Michael **Schramm**

Researcher | Watersheds, water quality and open science

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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.

Skills

Communication	academic writing, extension and outreach programming, stakeholder facilitation, technical and non-technical reporting
Programatic	grant writing, project management, proposal development
Technical	ArcGIS, Excel, 'git' (limited), 'Python', 'R'
Water Management and Science	statistical methods for water quality, TMDL development, water quality policy and regulations, watershed planning

Experience

current – 2019 — **Research Specialist III, Texas A&M AgriLife Research and Extension Service, Texas Water Resources Institute**

- Collaborated with researchers to design, plan, conduct, and coordinate water focused research projects. From 2016 through 2020, I helped secure over $1.6 million in extramural grants and contracts.
- Facilitate stakeholder engagement, conducted extension and outreach programming. From 2016 through 2020, I provided 59 public presentations with over 967 contact hours.
- Supervise undergraduate and/or graduate students and other technical or field staff involved in research.
- Represented TWRI at local, national, and international meetings to disseminate research findings and network with peers in the field.
- Prepared research and implementation proposals to funding agencies; managed multiple projects and financial accounts to ensure succesful completion of projects for sponsors.

2019 – 2016 — **Research Associate, Texas A&M AgriLife Research and Extension Service, Texas Water Resources Institute**

- Provided technical support and stakeholder facilitation of watershed planning, TMDL, and I-Plan projects in collaboration with state water resource agencies.
- Developed, evaluated, and applied research and statistical methods for water resources planning.

2016 – 2014 — **Research Associate, Oak Ridge National Lab, Environmental Sciences Division**

- Developed relational database and methods to assess environmental mitigation at U.S. hydropower facilities.
- Utilized statistical and geospatial methods to analyze movement and behavioral response data.
- Published three peer-reviewed journal articles, two technical reports, and one conference presentation related to research findings.

2013 – 2012 — **Graduate Research Assistant, University of Delaware, Center for Energy and Environmental Policy**

- Responsible for interviews, data analysis, and developing policy reccomendations in two policy analysis reports delived to the state General Assembly.

Education

2013 Master of Energy and Environmental Policy, University of Delaware
2011 B.A. Environmental Studies, University of North Carolina - Wilmington
2004 B.S. Biology, University of North Carolina - Wilmington

Selected Peer-Review Publications

1. Schramm MP, Bevelhimer MS, Scherelis C (2017) Effects of hydrokinetic turbine sound on the behavior of four species of fish within an experimental mesocosm. *Fisheries Research*, 190:1–14. DOI:10.1016/j.fishres.2017.01.012

2. DeRolph CR, Schramm MP, Bevelhimer MS (2016) Predicting environmental mitigation requirements for hydropower projects through the integration of biophysical and socio-political geographies. *Science of The Total Environment*, 566-567:888–918. DOI:10.1016/j.scitotenv.2016.05.099

3. Pracheil BM, DeRolph CR, Schramm MP, Bevelhimer MS (2016) A fish-eye view of riverine hydropower systems: The current understanding of the biological response to turbine passage. *Reviews in Fish Biology and Fisheries*, 26(2):153–167. DOI:10.1007/s11160-015-9416-8

Selected Technical Reports

1. Schramm MP, Jha A (2020) Technical Support Document for One Total Maximum Daily Load for Indicator Bacteria in Hillebrandt Bayou.:65. URL: **https://www.tceq.texas.gov/assets/public/waterquality/tmdl/118hillebrandt/118-hillebrandt-tsd-2020june.pdf**

2. Schramm MP, Jha A (2020) Technical Support Document for Two Total Maximum Daily Loads for Indicator Bacteria in Sandy Creek and Wolf Creek.:63. URL: **https://www.tceq.texas.gov/assets/public/waterquality/tmdl/118sandywolfcreeks/118-sandy-wolf-tsd-2020june.pdf**

3. Schramm M, Jha A (2020) Technical Support Document for Four Total Maximum Daily Loads for Indicator Bacteria in Neches River Tidal. URL: **https://www.tceq.texas.gov/assets/public/waterquality/tmdl/118nechestidal/118-nechestidal-bacteria-tsd-2020july.pdf**

Software

1. Schramm MP (2019) "dartx": Drainage Area Ratio with Correction Factors. URL: **https://github.com/mps9506/dartx**

2. Schramm MP (2019) "wd4tx": R interface for Texas Water Development Board water data. URL: **https://github.com/mps9506/wd4tx**

3. Schramm MP (2018) "tbrf": Time-Based Rolling Functions. DOI:10.5281/zenodo.3727319

4. Schramm MP (2018) "echor": Access EPA 'ECHO' Data. DOI:10.5281/zenodo.3635017