

## Extending Knowledge - Changing Lives

### EMERGED: Contaminants of Environmental Concern

*Delaware symposium serves as a benchmark on potential environmental impacts from emerging contaminants*

#### ISSUE

In Delaware, the most prevalent water quality impairments are from nutrients, due to their nature as a non-point source pollutant and an abundance of agriculture and urban lands where they are applied as fertilizers. For decades, nutrients have been the focus of status and trends research, regulatory efforts, implementation of best management practices, and funding programs. But, lesser known pollutants are emerging as new contaminants of concern. The water quality monitoring and regulatory community expressed a need to understand what contaminants are classified as emerging as new contaminants of concern.

#### RESPONSE

A one-day symposium was held in March 2017 to provide an opportunity for 93 representatives from local, state, and federal government agencies, academia, environmental groups, and industry to establish an emerging contaminants baseline in Delaware. Experts in the region presented the definition of emerging contaminants, transport pathways through the ecosystem, measures to protect human life, and treatment technologies and practices to reduce environmental impacts. The afternoon featured projects by local researchers studying a variety of emerging contaminants.

#### IMPACT

The symposium served as a benchmark for Delaware's efforts to understand and mitigate potential environmental impacts from emerging contaminants. Of the 93 participants, 73 (78%) submitted an evaluation measuring knowledge gained. Of those surveyed:

- 99% (72/73) indicated that increased understanding of what contaminants are currently considered emerging
- 96% (70/73) better understand how these contaminants move through the environment
- 93% (68/73) now have a better understanding of the known and potential consequences to the ecosystem and human health

The majority of participants felt they increased their knowledge of the local monitoring programs (89%; 65/73), how contaminants are regulated for drinking water (75%; 55/73), and best management practices to reduce and remove them (75%; 55/73). Despite the information shared, unknowns and uncertainties about emerging contaminants still exist. Research needs were identified related to fate and transport of contaminants, overall effects in the ecosystem, inter-relationships of mixing in the environment, and the prospect that replacements may also have negative environmental effects.

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