

# Michael Schramm

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578 John Kimbrough Blvd · 2260 TAMU · College Station, TX 77843

✉ [mpschrmm@gmail.com](mailto:mpschrmm@gmail.com) ☎ 910 232-3760 🌐 [mps9506](#) | Updated: March 27, 2020

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## Employment

*Texas Water Resources Institute, Texas A&M AgriLife Research and Extension Service*

Research Specialist III 2019-current

Research Associate 2016-2019

*Oak Ridge National Laboratory, Oak Ridge, TN*

Research Associate 2014-2016

*Center for Energy and Environmental Policy, University of Delaware*

Research Assistant 2012-2013

## Education

*University of Delaware, Master of Energy and Environmental Policy, 2013*

*University of North Carolina - Wilmington, B.A. Environmental Studies, 2011*

*University of North Carolina - Wilmington, B.S. Biology, 2004*

## Research Areas

Water quality - policy analysis, stakeholder engagement, statistical modeling, and watershed planning

Hydroinformatics - statistical modeling and visualization for decision-making

## Skills

Data Analysis, Environmental Policy, GIS, Grant Writing, Policy Analysis, Python, R, Reproducible Research, Stakeholder Facilitation, Technical Writing, Water Quality Modeling and Assessment, Watershed Planning

## Publications

### *Journal Articles*

**Schramm, M.P.**, Bevelhimer, M.S., 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](https://doi.org/10.1016/j.fishres.2017.01.012)

DeRolph, C.R., **Schramm, M.P.**, Bevelhimer, M.S. 2016. Predicting environmental mitigation requirements for hydropower projects through the integration of biophysical and socio-political geographies. *Science of The Total Environment* 566:888-918. [doi:10.1016/j.scitotenv.2016.05.099](https://doi.org/10.1016/j.scitotenv.2016.05.099)

**Schramm, M.P.**, Bevelhimer, M.P., 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. doi:10.1016/j.envsci.2016.03.019

Pracheil, B.M., DeRolph C.R., **Schramm, M.P.**, Bevelhimer, M.S. 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

Cutting, R.H., Cahoon, L.B., Flood, J.F., Horton, L., **Schramm, M.P.** 2010. Spill the beans: GoodGuide, Walmart and EPA use information as efficient, market-based environmental regulation. *Tul. Envtl. LJ* 24:291.

### *Technical Reports*

**Schramm, M.**, Jha, A. 2020. Technical Support Document for Two Total Maximum Daily Loads for Indicator Bacteria in Sandy Creek and Wolf Creek. Prepared by the Texas Water Resources Institute for the Total Maximum Daily Load Program, Texas Commission on Environmental Quality. Austin, TX. URL: <https://www.tceq.texas.gov/assets/public/waterquality/tmdl/118sandywolfcreeks/118-sandywolf-tds-2020jan.pdf>

**Schramm, M.**, Jha, A. 2019. Technical Support Document for One Total Maximum Daily Load for Indicator Bacteria in Hillebrandt Bayou. Prepared by the Texas Water Resources Institute for the Total Maximum Daily Load Program, Texas Commission on Environmental Quality. Austin, TX. URL: <https://www.tceq.texas.gov/assets/public/waterquality/tmdl/118hillebrandt/118-hillebrandtbayou-tds-2019.pdf>

Jain, S., Ruff, S., **Schramm, M.** 2018. Technical Support Document for One Total Maximum Daily Load for Indicator Bacteria in Arenosa Creek. Prepared by the Texas Water Resources Institute for the Total Maximum Daily Load Program, Texas Commission on Environmental Quality. Austin, TX. URL: <https://www.tceq.texas.gov/assets/public/waterquality/tmdl/108arenosa/108-arenosa-tds-final.pdf>

**Schramm, M.P.**, Broad, T., Arsuffi, R. 2018. *Escherichia coli* and Dissolved Oxygen Trends in the Upper Llano River Watershed, Texas (2001-2016). Technical Report, Texas Water Resources Institute TR-511. Prepared by the Texas Water Resources Institute and Llano River Field Station for the Texas State Soil and Water Conservation Board. Temple, TX. URL: <http://twri.tamu.edu/publications/reports/2018/tr-511/>

**Schramm, M.P.**, Entwistle, C., Berthold, T. 2018. Lavaca River Watershed Protection Plan. Technical report, Texas Water Resources Institute TR-507. College Station, TX. URL: <http://twri.tamu.edu/publications/reports/2018/tr-507/>

**Schramm, M.P.**, Entwistle, C., Berthold, T. 2017. Tres Palacios Watershed Protection Plan. Technical report, Texas Water Resources Institute TR-500. College Station, TX. URL: <http://twri.tamu.edu/publications/reports/2017/tr-500/>

**Schramm, M.P.**, Entwistle, C., Berthold, T. 2017. Implementation Plan for One Total Maximum Daily Load for Indicator Bacteria in Tres Palacios Creek Tidal. Prepared by the Texas Water Resources Institute for the Total Maximum Daily Load Program, Texas Commission on Environmental Quality. Austin, TX. URL: [https://www.tceq.texas.gov/assets/public/waterquality/tmdl/108trespalacios/108-TresPalaciosBacteria\\_TMDLIPlan\\_Comment\\_July05-2017.pdf](https://www.tceq.texas.gov/assets/public/waterquality/tmdl/108trespalacios/108-TresPalaciosBacteria_TMDLIPlan_Comment_July05-2017.pdf)

**Schramm, M.P.** 2017. Technical Support Document for Total Maximum Daily Loads for Indicator Bacteria in Aransas River Above Tidal and Poesta Creek. Prepared by the Texas Water Resources Institute for the Total Maximum Daily Load Program, Texas Commission on Environmental Quality. Austin, TX. URL: <https://www.tceq.texas.gov/assets/public/waterquality/tmdl/76copano/76-aransas-poesta-tsd.pdf>

McManamay, R.A., Troia, M.J., DeRolph, C.R., Bevelhimer, M.S., **Schramm, M.P.**, Larson, K.B., Tagestad, J.D., Johnson, G.E., Jager, H.I. 2015. Identifying Environmental Opportunities outside the Hydropower Project Boundary : An Updated Methodology of the Basin Scale Opportunity Assessment. doi:10.13140/RG.2.1.3000.0482

Kramer, C., Dsouza, C., **Schramm, M.P.**, Griffin, M., Teron, L. 2014. Brownfields: From Re-development to Revitalization. Technical Report, Center for Energy and Environmental Policy, Newark, DE. doi:10.13140/RG.2.1.5006.0565

Caldwell, J., Cruz-Ortiz, C., Dsouza, C., Johnson, T., Schorse, M., **Schramm, M.P.**, and Zhang, X. 2012. Supporting Urban Green Infrastructure. Technical report, Center for Energy and Environmental Policy, Newark. doi:10.13140/RG.2.1.1204.9687

### *Software*

**Schramm, M.P.** 2018. **echor**: Access EPA ECHO Data. *R package version 0.1.4 (CRAN)*. <https://CRAN.R-project.org/package=echor>

**Schramm, M.P.** 2018. **tbrf**: Time-Based Rolling Functions. *R package version 0.1.4 (CRAN)* <https://CRAN.R-project.org/package=tbrf>

**Schramm, M.P.** 2019. **dartx**: Drainage Area Ratio with Correction Factors. *R package version 0.1 (github)* <https://github.com/mps9506/dartx>

**Schramm, M.P.** 2019. **wd4tx**: R Interface for Texas Water Development Board water data. *R package version 0.0.9999 (github)* <https://github.com/mps9506/wd4tx>

### *Datasets*

Bevelhimer, M.S., **Schramm, M.P.**, DeRolph, C.R. 2015. Non-Federal Hydropower Mitigation Database, Oak Ridge National Laboratory, available at: <http://nhaap.ornl.gov/environmental-mitigation>

Bevelhimer, M.S., **Schramm M.P.**, DeRolph, C.R. 2015. US Maps of Non-Federal Hydropower Mitigation Data, Oak Ridge National Laboratory, available at: <http://nhaap.ornl.gov/environmental-mitigation>

Bevelhimer, M.S., **Schramm M.P.**, DeRolph, C.R. 2015. US Maps of Non-Federal Hydropower Water Quality Requirements, Oak Ridge National Laboratory, available at: <http://nhaap.ornl.gov/environmental-mitigation>

### *Forthcoming*

**Schramm, M.**, Jha, A. (forthcoming). Technical Support Document for Four Total Maximum Daily Loads for Indicator Bacteria in Neches River Tidal . Prepared by the Texas Water Resources

Institute for the Total Maximum Daily Load Program, Texas Commission on Environmental Quality. Austin, TX.

### *Conference Presentations*

Presenting author *italicized*, if other.

**Schramm, M.** 2019. Automating Retrieval of Wastewater Discharge Monitoring Reports with R. National Water Quality Monitoring Conference. Denver, Colorado.

**Schramm, M.** 2019. Automating Retrieval of Wastewater Discharge Monitoring Reports with R. Southern Region Water Conference. College Station, TX.

*DeRolph, C.R.*, Bevelhimer, M.S., Schramm, M.P. 2015. Development of an Environmental Mitigation Database and Statistical Models for Predicting Likely FERC License Mitigation Requirements at Hydropower Projects. American Fisheries Society. Portland, Oregon.

**Schramm, M.**, Bevelhimer, M.S., DeRolph, C.R. 2015. Analysis of Required Environmental Mitigation at Licensed Hydropower Projects Across the US. Southern Division American Fisheries Society. Savannah, Georgia.

### *Grants and Projects*

Basins Approach to Address Bacterial Impairments in the Lower Neches Basin (FY20). Texas Commission on Environmental Quality. PI: Lucas Gregory. Project Manager: Michael Schramm. September 2018-August 2019. Total: \$135,790.

Basins Approach to Address Bacterial Impairments in Basins 15, 16, 17 (FY20). Texas Commission on Environmental Quality. PI: Allen Berthold. Project Manager: Michael Schramm. September 2018-August 2019. Total: \$51,888.

Basins Approach to Address Bacterial Impairments in the Lower Neches Basin (FY19). Texas Commission on Environmental Quality. PI: Lucas Gregory. Project Manager: Michael Schramm. September 2018-August 2019. Total: \$139,343.

Basins Approach to Address Bacterial Impairments in Basins 15, 16, 17 (FY19). Texas Commission on Environmental Quality. PI: Allen Berthold. Project Manager: Michael Schramm. September 2018-August 2019. Total: \$97,399.

Lavaca River Watershed Protection Plan (WPP) - Coordination, Implementation and Routine Water Quality. Texas Commission on Environmental Quality. PI: Allen Berthold. September 2018 - August 2021. Total: \$150,000.

Tres Palacios On-Site Sewage Facilities Remediation. Texas Commission on Environmental Quality. PI: Allen Berthold. May 2018 - December 2020. Total: \$327,361.

Tres Palacios WPP implementation (TCEQ FY17). Texas Commission on Environmental Quality. PI: Allen Berthold. May 2018 - December 2020. Total: \$355,800.

Mission and Aransas Rivers TMDL I-Plan implementation. Texas General Land Office. PI: Allen Berthold. October 2017-March 2019. Total: \$83,979.

Coordinating Implementation of the Tres Palacios Watershed Protection Plan. Texas General Land Office. PI: Allen Berthold. October 2017-March 2019. Total: \$95,816.

Basins Approach to Address Bacterial Impairments in Basins 15, 16, 17 (FY18). Texas Commission on Environmental Quality. PI: Allen Berthold. Project Manager: Michael Schramm. September 2017-August 2018. Total: \$220,166. Amount to Schramm: \$179,996.

Basins Approach to Address Bacterial Impairments in Basins 15, 16, 17 (FY17). Texas Commission on Environmental Quality. PI: Allen Berthold. Project Manager: Michael Schramm. September 2016-August 2017. Total: \$292,699.

Coordinating Implementation of the Upper Llano Watershed Protection Plan. Texas State Soil and Water Conservation Board. Co-PIs: Tom Arsuffi, Kevin Wagner. December 2015-November 2017. Total: \$347,493.

## **Media Coverage**

### **Water Quality Projects**

“Team’s work to improve water quality at region’s watersheds paying off”: The Lufkin Daily News. [Link here](#)

“Experts gather to discuss Arenosa Creek’s water quality”: Victoria Advocate. [Link here](#)

“Texas Water Resources Institute protection plan for Lavaca River accepted by EPA”: The Eagle. [Link here](#)

“Group finalizes watershed protection plan”: Victoria Advocate. [Link here](#)

“Residents look to improve Lavaca River quality”: Victoria Advocate. [Link here](#)

## **Awards and Honors**

2013 - Center for Energy and Environmental Policy Leadership Award

2011 - NCDOT Environmental Science Scholarship

## **Service**

### **Review committees:**

Texas A&M AgriLife , Texas A&M AgriLife Extension, and Texas A&M Engineering Station Water Seed Grant Initiative (2019)

Texas Hill Country Headwaters Conservation Initiative Regional Conservation Partnership Program (2018 - ongoing)

TWRI Mills Scholarship Program (2017 - ongoing)

USGS Graduate Research Program (2017 - ongoing)

### **Journal peer review:**

*Water, Sustainability, R Journal*

## **Professional Affiliations**

American Water Resources Association (AWRA)

Universities Council on Water Resources (UCOWR)