Aaron William Bivins, PhD, PE, BCEE

Assistant Professor, College of Public Health, College of Engineering
University of Georgia, Athens, GA
aaron.bivins@uga.edu || Bivins Lab || SciProfile || ORCID: 0000-0001-9385-2138

EDUCATION & PROFESSIONAL QUALIFICATIONS

PhD	Georgia Institute of Technology, School of Civil & Environmental Engineering	2019
MS	Environmental Engineering (4.00/4.00) Georgia Institute of Technology, School of Civil & Environmental Engineering	2014
BS	Civil Engineering (3.36/4.00, *magna cum laude*) Georgia Institute of Technology, School of Civil & Environmental Engineering	2007
PE	Georgia, PE037066	2012
BCEE	American Academy of Environmental Engineers & Scientists (AAEES)	2024

PROFESSIONAL APPOINTMENTS

Assistant Professor — 8/2026 – Present
College of Public Health, Environmental Health Sciences
College of Engineering, Environmental, Civil, Agricultural, & Mechanical Engineering
University of Georgia, Athens, GA

Assistant Professor — 1/2022 – 7/2026
Department of Civil & Environmental Engineering
Louisiana State University, Baton Rouge, LA

Postdoctoral Research Associate — 11/2019 – 12/2021
Department of Civil & Environmental Engineering & Earth Sciences
Environmental Change Initiative
University of Notre Dame, Notre Dame, IN

Graduate Research Assistant & Teaching Assistant — 1/2014 – 10/2019
School of Civil & Environmental Engineering
Georgia Institute of Technology, Atlanta, GA

Engineering Associate I & II — 8/2007 – 6/2012
BP Barber/URS, Savannah, GA

HONORS, AWARDS & FELLOWSHIPS

Clarivate Highly Cited Researcher in Environment and Ecology	2025, 2023
40 Under 40 Recognition Program, AAEES	2024
FEMS Microbes Best Paper of 2023	*2023*
Environmental Science & Technology Letters Excellence in Review Award	*2021*
Larson Aquatic Research Support Scholarship, American Water Works Association	2019
Fulbright-Nehru Graduate Research Fellow, U.S. Department of State	2016 - 2017
Science to Achieve Results (STAR) Graduate Fellow, U.S. Environmental Protection Agency	2016 - 2019

Philip R. Karr III Scholar, Georgia Association of Water Professionals 2015

Chi Epsilon Civil Engineering Honor Society 2014

JOURNAL PUBLICATIONS

Bivins Advisee [##] || Corresponding Author [++]

IN-SUBMISSION

[5] Das, B.[##]; Ghosh, S. [##]; **Bivins, A.**[++] Roadside Ditches Receiving Onsite Wastewater Treatment System Effluent are Overlooked Venues of Human Exposure to Sewage.

[4] Weise, K.[##]; Ghosh, S.[##]; Das, B. [##]; **Bivins, A.**[++] *Escherichia coli* Resistant to Third-Generation Cephalosporins in On-site Wastewater Treatment System Effluent and Receiving Waters.

[3] Rao, G.; Purvis, T.; Cha, G.; Dalton, J.; Fisher, M.; Graham, K.; Kostantinitis, K.; Linden, Y.; **Bivins, A**.; Stauber, C.; Brown, J. Viral adsorption to Moore swabs in passive wastewater sampling.

[2] Dayton, R.; Baldwin, W.; Goaders, N.; Patterson, J.; Nam, H.; Latimer, B.; **Bivins, A.**; Subedi, B.; Peach, J.; Bhuiyan, M.; Owens, H.; Vanchiere, J.; Queen, K.; Keil, D.; Jones, J.; Snead, B.; William, D.; Murnane, K. Wastewater Analysis in North Louisiana Validates Conventional Local and Statewide Health Metrics of the Methamphetamine Epidemic.

[1] M.; Bendall, K.; Rogers, S.; Bivins, A.; Ghosh, S.; Ojeda, A. Linking Septic System Pollution Potential to Water Quality: A Baseflow Sampling Approach. Jones

IN-PREPARATION

[3] Ghosh, S. [##]; **Bivins, A.**[++] Design and Planning Determinants for Public Health Risks Associated with Onsite Wastewater Treatment Systems in High-income Countries: A Critical Review

[2] **Bivins, A.**[++]; Deveraux, J.[##] Who Loves the Sun? An Environmental Justice Framework for Regional Solar Energy Policy Design and Implementation.

[1] **Bivins, A.**[++]; Spencer, S.K.; Borchardt, M.A.; Lowry, S.; Brown, J. Evidence of enteric pathogens and risk assessment for distributed drinking water in the Black Belt of Alabama.

AS FIRST, SENIOR, OR CORRESPONDING AUTHOR

[21] Soni, A.; Das, B.[##]; Brand, M.; **Bivins, A.**[++] Aerobic Treatment Units for Widespread On-Site Wastewater Treatment in Coastal Louisiana: Pollution, Policy, and Market-Based Solutions. *Environmental Science & Technology* **2026**. Just accepted. https://pubs.acs.org/doi/10.1021/acs.est.5c17284

[20] Ghosh, S.[##]; **Bivins, A.**[++] A Head-to-Head Comparison of Two Microfluidic Digital PCR Platforms for Fecal Contamination Testing in Surface Waters. *ACS ES&T Water* **2026**, 6, 1, 429 – 437. https://pubs.acs.org/doi/10.1021/acsestwater.5c01129.

[19] Ghosh, S.[##]; **Bivins, A**.[++] Optimizing Digital PCR Assays for Multiplexed Microbial Source Tracking in Surface Waters. In *Digital PCR: Methods and Protocols*; Pavlovic, G., Ed.; Springer US: New York, NY, **2026**; pp 61–85. https://doi.org/10.1007/978-1-0716-4767-7_5.

[18] Ghosh, S.[##]; Smadi, M.[##]; **Bivins, A**.[++] In Situ Performance of Granular Activated Carbon for Sampling Viruses and Bacteria from Wastewater: Toward Quantitative Passive Sampling for Wastewater-based Epidemiology. *Water Research* **2025**, 288, 124605. https://doi.org/10.1016/j.watres.2025.124605

[17] **Bivins, A.**[++] Revisiting the Potential Role of Urine in Wastewater Surveillance: COVID-19 and Beyond. *Environmental Science & Technology Letters* **2025**, 12, 2, 113 – 123. https://doi.org/10.1021/acs.estlett.4c00911

[16] **Bivins, A.**; Srivastava, A; Katara, A.; Weise, K.[##]; Kachhawaha, A.S. Extended Spectrum Beta-Lactamase Producing *E. coli* (ESBL-Ec) in Freshwater Lakes Along an Anthropogenic Impact Gradient. *ACS ES&T Water* **2025**, 5, 3, 1321 – 1330. https://pubs.acs.org/doi/10.1021/acsestwater.4c01073

[15] **Bivins, A.**[++]; Morfino, R.; Franklin, A.; Simpson, S.; Ahmed, W. The Lavatory Lens: Tracking the Global Movement of Pathogens via Aircraft Wastewater. *Critical Reviews in Environmental Science and Technology* **2024**, *0* (0), 1–21. https://doi.org/10.1080/10643389.2023.2239129

[14] **Bivins, A.**[++]; Kaya, D.; Ahmed, W.; Brown, J.; Butler, C.; Greaves, J.; Leal, R.; Maas, K.; Rao, G.; Sherchan, S.; Sills, D.; Sinclair, R.; Wheeler, R. T.; Mansfeldt, C. Passive Sampling to Scale Wastewater Surveillance of Infectious Disease: Lessons Learned from COVID-19. *Science of The Total Environment* **2022**, *835*, 155347. https://doi.org/10.1016/j.scitotenv.2022.155347

[13] Tiwari, A.; Ahmed, W.; Oikarinen, S.; Sherchan, S. P.; Heikinheimo, A.; Jiang, G.; Simpson, S. L.; Greaves, J.; **Bivins, A.**[++] Application of Digital PCR for Public Health-Related Water Quality Monitoring. *Science of The Total Environment* **2022**, *837*, 155663. https://doi.org/10.1016/j.scitotenv.2022.155663

[12] **Bivins, A.**; Lott, M.; Shaffer, M.; Wu, Z.; North, D.; K. Lipp, E.; Bibby, K. Building-Level Wastewater Surveillance Using Tampon Swabs and RT-LAMP for Rapid SARS-CoV-2 RNA Detection. *Environmental Science: Water Research & Technology* **2022**, *8* (1), 173–183. https://doi.org/10.1039/D1EW00496D

[11] **Bivins, A.**; North, D.; Wu, Z.; Shaffer, M.; Ahmed, W.; Bibby, K. Within-and between-Day Variability of SARS-CoV-2 RNA in Municipal Wastewater during Periods of Varying COVID-19 Prevalence and Positivity. *ACS ES&T Water* **2021**, *1* (9), 2097–2108. https://doi.org/10.1021/acsestwater.1c00178

[10] **Bivins, A.**; Lowry, S.; Wankhede, S.; Hajare, R.; Murphy, H. M.; Borchardt, M.; Labhasetwar, P.; Brown, J. Microbial Water Quality Improvement Associated with Transitioning from Intermittent to Continuous Water Supply in Nagpur, India. *Water Research* **2021**, *201*, 117301. https://doi.org/10.1016/j.watres.2021.117301

[9] **Bivins, A.**; Kaya, D.; Bibby, K.; Simpson, S. L.; Bustin, S. A.; Shanks, O. C.; Ahmed, W. Variability in RT-QPCR Assay Parameters Indicates Unreliable SARS-CoV-2 RNA Quantification for Wastewater Surveillance. *Water Research* **2021**, *203*, 117516. https://doi.org/10.1016/j.watres.2021.117516

[8] **Bivins, A.**; Bibby, K. Wastewater Surveillance during Mass COVID-19 Vaccination on a College Campus. *Environmental Science & Technology Letters* **2021**, *8* (9), 792–798. https://doi.org/10.1021/acs.estlett.1c00519

[7] Ahmed, W.; Bibby, K.; D'Aoust, P. M.; Delatolla, R.; Gerba, C. P.; Haas, C. N.; Hamilton, K. A.; Hewitt, J.; Julian, T. R.; Kaya, D.; **Bivins, A.** Differentiating between the Possibility and Probability of SARS-CoV-2 Transmission Associated with Wastewater: Empirical Evidence Is Needed to Substantiate Risk. *FEMS Microbes* **2021**, *2*. https://doi.org/10.1093/femsmc/xtab007

[6] **Bivins, A.**; North, D.; Ahmad, A.; Ahmed, W.; Alm, E.; Been, F.; Bhattacharya, P.; Bijlsma, L.; Boehm, A. B.; Brown, J.; Buttiglieri, G.; Calabro, V.; Carducci, A.; Castiglioni, S.; Cetecioglu Gurol, Z.; Chakraborty, S.; Costa, F.; Curcio, S.; de los Reyes, F. L.; Delgado Vela, J.; Farkas, K.; Fernandez-Casi, X.; Gerba, C.; Gerrity, D.; Girones, R.; Gonzalez, R.; Haramoto, E.; Harris, A.; Holden, P. A.; Islam, Md. T.; Jones, D. L.; Kasprzyk-Hordern, B.; Kitajima, M.; Kotlarz, N.; Kumar, M.; Kuroda, K.; La Rosa, G.; Malpei, F.; Mautus, M.; McLellan, S. L.; Medema, G.; Meschke, J. S.; Mueller, J.; Newton, R. J.; Nilsson, D.; Noble, R. T.; van Nuijs, A.; Peccia, J.; Perkins, T. A.; Pickering, A. J.; Rose, J.; Sanchez, G.; Smith, A.; Stadler, L.; Stauber, C.; Thomas, K.; van der Voorn, T.; Wigginton, K.; Zhu, K.; Bibby, K. Wastewater-Based Epidemiology: Global Collaborative to

Maximize Contributions in the Fight Against COVID-19. *Environmental Science & Technology* **2020**, *54* (13), 7754–7757. https://doi.org/10.1021/acs.est.0c02388

[5] **Bivins, A.**; Lowry, S.; Murphy, H. M.; Borchardt, M.; Coyte, R.; Labhasetwar, P.; Brown, J. Waterborne Pathogen Monitoring in Jaipur, India Reveals Potential Microbial Risks of Urban Groundwater Supply. *npj Clean Water* **2020**, *3* (1), 1–10. https://doi.org/10.1038/s41545-020-00081-3

[4] **Bivins, A.**; Greaves, J.; Fischer, R.; Yinda, K. C.; Ahmed, W.; Kitajima, M.; Munster, V. J.; Bibby, K. Persistence of SARS-CoV-2 in Water and Wastewater. *Environmental Science & Technology Letters* **2020**, *7* (12), 937–942. https://doi.org/10.1021/acs.estlett.0c00730

[3] **Bivins, A.**; Crank, K.; Greaves, J.; North, D.; Wu, Z.; Bibby, K. Cross-Assembly Phage and Pepper Mild Mottle Virus as Viral Water Quality Monitoring Tools—Potential, Research Gaps, and Way Forward. *Current Opinion in Environmental Science & Health* **2020**, *16*, 54–61. https://doi.org/10.1016/j.coesh.2020.02.001

[2] **Bivins, A.**; Beetsch, N.; Majuru, B.; Montgomery, M.; Sumner, T.; Brown, J. Selecting Household Water Treatment Options on the Basis of World Health Organization Performance Testing Protocols. *Environmental Science & Technology* **2019**, *53* (9), 5043–5051. https://doi.org/10.1021/acs.est.8b05682

[1] **Bivins, A. W.**; Sumner, T.; Kumpel, E.; Howard, G.; Cumming, O.; Ross, I.; Nelson, K.; Brown, J. Estimating Infection Risks and the Global Burden of Diarrheal Disease Attributable to Intermittent Water Supply Using QMRA. *Environmental Science & Technology* **2017**, *51* (13), 7542–7551. https://doi.org/10.1021/acs.est.7b01014

AS CO-AUTHOR

[58] Healy, H.; Hoar, C.; Ahmed, W.; Bibby, K.; **Bivins, A.**; Bowes, D.; Darling, A.; DuPré, N.; Gonzalez, R.; Guo, R.; Grills, G.; Guerrini, C.; Holm, R.; Kavalukas, S.; Lee, D.; McGuire, A.; Mansfeldt, C.; Maresso, A.; Mason, C.; Rebbeck, T.; Smith, T.; Solo-Gabriele, H. Wastewater Surveillance to Inform Cancer Epidemiology and Evidence-Based Interventions. *Environ. Sci. Technol.* 2026, 60 (23): 16390 – 16401. https://doi.org/10.1021/acs.est.6c01391

[57] Farkas, K.; Kaya, D.; Maal-Bared, R.; Al-Mustapha, A.; Tandukar, S.; Keenum, I.; Gunnar, T.; **Bivins, A.**; Wade, M.; Bibby, K.; Pitkänen, T.; Tiwari, A. Communicating wastewater-based surveillance data to drive action. *Journal of Water & Health* **2025**, 23 (9): 1095 – 1108. https://doi.org/10.2166/wh.2025.080

[56] Dayton, R.; Baldwin, W.; Goaders, N.; Patterson, J.; Nam, H.; Latimer, B.; **Bivins, A.**; Subedi, B.; Peach, J.; Bhuiyan, M.; Owens, H.; Vanchiere, J.; Queen, K.; Keil, D.; Jones, J.; Snead, B.; William, D.; Murnane, K. A Comparison of Viral Prevalence Versus Population Coverage as Drivers of Public Health Information Derived from Wastewater Sampling. *Heliyon* **2025**. Just accepted.

[55] Nascimento, M.; Smith, W.J.M.; Yawen, L.; Costa, V.; Simpson, S.; **Bivins, A.**; Rahal, P.; Ahmed, W. Comparative evaluation of various heating instruments for detecting Bacteroides HF183, SARS-CoV-2, and Aichi virus A in untreated wastewater using colorimeteric LAMP. *Journal of Water & Health* **2025**. Just accepted.

[54] Nascimento, M.; Smith, W. J.M.; Yawen, L.; Simpson, S.; **Bivins, A.**; Rahal, P.; Ahmed, W. Development and comparative assessment of RT-qPCR and duplex RT-LAMP assays for the monitoring of Aichi Virus A (AiV-A) in untreated wastewater samples. *Science of The Total Environment* **2024**, 952, 175440. https://doi.org/10.1016/j.scitotenv.2024.175440

[53] Nascimento, M.; Smith, W. J.M.; Gebrewold, M.; Yawen, L.; Simpson, S.; **Bivins, A.**; Rahal, P.; Ahmed, W. Development and evaluation of a LAMP assay for screening of Bacteroides Dorei (HF183 marker) for

sewage pollution tracking in environmental waters. *Water Research* **2024**, 264, 122202. https://doi.org/10.1016/j.watres.2024.122202

[52] Smith, W. J. M.; Liu, Y.; Simpson, S. L.; **Bivins, A.**; Ahmed, W. Assessment of Nucleic Acid Extraction Protocols for Antibiotic Resistance Genes (ARGs) Quantification in Aircraft Wastewater. *Hum Genomics* **2024**, 18 (1), 54. https://doi.org/10.1186/s40246-024-00617-5.

[51] Hamilton, K. A.; Ciol Harrison, J.; Mitchell, J.; Weir, M.; Verhougstraete, M.; Haas, C. N.; Nejadhashemi, A. P.; Libarkin, J.; Gim Aw, T.; Bibby, K.; **Bivins, A.**; Brown, J.; Dean, K.; Dunbar, G.; Eisenberg, J. N. S.; Emelko, M.; Gerrity, D.; Gurian, P. L.; Hartnett, E.; Jahne, M.; Jones, R. M.; Julian, T. R.; Li, H.; Li, Y.; Gibson, J. M.; Medema, G.; Meschke, J. S.; Mraz, A.; Murphy, H.; Oryang, D.; Owusu-Ansah, E. de-G. J.; Pasek, E.; Pradhan, A. K.; Razzolini, M. T. P.; Ryan, M. O.; Schoen, M.; Smeets, P. W. M. H.; Soller, J.; Solo-Gabriele, H.; Williams, C.; Wilson, A. M.; Zimmer-Faust, A.; Alja'fari, J.; Rose, J. B. Research Gaps and Priorities for Quantitative Microbial Risk Assessment (QMRA). *Risk Analysis* **2024**; 1 - 16. https://doi.org/10.1111/risa.14318.

[50] Ahmed, W.; Liu, Y.; Smith, W.; Ingall, W.; Belby, M.; **Bivins, A.**; Bertsch, P.; Williams, D. T.; Richards, K.; Simpson, S. Leveraging Wastewater Surveillance to Detect Viral Diseases in Livestock Settings. *Science of The Total Environment* **2024**, 931, 172593. https://doi.org/10.1016/j.scitotenv.2024.172593.

[49] Rao, G.; Capone, D.; Zhu, K.; Knoble, A.; Linden, Y.; Clark, R.; Lai, A.; Kim, J.; Huang, C.-H.; **Bivins, A.**; Brown, J. Simultaneous Detection and Quantification of Multiple Pathogen Targets in Wastewater. *PLOS Water* **2024**, 3 (2), e0000224. https://doi.org/10.1371/journal.pwat.0000224.

[48] Akter, J.; Smith, W. J. M.; Gebrewold, M.; Kim, I.; Simpson, S. L.; **Bivins, A.**; Ahmed, W. Evaluation of Colorimetric RT-LAMP for Screening of SARS-CoV-2 in Untreated Wastewater. *Science of The Total Environment* **2024**, *907*, 167964. https://doi.org/10.1016/j.scitotenv.2023.167964.

[47] Crank, K.; Papp, K.; Barber, C.; Wang, P.; **Bivins, A.**; Gerrity, D. Correspondence on "The Environmental Microbiology Minimum Information (EMMI) Guidelines: qPCR and dPCR Quality and Reporting for Environmental Microbiology." *Environ. Sci. Technol.* **2023**, *57* (48), 20448–20449. https://doi.org/10.1021/acs.est.3c07968.

[46] Snyder, E. D.; Tank, J. L.; Brandão-Dias, P. F. P.; Bibby, K.; Shogren, A. J.; **Bivins, A. W.**; Peters, B.; Curtis, E. M.; Bolster, D.; Egan, S. P.; Lamberti, G. A. Environmental DNA (EDNA) Removal Rates in Streams Differ by Particle Size under Varying Substrate and Light Conditions. *Science of The Total Environment* **2023**, 903, 166469. https://doi.org/10.1016/j.scitotenv.2023.166469.

[45] Liu, Y.; Smith, W.; Gebrewold, M.; Wang, X.; Simpson, S. L.; **Bivins, A.**; Ahmed, W. Comparison of Concentration and Extraction Workflows for qPCR Quantification of intI1 and vanA in Untreated Wastewater. *Science of The Total Environment* **2023**, *903*, 166442. https://doi.org/10.1016/j.scitotenv.2023.166442.

[44] Bowes, D. A.; Darling, A.; Driver, E. M.; Kaya, D.; Maal-Bared, R.; Lee, L. M.; Goodman, K.; Adhikari, S.; Aggarwal, S.; **Bivins, A.**; Bohrerova, Z.; Cohen, A.; Duvallet, C.; Elnimeiry, R. A.; Hutchison, J. M.; Kapoor, V.; Keenum, I.; Ling, F.; Sills, D.; Tiwari, A.; Vikesland, P.; Ziels, R.; Mansfeldt, C. Structured Ethical Review for Wastewater-Based Testing in Support of Public Health. *Environ. Sci. Technol.* **2023**. https://doi.org/10.1021/acs.est.3c04529.

[43] Wu, Z.; Ginn, O.; **Bivins, A.**; Bibby, K. Correlation of Antibiotic Resistance Gene and Microbial Source Tracking Marker Removal through Activated Sludge Wastewater Treatment. *ACS EST Water* **2023**, *3* (10), 3335–3342. https://doi.org/10.1021/acsestwater.3c00308.

[42] Ahmed, W.; Smith, W. J. M.; Tiwari, A.; **Bivins, A.**; Simpson, S. L. Unveiling Indicator, Enteric, and Respiratory Viruses in Aircraft Lavatory Wastewater Using Adsorption-Extraction and Nanotrap® Microbiome A Particles Workflows. *Science of The Total Environment* **2023**, 896, 165007. https://doi.org/10.1016/j.scitotenv.2023.165007.

[41] Ahmed, W.; Smith, W. J. M.; Sirikanchana, K.; Kitajima, M.; **Bivins, A.**; Simpson, S. L. Influence of Membrane Pore-Size on the Recovery of Endogenous Viruses from Wastewater Using an Adsorption-Extraction Method. *Journal of Virological Methods* **2023**, *317*, 114732. https://doi.org/10.1016/j.jviromet.2023.114732.

[40] Keshaviah, A.; Diamond, M. B.; Wade, M. J.; Scarpino, S. V.; Ahmed, W.; Amman, F.; Aruna, O.; Badilla-Aguilar, A.; Bar-Or, I.; Bergthaler, A.; Bines, J. E.; **Bivins, A. W.**; Boehm, A. B.; Brault, J.-M.; Burnet, J.-B.; Chapman, J. R.; Chaudhuri, A.; Husman, A. M. de R.; Delatolla, R.; Dennehy, J. J.; Diamond, M. B.; Donato, C.; Duizer, E.; Egwuenu, A.; Erster, O.; Fatta-Kassinos, D.; Gaggero, A.; Gilpin, D. F.; Gilpin, B. J.; Graber, T. E.; Green, C. A.; Handley, A.; Hewitt, J.; Holm, R. H.; Insam, H.; Johnson, M. C.; Johnson, R.; Jones, D. L.; Julian, T. R.; Jyothi, A.; Keshaviah, A.; Kohn, T.; Kuhn, K. G.; Rosa, G. L.; Lesenfants, M.; Manuel, D. G.; D'Aoust, P. M.; Markt, R.; McGrath, J. W.; Medema, G.; Moe, C. L.; Murni, I. K.; Naser, H.; Naughton, C. C.; Ogorzaly, L.; Oktaria, V.; Ort, C.; Karaolia, P.; Patel, E. H.; Paterson, S.; Rahman, M.; Rivera-Navarro, P.; Robinson, A.; Santa-Maria, M. C.; Scarpino, S. V.; Schmitt, H.; Smith, T.; Stadler, L. B.; Stassijns, J.; Stenico, A.; Street, R. A.; Suffredini, E.; Susswein, Z.; Trujillo, M.; Wade, M. J.; Wolfe, M. K.; Yakubu, H.; Sato, M. I. Z. Wastewater Monitoring Can Anchor Global Disease Surveillance Systems. *The Lancet Global Health* **2023**, *11* (6), e976–e981. https://doi.org/10.1016/S2214-109X(23)00170-5.

[39] Morfino, R. C.; Bart, S. M.; Franlin, A.; Rome, B. H.; Rothstein, A. P.; Aichele, T. W. S.; Li, S. L.; **Bivins, A.**; Ernst, E. T.; Friedman, C. R. Notes from the Field: Aircraft Wastewater Surveillance for Early Detection of SARS-CoV-2 Variants — John F. Kennedy International Airport, New York City, August–September 2022. *MMWR Morbidity Mortality Weekly Report* **2023**, *72*. https://doi.org/10.15585/mmwr.mm7208a3.

[38] Tiwari, A.; Adhikari, S.; Kaya, D.; Islam, M. A.; Malla, B.; Sherchan, S. P.; Al-Mustapha, A. I.; Kumar, M.; Aggarwal, S.; Bhattacharya, P.; Bibby, K.; Halden, R. U.; **Bivins, A.**; Haramoto, E.; Oikarinen, S.; Heikinheimo, A.; Pitkänen, T. Monkeypox Outbreak: Wastewater and Environmental Surveillance Perspective. *Science of the Total Environment* **2023**, *856*, 159166. https://doi.org/10.1016/j.scitotenv.2022.159166

[37] Baldwin, W. M.; Dayton, R. D.; **Bivins, A. W.**; Scott, R. S.; Yurochko, A. D.; Vanchiere, J. A.; Davis, T.; Arnold, C. L.; Asuncion, Jose. E. T.; Bhuiyan, M. A. N.; Snead, B.; Daniel, W.; Smith, D. G.; Goeders, N. E.; Kevil, C. G.; Carroll, J.; Murnane, K. S. Highly Socially Vulnerable Communities Exhibit Disproportionately Increased Viral Loads as Measured in Community Wastewater. *Environmental Research* **2023**, *222*, 115351. https://doi.org/10.1016/j.envres.2023.115351.

[36] Naughton, C. C.; Roman, F. A., Jr; Alvarado, A. G. F.; Tariqi, A. Q.; Deeming, M. A.; Kadonsky, K. F.; Bibby, K.; **Bivins, A.**; Medema, G.; Ahmed, W.; Katsivelis, P.; Allan, V.; Sinclair, R.; Rose, J. B. Show Us the Data: Global COVID-19 Wastewater Monitoring Efforts, Equity, and Gaps. *FEMS Microbes* **2023**, *4*, xtad003. https://doi.org/10.1093/femsmc/xtad003.

[35] Ahmed, W.; **Bivins, A.**; Stephens, M.; Metcalfe, S.; Smith, W. J. M.; Sirikanchana, K.; Kitajima, M.; Simpson, S. L. Occurrence of Multiple Respiratory Viruses in Wastewater in Queensland, Australia: Potential for Community Disease Surveillance. *Science of The Total Environment* **2023**, *864*, 161023. https://doi.org/10.1016/j.scitotenv.2022.161023.

[34] Ahmed, W.; **Bivins, A.**; Korajkic, A.; Metcalfe, S.; Smith, W. J. M.; Simpson, S. L. Comparative Analysis of Adsorption-Extraction (AE) and Nanotrap® Magnetic Virus Particles (NMVP) Workflows for the Recovery of

Endogenous Enveloped and Non-Enveloped Viruses in Wastewater. *Science of The Total Environment* **2023**, *859*, 160072. https://doi.org/10.1016/j.scitotenv.2022.160072.

[33] Capone, D.; **Bivins, A.**; Brown, J. Producing Ratio Measures of Effect with Quantitative Microbial Risk Assessment. *Risk Analysis* **2023**, *43* (5). https://doi.org/10.1111/risa.13972.

[32] Hoar, C.; McClary, -Gutierrez Jill; Wolfe, M. K.; **Bivins, A.**; Bibby, K.; Silverman, A. I.; McLellan, S. L. Looking Forward: The Role of Academic Researchers in Building Sustainable Wastewater Surveillance Programs. *Environmental Health Perspectives* **2022**, *130* (12), 125002. https://doi.org/10.1289/EHP11519.

[31] Ahmed, W.; **Bivins, A.**; Payyappat, S.; Cassidy, M.; Harrison, N.; Besley, C. Distribution of Human Fecal Marker Genes and Their Association with Pathogenic Viruses in Untreated Wastewater Determined Using Quantitative PCR. *Water Research* **2022**, *226*, 119093. https://doi.org/10.1016/j.watres.2022.119093.

[30] Ahmed, W.; **Bivins, A.**; Metcalfe, S.; Smith, W. J. M.; Ziels, R.; Korajkic, A.; McMinn, B.; Graber, T. E.; Simpson, S. L. RT-QPCR and ATOPlex Sequencing for the Sensitive Detection of SARS-CoV-2 RNA for Wastewater Surveillance. *Water Research* **2022**, *220*, 118621. https://doi.org/10.1016/j.watres.2022.118621.

[29] Greaves, J.; Fischer, R. J.; Shaffer, M.; **Bivins, A.**; Holbrook, M. G.; Munster, V. J.; Bibby, K. Sodium Hypochlorite Disinfection of SARS-CoV-2 Spiked in Water and Municipal Wastewater. *Science of The Total Environment* **2022**, *807*, 150766. https://doi.org/10.1016/j.scitotenv.2021.150766

[28] Crank, K.; Chen, W.; **Bivins, A.**; Lowry, S.; Bibby, K. Contribution of SARS-CoV-2 RNA Shedding Routes to RNA Loads in Wastewater. *Science of The Total Environment* **2022**, *806*, 150376. https://doi.org/10.1016/j.scitotenv.2021.150376

[27] Cavany, S.; **Bivins, A.**; Wu, Z.; North, D.; Bibby, K.; Perkins, T. A. Inferring SARS-CoV-2 RNA Shedding into Wastewater Relative to Time of Infection. *Epidemiology & Infection* **2022**, 1–23. https://doi.org/10.1017/s0950268821002752

[26] Ahmed, W.; Smith, W. J.; Metcalfe, S.; Jackson, G.; Choi, P. M.; Morrison, M.; Field, D.; Gyawali, P.; **Bivins, A.**; Bibby, K. Comparison of RT-QPCR and RT-DPCR Platforms for the Trace Detection of SARS-CoV-2 RNA in Wastewater. *ACS ES&T Water* **2022**, *2* (11), 1871–1880. https://doi.org/10.1021/acsestwater.1c00387

[25] Ahmed, W.; Simpson, S. L.; Bertsch, P. M.; Bibby, K.; **Bivins, A.**; Blackall, L. L.; Bofill-Mas, S.; Bosch, A.; Brandão, J.; Choi, P. M. Minimizing Errors in RT-PCR Detection and Quantification of SARS-CoV-2 RNA for Wastewater Surveillance. *Science of The Total Environment* **2022**, *805*, 149877. https://doi.org/10.1016/j.scitotenv.2021.149877

[24] Ahmed, W.; **Bivins, A.**; Smith, W. J.; Metcalfe, S.; Stephens, M.; Jennison, A. V.; Moore, F. A.; Bourke, J.; Schlebusch, S.; McMahon, J. Detection of the Omicron (B. 1.1. 529) Variant of SARS-CoV-2 in Aircraft Wastewater. *Science of The Total Environment* **2022**, *820*, 153171. https://doi.org/10.1016/j.scitotenv.2022.153171

[23] Ahmed, W.; **Bivins, A.**; Smith, S. M. W. J.; Verbyla, M. E.; Symonds, E. M.; Simpson, S. L. Evaluation of Process Limits of Detection and Quantification Variation of SARS-CoV-2 RT-QPCR and RT-DPCR Assays for Wastewater Surveillance. *Water Research* **2022**, *213*, 118132. https://doi.org/10.1016/j.watres.2022.118132

[22] Ahmed, W.; **Bivins, A.**; Simpson, S. L.; Bertsch, P. M.; Ehret, J.; Hosegood, I.; Metcalfe, S. S.; Smith, W. J.; Thomas, K. V.; Tynan, J. Wastewater Surveillance Demonstrates High Predictive Value for COVID-19 Infection on Board Repatriation Flights to Australia. *Environment International* **2022**, *158*, 106938. https://doi.org/10.1016/j.envint.2021.106938

[21] Tiwari, A.; Oliver, D. M.; **Bivins, A.**; Sherchan, S. P.; Pitkänen, T. Bathing Water Quality Monitoring Practices in Europe and the United States. *International Journal of Environmental Research and Public Health* **2021**, *18* (11), 5513. https://doi.org/10.3390/ijerph18115513

[20] Renninger, N.; Nastasi, N.; Bope, A.; Cochran, S. J.; Haines, S. R.; Balasubrahmaniam, N.; Stuart, K.; **Bivins, A.**; Bibby, K.; Hull, N. M. Indoor Dust as a Matrix for Surveillance of COVID-19. *mSystems* **2021**, *6* (2), e01350-20. https://doi.org/10.1128/mSystems.01350-20

[19] Harris-Lovett, S.; Nelson, K. L.; Beamer, P.; Bischel, H. N.; **Bivins, A.**; Bruder, A.; Butler, C.; Camenisch, T. D.; De Long, S. K.; Karthikeyan, S.; Larsen, D. A.; Meierdiercks, K.; Mouser, P. J.; Pagsuyoin, S.; Prasek, S. M.; Radniecki, T. S.; Ram, J. L.; Roper, D. K.; Safford, H.; Sherchan, S. P.; Shuster, W.; Stalder, T.; Wheeler, R. T.; Korfmacher, K. S. Wastewater Surveillance for SARS-CoV-2 on College Campuses: Initial Efforts, Lessons Learned, and Research Needs. *International Journal of Environmental Research and Public Health* **2021**, *18* (9), 4455. https://doi.org/10.3390/ijerph18094455.

[18] Haas, C. N.; **Bivins, A.**; Ahmed, W.; Hamilton, K. A.; Khan, S. J. Discussion on "Potential Discharge, Attenuation and Exposure Risk of SARS-CoV-2 in Natural Water Bodies Receiving Treated Wastewater." *npj Clean Water* **2021**, *4* (1), 1–2. https://doi.org/10.1038/s41545-021-00123-4

[17] Ginn, O.; Rocha-Melogno, L.; **Bivins, A.**; Lowry, S.; Cardelino, M.; Nichols, D.; Tripathi, S. N.; Soria, F.; Andrade, M.; Bergin, M.; Deshusses, M. A.; Brown, J. Detection and Quantification of Enteric Pathogens in Aerosols Near Open Wastewater Canals in Cities with Poor Sanitation. *Environmental Science & Technology* **2021**, *55* (21), 14758–14771. https://doi.org/10.1021/acs.est.1c05060.

[16] Ginn, O.; Nichols, D.; Rocha-Melogno, L.; **Bivins, A.**; Berendes, D.; Soria, F.; Andrade, M.; Deshusses, M. A.; Bergin, M.; Brown, J. Antimicrobial Resistance Genes Are Enriched in Aerosols near Impacted Urban Surface Waters in La Paz, Bolivia. *Environmental Research* **2021**, *194*, 110730. https://doi.org/10.1016/j.envres.2021.110730.

[15] Ginn, O.; Berendes, D.; Wood, A.; **Bivins, A.**; Rocha-Melogno, L.; Deshusses, M. A.; Tripathi, S. N.; Bergin, M. H.; Brown, J. Open Waste Canals as Potential Sources of Antimicrobial Resistance Genes in Aerosols in Urban Kanpur, India. *The American Journal of Tropical Medicine and Hygiene* **2021**, *104* (5), 1761–1767. https://doi.org/10.4269/ajtmh.20-1222.

[14] Capone, D.; **Bivins, A.**; Knee, J.; Cumming, O.; Nalá, R.; Brown, J. Quantitative Microbial Risk Assessment of Pediatric Infections Attributable to Ingestion of Fecally Contaminated Domestic Soils in Low-Income Urban Maputo, Mozambique. *Environmental Science & Technology* **2021**, *55* (3), 1941–1952. https://doi.org/10.1021/acs.est.0c06972

[13] Bibby, K.; **Bivins, A.**; Wu, Z.; North, D. Making Waves: Plausible Lead Time for Wastewater Based Epidemiology as an Early Warning System for COVID-19. *Water Research* **2021**, *202*, 117438. https://doi.org/10.1016/j.watres.2021.117438

[12] Ahmed, W.; Tscharke, B.; Bertsch, P. M.; Bibby, K.; **Bivins, A.**; Choi, P.; Clarke, L.; Dwyer, J.; Edson, J.; Nguyen, T. M. H. SARS-CoV-2 RNA Monitoring in Wastewater as a Potential Early Warning System for COVID-19 Transmission in the Community: A Temporal Case Study. *Science of The Total Environment* **2021**, *761*, 144216. https://doi.org/10.1016/j.scitotenv.2020.144216

[11] Ahmed, W.; **Bivins, A.**; Simpson, S. L.; Smith, W. J.; Metcalfe, S.; McMinn, B.; Symonds, E. M.; Korajkic, A. Comparative Analysis of Rapid Concentration Methods for the Recovery of SARS-CoV-2 and Quantification of Human Enteric Viruses and a Sewage-Associated Marker Gene in Untreated Wastewater. *Science of the Total Environment* **2021**, *799*, 149386. https://doi.org/10.1016/j.scitotenv.2021.149386

[10] Ahmed, W.; **Bivins, A.**; Bertsch, P. M.; Bibby, K.; Gyawali, P.; Sherchan, S. P.; Simpson, S. L.; Thomas, K. V.; Verhagen, R.; Kitajima, M. Intraday Variability of Indicator and Pathogenic Viruses in 1-h and 24-h Composite Wastewater Samples: Implications for Wastewater-Based Epidemiology. *Environmental Research* **2021**, *193*, 110531. https://doi.org/10.1016/j.envres.2020.110531

[9] Johnson, A.; Ginn, O.; **Bivins, A.**; Rocha-Melogno, L.; Tripathi, S. N.; Brown, J. Extended-Spectrum Beta-Lactamase (ESBL)-Positive Escherichia Coli Presence in Urban Aquatic Environments in Kanpur, India. *Journal of Water and Health* **2020**, *18* (5), 849–854. https://doi.org/10.2166/wh.2020.065

[8] Gonzalez, R.; Curtis, K.; **Bivins, A.**; Bibby, K.; Weir, M. H.; Yetka, K.; Thompson, H.; Keeling, D.; Mitchell, J.; Gonzalez, D. COVID-19 Surveillance in Southeastern Virginia Using Wastewater-Based Epidemiology. *Water Research* **2020**, *186*, 116296. https://doi.org/10.1016/j.watres.2020.116296

[7] Ahmed, W.; **Bivins, A.**; Bertsch, P. M.; Bibby, K.; Choi, P. M.; Farkas, K.; Gyawali, P.; Hamilton, K. A.; Haramoto, E.; Kitajima, M. Surveillance of SARS-CoV-2 RNA in Wastewater: Methods Optimization and Quality Control Are Crucial for Generating Reliable Public Health Information. *Current Opinion in Environmental Science & Health* **2020**, *17*, 82–93. https://doi.org/10.1016/j.coesh.2020.09.003

[6] Ahmed, W.; Bertsch, P. M.; **Bivins, A.**; Bibby, K.; Farkas, K.; Gathercole, A.; Haramoto, E.; Gyawali, P.; Korajkic, A.; McMinn, B. R. Comparison of Virus Concentration Methods for the RT-QPCR-Based Recovery of Murine Hepatitis Virus, a Surrogate for SARS-CoV-2 from Untreated Wastewater. *Science of the Total Environment* **2020**, *739*, 139960. https://doi.org/10.1016/j.scitotenv.2020.139960

[5] Ahmed, W.; Bertsch, P. M.; Bibby, K.; **Bivins, A.**; Haramoto, E.; Hewitt, J.; Huygens, F.; Gyawali, P.; Korajkic, A.; Riddell, S.; Sherchan, S. P. Decay of SARS-CoV-2 and Surrogate Murine Hepatitis Virus RNA in Untreated Wastewater to Inform Application in Wastewater-Based Epidemiology. *Environmental Research* **2020**, *191*, 110092. https://doi.org/10.1016/j.envres.2020.110092

[4] Ahmed, W.; Bertsch, P. M.; Angel, N.; Bibby, K.; **Bivins, A.**; Dierens, L.; Edson, J.; Ehret, J.; Gyawali, P.; Hamilton, K. A. Detection of SARS-CoV-2 RNA in Commercial Passenger Aircraft and Cruise Ship Wastewater: A Surveillance Tool for Assessing the Presence of COVID-19 Infected Travellers. *Journal of Travel Medicine* **2020**, *27* (5), taaa116. https://doi.org/10.1093/jtm/taaa116

[3] Ahmed, W.; Angel, N.; Edson, J.; Bibby, K.; **Bivins, A.**; O'Brien, J. W.; Choi, P. M.; Kitajima, M.; Simpson, S. L.; Li, J. First Confirmed Detection of SARS-CoV-2 in Untreated Wastewater in Australia: A Proof of Concept for the Wastewater Surveillance of COVID-19 in the Community. *Science of the Total Environment* **2020**, *728*, 138764. https://doi.org/10.1016/j.scitotenv.2020.138764

[2] Zhang, S.-Y.; Tsementzi, D.; Hatt, J. K.; **Bivins, A.**; Khelurkar, N.; Brown, J.; Tripathi, S. N.; Konstantinidis, K. T. Intensive Allochthonous Inputs along the Ganges River and Their Effect on Microbial Community Composition and Dynamics. *Environmental Microbiology* **2019**, *21* (1), 182–196. https://doi.org/10.1111/1462-2920.14439

[1] Loo, A.; **Bivins, A.**; John, V.; Becker, S.; Evanchec, S.; George, A.; Hernandez, V.; Mullaney, J.; Tolentino, L.; Yoo, R. Development and Field Testing of Low-cost, Quantal Microbial Assays with Volunteer Reporting as Scalable Means of Drinking Water Safety Estimation. *Journal of Applied Microbiology* **2019**, *126* (6), 1944–1954. https://doi.org/10.1111/jam.14253

INVITED TALKS & PRESENTATIONS

[38] Bivins, A. Resilient by Design: Engineering Human Civilization to Prevent Infectious Disease. Louisiana Universities Marine Consortium — July 2026, *Houma, LA*

[37]	Bivins, A. On-Site Wastewater Treatment Systems in Coastal Louisiana: Scale, Policy, and Pollution. GulfCon 2026, Gulf of America Alliance	May 2026 *Mobile, AL*
[36]	Bivins, A. Resilient by Design: Engineering Human Civilization to Prevent Infectious Disease. College of the Coast & Environment, Louisiana State University	April 2026 *Baton Rouge, LA*
[35]	Bivins, A. Resilient by Design: Engineering Human Civilization to Prevent Infectious Disease. Department of Civil & Environmental Engineering, Auburn University	March 2026 *Auburn, AL*
[34]	Bivins, A. Adsorption-based Sampling of Microorganisms from Water. Wastewater Surveillance Research Coordination Network, National Science Foundation	November 2025 *Webinar*
[33]	Bivins, A. Private Sewers, Private Wells, Public Health: A Wicked Low-Level Equilibrium Trap. Private Well Research Coordination Network, National Science Foundation	October 2025 *Webinar*
[32]	Bivins, A. Adsorption-based Sampling of Microorganisms from Water. NC State Environment, Water Resources, and Coastal Seminar	October 2025 *Raleigh, NC*
[31]	Bivins, A.; Ghosh, S. *In Situ* Performance of GAC for Sampling Viruses and Bacteria from Wastewater: Toward Quantitative Passive Sampling for Wastewater-based Epidemiology. ACS Fall 2025 Conference.	August 2025 *Washington DC*
[30]	Bivins, A.; Ghosh, S. *In Situ* Performance of GAC for Sampling Viruses and Bacteria from Wastewater: Toward Quantitative Passive Sampling for Wastewater-based Epidemiology. IWA MEWE-11 (*poster*).	June 2025 *Atlanta, GA*
[29]	Bivins, A.; Ghosh, S. Fecal Indicators & Microbial Source Tracking Markers Suggest Significant Differences in Microbial Characteristics of Home Sewer System Effluents. AEESP Research & Education Conference.	May 2025 *Durham, NC*
[28]	Bivins, A.; Deveraux, J. Who Loves the Sun? An Environmental Justice Framework for Regional Solar Energy Policy Design and Implementation. APPAM Fall Research Conference.	November 2024 *Washington DC*
[27]	Bivins, A. Comparing dPCR systems for microbial source tracking in surface waters. In pursuit of pathogens: using dPCR and sequencing for microbial surveillance. Qiagen	June 2024 *Webinar*
[26]	Bivins, A.; Soni, A. Ideal versus Real: Mapping Nested Governance of On-Site Sewage Systems in Coastal Louisiana. The Gulf of Mexico Conference	February 2024 *Tampa, FL*
[25]	Bivins, A. Re-imagining Sanitary Engineering in the Anthropocene. Larry Mays Seminar Series. Department of Bioinformatics & Genomics. UNC Charlotte	January 2024 *Charlotte, NC*
[24]	Bivins, A. Passive Sampling to Scale Environmental Surveillance for Public Health. NSF Workshop on Human, Engineering, and Scientific Aspects of Disease Transmission in Natural and Built Environments.	October 2023 *Arlington, VA*
[23]	Bivins, A. Passive Sampling to Achieve Greater Equity in Environmental Surveillance for Public Health. Civil & Environmental Engineering & Earth Sciences Department Seminar. University of Notre Dame	October 2023 *Notre Dame, IN*
[22]	Bivins, A. Aircraft wastewater surveillance for global public health. Wastewater Disease Surveillance Summit. Water Environment Federation.	October 2023, *Chicago, IL*
[21]	Bivins, A. Aircraft wastewater surveillance for global public health. Committee on Community Wastewater-based Infectious Disease Surveillance. Virtual Meeting on Wastewater Surveillance Sampling: Institutional Sampling and Sentinel Sites. National Academies of Science Engineering and Medicine.	September 2023 *Webinar*
[20]	Bivins, A. Wastewater-based Epidemiology: Examining the Past, Building the Present, Forging the Future. National Environmental Health Association Annual Education Conference & Exhibition.	August 2023 *New Orleans, LA*

[19]	Bivins, A. Surveying the Global Circulation of Pathogens via Aircraft Wastewater. University of Washington School of Public Health Research Seminar.	May 2023 *Webinar*
[18]	Bivins, A.; Ahmed, W. Comparison of AE and Nanotrap® Microbiome A Particles for the Recovery of Endogenous Viruses from Wastewater. MetaSub Global Metagenomics Summit.	November 2022 *Miami, FL*
[17]	Bivins, A. Passive Samplers in Sewers. Water Environment Federation Technical Exhibition and Conference (WEFTEC).	October 2022 *New Orleans, LA*
[16]	Bivins, A. Wastewater-based Epidemiology: Examining the past, building the present, forging the future. University of Georgia Environmental Health Research Seminar.	March 2022 *Webinar*
[15]	Bivins, A. Wastewater surveillance for COVID-19 in a vaccinated world. SciLifeLab COVID-19 Seminars.	October 2021 *Webinar*
[14]	Bivins, A. Signal in the Sewer: Monitoring Wastewater to Fight COVID-19. London School of Hygiene and Tropical Medicine.	June 2021 *Webinar*
[13]	Bivins, A., Bibby, K. Within-Day Variability of SARS-CoV-2 RNA in Municipal Wastewater Influent During Periods of Varying COVID-19 Prevalence. National University of Singapore Environmental Research Institute.	March 2021 *Webinar*
[12]	Bivins, A. Beyond Epidemiology: Leveraging Environmental Microbiology to Reduce Waterborne Disease and Fight COVID-19. Louisiana State University Environmental Engineering Seminar.	March 2021 *Webinar*
[11]	Bivins, A. Signal in the Sewer: Monitoring Wastewater to Fight COVID-19. Arkansas Water and Wastewater Management Association.	February 2021 *Webinar*
[10]	Bivins, A. SARS-CoV-2 RNA in Midwestern Wastewaters. National Science Foundation Research Coordination Network Webinar.	November 2020 *Webinar*
[9]	Bivins, A., Lowry, S., Joe, B. Microbial Water Quality in Intermittent versus Continuous Water Supply in Nagpur, India. UNC Water and Health Conference.	October 2020 *Webinar*
[8]	Bivins, A. Signal in the Sewer: Monitoring Wastewater to Fight COVID-19. Marquette University: Conversations about Water.	October 2020 *Webinar*
[7]	Bivins, A. Adsorption Direct-Extraction & Droplet Digital PCR (ddPCR) for SARS-CoV-2 RNA Detection and Quantification in Wastewater. GenomeWeb Webinar.	August 2020 *Webinar*
[6]	Bivins, A., Lowry, S., Joe, B. Microbial Water Quality in Intermittent versus Continuous Water Supply in Nagpur, India. Colorado WASH Symposium.	March 2020 *Boulder, CO*
[5]	Bivins, A. Water quality in intermittent water supplies. UNC Water and Health Conference.	October 2018 *Chapel Hill, NC*
[4]	Bivins, A. Selecting household water treatment options on the basis of new World Health Organization performance testing protocols. Colorado WASH Symposium.	March 2018 *Boulder, CO*
[3]	Bivins, A. Estimating the global burden of diarrheal disease attributable to intermittent water supply using QMRA. UNC Water and Health Conference.	October 2016 *Chapel Hill, NC*
[2]	Bivins, A. Direct Sampling for Waterborne Pathogens in the Ganges Basin via Dead-end Ultrafiltration. Sources of Pollution in India Workshop, IIT Kanpur.	October 2015 *Kanpur, India*
[1]	Bivins, A. Drinking water quality and health in rural water supplies of Alabama's Black Belt. UNC Water and Health Conference.	October 2015 *Chapel Hill, NC*

GRANT FUNDING

[11]	Lead PI (100%). From the Ditches to the Lakes: Stormwater Runoff's Role in Mobilizing Human Sewage into Lake Pontchartrain Basin Waterways.	8/2026 – 8/2029 $465,007
[10]	Lead PI (45%). Innovative Onsite Treatment for Wastewater Nutrient Reduction. Gulf of America Program, U.S. EPA	8/2026 – 7/2031 $999,949
[9]	Sole PI. Environmental Surveillance of Vibrio spp. Using Low-Cost Passive Sampling and Rapid Testing. The Joe W. and Dorothy Dorsett Brown Foundation	1/2026 – 12/2027 $150,000
[8]	Sole PI. Rapid Low-Cost Assessment of Sewage Contamination in Surface Waters *via* Fluorescent Dissolved Organic Matter (fDOM). Louisiana Water Resources Research Institute, Louisiana State University	12/2025 – 11/2026 $38,926
[7]	Sole PI. Microbial Characterization of Effluent Discharged from In-Situ Aerobic Treatment Units. Lake Pontchartrain Basin Restoration Program, U.S. EPA	9/2024-9/2027 $361,849
[6]	Sole PI. Hydrogel affinity particles to enable high throughput screening of soft fruits for intact HAV virions. Center for Produce Safety	1/2025 – 12/2025 $58,390
[5]	Lead PI (75%). Soil-Microbe-Plant Ecosystems Can Predictively Augment River Delta Restoration via Geomorphology and Geochemistry. Provost's Big Ideas Phase 1 Grants, Louisiana State University	5/2024 – 4/2025 $25,000
[4]	Co-I (13%). Utility-Scale Solar in Louisiana: Mapping the Research, Policy, and Justice Landscape. Institute for Energy Innovation, Louisiana State University	11/2023 – 12/2024 $93,914
[3]	Lead PI (51%). Microbial Source Tracking and UV-LEDs to Mitigate Fecal Contamination in LA Rivers. Gulf of Mexico Program, U.S. EPA	2/2022 – 1/2026 $498,000
[2]	Sole PI. Efficient Screening for Antibiotic Resistance in Surface Waters Receiving Wastewater Effluent from On-site Treatment Units. Louisiana Water Resources Research Institute, Louisiana State University	9/2022 – 8/2023 $17,993
[1]	Co-I (50%). Dirty Little Secret: Mapping On-Site Sewage Management in Coastal Louisiana. Kathy and Roy Martin Research Award, Department of Public Administration, Louisiana State University	1/2023 – 12/2023 $25,000

ADVISING & MENTORSHIP

Notation || undergraduate student*

BIVINS LAB CURRENT & *FORMER*

[1]	Shimul Gosh, PhD Advisee	Spring 2023 - Present
[2]	Banna Das, PhD Advisee	Fall 2024 - Present
[3]	*Katherine Weise, MS Advisee (Thesis)*	*Graduated Spring 2025*
[4]	*Malek Smadi*, International Visiting Scholar*	*Summer 2024*
[5]	*Lauren Ejiaga*, Gulf Scholar Undergraduate Researcher*	*Summer 2024*
[6]	*Dillon Ditt*, Gulf Scholar Undergraduate Researcher*	*Summer 2025*

OTHER AVISEES CURRENT & *FORMER*

[1]	Abigail Bolander, MS Thesis Committee, LSU	Fall 2025 - Present
[2]	Josephine Saunders*, Distinguished Communicator Advisor, LSU	Fall 2025 - Present
[3]	Macie Tomboli*, Distinguished Communicator Advisor, LSU	Fall 2025 - Present
[4]	*Naresh Suwal, PhD Thesis Committee, LSU*	*Graduated Spring 2026*

[5]	*William Chen, PhD Thesis Committee, Notre Dame*	*Graduated Fall 2025*
[6]	*Ebenezer Etsiwah, MS Thesis Committee, LSU*	*Graduated Spring 2025*
[7]	*Azmain Akash, MS Thesis Committee, LSU*	*Graduated Fall 2024*
[8]	*Andrea Martinez, MS Thesis Committee, LSU*	*Graduated Spring 2023*
[9]	*Sammie Parks, MS Thesis Committee, LSU*	*Graduated Spring 2023*
[10]	*Jon Esparaz, Undergraduate Thesis Co-Advisor, University of Toronto*	*Graduated Spring 2024*
[11]	*Ann Jones*, Distinguished Communicator Advisor, LSU*	*Graduated Spring 2024*
[12]	*Hannah Mistric*, Distinguished Communicator Advisor, LSU*	*Graduated Spring 2023*

TEACHING

UNIVERSITY OF GEORGIA

[1]	Industrial Health (3)	Pending || Fall 2026

PREVIOUS APPOINTMENTS

[10]	Environmental Microbiology, LSU (3), 4.62/5.00 rating	Spring 2022, 2023, 2024, 2025, 2026
[9]	Environmental Engineering Design Lab, LSU (3), 4.75/5.00 rating	Fall 2022, 2023, 2024
[8]	Genomics for Environmental Engineers, LSU (3), 4.69/5.00 rating	Spring 2024
[7]	Quantitative Microbial Risk Assessment, LSU (3), 4.91/5.00 rating	Spring 2023, 2025
[6]	Microbiology of the Built Environment, LSU (3), 4.67/5.00 rating	Fall 2025
[5]	Instructor of Record, Grand Challenges Program, Georgia Tech (3)	Fall 2019
[4]	Instructor of Record, Freshmen Seminar, Georgia Tech (1)	Fall 2018
[3]	Facilitator, Grand Challenges Program, Georgia Tech (3)	Spring 2019 Fall 2018
[2]	Teaching Assistant, Env. Eng. Tech in the Dev. World, Georgia Tech (3)	Spring 2018 Spring 2016 Spring 2015
[1]	Teaching Assistant, Microbial Principles in Env. Eng., Georgia Tech (3)	Fall 2015

SELECTED SERVICE

[1]	Advisory Panel, Water Microbiology Conference UNC Water Institute/Water Environment Federation	2026
[2]	Conference Session Co-Chair, Hidden Pathways: The Overlooked Contribution of Small and Decentralized Wastewater Systems to Nutrient Loading in Gulf Waterways, 2026 Gulf Conference	2026
[3]	Side Event Co-Convener, What Now?!?!? Environmental Justice and WASH at the crossroads in high-income countries, UNC Water & Health Conference	2025
[4]	Symposium Co-Chair, Wastewater Surveillance for Environmental Health Monitoring, ACS Fall 2025 Conference	2025
[5]	Chair, Diversity, Equity, Inclusion & Accessibility Committee	2024-Present

	Association of Environmental Engineering & Science Professors	
[6]	Faculty Advisor, Tau Chi Alpha Env. Eng. Honor Society, LSU	2024 - Present
[7]	Associate Editor, *Journal of Water & Health*	2023 - Present
[8]	Peer Review of 149 manuscripts to date for top journals in the field including: *Science of the Total Environment* (56); *Environmental Science & Technology* (14); *Environmental Science & Technology Letters* (5); *Journal of Water & Health* (11); *Water Research* (12); *Emerging Infectious Disease* (11); *Environmental Science & Technology Water* (5); *FEMS Microbes* (6); and others (29).	2020 - Present
[9]	Co-Founder, COVID-19 WBE Collaborative	2020

PROFESSIONAL AFFILIATIONS

[1]	Association of Environmental Engineering & Science Professors	2019 - Present
[2]	American Academy of Environmental Engineers & Scientists	2023 - Present
[3]	Water Environment Federation	2022 - Present

INTERNATIONAL RESEARCH EXPERIENCE

[1]	India || Fulbright-Nehru Research Scholar	11 months in country
[2]	Nicaragua || NGO engineering intern	2 months in country
[3]	Jamaica || EWB Responsible engineer-in-charge	3 weeks in country
[4]	Bolivia || TA for field research course	3 weeks in country
[5]	Mozambique || RA for MAPSAN trial	2 weeks in country