



UTSA Geological Sciences

And

Institute of Water Research, Sustainability and Policy (IWRSP)

Seminar Presentation

By

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On

*Friday, October 23, 2020
4:00 P.M.*

*“Connections between land use, soil microbiology, and groundwater microbiology
in agricultural landscape”*

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Abstract



Agricultural practices, including use of chemicals, tilling, and irrigation, are known to alter the chemistry and structure of soils and the composition and movement of groundwater. These impacts are also known to alter microbial community composition in soils, which further influences how soil chemistry and physical properties evolve. But, how does agricultural land use affect groundwater microbiology and why should we care? My presentation will examine these questions and more using our recent results from the Great Bend Prairie Aquifer, a portion of the High Plains Aquifer in Kansas. I will discuss changes in the groundwater chemistry over the past four decades, impacts of land use on chemistry and microbiology, and implications of our findings for the future use of the aquifer as a source of drinking water.

Dr. Matthew Kirk is an Associate Professor in the Department of Geology at Kansas State University. He earned a PhD in Earth and Planetary Sciences at the University of New Mexico in 2008, a MS in Geology at the University of Illinois in 2004, and a BS in Geological Sciences from Bradley University in 2001. His primary area of research is groundwater chemistry and microbiology.

