

**Christopher T. Nietch, Ecologist in EPA's National Risk Management Research Laboratory**

Water Systems Division

[Mailing Address](#)

[nietch.christopher@epa.gov](mailto:nietch.christopher@epa.gov)

**Areas of Expertise:**

- Aquatic systems ecology; carbon and nutrient biogeochemistry
- Ecotoxicology, stream ecological structure and function response to contaminants; stream mesocosm studies to support aquatic life criteria
- Holistic watershed-scale nutrient management; market-based approaches to water quality protection
- Stormwater management ecological engineering
- Agricultural best management practice performance and effectiveness
- Harmful algae ecology and management

**Select Publications:**

Price, J., Matt Heberling, and **C. Nietch**. 2018. [Economic Support for Source Water Protection Decisions](#). *Journal of the American Water Works Association* 110(9):56-61.

Hoghooghi, N., H. Golden, B. Bledsoe, B. Barnhart, A. Brookes, K. Djang, J. Halama, Bob Mckane, **C. Nietch**, and P. Pettus. 2018. [Cumulative Effects of Low Impact Development on Watershed Hydrology in a Mixed Land-Cover System](#). *Water* 10(8):991.

Martin, R.W., E.R. Waits, and **C.T. Nietch**. 2018. [Empirically-based modeling and mapping to consider the co-occurrence of ecological receptors and stressors](#). *Science of the Total Environment*. 613-614:1228-1239.

Niazi, M., **C. Nietch**, M. Maghrebi, N. Jackson, B.R. Bennett, M. Tryby, and A. Massoudieh. 2017. [Storm Water Management Model \(SWMM\): Performance review and gap analysis](#). *Journal of Sustainable Water in the Built Environment*. 3(2):04017002.

Heberling, M.T., **C.T. Nietch**, H.W. Thurston, M. Elovitz, K.H. Birkenhauer, S. Panguluri, B. Ramakrishnan, E. Heiser, and T. Neyer. 2015. [Comparing drinking water treatment costs to source water protection costs using time series analysis](#), *Water Resources Research*, 51, 8741–8756, doi:10.1002/2014WR016422.

**Nietch, C.T.**, E.L. Quinlan, J.M. Lazorchak, C.A. Impellitteri, D. Raikow, and D. Walters. 2013. [Effects of a chronic lower range of triclosan exposure on a stream mesocosm community](#). *Environmental Toxicology and Chemistry*. 32(12):2874–2887. doi: 10.1002/etc.2385

View more research publications by [Christopher Nietch](#).

**Education:**

- Ph.D., Univ. of South Carolina, Columbia, SC; Biological/Marine Sciences, 2000
- B.A., Kalamazoo College, Kalamazoo, MI; Biology, 1993

## **Professional Experience:**

### Workgroup and Project Leads

- Principal Investigator, US EPA Experimental Stream Facility (Milford, OH), 2005-present.
- Research Area Lead, Safe and Sustainable Water Resources (SSWR) National Research Program, Nutrients Assessment and Management, 2018.
- Project Action Lead, Nutrient Management, SSWR, 2015 to present.
- Task Lead. Green Infrastructure Modeling Research. SSWR, 2015-present.
- East Fork Watershed Water Cooperative (EFWCoop), Leader, Multi-Agency watershed research and management action team, 2009-present.
- Great Miami River Ecosystem Model Evaluation, Expert Consult, 2016-present.
- Five Mile Run Five Element Plan and National Priority Watershed Program, Technical Expert. 2016-present.
- Conservation Innovation Grant Project, Technical Design and Support, 2011-present
- Resource Conservation Partnership Program Grant, Technical Design and Support 2014-present.
- Project Action Lead, Economic mechanisms, integrated management approaches, and ecological thresholds for watershed integrity. SSWR, 2011-2015.
- Task Lead, Develop and test integrated monitoring and modeling techniques supporting economic-based watershed management alternatives. SSWR, 2011-2015.

### Committees, Memberships, and Affiliations

- American Water Works Association Source Water Protection Committee, 2017-present
- Freshwater Salinization Work Group, SETAC, 2014-present
- Harmful Algal Bloom Management Collaborative, ORSANCO, 2017-present
- Adjunct Faculty at Wright State University (Dayton, OH) and Miami University (Oxford, OH)

### Awards and Honors

- EPA Scientific and Technology Achievement Award, Level III, 2017
- EPA Scientific and Technology Achievement Award, Level II, 2016 and 2017
- ORD Sustainability Award – Source Water Protection Incentive Team, 2017
- ORD Bronze Medal for Commendable Service – Safe and Sustainable Water Resource National Program Team, 2016
- Certificate of appreciation from Clermont County Soil and Water Conservation District in recognition of valuable contributions to the East Fork Watershed Cooperative
- Certificate of appreciation from U.S. Army Corp of Engineers, Ohio River Basin Division. for support in advancing remote sensing of harmful algal blooms, 2016
- Honorarium, University of Maryland, Expert Participation in Structured Expert Judgement Protocol: Expert Elicitation on Effectiveness of Best Management Practices in Reducing Nitrogen Export as an Intermediate Ecosystem Service, 2013

[Science Matters: Local Partnership Works to Improve Watershed Health](#)

[Science Matters: Streams of Science](#)