

ERIC S. PETERSON, PHD, PE

Senior Principal Engineer, Hazen and Sawyer, Lakewood, CO
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Scholar in Residence, Department of Civil, Environmental, and Architectural Engineering,
University of Colorado, Boulder, CO
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EDUCATION

Ph.D., Environmental Engineering, University of Colorado Boulder 2022
“Control of effluent organic matter and disinfection byproducts with biofiltration for potable reuse”
Advisors Sherri M. Cook & R. Scott Summers

M.S., Environmental Engineering, University of Colorado Boulder 2018
Graduate Certificate in Global Engineering

B.S., Civil Engineering (magna cum laude), University of Washington 2011

WORK

Senior Principal Engineer, Hazen and Sawyer, Lakewood CO 2022-present

Scholar in Residence, Department of Civil, Environmental, and Architectural Engineering,
University of Colorado, Boulder CO 2025-present

Professional Research Associate, Environmental Engineering,
University of Colorado, Boulder CO 2022-2025

Civil Engineer, KPFF Consulting Engineers, Seattle WA 2011-2016

PUBLICATIONS AND PRESENTATIONS

Peer-Reviewed Journal Articles

Peterson, E.S., Stanford, B., Raseman, W., Russell, C., Seidel, C., Bruce, G. Disinfection Byproducts: Health Risks, Occurrence, Control, and Implications for Regulatory Revision. *AWWA Water Science*. **2026**, In press. 10.1002/aws2.70049

Terry, L.G., Peterson, E.S., Summers, R.S. Organic matter biofiltration performance modeling: Influence of influent water quality, operating conditions, and biomass. *Water Research*. **2024**, 249 (121006). 10.1016/j.watres.2023.121006

Peterson, E.S., Raseman, William J., Stanford, Benjamin D., Bruce, Gretchen M., Klintworth, H., Reckhow, D. Evaluating regulatory scenarios to limit U.S. nationwide exposure to cytotoxic haloacetic acids. *AWWA Water Science*. **2023**, e1351, 10.1002/aws2.1351

Peterson, E.S., Summers, R.S., Cook, S.M. Control of Pre-formed Halogenated Disinfection Byproducts with Reuse Biofiltration. *Environmental Science and Technology*. **2023**, 10.1021/acs.est.2c05504

Fierer, N., et. al. A Metagenomic Investigation of Spatial and Temporal Changes in Sewage Microbiomes across a University Campus. *mSystems*. **2022**, 10.1128/msystems.00651-22

Peterson, E.S., Shiokari, S.T., Johnson, S., Yu, Y., Cook, S., Summers, R.S. Impacts of Carbon-Based Advanced Treatment on Disinfection Byproduct Formation and Speciation for Potable Reuse. *Water Research*. **2022**, 220 (118643). 10.1016/j.watres.2022.118643

Peterson, E.S. & Summers, R.S. Removal of effluent organic matter with biofiltration for potable reuse: A review and meta-analysis. *Water Research*. **2021**, 119 (117180). 10.1016/j.watres.2021.117180

Summers, R.S., Shiokari, S.T., Johnson, S., Peterson, E., Yu, Y., Cook, S. Reuse Treatment with Ozonation, Biofiltration and Activated Carbon Adsorption for TOC control and DBP regulation compliance. *AWWA Water Science*. **2020**, e1190, 10.1002/aws2.1190

Terry L., Puisner P., Peterson E., Dickenson E., Wang J., Summers R.S. A Scale-Up Methodology for Biological Filtration Removal of Dissolved Organic Matter. *Environmental Engineering Science*. **2019**, 36 (4):405-412, 10.1089/ees.2018.0316

Conference Oral Presentations

Peterson, E., Yu, Y., Summers, R.S. Development and Application of an Accessible Method for the Quantification of 40 Emerging Halogenated DBPs in Wastewater for Reuse. *AWWA Water Quality and Technology Conference*. **2022**, Cincinnati, OH.

Peterson, E., Yu, Y., Summers, R.S., Cook, S., Bell, K. Effects of Pre-Chlorination on Regulated and Non-Regulated DBP Control with Carbon Based Advanced Treatment. *AWWA Water Quality and Technology Conference*. **2021**, Tacoma, WA.

Peterson, E., Summers, R.S., Cook, S. Treatment of forty pre-formed halogenated disinfection byproducts with biofiltration for potable reuse. *American Chemical Society Fall Meeting and Exposition*, **2021**, Atlanta, GA.

Peterson, E., Johnson, S., Shiokari, S., Yu, Y., Cook, S., Summers, R.S. Evaluating Disinfection Byproduct Regulations for Limiting Human Health Risk after Ozone-Biofiltration-GAC Treatment for Potable Reuse. *35th WaterReuse Symposium*. **2020**, Denver, CO.

Summers, R.S., Shiokari, S., Johnson, S., Peterson, E., Yu, Y., Cook, S. Organic carbon removal and DBP control by coagulation, biofiltration and GAC adsorption. *35th WaterReuse Symposium*. **2020**, Denver, CO.

Peterson, E., Johnson, S., Shiokari, S., Yu, Y., Cook, S., Summers, R.S. Evaluating Disinfection Byproduct Regulations for Limiting Human Health Risk after Ozone-Biofiltration-GAC Treatment for Potable Reuse. *12th IWA International Conference on Water Reclamation and Reuse*. **2019**, Berlin, Germany.

Peterson, E., Cook, S., Summers, R.S. A Systematic Bench-Scale Evaluation of Effluent Organic Matter Removal with Biofiltration for Potable Reuse Systems. *AWWA Annual Conference and Exhibition*. **2019**, Denver, CO.

Peterson, E., Johnson, S., Shiokari, S., Yu, Y., Cook, S., Summers, R.S. Control of Disinfection Byproduct-Associated Risk by Ozonation, Biofiltration, and Adsorption for Wastewater Potable Reuse. *AWWA Annual Conference and Exhibition*. **2019**, Denver, CO.

Shiokari, S., Peterson, E., Johnson, S., Yu, Y., Cook, S., Summers, R.S. Efficacy of Ozone, Biofiltration, and Adsorption in Wastewater Reuse to Meet Disinfection Byproduct Regulations. *AWWA Annual Conference and Exhibition*. **2019**, Denver, CO.

Peterson E., Terry L, Pruisner P., Shiokari S., Johnson S., Dickenson E., Summers R.S. Impacts of Operational Parameters and Water Quality on Biofiltration for Potable Reuse Systems. *AWWA International Symposium on Biological Treatment*. **2018**, Austin, TX.

Other

Research and Full-Scale Operation of Non-RO-Based Advanced Treatment. Technical Session, *36th WaterReuse Symposium*, **2021**.

Sustainability evaluation of 8 community solar mechanized borehole water distribution systems. **2017**. Mortenson Center in Global Engineering, University of Colorado Boulder, MS Practicum Report. Partner organization: World Vision Malawi

Muench S.T., Anderson J.L., Hatfield J.P., Koester J.R., Söderlund M. Greenroads Rating System v1.0 (J.L. Anderson and S.T. Muench, Eds). **2010**. Seattle, WA: University of Washington.

RESEARCH FUNDING

As PI

Water Research Foundation: Integrating Requirements, Drivers, and Technologies for Enhanced Distribution System Water Quality Monitoring. 2025-2028. \$644,400 (\$350,000 award, \$294,400 cost share). (PI)

Water Research Foundation: Next Generation Analytical Methods for Understanding Biological Nutrient Removal. 2025-2027. \$473,818 (\$250,000 award, \$223,818 cost share). (Co-PI)

New York City Department of Environmental Protection: Croton Filtration Plant Analysis of Biologically Activated Carbon Study. 2025-2027. \$928,285. (Co-PI)

AWARDS AND HONORS

Water Reuse Colorado Scholarship, 2020

Mortenson Fellowship, Mortenson Center for Engineering in Developing Communities, 2017

Dean's Outstanding Merit Fellowship, University of Colorado Boulder, 2016

Lynch/Russell Memorial Scholarship, University of Washington, 2010

Charles Church Moore Scholarship, University of Washington, 2009

SERVICE

Co-Director, Water Reuse Program, Department of Civil, Environmental, and Architectural Engineering, University of Colorado Boulder, 2025-present

Finance committee lead, Colorado Water, Sanitation & Hygiene (WASH) Symposium, 2016-2017

Engineers Without Borders, University of Washington, 2010

TEACHING

Adjunct Professor 2025-present

Dept. of Civil, Environmental and Architectural Engineering, University of Colorado Boulder

- CVEN 5594 Water Reuse
- EVEN 4434 Senior Design

Guest Lecturer 2022-2025

Dept. of Civil, Environmental and Architectural Engineering, University of Colorado Boulder

- CVEN 5594 Water Reuse
- EVEN 6504 Advanced Physical/Chemical Treatment Processes

Teaching Assistant 2016, 2017, 2020

Dept. of Civil, Environmental and Architectural Engineering, University of Colorado Boulder

- CVEN 3414 Fundamentals of Environmental Engineering
- EVEN 4464 Environmental Engineering Processes

AFFILIATIONS AND REGISTRATIONS

- Professional Engineer, Civil, WA (License #53765)
- American Water Works Association