

## Michael B. Fisher

Assistant Professor  
Department of Environmental Sciences and Engineering  
Gillings School of Global Public Health  
University of North Carolina at Chapel Hill

Tel: (510) 280-4947  
Email: fishermb@email.unc.edu  
Web: sph.unc.edu/adv\_profile/michael-fisher/  
3207 McGavran-Greenberg Hall  
Chapel Hill, NC 27599

### EDUCATION

Ph.D. Environmental Engineering, U.C. Berkeley, Berkeley, CA., May 2011.  
M.S. Environmental Engineering, Massachusetts Institute of Technology, Cambridge, MA., September 2004  
B.A. Chemistry (honors), Grinnell College, Grinnell, IA., May 2002

### PROFESSIONAL EXPERIENCE

#### Employment and Academic Rank

2018-Present **Assistant Professor**, UNC, Environmental Sciences and Engineering  
2017-2018 **Senior Research Scientist**, UNC, Environmental Sciences and Engineering  
2012-2017 **Postdoctoral Research Associate**, UNC, Environmental Sciences and Engineering  
2011- 2012 **Visiting Researcher**, Fundacion Cantaro Azul, Mexico  
2010 **Research Associate**, Royal College of Surgeons in Ireland, Dept. of Physiology & Medical Physics

#### Academic Appointments

2018-Present Faculty Fellow, The Water Institute at UNC  
2018-Present Executive Committee, Rural Water Supply Network

### HONORS

#### Selected Honors

- C. Felix Harvey Award 2020
- NIEHS BIOS Training Grant 2012-2015
- NSF Graduate Research Fellowship 2005-2007
- NDSEG Graduate Research Fellowship 2003-2004
- AWWA LARS Fellowship 2003

### BIBLIOGRAPHY

<sup>T</sup>Technicians and Staff, <sup>U</sup>Undergraduates, <sup>M</sup>Masters and <sup>D</sup>PhD students supervised or co-supervised by Dr. Fisher are noted, as are <sup>P</sup>Post-doctoral researchers.

(For continuously updated publications and citation details, visit my Google Scholar page: <http://bit.ly/2QS8GsW>)  
Approximate metrics based on Google Scholar data: h-index: 16; citations: 1561

Referreed Papers/Articles – In Review

1. Browning, E. G.<sup>M</sup>; Bartram, J. K.; Guo, A. Z.<sup>T</sup>; Tracy, J. W.<sup>T</sup>; Kelly, E. R.<sup>M</sup>; **Fisher, M. B.**; Manganese and Iron in Drinking Water in Three West-African Countries: Implications for Health, Acceptability, and Disinfection. (Under review with PLoS Water).
2. Williams, A.R.<sup>T</sup>; **Fisher, M.B.**; Danquah, L.; Bates, L.; Geere, J.; Majuru, B.; Mokoena, M.M.; Mukhola, M.S.; Nguyen-Viet, H.; Duc, P.P.; Schmidt, W.P.; Groce, N.; Evans, B.; Hunter, P.R.; Bartram, J.K. Submitted Manuscript. Factors affecting household use of multiple water sources for consumption in Ghana, South Africa, and Vietnam: findings from a 3-country study and implications for global monitoring efforts. (pending resubmission, PLOS One).

#### Referred Papers/Articles – Published or In Press

1. Appling, K. C.<sup>M</sup>, Sobsey, M. D., Durso, L. M., & **Fisher, M. B.** (2023). Environmental monitoring of antimicrobial resistant bacteria in North Carolina water and wastewater using the WHO Tricycle protocol in combination with membrane filtration and compartment bag test methods for detecting and quantifying ESBL E. coli. *PLOS Water*, 2(9), e0000117.
2. Bauza, V., Furey, S., Alvarez-Sala, J., Bartram, J., Danert, K., De France, J., Diarra, S., **Fisher, M.B.**, Hansen, D., Hutchings, P. and Lindsay, C. (2023). Eliminating lead exposure from drinking water—A global call to action. *PLOS Water*, 2(4), e0000122.
3. Gibson, J. M., MacDonald, J. M., **Fisher, M.**, Chen, X., Pawlick, A., & Cook, P. J. (2022). Early life lead exposure from private well water increases juvenile delinquency risk among US teens. *Proceedings of the National Academy of Sciences*, 119(6), e2110694119.
4. Anderson, D. M., **Fisher, M. B.**, Kwena, O., Kambou, H., Broseus, R., Williams, A. R., ... & Bartram, J. (2021). Adapting a safe water storage container to improve household stored water quality in rural Burkina Faso: a cluster randomized trial. *Journal of Water, Sanitation and Hygiene for Development*, 11(5), 719-731.
5. Stallard, M. A.<sup>P</sup>, Mulhern, R., Greenwood, E., Franklin, T., Engel, L. S., **Fisher, M. B.**, ... & 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*, 100102.
6. **Fisher, M.B.**; Guo, A.z.<sup>T</sup>; Tracy, J.W.<sup>T</sup>; Prasad, S.K.; Browning, E.G.<sup>M</sup>; Liang, K.R.; Kelly, E.R.; Bartram, J.K. (2021). Occurrence of Lead and Other Toxic Metals Derived from Drinking-Water Systems in Three West African Countries. *Environmental Health Perspectives* 129:4 CID: 047012 <https://doi.org/10.1289/EHP7804>
7. Kelly, E.R.<sup>M</sup>; Cronk, R.D.; **Fisher, M.B.**; Bartram, J.K. (2020). Sanitary inspection, microbial water quality analysis and water safety in handpumps in rural sub-Saharan Africa. *NPJ Clean Water*.
8. Gibson, J. M., **Fisher, M. B.**, Clonch, A.<sup>M</sup>, MacDonald, J. M., & Cook, P. J. (2020). Children drinking private well water have higher blood lead than those with city water. *Proceedings of the National Academy of Sciences*, 117(29), 16898-16907.
9. **Fisher, M. B.**, Danquah, L., Seidu, Z., Fechter, A. N., Saga, B., Bartram, J. K., ... & Ramaswamy, R. (2020). WaSH CQI: Applying continuous quality improvement methods to water service delivery in four districts of rural northern Ghana. *PloS one*, 15(7), e0233679.
10. Oza, H. H.<sup>M</sup>, **Fisher, M. B.**, Abebe, L., Cronk, R., McCord, R., Reuland, F., ... & Bartram, J. (2020). Application of tools to monitor environmental conditions, identify exposures, and inform decision-making to improve infection prevention and control practices in Malawian maternity wards. *Environmental Monitoring and Assessment*, 192(2), 134.
11. Tracy, J. W.<sup>T</sup>, Guo, A.<sup>T</sup>, Liang, K., Bartram, J., & **Fisher, M. B.** (2020). Sources of and Solutions to Toxic Metal and Metalloid Contamination in Small Rural Drinking Water Systems: A Rapid Review. *International Journal of Environmental Research and Public Health*, 17(19), 7076.
12. McShea, L., Purvis, T., **Fisher, M.**, & Northcross, A. L. (2019). Low cost, at-home incubation systems to culture *Escherichia coli* bacteria for water quality testing in North Carolina. *Mol Biol*, 125(1), e83.

13. Reuland, F., Behnke, N.<sup>M</sup>, Cronk, R., McCord, R., **Fisher, M.B.**, Abebe, L., ... & Mmodzi Tseka, J.; Energy access in Malawian healthcare facilities: consequences for health service delivery and environmental health conditions. *Health policy and planning*.; 2019; *Health policy and planning*.
14. Sozzi, E.; Baloch, M. <sup>M</sup>; Strasser, J.; **Fisher, M.B.**; Leifels, M.; Camacho, J.; Mishal, N.; Elmes, S.F.; Allen, G.; Gadai, G.; Valenti, L.; Sobsey, M. (2019). A Bioassay-based Protocol for Chemical Neutralization of Human Faecal Wastes Treated by Physico-Chemical Disinfection Processes: A Case Study on Benzalkonium Chloride. *International Journal of Hygiene and Environmental Health*.
15. Wu, J., Stewart, J. R., Sobsey, M. D., Cormency, C., **Fisher, M. B.**, & Bartram, J. K. (2018). Rapid Detection of Escherichia coli in Water Using Sample Concentration and Optimized Enzymatic Hydrolysis of Chromogenic Substrates. *Current microbiology*, 1-8.
16. Geere, J; Bartram, J.; Bates, L.; Danquah, L.; Evans, B.; **Fisher, M.B.**; Groce, N. et al. "Carrying water may be a major contributor to disability from musculoskeletal disorders in low income countries: a cross-sectional survey in South Africa, Ghana and Vietnam." *Journal of Global Health* (2017).
17. **Fisher, M. B.**, Mann, B. H., Cronk, R. D., Shields, K. F., Klug, T. L., & Ramaswamy, R. "Evaluating Mobile Survey Tools (MSTs) for Field-Level Monitoring and Data Collection: Development of a Novel Evaluation Framework, and Application to MSTs for Rural Water and Sanitation Monitoring." *International Journal of Environmental Research and Public Health* 13.9 (2016): 840.
18. Williams, A.R.<sup>T</sup>; Bain, R.E.S.; **Fisher, M.B.**; Cronk, R.D.; Kelly, E.R.; Bartram, J.K.; A Systematic Review and Meta-Analysis of Fecal Contamination and Inadequate Treatment of Packaged Water.; 2015; (*PLOS ONE*).
19. **Fisher, M.B.**; Shields, K.; Leker, H.; Christenson, E.; Cronk, R.D.; Samani, D.; Apoya, P.; Lutz, A.; Bartram, J.K.; Understanding handpump sustainability: Determinants of rural water source functionality in the Greater Afram Plains region of Ghana.; 2015; *Water Resources Research*
20. **Fisher, M.B.**; Williams, A.R.<sup>T</sup>; Jalloh, M.F.; Saquee, G.; Bain, R.E.S.; Bartram, J. K.; Microbiological and chemical quality of packaged water and household stored drinking water in Freetown, Sierra Leone.; 2015; *PLoS One*; 10(7)
21. Bartram, J.K.; Brocklehurst, C.; **Fisher, M.B.**; Luyendijk, R.; Hossain, R.; Wardlaw, T.; and Gordon, B.; Global Monitoring of Water Supply and Sanitation: History, Methods and Future Challenges. ; 2014; *Int. J. Environ. Res. Public Health*; 11(8):8137-8165
22. **Fisher, M.B.**; Nelson, K.L.; Inactivation of Escherichia coli by Polychromatic Simulated Sunlight: Evidence for and Implications of a Fenton Mechanism Involving Iron, Hydrogen Peroxide, and Superoxide.; 2014; *Appl Environ Microbiol*; 80(3):935-42
23. **Fisher, M.B.**; Keane, D. A; Fernández-Ibáñez, P.; Colreavy, J.; Hinder, S.; McGuigan, K.G.; Pillai, S.; Nitrogen and copper doped solar light active TiO<sub>2</sub> photocatalysts for water decontamination.; 2012; *Appl Cat B*; 130-131:8-13
24. **Fisher, M.B.**; Iriarte, M.; Nelson, K.L.; Solar disinfection (SODIS) of *E. coli*, *Enterococcus*, and MS2 phage: effects of additives and alternative container materials.; 2012; *Water Research*; 46(6):1745-54
25. **Fisher, M.B.**; Love, D.C.; Schuech, R.; Nelson, K.L.; et al.; Simulated sunlight action spectra for inactivation of MS2 and PRD1 bacteriophages in clear water.; 2011; *Environmental Science and Technology*; 45(21): 9249-55
26. **Fisher, M.B.**; Keenan, C.R.; Nelson, K.L.; Voelker, B.M.; et al.; Speeding up Solar Disinfection: Effects of hydrogen peroxide, temperature, pH, and copper plus ascorbate on the photoinactivation of *E. coli* in river water.; 2008; *J Wat Health*; 6(1): 35-51.

### Products of Engaged Scholarship

1. Roy, Siddhartha; Salzberg, A.; **Fisher, M.B.**; Linsey, C.; et al. "Global Lead-Free Water Pledge." (2022)
2. **Fisher, M.B.**, Emily Madsen, Katherine Shields, Ashley Williams, Kaida Liang, Allison Fechter, Ryan Cronk, and Jordan Dalton. "WaSH M&E Operational Definitions for WaSH Monitoring and Evaluation March 2017." (2017).
3. Cronk, Ryan, Jeanne Luh, Benjamin Mason Meier, Jamie Bartram, Robert Bain, **Michael B. Fisher**, Katie Hall, Kaida Liang, Darren Saywell, and Katherine F. Shields. "The Water, Sanitation, and Hygiene Performance Index." (2015)

## Presentations, Reports, and Conference Proceedings

1. Salzberg, A.A.; DeFrance, J.; Questad, A.; **Fisher, M.B.** APEC Workshop: Reducing Lead in Drinking Water Through Standardization. Expert Panel Discussion. Asia Pacific Economic Cooperation (APEC) sub-Committee on Standards and Conformance (SCSC): Workshop on Water. August 6, 2023. Seattle, WA.
2. Hansen, D.; Salzberg, A.A.; Roy, S.; **Fisher, M.B.**; et al. Toxic Metals in Drinking Water – UNC Water Institute; WHO; UNICEF; IAPMO; World Vision. Side event at 2022 Water and Health Conference, Chapel Hill, NC. 2022
3. **Fisher, M.B.**; Bauza, V.; Purvis, T.; Hall, N.; Weinberg, H.; Liang, K.; Improving Water Quality Laboratory Management Practices in Small Island Developing States. April-August, 2022. Training program for water quality laboratories from 10 small island developing states (SIDS) for UNITAR (Global online training series).
4. **Fisher, M.B.**; Guo, A.Z.; Tracy, J.W.; Prasad, S.K.; Browning, E.G.; Liang, K. R.; Kelly, E.R.; Bartram, J.K.; Occurrence of metals from aquifers and drinking water system corrosion in three West African countries. October 7., 2019; Water and Health Conference, Chapel Hill, NC (verbal presentation)
5. Bartram, J.K.; **Fisher, M.B.**; Fuente, D.; Kelly, E.; Setty, K. Clear thinking on water and health? November 23, 2017. Invited Oxford Water Network Seminar, Christchurch College, University of Oxford, UK.
6. **Fisher, M.B.**; Danquah, L.K.; Seidu, Z.; et al.; Application of Continuous Quality Improvement methods to improve the microbial quality of household stored water and decreasing borehole repair times in northern Ghana. October 17, 2017; Water and Health Conference, Chapel Hill, NC (poster presentation)
7. **Fisher, M.B.**; Ramaswamy, R.; Madsen, E.; Seidu, Z.; Maliki, H.; Labat, A. September 28, 2016. Using Data for More Responsive Programme Improvement (Global Webinar)
8. **Fisher, M.B.**; WaSH CQI: Continuous Quality Improvement for Water, Sanitation, and Hygiene. October 27, 2015; Water and Health Conference, Chapel Hill, NC (conference workshop)
9. **Fisher, M.B.** Determinants of water point functionality from a cross-sectional study of three districts in northern Ghana. October 15, 2014; Water and Health Conference, Chapel Hill, NC (verbal presentation)
10. **Fisher, M.B.**; Williams, A.R.; Jalloh, M.F.; Saquee, G.; Bain, R.E.S.; Bartram, J. K.; Microbiological and chemical quality of packaged water in bottles and sachets and household stored drinking water in Freetown, Sierra Leone. October 16, 2014; Water and Health Conference, Chapel Hill, NC (poster presentation)
11. **Fisher, M.B.**; Why Do Germs Get Sunburns? Photoinactivation of Bacteria and Viruses by Sunlight: Mechanistic Studies and Applications to Drinking Water and Sanitation in Developing Country Settings. April 9, 2014. Invited ENVR 400 Seminar, UNC, Chapel Hill, NC
12. **Fisher, M.B.**; Williams, A.R.; Bain, R.E.S.; Bartram, J.K.; Drinking Water Quality and Source Characteristics of Urban, Rural, and Peri-urban Communities in Ghana, South Africa, and Vietnam.; October 16, 2013; Water and Health Conference, Chapel Hill, NC (verbal presentation)
13. **Fisher, M.B.**; Crocker, J.; Cronk, R.D.; Sobsey, M.D.; Field-Based Water Quality Testing.; October 15, 2013; Water and Health Conference, Chapel Hill, NC (conference workshop)
14. **Fisher, M.B.**; Nelson, K.L.; Performance of Accelerated Solar Disinfection Under Lab and Field Conditions.; September 22, 2009; International Research Colloquium of the HWTS Network; Dublin, Ireland (verbal presentation)
15. **Fisher, M. B.**; Nelson, K.L.; and Iriarte, M.; Sunlight inactivation rates of wild-type, mutant, and wastewater-derived *E. coli* in the presence and absence of iron chelators and ROS scavengers: Applied and Mechanistic Implications for SODIS.; *Proceedings of the Water Environment Federation* 2009.1 (2009): 202-221.
16. Nelson, K. L.; Kadir, K.; **Fisher, M.B.**; Love, D.; New insights into sunlight disinfection mechanisms in waste stabilisation ponds; *8th IWA Specialist Group Conference on Waste Stab. Ponds Belo Horizonte*, pp. 26-30. 2009.

## Teaching Record

### UNC Courses

Water, Sanitation, Hygiene, and Global Health

(ENVR 525; Formerly listed as ENVR 682 and ENVR 890 )                      3 Credits

Fall 2023 [14]

Fall 2022 [26]

Fall 2021 [16]

Fall 2020 [16]

Fall 2019

Spring 2018 (Co-instructor with Bartram)

Spring 2017 (Co-instructor with Bartram and Sobsey)

Spring 2016 (Co-instructor with Bartram and Sobsey)

Spring 2015 (Co-instructor with Bartram and Sobsey)

Undergraduate Seminar and ECUIPP Lab: Connecting with communities through environmental research for public health

(ENVR 89 and ENVR 135 - 3 Credits each – Co-instructor with Northcross)

Spring 2024 (Co-instructor with Northcross)

Fall 2023 (Co-instructor with Northcross)

Spring 2023 (Co-instructor with Northcross)

Fall 2022 (Co-instructor with Northcross)

Spring 2022 (Co-instructor with Northcross)

Fall 2021 (Co-instructor with Northcross)

Designing, Implementing, and Evaluating Public Health Solutions                      4 Credits

(SPHG:722 Residential)

Spring 2024 [240] (Co-instructor with Truesdale, Hussey, Chandler, and Villa-Torres)

Spring 2023 [280] (Co-instructor with Truesdale, Hussey, Chandler, and Villa-Torres)

Spring 2022 [380] (Co-instructor with Truesdale, Hussey, and Asham)

Spring 2021 [251] (Co-instructor with Lightfoot and Hussey)

Spring 2020 [180] (Co-instructor with Lightfoot and Cox)

Spring 2019 [120] (Co-instructor with Lightfoot, Cilenti, and Tucker)

Designing, Implementing, and Evaluating Public Health Solutions

(SPHG:722 Online Section Lead [MPH@UNC])    4 Credits

Summer 2019 [15]

Spring 2019 [15]

Fall 2019 [15]

Fall 2018 [15]

Designing, Implementing, and Evaluating Public Health Solutions

(SPHG:722 Lead Instructor and Course Coordinator [MPH@UNC]) 4 Credits

Fall 2018 -Present [45-75/term x 3 terms/year]

Introduction to Public Health

(SPHG 600) 3 Credits

Spring 2024 [40] Co-instructor with Hussey, Agrawal, Vines

Fall 2023 [40] Co-instructor with Hussey

Summer 2023 [40] Co-instructor with Agrawal

Summer 2021 [40] Co-instructor with Agrawal, Hussey

Spring 2021 [80] Co-instructor with Agrawal, Sozzi

Fall 2020 [40] Co-instructor with Vines

Spring 2019 [40] Co-instructor with Vines

Fall 2018 [40]

Environmental Exposure to Microbes of Public Health Relevance (Previously Environmental Health Microbiology)

Guest Lecturer (Primary Instructor: Sobsey [2015]; Primary Instructor: Sozzi [2020-Present]), 1 lecture per semester

(ENVR 421)

Spring 2021

Spring 2020

Fall 2015

Guest lectures in the following courses and terms

ENVR 756 (Physical/Chemical Treatment Processes): Spring 2024

ENVR 500 (Environmental Processes, Exposure and Risk Assessment): Spring 2024

### **Student Advising**

Postdoctoral Research Advisor

Completed (1 Completed)

Megan Stallard

2019-present

Co-advisor, Advised by Emanuele Sozzi

MS Advisor

Graduated (includes students approved to graduate this term)

Kyle Rezek	2023-2024	Co-advisor, Advised with Salzberg and Sid Roy
Maya Hoon	2020-2022	Advisor
Clark Appling	2021-2022	Advisor
Lunide Sylne	2020-2022	Co-advisor, Advised with Sozzi
Timothy Purvis	2020-2022	Co-advisor, Advised with Salzberg
Catherine Conaway	2020-2022	Co-advisor, Advised with Salzberg
Emily Browning	2018-2019	Co-advisor, Advised with Bartram
Hai-Ryung Sung	2018-2019	Co-advisor, Advised with Bartram
Noor Baloch	2017-2018	Co-advisor, Advised with Sobsey

MPH Advisor

2-3 MPH students per year

MS, PhD Committee Member

Angela Bittner Penny	ESE	MS
Nikki Behnke	ESE	MS
Emma Kelly	ESE	MS
Abhishek Komandur	ESE	MS
Hemali Oza	ESE	MS
Peter Kane	ESE	MS
Allison Clonch	ESE	MS
Megan Miller	ESE	MS
Ashley Labat	MCH	MS
Lauren Joca	ESE	MS
Juan Camacho	ESE	MS
Andy Koltun	ESE	MS
Hailey Schram	ESE	MS

## GRANTS

### Current support

Technical Lead, World Vision, "Validation and Prevention of Toxic Metal Contamination of Rural Water Supply Systems in Ghana (Salzberg PI)," With Bauza, Brown, and Liang, 11/1/2021-12/1/2024, \$788,000 Total.

### Completed support

Co-investigator, Gruppo Cap, "First Italian Sanitation Safety Planning to Water Reuse for Irrigation (Sozzi PI), with Bartram and Manga, 10/15/18-12/31/22, \$87,640 Direct Funding.

Co-PI, NSF (RAPID, CBET-1903010), "Impact of Hurricane Florence on Drinking Water Safety in Eastern and Central NC: Rapid Assessment and Recommendations (Sozzi lead PI)," with Sozzi, Stallard, 12/15/18-11/30/20, \$154,790 Total.

Co-PI, UNC RTI IMPACT Award, "Evidence to Policy: Surveillance and Analytics to Combat Antimicrobial Resistance (Stewart lead PI)," with Sozzi, RTI collaborators, 1/1/19-6/30/21, \$113,000 Total.

PI, UNC (Felix Harvey Award), "Felix Harvey Award: Mobile application to facilitate low-cost water quality testing in well water (Fisher and Sozzi PIs)," with Sozzi and Stallard, 4/30/20-4/30/21, \$75,000 Total.

PI, WHO, "Review of Sanitary Inspections for Drinking water," 8/27/20-10/16/20, \$10,000 Total.

PI, Aquagenx LLC, "Evaluation of novel Aquagenx quantitative bag test," 6/1/2020-12/31/2020, \$15,346 Total

Lead Investigator, Medentech, "Reformulation of Aquatabs to enhance inactivation of protozoan cysts and other chlorine-resistant pathogens (Bartram PI)," with Bartram, Sobsey, Sozzi, 3/1/2017-2/1/2020, \$140,000 Total.

PI, World Health Organization, "Evaluating Methods for Rapid, On-Site Decontamination of Facemasks for Reuse in Low-Resource Settings," with Sobsey, Brown, Sozzi, and Salzberg, 12/18/20-2/28/21 (extended through 7.31.21), \$99,990 Total.

Co-Investigator, UNITAR, "Strengthening the capacity of laboratories on monitoring of environmental waters (Salzberg PI)," with Bauza and Liang, 03/01/2022-09/01/2022, \$40,000 Direct Funding.

Co-investigator, NSF (RAPID, 5117839), "RAPID - Airborne CoV-2 Viability and oxidation (Turpin PI)," with Surratt, Baumann, Morrison, Baric, Brown, Stewart, and Stallard, 08/01/20-07/31/21, \$199,997 Total.

Co-investigator, NSF (RAPID, 5117839), "RAPID - Airborne CoV-2 Viability and oxidation (Turpin PI)," with Surratt, Baumann, Morrison, Baric, Brown, Stewart, and Stallard, 08/01/20-07/31/21, \$199,997 Total.

Co-investigator, Gillings Innovation Lab (GIL, ), "Residence time and viability of coronavirus in airborne respirable particles in public spaces (Baumann PI)," with Turpin, Surratt, Morrison, Baric, Stewart, and Stallard, 07/01/20-06/31/21, \$99,998 Total.

Moore Inventor Fellowship Finalist Gift Support, \$25,000 Total (unrestricted gift funds).

Technical Lead- Water Quality, World Vision (World Vision 30703), "Monitoring, Evaluation and Learning for WASH: Bridge II Funding (Bartram PI)," with Bartram, Salzberg, Liang, Anthonj, and others, 1/1/19-6/30/20 (pending renewal), \$357,610 Total.

Co-PI, US EPA (EPA 83927901), "Building US Water Infrastructure to Improve Childhood Outcomes Interventions to Decrease Childhood Lead Exposure from Private Wells (MacDonald-Gibson Lead PI)," with Phil Cook, John MacDonald, and others, 1/1/18-7/30/20, \$800,000 Total.

Technical Lead\*- Water Quality, WaterAid, "Continuous Quality Improvement to Ensure Household Water Safety in Burkina Faso (Bartram PI)," with Bartram, Liang, and others, 12/01/17-5/31/18, \$38,467 Total (\*co-wrote proposal with Liang).



Technical Lead\*- Water Quality, World Vision, "Monitoring, Evaluation and Learning for WASH (Bartram PI)," with Bartram, Liang, Cronk, and others, 1/1/16-12/31/18, \$1,455,582 Total (\*drafted water quality, quality improvement proposal sections).

Postdoctoral researcher, World Vision, "Monitoring, Evaluation and Learning for WASH (Bartram PI)," with Bartram, Kolsky, Liang, Kayser, Ramaswamy, and others, 7/1/12-12/31/15, \$1,500,000 Total.

Technical Lead\*- Adam Smith International, "Improving the Regulation, Monitoring and Quality of the Packed Water Industry in Sierra Leone (Bartram PI)," with Bartram, Ashley Williams, and Focus1000 (NGO in Sierra Leone), 3/01/13-3/31/14, \$175,000 Direct Funding (UNC subaward) (\*wrote water quality proposal sections).

## PROFESSIONAL SERVICE

### To Discipline(s)

- Informal Toxic Metals Working Group Member 2021-Present
- Rural Water Supply Network Executive Committee Member 2018-Present
- Rural Water Supply Network Monitoring and Mapping Theme Co-Lead (Water Quality) 2018-2022
- Proposal Reviewer for USEPA, NAS, USAID

### Conference Organizing

- Water and Health Conference Abstract and Side Event reviewer and Session/Workshop Moderator 2018-Present

### Scientific Sessions

- Co-organized UN Water Conference Session on [Global Commitment to Stop Flow of Lead in Drinking Water](#) 2023
- WHO Consultation on Laboratory Capacity and Field-Level Water Quality Monitoring Participant 2021
- Organized and led RWSN Webinar on COVID-19 and WaSH 2020
- WHO RegNet Meeting Presenter on Lead and Toxic Metals in small drinking water systems, Nov 2019

### Within North Carolina

- Co-facilitator for rural water quality youth summer training activities with Amanda Northcross, ECUIPP lab students, and Living and Learning Youth Center, Warren County NC, Summers 2022, 2023
- Presentation on lead in drinking water at Morehead Planetarium Teen Science Café, Jan 2024

### Within UNC-Chapel Hill

- Innovate Carolina [UNC Innovation Showcase](#) Presenter: 2021
- Moore Foundation Fellowship Candidate Internal Prep Workshop Panelist: 2020
- Equity in Teaching INstitute informal Zoom Check-in Participant (2021-present)
- EHS Inclusive Excellence Committee: February 2022-present

### Within Gillings School of Global Public Health/MPH program

- Student Recruitment/Presentations at Open House Events for MPH (2018-Present)
- Co-development of evidence-based public health modules (with Michelle Cawley and HSL team) for SPHG 600 and SPHG722, collectively reaching all UNC graduate students
- SPHG722 (Designing, implementing, and evaluating public health solutions) course co-designer, co-lead, and instructor (2018-present). Contributed to all aspects of course design, iteration, improvement, and delivery since inception.
- MPH comprehensive exam co-lead and co-administrator (residential and online) 2021-Present

Within Department of Environmental Sciences and Engineering

- Student Recruitment/Presentations at Open House Events for ESE Water (2018-Present)
- MPH Qualifying Exam Evaluator for ESE (2020-Present)