

Dr. JARKA POPOVICOVA'S VITA

EDUCATION

1996. Ph.D. Soil, Water and Environmental Science.

University of Arizona, Tucson, Arizona.

1991. M.S. Environmental Engineering - Water Treatment Technology.

Institute of Chemical Technology, Prague, Czech Republic.

PROFESSIONAL EXPERIENCE

Since 2003 Assistant Professor. Ball State University.

- 2010 Promoted to Associate Professor.
- Teaches courses in water resources, water quality management, wastewater treatment, and environment & society.
- Conducts water quality research on a local reservoir and watersheds.
- Mentors undergraduate and graduate students.
- Collaborates with local NGO and other organizations on various environmental projects.
- Provides service to academic and professional institutions.

1997 – 2003 Project Manager. AWWA Research Foundation, Denver, CO

- Developed and managed national and international scientific research projects for the drinking water industry with a total budget of \$8.5 mil.
- Supervised proposal review, evaluation, and selection process.
- Reviewed and edited technical reports.
- Facilitated meetings and expert discussions.

1996/97 Water Quality Intern. East Bay Municipal Utility District, Pardee, CA.

- Developed a revegetation plan to comply with statutory requirements of zero discharge for treated wastewater (the plan is currently in use).
- Performed routine daily, weekly, and monthly water quality sampling and monitoring of drinking water reservoirs for inorganic, organic, physical and microbiological analysis.
- Assisted in operations and improvements of drinking water plants.

1993/96 Research Assistant. University of Arizona, Tucson, AZ.

- Carried out bench-scale experiments to study transport, fate and removal of petroleum hydrocarbons from the vadose zone - sponsored by US Department of Energy.
- Performed all necessary instrumental analysis.

1991/92 Water Quality Trainee. City of San Diego Water Utilities. San Diego, CA.

- Analyzed water samples for total organic carbon, chlorinated pesticides, turbidity, chemical oxygen demand, chlorine residual, and various physical parameters.

- Performed field sampling, laboratory analysis, and instrument maintenance. Performed QA/QC analysis based on California state and EPA protocols.
- Analyzed EPA laboratory certification standards with success.

1990/91 Research Assistant. Institute of Chemical Technology. Prague, Czech Republic.

- Carried out bench-scale studies of the removal of inorganic constituents from groundwater. Designed and performed experiments and analysis.

1990 Water Quality Intern. Water Treatment Plant, Kutná Hora, Czech Republic.

- Coordinated and conducted project 'The efficiency of coagulant Al³⁺ in water treatment' involving daily sampling and analysis.

SCHOLARLY PUBLICATIONS

- ◆ Popovičová, J. and A.L. Gregg. 2010. Public perceptions and preferences for future management and development of reservoir waterfront. *Journal of Park and Recreation Administration*. Accepted for publication in 2010.
- ◆ Popovičová, J. 2009. Water quality assessment and ecoregional comparison of a reservoir in east-central Indiana. *Lake and Reservoir Management*. 25:1-12.
- ◆ Popovičová, J. and Diana E. Fiallos Celi. 2009. The trophic status of Prairie Creek reservoir: Implications for resource management. *Proceedings of the Indiana Academy of Science*, 118(1):1-12.
- ◆ Popovičová, J. 2009. Water quality assessment of the Prairie Creek reservoir in Delaware County. *Proceedings of the Indiana Academy of Science*. 117(2):124-135.
- ◆ Popovicova J. and M. L. Brusseau. 1998. Contaminant mass transfer during gas-phase transport in unsaturated porous media, *Water Resources Res.* (34):83.
- ◆ Brusseau M.L. and J. Popovicova. 1997. Characterizing gas-water interfacial bulk-water partitioning for gas-phase transport of organic contaminants in unsaturated porous media, *Environ. Sci. Technol.*, (31):1645.

Chapters in a textbook

- ◆ Popovicova, J. 2008. Chapter 15 - Environmental Concerns: Wastes and Pollution. *In* Community Health, eds. McKenzie, Pinger, and Kotecki, 447-487. 6th Edition. Jones and Barlett, Sudbury, Massachusetts.
- ◆ Popovicova, J. 2008. Chapter 16 - The Impact of Environment on Human Health. *In* Community Health, eds. McKenzie, Pinger, and Kotecki, 488-521. 6th Edition. Jones and Barlett, Sudbury, Massachusetts.
- ◆ Co-editor of a book: Online monitoring for drinking water utilities. 2002. *Eds.* E. Hargesheimer, O. Conio and J. Popovicova. American Water Works Association and AWWA Research Foundation.

Non-refereed publications

- ◆ Indiana Academy of Science. Final report *Effects of Agricultural Land Use on the Prairie Creek Reservoir Water Quality*. October 2007.
- ◆ Delaware County Soil and Water Conservation District, *White River Watershed Project Report*: 2007.
- ◆ Indiana Lake Management Society. *Assessment of Contribution of Non-point Source Pollution to the Prairie Creek Reservoir in Delaware County, Indiana*. 2007.
- ◆ Prairie Creek Reservoir Master Plan. 2007. Delaware Muncie-Metropolitan Plan Commission. <http://www.whiteriverwatershedproject.org>
- ◆ Popovicova J. et. al. 2002. Process for Developing Microbial Standards. AWWARF.

FUNDED GRANTS

- ◆ 2009: Atrazine occurrence in White River watershed. Subcontracted by **Muncie Sanitary District** for Delaware County Soil and Water Conservation District. \$3,280.00.
- ◆ July 2008. Zinn, E. and J. Popovicova. The efficiency of constructed wetlands for the removal of Triclosan. **Indiana Academy of Science**. \$1,718.00.
- ◆ May 2006: Assessment of contribution of non-point source pollution to the Prairie Creek reservoir in Delaware County, Indiana. \$4,995.00. **Indiana Lake Management Society**.
- ◆ April 2006. Effects of agricultural land use on the Prairie Creek reservoir water quality. \$3,000. **Indiana Academy of Science**.
- ◆ February 2006: Brown, H. And J. Popovicova. Stream monitoring for the White River Watershed Project, \$50,000. **Delaware County Soil and Water Conservation District**.
- ◆ 2005: Indiana Lake Management Society - \$500.00 travel grant.
- ◆ June 2008: Water quality assessment of the Prairie Creek reservoir and its watershed. \$1,700 to fund undergraduate fellow for fall 2008 and summer 2009. **BSU Honors College Fellowship**.
- ◆ June 2007: Long-term water quality monitoring of the Prairie Creek reservoir, Delaware County, Indiana. \$1,700 to fund undergraduate fellow for fall 2007 and summer 2008. **BSU Honors College Fellowship**.
- ◆ July 2007: Proposal to the College of Sciences and Humanities for the Research Support of New Faculty. \$5,297.00 **BSU College of Sciences and Humanities, Lilly V**.
- ◆ May 2006: Water quality research in Delaware County watersheds. \$18,252.00. Proposal to the College of Sciences and Humanities for the Research Support of New Faculty. **BSU College of Sciences and Humanities, Lilly V**.
- ◆ March 2006: Long-term water quality monitoring of the Prairie Creek reservoir. \$1,700 to fund undergraduate fellow for fall 2006 and summer 2007. **BSU Honors College Fellowship**.
- ◆ 2005: Water quality monitoring and assessment of Prairie Creek Reservoir; \$ 14,432. Summer 2005 (includes summer salary, supplies, equipment and travel expenses, Graduate Assistant for one summer session). **BSU Internal Grant Research Program**.
- ◆ 2005: Water quality assessment of the Prairie Creek Reservoir. Received funding (\$1,700) for one undergraduate honors fellow to work on the project in the Fall 2005 and Spring 2006. **BSU Honors College Fellowship**.
- ◆ 2005: Water quality monitoring in Delaware County; \$ 20,375 – awarded to support course buyout and equipment purchase for research. Awarded in July 2005. **BSU College of Sciences and Humanities, Lilly V**.

Teaching grants

- ◆ Immersive community-based learning: Field study in South America. BSU Provost Office Internal Endowment Fund. \$3,992.00.
- ◆ Development of experiential learning experiences and implementation of tools to assess learning outcome in water resources courses. BSU Office of Academic Assessment and Institutional Research. \$1,000.00.

THESIS/DISSERTATION ADVISER***EdD Dissertation***

- ◆ Lisa Zinn. Efficiency of constructed wetlands to remove an antimicrobial agent Triclosan from wastewater.

M.S. Thesis

- ◆ 2009. Diana Fiallos Celi. Water quality assessment of Prairie Creek Reservoir in Delaware County, Indiana.
- ◆ 2008. Edward Dobrowolski. Assessment of water quality changes resulting from municipal sewer installation in the Killbuck-Mud Creek watershed, Indiana.
- ◆ 2007. Sarah Matheny. Nutrient and pesticides analysis of sediment interstitial water of the Prairie Creek Reservoir, Indiana. Recipient of the Sandra L. Smith Award for the best graduate student poster at 2007 Ball State Student symposium.
- ◆ 2009. Isabel Meza. Permeable reactive barriers for attenuation of hexavalent Chromium from contaminated soil.
- ◆ 2009. Connie Ronald. Evaluation of restored wetlands using the Ohio rapid assessment protocol.
- ◆ 2005. Chris Edelstein. Impact of Agricultural Drainage Tiles on Surface Water Flow.
- ◆ 2005. Calvin Hee. Field-Scale Phytoremediation Trials of Lead-Contaminated Soil.
- ◆ 2004. Kelly Goward. Nutrients and Pesticides in three sub-watersheds of the Upper White River, Indiana.
- ◆ 2004. Kejun Xu. Total Suspended Solids, Discharge, Conductivity and Nutrients in Three Watersheds of the Upper White River, Indiana.

Honor's Thesis

- ◆ 2006: Sara Parks. Prairie Creek Reservoir: A Basic Characterization.
- ◆ 2005: Rebecca Cavnar and Amelie Horton. Adventures in Vegetarianism.

PRESENTATIONS AT PROFESSIONAL MEETINGS

- ◆ Zinn, E. and J. Popovicova. The efficiency of constructed wetlands for the removal of antimicrobial agent Triclosan. Annual Meeting of the Indiana Academy of Science. Kokomo, Indiana, October 23, 2009.
- ◆ Raffel, A., and J. Popovicova. Resident's knowledge of septic and well issues in Desoto, Indiana. Poster presented at the annual meeting of the Indiana Academy of Science. Kokomo, Indiana, October 23, 2009.
- ◆ Prater, M., J. Prast, M. Ak, K. Grahm and J. Popovicova. Occurrence of Escherichia Coli (E. coli) in Kankakee and Iroquois river basins. Poster presented at the 2009 Fourteenth BSU Annual Student Symposium March 24, 2009.
- ◆ Popovicova, J. and A.L. Gregg. 2009. Public perceptions and preferences for future management and development of reservoir waterfront. Annual Meeting of the Indiana Lake Management Society. Indianapolis, Indiana; January 29, 2009.
- ◆ Popovicova, J. 2009. Water quality assessment and ecoregional comparison of Prairie Creek Reservoir, Delaware County. Annual Meeting of the Indiana Lake Management Society. Indianapolis, Indiana; January 29, 2009.
- ◆ Popovicova, J. Water quality assessment and ecoregional comparison of Prairie Creek Reservoir, Delaware County. Indiana Academy of Science. Evansville, Indiana, October 24, 2008.
- ◆ Popovicova, J., Fiallos Celi, Diana. Assessment of trophic status of Prairie Creek reservoir in east-central Indiana. Indiana Lakes Management Society. Warsaw, April 2008.
- ◆ Williams, T. and J. Popovicova. Water quality research at the Minnetrista pond. Poster presented at Ball State University Student Symposium March 25, 2008.
- ◆ Popovicova, J. and S. Matheny. Nutrient analysis of sediment interstitial water of the Prairie Creek Reservoir, Indiana. Annual meeting of the North American Lake Management Society in Orlando, Florida. October 30, 2007.
- ◆ Fiallos Celi, D. and J. Popovicova. Water quality assessment of Prairie Creek reservoir in Delaware County, Indiana. Annual meeting of Indiana Academy of Science. October 26, 2007.
- ◆ Popovicova, J. and S. Matheny. Sediment pore water: What can it tell us? Annual meeting of Indiana Academy of Science. October 26, 2007.
- ◆ Crismore, C., L. Bowley, and J. Popovicova. Does water depth affect the occurrence of mussels in the White River? Poster presented at the annual meeting of Indiana Academy of Science. October 26, 2007.
- ◆ Potts, S., A. Chew and J. Popovicova. Assessment of the contribution of non-point source pollution to the Prairie Creek reservoir in Delaware County, Indiana. Poster presented at the annual meeting of Indiana Academy of Science. October 26, 2007.
- ◆ Matheny, S. and J. Popovicova. Nutrient analysis of sediment interstitial water of the Prairie Creek reservoir, Indiana. Recipient of the Sandra L. Award for the best graduate student poster. Poster presented at Ball State Student symposium in spring 2007.
- ◆ Popovicova, J. Water quality monitoring and assessment of the Prairie Creek reservoir in Delaware County, Indiana. Annual meeting of the Indiana American Water Works Association. Indianapolis, Indiana. February 2007.
- ◆ Popovicova, J. Water quality assessment of the Prairie Creek reservoir in Delaware County, Indiana. Annual Conference of North American Lake Management Society. Indianapolis, IN. November 2006.
- ◆ Popovicova, J. Effects of land use on water quality of the Prairie Creek reservoir in Delaware County, Indiana. Indiana Academy of Science. October 2006.

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- ◆ Matheny, S. and J. Popovicova. Nutrient analysis of sediment interstitial water of the Prairie Creek Reservoir, Indiana. Indiana Academy of Science. November 2006.
 - ◆ Dobrowolski, E. and J. Popovicova. Water quality monitoring in an Indiana sub-watershed. Indiana Academy of Science. November 2006.
 - ◆ Smith, C., S. Matheny and J. Popovicova. Occurrence of pesticides in the West Fork of the White River watershed. Indiana Academy of Science. November 2006.
 - ◆ Popovicova, J. Watershed Management in Delaware County, Indiana. 14th Nonpoint Source Pollution Workshop and Conference, Minneapolis, MN. September 24-28, 2006.
 - ◆ Popovicova, J. Pharmaceuticals and personal care products: Effects on water resources. Invited Presentation at the Indiana Environmental Health Association. April 2006.
 - ◆ Popovicova, J. Water quality: What you should know. Invited Presentation – BSU Chapter of Sigma Xi. April 2006.
 - ◆ Dobrowolski, E. and J. Popovicova. Monitoring water quality in an Indiana agricultural sub-watershed. BSU Student Symposium. March 21, 2006.
 - ◆ Parks, S. and J. Popovicova. Prairie Creek reservoir: A basic characterization. BSU Student Symposium. March 21, 2006.
 - ◆ Popovicova, J. Water quality assessment of the Prairie Creek reservoir in Delaware County, Indiana. Indiana Academy of Science. October 7, 2005.
 - ◆ Popovicova, J. Are there pharmaceuticals in Indiana water supplies? Presented at the 2004 Annual Meeting of the Indiana Academy of Science, Hanover College, IN; October 29, 2004.
 - ◆ Popovicova, J. Strategies to teach a controversial topic. Presented at the 2004 Annual Meeting of the Indiana Academy of Science, Hanover College, Indiana; October 29, 2004.
 - ◆ Popovicova, J. Strategies to teach a controversial topic. Presented at the BSU Teaching and Learning Conference 6, April 9, 2004.
 - ◆ Popovicova, J. Why should faculty create teaching portfolios? Presented at the BSU Teaching and Learning Conference 6, April 9, 2004.
 - ◆ Water Reuse Foundation Annual Conference, Long Beach, CA; Endocrine Disruptors and Pharmaceuticals in Drinking Water; 05/2000.
 - ◆ WQTC Annual Conference. 1998. Taste and Odor Workshop – Summary of research needs.
 - ◆ International Conference on Groundwater Quality 1995. Prague, Czech Republic: An oral presentation.
 - ◆ American Chemical Society National Meeting. 1994-5. Research poster & presentation.

EDITORSHIP, REVIEWS, REVIEW PANELS

- ◆ Reviewer for the Proceedings of the Indiana Academy of Science.
 - ◆ McKenzie, James, Robert Pinger, and Kerome Kotecki. Community Health. Reviewed chapter 15 and 16 of the textbook.
 - ◆ Evaluated 1,200 AP Exams as a Reader for the College Board: Advanced Placement Tests in Environmental Science; June 2-9, 2005, Clemson College, Clemson, SC.
 - ◆ Cleveland and Kaufmann: The Global Environment, An Integrated System Approach, McGraw-Hill Publishers. Reviewed 8 chapters of the book and provided written comments to the publisher.
 - ◆ Brennan/Withgott, Environment: The Science Behind the Stories. 2nd Edition Pearson – Benjamin Cummings. Reviewed the textbook and participated in a review workshop of the textbook, San Francisco.
 - ◆ Reviewed 10 chapters of the book authored by Cleveland and Kaufmann: The Global Environment: An Integrated System Approach. McGraw-Hill Publishers.
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- ◆ Khiari, D. et al. Distribution Generated Taste and Odor Phenomena. 2002. AWWARF.
 - ◆ Edberg, S. et al. 2001. Evaluation of Indicator Bacteria by Molecular Fingerprinting. AWWARF.
 - ◆ Pellizzari, E. et al. 2003. Arsenic Contribution from Dietary Sources. AWWARF.
 - ◆ Tice, R. et al. 2000. Sodium Arsenite in p53+/- Mice. AWWARF.
 - ◆ Hwang, C. et al. 2002. Polar NOM: Characterization, DBPs, Treatment. AWWARF.
 - ◆ Endocrine Disruptors and Pharmaceuticals in Drinking Water. 2000. CHEEC University of Iowa, AWWARF.
 - ◆ Swenberg, J. and La, D. 2003. Identification and Quantitation of DNA Adducts Derived from Disinfection By-Products. AWWARF.

RESEARCH INTERESTS

Water Resources
Water Quality and Management
Wastewater Treatment
Water resources in developing countries
Historical aspects of water treatment systems

COURSES TAUGHT

NREM 101 – Environment and Society.
NREM 211/511 – Water Resources including laboratory.
NREM 315/515 Water Quality Management including laboratory.
NREM 385/585 – Wastewater Management.
NREM 697 – Special Topic: Current Water Issues.
HNRS 297 – Earth Science.
NREM 402/502 – Field Study course: Rural development in Ecuador.
NREM 369 – Professional practice.
NREM 497 – Special studies.
NREM 572 – Special studies.

OTHER CREATIVE ENDEAVORS

- ◆ Young People's Concert. Watershed Music DVD. Muncie Symphony Orchestra. 2009.
- ◆ Managed & facilitated AWWARF workshops:
 - Endocrine Disruptors and Pharmaceutically Active Compounds in Drinking Water. Iowa City, Iowa; April 2000.
 - Microbial Risk Factor, Padre Island, TX, 1998; Denver, CO, 1999.
 - Taste and Odor in Great Lakes; Chicago, IL, 1998.

PROFESSIONAL DEVELOPMENT

Teaching

- ◆ Expert Teaching – discussion on what makes the expert teacher.
- ◆ Documenting the Scholarship of Teaching – class lead discussion and work on basic of teaching portfolio and its components.
- ◆ Essentials of Learning – classroom discussion of teaching theories and their implementation in classroom setting.
- ◆ Website Production for Teaching – created Internet Website by use of FrontPage software.
- ◆ Classroom Assessment – class discussed methods for evaluating students' understanding of material taught in class.
- ◆ Academic Integrity - issues of cheating, plagiarism were discussed together with methods of testing and development of assignments to discourage such behavior.
- ◆ Use of Multimedia in the Classroom – various options and opportunities for creative work, such as videos, DVDs, CD-ROMs were presented.
- ◆ Teaching in the Affective Domain.
- ◆ Design Conference Posters with Microsoft PowerPoint 2003.

Research

- ◆ National Onsite Wastewater Recycling Association:
 - Wastewater characteristics
 - Soil & site evaluation overview
 - Septic tanks
 - Aerobic treatment units and media filters
 - Pumps and controls : function and troubleshooting
 - Operation and maintenance of systems
 - Providing decentralized wastewater sustainability
 - Modular wastewater treatment
- ◆ Internal Phosphorus Loading in Lakes and Reservoirs. North American Lake Management Society.
- ◆ Alternative Wastewater Treatment: National Environmental Training Center for Small Communities. Morgantown, WV
- ◆ Access Database. Faculty Technology Series.
- ◆ Best Management Strategies for Data Collection and Analysis.
- ◆ Best Practices for Managing Scholarly Work in Word.
- ◆ Geography 342 Remote Sensing I and II course.

SERVICE ACTIVITIES

University

- ◆ Disabled Student Development Mentor.
- ◆ Review committee for Udall Scholarship (Spring 2008 & 2009).
- ◆ College Transition Program - Department's liaison for dual-credit courses (2009).
- ◆ University Research Committee (2005-2007).
- ◆ Teaching Evaluation Committee (fall 2004-spring 2007).
- ◆ Professional Affairs Council – member from 2004 to 2005.

Service - other organizations

- ◆ Engineers without Borders.
- ◆ Indiana Academy of Science.
- ◆ North American Lake Management Society.
- ◆ Muncie Symphony Orchestra – Watershed Music. 2009.

- ◆ Delaware County TRIAD.
- ◆ Prairie Creek reservoir Advisory Board.
- ◆ Minnetrista.
- ◆ White River Watershed Project Steering Committee.
- ◆ Delaware County Soil and Water Conservation District.
- ◆ Farmland Conservation Club.
- ◆ Indiana Environmental Health Association.
- ◆ Muncie Children’s Museum.
- ◆ Maquipucuna Cloud Forest Reservation, Ecuador.

PROFESSIONAL MEMBERSHIPS

- ◆ Indiana Academy of Science
- ◆ North American Lake Management Society
- ◆ Indiana Lake Management Society
- ◆ Engineers without Borders