

# Michael SCHRAMM

Researcher | Watersheds, water quality and open science

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My primary role over the last seven years has been facilitating water quality planning efforts with state agencies and local stakeholders. I provide expertise in data modeling and assessment using GIS and open source programming tools. My research interests are in implementing and evaluating water quality policies and programs. I'm especially interested in leveraging open data and developing open source tools that enable strong research and planning for myself, collaborators, and the broader water management and research communities.

## SKILLS

Communication	academic/technical writing, public speaking, stakeholder facilitation
Project Management	budgeting, data management, grant writing, proposal development
Computing	ArcGIS, <b>git</b> , GitHub, MS Excel, MS Word, <b>Python</b> , <b>R</b>
Watershed Management	statistical methods for water quality, Total Maximum Daily Loads (TMDLs), water quality policy, watershed planning

## EXPERIENCE

current	Research Specialist III (40 hours/week), TEXAS A&M AGRILIFE RESEARCH, Texas Water Resources Institute
Aug. 2019	<ul style="list-style-type: none"><li>➤ Responsible for collaborating with internal and external scientists and faculty to design, plan, conduct, and coordinate water focused research and extension projects. Led or collaborated in the development of 25 grants and contracts securing over \$3.6 million in external funding.</li><li>➤ Supervised and mentored graduate students and research staff. Developed guidance and best practice documents for <a href="#">data visualization</a> and <a href="#">data analysis software</a>.</li><li>➤ Led the development, evaluation, and application of research and statistical methods for water resources planning. Published fifteen technical reports, eight TMDLs, six Implementation Plans, four journal articles, and developed six R software packages (<a href="#">adc</a>, <a href="#">echor</a>, <a href="#">ldc</a>, <a href="#">rATTAINS</a>, <a href="#">twriTemplates</a>, <a href="#">wd4tx</a>)</li><li>➤ Conducted engagement, education, and extension activities. Provided over 60 public presentations with over 1,000 contact hours to the general public, agency staff, local governments and other stakeholders.</li></ul>
Aug. 2019	Research Associate (40 hours/week), TEXAS A&M AGRILIFE RESEARCH, Texas Water Resources Institute
May 2016	<ul style="list-style-type: none"><li>➤ Provided technical support and facilitated stakeholder engagement for watershed protection plan and TMDL development. Worked with senior staff to develop and secure external funding.</li></ul>
Feb. 2016	Research Associate (40 hours/week), ORAU/ORNL, Environmental Sciences Division
Feb. 2014	<ul style="list-style-type: none"><li>➤ Developed databases and methods to assess environmental mitigation at U.S. hydropower facilities.</li><li>➤ Utilized statistical and geospatial methods to assess environmental impacts of hydropower facilities.</li><li>➤ Published three peer-reviewed journal articles, two technical reports, and one conference presentation related to research findings.</li></ul>

June 2013	Graduate Research Assistant (20 hours/week), UNIVERSITY OF DELAWARE, Center for Energy and Environmental Policy
Sept. 2012	<ul style="list-style-type: none"> <li>Responsible for interviews, data analysis, and developing policy recommendations in policy analysis reports for the Delaware General Assembly.</li> </ul>

## 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

## RECENT PROJECTS

### TEXAS COASTAL NUTRIENT INPUT REPOSITORY (PHASE I) 2021 - 2023

 <https://tcnir.twri.tamu.edu/>

Proof-of-concept project that developed statistical models to estimate daily watershed nutrient loads and evaluate coastal water quality responses. Efforts are underway to secure additional funding for subsequent project phases.

### LOWER NECHES BASIN BACTERIA IMPAIRMENTS 2019 - 2023

 <https://neches.twri.tamu.edu/>

Collaborated with TCEQ to engage local stakeholders, conduct technical work for developing bacteria TMDLs, and work with stakeholders to develop Implementation Plans aimed at reducing riverine bacteria loads.

### MATAGORDA BASINS WATER QUALITY PLANNING 2016 - ONGOING

 <https://matagordabasin.tamu.edu/>

Led both technical and stakeholder engagement efforts to develop Watershed Protection Plans and TMDLs across four subwatersheds. Secured external funding for a watershed coordinator, septic system and pet waste programs, and water quality education.

## SELECTED PEER-REVIEWED PUBLICATIONS

- Schramm, M. P., 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/twj.v12i1.7126>
- Schramm, M. P., Bevelhimer, M. S., & DeRolph, C. R. (2016). A synthesis of environmental and recreational mitigation requirements at hydropower projects in the United States. *Environmental Science & Policy*, 61, 87–96. <https://doi.org/10.1016/j.envsci.2016.03.019>

## AWARDS

- 2023** Universities Council on Water Research (UCOWR), Journal Of Contemporary Water Research and Education Paper of the Year
- 2013** Center for Energy and Environmental Policy Leadership Award
- 2011** North Carolina Department of Transportation Environmental Service Scholarship

## “ REFERENCES

Available upon request.

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