RILEY E. MULHERN

Assistant Professor, Environmental Studies
Fellow, Institute of Arctic and Alpine Research
University of Colorado Boulder

Education

PhD, Environmental Sciences & Engineering, University of North Carolina at Chapel Hill, Gillings School of Global Public Health, 2021

MS, Environmental Engineering, University of Colorado Boulder, College of Engineering and Applied Science, 2016

BS, Physics, Wheaton College, Wheaton, IL, 2014, graduated magna cum laude

Professional Experience

2025 – present	Assistant Professor, Department of Environmental Studies, University of Colorado, Boulder, CO
2025 – present	Fellow, Institute of Arctic and Alpine Research, University of Colorado, Boulder, CO
2023 – 2024	Associate Environmental Engineer, Brown and Caldwell, Denver, CO
2021 – 2023	Research Environmental Engineer, RTI International, Research Triangle Park, NC
2018 – 2021	Research Project Manager, University of North Carolina, Chapel Hill, NC
2016 – 2018	Research Consultant, Mennonite Central Committee & Center for Ecology and Andean Peoples, Oruro, Bolivia
2015 – 2016	Graduate Research & Teaching Assistant, University of Colorado, Boulder, CO
2014 – 2015	Strategy Consultant, Hemera Project Ltd., Denver, CO
2014	Engineering Intern, Wright Water Engineers Inc., Denver, CO
2013	Undergraduate Research Intern, Nuevas Esperanzas, León, Nicaragua

Honors and Awards

- Paul V. Roberts/AEESP Outstanding Doctoral Dissertation Award, Association of Environmental Engineering and Science Professors, 2022
- Highly Cited Author Award, RTI International, 2022
- Highly Published Author Award, RTI International, 2022
- Early Career Author Award, RTI International, 2022
- Community Engagement Fellow, Carolina Center for Public Service, UNC-Chapel Hill, 2020
- Engineering and Infrastructure Student Merit Award, Society of Risk Analysis, Engineering and Infrastructure Specialty Group, 2019
- Daniel A. Okun Water, Sanitation, and Hygiene Student Travel Award, Department of Environmental Sciences & Engineering, UNC Chapel Hill, 2019
- Graduate Student Research Fellowship, North Carolina Water Resources Research Institute/North Carolina Sea Grant, Raleigh, NC, 2019
- Journal Editors' Choice Top 10 Paper – Environmental Science: Water Research and Technology, Royal Society of Chemistry, 2017

- Recognition of Academic Excellence as a Guest Lecturer – Faculty of Agricultural and Natural Sciences, Technical University of Oruro, Bolivia, 2017

- AWWA Oral Presentation Winner, Rocky Mountain Section American Water Works Association/Rocky Mountain Water Environment Association Student Conference, University of Wyoming, 2016

- Mortenson Graduate Fellowship, Mortenson Center in Engineering for Developing Communities, University of Colorado Boulder, 2016

Bibliography

- [T]Technicians, [U]Undergraduates, and [M]Masters students supervised by Dr. Mulhern are noted.
- *Indicates products of engaged scholarship.

Articles In Review

1. Jones, Christopher H., Mulhern, Riley E., Wylie, V., Fawell, J., Oza, S., Holmer, M., Bell, K. Quantitative Relative Chemical Assessment to Support Risk Frameworks for Water Recycling. (2025). *ES&T Water.*

2. Zanib, H.,[M] Stallard, M., Sozzi, E., Stewart, J., Linden, K. MacDonald Gibson, J., Mulhern R.E. Evaluating the effectiveness of point-of-use UVC LED disinfection of activated carbon block filter effluent among private well users. (2025). *International Journal of Hygiene and Environmental Health.* *

Peer-Reviewed Articles – Published or In Press

3. MacDonald Gibson, J.; Desclos, A.; Harrington, J.; Mcelmurry, S. P.; **Mulhern, R.** Effect of Community Water Service on Lead in Drinking Water in an Environmental Justice Community. (2024). *Environmental Science and Technology.* https://doi.org/10.1021/acs.est.3c01341. *

4. Bauza, V.; Furey, S.; Alvarez-Sala, J.; Bartram, J.; Danert, K.; Jennifer, D. F.; Samuel, D.; Fisher, M. B.; Hansen, D.; Hutchings, P.; Lindsay, C.; **Mulhern, R.;** Norman, R.; Ramseier, C.; Strandberg, J.; Studer, P.; Salzberg, A. (2023). Eliminating Lead Exposure from Drinking Water — A Global Call to Action. *PLOS Water*, 2(4), e0000122. https://doi.org/10.1371/journal.pwat.0000122

5. **Mulhern, R. E.**, Kondash, A., Norman, E., Johnson, J., Levine, K., McWilliams, A., Napier, M., Weber, F., Stella, L., Wood, E., Lee Pow Jackson, C., Colley, S., Cajka, J., MacDonald Gibson, J., Hoponick Redmon, J. Improved Decision Making for Water Lead Testing in U.S. Child Care Facilities Using Machine-Learned Bayesian Networks. (2023). *Environmental Science and Technology.* https://doi.org/10.1021/acs.est.2c07477.

6. Hoponick Redmon, J., Kondash, A. J., Norman, E., Johnson, J., Levine, K., Mcwilliams, A., Napier, M., Weber, F., Stella, L., Wood, E., Lee, C., Jackson, P., Mulhern, R., Lee Pow Jackson, C., **Mulhern, R**. (2022). Lead Levels in Tap Water at Licensed North Carolina Child Care Facilities, 2020-2021. *American Journal of Public Health*, 112 (S7), S695–S705. https://doi.org/10.2105/AJPH.2022.307003. *

7. Hoponick Redmon, J., **Mulhern, R. E.**, Castellanos, E., Wood, E., Mcwilliams, A., Herrera, I., Liyanapatirana, C., Weber, F., Levine, K., Thorp, E., Bynum, N., Amato, K., Andrea, M., Acevedo, N., Baker, J., Houtven, G. Van, Henry, C., Wade, C., Kondash, A. J. (2022). A Participatory Science Approach to Evaluating Factors Associated with the Occurrence of Metals and PFAS in Guatemala City Tap Water. *Int. J. Environ. Res. Public Health*, 19, 6004. https://doi.org/10.3390/ijerph19106004. *

8. **Mulhern, R.** Grubbs, B.,[U] Gray, K., MacDonald Gibson, J. (2022). User experience of point-of-use water treatment for private wells in North Carolina: Implications for outreach and well stewardship. *Science of the Total Environment*. 806, 150448. https://doi.org/10.1016/j.scitotenv.2021.150448. *****

9. **Mulhern, R.**, Roostaei, J., Schwetschenau, S., Pruthi, T.,[U] Campbell, C., MacDonald Gibson, J. (2022). A new approach to a legacy concern: Evaluating machine-learned Bayesian networks to predict childhood lead exposure risk from community water systems. *Environmental Research*. 204, 112146. https://doi.org/10.1016/j.envres.2021.112146

10. Mattos, K. J., **Mulhern, R.**, Naughton, C. C., Anthonj, C., Brown, J., Brocklehurst, C., Brooks, C., Desclos, A., Escobedo, N. E., Gibson, M., Linden, K. G., Lindsay, C. A., Newby, J., Sinclair, R., & Smith, A. (2021). "Reaching those left behind: knowledge gaps, challenges, and approaches to achieving SDG 6 in high-income countries." *Journal of Water, Sanitation and Hygiene for Development.* https://doi.org/10.2166/washdev.2021.057

11. **Mulhern, R. E.**, Bynum, N., Liyanapatirana, C., Knappe, D., DeStefano, N., MacDonald Gibson, J. (2021). Longitudinal assessment of point-of-use carbon filters for removal of per- and polyfluoroalkyl substances from private well water. *AWWA Water Science.* 3 (6), e1262. https://doi.org/10.1002/aws2.1262 *****

12. **Mulhern, R. E.**, Stallard, M., Zanib, H., [U] Stewart, J., Sozzi, E., MacDonald Gibson, J. (2021). Are carbon water filters safe for private wells? Evaluating the occurrence of microbial indicator organisms in private well water treated by point-of-use activated carbon block filters. *International Journal of Hygiene and Environmental Health* 238, 113852. https://doi.org/10.1016/j.ijheh.2021.113852 *****

13. Redding, E.M., Hou, Y., **Mulhern, R. E.** (2021). Personal Internalization of a Confederate Monument Removal Event Associated with Increased Depression, Anxiety, and Stress Among University Students. *Journal of Health Disparities Research and Practice*. 14 (1).

14. Roostaei, J., Colley, S., **Mulhern, R. E.**, May, A. A., & Gibson, J. M. (2021). Predicting the risk of GenX contamination in private well water using a machine-learned Bayesian network model. *Journal of Hazardous Materials, 411*, 125075. https://doi.org/10.1016/j.jhazmat.2021.125075

15. Stallard, M., **Mulhern, R.**, Greenwood, E., Franklin, T., Engel, L. S., Fisher, M., Sobsey, M., Noble, R., Stewart, J., & Sozzi, E. (2021). Occurrence of male-specific and somatic coliphages and relationship with rainfall in privately-owned wells from peri-urban and rural households. *Water Research X, 12*, 100102. https://doi.org/10.1016/j.wroa.2021.100102

16. **Mulhern, R. E.**, & Gibson, J. M. (2020). Under-sink activated carbon water filters effectively remove lead from private well water for over six months. *Water*. 12 (12), 3584. https://doi.org/10.3390/w12123584 *****

17. **Mulhern, R. E.**, Mulhern, M., & Perreault, T. (2020). Contesting the social license to operate: Competing visions and community exclusion on the Bolivian altiplano. *The Extractive Industries and Society*. https://doi.org/10.1016/j.exis.2020.08.014 *****

18. Cuthbertson, A., Kimura, S., Liberatore, H., Summers, R. S., Knappe, D., Stanford, B., Maness, C. J., **Mulhern, R. E.**, Selbes, M., & Richardson, S. (2019). Does GAC with chlorination produce safer drinking water? From DBPs and TOX to calculated toxicity. *Environmental Science & Technology, 53*(10), 5987-5999. https://doi.org/10.1021/acs.est.9b00023

19. Quaghebeur, W., **Mulhern, R. E.**, Ronsse, S., Blommaert, H., Potemans, S., Mendizábal, C. V., [T] Heylen, S., & García, J. T. (2019). Arsenic contamination in rainwater harvesting tanks around Lake Poopó in Oruro, Bolivia: An unrecognized health threat. *Science of the Total Environment, 688*, 224-230. https://doi.org/10.1016/j.scitotenv.2019.06.126 *****

20. **Mulhern, R. E.**, Dickenson, E. R. V., & Summers, R. S. (2017). Evaluating and modeling the activated carbon adsorption of wastewater-derived *N*-Nitrosodimethylamine precursors. *Environmental Science: Water Research and Technology,* 3(5), 844-856. https://doi.org/10.1039/C7EW00123A

21. Shimabuku, K. K., Kennedy, A. M., **Mulhern, R. E.**, & Summers, R. S. (2017). Evaluating activated carbon adsorption of dissolved organic matter and micropollutants using fluorescence spectroscopy. *Environmental Science & Technology*. 51 (5), 2676–2684. https://doi.org/10.1021/acs.est.6b04911

Technical Reports

22. **Mulhern, R.**, Roostaei, J., Schwetschenau, S., Pruthi, T., Campbell, C., & MacDonald Gibson, J. (2021). *Modelling and Predicting Drinking Water Contamination Risk in North Carolina to Enhance Community Resilience* (2021). Raleigh, NC: Water Resources Research Institute. Principle Investigator.

23. Hazen and Sawyer. (2019). *GAC Control of Regulated and Emerging DBPs of Health Concern*. Denver, CO: Water Research Foundation. Contributor.

24. **Mulhern, R.**, Mulhern, M., Mendizábal, C.V., & Vilches, R. (2018). *Oro y Agua: Hacia un Diálogo Abierto. An evaluation of the competing stakeholder claims on the social, economic and environmental impacts of the Kori Chaca gold mine in Oruro, Bolivia.* Oruro, Bolivia: Centro de Ecología y Pueblos Andinos (CEPA). Principal Investigator. *****

25. Centro de Aguas y Saneamiento Ambiental (CASA). (2017). *Estudio de Factibilidad para la Implementación de la Fitoestabilización de Residuos Mineros* [*Feasibility Study for the Implementation of Phytostabilization of Mining Wastes*]. Cochabamba, Bolivia: Universidad Mayor de San Simón. Contributor. *****

Other Scholarly Work

26. Kearns, J. & **Mulhern, R. E.** (2021). Achieving safe drinking water and clean cooking for all. *The Lancet Global Health,* 9(6), E755. https://doi.org/10.1016/S2214-109X(21)00087-5

27. **Mulhern, R. E.** (2021). Point-of-use water treatment for private wells in North Carolina: risks and solutions for lead, per- and polyfluoroalkyl substances (PFASs), and microbial contaminants. Doctoral dissertation.

28. **Mulhern, R. E.** (2016). Removal of *N*-Nitrosodimethylamine and other disinfection by-product precursors from tertiary wastewater effluent by activated carbon. Master's thesis.

Media and Communications

29. Hoponick Redmon, J., **Mulhern, R. E.**, Kondash, A.J., Castellanos, E.J. (2022). Understanding Water Quality at the Tap in Guatemala City. *RTI Insights Blog.* https://www.rti.org/insights/understanding-water-quality-tap-guatemala-city

30. **Mulhern, R.** (2022). Who is most at risk of forever chemicals in their drinking water? *RTI Insights Blog*. https://www.rti.org/insights/who-most-risk-forever-chemicals-their-drinking-water

31. Kondash, A.J., Redmon, J.H., Wood, E., **Mulhern, R.E.**, Levine, K.E., Weber, F. (2021). Preventing Childhood Lead Poisoning—One Drop at a Time. *RTI Insights Blog*. https://www.rti.org/insights/ preventing-childhood-lead-poisoning%E2%80%94one-drop-time

32. **Mulhern, R.** (2021). Yes, water filters work—solutions for private well users affected by lead and PFAS. *UNC Institute for the Environment*. https://environmentblog.web.unc.edu/2021/05/yes-water-filters-work-solutions-for-private-well-users-affected-by-lead-and-pfas/

33. **Mulhern, R.** (2019). Arsenic detected in rainwater harvesting tanks in Bolivia. *Rural Water Supply Network.* https://rwsn.blog/2019/08/16/arsenic-detected-in-rainwater-harvesting-tanks-in-bolivia/

34. **Mulhern, R.** (2019). Harvesting rainwater? Test for arsenic. *Engineering for Change.* https://www.engineeringforchange.org/news/harvesting-rainwater-test-arsenic/

35. **Mulhern, R.** (2018). Are one-size-fits-all metrics for global WASH really appropriate? *Engineering for Change.* https://www.engineeringforchange.org/news/one-size-fits-metrics-global-wash-really-appropriate/

36. **Mulhern, R.** (2018). A Lesson from Warisata. *Engineering for Change*. https://www.engineeringforchange.org/news/a-lesson-from-warisata/

37. **Mulhern, R.** (2017). Surrendering control, improving outcomes: Learning an engineering of accompaniment. *Engineering for Change*. https://www.engineeringforchange.org/news/surrendering-control-improving-outcomes-learning-an-engineering-of-accompaniment/

38. **Mulhern, R.** (2017). Why technology alone will never provide sanitation for the poor. *Engineering for Change*. https://www.engineeringforchange.org/news/why-technology-alone-will-never-provide-sanitation-for-the-poor/

39. **Mulhern, R.** (2016). Millennials, stop trying to "solve" poverty. *BRIGHT Magazine*. https://brightthemag.com/millennials-stop-trying-to-solve-poverty-ef33a6f696cc

Presentations and Proceedings

- ^TTechnicians, ^UUndergraduates, and ^MMasters students supervised by Dr. Mulhern are noted.
- *****Indicates products of engaged scholarship.

Invited Seminars and Conference Presentations

1. **Mulhern, R.** Jones, Christopher H., Wylie, V., Fawell, J., Oza, S., Holmer, M., Bell, K. (2024, November). Risk Amidst Uncertainty: Evaluating Complex Chemical Risks for Water Reuse/recycling and Other Drinking Water Challenges. Oral presentation at American Water Works Association Water Quality and Technology Conference, Schaumburg, IL.

2. **Mulhern, R.** (2024, March). "Dos" and "Don'ts" of PFAS sampling. Oral presentation at Rocky Mountain Section Water Environment Association Lab Practices Committee Meeting, Englewood, CO.

3. **Mulhern, R.** (2023, September). Point-of-use water filters to control PFAS: 5 things people want to know. Virtual presentation at Washington State PFAS Conference, Washington Department of Health.

4. **Mulhern R.**, Kondash A. J., Lutes, C., Holton, C. (2023, March). Understanding the relationship between indicators and tracers and vapor intrusion: Dynamic multivariate time series regressions. Virtual presentation at the Association for Environmental Health and Sciences (AEHS) Foundation 32nd Annual International Conference on Soil, Water, Energy, and Air, San Diego, CA.

5. **Mulhern, R.**, Kondash, A. J., Lee Pow Jackson, C., Colley, S., Wood, E., Cajka, J., Hoponick Redmon, J. (2022, June). Improved decision making for water lead testing in North Carolina child care centers using machine-learned Bayesian network classifiers. Poster presentation at the Association of Environmental Engineering and Science Professors (AEESP) Research and Education Conference, University of Washington in St. Louis, St. Louis, MO.

6. Kearns, J., Mostafa, S., Stoler, J., & **Mulhern, R.** (2021, March). WASH and the military-industrial-complex. Virtual panel presentation at Colorado WASH Symposium, University of Colorado, Boulder, CO.

7. **Mulhern, R.** (2020, December). Household water filters effectively remove lead from private well water. Virtual presentation at American Water Works Association Virtual Summit: Water Quality and Infrastructure. *

8. **Mulhern, R.E.**, Gray, K., & Gibson, J. M. (2020, October). Perceptions driving adoption of point-of-use water filters among private well users impacted by groundwater contamination in North Carolina. Virtual poster presentation at UNC Water and Health Conference, Chapel Hill, NC. *

9. **Mulhern, R.**, & Zapata, L. (2020, March). Achieving SDG 6 in complex situations: A case study of the Telica volcano in León, Nicaragua. Oral presentation at Colorado WASH Symposium, University of Colorado Boulder. *

10. **Mulhern, R.**, Roostaei, J., & Gibson, J. M. (2019, December). Modelling and predicting drinking water lead risk using Bayesian Belief Networks. Oral presentation at Society for Risk Analysis Annual Meeting, Arlington, VA.

11. Gibson, J. M., Lewis, E. Y., Carrasquillo, M., & **Mulhern, R.** (2019, May). How environmental engineers can help communities facing environmental justice challenges: Case studies. Panel presentation at Association of Environmental Engineering and Science Professors (AEESP) Education and Research Conference, Arizona State University, Tempe, AZ.

12. Linden, K., Brown, J., Thavaraja, W., & **Mulhern, R.** (2019, March). From the lab to the field: Emerging research in water quality. Panel presentation at Colorado WASH Symposium, University of Colorado, Boulder, CO.

13. **Mulhern, R.**, Quaghebeur, W., Ronsse, S., Blommaert, H., Potemans, S., Mendizábal, C. V.,[T] Heylen, S., & García, J. T. (2019, March). Arsenic contamination in rainwater harvesting tanks around Lake Poopó in Oruro, Bolivia: An unrecognized health risk. Oral presentation at Colorado WASH Symposium, University of Colorado, Boulder, CO. *

14. **Mulhern, R.** (2022, June). Environmental Health Professional's Guide to Positively Influencing Domestic Well Water Testing Behavior. Oral presentation at Private Water Network Workshop, National Environmental Health Association, Spokane, WA.

15. **Mulhern, R.** (2022, February). Do Point-of-Use Water Filters Work for Private Wells? Virtual presentation for the Private Water Network Webinar Series, National Environmental Health Association, Denver, CO. https://www.youtube.com/watch?v=XjGyualbPcY.

16. **Mulhern, R.** (2021, October). Tap water quality in Guatemala City. Virtual presentation at Study Participant Workshop, Universidad del Valle, Guatemala City, Guatemala.

17. **Mulhern, R.** (2021, May). Point-of-use water treatment for private wells in North Carolina: risks and solutions for lead, per- and polyfluoroalkyl substances (PFASs), and microbial contaminants. Oral presentation for Environmental Finance Center Lunch & Learn Seminar, University of North Carolina at Chapel Hill.

18. **Mulhern, R.** (2020, October). Private well water and the increased risks of lead exposure: Is household water treatment a solution? Virtual presentation for Environmental and Occupational Health Departmental Seminar, Indiana University Bloomington.

19. **Mulhern, R.** (2020, September). Does it work? Everything we don't (but should) know about household water treatment for private wells. Virtual presentation for Environmental Sciences & Engineering Departmental Seminar, University of North Carolina at Chapel Hill.

20. **Mulhern, R.** (2019, March). Arsenic contamination in rainwater harvesting tanks around Lake Poopó in Oruro, Bolivia: An unrecognized health risk. Oral presentation for Water Institute Seminar, University of North Carolina, Chapel Hill, NC.

21. **Mulhern, R.** (2017, November). Watersheds, climate, and health: How watershed management and climate are related to public health. Oral presentation at Environmental Leadership Conference, Technical University of Oruro, Bolivia, November 2017.

22. **Mulhern, R.** (2017, October). Socioeconomic impacts of the open-pit gold mine Kori Chaca in Oruro, Bolivia. Oral presentation at Research Dissemination Workshop, Technical University of Oruro, Bolivia.

23. **Mulhern, R.,** & Summers, R. S., (2016, May). Granulated activated carbon control of N-Nitrosodimethylamine precursors in wastewater effluent. Presented at Rocky Mountain Section American Water Works Association/Rocky Mountain Water Environment Association Student Conference, University of Wyoming, Laramie, Wyoming.

24. **Mulhern, R.** (2014, April). Availability and utilization of water resources on Volcán Telica's northern slopes, León, Nicaragua. Oral presentation for Wheaton College Science Faculty Seminar, Wheaton College, Wheaton, Illinois.

25. **Mulhern, R.** (2014, February). Availability and utilization of water resources on Volcán Telica's Northern Slopes, León, Nicaragua. Poster presentation at Human Needs and Global Resources Symposium, Wheaton College, Wheaton, Illinois. *

Contributed Presentations

26. Jones, Christopher H., **Mulhern, R.**, Wyliec, V., Fawell, J., Oza, S., Holmer, M., Bell, K. (2024, August). Water Recycling and Risk: Benefits of Stochastic Risk Modeling. Oral presentation at Rocky Mount Water Conference, American Water Works Association, Keystone, CO.

27. Hoponick Redmon, J. & **Mulhern, R.** (2022, October). Understanding tap water quality in Guatemala City: Toxic metals in drinking water side event. Presentation at UNC Water and Health Conference, Chapel Hill, NC. *

28. Hoponick Redmon, J., **Mulhern, R. E.**, Castellanos, E., Wood, E., Mcwilliams, A., Herrera, I., Liyanapatirana, C., Weber, F., Levine, K., Thorp, E., Bynum, N., Amato, K., Andrea, M., Acevedo, N., Baker, J., Houtven, G. Van, Henry, C., Wade, C., Kondash, A. J. (2022, October). Understanding Tap Water Quality in Guatemala City. Poster presented at UNC Water and Health Conference, Chapel Hill, NC. *

29. Castellanos, Edwin J. & **Mulhern, R.** (2022, June). Usando ciencia participativa para evaluar los factores asociados con la ocurrencia de metales y PFAS en el agua de grifo de la Ciudad de Guatemala [A Participatory Approach to Evaluating Metals and PFAS in Guatemala City Tap Water]. Virtual presentation to La Comisión de Educación Continua del Colegio de Farmacéuticos y Químicos de Guatemala, Guatemala City, Guatemala. *

30. Lee Pow Jackson, C., Kondash, A., Norman, E., Napier, N., Johnson, J., Levine, K., McWilliams, A., Weber, F., Stella, L., Wood, E., Colley, S., **Mulhern, R.**, Hoponick Redmon, J. (2022, May). Protecting Children's Health with Partnerships That Thrive: How to Get the Lead Out of Child Care Centers Across North Carolina. Poster presented at North Carolina Public Health Leader's Conference. Raleigh, NC. *

31. Nilsen, R., Jeranko, M., Rentschler, L., & **Mulhern, R.** (2021, February). Graduate community engagement in the context of crisis: Lessons from the Community Engagement Fellowship at UNC-CH. Virtual presentation at North Carolina Campus Compact Pathways to Achieving Civic Engagement Conference. *

32. Roostaei, J., **Mulhern, R. E.**, & Gibson, J. M. (2019, December). Risk analysis of PFAS contamination in private water wells: A Bayesian network model. Poster presented at Society for Risk Analysis Annual Meeting, Arlington, VA.

33. Stallard, M., **Mulhern, R.**, Cross, M., Greenwood, E., Deyonke, K., Kim, J., Cromratie, S., Zanib, H., Chai, T., Stewart, J., Fisher, M., Sobsey, M., & Sozzi, E. (2019, October). Presence of bacterial and viral indicators of fecal contamination in two counties a year post-Hurricane Florence. Presented at UNC Water & Health Conference, Chapel Hill, NC.

34. Summers, R. S., **Mulhern, R.**, & Dickenson, E. R. V. (2017, November). Effects of activated carbon type, operation and scale-up on adsorption of wastewater-derived NDMA and other DBP precursors. Presented at American Water Works Association Water Quality & Technology Conference, Portland, OR.

35. Richardson, S. D., Cuthbertson, A. A., Kimura, S. Y., Liberatore, H. K., Knappe, D., Stanford, B., Summers, R. S., Dickenson, E., Seidel, C., Maness, C., **Mulhern, R.**, Ghosh, A., & Byer, J., (2017, June). Combining non-target and target screening of DBPs: Assessing removal strategies to make drinking water safer. Presented at American Society for Mass Spectrometry Conference, Indianapolis, Indiana.

Teaching Record

University of Colorado Boulder Courses

- **Water Quality and Health Risks (ENVS 4800 – Capstone: Critical Thinking in Environmental Studies).** 3 credits. 25 – 30 students.
    - Instructor: Spring 2025

Other Teaching and Outreach

- **Introduction to drinking water quality analysis.** Week-long intensive through the Center for Ecology and Andean Peoples in Oruro, Bolivia co-taught with Eva Manzano from the Center for Affordable Water and Sanitation Technology, October 2017.

- **Introduction to environmental engineering**. Series of five guest lectures delivered to engineering students at the Technical University of Oruro, Oruro, Bolivia, April-June 2017.

- **Microbial water quality monitoring.** Invited lecture at the National Meeting of Community Water Quality Monitors, Coro Coro, Bolivia. November, 2017.

- **Treatment technologies for the removal of heavy metals from water.** Invited lecture at the Oruro Symposium on Heavy Metals and Our Health, Technical University of Oruro, Bolivia, November 2017.

- **Introduction to disinfection of drinking water.** Invited lecture to the Water Working Group Seminar, Center for Ecology and Andean Peoples, Oruro, Bolivia, July 2017.

- **Introduction to water treatment for the protection of health**. Invited lecture at the Environmental Leadership Conference, Center for Ecology and Andean Peoples, Oruro, Bolivia, November 2016.

Student Advising

Undergraduate Mentees

- Tejas Pruthi, BS Computer Science, UNC Chapel Hill, 2022

- Banks Grubbs, BSPH Environmental Health Sciences, UNC Chapel Hill, 2021

- Hania Zanib, BS Biology, UNC Chapel Hill, 2021

Master's Thesis Committees

- Hania Zanib, MS Environmental Sciences and Engineering, UNC Chapel Hill, 2022. *Evaluating the effectiveness of point-of-use UVC-LED disinfection of activated carbon filter effluent in private well water in North Carolina.*

Grants and Proposals

Awarded Grants

1. North Carolina Water Resources Research Institute. "Modelling and predicting drinking water contamination risk in North Carolina to enhance community resilience."
   Award amount: $10k. Role: Student researcher. 03/01/2019 – 02/20/2020

Submitted Proposals

1. University of Colorado Boulder Office for Public and Community-Engaged Scholarship. January 2025. "Evaluating water lead risks in transitional housing communities." $2k.
2. Water Quality Research Foundation. December 2024. "Identifying treatment approaches for emerging and non-targeted fluorinated organic compounds in private well water in an AFFF impacted zone." $100k.
3. North Carolina Water Resources Research Institute. November 2018. "Modelling and predicting drinking water contamination risk in North Carolina to enhance community resilience." $10k.
4. U.S. EPA Science to Achieve Results (STAR) program. May 2015. "Optimizing NDMA precursor removal from point and nonpoint sources by adsorption and biological filtration." $88k.
5. National Science Foundation Graduate Research Fellowship Program. October 2014. "Evaluating geothermal arsenic fate and transport along the Nicaraguan volcanic chain to evaluate public health risks."

Professional Service

Invited Reviewer for Scientific Journals

- *AWWA Water Science*
- *BMJ Global Health*
- *Environmental Engineering Science*
- *Environmental Health Insights*
- *Environmental Health Perspectives*
- *Environmental Science & Technology*
- *Environmental Science: Advances*
- *ES&T Water*
- *Journal of Environmental Management*
- *PLOS One*
- *Sustainability*
- *Water Research*

Invited Reviewer for Research Grant Proposals

- January 2025 – University of Wisconsin Water Resources Institute

- March 2022 – Center for Human Health and the Environment, North Carolina State University

Other Service

- Delivered an invited presentation to a community of private well users impacted by PFAS contamination in Airway Heights, WA on how select a household water filter, West Plains Water Coalition, October 2024.

- Served as a member of the Board of Directors for a small community development non-profit focused on WASH and sustainable agriculture in rural Nicaragua, Nuevas Esperanzas, León, Nicaragua, 2019 – 2022

- Served as an academic mentor for an undergraduate engineering student from Mexico interested in WASH, Clean Water Science Network, 2018 – 2019

- Served as a Contributing Editor for Engineering for Change, an online academy, innovation lab, and media platform, www.engineeringforchange.org, 2017 – 2018