

Curriculum Vitae

Mark William Bowen, Ph.D.

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EDUCATION

Doctor of Philosophy (2011)
Advisor: William C. Johnson

Geography, University of Kansas
Dissertation: *Spatial Distribution and Geomorphic Evolution of Playa Wetlands on the Kansas High Plains: Implications for a Changing Environment*

Master of Science (2004)
Advisor: Robert T. Pavlowsky

Resource Planning, Missouri State University
Thesis: *Consequences of Reservoir Drainage on Downstream Water Chemistry, Suspended Sediment, and Nutrients, Southwest Missouri*

Bachelor of Science (2000)

Missouri State University
Major: Geography
Minor: Computer Information Systems

PROFESSIONAL EXPERIENCE

2011 – Present	Assistant Professor, Department of Geography and Urban Planning, University of Wisconsin Oshkosh
2007 – 2011	Graduate Research Assistant, Dept. of Geography, University of Kansas
2005 – 2011	Research Assistant, United States Geological Survey, Lawrence, Kansas
2004 – 2008	Graduate Teaching Assistant, Dept. of Geography, University of Kansas
2003	Graduate Teaching Assistant, Dept. of Geography, Geology, and Planning, Missouri State University
2002 – 2004	Graduate Research Assistant, Dept. of Geography, Geology, and Planning, Missouri State University
2000 – 2001	Chemistry and Earth Sciences Librarian Assistant, Washington University in Saint Louis

TEACHING EXPERIENCE

2012	Advanced Topics: Global Climates and Landscapes
2012	Soils
2012	Environmental Conservation
2012	Independent Study: Soil Research Topics and Techniques

2011 - Present	Introduction to Physical Geography: Landforms and Soils
2011	Introduction of Physical Geography: Weather and Climate Laboratory
2007 – 2008	Introduction to Soil Geography Laboratory
2007	Principles of Physical Geography
2007	Field Methods in Geographic Research
2004 – 2007	Introductory Meteorology Laboratory
2003	Special Topics in Geography Graduate Seminar: Water Quality

RESEARCH EXPERIENCE

2006 – Present	Investigating playa and lunette stratigraphy to reconstruct paleoenvironment and document climate change events
2006 – Present	Applying the Hydrogeomorphic Approach to assess playa wetland ecological functions and identify factors impacting those functions
2006 – Present	Developing new GIS-remote sensing techniques to identify and map wetlands and other water resources
2007 – 2010	Analyzing stream channel response to large floods using USGS stream gage data
2006 – 2008	Determined response and recovery of mountain streams to a 100- to 500-year flood along the Colorado Front Range
2007	Developed and implemented standard operating procedures for soil particle-size analysis using a Malvern Mastersizer laser diffractometer
2006 – 2007	Designed and conducted new sampling methodologies for optically stimulated luminescence age-dating
2006	Investigated sediment sources to Perry Lake and Lake Wabaunsee using select chemical tracers, northeast Kansas
2005	Estimated degree of soil formation on a 12-year old flood deposit of the Kansas River, Douglas County, Kansas
2005	Mapped surface geology: USGS EdMap project for Norton County, Kansas
2004	Assessed stream channel response to urbanization, Greene County, MO
2004	Conducted Phase One Environmental Assessment of North Dry Sac Watershed, Southwest Missouri
2003 – 2004	Implemented Total Maximum Daily Load water quality program for James River Watershed, Southwest Missouri
2002 – 2004	Conducted Phase One Environmental Assessment of Valley Mill Watershed, Greene County, Missouri

RESEARCH INTERESTS

- Soils and Stratigraphy
- Climate and Paleoenvironmental Change
- Wetland Ecology
- Fluvial Geomorphology
- Water Resources Research
- Human-Environment Interactions

PUBLICATIONS

- Bowen, Mark W. and William C. Johnson, (2012). Lunette distribution on the High Plains of Kansas – a guide to seeking Paleoindian sites. *Current Research in the Pleistocene*, Vol. 28.
- Bowen, Mark W. and William C. Johnson, (2012). Late-Quaternary Environmental Reconstructions throughout Playa-Lunette Evolution on the Central High Plains of Kansas, United States. *Geological Society of America Bulletin*, Vol. 124 (1-2): 146-161. DOI: 10.1130/B30382.1.
- Bowen, Mark W. and Kyle E. Juracek, (2011). Assessment of the Geomorphic Effects of Large Floods using Stream-Gage Information. *Physical Geography*, Vol. 32 (1): 52-77. DOI: 10.2747/0272-3646.32.1.52.
- Johnson, William C., Terri L. Woodburn and **Mark W. Bowen**, (In Press). Geologic Map, Norton County. Kansas Geological Survey, Map Series.
- Bowen, Mark W., William C. Johnson, Stephen L. Egbert, Scott T. Klopfenstein, 2010. A GIS-Based Approach to Identify and Map Playa Wetlands on the High Plains, Kansas, USA. *Wetlands*, Vol. 30 (4): 675-684. DOI: 10.1007/s13157-010-0077-z.
- Juracek, Kyle E., and **Mark W. Bowen**, 2010. Channel Geomorphic Responses to Disturbances Assessed Using Streamgage Information. *Proceedings, Second Joint Federal Interagency Conference -- Ninth Federal Interagency Sedimentation Conference*, Las Vegas, NV, June 27-July 1, 2010. 10 p.
- Bowen, Mark W., 2010. Differential Heating. In *Encyclopedia of Geography*, Barney Warf (Ed.). Sage Publications.
- Bowen, Mark W., W.C. Johnson, S.T. Klopfenstein, and J.W. Dunham, 2009. Developing a Geospatial Database of Playas within the High Plains of Kansas. *Current Research in the Pleistocene*, Vol. 26: 191-193.
- Contributing author, 2008. A Laboratory Guide to Meteorology, 3rd Ed. Cengage Learning.
- Campbell, J. S., W. C. Johnson, and **M. W. Bowen**, 2007. Mapping High Plains Playas as a Means to Identifying Potential Paleoindian Archaeological Sites. *Current Research in the Pleistocene*, Vol. 24: 194-195.
- Bowen, Mark W., 2003. Consequences of Reservoir Drainage on Sediment and Nutrient Transport. *Papers of the Applied Geography Conference* Vol. 26: 424-433.

PROFESSIONAL PRESENTATIONS

- Bowen, Mark W., William C. Johnson, and Chelsy A. Herring, 2012. Evaluating the Impacts of Environmental Change on Playa Form and Function. *Geological Society of America Abstracts with Programs* 44(5).

- Herring, Chelsy A. and **Mark W. Bowen**, 2012. Evidence of Rapid Climate Change Events Preserved within Playa Wetlands on the Central High Plains, Kansas, USA. American Quaternary Association 22nd Biennial Meeting, Duluth, MN.
- Bowen, Mark W. and William C. Johnson, 2011. Lithostratigraphy and Paleoenvironments of Playa-Lunette Systems on the Kansas High Plains. Geological Society of America *Abstracts with Programs* 43 (5).
- Bowen, Mark W. and William C. Johnson, 2010. Spatial Distribution and Geomorphic Evolution of Playa-Lunette Systems on the Kansas High Plains. Geological Society of America *Abstracts with Programs* 42 (5).
- Bowen, Mark W. and William C. Johnson, 2010. Late-Quaternary Paleoenvironment and Playa-Lunette System Evolution on the Central High Plains. Association of American Geographers Great Plains-Rocky Mountain Regional Meeting, Lawrence, Kansas.
- Johnson, William C. and **Mark W. Bowen**, 2010. Playas of Kansas – Form, Function, and History. Kansas Alliance for Wetlands and Streams Annual Meeting.
- Bowen, Mark W. and William C. Johnson, 2009. Playa Lake Response to Rapid Climate Changes during the Late-Pleistocene and Holocene on the High Plains of Kansas. Geological Society of America *Abstracts with Programs* 41 (6): 247.
- Bowen, Mark W. and William C. Johnson, 2008. Environmental History of Playas: The Eolian-Fluvial Systems of the High Plains of Kansas. 39th Annual Binghamton Geomorphology Symposium.
- Bowen, Mark W. and William C. Johnson, 2008. Playa-Lunette Systems and Paleoenvironmental Changes on the Central High Plains. Geological Society of America *Abstracts with Programs* 40 (6): 146.
- Bowen, Mark W. and William C. Johnson, 2008. Landscape Response to Climate Change Recorded within Playa-Lunette Systems on the Central High Plains, Kansas. American Quaternary Association 20th Biennial Meeting.
- Bowen, Mark W., 2008. Stratigraphic Investigations of High Plains Playas for Landscape Reconstruction. Association of American Geographers *Annual Meeting Abstracts – Boston 2008*.
- Bowen, Mark W., 2007. University of Kansas GIS Day Symposium: Identifying and Mapping Playa Basins on the Kansas High Plains.
- Bowen, Mark W. and W.C. Johnson. 2007. Mapping and Stratigraphic Investigations of Playa Basins on the High Plains of Kansas. Geological Society of America *Abstracts with Programs* 39 (6):302.
- Bowen, Mark W., W.C. Johnson, and A. Gray, 2007. Identification and Mapping of Playa Lakes within a GIS Environment for the High Plains of Kansas. Geological Society of America *Abstracts with Programs* 39 (3):26.

- Bowen, Mark W., 2007. Human Constructs, Channel Morphology, and the 100-Year to 500-Year Flood along the Colorado Front Range. Association of American Geographers *Annual Meeting Abstracts – San Francisco 2007*.
- Bowen, Mark W., 2006. Impact of Bridge Structures on Channel Morphology during a Flood Event along the Colorado Front Range. Invited Lecturer, University of Missouri, Department of Geography and Center for Arts and Humanities, Fall Colloquium Series.
- Bowen, Mark W., 2005. Short-Term Water Quality Variation in a Karst Spring, Southwest Missouri. Association of American Geographers *Annual Meeting Abstracts – Denver 2005*.
- Bowen, Mark W., 2003. Spatial Distribution of Nitrogen and Phosphorus in the Valley Mill Reservoir Study Area, Greene County, Missouri. 26th Annual Applied Geography Conference – Colorado Springs.
- Bowen, Mark W., 2003. Consequences of Reservoir Drainage on Sediment and Nutrient Transport. 26th Annual Applied Geography Conference – Colorado Springs.
- Bowen, Mark W., 2003. Effects of Reservoir Drawdown on Water Quality in a Small Reservoir, Southwest Missouri. Association of American Geographers *Annual Meeting Abstracts – New Orleans 2003*.

RESEARCH AWARDS

Playa Lakes Joint Venture, 2011, Playa Lakes Joint Venture/ConocoPhillips Grant Proposal Competition. Evaluating the impacts of land use and climate change on playa form and function and effectiveness of grass buffers to mitigate these impacts. Mark W. Bowen (PI) and William C. Johnson (Co-PI)

University of Wisconsin Oshkosh, Faculty Development Grant, 2012, Evaluating the Impacts of Land Use and Climate Change on Playa Wetland Form and Function. Mark W. Bowen

University of Wisconsin Oshkosh, Undergraduate Student/Faculty Collaborative Research Small Grants Proposal Competition, 2012, Evidence of Rapid Climate Change Events Preserved within Playa Wetlands. Chelsy Herring (Student) and Mark W. Bowen (Faculty Advisor)

Geological Society of America, Annual Meeting Graduate Student Travel Grant, 2010

University of Kansas, 2009 Summer Research Fellowship

University of Kansas, Department of Geography, Kollmorgen Graduate Research Scholarship, 2009: Evidence of Rapid Climate Change Events Preserved within Playa-Lunette Systems

Geological Society of America, Annual Meeting Graduate Student Travel Grant, 2009

University of Kansas, Department of Geography, Kollmorgen Graduate Research Scholarship, 2008: Linking Playa Sedimentation Rates to Land Use and Global Climate Changes

The Nature Conservancy, Nebraska Chapter of the J. E. Weaver Competitive Grants Program, 2008: Mapping and Evaluation of Playa Wetlands on the High Plains of Kansas

Geological Society of America, Annual Meeting Graduate Student Travel Grant, 2007

Association of American Geographers, Graduate Student Research Grant Proposal Competition, Water Resources Specialty Group, 103rd Annual Association of American Geographers Conference, 2007: Role of Playa Lakes in Focusing Recharge to the Ogallala Aquifer on the High Plains of Western Kansas

Association of American Geographers, Dissertation Research Grant Proposal Award. 2007: Soil Variability as an Indicator of Paleoclimate, Paleohydrology, and Playa Evolution on the High Plains of Kansas

Geological Society of America, Graduate Student Research Grant Proposal Award. 2007: Soil Variability as an Indicator of Modern Hydrology, Paleohydrology, and Playa Origin and Evolution on the High Plains of Kansas

University of Kansas, Graduate School Student Travel Grant, 2006

PROFESSIONAL ASSOCIATIONS

Association of American Geographers

- Water Resources Specialty Group
- Geomorphology Specialty Group
- Paleoenvironmental Change Specialty Group

Geological Society of America

- Quaternary Geology and Geomorphology Division

American Quaternary Association

Council on Undergraduate Research

PROFESSIONAL DEVELOPMENT

University of Wisconsin Oshkosh. STEM Best Practices in Gateway Courses Workshop Series Certification. Spring semester, 2013.

- Designing Engaging Lectures
- Community Building Through Group Work
- Creating Effective Homework
- Active Learning in Large Classes

University of Wisconsin Oshkosh, Center for Excellence in Teaching and Learning. *One Session Wonder – Assessment of Student Learning Online*, December, 2012

University of Wisconsin Oshkosh, College of Letters and Science. *Innovations in Pedagogy Workshop – Innovations in Global Pedagogy*, October, 2012

University of Wisconsin Oshkosh. University Studies Program Quest 1 Course Development
Faculty College. May, 2012.

Center for Undergraduate Research Institute. Beginning a Research Program in the Natural
Sciences at a Predominantly Undergraduate Institution. Hope College, November, 2011.

University of Wisconsin Oshkosh, College of Letters and Science. Innovations in Pedagogy
Workshop – Integrating Sustainability into your Classroom and Syllabus, October, 2011.

University of Wisconsin Oshkosh, Center for Excellence in Teaching and Learning. One Session
Wonder – Leading Discussion, Fall, 2011.

University of Wisconsin Oshkosh, Office of Grants and Faculty Development. Faculty
Development Research/Teaching workshop. September, 2011.

University of Wisconsin Oshkosh. How to be a Competitive Grantseeker in the Current Funding
Climate webinar. September, 2011.

National Science Foundation. On the Cutting Edge – Preparing for an Academic Career in the
Geoscience workshop. University of Nebraska, Lincoln, June, 2011.

SERVICE

2012 – Present	Faculty Advisor UW Oshkosh Community Gardens Club
2012 – Present	Faculty Advisor UW Oshkosh Geography Club
2012	Manuscript reviewer, Island Press
2011 – Present	McNair Scholar Program Mentor for Chelsy Herring
2011 – Present	Department of Geography and Urban Planning Map Room Coordinator
2011 – Present	Student-Faculty Collaborative Research Grant Program Proposal Reviewer
2011 – Present	Faculty Development Grant Proposal Reviewer
2011 – Present	Manuscript reviewer, Wiley-Blackwell

09/17/2012