EAR 419/619 – Aqueous Geochemistry

Lab #1: Paper Discussion

Topic: Chemical reactions in urban streams

**Students must come to class prepared to discuss the assigned paper. Responses to paper discussions will be completed before class and turned in at the end of the class period on the day that the paper is discussed. Each student will only need to PICK ONE of the provided two papers.**

Discussion papers (**PICK ONE**):

1. Nesheim, S., Yu, Z., Tuttle, S., Klein, J., Wen, T., 2024. Assessing impacts of cemeteries on water quality in an urban headwater watershed with mixed human-built infrastructure. *Hydrological Processes* 38, e15128. https://doi.org/10.1002/hyp.15128
2. Kaushal, S.S., Likens, G.E., Pace, M.L., Utz, R.M., Haq, S., Gorman, J., Grese, M., 2018. Freshwater salinization syndrome on a continental scale. *Proceedings of the National Academy of Sciences* 115, E574–E583. https://doi.org/10.1073/pnas.1711234115

Respond to each of the following questions with one detailed paragraph. **Please write complete sentences.** Your answers should provide specific and relevant information. Do not quote the article; rather, critically evaluate the topic and findings **in your own words**.

1. Define the research topic. What are the authors investigating, and why? Do the authors state a hypothesis or more?
2. What methods were used to investigate the research question? Does this approach seem appropriate or are there any deficiencies?
3. How did the authors analyze their data? Did the authors make any assumptions with regard to data collection or analysis?
4. Briefly outline the major results of the paper. What are the major conclusions of the paper and how are they supported by the data?
5. Describe the figure that is most relevant to the authors’ main argument. How did the authors choose to plot the data, and why?
6. Discuss the novelty and implications of this paper. Why does this matter for science and society?