



University at Buffalo

Department of Civil, Structural  
and Environmental Engineering

School of Engineering and Applied Sciences

## Environmental and Water Resources Engineering Seminar

# The Freedom Industries Chemical Spill, West Virginia

### Abstract

In January 2014, 15% of West Virginia's population was provided drinking water of unknown toxicity which prompted a water ban for up to nine days. During this Federally declared disaster, licorice-smelling drinking water was only permitted for fire-fighting and toilet flushing activities. Lack of available information inhibited government officials from adequately protecting the public from harm. Residents were exposed to contaminated water and adverse health effects were reported. Dr. Whelton, and a team of students and faculty, responded to the area and worked alongside volunteer organizations to provide the community support. The team helped residents decontaminate their plumbing and investigate chemical fate, exposure, and toxicity through bench-, pilot-, and full-scale activities. West Virginia's Governor Earl Ray Tomblin also asked Dr. Whelton to provide the State assistance which catalyzed the involvement of toxicologists and engineers from the U.S., Israel, and the U.K. In Fall 2016, residents and businesses reached a tentative class-action settlement with the water and chemical companies. Notwithstanding, academic and government researchers continue to fill knowledge-gaps associated with the chemical spill's impacts and identify actions needed to better protect populations from future large-scale disasters. A variety of erroneous assumptions and research gaps uncovered during the Freedom Industries spill and recovery will be described. Examples of how government agencies, corporations, and nonprofit organizations involved amplified, lessened, and obfuscated the chemical spill impacts will be noted.

### Andrew Whelton, PhD

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Dr. Whelton is an assistant professor in the Purdue University Lyles School of Civil Engineering and Division of Environmental and Ecological Engineering, Indiana. His research program focusses on emerging health and environmental risks associated with technology and disasters. Contributions of his research program have spanned the drinking water, nanotechnology, nuclear power, aquatic toxicology, and indoor air disciplines. Dr. Whelton's research has been supported by the NSF, EPA, state DOTs, research foundations, water utilities, corporations, and through crowdfunding. Andrew previously worked for the University of South Alabama, U.S. Army, consulting engineering firms, and National Institute for Standards and Technology.

**Date: December 2, 2016 Time: 12-1 PM**

**Location: 223 Jarvis Hall, North Campus, University at Buffalo**