

**Michael Borst, Chemical Engineer in EPA's National Risk Management Research Laboratory**

Water Systems Division

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**Areas of Expertise:**

- Green infrastructure research, including permeable pavement systems and rain gardens
- Environmental effects and performance of permeable pavement
- Best management practices performance for stormwater management

**Select Publications:**

Razzaghmanesh, M. and M. **Borst**. [Investigation clogging dynamic of permeable pavement systems using embedded sensors](#). Journal of Hydrology. Elsevier Science Ltd, New York, NY, 557:887-896, (2018).

Liu, J. and M. **Borst**. [Performances of Metal Concentrations from Three Permeable Pavement Infiltrates](#). Water Research. Elsevier Science Ltd, New York, NY, 136:41-53, (2018).

Brown, R. and M. **Borst**. [Evaluating the Accuracy of Common Runoff Estimation Methods for New Impervious Hot-Mix Asphalt](#). Journal of Sustainable Water in the Built Environment. American Society of Civil Engineers (ASCE), New York, NY, 2(2):04015010, (2016).

Brown, R. and M. **Borst**. [Nutrient Infiltrate Concentrations from Three Permeable Pavement Types](#). Journal of Environmental Management. Elsevier Science Ltd, New York, NY, 164:74-85, (2015).

Brown, R., T. O'Connor, and M. **Borst**. [Divergent Vegetation Growth Patterns Relative to Bioinfiltration Unit Size and Plant Placement](#). Journal of Sustainable Water in the Built Environment. American Society of Civil Engineers (ASCE), New York, NY, 1(3):04015001, (2015).

Hopton, M. E., M. Simon, M. **Borst**, A. S. Garmestani, T. Jarnagin, S. Jacobs, D. Lye, T. P. O'Connor, and W. D. Shuster. [Green Infrastructure for Stormwater Control: Gauging its Effectiveness with Community Partners, Summary of EPA GI Reports](#). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-15/219 (2015).

View more research publications by [Michael Borst](#)

**Education:**

- B.ChE., Georgia Institute of Technology, Atlanta, GA; Chemical Engineering, 1979
- M.B.A., Monmouth University, West Long Branch, NJ; Management, 1989

**Professional Experience:**

- Developed stormwater green infrastructure research strategy; planned, prioritized, integrated, and coordinated research projects among principal researchers.
- Led multi-year place-based green infrastructure research effort in several municipalities/locations, focusing on permeable pavements and their effectiveness and environmental impacts.
- Designed and oversaw construction of EPA-Edison's permeable pavement parking lot used for both green infrastructure research and employee parking.
- Designed and oversaw construction of EPA's Urban Watershed Research Facility.
- Led research teams on watershed management and evaluating best management practices performance for stormwater runoff.
- Past research was hazardous waste treatment technologies and oil spill remediation approaches.

[Science Matters: Parking Lots: Letting it Soak In. Experimental Permeable Pavement Parking Lot and Rain Garden for Stormwater Management](#)

[EPA Science in Action Fact Sheet: Green Infrastructure Research: Permeable Pavement at EPA'S Edison Environmental Center](#)

[EPA Science in Action Fact Sheet: Green Infrastructure Research: Rain Gardens at EPA'S Edison Environmental Center](#)

[EPA Science in Action Fact Sheet: Demonstrating NetZero Green Infrastructure Technologies on Fort Riley, KS](#)

[Webcast – Lessons Learned in Green Infrastructure: First Year Cistern Monitoring in Camden, NJ](#)