

Privacy Notice

I hereby acknowledge that the information I provide in this application is subject to disclosure pursuant to the North Carolina Public Records Laws, and that I provide the information contained in this application freely and voluntarily, and that by submitting my application to Wake County I consent to such disclosure pursuant to the North Carolina Public Records Laws, and that I waive and release Wake County, its agents, employees and elected and appointed officials, from any liability related to disclosure of any information provided herein.

Profile

Which Boards would you like to apply for?

Wake County Water Partnership: Submitted

Please select your first Board preference: *

Wake County Water Partnership

Please select your second Board preference: *

None Selected

Please select your third Board preference: *

None Selected

Please select your fourth Board preference: *

None Selected

Please select your fifth Board preference: *

None Selected

Please select your sixth Board preference: *

None Selected

Kevin

First Name

S.

Middle Initial

Watson

Last Name

450 E. Horton St.

Street Address

Suite or Apt

Zebulon

City

NC

State

27597

Postal Code

What district do you live in?

None Selected

Business: (919) 823-1846

Primary Phone

Mobile: (919) 909-2374

Alternate Phone

kwatson@townofzebulon.org

Email Address

Town of Zebulon

Employer

Stormwater Manager

Job Title

If you live in an Extraterritorial Jurisdiction Area, select Yes:

Yes No

In order to assure countywide representation, please indicate your place of residence:

Zebulon

Interests & Experiences

Why are you interested in serving on a Board or Commission?

Represent the Town of Zebulon on the Wake County Water Partnership

Work Experience

Volunteer Experience

Education

Comments

Upload a Resume

If you have another document you would like to attach to your application, you may upload it below:

Please upload a file

Demographics

Kevin S. Watson

Date of Birth

Gender *

Male

Ethnicity *

Caucasian

Other

How did you become aware of Wake County volunteer opportunities?

None Selected

If you selected "Other" above, how?

Please upload a file

ETHICS GUIDELINES FOR COUNTY ADVISORY BOARDS AND COMMISSIONS

By submitting this electronic application, if appointed, I pledge by my signature below that I have read and will comply with the ethics guidelines for advisory boards and commissions as adopted by the Wake County Board of Commissioners, found [here](#).

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Profile

Which Boards would you like to apply for?

Wake County Water Partnership: Submitted

Please select your first Board preference: *

Wake County Water Partnership

Please select your second Board preference: *

None Selected

Please select your third Board preference: *

None Selected

Please select your fourth Board preference: *

None Selected

Please select your fifth Board preference: *

None Selected

Please select your sixth Board preference: *

None Selected

Ayse
First Name

Middle Initial

Ercumen Webb
Last Name

2534 Asher View Ct
Street Address

Suite or Apt

Raleigh
City

NC
State

27606
Postal Code

What district do you live in?

None Selected

Mobile: (510) 225-8828

Primary Phone

Business: (919) 515-7051

Alternate Phone

aercume@ncsu.edu

Email Address

North Carolina State
University

Employer

Associate Professor

Job Title

If you live in an Extraterritorial Jurisdiction Area, select Yes:

Yes No

In order to assure countywide representation, please indicate your place of residence:

Raleigh

Interests & Experiences

Why are you interested in serving on a Board or Commission?

As a water quality researcher and Wake County resident, I am interested in learning more about water issues in the county, as well as contributing to discussions, effective solutions and outreach around these issues.

Work Experience

Associate Professor, Department of Forestry and Environmental Resources, North Carolina State University (2024-) Assistant Professor, Department of Forestry and Environmental Resources, North Carolina State University (2019-2024) Research Scientist, School of Public Health, University of California, Berkeley (2013-2018) Short-term Consultant, World Bank, Water and Sanitation Program (2012) Associate Environmental Engineer, Montgomery Watson Harza (2005-2007)

Volunteer Experience

Education

PhD, Epidemiology, University of California, Berkeley (2013) MPH, Epidemiology and Biostatistics, University of California, Berkeley (2009) MS, Environmental Engineering, University of California, Berkeley (2005) BS, Environmental Engineering, Massachusetts Institute of Technology (2004)

Comments

[Ercumen-CV-2026-1.pdf](#)

Upload a Resume

If you have another document you would like to attach to your application, you may upload it below:

Please upload a file

Demographics

Date of Birth

Gender *

Female

Ethnicity *

Other

Other

How did you become aware of Wake County volunteer opportunities?

Other

If you selected "Other" above, how?

My colleague at NC State recommended that I fill the position she is vacating

Please upload a file

ETHICS GUIDELINES FOR COUNTY ADVISORY BOARDS AND COMMISSIONS

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AYSE ERCUMEN

North Carolina State University
Department of Forestry and Environmental Resources
2225 Jordan Hall Addition
Raleigh, NC 27695

Email: aercume@ncsu.edu
Phone: (510) 225 8828

EDUCATION

PhD	Epidemiology, University of California, Berkeley	2013
MPH	Epidemiology and Biostatistics, University of California, Berkeley	2009
MS	Environmental Engineering, University of California, Berkeley	2005
BS	Environmental Engineering, Massachusetts Institute of Technology	2004

ACADEMIC APPOINTMENTS AND PROFESSIONAL EXPERIENCE

North Carolina State University		
Associate Professor, Department of Forestry and Environmental Resources		2024-
Associate Faculty, Department of Civil, Construction and Environmental Engineering		2020-
Core Faculty, Chancellor's Faculty Excellence Program, Global WaSH Cluster		2019-
Assistant Professor, Department of Forestry and Environmental Resources		2019-2024
Research Scientist, School of Public Health, University of California, Berkeley		2013-2018
Consultant, International Centre for Diarrhoeal Disease Research, Bangladesh		2010-2012
Consultant, World Bank, Water and Sanitation Program		2012
Associate Environmental Engineer, Montgomery Watson Harza		2005-2007

HONORS AND AWARDS

Elsevier list of world's top 2% most cited scientists (2021, 2022, 2024, 2025)
Best Paper of the Year, Global One Health Academy, NC State (2025)
"Thank an Advisor" recognition, NC State (2024, 2025)
Goodnight Early Career Innovator Award, NC State (2023)
Outstanding Global Engagement Award, NC State (2023)
Outstanding Graduate Student Instructor Award, UC Berkeley (2009)
Richard Russell Lee Award for Academic Excellence, MIT (2004)

AWARDS RECEIVED BY MENTEES

Goodnight Fellowship, NC State (Budden 2025)
Abstract ranked #2 at UNC Water and Health Conference (Tazin 2025)
Second place poster, College of Natural Resources Graduate Research Symposium (Davis 2025)
Best PhD poster, College of Natural Resources Graduate Research Symposium (Tazin 2024; Niven 2023)
Global One Health Graduate Travel Award, NC State (Tazin 2024)
NSF Graduate Research Fellowship Program (GRFP) (Davis 2023)
Global One Health Fellowship, NC State (Niven 2023)
Laarman International Gift Fund Travel Award, NC State (Tazin 2023)
Abstract ranked #2 (Niven) and in top 20 (Contreras) at UNC Water and Health Conference (2023)
Abstract ranked #1 (Islam) and in top 10 (Lowe) at UNC Water and Health Conference (2021)

GRANTS FUNDED

Center for Human Health and the Environment (CHHE). Investigating the human health impacts of tidal flooding in coastal North Carolina. 11/1/2025-10/31/2026. Co-PI. **\$35,890**

National Institutes of Health (NIH), Research Project Grant (R01). Prime: Stanford University. Effects of household concrete floors on child health. 8/2022-5/2027. Co-I, lead on NC State subaward. **\$346,846** to NC State (\$3,418,598 total)

National Science Foundation (NSF), International Research Experiences for Students (IRES). Filling the gaps in WaSH research through field-based student research experiences in Malawi. 4/2023-3/2026. Co-PI. **\$299,999**

Global One Health Academy (GOHA). Antimicrobial resistance surveillance across the environment, domestic animals and children in rural Bangladesh, and improved floors to reduce exposure to soilborne resistance. 1/2024-6/2024. PI. **\$49,640**

Center for Human Health and the Environment (CHHE). Earth observation data to support environmental justice: Linking non-permitted poultry operations in eastern North Carolina to water quality impacts and environmental vulnerability indices. 4/2023-6/2024. PI. **\$72,352**

University Global Partnership Network (UGPN) Research Collaboration Fund. Moving the needle in WaSH R&D and impact: Global sharing of challenges and solutions. 8/2022-7/2023. Co-PI. **\$9,999** to NC State (\$40,000 total)

Faculty Research and Professional Development Fund. Point-of-use filters to reduce private well users' exposure to organic exposomes. 7/2022-6/2023. Co-PI. **\$10,000**

North Carolina State University Outreach & Engagement Incentives Grants. Engaging private well users and Wake County's Groundwater Well Program to understand how HRMS technology can benefit public health. 5/2021-6/2022. Co-PI. **\$10,000**

College of Veterinary Medicine Grant Research Award. Environment-to-human transmission of ESBL-producing *Escherichia coli* via wastewater irrigation. 2021-2022. Co-I. **\$25,000**

US Agency for International Development (USAID), Water, Sanitation and Hygiene Partnerships and Learning (WASHPaLS). Improving hygienic management of poultry in rural Uganda. 7/2019-8/2020. Co-PI. **\$99,956** to the Water Trust Uganda.

National Institutes of Health (NIH), Research Project Grant (R01). Effects of sanitation on pathogen transmission and child health in Bangladesh. 8/2014-5/2019. Wrote grant and acted as PI. **\$2,271,443**

World Bank, Water and Sanitation Program. Exposure to fecal contamination, association with diarrhea and sanitation coverage in Bangladesh. 4/2013-12/2014. Co-wrote grant and acted as co-PI. **\$622,867**

PEER-REVIEWED PUBLICATIONS

https://scholar.google.com/citations?hl=en&user=5ZxIY3cAAAAJ&view_op=list_works

<u>Published research articles</u>		<u>Impact metrics</u>	
Total:	89	Total citations:	5166
NC State (2019-2025):	59	h-index:	38
UC Berkeley (2013-2018):	30	i10-index:	63
Under review:	2 (in addition to total above)	Mean journal impact factor:	10.1

Authorship convention: The first author indicates who completed the data analysis and developed the manuscript. The last (senior) author indicates who led the study and mentored the first author.

* Indicates student or post-doctoral researcher I advised or co-advised.

† Indicates student or researcher I mentored during study design, data collection, data analysis and/or development of the specific manuscript. These include junior low-income country scientists as well as US students or post-docs where I provided substantial scientific guidance but was not the formal advisor.

2026

89. * Niven CG, * Clark B, * Floess E, Chirwa B, * Matekenya M, * Budden E, Cadono S, Chavula J, Chisamanga V, Dzinkambani A, Kaponda C, Ngondo N, * Patterson N, Symon S, Chunga BA, Holm RH, Chigwechokha P, de los Reyes III FL, Workman CL, Harris AR, **Ercumen A** (2026). Associations between water supply intermittenencies and water use, drinking water quality, child health, and caregiver emotional stress in peri-urban Malawi. *Environmental Science & Technology*. [10.1021/acs.est.5c08820](https://doi.org/10.1021/acs.est.5c08820)

2025

88. Van Wyk H, Brouwer AF, * Contreras J, Rahman M, Islam M, Pickering AJ, Arnold BF, Luby SP, Colford JM, Freeman M, **Ercumen A**, Eisenberg JNS (2025). Examining the effect of neighborhood sanitation coverage on childhood diarrheal disease in rural Bangladesh. *International Journal of Hygiene and Environmental Health*, 272, 114732. Co-senior author with equal contribution. <https://doi.org/10.1016/j.ijheh.2025.114732>

87. **Ercumen A**, Hossain MS, Tabassum T, Haque A, Rahman A, Rahman MH, Anderson C, * Tazin S, Hanif S, Barratt Heitmann G, Miah MD, Yeamin A, Jahan F, Shoab AK, Mahmud ZH, Rahman M, Benjamin-Chung J (2025). Dirt floors and domestic animals are associated with soilborne exposure to antimicrobial resistant *E. coli* in rural Bangladeshi households. *Environmental Science & Technology*, 59(47):25173–25185. [10.1021/acs.est.5c10329](https://doi.org/10.1021/acs.est.5c10329)

86. * Niven C, Islam M, Nguyen A, Mertens A, Pickering AJ, Kwong LH, Alam M, Sen D, Islam S, Grembi J, Rahman M, Unicomb L, Hubbard AE, Luby SP, Colford JM, Arnold BF, Benjamin-Chung J, **Ercumen A** (2025). Rainfall and temperature influence effectiveness of on-site sanitation intervention against *E. coli* contamination in Bangladeshi households. *International Journal of Hygiene and Environmental Health*, 272, 114731. <https://doi.org/10.1016/j.ijheh.2025.114731>

85. Billava NN, Panchamuki PP, Nayak NS, Kumpel E, **Ercumen A**, Burt Z. Intermittent versus continuous (24x7) water supply system: Empirical Findings from Hubballi-Dharwad, Belagavi and Kalaburagi Cities in Karnataka, India. *Review of Development and Change*, 30 (2), 169-19. <https://doi.org/10.1177/09722661251392>

84. Jeboda D, Banner Shackelford B, Chigwechokha P, Chunga BA, **Ercumen A**, Workman C, Hart J, Smith T, Holm R (2025). Public Opinions from Malawian and Malawi Refugee Camp Residents of Wastewater and Environmental Surveillance. *American Journal of Hygiene and Tropical Medicine*, 113(1), 200-213. <https://doi.org/10.4269/ajtmh.24-0759>

83. * Tazin S, Islam M, Pickering AJ, Kwong LH, Mertens A, * Niven C, Arnold BF, Hubbard AE, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Luby SP, Colford JM, Benjamin-Chung J, **Ercumen A** (2025). Associations between floor material and *E. coli* contamination in rural Bangladeshi households. *International Journal of Hygiene and Environmental Health*, 269, 114641. <https://doi.org/10.1016/j.ijheh.2025.114641>

82. Hanif S, Momo JT, Jahan F, Goldberg L, Herbert N, Yeamin A, Shoab AK, Akhter RM, Roy SK, Barratt Heitmann G, **Ercumen A**, Rahman R, Tofail F, Wong-Parodi G, Benjamin-Chung J (2025). Flooding and elevated prenatal depression in a climate-sensitive community in rural Bangladesh: a mixed methods study. *PLOS Global Health*, 5(7), e000479. <https://doi.org/10.1371/journal.pgph.0004792>

81. * Floess E, **Ercumen A**, Harris A, Grieshop A (2025). Health Trade-Offs of Boiling Drinking Water with Solid Fuels: A Modeling Study. *Environmental Health Perspectives*, 133(6), 067021. <https://doi.org/10.1289/EHP1505>

80. Nguyen A, Ratnasiri K, Barratt Heitmann G, * Tazin S, Anderson A, Hanif S, Yeamin A, Shoab AK, Shanta IS, Jahan F, Hossain MS, Mahmud ZH, Jubair M, Rahman M, Rahman M, **Ercumen A**, Benjamin-Chung J (2025). Potential pathogens and antimicrobial resistance genes in household environments: A study of soil floors and cow dung in rural Bangladesh. *Applied Environmental Microbiology*, 91(6), e00669-25. <https://doi.org/10.1128/aem.00669-25>

79. Nguyen A, Barratt Heitman G, Mertens A, Ashraf S, Ali S, Rahman M, Arnold BF, Grembi JA, Lin A, **Ercumen A**, Benjamin-Chung J. Pathways through which water, sanitation, hygiene and nutrition interventions reduce antibiotic use in young children: a mediation analysis of a cluster-randomized trial (2025). *EClinicalMedicine*, 82. [10.1016/j.eclinm.2025.103147](https://doi.org/10.1016/j.eclinm.2025.103147)
78. † Islam M, * Contreras JD, Unicomb L, Rahman M, Arnold BF, Colford JM, Luby SP, Thomas EA, **Ercumen A**. Sensor-measured versus reported latrine use to characterize sanitation intervention uptake in a randomized controlled trial among households in rural Bangladesh (2025). *International Journal of Hygiene and Environmental Health*, 264, 114511. <https://doi.org/10.1016/j.ijheh.2024.114511>
77. Rahman M, Jahan F, Hanif S, Yeamin A, Shoab AK, Andrews JR, Lu Y, Billington S, Pilote N, Shanta I, Jubair M, Rahman M, Kabir M, Haque R, Tofail F, Hossain S, Mahmud ZH, **Ercumen A**, Benjamin-Chung J (2025). Effects of household concrete floors on maternal and child health – the CRADLE trial: a randomised controlled trial protocol. *BMJ Open*, 15(3), e090703. <https://doi.org/10.1136/bmjopen-2024-090703>
76. **Ercumen A**, Mertens AN, Butzin-Dozier Z, Jung DK, Ali S, Achando BS, Rao G, Hemlock C, Pickering AJ, Stewart CP, Tan S, Grembi JA, Benjamin-Chung J, Wolfe M, Ho G, Rahman MA, Arnold CD, Dentz HN, Njenga SM, Meerkerk T, Chen B, Nadimpalli M, Islam MA, Hubbard AE, Null C, Colford Jr JM, Arnold BF, Luby SP, Rahman A, Lin A. Water, sanitation, handwashing, and nutritional interventions can reduce child antibiotic use: Evidence from Bangladesh and Kenya (2025). *Nature Communications*, 16 (1), 556. <https://doi.org/10.1038/s41467-024-55801-x> **[Best Paper of the Year Award, Global One Health Academy, NC State]**
75. * Niven C, Islam M, Nguyen A, Mertens A, Pickering AJ, Kwong LH, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Hubbard AE, Luby SP, Colford JM, Arnold BF, Benjamin-Chung J, **Ercumen A**. Associations between weather extremes and faecal contamination along pathogen transmission pathways in rural Bangladeshi households: A prospective observational study (2025). *The Lancet Planetary Health*, 9 (1), e5-e13. [10.1016/S2542-5196\(24\)00306-1](https://doi.org/10.1016/S2542-5196(24)00306-1)
- 2024**
74. Brouwer AF, Zahid MH, Eisenberg MC, Arnold BF, Ashraf S, Benjamin-Chung J, Colford Jr JM, **Ercumen A**, Luby SP, Pickering AJ, Rahman M, Eisenberg JNS, Freeman MC (2024). Understanding the effectiveness of water, sanitation, and handwashing interventions: a counterfactual simulation approach to generalizing the outcomes of intervention trials. *Environmental Health Perspectives*, 132(12), 127003. <https://doi.org/10.1289/EHP15200>
73. Tulbure M, Caineta J, Cox B, Stehman SV, **Ercumen A**, Witter R, Emanuel RE, Powell DE, Burdette K, White-Williamson S, Tuberty S (2024). Earth observation data to support environmental justice: Linking non-permitted poultry operations to social vulnerability indices. *GeoHealth*, 8(12), e2024GH001179. <https://doi.org/10.1029/2024GH001179>
72. * Rudd H, **Ercumen A**, Kane E, Shea D, Nichols EG (2024). Diagnostic screening of private well water using high resolution mass spectrometry to support well water management. *Science of the Total Environment*, 175945. <https://doi.org/10.1016/j.scitotenv.2024.175945>
71. Tabassum T, Hossain MS, **Ercumen A**, Benjamin-Chung J, Abedin MF, Rahman M, Jahan F, Haque M, Mahmud ZH (2024). Isolation and characterization of cefotaxime resistant *Escherichia coli* from household floors in rural Bangladesh. *Heliyon*, 10(14). [10.1016/j.heliyon.2024.e34367](https://doi.org/10.1016/j.heliyon.2024.e34367)
70. Grembi JA, Nguyen AT, Riviere M, Barratt Heitmann G, Patil A, Athni TS, Djajadi S, **Ercumen A**, Lin A, Crider Y, Mertens A, Colford Jr. JM, Arnold BF, Karim MA, Islam MO, Miah R, Famida S, Hossen MS, Mutsuddi P, Ali S, Rahman MZ, Hussain Z, Shoab AK, Haque R, Rahman M, Unicomb L, Luby SP, Bennett A, Benjamin-Chung J (2024). Influence of hydrometeorological risk factors on child diarrhea and enteropathogens in rural Bangladesh. *PLOS Neglected Tropical Diseases*, 18(5), e0012157. <https://doi.org/10.1371/journal.pntd.0012157>
69. Nguyen AT, Grembi JA, Riviere M, Barratt Heitmann G, Hutson WD, Athni TS, Patil A, **Ercumen A**, Lin A, Crider Y, Mertens A, Unicomb L, Rahman M, Colford Jr. JM, Luby SP, Arnold BF, Benjamin-Chung (2024). Influence of temperature and precipitation on the effectiveness of water, sanitation, and handwashing interventions against childhood diarrheal disease in rural Bangladesh: a re-analysis of the WASH Benefits trial. *Environmental Health Perspectives*, 132(4), 047006. <https://doi.org/10.1289/EHP1380>

68. * Contreras JD, Islam M, Mertens A, Pickering AJ, Arnold BF, Benjamin-Chung J, Hubbard AE, Rahman M, Unicomb L, Luby SP, Colford JM, **Ercumen A** (2024). Improved child feces management mediates reductions in childhood diarrhea from an on-site sanitation intervention: Causal mediation analysis of a cluster-randomized controlled trial in rural Bangladesh. *Journal of Epidemiology and Global Health*, 1-14. <https://doi.org/10.1007/s44197-024-00210-y>

67. † Mertens AN, Arnold BF, Benjamin-Chung J, Boehm A, Brown J, Capone D, Clasen T, Fuhrmeister E, Grembi JA, Holcomb D, Knee J, Kwong LH, Lin A, Luby SL, Nala R, Nelson N, Njenga SM, Null C, Pickering AJ, Rahman M, Reese H, Steinbaum L, Stewart J, Thilakaratne R, Cumming O, Colford Jr. JM, **Ercumen A** (2024). Is detection of enteropathogens and microbial source tracking markers in the environment associated with subsequent child enteric infections and growth: an individual participant data meta-analysis. *The Lancet Global Health*, 12(3), e433-e444. [10.1016/S2214-109X\(23\)00563-6](https://doi.org/10.1016/S2214-109X(23)00563-6)

66. * Meyer C, * Price S, * Bailiff B, **Ercumen A** (2024). Do domestic animal husbandry operations contaminate groundwater sources with antimicrobial resistance: Systematic review. *Environmental Science and Pollution Research*, 31(11), 16164-16176. <https://doi.org/10.1007/s11356-024-31899-w>

65. Arnold BF, Rerolle F, Tedijanto C, Njenga SM, Rahman M, **Ercumen A**, Mertens A, Pickering AJ, Arnold CD, Stewart CP, Null C, Luby SP, Colford JM, Hubbard AE, Benjamin-Chung J (2024). Geographic pair-matching in large-scale cluster randomized trials. *Nature Communications*, 15(1), 1069. <https://doi.org/10.1038/s41467-024-45152-y>

2023

64. † Islam M, Rahman M, Kafi MAH, Unicomb L, Rahman M, Mertens A, Benjamin-Chung J, Arnold BF, Colford JM, Luby SL, **Ercumen A** (2023). Assessing sustained uptake of latrine and child feces management interventions: Extended follow-up of a cluster-randomized controlled trial in rural Bangladesh 1-3.5 years after intervention initiation. *International Journal of Hygiene and Environmental Health*, 250, 114149. <https://doi.org/10.1016/j.ijheh.2023.114149>

63. † Mertens AN, Arnold BF, Benjamin-Chung J, Boehm A, Brown J, Capone D, Clasen T, Fuhrmeister E, Grembi JA, Holcomb D, Knee J, Kwong LH, Lin A, Luby SL, Nala R, Nelson N, Njenga SM, Null C, Pickering AJ, Rahman M, Reese H, Steinbaum L, Stewart J, Thilakaratne R, Cumming O, Colford Jr. JM, **Ercumen A** (2023). Effects of water, sanitation, and hygiene interventions on detection of enteropathogens and host-specific faecal markers in the environment: an individual-participant data meta-analysis. *The Lancet Planetary Health*, 7(3), e197-e208. [10.1016/S2542-5196\(23\)00028-1](https://doi.org/10.1016/S2542-5196(23)00028-1)

2022

62. Workman CL, Stoler J, Harris A, **Ercumen A**, Kearns J, Mapunda KM (2022). Food, water and sanitation insecurities: Complex linkages and implications for achieving WASH security. *Global Public Health*, 17(11), 3060-3075. <https://doi.org/10.1080/17441692.2021.1971735>

61. * Lowe J, **Ercumen A**, Prottas C, Harris AR (2022). Exploring the determinants and indicators of poultry feces management behaviors in rural western Uganda. *Science of the Total Environment*, 834, 155202. <https://doi.org/10.1016/j.scitotenv.2022.155202>

60. * Contreras JD, Islam M, Mertens A, Pickering AJ, Arnold BF, Benjamin-Chung J, Hubbard AE, Rahman M, Unicomb L, Luby SP, Colford JM, **Ercumen A** (2022). Evaluation of an on-site sanitation intervention against childhood diarrhea and acute respiratory infection 1 to 3.5 years after implementation: Extended follow-up of a cluster-randomized trial in rural Bangladesh. *PLoS Medicine*, 19(8), e1004041. <https://doi.org/10.1371/journal.pmed.1004041>

59. * Contreras JD, Islam M, Mertens A, Pickering AJ, Kwong LH, Arnold BF, Benjamin-Chung J, Hubbard AE, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Luby SP, Colford JM, **Ercumen A** (2022). Influence of community-level sanitation coverage on environmental contamination and child health in a longitudinal cohort in rural Bangladesh. *International Journal of Hygiene and Environmental Health*, 245, 114031. <https://doi.org/10.1016/j.ijheh.2022.114031>

58. Rahman M, † Islam M, Doza S, Naser AM, Sen D, Shahriar S, Gazi MS, Alam GR, Khan GK, Rosenbaum J, Islam MS, Unicomb L, Clasen TF, **Ercumen A** (2022). Higher helminth ova counts and delayed decomposition in sand-enveloped latrine pits in a coastal sub-district of Bangladesh. *PLoS Neglected Tropical Diseases*, 16(6), e0010495. <https://doi.org/10.1371/journal.pntd.0010495>

57. Kumpel E, Billava N, Nayak N, **Ercumen A** (2022). Water use behaviors and water access in intermittent and continuous water supply areas during the COVID-19 pandemic. *Journal of Water and Health*, 20(1), 139-148. <https://doi.org/10.2166/wh.2021.184>

2021

56. Rahman M, Alam M, Luies SK, Kamal A, Ferdous S, Lin A, Sharior F, Khan R, Rahman MD, Parvez SM, Amin N, Hasan R, Tadesse BT, Taneja N, Islam MA, **Ercumen A** (2021). Contamination of fresh produce with antibiotic resistant organisms and associated risks to human health: A scoping review. *International Journal of Environmental Research and Public Health*, 19(1), 360. <https://doi.org/10.3390/ijerph19010360>

55. Alam M, Ferdous S, **Ercumen A**, Lin A, Kamal A, Luies SK, Sharior F, Khan R, Rahman MD, Parvez SM, Amin N, Tadesse BT, Taneja N, Moushomi NA, Hasan R, Islam MA, Rahman M (2021). Effective treatment strategies for the removal of antibiotic resistant bacteria, antibiotic resistance genes and antibiotic residues in the effluent from wastewater treatment plants receiving municipal, hospital and domestic wastewater: Protocol for a systematic review. *JMIR Research Protocols*, 10(11), e33365. [10.2196/33365](https://doi.org/10.2196/33365)

54. * Slobodiuk S, * Niven C, Arthur G, Thakur S, **Ercumen A** (2021). Does wastewater irrigation increase antimicrobial resistance in soil and water: Systematic review. *International Journal of Environmental Research and Public Health*, 18(21), 11046. <https://doi.org/10.3390/ijerph182111046>

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REFEREED CONFERENCE PRESENTATIONS

Authorship convention: The first author indicates who completed the data analysis and delivered the presentation. The last (senior) author indicates who led the study and mentored the first author.

* Indicates student or post-doctoral researcher I advised or co-advised.

† Indicates student or researcher I mentored during study design, data collection, data analysis and/or development of the specific presentation. These include junior low-income country scientists as well as US students/post-docs where I provided substantial scientific guidance but was not the formal advisor.

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58. Jahan F, Rahman M, Hanif S, Yeamin A, Shoab AK, Mahmud ZH, Tofail F, Haque R, **Ercumen A**, Benjamin-Chung J. Effects of household concrete floors on maternal and child health (CRADLE trial): a randomized controlled trial. *American Society of Tropical Medicine and Hygiene (ASTMH) Annual Meeting*, New Orleans, LA, Nov 13-17, 2024.
57. * Tazin S, Islam M, Mertens A, Pickering AJ, Kwong LH, Arnold BF, Hubbard AE, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Luby SP, Colford JM, Benjamin-Chung J, **Ercumen A**. Association of flooring material with *E. coli* contamination in rural Bangladeshi households. *North Carolina Global Health Conference*, Raleigh, NC, Oct 22, 2024 (poster).
56. * Niven CG, Islam M, Nguyen A, Mertens A, Pickering AJ, Kwong LH, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Hubbard AE, Luby SP, Grembi JA, Colford, Jr. JM, Arnold BF, Benjamin-Chung J, **Ercumen A**. Rainfall and temperature modify the efficacy of sanitation interventions on *E. coli* contamination in households in rural Bangladesh. *North Carolina Global Health Conference*, Raleigh, NC, Oct 22, 2024 (poster).
55. Tajanpure P, **Ercumen A**, Kumpel E. Unpredictability of intermittent water supply: Health and societal implications in urban India. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 14-18, 2024.
54. * Tazin S, Islam M, Mertens A, Pickering AJ, Kwong LH, Arnold BF, Hubbard AE, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Luby SP, Colford JM, Benjamin-Chung J, **Ercumen A**. Association of flooring material with *E. coli* contamination in rural Bangladeshi households. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 14-18, 2024.
53. * Niven CG, Islam M, Nguyen A, Mertens A, Pickering AJ, Kwong LH, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Hubbard AE, Luby SP, Grembi JA, Colford, Jr. JM, Arnold BF, Benjamin-Chung J, **Ercumen A**. Rainfall and temperature modify the efficacy of sanitation interventions on *E. coli* contamination in households in rural Bangladesh. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 14-18, 2024 (poster).
52. Tulbure MG, Caineta J, **Ercumen A**, Burdette K. Earth Observation data to support environmental justice: Linking non-permitted poultry operations in eastern North Carolina to water quality impacts and environmental vulnerability indices. *American Geophysical Union (AGU) Annual Meeting*, San Francisco, CA, Dec 11-15, 2023.
51. * Rudd H, Nichols EG, **Ercumen A**, Kane E, Shea D. Using point-of-use filters and high-resolution mass spectrometry to examine and reduce private well users' exposure to organic contaminants. *AWRA 2023 Annual Water Resources Conference*, Raleigh, NC, Nov 6-8, 2023.
50. **Ercumen A**, Mertens AN, Butzin-Dozier Z, Jung DK, Ali S, Achando BS, Rao G, Hemlock C, Pickering AJ, Stewart CP, Tan S, Grembi JA, Benjamin-Chung J, Wolfe M, Ho G, Rahman MZ, Arnold CD, Dentz HN, Njenga SM, Meerkerk D, Chen B, Nadimpalli M, Islam MA, Hubbard AE, Null C, Colford JM, Arnold BF, Luby SP, Rahman M, Lin A. Can WASH/nutritional interventions reduce antibiotic use: Evidence from cluster-randomized controlled trials in Bangladesh and Kenya. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 23-27, 2023.
49. * Niven C, Islam M, Nguyen A, Mertens A, Pickering AJ, Kwong LH, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Hubbard AE, Luby SP, Colford JM, Arnold BF, Benjamin-Chung J, **Ercumen A**. Effects of climate extremes on fecal contamination along pathogen transmission pathways in rural Bangladeshi households. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 23-27, 2023 **[Ranked #2 submission]**
48. * Contreras J, Islam M, Mertens A, Pickering AJ, Arnold BF, Benjamin-Chung J, Hubbard AE, Rahman M, Unicomb L, Luby SP, Colford JM, **Ercumen A**. Improved child feces management mediates reductions in childhood diarrhea from an onsite sanitation intervention: Causal mediation analysis of a cluster-randomized controlled trial in rural Bangladesh. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 23-27, 2023. **[Ranked among top 20 submissions]**

47. Kamal A, Alam M, Tabassum KF, Ferdous S, **Ercumen** A, Islam MA, Rahman M. Strategies to control AMR from the effluent of WWTPs receiving municipal, hospital, and domestic wastewater: Evidence synthesis. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 23-27, 2023.
46. Van Wyk H, Brouwer AF, **Ercumen** A, Contreras J, Freeman MC, Eisenberg JE. Examining the effect of neighborhood latrine coverage on childhood diarrheal risk in rural Bangladesh. *American Society of Tropical Medicine and Hygiene (ASTMH) Annual Meeting*, Chicago, IL, Oct 18-22, 2023.
45. Rachita S, * Rudd H, **Ercumen** A, Guthrie Nichols E. Do you know what's in your well water? Screening for organic chemicals of concern in private wells of Wake County. *State of North Carolina Undergraduate Research & Creativity Symposium*. UNC Wilmington, Dec 3, 2022 (poster).
44. † Mertens AN, Arnold BF, Benjamin-Chung J, Boehm A, Brown J, Capone D, Clasen T, Fuhrmeister E, Grembi JA, Holcomb D, Knee J, Kwong LH, Lin A, Luby SL, Nala R, Nelson N, Njenga SM, Null C, Pickering AJ, Rahman M, Reese H, Steinbaum L, Stewart J, Thilakarathne R, Cumming O, Colford Jr. JM, **Ercumen** A. Links between water, sanitation and hygiene interventions, environmental contamination, child enteric infections and growth: An individual participant data meta-analysis. *American Society of Tropical Medicine and Hygiene (ASTMH) Annual Meeting*, Seattle, WA, Oct 30-Nov 2, 2022.
43. * Contreras JD, Islam M, Mertens A, Pickering AJ, Kwong LH, Arnold BF, Benjamin-Chung J, Hubbard AE, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Luby SP, Colford JM, **Ercumen** A. Longitudinal effects of a cluster-randomized sanitation intervention on diarrhea and respiratory infection in rural Bangladesh. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 24-28, 2022.
42. * Contreras JD, Islam M, Mertens A, Pickering AJ, Kwong LH, Arnold BF, Benjamin-Chung J, Hubbard AE, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Luby SP, Colford JM, **Ercumen** A. Influence of community-level sanitation coverage on environmental fecal contamination and child health in rural Bangladesh. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 24-28, 2022 (poster).
41. Poulin C, Peletz R, **Ercumen** A, Pickering A, Marshall K, Boehm A, Khush R, Delaire C. What environmental factors influence the concentration of fecal indicator bacteria in groundwater? Insights from Uganda and Bangladesh. *Groundwater, Key to the Sustainable Development Goals*, Paris, France, May 18-20, 2022.
40. * Contreras JD, Islam M, Mertens A, Pickering AJ, Kwong LH, Arnold BF, Benjamin-Chung J, Hubbard AE, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Luby SP, Colford JM, **Ercumen** A. Longitudinal effects of a sanitation intervention on environmental fecal contamination in a cluster-randomized controlled trial in rural Bangladesh. *American Society of Tropical Medicine and Hygiene (ASTMH) Annual Meeting*, Nov 17-21, 2021.
39. * Contreras JD, Islam M, Mertens A, Pickering AJ, Kwong LH, Arnold BF, Benjamin-Chung J, Hubbard AE, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Luby SP, Colford JM, **Ercumen** A. Longitudinal effects of an on-site sanitation intervention on child diarrhea and acute respiratory infection 1-3.5 years after implementation in a cluster-randomized controlled trial in rural Bangladesh. *American Society of Tropical Medicine and Hygiene (ASTMH) Annual Meeting*, Nov 17-21, 2021 (poster).
38. † Islam M, Rahman M, Abdullah Heel Kafi, Unicomb L, Rahman M, Mertens A, Benjamin-Chung J, Arnold B, Colford J, Luby S, **Ercumen** A. User uptake of latrine and child feces management interventions among households with children <5 years in rural Bangladesh: Evidence from 2.5 years of longitudinal follow-up. *UNC Water and Health Conference*, Oct 4-8, 2021. **[Ranked #1 submission]**
37. * Lowe J, **Ercumen** A, Prottas C, Zikusooka S, Harris A. Investigating the Temporal Variability of Poultry Feces Risk Perceptions and Management Self-Efficacy in Rural Uganda. *UNC Water and Health Conference*, Oct 4-8, 2021. **[Ranked among top 10 submissions]**
36. * Floess E, **Ercumen** A, Harris A, Grieshop A. Health Impacts of Boiling Drinking Water with Solid Fuels. *UNC Water and Health Conference*, Oct 4-8, 2021.

35. * Floess E, **Ercumen A**, Harris A, Grieshop A. Do the Health Benefits of Boiling Drinking Water Outweigh the Associated Impacts of Increased Household Air Pollution Exposure? *American Geophysical Union (AGU) Annual Meeting*, Dec 1-17, 2020.
34. * Lowe J, **Ercumen A**, Prottas C, Harris A. Exploring the Determinants and Indicators of Poultry Feces Management Behaviors in Rural Western Uganda. *UNC Water and Health Conference*, Oct 26-30, 2020 (poster).
33. † Islam M, Rahman M, Unicomb L, Kafi MAH, Rahman M, Alam M, Sen D, Islam S, Pickering AJ, Arnold BF, Hubbard AE, Luby SP, Colford JM, **Ercumen A**. Associations between child feces management and fecal contamination of hands, stored drinking water and observed hand cleanliness in rural Bangladesh. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 7-11, 2019.
32. Goddard FGB, Pickering AJ, **Ercumen A**, Chang HH, Clasen TF. An individual participant data meta-analysis on the association between environmental fecal contamination and child health. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 7-11, 2019.
31. Poulin C, Peletz R, **Ercumen A**, Pickering A, Marshall K, Boehm A, Khush R, Delaire C. What environmental factors influence the concentration of fecal indicator bacteria in groundwater? Insights from explanatory modeling in Uganda and Bangladesh. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 7-11, 2019.
30. Rahman M, Doza S, Naser AM, Ahmed KM, Khan GKK, Parvez SM, **Ercumen A**, Islam MS, Luby SP, Clasen TF, Unicomb L. Effect of sand barriers around pit latrines on pit content decomposition and helminth ova counts in coastal Bangladesh. *Planetary Health Annual Meeting*, Stanford, CA, Sept 4-6, 2019.
29. Naser AM, Doza S, Rahman M, Ahmed KM, Gazi R, Robin RA, Karim R, Uddin MN, Mahmud I, **Ercumen A**, Annis J, Rosenbaum J, Luby SP, Unicomb L, Clasen T. Sand barrier around latrine to prevent faecal leaching into the shallow water aquifer: A randomized controlled trial in coastal Bangladesh. *American Society of Tropical Medicine and Hygiene (ASTMH)*, New Orleans, LA, Oct 28-Nov 1, 2018.
28. **Ercumen A**, Lin A, Pickering AJ, Null C, Luby SP, Colford JM. The WASH Benefits Study: The Effect of Single and Combined Water, Sanitation, Handwashing and Nutrition Interventions on Environmental Contamination, Parasite Infection, Environmental Enteric Dysfunction and Child Development. *American Society of Tropical Medicine and Hygiene (ASTMH)*, Baltimore, MD, Nov 5-9, 2017 (symposium).
27. **Ercumen A**, Benjamin-Chung J, Pickering AJ, Arnold B, Addiss D. WASH Benefits and STH: Results and Program Implications, *Coalition for Operational Research on Neglected Tropical Diseases*, Baltimore, MD, Nov 3-4, 2017.
26. **Ercumen A**, Lin A, Pickering AJ, Null C, Luby SP, Colford JM. Results from the WASH Benefits Trials of Water Quality, Sanitation, Handwashing and Nutritional Interventions in Bangladesh and Kenya. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 16-20, 2017.
25. † Kwong LH, **Ercumen A**, Pickering AP, Unicomb L, Davis J, Leckie J, Luby SP. Soil Ingestion Among Young Children in Rural Bangladesh. *International Society of Exposure Science*, Research Triangle Park, NC, Oct 15-19, 2017.
24. **Ercumen A**, Pickering AJ, Arnold BF, Kwong LH, Parvez SM, Kullman C, Chase C, Ahmed R, Unicomb L, Colford JM, Luby SP. Quantifying fecal contamination levels of drinking and ambient waters, hands, food, soil and flies in the domestic environment in rural Bangladesh. *American Society of Tropical Medicine and Hygiene (ASTMH)*, Atlanta, GA, Nov 14-17, 2016.
23. Pickering AJ, **Ercumen A**, Arnold BF, Kwong LH, Parvez SM, Kullman C, Ahmed R, Chase C, Unicomb L, Colford JM, Luby SP. Fecal contamination along multiple environmental pathways is associated with subsequent diarrhea among children in rural Bangladesh. *American Society of Tropical Medicine and Hygiene (ASTMH)*, Atlanta, GA, Nov 14-17, 2016.
22. † Kwong LH, **Ercumen A**, Pickering AP, Unicomb L, Davis J, Luby SP. Hand- and Object-Mouthing by Rural Bangladeshi Children 6-20 Months Old; Importance of Including Food-Related Contacts. *American Society of Tropical Medicine and Hygiene (ASTMH)*, Atlanta, GA, Nov 14-17, 2016.

21. Steinbaum L, † Kwong LH, **Ercumen** A, † Negash M, † Lovely A, Njenga SM, Boehm AB, Pickering AJ, Nelson K. Soil-transmitted helminths in soil: Method development and field testing in Kenya and Bangladesh. *American Society of Tropical Medicine and Hygiene (ASTMH)*, Atlanta, GA, Nov 14-17, 2016. (poster)
20. † Islam M, **Ercumen** A, Naser AM, Unicomb L, Rahman M, Arnold BF, Colford JM, Luby SP. Effectiveness of the H2S test as a water quality indicator for diarrhea risk in rural Bangladesh. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 10-14, 2016.
19. † Kwong LH, **Ercumen** A, Pickering AP, Unicomb L, Davis J, Luby SP. Hand- and Object-Mouthing by Rural Bangladeshi Children 6-20 Months Old; Importance of Including Food-Related Contacts. *International Society of Exposure Science*, Utrecht, Netherlands, Oct 9-13, 2016.
18. Arnold BF, Schiff K, **Ercumen** A, Benjamin-Chung J, Steele J, Griffith J, Steinberg S, Smith P, McGee C, Wilson R, Nelsen C, Weisberg S, Colford JM. Acute Illness Associated with Ocean Exposure and Fecal Indicator Bacteria during Dry and Wet Weather: A Longitudinal Cohort Study of Surfers in San Diego, CA. *USEPA Recreational Waters Conference*, New Orleans, LA, Apr 12-15, 2016. (presented on behalf of Arnold).
17. † Islam M, **Ercumen** A, Ashraf A, Das KK, Kafi MAH, Luby SP, Unicomb L. Impact of unsafe feces disposal of <3 years child among households with latrine access in rural Bangladesh. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 26-30, 2015.
16. Steinbaum L, Nelson K, **Ercumen** A, Kwong LH, Kihara J, Njenga SM, Boehm A, Davis J, Null C, Pickering AJ. Soil-transmitted helminth contamination in rural Kenyan homes. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 26-30, 2015.
15. Pickering A, **Ercumen** A, Arnold B, Kwong L, Parvez S, Kullman C, Ahmed R, Unicomb L, Colford JM, Luby SP. Fecal contamination among multiple environmental pathways is associated with subsequent diarrhea among children in rural Bangladesh. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 26-30, 2015.
14. Doza S, Islam MA, Ashraf SA, **Ercumen** A, Pickering AJ, Kwong LH, Das KK, Unicomb L, Luby SP. Contamination of home-made complementary food and flies carrying E. coli in rural Bangladesh. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 26-30, 2015.
13. † Kwong LH, **Ercumen** A, Pickering AP, Unicomb L, Davis J, Luby SP. Hand- and Object-Mouthing of Rural Bangladeshi Children 3-18 Months Old. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 26-30, 2015 (poster).
12. † Parvez SM, Kwong LH, Ercumen A, Pickering A, Ghosh PK, Rahman MJ, Unicomb L, Luby SL. E. coli contamination of complementary foods and association with domestic hygiene in rural Bangladesh. *American Society of Tropical Medicine and Hygiene (ASTMH)*, Philadelphia, PA, Oct 25-29, 2015.
11. † Kwong LH, **Ercumen** A, Pickering AP, Unicomb L, Davis J, Luby SP. Hand- and Object-Mouthing of Rural Bangladeshi Children 3-18 Months Old. *International Society of Exposure Science*, Las Vegas, NV, Oct 18-22, 2015.
10. **Ercumen** A, Arnold BF, Kumpel E, Burt ZI, Ray I, Nelson KL, Colford JM. Upgrading a piped water supply from intermittent to continuous delivery: Impact on waterborne illness in urban India. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 13-17, 2014. **[Ranked #1 submission]**
9. **Ercumen** A, Naser AM, Unicomb L, Arnold BF, Colford JM, Luby SP. Randomized controlled trial evaluating health impact of treating and safely storing shallow tubewell drinking water in rural Bangladesh. *UNC Water and Health Conference*, Chapel Hill, NC, Oct 14-18, 2013.
8. Naser AM, **Ercumen** A, Hussain Z, Rahman Z, Arnold BF, Colford JM, Luby SP, Unicomb L. Tube well water disinfection using sodium dichloroisocyanurate when recommended chlorine residual is not attained. *UNC Water & Health Conference*, Chapel Hill, NC, Oct 14-18, 2013.
7. Kumpel E, **Ercumen** A, Burt ZI, Ray I, Colford JM, Nelson KL. Evaluation of intermittent versus 24/7 water supply in Hubli-Dharwad, India. *IWA Development Congress & Exhibition*, Nairobi, Kenya, Oct 14-17, 2013.

6. Naser AM, Higgins EM, Arman S, **Ercumen** A, Ashraf S, Rahman M, Luby SP, Unicomb L. Influence of iron and groundwater contamination on residual chlorine of water treated with sodium dichloroisocyanurate (NaDCC) tablets. *University of Oklahoma WaTER Conference*, Norman, OK, Sept 23-25, 2013.
5. Naser AM, **Ercumen** A, Rahman M, Arnold B, Colford JM, Islam M, Unicomb L, Luby SP. Microbiological effectiveness of treating and safely storing shallow tubewell water in rural Bangladesh: A pilot study. *American Society of Tropical Medicine and Hygiene (ASTMH)*, Philadelphia, PA, Dec 4-8, 2011. (*poster*)
4. **Ercumen** A, Naser AM, Rahman MW, Arnold BF, Colford JM, Islam MS, Unicomb L, Luby SP. Uptake of chlorine treatment and safe storage of shallow tubewell water in rural Bangladesh: A pilot study. *UNC Water and Health*, Chapel Hill, NC, Oct 3-6, 2011. (*poster*)
3. **Ercumen** A, Kumpel E, Nelson KL. Water quality and household behaviors affecting water quality in an intermittent and continuous urban piped water supply. *Singapore International Water Week*, Singapore, Jun 28-Jul 2, 2010.
2. **Ercumen** A, Colford JM. Water distribution systems and the risk of gastrointestinal illness. *American Public Health Association (APHA)*, Philadelphia, PA, Nov 7-11, 2009.
1. **Ercumen** A, Kumpel E, Burt ZI. Volunteer-led effort linking research to development practice to promote safe water and hygiene in slums in India. *Water Environment Federation Disinfection*, Atlanta, GA, Mar 1-3, 2009.

INVITED TALKS, SEMINARS AND PRESENTATIONS

28. Panelist. Students for the Advancement of Global One Health (SAGOH). Water and Civilization Panel. NC State, Nov 6, 2025.
27. Speaker. *Can low-cost WASH and nutrition interventions reduce antibiotic use: Evidence from cluster-randomized trials in Bangladesh and Kenya*. Global One Health Academy One Health Research Symposium, NC State, Apr 25, 2025
26. Speaker. *State of the world's water*. Global WaSH Club and Students for the Advancement of Global One Health (SAGOH) Earth Day event, Apr 16, 2025.
25. Seminar speaker. Taps, toilets and dirt floors: Child exposure pathways to environmental contaminants in low-income countries. Toxicology Program Seminar Series, NC State, Feb 4, 2025.
24. Speaker. *Global Lessons for Local Contexts to Reduce Infectious Disease Risks*. NC State Research Week, Oct 22, 2024 (virtual).
23. Symposium presenter. *When is your water on? Harmonizing measurements of intermittency and predictability in piped water supplies for research and policy*. UNC Water and Health Conference, Chapel Hill, NC, Oct 14-18, 2024.
22. Speaker. *Taps, Toilets and Dirt Floors: Filling the Gaps in Water, Sanitation, and Hygiene Research to Achieve Transformative Solutions*. PAUSE (Pakistan and United States Environmentalists) Webinar series (virtual). Sep 23, 2024.
21. Speaker. *Filling the Gaps: How to Get from Status Quo to Transformative WASH Solutions*. Mzuzu University, Mzuzu, Malawi, May 30, 2024.
20. Symposium presenter. *Building Consensus Around Metrics and Monitoring in Area-Wide Sanitation*. UNC Water and Health Conference, Chapel Hill, NC, Oct 23-27, 2023.
19. Plenary speaker. *Can We Achieve Safely Managed Water for All in a Climate-Sensitive World: Case Study of Tubewells in Bangladesh*. Bangladesh Association for Food Protection in North America - International Association for Food Protection (virtual), Sep 30, 2023.
18. Webinar speaker. *Unknown Factors in WASH: How to Get from Status Quo to Transformative Solutions*. University Global Partnership Network (UGPN) Webinar. NC State, University of Sao Paulo, University of Surrey (virtual), Apr 28, 2023.

17. Speaker and panelist. *Who's Got Safe Water: Closing the Gaps*. Environmental Justice Symposium. NC State Stewards, NC State, Mar 21, 2023.
16. Speaker. *Can Water, Sanitation, Hygiene and Nutrition Interventions Reduce Antibiotic Use: Gendered Effects?* 7th Annual Center for Human Health and the Environment Symposium, NC State, Feb 21, 2023.
15. Speaker. *Equitable Access to Safe Water for All: Toward the UN Sustainable Development Goals*. Equity Research Symposium, NC State, Feb 8, 2022.
14. Speaker. *Safely Managed Water for All*. Sustainable Development Goals Club TedX Event, UNC Charlotte (virtual), Nov 16, 2021.
13. Speaker. *Safely Managed Water for All*. Sustainable Development Goals Workshop, Office of Global Engagement, NC State, Nov 10, 2021.
12. Panelist. Young Professionals Panel, UNC Water and Health Conference, Oct 6, 2021.
11. Panelist. Engineers Without Borders, NC State Student Chapter Research Panel, Apr 17, 2021.
10. Seminar speaker. *Infectious Disease Transmission through Environmental Pathways and WASH Interventions*. Environmental, Water Resources, and Coastal Engineering, NC State, Aug 21, 2020.
9. Seminar speaker. *Infectious Disease Transmission through Environmental Pathways and WASH Interventions*. Forestry and Environmental Resources Department Seminar, NC State, Aug 17, 2020.
8. Speaker. *Water, Sanitation and Hygiene Interventions to Improve Child Health in Low-Income Countries*. East Wake Academy Earth Day event (virtual), Apr 22, 2020.
7. Invited presenter. *WASH Studies with STH Implications*, Soil-Transmitted Helminthiasis Advisory Committee (STHAC) Meeting, Baltimore, MD, Nov 2-3, 2017.
6. Symposium presenter. *Exposure to Animal Feces and Human Health*. Symposium, UNC Water and Health Conference, Chapel Hill, NC, Oct 16-20, 2017.
5. Speaker. *Acute Illness Associated with Ocean Exposure and Fecal Indicator Bacteria during Dry and Wet Weather: A Longitudinal Cohort Study of Surfers in San Diego, CA*. California State Water Resources Control Board, Oakland, CA, Nov 10, 2016.
4. Speaker. *Drinking Water and Environmental Health*. Chinese Center for Disease Control and Prevention, National Center of Rural Water Supply Technical Guidance, Beijing, China, Mar 20-22, 2016.
3. Presenter. *Impact of a Water Quality Intervention on Typhoid Incidence in Urban India*. 9th International Conference on Typhoid and Invasive NTS Disease, Bali, Indonesia, Apr 30-May 3, 2015
2. Invited presenter. *Impact Evaluation for Switching from Intermittent to 24x7 Water Supply in Hubli-Dharwad, India*. World Bank, Dhaka, Bangladesh, Aug 5, 2013.
1. Invited presenter. *Evaluation of 24x7 Water supply in Hubli-Dharwad - City Stakeholders' Perceptions, Water quality, Health, and Affordability*. World Bank, Delhi, India, Jul 25, 2013.

OTHER SCHOLARLY ACTIVITY

Invited participant. Grand Challenges Addressing Program. Antimicrobial Resistance. “Speed Dating” and Flash Funding Event. NC State, Dec 10, 2025.

Invited panelist. Goodnight Scholars Faculty Dinner Panel, NC State, Nov 20, 2025.

Invited workshop participant. North America One Health University Network (virtual), Sep 4-5, 2025.

Invited workshop participant. Food and Water Solutions Workshop. NC State, May 13-14, 2023.

Participant. Community-Engaged Workshop: Impact-focused Environmental Health Research. NC State, Mar 24, 2025.

Participant. Climate & Sustainability Academy Open House. NC State, Mar 3, 2025.

Invited panelist. Junior MANRRS Career Panel/Flash Talks. NC State, Mar 19, 2024.

Instructor. Refresher Course/Capacity Building Training Program on the Use of Modern Tools in Social Science Research. Center for Multidisciplinary Development Research, Dharwad, India (virtual), Mar 17, 2025.

Invited panelist. The Postdoctoral Readiness to Enter the Professoriate Program (PREPP). NC State, Mar 21, 2024.

Invited participant. Global One Health Academy (GOHA) strategic planning meeting. NC State, Feb 23, 2024.

Invited symposium participant. Building Partnerships for Health and Sustainable Agricultural Development in East Africa. NC State, Sept 18-20, 2023.

Participant. Coastal Resilience and Sustainability Initiative celebration event. NC State, Apr 25-26, 2023. **[Research pitch awarded \$10,000 of seed funding for proposal development]**

Invited participant. PAUSE AMR Workshop for Creativity Hubs. North Carolina Biotechnology Center, Mar 3, 2023.

Invited participant. Household Water Insecurity Experiences Workshop. *Causes, Consequences, and Measurement of Unpredictable Water Supplies: An Underlying Driver of Water Insecurity*. University of Miami, Jan 9-10, 2023.

Interviewed as subject matter expert for Environmental Health Perspectives Science Selection. *How Improved Is Improved Enough? Gastrointestinal Illness Risk after Sewer Infrastructure Upgrades*. Jun 14, 2022. <https://doi.org/10.1289/EHP11525>

Workshop convener. University Global Partnership Network (UGPN) Conference, Global WaSH Workshop (virtual). *Exploring the “Adjacent Possible” in Global WaSH*, Mar 21-23, 2022.

Presenter. Coastal Resilience and Sustainability Initiative (CRSI) Lightning Talks, NC State, Sep 22, 2021.

Interviewed as subject matter expert for Environmental Health Perspectives Science Selection. *A Better Way to Boil: Comparing Methods of Purifying Water at Home*. Apr 9, 2021. <https://doi.org/10.1289/EHP8921>

Webinar Panelist. *Lessons learned: Poultry Management and Water, Sanitation and Hygiene*. Organized by The Water Trust Uganda. Mar 9, 2021.

Webinar Panelist. *The Water Trust Poultry and Health*. Organized by The Water Trust Uganda. Jun 10, 2020

Workshop instructor. Fecal pathogen exposure in the environment, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), Dhaka, Bangladesh, Feb 27, 2014.

Workshop instructor. Health impact evaluation, Kenya Medical Research Institute (KEMRI), Nairobi, Kenya, Jan 18, 2013.

Workshop instructor. Health impact evaluation, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), Dhaka, Bangladesh, Jan 10-12, 2012.

RESEARCH HIGHLIGHTS IN MEDIA

Featured in *Environmental Health Perspectives* Invited Perspective. Carlton EJ (2024). Climate changes the effectiveness of water, sanitation and hygiene interventions. <https://doi.org/10.1289/EHP14771>

Featured in *Lancet Global Health* Commentary. Dey MC, Parvez M (2021). Household finished flooring as guard against enteric illness in children. [https://doi.org/10.1016/S2214-109X\(21\)00005-X](https://doi.org/10.1016/S2214-109X(21)00005-X)

Featured in *PLoS Blogs* (2016). Catching up with the Authors: Aurelie Jeandron and Ayse Ercumen on Clean Water Supply in the DRC and India. <http://blogs.plos.org/speakingofmedicine/2016/06/10/catching-up-with-the-authors-aurelie-jeandron-and-ayse-ercumen-on-clean-water-supply-in-india-and-the-drc/>

Featured in *Berkeley Science Review* (2016). When habits aren't so fluid. <https://berkeleysciencereview.com/article/2016/11/28/when-habits-aren-t-so-fluid>

Featured in *PLoS Medicine* Editorial. The PLoS Medicine Editors (2015). Transparency in Reporting Observational Studies: Reflections after a Year. <https://doi.org/10.1371/journal.pmed.1001896>.

Featured in *PLoS Medicine* Commentary. Brocklehurst C, Slaymaker T (2015). Continuity in Drinking Water Supply. <https://doi.org/10.1371/journal.pmed.1001894>

Featured in *Environmental Health Perspectives* Science Selection. Barrett J (2014) Plugging the Holes in Water Distribution Systems: Deficiencies May Contribute to Gastrointestinal Illnesses. <https://doi.org/10.1289/ehp.122-A195>

Featured in *The Times of India* (2013). Workshop to evaluate 24x7 water supply in twin cities. <http://timesofindia.indiatimes.com/city/hubballi/Workshop-to-evaluate-24x7-water-supply-in-twin-cities/articleshow/21199039.cms>

Featured in *Deccan Herald* (2013). Water, waste management is a challenge for city corporations. 24x7 water supply to be extended to seven new wards during second phase.

TEACHING

North Carolina State University

- Water Quality and Health (ES/NR 425/525): Newly developed course for upper-level undergraduate and graduate enrollment in response to student demand on water quality topics. This course covers microbiological and chemical contaminants in water supplies, including their health effects, societal determinants of safe water access, historical context, and emerging threats to water quality. **[Teaching evaluation score: 4.7-5.0 out of 5.0]**
- Research Methods for Global Environmental Health (ES 495): Newly developed course for upper-level undergraduate and graduate enrollment in response to NC State strategic growth in global health. This course covers methods and tools for conducting research on global environmental health, including how to characterize environmental contamination and health risk behaviors and how to design studies on health outcomes. **[Teaching evaluation score: 4.6-5.0 out of 5.0]**
- Guest lectures: 15 guest lectures
 - BIO 484 Lead Exposure and Human Health (SP 2025)
 - GOH 201 Foundations of Global One Health (F 2024, SP 2025, F 2025)
 - ET 401 Environmental Technology Laboratory (F 2022, F 2024, F 2025)
 - BSC 295 The Many Faces of Water (SP 2023, SP 2024)
 - CE 497/596 Water and Sanitation in Developing Countries (F 2023)
 - ET 201 Environmental Technology Laboratory (F 2022)
 - ENVIRON 851S Environment and Development Economics, Duke University (SP 2022)
 - ARE 495/590 Environmental Economics in Developing Countries (SP 2020, SP 2021, SP 2022)

University of California, Berkeley (Teaching Assistant)

- Advanced Epidemiologic Methods: Graduate level required course for Epidemiology program (2009)
- Impact Evaluation Methods: Graduate level course on econometric methods (2012)
- Outstanding Graduate Student Instructor Award (2009)

Massachusetts Institute of Technology (Teaching Assistant)

- Fluid Mechanics: Undergraduate level required course for Environmental Engineering majors (2003)

MENTORING

Division of Academic and Student Affairs "Thank an Advisor" recognition (2024, 2025)

POST-DOCTORAL

Jesse Contreras, Forestry and Environmental Resources (2020-2022)

GRADUATE (* indicates graduated)

Committee chair

Emma Budden. PhD, Microbiology (2025-) (co-chair)

Sumaiya Tazin. PhD, Forestry and Environmental Resources (2022-)

Caitlin Niven. PhD, Forestry and Environmental Resources (2021-2025) *

Bekah Davis. MS, Natural Resources (2023-2025) *

Lia Willcoxon. Master of Arts in Liberal Studies (2023-2024) *

Monica Matekenya. Master of Natural Resources (2022-2023) *

Master of Environmental Assessment professional project advisor

Maggie Watkins (2025-)

Carter Estes (2025) *

Joanna Perry (2023-2024) *

Haley Turner (2023-2024) *

Brian Miller (2023) *

Cameron Meyer (2022) *

Bradford Bailiff (2022) *

Stacy Slobodiuk (2020-2021) *

Committee member

Poonam Tajanpure, PhD, Civil and Environmental Engineering, University of Massachusetts, Amherst (2025-)

Benjamin Clark, PhD, Civil, Construction and Environmental Engineering (2025-)

Emily Floess. PhD, Civil, Construction and Environmental Engineering (2021-2025) *

Sailaja Eluri. PhD, Civil, Construction and Environmental Engineering (2021-2025) *

Hayden Rudd. PhD, Forestry and Environmental Resources (2022-2024) *

Sean Daly. PhD, Civil, Construction and Environmental Engineering (2021-2023) *

UNDERGRADUATE

Athena Tomlinson. Environmental Sciences. Honors course credit mentor (SP 2025)

Norah Patterson. Biological Sciences. Advisor for BSC 493 Research Experience (2024)

Emma Budden. Forestry and Environmental Resources. Advisor for ES 498 Professional Experience (2024)

Trey Mumma. Forestry and Environmental Resources. Research advisor (2024)

Annika Pillutla. Statistics. Research advisor (2023-2024)

Cooper Seward. Chemical Engineering. Honors course credit mentor (SP 2023)

Madelyn Milazzo. Science, Technology and Society. Honors Capstone project mentor (2022-2023)

Skyler Price. Forestry and Environmental Resources. Research advisor (2020-2021)

Jordan Turner. Forestry and Environmental Resources. Research advisor (2020-2021)

Jeremy Lowe. Civil, Construction and Environmental Engineering. Research co-advisor (2020-2022)

Bethany Suarez. Environmental Sciences. Senior capstone project faculty mentor (F 2020)

Austin Bridges. Environmental Sciences. Senior capstone project faculty mentor (F 2020)

Emma Hirschy. Environmental Sciences. Senior capstone project faculty mentor (F 2020)

HIGH SCHOOL STUDENTS

Aiden Hernandez, North Carolina School of Science and Math, Summer Mentorship Program (2025)

NSF IRES INTERNATIONAL RESEARCH EXPERIENCES FOR STUDENTS (2024-2026)

Facilitated 20 NC State students traveling to Malawi over 3 years for hands-on field research

- Led trip to Malawi with 7 NC State students in Summer 2024 (2 from College of Natural Resources)
- Co-mentored 6 NC State students in Summer 2025 (2 from College of Natural Resources)
- One additional cohort planned for Summer 2026

IRES graduate students

Ben Clark, PhD, Civil, Construction and Environmental Engineering

Caitlin Niven, PhD, Forestry and Environmental Resources

Nadia Sheppard, MS, Civil, Construction and Environmental Engineering

Seth Wolter, PhD, Civil, Construction and Environmental Engineering

Maggie Watkins, Master of Environmental Assessment

IRES undergraduate students

Norah Patterson, BS, Biological Sciences

Emma Budden, BS, Environmental Sciences

Chinmay Talikoti, BS, Economics, Computer Science

Gabby Vertreese, BS, Biological and Agricultural Engineering

Halee Reinhardt, BS, Natural Resources

Willamina Ingle, BS, Biological Sciences

Kirk Porter, BS, Civil, Construction and Environmental Engineering

Fernando de Silva, BS, Civil, Construction and Environmental Engineering

GRADUATE STUDENT PRESENTATIONS AT INTERNAL SYMPOSIA

9. Wolter S, Chigwechokha P, **Ercumen A**, Harris A, Holms R, Workman C. Risk Perceptions of Diarrheal Disease Incidence in Peri-Urban Malawi. *Global One Health Academy (GOHA) One Health Research Symposium*, April 25, 2025.

8. Wolter S, Chigwechokha P, **Ercumen A**, Harris A, Holms R, Workman C. Risk Perceptions of Diarrheal Disease Incidence in Peri-Urban Malawi. *Environmental, Water Resources and Coastal Engineering Graduate Research Symposium*, Mar 2025.

7. Niven CG, Islam M, Nguyen A, Mertens A, Pickering AJ, Kwong LH, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Hubbard AE, Luby SP, Grembi JA, Colford, Jr. JM, Arnold BF, Benjamin-Chung J, **Ercumen A**. Rainfall and temperature modify the efficacy of sanitation interventions on *E. coli* contamination in households in rural Bangladesh. *Graduate Student Research Symposium*, Apr 2, 2025.

6. Davis B, Tulbure M, Caineta J, Witter R, Emanuel RE, Powell DE, Burdette K, White-Williamson S, Tuberty S, **Ercumen A**. Surface water quality impacts from non-permitted poultry operations in the Cape Fear River watershed. *College of Natural Resources Graduate Research Symposium*, Mar 20, 2025. [2nd place PhD poster award]

5. Davis B, Tulbure M, Caineta J, Witter R, Emanuel RE, Powell DE, Burdette K, White-Williamson S, Tuberty S, **Ercumen A**. Surface water quality impacts from non-permitted poultry operations in the Cape Fear River watershed. *Center for Human Health and the Environment (CHHE) Annual Symposium*, Mar 6, 2025.

4. Floess E, Workman C, **Ercumen** A, Grieshop A, Harris A. Cross-Sectional Field Study Exploring Possible Links between Food, Water, and Energy Insecurity in Peri-Urban Malawi. *Environmental, Water Resources and Coastal Engineering Graduate Research Symposium*, Mar 2025.

3. Niven CG, Islam M, Nguyen A, Mertens A, Pickering AJ, Kwong LH, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Hubbard AE, Luby SP, Grembi JA, Colford, Jr. JM, Arnold BF, Benjamin-Chung J, **Ercumen** A. Rainfall and temperature modify the efficacy of sanitation interventions on *E. coli* contamination in households in rural Bangladesh. *Climate Leaders Program Symposium*, Sep 19, 2024.

2. Tazin S, Islam M, Mertens A, Pickering AJ, Kwong LH, Arnold BF, Hubbard AE, Alam M, Sen D, Islam S, Rahman M, Unicomb L, Luby SP, Colford JM, Benjamin-Chung J, **Ercumen** A. Association of flooring material with *E. coli* contamination in rural Bangladeshi households. *College of Natural Resources Graduate Research Symposium*, Mar 7, 2024 [**Best PhD poster award**]

1. Niven CG, Contreras J, Schmittling S, Nguyen A, **Ercumen** A. Climate impacts on *E. coli* in domestic environments of rural Bangladeshi households. *College of Natural Resources Graduate Research Symposium*, Mar 8, 2023 [**Best PhD poster award**]

UNDERGRADUATE STUDENT PRESENTATIONS AT INTERNAL SYMPOSIA

3. Budden EG, Harris, AR, **Ercumen** A. Household and Environmental Factors Associated with Detection of Cefotaxime-Resistant *Escherichia coli* in Yard Soil in Peri-Urban Malawi. *Global One Health Academy (GOHA) One Health Research Symposium*, April 25, 2025.

2. Milazzo M, **Ercumen** A. Correcting a history of poor urban planning and design for improved community health. *NC State Undergraduate Research & Creativity Symposium*, Apr 26, 2023.

1. Rachita S, Rudd H, **Ercumen** A, Guthrie Nichols E. Screening for organic chemical removal by low-cost point of use filters. *NC State Undergraduate Research & Creativity Symposium*, Apr 26, 2023.

MENTORING AND CAPACITY BUILDING IN LOW-INCOME COUNTRIES

Mentored junior scientists from low-income country research institutions on data analysis, first-authored peer-reviewed manuscripts and conference presentations (2017-)

Mentor, Minority Health and Health Disparities International Research Training program (2013-2015)

- Mentored low-income country scientists in developing fellowship proposals for training in the US
- Mentored UC Berkeley undergraduate students (often first-generation) from minority backgrounds in developing small-scale research proposals and completing research at overseas institutions

TRAINING AND CERTIFICATES

Inclusive Excellence Certificate, NC State (2023)

Faculty Leadership Education and Development (LEAD) Program, NC State (2024-2025)

Media training, NC State (May 2025)

SERVICE

PROFESSIONAL SERVICE ON CAMPUS

Department of Forestry and Environmental Resources

Reappointment, Promotion and Tenure Committee (2025)

Search committee for watershed hydrologist position (2025)

International Programs and Funds Committee (2020-2025)

Department Advisory and Management Committee (2022-2023)
Peer teaching evaluator (SP 2022, F 2024)

College of Natural Resources

CNR Research Committee (2024-)
Reviewer for Stannis-McIntyre grant submissions (2025)

Center for Human Health and the Environment (CHHE)

Co-organizer, CHHE 10th Annual Symposium (2025)
Co-lead, Water & Emerging Challenges Research Interest Group (2024-)
Pilot Project Program grant proposal review (2023-)
Community Grant proposal review (2024)

Global One Health Academy (GOHA)

Advisory Board for the Master of Science program in Global One Health (2025-)
Curriculum Committee for the Master of Science program in Global One Health (2025-)
Graduate Program Committee (2024)
Pilot grant review (2024-)
GOHA graduate fellowship application review (2024-)
Grand Challenges Addressing Program grant review (2024-)

Other

Red Team Reviewer for PI Burford Reiskind R01 (2025)
Global Water, Sanitation and Hygiene Cluster activities (2019-)

PROFESSIONAL SERVICE OFF CAMPUS

Review for funders:

Reckitt Global Hygiene Institute, International Collaboration Awards (2023)
Binational Agricultural Research and Development Fund US-Israel (2022)
National Institutes of Health (NIH) Fogarty global health fellowship program (2021)
Emory University HERCULES Center pilot grants (2020)

Review for conferences:

Abstract review for annual Water and Health Conference at UNC, Chapel Hill (2020-)

Editorial positions:

Academic editor for PLoS Global Health (2023-)
Associate editor for PLoS Neglected and Tropical Diseases (2019-2021)
Guest editor for International Journal of Environmental Research and Public Health on Special Issue
"Assessment of Human Exposure Pathways to Antimicrobial Resistance in Environment" (2019-2021)

Peer review for journals: 30+ journals, including The Lancet, Nature Communications, Environmental Health Perspectives, Environmental Science and Technology, Science of the Total Environment, Water Research