

Curriculum Vita Toby Dogwiler, Ph.D.

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Missouri State University
Department of Geography, Geology, and Planning
901 S. National Avenue
Springfield, MO 65897, USA

tdogwiler@missouristate.edu
O. (417) 836-5436
C. (507) 312-4385
F. (417) 836-6006

PROFESSIONAL APPOINTMENTS

- Department Head and Professor**, Department of Geography, Geology, and Planning, Missouri State University, June 2015-Present
- Chair**, Department of Geoscience, Winona State University, August 2010-May 2015; August 2007-August 2008
- Professor**, Department of Geoscience, Winona State University, August 2002-July 2015
- Director**, Southeast Minnesota Water Resources Center, Winona State University, August 2002-July 2015
- Interim Program Director**, Professional Science Master's program, Winona State University, November 2012-July 2013
- Adjunct Faculty**, Department of Geography-Geology, Illinois State University, April 1, 2007-Present
- Instructor**, University of Missouri-Columbia (2000-2001), Mississippi State University (1998)

EDUCATION

- Doctor of Philosophy**, Geology, University of Missouri-Columbia (2002)
- Master of Science**, Geosciences, Mississippi State University (1998)
- Bachelor of Arts**, Geology, Wittenberg University (1996)

RESEARCH EXPERTISE

I am broadly trained in surficial processes and watershed dynamics with an emphasis on environmental issues in karst terrains and agricultural areas. My current research focuses include (1) GIS terrain analysis-based identification of critical source areas of agricultural water contaminants and prediction of surface erosion, (2) understanding the role of climate change in patterns of precipitation, temperature, and runoff, particularly as they relate to water resources quantity and quality, and (3) reach-scale to watershed-scale influences on geomorphology, sediment transport, and water quality in karst hydrologic systems, including the role of humans in land use planning and management.

TEACHING

My goal as an instructor is to actively engage my students in a manner that builds fundamental knowledge, career skills, and appreciation of the connections between diverse bodies of knowledge. I am experienced in teaching a broad array of courses related to surficial and environmental geology and physical geography, including meteorology, water resources, climate change, Geographic Information Systems (GIS), watershed science, geomorphology, and karst hydrology. I have also regularly taught field-based courses, both domestically and internationally, including in Costa Rica, New Zealand, and Australia.

PUBLICATIONS

Peer-Reviewed Articles

- Schroeder, K. E., Peterson, E. W., and Dogwiler, T. J., 2015, Field Validation of DEM and GIS Derived Longitudinal Stream Profiles: *Journal of Earth Science Research*, v.3, n. 3, p. 43-54. (Link: <http://dx.doi.org/10.18005/JESR0303002>)

- Woodside, J., Peterson, E.W., and Dogwiler, T., 2015, Longitudinal profile and sediment mobility as geomorphic indicators within a fluvio karst stream system: *International Journal of Speleology*, v. 44, no. 2. (Link: <http://dx.doi.org/10.5038/1827-806X.44.2.9>)
- Wilson, G., Dalzell, B. J., Mulla, D. J., Porter, P., and Dogwiler, T., 2014, Estimating water quality effects of conservation practices and grazing land-use scenarios: *Journal of Soil and Water Conservation*, v. 69, no. 4, p. 330-342. (Link: <http://dx.doi.org/10.2489/jswc.69.4.330>)
- Jacoby, B. S., Peterson, E. W., Kostelnick, J. C., and Dogwiler, T., 2013, Approaching Cave Level Identification with GIS: A Case Study of Carter Caves: *ISRN Geology*, v. 2013, p. 1-7. (Link: <http://dx.doi.org/10.1155/2013/160397>)
- Jacoby, B. S., Peterson, E. W., and Dogwiler, T., 2011, Identifying the Stream Erosion Potential of Cave Levels in Carter Cave State Resort Park, Kentucky, USA: *Journal of Geographic Information System*, v. 3, no. 4, p. 323-333, DOI: 10.4236/jgis.2011.34030. (Link: <http://bit.ly/Jacoby2011>)
- Jacoby, B. S., Peterson, E. W., Dogwiler, T., and Kostelnick, J. C., 2011, Estimating the Timing of Cave Level Development with GIS: *Speleogenesis and Evolution of Karst Aquifers*, v. 2011, no. 11, p. 52-61 (Link: <http://bitly.com/jacoby2011b>)
- Peterson, E. W., Dogwiler, T., and Harlan, L., 2011, Using GIS to identify cave levels and discern the speleogenesis of the Carter Caves karst area, Kentucky, *in* Kuniansky, E., ed., *U.S. Geological Survey Karst Interest Group Proceedings*, Fayetteville, Arkansas (April 26-29, 2011), U.S. Geological Survey Scientific Investigations Report 2011-5031, p. 94-103. (Link: <http://on.doi.gov/Peterson2011>)
- Wicks, C.M., Noltie, D.B., Peterson, E.W., and Dogwiler, T., 2010, Disturbances in the habitat of *Macrocotyla glandulosa* (Kenk): *Ecohydrology*, v. 3, n. 1, p. 116-125, DOI: 10.1002/eco.102. (Link: <http://dx.doi.org/10.1002/eco.102>)
- Dogwiler, T., Wicks, C.M., Jenzen, E., 2007, An assessment of the applicability of the heat pulse method toward the determination of infiltration rates in karst losing-stream reaches: *Journal of Cave and Karst Studies*, v. 69, no. 2, p. 237-242. (Link: <http://bit.ly/Dogwiler2007>)
- Dogwiler, T., and Wicks, C.M., 2006, Thermal variations in the hyporheic zone of a karst stream: *International Journal of Speleology*, v. 35, n. 2., p. 59-66. *Invited reprint of Dogwiler and Wicks (2005). (Link: <http://dx.doi.org/10.5038/1827-806X.35.2.1>)
- Dogwiler, T., and Wicks, C.M., 2005, Thermal variations in the hyporheic zone of a karst stream: *Speleogenesis and Evolution of Karst Aquifers*, v. 3, n. 1, 11p. (Link: <http://bitly.com/seka2005>)
- Dogwiler, T.J., and Wicks, C.M., 2004, Sediment entrainment and transport in fluvio karst systems: *Journal of Hydrology*, v. 295, p. 163-172. (Link: <http://bit.ly/Dogwiler2004>)
- Gamble, D.W., Dogwiler, J.T. [sic], and Mylroie, J.E., 2000, Field Assessment of the microclimatology of tropical flank margin caves: *Climate Research*, v. 16, p. 27-50. (Link: <http://bit.ly/Gamble2000>)
- Gamble, D.W., Dogwiler, T.J., and Mylroie, J.E., 1999, A comparison of tidal and nontidal cave temperature on San Salvador Island, Bahamas: A preliminary analysis: *Proceedings of the 9th Symposium on the Geology of the Bahamas and Other Carbonate Regions: Bahamian Field Station, San Salvador Island, Bahamas*, p. 58-68. (Link <http://bit.ly/1o9LLci>)

Professional Reports

- Dogwiler, T., 2014, Electrical Resistivity Imaging (ERI) Investigation of Proposed Manure Basin Site, Bartholome Farms, Goodhue, Minnesota: WRC Report 2014-04, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Bartholome Farms, 21p.
- Dogwiler, T., 2014, Electrical Resistivity Imaging (ERI) Investigation of Proposed Manure Basin Sites, Young Dairy Farm, Plainview, Minnesota: WRC Report 2014-03, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Young Dairy Farm, 20p.

- Dogwiler, T., 2014, Electrical Resistivity Imaging (ERI) Investigation of Proposed Manure Basin Site, Speltz Farm, Lewiston, Minnesota: WRC Report 2014-02, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Speltz Farm, 26p.
- Dogwiler, T., 2014, Electrical Resistivity Imaging (ERI) Investigation of Proposed Manure Basin Site, Johnson Farm, Witoka, Minnesota: WRC Report 2014-01, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Johnson Farm, 19p.
- Dogwiler, T., 2013, Electrical Resistivity Imaging (ERI) Investigation of Proposed Manure Basin Site, Meyer Brothers Farm, Hart, Minnesota: WRC Report 2013-04, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Meyer Brothers Farm, 15p.
- Dogwiler, T., 2013, Groundwater Vulnerability to Nutrient Contamination Mapping: Using Electrical Resistivity Imaging to Identify Hazards, Final Report: WRC Report 2013-03, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Minnesota Pollution Control Agency, 22p.
- Dogwiler, T., 2013, Southeastern Minnesota Soil Water Sampling (Lysimeter) Network Project Final Report 2011-2013: WRC Report 2013-02, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Minnesota Pollution Control Agency, p. 157.
- Reed, J. P., and Dogwiler, T., 2013, Southeastern Minnesota Precipitation Atlas (2010-2012): WRC Report 2013-01, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Minnesota Pollution Control Agency, 39p.
- Dogwiler, T., and Hooks, T. L., 2012, Digital Terrain Analysis of Crystal Creek, Bridge Creek, and South Branch of the Root River Headwaters Reach: WRC Report 2012-02, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Root River Field to Stream Partnership Project, 68p.
- Dogwiler, T., and Hawkridge, C. A., 2011, Report on 2010 Sonde Monitoring Program in the Rush – Pine Creek Watershed, Southeastern Minnesota, WRC Report 2011-01: Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for The Nature Conservancy, 11p.
- Dogwiler, T., Dockter, D., and Omoth, D., 2010, Rush-Pine Creek Watershed Digital Terrain Analysis Overview and Procedure Guidelines: WRC Report 2010-02, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for The Nature Conservancy, 21p.
- Dogwiler, T., 2010, Rush-Pine Creek Watershed Preliminary Assessment and Scoping Plan: WRC Report 2010-01, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for The Nature Conservancy, 114 p. (Link: <http://bit.ly/RPScoping>)
- Dogwiler, T., 2008, Technical Review of the Conditional Use Permit requested by Joel and Curtis Luhmann to allow expansion of an existing feedlot and construction of related facilities at 32353 Sievers Dr., Rushford, MN 55971 (T105N, R8W, Sec. 34, NE¼ of SW¼, Hart Township): WRC Report 2008-06, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Winona County (MN) Planning and Zoning Commission, 8p.
- Dogwiler, T., Dieterman, K.E., and Johnson, C.L., 2008, SWAT Model Geomorphic Assessment in the South Branch of the Root River Project Final Report: WRC Report 2008-05, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Fillmore County Soil and Water Conservation District, 7p.
- Dogwiler, T., 2008, Technical Review of the Conditional Use Permit requested by Fenco Holdings Group for a land alteration conditional use permit to lower earthen dams: WRC Report 2008-04, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Wilson Township (Winona County, MN) Planning and Zoning Commission, 2p.
- Dogwiler, T., 2008, Technical Review of the Conditional Use Permit requested by the William Selke of Selke Farms to allow expansion of an existing feedlot and construction of related facilities at the Selke Farm, 30950 County Road 11, Dakota, MN 55952: WRC Report 2008-03, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Winona

- County (MN) Planning and Zoning Commission, 5p.
- Dogwiler, T., 2008, Technical Review of the Conditional Use Permit requested by the Wayne Voth Dairy Farm to allow expansion of an existing feedlot and construction of related facilities at the Wayne Voth Dairy Farm, 22528 Rupprechts Valley Rd., Lewiston, MN: WRC Report 2008-02, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Winona County (MN) Planning and Zoning Commission, 11p.
- Dogwiler, T., 2008, Technical Review of the Conditional Use Permit requested by Speltz Dairy to allow construction of a new 300 head Animal Confinement barn and Liquid Manure Storage Area at Speltz Dairy Farm, 14516 County Road 31, Altura, Minnesota: WRC Report 2008-01, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Winona County (MN) Planning and Zoning Commission, 7p.
- Harmes, S. and Dogwiler, T., 2007, Citizen Sediment Monitoring Coordination to Support Turbidity Total Maximum Daily Loads (TMDL): Final Report for Project in Southeastern Minnesota September 2004-March 2007: WRC Report 2007-05, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for the Minnesota Pollution Control Agency, 397p.
- Dogwiler, T., 2007, Technical Review of the Conditional Use Permit requested by Fat Fest Music Festival to allow a musical festival on property located on the east side of Headwaters Drive in Section 12 of Wiscoy Township: WRC Report 2007-03, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Winona County (MN) Planning and Zoning Commission, 2p.
- Dogwiler, T., 2007, Technical Review of the Conditional Use Permit requested by Smith Farms of Rushford, Inc. to allow construction of a 1,200-head hog-finishing barn to expand an existing feedlot operation at the Greg Smith Farm property located in the southeastern ¼ of Section 22, T105N, R8W of Hart Township, Winona County: WRC Report 2007-02, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Winona County (MN) Planning and Zoning Commission, 4p.
- Dogwiler, T., 2007, Technical Review of the Conditional Use Permit requested by Don and Jean Huebner and Rick Domke of Domke Excavating to allow mineral extraction of limestone on property located in Section 7 of Norton Township: WRC Report 2007-01, Southeastern Minnesota Water Resources Center, Winona State University, Winona, MN, Prepared for Winona County (MN) Planning and Zoning Commission, 8p.

Abstracts

- Dogwiler, T., 2015, Characterizing Karst Hazards and Depth-To-Bedrock in Driftless Area Agriculture Settings in Southeastern Minnesota: Geological Society of America Abstracts with Programs, v. 47, no. 7, p. 625.
- Dogwiler, T., and Lea, B., 2015, Using Electrical Resistivity Imaging to Characterize Karst Hazards in Southeastern Minnesota Agricultural Settings, in Doctor, D. H., Land, L., and Stephenson, J. B., eds., Sinkholes and the Engineering and Environmental Impacts of Karst: Proceedings of the Fourteenth Multidisciplinary Conference, October 5-9, 2015, Rochester, Minnesota: NCKRI Symposium 5.: Carlsbad, MN, p. 431.
- Lea, B. S., and Dogwiler, T., 2015, An Assessment of Long-Term Changes in the Observed Magnitude, Duration, and Intensity of Precipitation in The Root River Basin of Southeastern Minnesota: Geological Society of America Abstracts with Programs, v. 47, no. 7, p. 593.
- Schroeder, K. E., Peterson, E. W., and Dogwiler, T., 2015, The Use of GIS in Evaluating Longitudinal Profiles of Karst Streams: Geological Society of America Abstracts with Programs, v. 47, no. 7, p. 625.
- Voss, J., and Dogwiler, T., 2015, Comparing the Effect of DEM Resolution on the Accuracy of Digital Terrain Analysis-Based Sediment Erosion Prediction: Geological Society of America Abstracts with Programs, v. 47, no. 7, p. 521.
- *Tousignant, C., Nicosia, C., and Dogwiler, T., 2014, Evaluating the Potential for Bank Erosion to Prioritize Cedar Revetment Bank Stabilization: Geological Society of America Abstracts with

Programs, v. 46, n. 6, p. 502.

**Awarded Best Undergraduate Poster Award for the GSA Environmental and Engineering Geology Division, 2014 GSA Annual Meeting, Vancouver, B.C.*

- Holzbauer-Schweitzer, B., and Dogwiler, T., 2014, Digital Terrain Analysis of the Root River Watershed: Minnesota Ground Water Association Spring Conference: Recharge, Infiltration, and Drainage, St. Paul, MN, April 22, 2014.
- Dogwiler, T. and Nowariak, E., 2013, Electrical Resistivity Investigation of Three Agricultural Fields, Fillmore County, Minnesota: Minnesota Ground Water Association Spring Conference, St. Paul, MN, April 24, 2013. (Link: <http://bitly.com/nowa13>)
- Peterson, E. W., Jacoby, B., and Dogwiler, T., 2012, Employing GIS to Investigate Karst Regions: A Quantitative Assessment (Abstract), 2012 GSA Annual Meeting, GSA Abstracts with Programs, Volume 44: Charlotte, North Carolina (4–7 November 2012), Geological Society of America, p. 298. (Link: <http://bitly.com/1ejNp1H>)
- Breid, H. M., Hawkrigde, C. A., and Dogwiler, T., 2012, Establishing a Lysimeter Network in Southeastern Minnesota to Assess Nitrate Transport Through the Root Zone of Agricultural and Non- agricultural Soils: Minnesota Ground Water Association Spring Conference: Conduits, Karst, and Contamination, St. Paul, MN, April 19, 2012.
- Arnold, C. B., Harris, K. M., and Dogwiler, T., 2011, Assessing the Ability of Electrical Resistivity Imaging to Discern Lateral Changes in Soil Moisture (Abstract No: 198095), in Session #241 "Environmental Geoscience (Posters)": GSA Abstracts with Programs, v. 43, no. 5, p. 583. (Link: <http://bit.ly/Arnold2011>)
- Dieterman, K. E., and Dogwiler, T., 2011, Temperature Controls in a Southeastern Minnesota Trout stream (Abstract No: 197924), in Session #241 "Environmental Geoscience (Posters)": GSA Abstracts with Programs, v. 43, no. 5, p. 582. (Link: <http://bit.ly/Dieterman2011>)
- Hawkrigde, C. A., Breid, H. M., and Dogwiler, T., 2011, Establishing a Lysimeter Network in Southeastern Minnesota to Assess Nitrate Transport through the Root Zone of Agricultural and Non-Agricultural Soils (Abstract No: 197100), in Session "T100. Exploration of Karst Aquifer Systems Using New and Innovative Techniques and Methods (Posters)": GSA Abstracts with Programs, v. 43, no. 5, p. 292. (Link: <http://bit.ly/Hawkrigde2011>)
- Omoth, D., and Dogwiler, T., 2011, A Digital Terrain Analysis Technique for Assessing Sediment Erosion and Efficiently Targeting Best Management Practices Within Agricultural Watersheds in Southeastern Minnesota (Abstract No: 198040), in Session "T68. Water and Sediment Dynamics in Agricultural Landscapes: Toward Prediction of Watershed Sediment Yield (Posters)": GSA Abstracts with Programs, v. 43, no. 5, p. 450. (Link: <http://bit.ly/Omoth2011>)
- Omoth, D., and Dogwiler, T., 2011, Evaluating Stream Power Index as a Predictor of Stream Stability [POSTER], in Minnesota Groundwater Association Spring 2011 Conference: Toward Sustainable Water Use in Minnesota, May 4, 2011, Continuing Education and Conference Center, University of Minnesota, St. Paul, Minnesota.
- Omoth, D., and Dogwiler, T., 2011, Evaluating Stream Power Index as a Predictor of Stream Stability (Poster #91), in 5th Annual WSU Celebration of Research and Creative Scholarship, Winona State University, Winona, MN, p. 1.
- Pletta, H. N., and Dogwiler, T., 2011, Evaluating the Causes of High Baseflow Suspended Sediment Concentrations in a Small Southeastern Minnesota Stream (Abstract No: 197826), in Session #241 "Environmental Geoscience (Posters)": GSA Abstracts with Programs, v. 43, no. 5, p. 582. (Link: <http://bit.ly/Pletta2011>)
- Simmons, A. W., and Dogwiler, T., 2011, Geomorphic Assessment of Karst Trout Streams in Southeastern Minnesota for Evaluating the Effectiveness of Agricultural Best Management Practices (Abstract No: 196736), in Session "T100. Exploration of Karst Aquifer Systems Using New and Innovative Techniques and Methods (Posters)": GSA Abstracts with Programs, v. 43, no. 5, p. 291. (Link: <http://bit.ly/Simmons2011>)

- Dockter, D. L., and Dogwiler, T., 2010, Use and verification of DEM-based terrain analysis to identify source regions of erosion and saturation in southeastern Minnesota watersheds: GSA Abstracts with Programs, v. 42, no. 5, p. 601. (Link: <http://bit.ly/Dockter2010>)
- Wicks, C. M., Noltie, D. B., Peterson, E. W., and Dogwiler, T., 2010, Disturbances in the habitat of *Macrocotyle* [sic] *glandulosa* (Kenk), Aquatic Sciences: Global Changes from the Center to the Edge, Joint Meeting with American Society of Limnology and Oceanography and the North American Benthological Society, June 6-11, 2010: Santa Fe, NM, American Society of Limnology and Oceanography and the North American Benthological Society, p. 250.
- Zawacki, A. C., Dogwiler, T., Hooks, T. L., and Riley, R., 2010, Spatial and temporal trends in fecal coliform concentrations and other water quality parameters in west-central Costa Rica: Geological Society of America Abstracts with Programs, v. 42, no. 2, p. 80. (Link: <http://bit.ly/Zawacki2010>)
- Dockter, D. and Dogwiler, T., 2010, Terrain Analysis Based on LiDAR-Derived Digital Elevation Models to Identify Critical Source Regions of Agriculturally-Derived Sediments and Pollutants: North-Central/South-Central Regional Geological Society of America Annual Meeting, Geological Society of America Abstracts with Programs, v. 42, n. 2, p. 87. (Link: <http://bit.ly/Dockter2010a>)
- Dogwiler, T. and Weisbrod, T., Evaluating Sinkhole Damage to a Flood Control Structure in Southeastern Minnesota Using Electrical Resistivity Imaging: 2010 North-Central/South-Central Regional Geological Society of America Annual Meeting, Geological Society of America Abstracts with Programs, v. 42, n. 2, p. 46. (Link: <http://bit.ly/Dogwiler2010>)
- Summa, C.L. and Dogwiler, T., 2009, Linking Sedimentology and Local Water Quality Issues in a Team-Taught Undergraduate Sedimentology and Stratigraphy Course at Winona State University: Northeast Regional Geological Society of America Annual Meeting, Geological Society of America Abstracts with Programs, Vol. 41, No. 3, p. 20.
- Dankers, J., and Dogwiler, T., 2008, Analyzing Suspended Sediment Concentration, Ash Free Dry Weight, and Particle Size Distribution to Understand the Sediment Transport Dynamics in Southeastern Minnesota Streams for the August 19, 2007 Flood Event: Geological Society of America, Abstracts with Programs, v. 39, n. 6. p. 488.
- Dogwiler, T., and Gernes, M., 2008, Utilizing Electrical Resistivity Imaging Techniques to Evaluate Karst Hazards in Agricultural Land Planning Decisions: Geological Society of America, Abstracts with Programs, v. 39, n. 6. p. 488.
- Dogwiler, T., Peterson, E.W., Angel, J.C., Woodside, J.S., and Gorecki, K.A., 2008, The Speleogenesis of the Cave Branch and Horn Hollow Karst Systems, Carter Caves State Resort Park, Northeastern Kentucky: Proceedings of the Second Appalachian Karst Symposium, Johnson City, Tennessee, May 7-10, 2008, p. 26.
- Asuncion, N. and Dogwiler, T., 2008, Majestic Mountains, Verdant Jungles...and Brown Water?: The Story of Water Quality in Costa Rica: Proceedings of the Second Annual Student-Faculty Research Celebration, Winona State University, April 16, 2008, p. 3.
- Gorecki, K., and Dogwiler, T., 2008, On the Level: Shedding Light on the Dark Mysteries of Eastern Kentucky Cave Evolution, Proceedings of the Second Annual Student-Faculty Research Celebration: Winona, MN, Winona State University, p. 14.
- Dogwiler, T., Woodside, J.S., Peterson, E.W., 2007, Modeling hyporheic zone thermal pulses through a sediment pack in a laboratory flume: Geological Society of America, Abstracts with Programs, v. 39, n. 6. p. 488.
- Plitzuweit, S., and Dogwiler, T., 2007, Role of local bedform structures in a low-gradient, riffle-pool stream: Geological Society of America, Abstracts with Programs, v. 39, no. 3, p. 23.
- Dogwiler, T., Peterson, E.W., Angel, J.C., Gorecki, K.A., Hilber, M.D., Johnson, C.L., Kunkel, D.L., 2006, A preliminary model of speleogenesis in the Horn Hollow Karst System, Carter Caves State Resort Park, northeastern Kentucky: Geological Society of America, Abstracts with Programs, v. 38, n. 7, p. 60.

- Peterson, E.W., Dogwiler, T., Angel, J.C., Gorecki, K.A., Hilber, M.D., Johnson, C.L., Kunkel, D.L., 2006, Preliminary delineation of the hydrology of The Horn Hollow Karst System, Carter Caves State Resort Park, northeastern Kentucky: Geological Society of America, Abstracts with Programs, v. 38, n. 7, p. 195.
- Thielen, A.M., and Dogwiler, T., 2006, Evaluating controls on turbidity in a small low-order stream in southeastern Minnesota: Geological Society of America, Abstracts with Programs, v. 38, n. 4, p. 53.
- Kraszewski, M.J., and Dogwiler T., 2006, Transparency as an indicator of water quality in Garvin Brook, southeastern Minnesota: Geological Society of America, Abstracts with Programs, v. 38, n. 4, p. 53.
- Weinkauff, D.C., and Dogwiler, T., 2006, Assessing water quality in Dominical, Costa Rica: Present quality and applications for determining future impacts due to tourism development: Geological Society of America, Abstracts with Programs, v. 38, n. 4, p. 54.
- Dogwiler, T., and Wicks, C.M., 2003, Geomorphic disturbances in karst hyporheic zones: Linking hydrology and ecology: Geological Society of America, Abstracts with Programs, v. 35, n. 6, p. 377.
- Dogwiler, T., and Wicks, C.M., 2002, Fluvial disturbances in karst streams: Sediment transport processes: Geological Society of America, Abstracts with Programs, v. 34, n. 6, p. 161: Boulder, CO, Geological Society of America.
- Dogwiler, T.J., and Wicks, C.M., 2001, Sensitivity of hyporheic zone sediments to geomorphic disturbances in a karst watershed in eastern Kentucky: Geological Society of America, Abstracts with Programs, v. 33, n. 6, p. 71.
- Dogwiler, T.J., and Wicks, C.M., 2001, Lateral and vertical thermal fluxes in the hyporheic zone of a low-order karst stream: St. Louis Section of the Association of Engineering Geologists, 4th Annual Student Presentation Competition, Rolla, MO.
- Dogwiler, T.J., and Wicks, C.M., 2000, Evaluation of the characteristics of hyporheic zone habitats in karst watersheds: Lateral and vertical thermal fluxes in the stream substrate: Geological Society of America, Abstracts with Programs, v. 32, n. 7, p. 60.
- Dogwiler, T.J., and Wicks, C.M., 1999. Characterizing the sediments in the hyporheic zone in a karst system: Geological Society of America, Abstracts with Programs, v. 31, n. 7, p. 155.
- Dogwiler, T.J., 1999, An assessment of the impact of land use and management practices on nutrient concentrations (nitrogen, ammonia, and phosphorus) in the Perche Creek drainage basin, central Missouri: Missouri Groundwater Association Spring Meeting, St. Louis, MO.
- Dogwiler, T.J. and Mylroie, J.E., 1998, Bell hole morphology: Speculations on genesis: Journal of Cave and Karst Studies, v. 60, n. 3, p. 187.
- Dogwiler, T.J., Mylroie, J.E., Gamble, D.W., Hamilton, S., Kirkpatrick, A., and Phillips, G., 1998, A method for analyzing morphological variations of cave dissolutional features: Journal of Cave and Karst Studies, v. 60, n. 3, p. 187.
- Gamble, D., Dogwiler, T., Mylroie, J.E., 1998, A comparison of tidal and nontidal cave temperatures on San Salvador Island, Bahamas: A preliminary analysis: *Geo²*, v. 26, n. 2-3, p. 30.
- Gamble, D., Dogwiler, T.J., and Mylroie, J., 1998, Variation in cave temperatures on San Salvador Island, Bahamas: A preliminary analysis: Journal of Cave and Karst Studies, v. 60, n. 3, p. 187.
- Dogwiler, T.J. and Mylroie, J.E., 1997, Identification of a mechanism(s) for bell hole formation: A preliminary report: Proceedings of the Sixth Annual Mammoth Cave National Park Science Conference, 17-18 July 1997, p. 151.
- Dogwiler, T.J. and Hobbs III, H.H., 1997, Evaluation of the hydrologic and geomorphic characteristics of the Warrensburg Road Karst, Delaware County, Ohio: Journal of Cave and Karst Studies, v. 59, n. 3, p. 170.
- Lauritzen, S.E., Lundberg, J., Mylroie, J.E., and Dogwiler, T.J., 1997, Bell hole morphometry of a flank margin cave and genetic models, Lighthouse Cave, San Salvador, The Bahamas: Proceedings of the 12th International Congress of Speleology, Switzerland, v. 1, p. 178.
- Dogwiler, T.J. and Porter, M.L., 1996, Anthropogenic impacts upon temperature and relative humidity in spelean environments: Conference Program and Abstract Book: Tenth National

Conference on Undergraduate Research, Asheville, NC, p. PS2-15.
Dogwiler, T.J., Hobbs III, H.H., and Ritter, J.B., 1996. Drainage basin delineation of the Warrensburg Road Karst, Delaware County, Ohio: Implications for evaluating land use impacts: Ohio Journal of Science, v. 96, n. 2, p. 29.

GRANTS AND CONTRACTS

Winona State University (External Proposals / Awards)

- **"Riceford Creek Water Quality Monitoring and Pre- and Post-Cedar Revetment Geomorphic Assessment, 2014-2015 Monitoring Seasons"**, funded by the Root River Soil and Water Conservation District, Minnesota Corn Growers, and The Nature Conservancy, **\$17,882**, 2014-2015 (Approved, Funded)
- **"High-Resolution Water Quality Monitoring in the Rush-Pine Creek Watershed"**, funded by The Nature Conservancy, **\$16,090**, 2013 (Approved, Funded)
- **"Geomorphic Assessment and In-Stream Survey of Riceford Creek, Houston County, Minnesota"** funded by The Nature Conservancy, **\$19,073**, 2013 (Approved, Funded)
- **"Southeastern Minnesota Soil Water Sampling Network"**, funded by the Minnesota Pollution Control Agency, **\$43,872**, 2013-2015 (Approved, Funded)
- **"Electrical Resistivity Investigation of Potential Karst Hazards at the Meyer Brothers Farms Feedlot Expansion Site, Hart Township, Winona County, Minnesota"**, Winona County Planning and Zoning Department, **\$750**, 2013 (Approved, Funded)
- **"An Integrated Sediment Budget for the Root River, Southeastern Minnesota"**, submitted to Minnesota Department of Agriculture Impaired Waters Research, **\$227,658**, 2012-2014 (Approved, Funded)
- **"The Watershed Approach: Demonstrating the Effectiveness of a Systematic and Strategic Approach to Avoiding, Controlling, and Trapping Nutrients in Priority HUC-12 Watersheds"**, Scientific Advisory Board and Planning Committee, funded by The Environmental Defense Fund, **\$5,000**, 2012-2014 (Approved, Funded)
- **"Geomorphic and Habitat Assessment and In-Stream Survey of Garvin Brook, Winona County, Minnesota"**, funded by Trout Unlimited, **\$23,076**, 2012-2015 (Approved, Funded)
- **"Southeastern Minnesota Soil Water Sampling Network"**, funded by the Minnesota Pollution Control Agency, **\$68,000**, 2011-2013 (Approved, Funded)
- **"Stressor Identification in the Root River Watershed"**, funded by the Minnesota Pollution Control Agency, **\$9,000**, 2011-2013 (Approved, Funded)
- **"Groundwater Vulnerability to Nutrient Contamination Mapping"**, funded by the Minnesota Pollution Control Agency, **\$17,000**, 2011-2013 (Approved, Funded)
- **"Support for Dye-Tracing Nutrient Contamination Flow Paths in Southeastern Minnesota Karst"**, funded by the Minnesota Pollution Control Agency, **\$5,000**, 2011-2013 (Approved, Funded)
- **"High Resolution Terrain Analysis Toward Identifying 'Highly-Connected Corridors' in the Rush-Pine Creek Watershed"**, Funded by the Nature Conservancy, **\$14,014.52**, 2011 (Approved, Funded)
- **"Southeastern Minnesota Suspended Sediment Concentration Analysis and Sieve Particle Size Determination in Support of TMDL Development"**, Minnesota Pollution Control Agency, **\$12,000**, 2010-2013 (Approved, Funded)
- **"Root River Water Quality: From Field to Watershed"**, (Co-PI, assisted in project development, proposal writing, and workplan development) Funded through Legislative Appropriation via the Clean Water, Land, and Legacy Amendment funding with matching funds from the Nature Conservancy. Total Funding is approximately **\$550,000** awarded

to the Minnesota Department of Agriculture and Fillmore County Soil and Water Conservation District. **\$39,980** is subcontracted for 2010-2013 to the WSU Southeastern Minnesota Water Resources Center for grant-related work. I am also consulting and assisting with the broader project. (Main proposal Funded; WRC Subcontract executed)

- **"High-resolution, multi-parameter water quality sonde-based monitoring in the Rush-Pine Creek Watershed"**, Funded by the Nature Conservancy, **\$6,780**, 2010 (Approved, Funded)
- **"Rush-Pine Creek Watershed Preliminary Assessment and Project Scoping Work Plan"**, Funded by the Nature Conservancy, **\$10,000**, 2009-2010 (Approved, Funded)
- **"Rush-Pine Creek Digital Terrain Analysis Using LiDAR"**, Funded by the Nature Conservancy, **\$7,800**, 2010 (Approved, Funded)
- **"Luhmann Feedlot Expansion Conditional Use Permit Technical Review"**, Winona County Planning and Zoning Department, **\$540**, 09/2008 (Approved, Funded)
- **"Southeastern Minnesota Suspended Sediment Concentration Analysis and Sieve Particle Size Determination in Support of TMDL Development"**, Minnesota Pollution Control Agency, **\$15,000**, 09/2008-12/2010 (Approved, Funded)
- **"Phillips Dam Conditional Use Permit Technical Review"**, Wilson Township (Winona County) Planning and Zoning Board, **\$210**, 07/2008 (Approved, Funded)
- **"Assessing Multiple Parameters in Southeastern Minnesota Trout Streams"**, Minnesota Pollution Control Agency Surface Water Assessment Grant, **\$50,066**, 03/2008-05/2010 (Approved, Funded)
- **"Selke Feedlot Expansion Conditional Use Permit Technical Review"**, Winona County Planning and Zoning Department, **\$615**, 05/2008 (Approved, Funded)
- **"Voth Feedlot Expansion Conditional Use Permit Technical Review"**, Winona County Planning and Zoning Department, **\$550**, 03/2008 (Approved, Funded)
- **"Speltz Feedlot Expansion Conditional Use Permit Technical Review"**, Winona County Planning and Zoning Department, **\$650**, 01/2008 (Approved, Funded)
- **"Stream Geomorphology in Support of SWAT Modeling"**, Fillmore County Soil and Water Conservation District and the Minnesota Department of Agriculture, **\$20,050**, 06/2007-08/2008 (Approved, Funded)
- **"Smith Feedlot Expansion and Fat Fest Music Festival Conditional Use Permits Technical Review"**, Winona County Planning and Zoning Department, **\$350**, 04/2007 (Approved, Funded)
- **"Domke Quarry Conditional Use Permit Technical Review"**, Winona County Planning and Zoning Department, **\$1,050**, 01/2007 (Approved, Funded)
- **"The Power of Moving Sediment: Integrating Experimental Sedimentology into the Undergraduate Geoscience Curriculum at Winona State University"**, National Science Foundation—CCLI—Adaptation and Implementation (Co-PI with Drs. Catherine Summa), **\$191,845**, 7/1/04-7/1/06 (Approved, Funded)
- **"Citizen Sediment Monitoring Coordinator to Support Turbidity TMDLs"**, Minnesota Pollution Control Agency, **\$72,260**, 3/15/2004-3/15/2007 (Approved, Funded)
- **"Establishing an Interdisciplinary Computing Course and Environment within the College of Science and Engineering at Winona State University"**, Bush Foundation, (Co-PI with Dr. Mingrui Zhang), **\$15,000**, 7/1/2003 – 6/30/2004 (Approved, Funded)
- MnSCU—Leveraged Equipment Grant for Upgrade to WSU Geoscience GIS Laboratory, (Co-PI with Dr. Catherine Summa), **\$32,677**, 8/2002 (Approved, Funded)

GRADUATE COMMITTEES

- Angel, Julie, Spring 2007-2010, Characterization and comparison of the geochemistry and evolutionary controls of Horn Hollow Valley karst waters to other karst systems: Master's Thesis, Department of Geography-Geology, Illinois State University, Advisor: Dr. Eric Peterson.
- Dieterman, Kristen E., 2013-2015, Use of a Dispersed Alkaline Substrate and Limestone Beds to Treat Acid Mine Drainage at Soudan Mine, Minnesota: Master's Thesis, Professional Science Masters Program, Winona State University, Advisor: Dr. Candace Kairies-Beatty.
- Harlan, Lara, Fall 2008-2009, Expanding the conceptual model for the Carter caves system, Carter County, Kentucky using GIS, Advisor: Dr. Eric Peterson.
- Hemmis, Jay, 2014-, Developing a Sediment Budget for the Root River, Southeastern Minnesota: Master's Thesis, Watershed Sciences Department, Utah State University, Advisor: Dr. Patrick Belmont.
- Jacoby, Brianne, Spring 2010-2012, Uncovering the Speleogenesis of Carter Caves, Kentucky Using GIS: Master's Thesis, Department of Geography-Geology, Illinois State University, Advisor: Dr. Eric Peterson.
- Klein, Talia, 2016-Present, Assessing the Effectiveness of Cedar Revetment on Stream Bank Stability in Riceford Creek, Southeastern Minnesota, Department of Geography, Geology, and Planning, Missouri State University, Advisor: Dr. Toby Dogwiler
- Lea, Blake S., 2015-Present, An Assessment of Long-Term Changes in the Observed Magnitude, Duration, and Intensity of Precipitation in the Upper Midwestern U.S., Department of Geography, Geology, and Planning, Missouri State University, Advisor: Dr. Toby Dogwiler
- Schroeder, Kathryn E., 2012-2014, Determining the Source of Anomalous Segments in a Karst Stream: Master's Thesis, Department of Geography-Geology, Illinois State University, Advisor: Dr. Eric Peterson.
- Woodside, John, Spring 2007-2009, A geomorphic investigation of the longitudinal profile, sediment transport and abrasion within a fluvio-karst system, Horn Hollow Karst, Carter Caves State Resort Park, Kentucky: Master's Thesis, Department of Geography-Geology, Illinois State University, Advisor: Dr. Eric Peterson.