



**Pittsburgh Chapters of:**  
**American Society of Civil Engineers**  
**Environmental and Water Resources Institute**  
**Pennsylvania Section of:**  
**American Water Works Association**  
**Western PA Water Pollution Control Association**  
**Water Works Operators' Association of PA**

Thursday, February 12<sup>th</sup> at 8:00 AM  
 Engineer's Society of Western Pennsylvania  
 337 Fourth Avenue, Pittsburgh, PA 15222

## Contaminants of Emerging Concern in Drinking Water and Wastewater

Latest Research Findings from the EPA



Image from epa.gov

The presence of pharmaceuticals in our nation's water resource supplies has garnered much scrutiny in major news outlets over the past several years. The following articles are just a few examples that have been published in recent years: *"That Tap Water is Legal but May Be Unhealthy"* Duhigg 2009, The New York Times; *"This New Study Found More Drugs in Our Drinking Water than Anybody Knew"* Fallik 2013, New Republic; and *"Emerging Contaminants Taint Drinking Water Supply"* Herman 2014, Scientific American. As expected, headlines and articles such as these have grabbed the attention of the general public including many water resources engineering professionals.

On Thursday February 12<sup>th</sup>, 2015 at 8 am two of the leading researchers within the Environmental Protection Agency will present the latest findings regarding contaminants of emerging concern (CECs) within our nation's water resource supplies. Susan Glassmeyer will present on the drinking water implications of CECs, including her 2014 findings on the types of CECs that are most likely to persist through drinking water treatment systems based upon sampling 25 drinking water treatment plants throughout the nation. Mitch Kostich will present on the sewage treatment implications of CECs, including his 2014 findings from sampling the effluents of 50 large wastewater treatment plants throughout the nation for pharmaceuticals. The future engineering implications from the results of these studies will be discussed.

Join the Pittsburgh Section of the American Society of Civil Engineers, the Pittsburgh Chapter of the Environmental and Water Resources Institute, Pennsylvania American Water Works Association, Western Pennsylvania Water Pollution Control Association, and the Water Works Operators' Association of Pennsylvania for this important and timely seminar.

Program Sponsored by:

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THE LEADER IN ENVIRONMENTAL TESTING

Cost:

Members: \$15; Non-members: \$20; Students: \$5 - 2.5 PDH Certificate Upon Attendance

Register by Feb. 10th at <http://www.asce-pgh.org/> or email Timothy.Brett@xylem.com

# CONTAMINANTS OF EMERGING CONCERN IN DRINKING WATER AND WASTEWATER

Thursday, February 12<sup>th</sup>, 8:00 am  
Engineer's Society of Western Pennsylvania  
337 Fourth Avenue, Pittsburgh, PA 15222

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## **Program Schedule:**

8:00-8:45 AM – Registration and Complimentary Continental Breakfast

8:45-10:00 AM – “CECs in Source and Treated Drinking Water” by Susan Glassmeyer, Ph.D, Environmental Protection Agency

10:00-10:15 AM – Break

10:15-11:30 AM – “Concentrations of CECs in the Effluents of 50 Large Wastewater Treatment Plants in the US” by Mitch Kostich, Ph.D, Environmental Protection Agency

## **CECs in Source and Treated Drinking Water**

**Susan Glassmeyer, Ph. D, Environmental Protection Agency**

Susan Glassmeyer will present on the drinking water implications of CECs, including her 2014 findings on which CECs are most likely to persist through drinking water treatment systems based upon sampling 25 drinking water treatment plants throughout the nation. Susan's research has focused on contaminants of emerging concern (CECs) – chemicals such as pharmaceuticals, flame retardants, and surfactants – in the water cycle. Her initial work in this area examined concentration of these chemicals in wastewater effluents, and their environmental persistence. Since many of these chemicals are associated with household wastewater, they have the potential to be used as tracers of human fecal pathogens. Susan's current research is examining the occurrence of CECs during drinking water treatment to determine which chemicals people are exposed to through the tap. Susan received her Ph. D in Environmental Science at Indiana University in 1998.

## **Concentrations of CECs in the Effluent of 50 Large Wastewater Treatment Plants in the US**

**Mitch Kostich, Ph. D., Environmental Protection Agency**

Mitch Kostich will present on the sewage treatment implications of CECs, including his 2014 findings from sampling the effluents of 50 large wastewater treatment plants throughout the nation for pharmaceuticals. Mitch conducts research to identify risks from exposure to chemical contaminants in water. His research uses technologies from fields of molecular biology, genomics, analytical chemistry, environmental modeling, and machine learning to prioritize contaminants in the environment based on the potential risks they pose to human and aquatic life. Mitch has led a national study of 50 large wastewater plants for emerging contaminants, including pharmaceuticals and is currently helping conduct a large microarray study to identify molecular indicators of pyrethroid exposure in arthropods and fish. Mitch received his Ph. D in Biology at Johns Hopkins University in 1999.