

Craig Patterson, Environmental Engineer in EPA's National Risk Management Research Laboratory

Water Systems Division

[Mailing Address](#)

patterson.craig@epa.gov

Areas of Expertise: Small drinking water treatment technologies including filtration, point-of-use/point-of-entry devices, advanced oxidation and disinfection processes. Other areas of expertise include studies on household water systems for PFAS removal, slow sand filtration, UV disinfection, granular activated carbon for disinfection byproduct control, water treatment plant optimization for algal toxin removal, reuse of water treatment plant residuals, hydraulic fracturing wastewater, mine wastes, water reuse, nano-scale treatment, and water quality monitoring. Expertise from previous jobs includes landfill technology, pollution prevention, environmental remediation, regulatory compliance and environmental software development.

Select Publications:

Salih, H., **Patterson**, C., Li, J., Mock, J., and Dastgheib, S., [Utilization of water utility lime sludge for flue gas desulfurization in coal-fired power plants: Part I. Supply-demand evaluation and life cycle assessment and Part II. Lime sludge characterization and mercury reemission](#), *Journal of Energy & Fuels*, 2018.

Patterson, C., Maldonado, C., Sinha, R., Lopez-Maisonave, C., and Ramirez-Toro, G., [Benefits of Solar Energy for Small Community Water Systems in Puerto Rico](#), *Opflow Journal*, June 2018.

Salih, H., Sorial, G., **Patterson**, C., and Speth, T., The Implications of Fe₂O₃ and TiO₂ Nanoparticles on the Removal of Trichloroethylene by Activated Carbon in the Presence and Absence of Humic Acid", *Water, Air, & Soil Pollution*, (2015) 226: 4 DOI 10.1007/s11270-014-2287-0 February 1, 2015.

Salih, H., Musaad, S., **Patterson**, C., Schock, M., and Sorial, G., [Lead Adsorption into Activated Carbon - a Critical Review of the Literature](#)", Chapter 1 in *Advances in Environmental Research*, Volume 34, Justin A. Daniel (EBook Editor), Nova Science Publishers, Inc., New York, 2014.

Impellitteri, C., **Patterson**, C., Muhammad, N., Sinha, R., and Stottlemeyer, F., [Evaluation of an Innovative Sand Filter for Small System Drinking Water Treatment](#), EPA/600/R-13/342, U.S. EPA, Washington DC, June 2014.

Hawes, B., **Patterson**, C., Stout, B., and Jones, A., [Economic Impacts of Surface Mining on Drinking Water: Cost Analysis of Contaminated Household Drinking Water Supplies](#), EPA/600/R-14/152, U.S. EPA, Washington DC, January 2014.

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Education:

- M.S., University of Cincinnati, Cincinnati, OH; Environmental Engineering, 1985
- B.S., University of Cincinnati, Cincinnati, OH; Civil Engineering, 1982

Professional Experience:

- Environmental Engineer, US EPA, Cincinnati, OH 2003-Present
- Project Engineer, IT Corp./Shaw Environmental, Inc. (IT/Shaw), Cincinnati, OH 1995-2003
- Project Engineer, Science Applications International Corp. (SAIC), Cincinnati, OH 1993-1994
- Sr. Programmer/Analyst, Computer Sciences Corp. (CSC), Cincinnati, OH and Chicago, IL 1984-1993
- Graduate Assistant, University of Cincinnati (UC), Cincinnati, OH 1983-1984
- Engineering Technician, US EPA, Cincinnati, OH 1978-1982

Committees and Workgroups

- Member of American Water Works Association (AWWA) since 2008
- Member of Environmental & Water Resources Institute (EWRI) since 2004
- Member of American Society of Civil Engineers (ASCE) since 1982

Honors and Awards

- ORD Bronze Medal Award, Small Community Water Systems Research in Support of Public Health in Rural Puerto Rico, 2016
- Exceptional/Outstanding ORD Technical Assistance to the Regions or Program Offices, NRMRL; For outstanding technical support in small drinking water treatment to Regions 2, 6, 7 and the Office of Water, 2010
- Certificate of Appreciation of Outstanding Service as Chair of the 2008/2009 EWRI Emerging and Innovative Technologies Committee, 2010
- ORD Bronze Medal Award, NRMRL Katrina Assistance Response Team, 2007
- Trudy A. Speciner Non-Supervisory Award for Advancing Environmental Protection, 2007
- Federal Executive Board Award for Outstanding Public Service, Louisiana Drinking Water Rapid Assessment and Response Team, May 24, 2006 and Federal Service Excellence Award, Project Team Award Category, Hurricane Katrina Response Team, 2006