

**William D. Shuster, Senior Research Hydrologist in EPA's National Risk Management Research Laboratory**

Water Systems Division

[Mailing Address](#)

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**Areas of Expertise:**

Interdisciplinary work that integrates elements of hydrology, sustainability, and soil science with ecology, economics, and law to develop management techniques for urban watershed and wastewater flows, with an emphasis on the integration of green infrastructure techniques and rendering ecosystem services from hybrid gray-green approaches.

**Select Publications:**

**Shuster**, W. and R. Darner. [Hydrologic Performance of Retrofit Rain Gardens in a Residential Neighborhood \(Cleveland Ohio USA\) with a Focus on Monitoring Methods](#). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-18/191, 2018.

Schifman, L.A, M. Tryby, J. Berner, and W.D. **Shuster**. [Managing uncertainty in runoff estimation with the U.S. EPA National Stormwater Calculator](#). Journal of the American Water Resources Association, 54(1):148-159, 2018.

Berland, A., S. Shiflett, W. **Shuster**, A. Garmestani, H. Goddard, D. Herrmann, and M. Hopton. [The role of trees in urban stormwater management](#). *Landscape and Urban Planning*. Elsevier Science Ltd, New York, NY, 162:167-177, 2017.

**Shuster**, W., R. Darner, L. Schifman, and D. Herrmann. [Factors contributing to the hydrologic effectiveness of a rain garden network \(Cincinnati, OH\)](#). *Infrastructures*. MDPI AG, Basel, Switzerland, 2(3):11, 2017.

Schifman, L., D. Herrmann, W. **Shuster**, A. Ossola, A. Garmestani, and M. Hopton. [Situating Green Infrastructure in Context: A Framework for Adaptive Socio-Hydrology in Cities](#). *Water Resources Research*. American Geophysical Union, Washington, DC, 53(12):10139-10154, 2017.

**Shuster**, W.D., S. Dadio, P. Drohan, R. Losco, J. Shaffer. [Residential demolition and its impact on vacant lot hydrology: Implications for the management of stormwater and sewer system overflows](#). *Landscape and Urban Planning*. Volume 125, 48-56. 2014.

View more research publications by [William Shuster](#)

**Education:**

- Ph.D., The Ohio State University, Columbus, OH; Environmental Science, 2000.
- B.S., University of Michigan, Ann Arbor, MI; Physics, 1987.

## Professional Experience

### Workgroups, Projects, and Committees

- Project Lead, Safe and Sustainable Water Resources Research Program. Develop and lead a multi-agency team in a comprehensive research program on the integration of green infrastructure into US communities that operate combined sewer systems (2011-2013; Technical Lead 2013-present)
- Embassy Science Fellow, detailed to U.S. Embassy, Majuro atoll, Republic of the Marshall Islands, Oct-Nov 2015.
- American Society of Agronomy-Soil Science Society of America (SSSA) Urban Soils S594 Committee; Membership and Identity S237 Committee (2011-2017)
- Novatech 2013 Scientific Coordinating Committee
- IWA/IAHR Joint Committee on Urban Drainage (JCUD) 2010-2013

### Professional Affiliations

- American Geophysical Union, member since 2006
- Ecological Society of America, member since 2008, Urban Ecology section member
- International Water Association – Urban Drainage specialist group
- Sigma Xi, member since 2000
- Soil Science Society of America, member since 1996
- Editorial Board, Infrastructures (MDPI) 2016-present
- Associate Editor, Landscape and Urban Planning, 2016-present

### Select Awards and Honors

- U.S. EPA Honor Award for Exceptional/Outstanding ORD Technical Assistance to the Regions or Program Offices, 2017
- U.S. EPA Superior Accomplishment Recognition Award (2004-2018)
- GreenGov Presidential Awards: Good Neighbor award for Greener Demolitions in Distressed Cities, 2016
- U.S. EPA Scientific and Technological Achievement Awards (STAA) Honorable Mention, 2015 (three projects), 2014, 2011, 2010
- U.S. EPA National Honor Award, Silver Medal for Superior Service, 2011
- U.S. Dept. of Justice: Certificate of Commendation (developed green infrastructure pilot plan as a part of settling a Clean Water Act negotiation)
- U.S. EPA, Office of Research and Development Bronze Medal; Safe and Sustainable Water Resources Research Action Plan Development Team, 2011
- U.S. EPA-ORD-NRMRL Health and Safety award: Addressed unique safety issues that arise in urban environmental field research work, 2011
- U.S. EPA STAA Level 3 awards, 2010 (two)

[Science Matters: Meet EPA Hydrologist Bill Shuster, Ph.D.](#)

[Science Matters: Evaluating the Effectiveness of Vacant Lots as Green Infrastructure in Buffalo, NY](#)

[Science Matters: Tapping Green Infrastructure to Curb Sewer Overflows](#)

[Science Matters: Can Rain Barrels and Gardens Help Keep Sewage in the Sewers?](#)

[Science Matters: Helping Cities Benefit from Green Infrastructure](#)

[U.S. EPA Scientists at Work: Managing Sewer Overflows with Green Infrastructure \(video\)](#)