

SCIENCE, POLICY, AND INNOVATION FOR CLEAN WATER PROTECTION IN THE DAIRY STATE



SUMMARY

Collaborative exploration, analysis, and development of solutions to the Dairy State's water challenges.

DESCRIPTION

The overarching purpose of the program is to form a foundational nucleus of expertise for exploring, analyzing, and developing solutions to water challenges centered in Marquette's facility at the Global Water Center. This project will establish a functioning citizen driven surface water quality monitoring program for testing and analyzing water parameters associated with agricultural consolidation and manure practices. At the same time, will explore social and political dimensions of contamination problems and potential solutions in the Kewaunee County community.



MILESTONES

1. Explore intersections between scientific, social, and technological challenges related to local water contamination and develop potential solutions.
2. Work with the community at Kewaunee County to implement a water quality monitoring program.
3. Explore social and political dimensions of contamination problems and potential solutions in the Kewaunee County community.
4. Conduct research to develop new technologies for manure waste management.

ABOUT OUR TEAM

Dr. Krassimira Hristova, PI

Dr. Patrick McNamara, Lead Technology Developer

Dr. Jill Birren, Community and Regulatory Agency Liason

Dr. Amber Wichowsky, Policy Network Analyst

Dr. Joseph Brown, Student Communications Lead

Dr. Hristova has experience in water quality monitoring and ecosystem services assessment as well as directing multidisciplinary projects. Dr. Birren has experience working with communities to trace social-political processes at the nexus of science and policy and has established close connections with the KC community. Dr. McNamara has conducted research on the feasibility of pyrolysis of wastewater biosolids, a material that is similar to manure in that both have high organic content, biomass, and pathogens. Dr. Amber Wichowsky will perform network analysis tracing varied influences in policy-making in regulating water contamination in Kewaunee County. All team members will collaborate to engage students in research, development, education, and community outreach in the interest of promoting surface and groundwater protection and sustainable agriculture.

BEYOND BOUNDARIES

Our project answers invitations for multidisciplinary research in the pursuit of environmental preservation by utilizing innovation funds to initiate multidisciplinary environmental teaching and research into the science and politics of antimicrobial additives.

Intersections between water-related innovation, and water contamination in Milwaukee offer opportunities to examine the ways water quality issues, like antimicrobial additives, are understood and managed while providing novel, transformative learning experiences for Marquette University students.