Michael Schramm

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Research Experience

Texas A&M AgriLife Research — May 2016 - current
Texas Water Resources Institute

Research Specialist IV (Sept. 2023 - current); Research Specialist III (Aug. 2019 - Aug. 2023); Research Associate (May 2016 - Aug. 2019)

Lead and collaborate on watershed management and water quality assessment projects. Develop internal and external facing open-source tools for watershed planning, data analysis, and data sharing. Provide data science and statistical support for senior PIs and graduate students.

Oak Ridge National Labratory/
Oak Ridge Associated Universities — Feb. 2014 - Feb. 2106
Environmental Sciences Division

Research Associate (Feb. 2014 - Feb. 2106)

Collaborated on projects focused on improving the understanding of environmental impacts and mitigation of hydropower technologies. Work included database development, statistical analysis, experiments, and publication.

University of Delaware — Sept. 2012 - June 2013
Center for Energy and Environmental Policy

Graduate Research Assistant (Sept. 2012 - June 2013)

Provided research, data analysis, and conducted interviews for environmental policy analysis reports commissioned by the Delaware General Assembly. Policy analysis work focused on green infrastructure promotion and revitalization of brownfield sites.

Synergistic Activities

Ongoing Watershed Protection Planning and Total Maximum Daily Load development with state agencies (TCEQ, TSSWCB) that lead to stakeholder engagement, workshops, and implementation of best management practices to reduce nonpoint source pollutant loading to waterbodies.

Education

2011 - 2013 — University of Delaware
Master of Energy and Environmental Policy — Newark, DE

2010 - 2011 — University of North Carolina - Wilmington

B.A. Environmental Studies — Wilmington, NC

1999 - 2004 — University of North Carolina - Wilmington
B.S. Biology — Wilmington, NC

Research Area

I work at the intersection of environmental science and policy by facilitating water quality planning efforts with state agencies and local stakeholders. I provide expertise in water quality modeling and assessment through the use of GIS and open source programming tools. My primary interest revolves around water policy and the evaluation of implementation effectiveness. I'm especially interested in leveraging open data and open source analytic tools to develop toolkits and resources for evaluating the environmental outcomes of policy implementation.

Grants Received

2024 - 2027 *Matagorda Bay Mitigation Trust*: Assessment of PFAS concentrations and loadings in the Lavaca Bay watershed. Role: PI. Amount: $477,186.

2024 - 2027 *Section 319 Nonpoint Source Grant*: Sandy Creek Watershed Monitoring and Characterization. Role: PI. Amount: $400,646.

2022 - 2024 *Texas State Soil and Water Conservation Board*: Regional Agricultural BMP Planning Database. Role: PI. Amount: $87,016.

2021 - 2023 *Texas General Land Office Coastal Management Program*: Texas Coastal Nutrient Input Repository; Role: PI. Amount: $63,969.

Refereed Publications (prior 4-years)

Schramm, M. P., Kikoyo, D., Wright, J., & Jain, S. (2024). A meta-analysis of the impacts of best management practices on nonpoint source pollutant concentration. *Frontiers in Water*, *6*(1397615). https://doi.org/10.3389/frwa.2024.1397615

Berthold, T. A., McCrary, A., deVilleneuve, S., & Schramm, M. (2023). Let's talk about PFAS: Inconsistent public awareness about PFAS and its sources in the United States. *PLoS ONE*, *18*(11), e0294134. https://doi.org/10.1371/journal.pone.0294134

Schramm, M. (2023). Assessing linkages between watershed nutrient loading and water quality in a subtropical estuary with generalized additive models. *PeerJ*. https://doi.org/10.7717/peerj.16073

Schramm, M., Gitter, A., & Gregory, L. (2022). Total Maximum Daily Loads and *Escherichia coli* trends in Texas freshwater streams. *Journal of Contemporary Water Research & Education*, *176*, 36–49.

https://doi.org/10.1111/j.1936-704X.2022.3374.x
Berthold, T. A., Olsovsky, T., & Schramm, M. P. (2021). Direct mailing education campaign impacts on the adoption of grazing management practices. *Journal of Contemporary Water Research & Education*, *174*, 45–60. https://doi.org/10.1111/j.1936-704X.2021.3360.x
Schramm, M. P. (2021). Estimating statistical power for detecting long term trends in surface water *Escherichia coli* concentrations. *Texas Water Journal*, *12*(1), 140–150. https://doi.org/10.21423/txj.v12i1.7126