Title: Source or sink? The role of hyporheic connectivity in autochthonous nitrogen cycling in Antarctic Streams

Abstract: Hyporheic zones are widely recognized as important interfaces that drive the biogeochemical function of streams and rivers. They are often conceptualized as nitrogen (N) sinks, especially via denitrification, but that may not always be true in systems that are less impacted by anthropogenic additions of N. In this work, I will provide an overview of multiple projects that leverage ephemeral streams in the McMurdo Dry Valleys, Antarctica, to illustrate a more nuanced understanding of how stream corridors and hyporheic zones, in particular, store, process, and release N in highly oligotrophic environments.

Bio: Joel is a Ph.D. Candidate in Environmental Studies advised by Professors Eve-Lyn Hinckley and Michael Gooseff. Joel worked as a middle school math and science teacher for five years after graduating from Cornell University in 2010. Since starting graduate studies at CU in 2015, Joel has investigated coupled hydrological and biogeochemical processes in streams from Colorado to Iowa and Antarctica.