

Name _____

Student ID _____

Date _____

Hydrofracking and Forests

1. Read “Fracking Fury” by Janna Palliser. Based on this reading, answer the following questions:
- a. What is hydrofracking?

- b. Where is the closest shale gas available to you?

- c. Complete the chart below, based on the reading.

Benefits of Hydrofracking	Drawbacks of Hydrofracking

- d. Based on what you have read, do you think hydrofracking should be allowed to continue? Explain your answer, using evidence from the article.

2. Use the graph below to answer the following questions. This study, conducted by scientists at Duke University, examined methane concentrations in drinking water wells located at various distances from Marcellus gas wells in Pennsylvania.

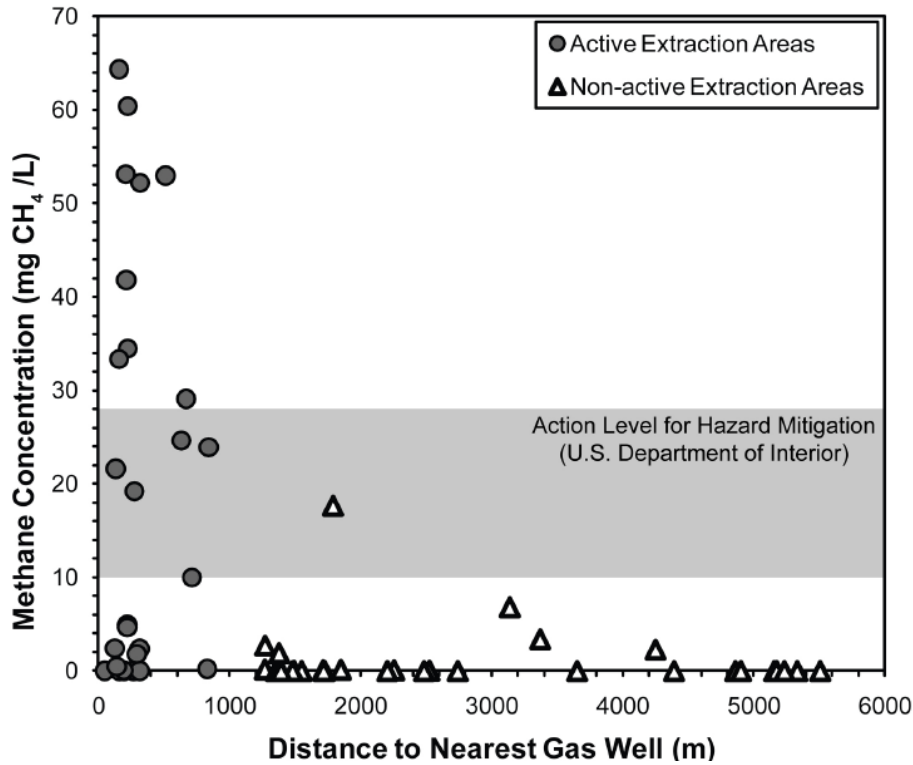


Figure 3 from Osborn, S.G., A. Vengosh, N.L. Warner & R. Jackson. 2011. Methane contamination of drinking water accompanying well-drilling and hydraulic fracturing. *Proceedings of the National Academy of Sciences* 108: 8172-8176.

- a. What is the difference in methane concentration between active and non-active extraction areas?

- b. What is the range in methane concentration for sampling sites that were in active extraction areas within 1000m from a gas well?

- c. What do you think could be the cause of the variability in methane concentration in active extraction areas?

- 3. In this investigation, you will focus on the potential ecological consequences of hydrofracking on ecosystems. You will be using a study that investigated the impact of spraying flowback water, or the water that comes back out of the wells, onto forests. This study measured the following variables in the forest soil where the water was sprayed:
 - a. pH
 - b. Total Nitrogen
 - c. Chloride
 - d. Phosphorus
 - e. Iron
 - f. Sodium

Based on what you have read, make a prediction about which variable you think will show the greatest change between the control and the treatment forest: _____

- 4. Justify the answer to #3 – why did you pick the variable that you did? Give a specific reason from the article (or another article). Cite your source.
