Houston-Galveston Area Council

Clean Waters Initiative: Microplastics in Surface Waters
AGENDA
February 25, 2025

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Clean Waters Initiative: Microplastics in Surface Waters Workshop
February 25, 2025 |8:30 – 12:00

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8:30 am	*Coffee and Networking*
9:00 am	*Welcome and Introductions* ▪ Todd Running ▪ Water Resources Manager – Houston-Galveston Area Council
9:05 am	*Introduction to Microplastics and Impacts on Wild Bird Health* ▪ Jacquelyn Grace, Ph.D. ▪ Assistant Professor, Dept. of Ecology and Conservation Biology – Texas A&M University
9:30 am	*Microplastics in Galveston Bay Tributaries* ▪ Michael Lee ▪ Gulf Coast Branch Chief – United States Geological Survey
9:50 am	*Microplastics in Galveston Bay* ▪ Jenny Oakley, Ph.D. ▪ Senior Water Resources Scientist – Houston-Galveston Area Council
10:10 am	*Break*
10:20 am	*Microplastics Transport in Coastal Waters* ▪ Emily Summer, Ph.D. ▪ Postdoctoral Researcher – US Army Corps of Engineers
10:40 am	*Microplastics in Galveston Bay Oysters* ▪ Antonietta Quigg, Ph.D. ▪ Regents Professor – Texas A&M University Galveston
11:00 am	*Microplastics in Galveston Bay Fishes* ▪ M. Bryan Gahn ▪ Doctoral Student – Texas A&M University Galveston
11:20 am	*Ultrasonic Waves to Filter Microplastics* ▪ Justin Huang and Victoria Ou ▪ Students – Academy of Science and Technology at College Park Highschool
11:30 am	*Panel Discussion* Audience Questions and Guided Discussion

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PRESENTERS

Todd Running

Todd Running, Water Resources Manager, has served at the Houston-Galveston Area Council for over 32 years. He is responsible for conducting water quality assessments for river and coastal basins in the Houston-Galveston area. He has also developed and directed over two dozen special studies regarding water quality issues in the H-GAC region. Under his leadership, H-GAC's Clean Rivers Program has produced several innovative reports that have taken advantage of advances in computer technology and the web. Mr. Running is also responsible for overseeing the development of TMDL Implementation Plans, Watershed Protection Plans and the annual update of the Regional Water Quality Management Plan at H-GAC.

Jacquelyn Grace, Ph.D.

Jacquelyn Grace, Ph.D. is an assistant professor in the Department of Ecology and Conservation Biology at Texas A&M University. Her research focuses on how animals and their communities respond to stressors in their environments and spans the fields of conservation physiology, ecotoxicology, behavioral and community ecology. This work addresses the significant challenge of understanding animal responses to environmental change, with the goal of predicting future population health and designing effective conservation management techniques. Her lab is currently conducting several projects focused on ingestion of microplastics by wild birds on the Gulf Coast, and the threats they may pose to bird health.

Mike Lee

Mike is the Gulf Coast Branch Chief at the USGS Oklahoma-Texas Water Science Center near Houston, Texas. In this role, Mike coordinates and facilitates the scientific, technical, and administrative direction of all operations in the branch including those carried on in cooperation with local, State, and other Federal agencies. He conducts research and other scientific/technical work related to water resources development and conservation and ensures that scientific activities meet the needs of the Federal gov-ernment, the OK/TXWSC, cooperating State and local agencies, and the general public. His technical background specializes in hydrologic research and data collection including water resource, water quality, and environmental/ecological monitoring; utilizing real-time systems, networks, and innovative technology for developing monitoring solutions for hydrologic research. The USGS is a worldwide leader in the research of the natural world and serves as the research arm of the U.S. Department of Interior.

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Jenny Oakley, Ph.D.

Jenny Oakley is a Senior Water Resources Scientist at the Houston-Galveston Area Council. Jenny earned her Ph.D. in Marine Biology Interdisciplinary Programs at Texas A&M University. She coordinates the Houston region's Clean Rivers Program and collaborates with partners region-wide to develop and direct research projects focused on all aspects of water resources.

Emily Summer, Ph.D.

Emily Summers is a postdoctoral researcher at the US Army Corps of Engineers Research and Development Center. Her work primarily focuses on modelling of water quality and anthropogenic pollutants under a changing climate. Her areas of interest include microplastics, harmful algal blooms, and post-wildfire scenarios. She received a PhD from Texas A&M University in Oceanography in August 2024.

M. Bryan Gahn

M. Bryan Gahn is a Ph.D. student at Texas A&M at Galveston in the Department of Marine Biology. His path into research began during undergraduate studies at Texas A&M University at Galveston, where he completed an internship in Dr. Christopher Marshall's and Dr. Karl Kaiser's labs analyzing amino acids in biological inks using high performance liquid chromatography. That's when he discovered his love for using analytical chemistry to answer biological questions. Upon graduating, Bryan started a master's program which evolved into a Ph.D. due to a breakthrough in methodology which allowed him to use chromatography and spectrometry to analyze micro- and nanoplastic contamination in a variety of matrices. Beyond plastics, he is passionate about understanding how human activities influence biological systems and contributing to scientific progress that helps create a smarter, safer, more sustainable world.

Antonietta Quigg, Ph.D.

Dr. Antonietta Quigg is a Regents Professor with Texas A&M University Galveston and leads an impactful and transformational research program that uses micro-sentinel phytoplankton species to assess the response of aquatic ecosystems to environmental pollutants. Her research spans organizational scales from genes to ecosystems and timescales from seconds to decades, and has foci in areas of water quality, climate change, and energy. Her work is collaborative, multidisciplinary, and timely. Recently, she was inducted into the Texas Women's Hall of Fame for her contributions to science. Dr. Quigg is a thought-leader in her field who is the epitome of the creative TAMU scholar, defined by excellence and fueled by selfless service.

Justin Huang and Victoria Ou

Justin Huang and Victoria Ou are students at the Academy of Science and Technology at College Park Highschool. They recently won the Gordon E. Moore Award for Positive Outcomes for Future Generations at the Regeneron International Science and Engineering Fair. Their winning study harnessed ultrasonic technology for removing microplastic particles from water. Both are currently seniors who look forward to attending college and conducting research after graduation. They plan to major in STEM and continue to solve world problems through scientific exploration.

NOTES

The Clean Waters Initiative workshop series is supported, in part by the Texas Commission on Environmental Quality

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