

Contaminants of Emerging Concern

Not addressed in the 2009 State Water Plan Update, but of increasing concern for water quality today, are “emerging contaminants” or “contaminants of emerging concern” (CECs). CEC compounds are typically unregulated substances for which there is an emerging or evolving scientific understanding of the risk they pose to human health, aquatic life, or the environment. They are found in a wide range of products such as pharmaceuticals and personal care products as well as industrial, household, agricultural, and manufactured goods.

Since CECs are typically unregulated substances, they usually do not have any associated ambient water quality criteria or enforceable drinking water standards controlling or regulating the substances. However, continued research into CECs and development of regulations will help reduce adverse impacts on human and aquatic life.

The process to reduce or control a source of a new CEC is to:

- Develop a data-based process/methodology for naming a new CEC
- Create a pathway to analyze potential seriousness of impact, then develop a strategy to address
- Define a process for containment

In the recent past, DEP has taken steps to address a particular subset of CECs known as perfluoroalkyl and polyfluoroalkyl substances (PFAS). These actions include participation with other Commonwealth agencies in a PFAS Action Team to assess the potential environmental and health effects of PFAS and recommend strategies to reduce or eliminate the impacts.

DEP collaborated with the United States Geological Survey and the Susquehanna River Basin Commission on a sampling study of PFAS at surface water quality network stations. Other DEP involvement in addressing CECs includes toxic contaminants research, policy, and prevention efforts under the Chesapeake Bay Program. Background information on CECs including PFAS, endocrine disrupting compounds, and DEP sampling studies involving sediment and neonicotinoid insecticides may be found at:

- the DEP Water Quality Division’s webpage on [Contaminants of Emerging Concern](#)
- the DEP Safe Drinking Water Program’s [Emerging Contaminants Frequently Asked Questions](#) webpage

On November 16, 2021, Pennsylvania’s Environmental Quality Board (EQB), adopted [a proposed rulemaking](#) that would set PFAS standards for public water systems. The EQB will have a 60-day public comment period and five public hearings on the proposed rulemaking.

On the federal level, the United States Environmental Protection Agency (EPA) is increasing its commitment to addressing CECs, especially for PFAS, through the development of a [PFAS Strategic Roadmap](#).

From the 2021 Bipartisan Infrastructure Investment and Jobs Act, the EPA will be investing \$4 billion to address emerging contaminants through the Drinking Water State Revolving Funds, \$5 billion to address emerging contaminants in disadvantaged communities through Water Infrastructure Improvements for

the Nation (WIIN) Grants and under Clean Water for Communities, and \$1 billion to address emerging contaminants through Clean Water State Revolving Funds.

FDEP collaborates with EPA, shares data, and utilizes EPA funding for DEP water quality monitoring work generally, including CEC monitoring. Under certain circumstances, DEP may take the initiative in research and relevance of emerging contaminants as well as develop regulatory proposals.

Leadership at the federal, state, and local levels will continue to make the biggest impacts towards regulating, cleaning up, and preventing contamination from CECs. With this in mind, for the 2022 Update, the Emerging Contaminants and Water Quality workgroup under the statewide committee has developed the following recommendations to be implemented through the establishment of a statewide CEC program, to strengthen the support to DEP in fulfilling its duties regarding emerging contaminants and to encourage the federal government to extend their responsibilities.

General recommendations to expand the statewide Contaminants of Emerging Concern (CEC) program:

DEP should expand and further coordinate its CEC program to include relevant program leads with a CEC nexus. DEP's CEC program should also be expanded by identifying and engaging partner organizations that are examining CECs, including sister Commonwealth agencies and river basin commissions. The envisioned purpose of the expanded and further coordinated DEP CEC program is to establish collaborative engagement. This program would evaluate occurrence monitoring data/trends and would apply screening criteria to prioritize and assess CEC for state action. Through this screening process, the program would:

- Develop a list of candidate CECs including their source, routes, and effects
- Maintain a publicly accessible website that summarizes the status of each candidate CEC

Finally, DEP would develop strategies for monitoring, managing, and addressing specific CECs as well as developing a process for identifying next contaminants of concern.

Specific recommendations include:

1. Additional funding support for financing the program through General Assembly appropriations and consideration of other funding mechanisms.

~~2. Encourage the General Assembly to adopt private drinking water well construction standards.~~

~~3.2.~~ Support for DEP labs to test an expanding list of analytes. Additional dedicated funding would provide for needed staff and analytical equipment, and would address any needed accreditation to assure data is defensible.

~~4.3.~~ DEP should establish the impact and risk to the environment and human health in conjunction with having an in-house toxicologist to assist with risk assessments.

~~5.4.~~ DEP should encourage the federal government to develop data and reports establishing the impact ~~to~~ the risk to the environment and human health followed by development of national Maximum Contaminant Levels and Water Quality Criteria for CECs.