The Department of Environmental Sciences and Engineering at the UNC Gillings School of Global Public Health presents:

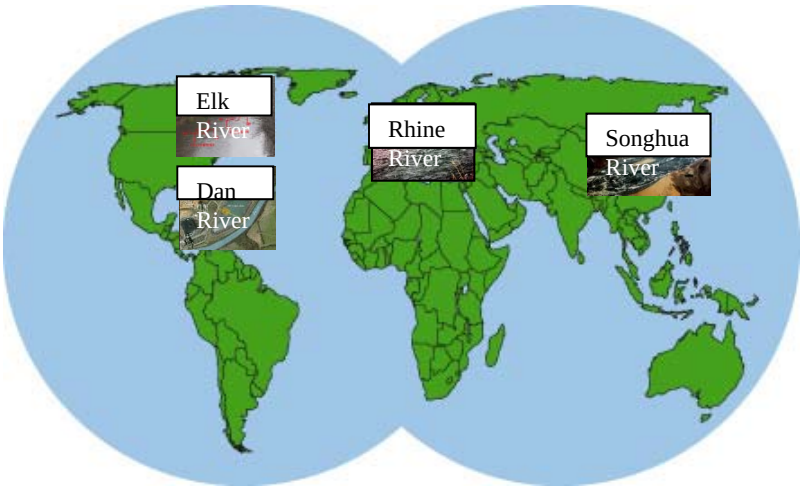
2015 ESE Distinguished Alumna

Andrea Dietrich

Professor, Virginia Tech,
Department of Civil and Environmental Engineering

April 8 2:00 pm

NCBCBS Auditorium (0001 MHRC)



Unthinkable and Undrinkable: Chemical Spills and Water Contamination

Abstract: Surface waters, including rivers and lakes, are centers of society for residential living, commercial manufacturing and transport, and drinking water production. Globally, this multiple use of surface waters creates a situation that chemical spills can contaminate drinking water resulting in interruption of drinking water production, distribution, and use to result in severe societal and economic disruption. Using case studies from the Songhua River in Asia, the Rhine River in Europe, the Elk and Dan Rivers in North America, chemical spills are presented and analyzed for their causes and impacts on society. The role of scientists, engineers, industry and government in providing technical support during and after the spill is discussed. To be more sustainable in the future, drinking water resources need protection and thus data and policies that prevent spills, effectively respond to spills, and protect the public are needed.

BIO

Since graduating from UNC in 1987 and joining the civil and environmental engineering faculty at Virginia Tech, Dr. Dietrich has enjoyed nearly thirty years of activities in teaching, research, and consulting within the interdisciplinary field of environmental engineering and sciences. Her areas of expertise are water quality, fate and transport of organic and inorganic chemicals, sensory analysis of environmental contaminants, odorants and tastants; and potable water infrastructure. She has authored over 125 peer-reviewed journal articles, book chapters, and technical reports. As the past chair person of the American Water Works Association Taste and Odor Committee and chair of the International Water Association's Specialist Group on Tastes, Odours, and Algal Toxins in the Sources of Waters, she is active nationally and internationally to promote safe and palatable drinking water. Her awards include the Civil and Environmental Engineering Alumni Teaching Excellence Award; American Water Works Association's Golden Spigot Award; Dean's Excellence in Research Award; Visiting Scientist with NASA; two Science, Technology and Policy Fellowships from the American Association for the Advancement of Science. Research and consulting projects include development of practical methods for sensory analyses, investigating sources and controls for tastes and odors in drinking water, using customer complaints as a predictor of drinking water quality, and fate and transport of chemical contaminants. Her interdisciplinary background and approach allow her to collaborate across departments and disciplines to resolve basic and applied research challenges for society and industry.

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