BTEX has contaminated the groundwater of Well C.

Residents are now looking to your team to determine which of their wells are at risk of contamination and what options the community has for remediation of their groundwater.

The Facts

- BTEX was found at Well C.
- Residents are currently pumping from Wells B and D.
- Wells C and E are not pumping water.

Your Mission

Answer the following questions posed by Appleton's residents, and complete the Remediation Table by the residents' request. You may use the Aquifer Lab modeling application to help you complete your work.

1. From Well C, which direction(s) is the contaminant plume most likely going to go (North, Northeast, South, etc.)?

2. Other than Well C, which well(s) are at risk of contamination?

3. Assuming the Aquifer Lab's assumptions are correct, if the residents start pumping water from Well C, will that reduce the risk of contamination of any of the wells you listed in question 2? Explain your answer.

4. Assuming the Aquifer Lab's assumptions are correct, if the residents start pumping water from Well C, how will that affect the velocity of the contaminant plume?

5. Approximately how long will it take for the BTEX to travel from the source (Well C) to the nearest well in danger of being contaminated?

A. Less than one week
B. About one year
C. 2-4 years
D. More than 5 years

6. The residents want to know more about the contaminant, including:

- What type of contaminant is it?
- What are its common sources?
- What environmental/health concerns does it pose?