

March 14: 40th Annual Frontier Forum

Topic is Soil, Water & Agriculture: A Sustainable Future for America's Breadbasket?'

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COLLEGE OF SOCIAL & BEHAVIORAL SCIENCES

40th Annual Frontier Forum

SOIL, WATER, & AGRICULTURE:
A SUSTAINABLE FUTURE FOR AMERICA'S BREADBASKET?

presented by
Dr. Mark Bowen
Department of Geography

Thursday, March 14, 2019
11:00 A.M. – 12:15 P.M.
Centennial Student Union | Ostrander Auditorium

Although the Great Plains has served as America's Breadbasket for over a century, widespread conversion of native prairies to cropland has led to a serious deterioration in soil and water quality and quantity. Dr. Bowen will discuss long-term, natural trends in soil formation and erosion and describe how his research fits into a new agricultural revolution that can potentially restore soil quality, improve water resources, increase biodiversity, and mitigate climate change. Professor Bowen will also explain how implementing more environmentally friendly farming techniques are compatible with profitable, productive, and accessible farming that will enable the Great Plains to continue its role as a national breadbasket for generations to come.

THIS EVENT IS FREE AND OPEN TO THE PUBLIC.

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MINNESOTA STATE UNIVERSITY MANKATO

Mankato, Minn. – Minnesota State University, Mankato faculty member Mark Bowen will discuss “Soil, Water, & Agriculture: A Sustainable Future for America's Breadbasket?” in a lecture from 11 a.m.-12:15 p.m. Thursday, March 14 on campus in Centennial Student Union's Ostrander Auditorium.

The lecture, the 40th Annual Frontier Forum Lecture sponsored by Minnesota State Mankato's College of Social and Behavioral Sciences, is free and open to students, faculty, staff and the public.

Following is a preview of Bowen's presentation provided by Minnesota State Mankato's College of Social and Behavioral Sciences:

“The Great Plains has served as America's Breadbasket for over a century, and widespread conversion of this native prairie to cultivated cropland has had severe impacts on soil and water quality and quantity. Mark Bowen will present research that utilizes a variety of field and laboratory techniques to establish long-term, natural trends in soil formation and erosion and evaluate historical to modern trends. Recent research shows that extensive erosion from cropland has filled in and degraded critical wetland resources. Furthermore, this research reveals some unintended negative consequences of soil conservation strategies on water resources. Bowen will also examine a new agricultural revolution taking place that has the potential to restore soils and improve water resources, as well as increase biodiversity and mitigate climate change, all while making agriculture more profitable, productive and accessible to the next generation of farmers.”

For more information about the presentation, contact Bowen by phone at 507-389-2617 or by email at mark.bowen@mnsu.edu.

For more information about the Frontier Forum, contact Denise Thompson, College of Social and Behavioral Sciences, by phone at 507-389-5699 or by email at denise.thompson@mnsu.edu.

Bowen is an assistant professor in Minnesota State Mankato's [Department of Geography](#), which is part of Minnesota State Mankato's [College of Social and Behavioral Sciences](#). He is also co-director of the University's Anthropology, Geography and Earth Science laboratory, an interdisciplinary research laboratory with faculty from multiple departments.

According to Bowen, his primary expertise is in soils-landscape evolution with a secondary emphasis on water and water resources. His research interests are in understanding how soils preserve records of landscape change, both natural (i.e., climate change) and human-caused change (i.e., agriculture). He has received grants to examine the impacts of agriculture on soils from the Playa Lakes Joint Venture, U.S. EPA, U.S. Fish and Wildlife Service and Great Plains Conservation Cooperative. He has published multiple papers on related topics in various academic journals.

Bowen received a bachelor's degree in geography from Missouri State University in 2000, a master's degree in resource planning from Missouri State University in 2004 and a doctorate in geography from the University of Kansas in 2011. Prior to coming to Minnesota State Mankato in 2018, he was a faculty member in the Department of Geography at University of Wisconsin Oshkosh.

Minnesota State Mankato, a comprehensive university with 14,227 students, is part of the Minnesota State system, which includes 30 colleges and seven universities.