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EDUCATION

Missouri State University

Master of Science, Resource Planning, 2003

Thesis: *Phosphorus Contamination and Storage in Bottom Sediments of the James River Arm of Table Rock Lake, Southwest Missouri*

Advisor: Robert T. Pavlowsky

Committee: Rex Cammack, Erwin Mantei

Bachelor of Science, Geography (Environmental and Natural Resources emphasis), Minor: Biology, 2000

Research Project: *Historical Mining Pollution and Overbank Sedimentation, James River, SW Missouri*

Advisor: Robert T. Pavlowsky

WORK EXPERIENCE

2013-present: Assistant Director, Ozarks Environmental and Water Resources Institute, Missouri State University

2005-2013: Research Specialist II, Ozarks Environmental and Water Resources Institute, Missouri State University

2002-2005: Environmental Investigator, Environmental Section, Resource Management Department, Greene County, Missouri

2000-2002: Graduate Assistant, Department of Geography, Geology, and Planning, Missouri State University, Resource Planning Graduate Program

PEER-REVIEWED PAPERS

6. Jerin, T., R.T. Pavlowsky, **M.R. Owen**, J.W. Hess, H.N. Alkier, and K.A. Grong (2023) *Anthropogenic channel network development in forested watersheds by recent stream channelization practices in Mark Twain National Forest, Missouri Ozarks*. *Geomorphology*, 426 (2023) 108601.
5. Kincaid, J.C., **M.R. Owen**, R.T. Pavlowsky, and B.S. Mirza (2022) *Microbiome of Bacterially Impaired Watersheds: Distribution of Potential Bacterial Pathogens*. *Diversity*, 2022, 14(2), 96. 15 pages.
4. Zeiger, S, **M.R. Owen**, and R.T. Pavlowsky (2021) *Simulating nonpoint source pollutant loading in a karst basin: A SWAT modeling application*. *Science of the Total Environment*, 785 (2021) 147295, 11 pages.

3. Pavlowsky, R.T., S.A. Lecce, **M.R. Owen**, and D.J. Martin (2017) *Legacy sediment, lead, and zinc storage in channel and floodplain deposits of the Big River, Old Lead Belt Mining District, Missouri, USA*. *Geomorphology*, Vol. 299, 54-75.
2. **Owen, M.R.**, R.T. Pavlowsky, P.J. Womble (2011) *Historical Disturbance and Contemporary Floodplain Development along an Ozark River, Southwest Missouri*. *Physical Geography*, 32 (5), pp. 423-444.
1. **Owen, M.R.** and R.T. Pavlowsky, (2011) *Base Flow Hydrology and Water Quality of an Ozarks Spring and Associated Recharge Area, Southern Missouri, USA*. *Environmental Earth Science*, 64 (1), pp. 169-183.

PROCEEDINGS AND EDITED ARTICLES

2. Pavlowsky, R.T., **M.R. Owen**, S.A. Lecce, and J. Pace-Witt (2023) *Sand and Gravel Dispersal Rates using Mine Tailings Tracers in Big River, Ozark Highlands*. Proceeding of SEDHYD 2023, St. Louis, Missouri, May 8-12, 2023.
1. Pavlowsky, R.T., **M.R. Owen**, and R.A. Bradley (2016). *Recent increase in extreme rainfall amounts in the Big Barren Creek Watershed, S.E. Missouri*. *Missouri Natural Areas Newsletter*. Vol. 16, Number 1.

TECHNICAL REPORTS

78. Hess, J.W., **M.R. Owen**, and R.T. Pavlowsky (2023) Pre- and Post-Harvest Activity Assessment using the U.S. Forest Service Forest Soil Disturbance Monitoring Protocol (FSDMP), Mark Twain National Forest, Missouri (2022-2023). OEWRI EDR-23-001.
77. **Owen, M.R.**, A. Aranya, N.D. Sines, T. Jerin, and R.T. Pavlowsky (2022) Quality Assurance Project Plan (QAPP) for: Spreadsheet Tool for Estimating Pollutant Loads in the Cuivre River Watershed, East-Central Missouri. OEWRI QAPP-22-002.
76. **Owen, M.R.**, E. Englebrecht, and R.T. Pavlowsky (2022) Mississippi River Basin Healthy Watersheds Initiative (MRBI) Assessment for: Fox River (HUC-071100010306) and Brush Creek-Fox River HUC-071100010301) Watershed, OEWRI EDR-22-006.
75. **Owen, M.R.**, H. Eades, and R.T. Pavlowsky (2022) National Water Quality Initiative (NWQI) Watershed Assessment for: Upper (HUC-103001020403) and Middle (HUC-103001020405) Petite Saline Creek Watershed, OEWRI EDR-22-005.
74. **Owen, M.R.**, K.A. Grong, and R.T. Pavlowsky (2022) Quality Assurance Project Plan (QAPP) for: Spreadsheet Tool for Estimating Pollutant Loads in the Blue River Watershed, Kansas City, Missouri, OEWRI QAPP-22-001.
73. **Owen, M.R.**, P.J. Saulys, T. F. Arcenaux, and R.T. Pavlowsky (2022) Baseflow Water Quality Monitoring of the Lake Taneycomo-White River Watershed (HUC-1101000301), September 2020-September 2021. Completed for H2Ozarks, August 2, 2022, OEWRI EDR-22-004.
72. **Owen, M.R.**, J. W. Hess, and R.T. Pavlowsky (2022) Pre- and Post-Harvest Activity Assessment using the U.S. Forest Service Forest Soil Disturbance Monitoring Protocol (FSDMP), Mark Twain National Forest, Missouri (2021-2022), OEWRI EDR-22-003.
71. **Owen, M.R.**, S.N. Casagrand, and R.T. Pavlowsky (2022). Water Quality Monitoring and Annual Loading of Nutrients and Suspended Sediment, Wilsons Creek at Farm Road 182, Greene County, Missouri. Completed for James River Basin Partnership, January 11, 2022, OEWRI EDR-22-001.
70. **Owen, M.R.**, J.W. Hess, and R.T. Pavlowsky (2021). Dissolved Oxygen and Water Temperature Monitoring of the Big Piney River and Roubidoux Creek at Fort Leonard Wood, Missouri (October 2019-June 2021), November 10, 2021, OEWRI EDR-21-011.

69. **Owen, M.R.**, H.R. Eades, T. J. Pursley, and R.T. Pavlowsky (2021). National Water Quality Initiative (NWQI) Watershed Assessment for: Sugar Creek-East Fork Little Chariton River Watershed (HUC-102802030204), OEWRI EDR-21-009.
68. **Owen, M.R.**, S.N. Casagrand, T. J. Pursley, and R.T. Pavlowsky (2021). Mississippi River Basin Healthy Watersheds Initiative (MRBI) Assessment for: Mozingo Creek Watershed (HUC-102400130303), OEWRI EDR-21-008.
67. T.J. Pursley, H.R. Eades, **M.R. Owen**, and R.T. Pavlowsky (2021). Mississippi River Basin Healthy Watersheds Initiative (MRBI) Assessment for: Lower Apple Creek Watershed (HUC-071401070404), OEWRI EDR-21-007.
66. **Owen, M.R.**, J.W. Hess, and R.T. Pavlowsky (2021). Pre- and Post-Harvest Activity Assessment using the U.S. Forest Service Forest Soil Disturbance Monitoring Protocol (FSDMP), Mark Twain National Forest, Missouri (2020-2021). OEWRI EDR-21-006.
65. **Owen, M.R.**, S. Ahmed, and R.T. Pavlowsky (2021). Rainfall Monitoring in the Big Barren Creek Watershed, Mark Twain National Forest, Southeast Missouri Water Years 2018-2020, Final Summary Report. OEWRI EDR-21-004.
64. **Owen, M.R.**, S. Ahmed, and R.T. Pavlowsky (2021). Water Temperature Monitoring in the Big Barren Creek Watershed, Mark Twain National Forest, Southeast Missouri, Water Years 2017-2020. OEWRI EDR-21-003. Completed for U.S. Forest Service, April 19, 2021.
63. **Owen, M.R.**, S. Ahmed, and R.T. Pavlowsky (2021). Gaging Station Report for: Hydrological Monitoring of the Big Barren Creek Watershed, Mark Twain National Forest, Southeast Missouri, OEWRI EDR-21-002. Completed for U.S. Forest Service, April 15, 2021.
62. Hess, J.W., R.T. Pavlowsky, and **M.R. Owen** (2021) Sediment and Erosion Control Assessment, Fort Leonard Wood: Best Management Practices for Ranges 33H, Ranges 2&3, and Roadway Drainage for FLW E, OEWRI EDR-21-001. Completed for the U.S. Army Corps of Engineers, January 4, 2021.
61. **Owen, M.R.**, B.S. Mirza, T.J. Pursley, and R.T. Pavlowsky (2020). Bacteria Source Tracking Assessment of Sequiota Spring, Springfield Missouri (June 2019-July 2020), OEWRI EDR-20-008. Completed for the City of Springfield, December 18, 2020.
60. **Owen, M.R.**, S.N. Casagrand, K.A. Coonen, and R.T. Pavlowsky (2020). National Water Quality Initiative (NWQI) Watershed Assessment for: Little Hunting Slough-Black River Watershed (HUC-110100070805), OEWRI EDR-20-007. Completed for the Natural Resources Conservation Service, October 2, 2020.
59. Pursley, T., **M.R. Owen**, T. Rice, and R.T. Pavlowsky (2020) Mississippi River Basin Healthy Watersheds Initiative (MRBI) Watershed Assessment for: Cane Creek Watershed (HUC-071401070404) and Dry Creek Watershed (HUC-071401070406), OEWRI EDR-20-006. Completed for the Natural Resources Conservation Service, October 1, 2020.
58. **Owen, M.R.**, K.A. Coonen, and R.T. Pavlowsky (2020). Mississippi River Basin Healthy Watersheds Initiative (MRBI) Watershed Assessment for: Coon Creek Watershed (HUC-071100080104), Sandy Fork-West Fork Cuivre River Watershed (HUC-071100080105), and Headwaters Indian Creek Watershed (HUC-071100080201), OEWRI EDR-20-005. Completed for the Natural Resources Conservation Service, September 30, 2020.
57. **Owen, M.R.**, K.A. Coonen, and R.T. Pavlowsky (2020). *Post-Construction Water Quality Monitoring, South Creek at Campbell Avenue and Kansas Expressway, Springfield, Missouri, March 1, 2019 – February 29, 2020.* OEWRI EDR-20-004. Completed for the James River Basin Partnership, May 6, 2020.
56. **Owen, M.R.** and R.T. Pavlowsky (2020). *Geomorphic Monitoring of Channel Form and Engineered Wood Structures, North Fork of the White River, Southern Missouri.* OEWRI EDR-20-003. Completed for the U.S. Forest Service, April 2, 2020.

55. **Owen, M.R.**, K.A. Coonen, and R.T. Pavlowsky (2020). *Post-Harvest Activity Assessment using the U.S. Forest Service Soil Disturbance Monitoring Protocol (FSDMP), Mark Twain National Forest, Missouri*. OEWR EDR-20-002. Completed for the U.S. Forest Service, March 2, 2020.
54. Roman, G.R., R.T. Pavlowsky, and **M.R. Owen** (2020). *Soil and Vegetation Monitoring to Evaluate Hydrological Effects of Prescribed Burning in Big Barren Creek Watershed, Mark Twain National Forest, SE Missouri*. OEWR EDR-20-001. Completed for the U.S. Forest Service, January 30, 2020.
53. **Owen, M.R.** and T. Pursley (2019). *Riparian Corridor and Detention Basin Retrofit Load Reduction Assessment, Wilson Creek 319 Project, Springfield, Missouri*. OEWR EDR-19-006. Completed for the James River Basin Partnership. December 20, 2019.
52. Jordan, M., **M.R. Owen**, H.R. Adams, and R.T. Pavlowsky (2019). *National Water Quality Initiative (NWQI) Watershed Assessment for: Headwaters Petite Saline Creek Watershed (HUC-103001020401)*. OEWR EDR-19-005. Completed for: Natural Resources Conservation Service, October 9, 2019.
51. Reminga, K.N., G.F. Roman, K.A. Coonen, **M.R. Owen**, H.R. Adams, and R.T. Pavlowsky (2019). *Mississippi River Basin Healthy Watershed Initiative (MRBI) Watershed Assessment for: Upper Apple Creek Watershed (HUC12# 071401050401) and Middle Apple Creek Watershed (HUC12# 071401050403)*. OEWR EDR-19-004. Completed for: Natural Resources Conservation Service, October 9, 2019.
50. Adams, H., K. Coonen, T. Rice, **M.R. Owen**, and R.T. Pavlowsky (2019). *Mississippi River Basin Healthy Watersheds Initiative (MRBI) Watershed Assessment for: Long Branch Watershed (HUC-10280103204), Spring Branch-Elk Creek Watershed (HUC-102801031302), and Turkey Creek Watershed (HUC-102801031301)*. OEWR EDR-19-003. Completed for: Natural Resources Conservation Service, October 9, 2019.
49. **Owen, M.R.**, S. LeTarte, and R.T. Pavlowsky (2019). *Flow and Exfiltration Assessment of the Jordan Creek Underground, Springfield, MO*. OEWR EDR-19-002. Completed for the City of Springfield, January 31, 2019.
48. **Owen, M.R.** and R.T. Pavlowsky (2019). *Quality Assurance Project Plan for: Water Quality Monitoring of the South Creek Stream Restoration Site between Campbell Ave. and Kansas Expressway, Springfield, Missouri*. OEWR QAPP-19-001. Completed for: James River Basin Partnership, January 15, 2019.
47. Mirza, B.S., **M.R Owen**, J.C. Kincaid, and R.T. Pavlowsky (2019). *Bacteria Source Tracking to Support Watershed Planning, Pearson Creek, Southwest Missouri*. OEWR EDR-19-001. Completed for Greene County Resource Management, January 4, 2019.
46. **Owen, M.R.**, H.R. Adams, and R.T. Pavlowsky (2018). *Pre-Activity Assessment using the USFS Soil Disturbance Protocol, Mark Twain National Forest, SE Missouri*. OEWR EDR-18-008. Completed for the U.S. Forest Service, December 17, 2018.
45. **Owen, M.R.** and R.T. Pavlowsky (2018). *Year 3 Annual Report for: Big River Lead Remediation Structure (BRLRS) Monitoring Project*. OEWR EDR-18-007. Completed for the U.S. EPA, November 2, 2018.
44. **Owen, M.R.** and R.T. Pavlowsky (2018). *Quality Assurance Project Plan for: Water Quality Monitoring of the Lower Wilson Creek at the USGS Gaging Station (#07052160), Farm Road 182, Greene County, Missouri*. OEWR QAPP-18-001. Completed for: James River Basin Partnership, October 22, 2018.
43. **Owen, M.R.**, J.S. Nash, and R.T. Pavlowsky (2018). *Geomorphic Assessment of the U.S. Forest Service Stream Restoration Site, Mill Creek, Phelps County, Missouri*. OEWR EDR-18-006. Completed for the U.S. Forest Service, November 8, 2018.

42. Zeiger, S.J., **M.R. Owen**, and R.T. Pavlowsky (2018). *Soil and Water Management Tool (SWAT) simulated flow and bacteria in Little Sac Watershed: A Best Management Practice Assessment*. OEWRI EDR-18-005. Completed for the Watershed Committee of the Ozarks, April 20, 2018.
41. Mirza, B.S., **M.R Owen**, J.C. Kincaid, and R.T. Pavlowsky (2018). *Bacteria Source Tracking to Support Watershed Planning, Little Sac River, Southwest Missouri*. OEWRI EDR-18-004. Completed for the Watershed Committee of the Ozarks, June 7, 2018.
40. **Owen, M.R.**, R.T. Pavlowsky, and H. R. Adams (2018). *National Water Quality Initiative (NWQI) Pilot Watershed Assessment for: Lamar Lake-North Fork Spring River Watershed (HUC-110702070206)*. OEWRI EDR-18-003. Completed for the Natural Resources Conservation Service, April 2, 2018.
39. **Owen, M.R.**, M.S. Thies, K.M. Geier R.T. Pavlowsky (2018). *Stream Crossing Inventory and Evaluation. Upper Big Barren Creek Watershed, Southeast Missouri*. OEWRI EDR-18-002. Completed for the U.S. Forest Service, January 26, 2018.
38. **Owen, M.R.**, R.T. Pavlowsky, and G. Roman (2018). *Wastewater Indicators and Exfiltration Sources in Pearson Creek, Springfield, Missouri*. OEWRI EDR-18-001. Completed for The City of Springfield, Missouri, January 4, 2018.
37. **Owen, M.R.**, R.T. Pavlowsky, and J.S. Nash (2017). *Geomorphic Monitoring of Channel Form and Engineered Wood Structures, North Fork of the White River, Southern Missouri*. OEWRI EDR-17-003. Completed for the U.S. Forest Service, September 14, 2017.
36. **Owen, M.R.**, T.M. Carroll, and R.T. Pavlowsky (2017). *Wastewater Indicators and Exfiltration Sources in Wilson Creek, Springfield, Missouri*. OEWRI EDR-17-001. Completed for The City of Springfield, Missouri, January 27, 2017.
35. Pavlowsky, R.T., and **M.R. Owen** (2016). *Stream sediment and floodplain soil contamination in the Viburnum Trend in Crawford, Dent, Iron, Reynolds, and Washington Counties in Southeast Missouri*. OEWRI-EDR-15-002. Completed for the U.S. Fish and Wildlife Service, 101 Park DeVillie, Suite A, Columbia, MO 65203, November 14, 2016.
34. Pavlowsky, R.T., M.C. Pierson, **M.R. Owen**, and J.C. Voss (2016). *Year 1 Annual Report for: Big River Lead Remediation Structure (BRLRS) Monitoring Project*. Completed for U.S. Environmental Protection Agency, Region VII. October 14, 2016.
33. Pavlowsky, R.T. and **M.R. Owen** (2016). *Quality Assurance Project Plan (QAPP) for: Big River Lead Remediation Structure (BRLRS) Monitoring Project*. Completed for U.S. Environmental Protection Agency, Region VII. June 13, 2016.
32. **Owen, M.R.**, R.T. Pavlowsky, E. Buyrgan, and S. Zeiger (2016). *Water Quality Modeling and Load Reduction Simulation of Nutrients and Sediment, Wilsons Creek Watershed, Springfield, Missouri*. OEWRI-EDR-016-002, completed for the James River Basin Partnership. May 10, 2016.
31. Pavlowsky R.T., **M.R. Owen**, and R.A. Bradley (2016). *Historical Rainfall Analysis for the Big Barren Creek Watershed, Southeast Missouri (1955-2015)*. Prepared for U.S. Forest Service, Mark Twain National Forest, March 23, 2016.
30. **Owen, M.R.**, R.T. Pavlowsky, and Matt Thies (2016). *Update to Water Quality Monitoring and Load Reduction Evaluation from Detention Basin Retrofits in Springfield, Missouri*. Completed for the City of Springfield, February 16, 2016.
29. **Owen, M.R.** and R.T. Pavlowsky (2015). *Nonpoint Source Bank Erosion and Load Reduction Assessment for the Pearson Creek 319 Riparian Corridor Easement Site 5377 E. Foxgrove Lane, Greene County, Missouri*. Prepared for the James River Basin Partnership, July 30, 2015.

28. **Owen, M.R.**, R.T. Pavlowsky and K. Zelzer (2015). *Nonpoint Source Bank Erosion and Load Reduction along Wilson Creek below Farm Road 156, Greene County, Missouri*. Prepared for the James River Basin Partnership, June 25, 2015.
27. **Owen, M.R.**, R.T. Pavlowsky and A. Mulling (2015). *Water Quality Monitoring and Load Reduction Evaluation from Detention Basin Retrofits in Springfield, Missouri*. Completed for the Watershed Committee of the Ozarks supporting the Springfield Greene County Urban Watershed Stewardship 319 Grant. June 11, 2015.
26. **Owen, M.R.**, R.T. Pavlowsky and A. Mulling (2015). *South and Fasnicht Creek Water Quality Assessment, January 2012-March 2015*. Completed for the Watershed Committee of the Ozarks supporting the Springfield Greene County Urban Watershed Stewardship 319 Grant. May 12, 2015.
25. **Owen, M.R.**, R.T. Pavlowsky and A. Mulling (2015). *Pre-Project Water Quality Monitoring for South Creek at Campbell Avenue and Kansas Expressway, Springfield, Missouri, April 1, 2014 to March 31, 2015*. Completed for the City of Springfield, Missouri. April 29, 2015.
24. Pavlowsky, R.T. and **M.R. Owen** (2014). *Geomorphic Assessment of South Creek between National and Campbell Avenue, Springfield, Missouri*. Completed for: Olsson Associates, August 6, 2014.
23. **Owen, M.R.** and R.T. Pavlowsky (2014). *Water Quality Assessment and Load Reductions for Pearson Creek, Springfield, Missouri*. Final Report, Completed for: James River Basin Partnership, Show-Me Yards Neighbors, Farms and Ranches 319 Project. January 31, 2014.
22. **Owen, M.R.** and R.T. Pavlowsky (2013). *Asher Creek Water Quality Assessment, Greene and Polk Counties, Missouri*. Final Report, Completed for: Greene County Soil and Water Conservation District, Asher Creek Watershed 319 Project, G12-NPS-02. December 1, 2013.
21. Pavlowsky, R.T. and **M.R. Owen** (2013). *Indian Creek Fluvial Geomorphology Study, Olathe, Kansas*. Final report to Olsson Associates for the City of Olathe, Kansas. November 11, 2013.
20. **Owen, M.R.**, R.T. Pavlowsky and E. Kuehn (2013). *Nonpoint Source Bank Erosion and Water Quality Impairment Assessment, James River at Rivercut Golf Course, Greene County, Missouri*. Prepared for the James River Basin Partnership. September 17, 2013.
19. **Owen, M.R.**, R.T. Pavlowsky and E. Kuehn (2013). *Nonpoint Source Bank Erosion and Water Quality Assessment, James River at River Bluff Farm, Stone County, Missouri*. Prepared for the James River Basin Partnership. June 12, 2013.
18. **Owen, M.R.**, R.T. Pavlowsky and E. Kuehn (2013). *Historical Water Quality Data Analysis, Pearson Creek, Springfield, Missouri*. Ozarks Environmental and Water Resources Institute EDR-13-001.
17. **Owen, M.R.**, R.T. Pavlowsky, and L.M. Olson (2012). *Channel Stability and Riparian Corridor Assessment to Identify Nonpoint Source Pollution, Wilson Creek, Springfield, Missouri*. Completed for the James River Basin Partnership. OEWRI EDR-12-003.
16. **Owen, M.R.** and R.T. Pavlowsky (2012). *Final Report for: Nutrient Transport and Fate from Municipal Biosolids Land Application*. Completed for the City of Springfield, Missouri. OEWRI EDR-12-001.
15. **Owen, M.R.**, R.T. Pavlowsky, and D.J. Martin (2011). *Big River Mining Sediment Assessment Project: Big River Borrow Pit Monitoring Project*. Funded by: U.S. Fish and Wildlife Service Cooperative Ecosystems Studies Unit. OEWRI EDR-10-003.
14. **Owen, M.R.** and R.T. Pavlowsky (2011). *Final Technical Report for: Water Quality Monitoring and Load Reduction Evaluation from Residential Developments in Christian County, Missouri*. Completed for: James River Basin Partnership "Sources and Reductions of Storm Water Runoff in the James River Basin" EPA FY 2006 319. OEWRI EDR-11-001.

13. **Owen, M.R.**, R.T. Pavlowsky, and A. DeWitt (2010). *2nd Annual Report for: Nutrient Transport and Fate from Municipal Biosolids Land Application*. Completed for the City of Springfield, Missouri. OEWRI EDR-10-007.
12. Pavlowsky, R.T. and **M.R. Owen**, (2010). *Geomorphic Assessment of Upper Wards Branch, Springfield, Missouri*. OEWRI EDR-10-006.
11. Mickus, K.L., R.T. Pavlowsky, **M.R. Owen**, and P.J. Womble (2010). *DC-Resistivity and Ground Penetrating Radar Investigation of the Floodplain and Gravel Bars of the Big River, Eastern Missouri*. OEWRI EDR-10-004.
10. Pavlowsky, R.T., **M.R. Owen** and D.J. Martin (2010). *Distribution, Geochemistry, and Storage of Mining Sediment in Channel and Floodplain Deposits of the Big River System in St. François, Washington, and Jefferson Counties, Missouri*. Final Report to the USFWS Cooperative Ecosystems Studies Unit. OEWRI EDR-10-002.
9. Pavlowsky, R.T. and **M.R. Owen** (2009). *Geomorphic Analysis of Lackman Tributary, Lenexa, KS*. Final report to Olsson Associates for the City of Lenexa, Kansas. OEWRI EDR-09-004.
8. **Owen, M.R.**, J. Duzan, R.T. Pavlowsky, M. Burton, T. Dewitt, C. Wallace, D. Gisselbeck, S. Hefner, (2009). *1st Annual Report for: Nutrient Transport and Fate from Municipal Biosolids Land Application*. Completed for the City of Springfield, Missouri. OEWRI EDR-09-003.
7. Pavlowsky, R.T. and **M.R. Owen** (2009). *Geomorphic Assessment of Galloway Branch in Sequiota Park, Springfield, Missouri* Final report to Olsson Associates for the City of Springfield, Missouri. OEWRI EDR-09-002.
6. Pavlowsky, R.T. and **M.R. Owen** (2009). *Geomorphic Assessment of City Center Athletic Club. Development Impacts on Existing Stream Channel Stability, Lenexa, KS*. Final report to Olsson Associates for the City of Lenexa, Kansas. OEWRI EDR-09-001.
5. **Owen, M. R.** and R.T. Pavlowsky (2008). *Final Report for the Water Quality Monitoring and Analysis of the Bennett Spring Watershed and Recharge Area*. OEWRI EDR-08-005.
4. **Owen, M. R.** and R.T. Pavlowsky (2008). *Ward Branch Stream Restoration Project Post-Construction Assessment and Final Report*. OEWRI EDR-08-004.
3. **Owen, M. R.**, M.A. Gossard, and R.T. Pavlowsky (2007). *Pre-construction report for the Ward Branch stream restoration project*. OEWRI EDR-07-004.
2. **Owen, M.R.**, and R. Pavlowsky (2007). *Quality Assurance Project Plan for: Water Quality Monitoring and Analysis of the Bennett Spring Watershed and Recharge Area*. OEWRI QA07-001.
1. **Owen, M.R.**, G. Borchelt, and R.T. Pavlowsky (2006). *Environmental Data Report for Geospatial Database and Water Quality Baseline Development for the Upper White River Basin, Missouri and Arkansas*. Completed for the Upper White River Basin Foundation, funded by Upper White River Basin Initiative Project, USEPA Region 7. OEWRI EDR-06-001.

GRANTS AND CONTRACTS (Total = \$1,931,988)

47. Pavlowsky, R.T. and **M.R. Owen**, 2023. MS4 Springfield \$75,000
46. Pavlowsky, R.T. and **M.R. Owen**, 2023. USFS Sinkhole Project Addition, \$35,000
45. Pavlowsky, R.T. and **M.R. Owen**, 2023. Upper James River Watershed Assessment, City of Springfield, \$106,875
44. Pavlowsky, R.T. and **M.R. Owen**, 2023. Forest Soil Disturbance Monitoring Protocol Extension, U.S. Forest Service, \$10,000
43. Pavlowsky, R.T. and **M.R. Owen**, 2023. Pearson Creek 319 Bacteria Source Tracking II, \$25,200
42. Pavlowsky, R.T. and **M.R. Owen**, 2023. City of Nixa MS4 Monitoring Extension, \$15,000
41. Pavlowsky, R.T. and **M.R. Owen**, 2023. Greene County Pearson Creek Monitoring Extension, \$11,000

40. Pavlowsky, R.T. and **M.R. Owen**, 2022. City of Springfield MS4 (Year-13) Monitoring Extension, \$78,650.
39. Pavlowsky, R.T. and **M.R. Owen**, 2022. Sinkhole Mapping Project, U.S. Forest Service, \$150,000.
38. Pavlowsky, R.T. and **M.R. Owen**, 2022. Missouri Agricultural Watershed Assessment Project Renewal, \$370,000.
37. Pavlowsky, R.T. and **M.R. Owen**, 2022. Sequiota Spring Bacteria Source Tracking Assessment II Addendum, \$2,565.
36. Pavlowsky, R.T. and **M.R. Owen**, 2022. Forest Soil Disturbance Monitoring Protocol Extension, U.S. Forest Service, \$10,000.
35. Pavlowsky, R.T. and **M.R. Owen**, 2022. Sequiota Spring Bacteria Source Tracking Assessment II, \$3,848.
34. Pavlowsky, R.T. and **M.R. Owen**, 2022. Greene County MS4 Monitoring Extension, \$10,400.
33. Pavlowsky, R.T. and **M.R. Owen**, 2021. Missouri Agricultural Watershed Assessment Project Additional Funding, \$25,000.
32. Pavlowsky, R.T. and **M.R. Owen**, 2021. City of Springfield MS4 (Year-13) Monitoring Extension, \$70,000.
31. Pavlowsky, R.T. and **M.R. Owen**, 2021. Missouri Agricultural Watershed Assessment Project 1-year Extension, \$75,000.
30. Pavlowsky, R.T. and **M.R. Owen**, 2021. Forest Soil Disturbance Monitoring Protocol Extension, \$10,000.
29. Pavlowsky, R.T. and **M.R. Owen**, 2021. Greene County MS4 Monitoring Extension, \$10,400.
28. Pavlowsky, R.T. and **M.R. Owen**, 2021. City of Battlefield MS4 Monitoring Extension, \$4,500.
27. Pavlowsky, R.T. and **M.R. Owen**, 2020. City of Springfield MS4 (Year-12) Monitoring Extension, \$65,000.
26. Pavlowsky, R.T. and **M.R. Owen**, 2020. Missouri Agricultural Watershed Assessment Project 1-year Extension, \$75,000.
25. Pavlowsky, R.T. and **M.R. Owen**, 2020. Forest Soil Disturbance Monitoring Protocol Extension, \$10,000.
24. Pavlowsky, R.T. and **M.R. Owen**, 2020. City of Battlefield MS4 Monitoring Extension, \$4,500.
23. Pavlowsky, R.T. and **M.R. Owen**, 2020. Greene County MS4 Monitoring Extension, \$10,400.
22. Pavlowsky, R.T. and **M.R. Owen**, 2020. City of Nixa MS4 Monitoring Extension, \$13,500.
21. Pavlowsky, R.T., B.S. Mirza, and **M.R. Owen**, 2020. City of Springfield Sequiota Spring Bacteria Source Tracking Extension, \$4,275.
20. Pavlowsky, R.T. and **M.R. Owen**, 2019. Sequiota Spring Bacteria Source Tracking, \$8,550.
19. Pavlowsky, R.T. and **M.R. Owen**, 2019. City of Battlefield MS4 Monitoring Extension, \$3,900.
18. Pavlowsky, R.T. and **M.R. Owen**, 2019. U.S. Forest Service-Forest Soil Disturbance Monitoring Protocol, \$5,000.
17. Pavlowsky, R.T. and **M.R. Owen**, 2019. Greene County MS4 Monitoring Extension, \$10,400.
16. Pavlowsky, R.T. and **M.R. Owen**, 2018. Pearson Creek Bacteria Source Tracking Assessment, Greene County, Missouri, \$9,975.
15. Pavlowsky, R.T. and **M.R. Owen**, 2018. Missouri Agricultural Watershed Assessment Project. USDA/NRCS Missouri, \$240,000.
14. Pavlowsky, R.T. and **M.R. Owen**, 2018. Battlefield MS4 Monitoring Extension, \$3,900.
13. Pavlowsky, R.T. and **M.R. Owen**, 2018. Greene County MS4 Monitoring Extension, \$10,400.
12. Pavlowsky, R.T. and **M.R. Owen**, 2018. Big River Riffle-Basin Monitoring Project for the Big River Superfund Site, \$58,255.

11. Pavlowsky, R.T. and **M.R. Owen**, 2018. Wilson Creek 319 Project, James River Basin Partnership, \$48,139.
10. Pavlowsky, R.T. and **M.R. Owen**, 2018. City of Springfield MS4 Monitoring Grant - Year 10 continuation, \$51,929.
9. Pavlowsky, R.T. and **M.R. Owen**, 2017. Lamar Lake Pilot Watershed Assessment, USDA-NRCS \$34,279.
8. Pavlowsky, R.T. and **M.R. Owen**, 2016. Wilson Creek Exfiltration Assessment Pilot Project, City of Springfield, \$14,891.
7. Pavlowsky, R.T., **M.R. Owen**, and P. Schweiger, 2016. Little Sac Watershed SWAT model to support watershed planning (319), Watershed Committee of the Ozarks, \$58,257.
6. Pavlowsky, R.T. and **M.R. Owen**, 2016. MS4 monitoring and reporting services for Greene County, City of Nixa, and City of Battlefield, Missouri. \$21,000.
5. Pavlowsky, R.T. and **M.R. Owen**, 2015. Technical assistance and water quality modeling for the Middle James River Watershed Management Plan, James River Basin Partnership, \$28,000.
4. Pavlowsky, R.T. and **M.R. Owen**, 2015. Load reduction analysis for 319 riparian easement projects for Wilson and Pearson Creeks. James River Basin Partnership, \$10,000.
3. Pavlowsky, R.T. and **M.R. Owen**, 2015. Storm water basin monitoring (post-construction period continuation) City of Springfield, \$14,000.
2. Pavlowsky, R.T. and **M.R. Owen**, 2015. MS4 monitoring and reporting services for Greene County, City of Nixa, and City of Battlefield, Missouri. \$18,000.
1. Pavlowsky, R.T. and **M.R. Owen**, 2014. Geomorphic Assessment of the South Creek restoration site, Springfield, Missouri. Olsson Associates, \$3,000.

CONFERENCE PRESENTATIONS/POSTERS

18. **Owen, M.R.**, S. Ahmed, S. N. Casagrand, and R. T. Pavlowsky (2021) Long-Term Impact of Exploitative Logging on Forest Watershed Hydrology in the Missouri Ozarks. Poster Presentation at the 2021 Binghamton Geomorphology Symposium, Middle Tennessee State University, Murfreesboro, Tennessee, October 15-17, 2021.
17. **Owen, M.R.** and R.T. Pavlowsky. Hydrological Monitoring of an Oak-Pine Forest Under Prescribed Fire Management, SE Missouri. Poster presentation at the 2019 Binghamton Geomorphology Symposium, Denver Colorado, October 10-13, 2019.
16. **Owen, M.R.** and R.T. Pavlowsky. *Hydrologic Monitoring of the Big Barren Creek Watershed, Mark Twain National Forest, SE Missouri*. 2019 Missouri Natural Resources Conference, Tan-Tar-A Resort, Osage Beach, Missouri. February 5-7, 2019.
15. **Owen, M.R.**, R.T. Pavlowsky, and A.D. Mulling. *Sediment Phosphorus Reductions due to Improvements in Wastewater Treatment in Table Rock Lake, southwest Missouri*. American Water Resources Association 2015 Annual Water Conference, Denver, CO, November 16-19, 2015.
14. **Owen, M.R.** and R.T. Pavlowsky. *Historical Channel Change and Disturbance Zone Formation in the Big River, SE Missouri*. Poster Presentation at the 2015 Upper Midwest Stream Restoration Symposium, Dubuque, IA, February 8-11, 2015.
13. **Owen, M.R.** and R.T. Pavlowsky. *Decade of Watershed Science and Applications in Southwest Missouri*. Water Challenges and Opportunities, A Symposium in Celebration of 50th Anniversary of Missouri Water Resources Research Center. University of Missouri, Columbia. Sponsored by Mizzou Advantage & the Chancellor's Distinguished Speakers Program, October 7-8, 2014.

12. **Owen, M.R.** and R.T. Pavlowsky. *Geomorphic Based Stream Restoration in Missouri and Kansas*. Poster Presentation at the 2013 Upper Midwest Stream Restoration Symposium. La Crosse, WI February 24-27, 2013.
11. **Owen, M.R.** and R.T. Pavlowsky. *Local-scale variations in Floodplain Contamination by Historical Mining in the Old Lead Belt, SE Missouri*. Poster Presentation at the 67th Annual Meeting of the Southeastern Division of the Association of American Geographers. Asheville, NC, November 18-20, 2012.
10. **Owen, M.R.** and R.T. Pavlowsky. *Water Quality and Forage Production from Municipal Biosolids Land Application in Southwest Missouri*. Presentation at the 2012 Ozark Summit, Springfield, Missouri, June 12-14, 2012.
9. **Owen, M.R.** and R.T. Pavlowsky. *Channel Stabilization and Riparian Corridor Enhancement in an Urban Stream, Springfield, Missouri*. Poster presentation at the 2012 Ozark Summit, Springfield, Missouri, June 12-14, 2012.
8. **Owen, M.R.** and R.T. Pavlowsky. *Assessment of Nutrient and Suspended Sediment Contributions from Subdivision Developments in Christian County, Missouri*, Poster Presentation at the 2011 Upper Midwest Stream Restoration Symposium, Oconomowoc WI. February 27 to March 2, 2011.
7. **Owen, M.R.** and R.T. Pavlowsky. *Water Quality and Runoff Characteristics from Agricultural Fields Applied with Biosolids and Mineral Fertilizers, Lawrence County, Missouri*. 2011 Missouri Natural Resources Conference, Osage Beach MO, February 2-4, 2011.
6. **Owen, M.R.**, Pavlowsky, R.T., and D.J. Martin. *Geomorphic Evaluation of Channel Dredging to Control Contaminated Sediment Transport in Big River, Old Lead Belt, Eastern Missouri*. 65th Annual Meeting of the Southeastern Division of the Association of American Geographers, Birmingham AL, November 21-23, 2010.
5. **Owen, M.R.**, R.T. Pavlowsky and P.J. Womble. *Historical Floodplain Deposition and Disturbance Zone Evolution in the Middle James River, SW Missouri*. Joint Meeting of the North-Central/South-Central Sections of the Geological Society of America, Branson MO, April 11-13, 2010.
4. **Owen, M. R.** and R.T. Pavlowsky. *Spatial Distribution of Historical Alluvium on Floodplains of the Middle James River, SW Missouri*. Poster Session in Geoarchaeology and Environmental History at the 39th Annual Binghamton Geomorphology Symposium, University of Texas at Austin, October 9-11, 2008.
3. **Owen, M. R.** and R.T. Pavlowsky. *Historical Sediment Deposition on Floodplains of the James River, Southwest Missouri*. Presentation at the Annual Meeting of the Association of American Geographers, Boston MA, April 15-19, 2008.
2. **Owen, M. R.** *Ward Branch Urban Channel Stabilization Project*. Missouri Natural Resource Conference, Osage Beach MO, February 1st, 2008.
1. **Owen, M.R.**, R.T. Pavlowsky, M.A. Gossard, and T.W. Smith. *Channel restoration of urbanizing stream of the Ozarks Plateaus, Greene County, Missouri*. Association of American Geographers Annual Meeting, San Francisco CA, April 17-21, 2007.

INVITED PRESENTATIONS

12. **Owen, M.R.** (2023) Pearson Creek Water Quality Monitoring to Support Regional Watershed Planning Initiatives, Report to the Greene County Commission, April 13, 2023.
11. **Owen, M.R.** and R.T. Pavlowsky (2019) Hydrologic Monitoring of the Big Barren Creek Watershed, Mark Twain National Forest, SE Missouri. Region 9 Southern Tier States Sub-

- Regional Soils, Water, Fisheries and Aquatic Ecology Meeting. Rolla, Missouri, October 24, 2019.
10. **Owen, M.R.**, National Water Quality Initiative (NWQI) Lamar Lake-North Fork Spring River Pilot Watershed Assessment. National Water Quality Initiative Kick-Off Meeting, Lamar, Missouri, September 18, 2018.
 9. **Owen, M.R.** and R.T. Pavlowsky. Hydrology Research in the Big Barren Creek Watershed, Mark Twain National Forest, SE Missouri. Fieldtrip to Big Barren Creek, Mark Twain National Forest, Carter County, Missouri, June 20, 2018.
 8. **Owen, M.R.** and R.T. Pavlowsky. Hydrology monitoring projects in the Big Barren Creek Watershed Mark Twain National Forest in SE, Missouri. June 6, 2018.
 7. **Owen, M.R.** and H.R. Adams. National Water Quality Initiative (NWQI) Lamar Lake – North Fork Spring River Pilot Watershed Assessment. USDA/NRCS Missouri Leadership Team Meeting, Columbia, Missouri, April 18, 2018.
 6. **Owen, M.R.** and H.R. Adams. National Water Quality Initiative (NWQI) Lamar Lake – North Fork Spring River Pilot Watershed Assessment. Jasper-Barton County Soil and Water Conservation District Board, Carthage, Missouri, February 28, 2018.
 5. **Owen, M.R.**, Update on OEWRI projects in the Big Barren Creek Watershed Mark Twain National Forest in SE, Missouri. USFS Region 9 Silviculture Workshop, March 8, 2017.
 4. **Owen, M.R.**, Hydrology and Water Quality Monitoring in Southwest Missouri. Watershed Committee of the Ozarks Summer Watershed Academy, July 16, 2013.
 3. **Owen, M. R.**, Update on Water Quality Projects in the Springfield Area, Watershed Committee of the Ozarks Monthly Meeting, December 4, 2009.
 2. **Owen, M. R.**, GIS Techniques for Watershed Science Research, Distinguishing Your Community by Its Natural Resources, Missouri Department of Conservation Springfield Nature Center, February 20, 2009.
 1. **Owen, M. R.**, Sources and Reductions of Storm Water Runoff in the James River Basin, field trip presentation for Ripple Effect-Low Impact Development Conference, Springfield Missouri, May 7-8, 2008.

AWARDS, EDUCATION, SERVICE, AND SUPPORT

15. Member of the search committee to hire new Assistant Professor of Sustainability and Climate, Department of Geography, Geology, and Planning, November 2021.
14. Water Quality Data and Monitoring Panel Participant, 2021 Integrated Plan Field Day, September 30, 2021.
13. Member of the search committee to hire new Assistant Professor of Physical Geography, Department of Geography, Geology, and Planning, December 2020.
12. Recipient of the 2020 College of Natural and Applied Science Excellence Award for Staff.
11. Received Professional Graduate Faculty status, Department of Geography, Geology, and Planning, November 2019.
10. University Staff Ambassadors (USA) Advisory Council Member.
9. BEAR (Building Employee Ambassador Relationships) Connection Mentor.
8. Graduated from the University Staff Ambassador (USA) Program (Class of 2015).
7. Organized and conducted annual field trip to local stream for 6th grade science class at Springfield Lutheran School, 2014-2016.
6. Served as a judge at the Ozarks Science and Engineering Fair, Hammons Student Center, Missouri State University, 2014-2016.
5. Co-Organizer of *Environmental Stewardship of Biosolids Land Application: Implications regarding soil health, nutrient cycling, storm water runoff, and agricultural production*

workshop at the 2011 Missouri Natural Resources Conference, Osage Beach, Missouri, February 2-4, 2011.

4. Co-Chair of the *Human Impacts on Fluvial Systems* session at the Joint Meeting of the North-Central/South-Central Sections of the Geological Society of America, Branson, Missouri, April 11-13, 2010.
3. Guest lecture and teach labs for several CNAS courses including BIO 509 Stream Ecology, GEO 700 Introduction to Graduate Study in Geospatial Sciences, GEO 770 Advanced Field and Laboratory Methods, GRY 108 Principles of Sustainability, and GRY 348 Geomorphology.
2. Provide technical assistance to Greene County, Missouri Resource Management Department on impact of mining waste on a tributary to Pearson Creek, stream stabilization projects, and topsoil removal permitting.
1. Supervised, trained, and mentored 80 graduate assistants and 25 undergraduate research assistants since 2005.

MASTER'S DEGREE THESIS COMMITTEE MEMBER (School of Earth, Environment, and Sustainability)

7. Saulys, Patrick (2023) Recent Climate Change Influence on Flood Magnitude and Frequency, Channel Widening, and Bar Deposition, Big River, Missouri Ozarks.
6. Grong, Katie (2023) Land Use Change and Hydrologic Impacts on Historical and Present-Day Channel and Floodplain Form, Blue River Watershed Near Kansas City Missouri.
5. Hillermann, Max (2022) Mining-Contaminated Sediment and Metal Storage in Channel Deposits in Turkey Creek, Tri-State Mining District, Missouri and Kansas.
4. Casagrand, Sierra N. (2021) Historical Changes of Channel Width in a Headwater Stream System, Mark Twain National Forest, Missouri.
3. Ahmed, Shoukat (2021) Long-Term Hydrological Impacts of Historical Logging on Recent Hydro-Geomorphologic Conditions, Big Barren Creek Watershed, Mark Twain National Forest.
2. Pursley, Tyler J. (2021) Spatial Variability of Nonpoint Source Yields in Ozark Highlands Watersheds under Historical and Recent Land Use Conditions.
1. Coonen, Kayla A. (2020) Stream Bank and Bar Erosion Contributions and Land Use Influence on Suspended Sediment Loads in Two Ozark Watersheds, Southeast Missouri.