

# Per- and Polyfluorinated Alkyl Substances (PFASs) Connecticut Status

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NEWMOA PFAS Workshop

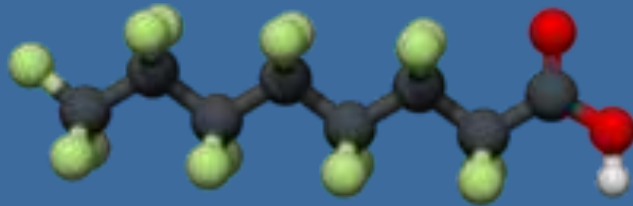
Quinebaug Community College, Danielson, CT



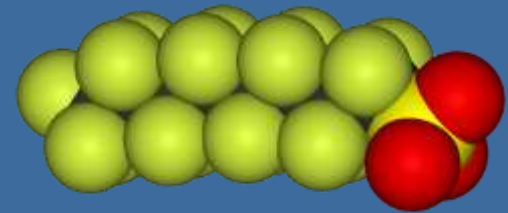
Connecticut Department of Energy and Environmental Protection

# Overview

- UCMR3 PFAS results for CT
- CT DPH Drinking Water Action Level
- CT Remediation Standard Regulations



PFOA



PFOS



# PFASs in Drinking Water

- Unregulated Contaminant Monitoring Rule 3 – (UCMR3) – Sampling of large water systems required by EPA nationwide
  - Good news in CT
  - Sampling between 2013-2015
  - No PFAS detections in 40 CT water systems required to monitor
    - 130 sources sampled, includes both surface water and groundwater



# PFASs in Drinking Water

- Nov. 2016 - CT DPH established a Drinking Water Action Level for PFASs in Private Wells
- 70 µg/L (ppt) for  $\Sigma$  5 PFASs:
  - Perfluorooctanoic acid (PFOA)
  - Perfluorooctane sulfonate (PFOS)
  - Perfluorononanoic acid (PFNA)
  - Perfluoroheptanoic acid (PFHpA)
  - Perfluorohexane sulfonate (PFHxS)

[http://www.ct.gov/dph/lib/dph/environmental\\_health/eoha/groundwater\\_well\\_contamination/110916\\_ct\\_action\\_level\\_list\\_nov\\_2016\\_update.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/eoha/groundwater_well_contamination/110916_ct_action_level_list_nov_2016_update.pdf)



# Remediation Standard Regulations

- PFASs must be addressed as an Additional Polluting Substance at Remediation Sites
  - Utilize EPA's RfD of 0.00002 mg/kg/day
  - Soil Direct Exposure Criteria – use equations in RSR Section 22a-133k-2(b)(5)
  - Groundwater – Adopting CT DPH's Drinking Water Action Level of 70 ppt for  $\sum$  PFOA, PFOS, PFNA, PFHpA, and PFHxS
  - OR Calculate Site-Specific Criteria for DEEP review and approval



# Suggested APS Criteria for PFASs

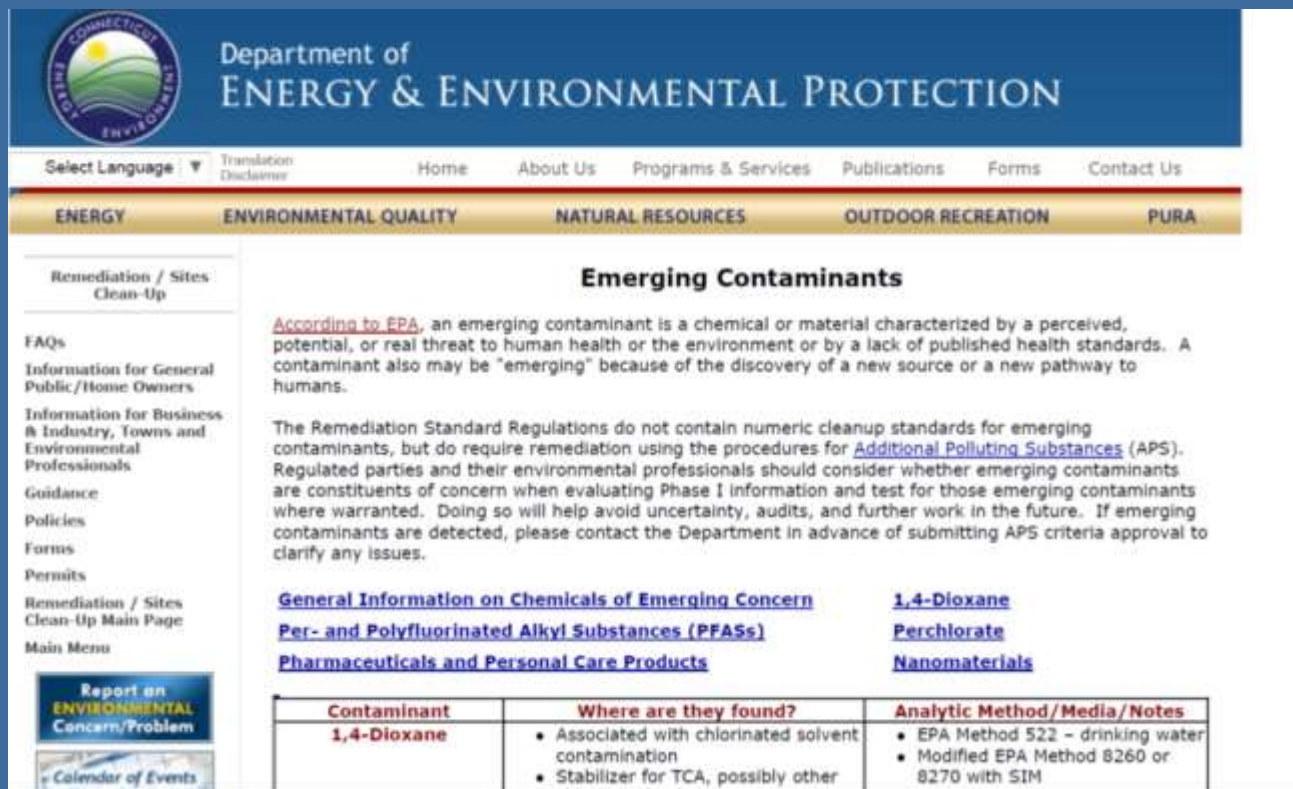
Remediation Standard	Criterion
Residential Direct Exposure Criterion	1.35 mg/kg
Industrial/Commercial Direct Exposure Criterion	41 mg/kg
GA Pollutant Mobility Criterion	1.4 µg/kg
GB Pollutant Mobility Criterion	14 µg/kg
Groundwater Protection Criterion (adopting DPH's Drinking Water Action Level for $\Sigma$ PFOA, PFOS, PFNA, PFHpA, and PFHxS)	70 ng/L
Surface Water Protection Criterion	In Development

Applies to  $\Sigma$  PFOA, PFOS, PFNA, PFHpA, & PFHxS



# Emerging Contaminants Webpage

[http://www.ct.gov/deep/cwp/view.asp?a=2715&q=581988&deepNav\\_GID=1626](http://www.ct.gov/deep/cwp/view.asp?a=2715&q=581988&deepNav_GID=1626)



The screenshot shows the website for the Connecticut Department of Energy & Environmental Protection. The header includes the department's logo and name. Below the header is a navigation menu with options like 'Select Language', 'Home', 'About Us', 'Programs & Services', 'Publications', 'Forms', and 'Contact Us'. A secondary menu lists 'ENERGY', 'ENVIRONMENTAL QUALITY', 'NATURAL RESOURCES', 'OUTDOOR RECREATION', and 'PURA'. The main content area is titled 'Emerging Contaminants' and contains a definition of emerging contaminants according to the EPA, a paragraph explaining the Remediation Standard Regulations, and a table of contaminants. The table lists '1,4-Dioxane' with its associated risks and analytical methods. A sidebar on the left provides links to various resources like FAQs, guidance, and permits.

**Department of ENERGY & ENVIRONMENTAL PROTECTION**

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ENERGY ENVIRONMENTAL QUALITY NATURAL RESOURCES OUTDOOR RECREATION PURA

### Emerging Contaminants

According to EPA, an emerging contaminant is a chemical or material characterized by a perceived, potential, or real threat to human health or the environment or by a lack of published health standards. A contaminant also may be "emerging" because of the discovery of a new source or a new pathway to humans.

The Remediation Standard Regulations do not contain numeric cleanup standards for emerging contaminants, but do require remediation using the procedures for [Additional Polluting Substances \(APS\)](#). Regulated parties and their environmental professionals should consider whether emerging contaminants are constituents of concern when evaluating Phase I information and test for those emerging contaminants where warranted. Doing so will help avoid uncertainty, audits, and further work in the future. If emerging contaminants are detected, please contact the Department in advance of submitting APS criteria approval to clarify any issues.

[General Information on Chemicals of Emerging Concern](#)  
[Per- and Polyfluorinated Alkyl Substances \(PFASs\)](#)  
[Pharmaceuticals and Personal Care Products](#)

[1,4-Dioxane](#)  
[Perchlorate](#)  
[Nanomaterials](#)

Contaminant	Where are they found?	Analytic Method/Media/Notes
<b>1,4-Dioxane</b>	<ul style="list-style-type: none"><li>Associated with chlorinated solvent contamination</li><li>Stabilizer for TCA, possibly other</li></ul>	<ul style="list-style-type: none"><li>EPA Method 522 – drinking water</li><li>Modified EPA Method 8260 or 8270 with SIM</li></ul>

Remediation / Sites Clean-Up

FAQs  
Information for General Public/Home Owners  
Information for Business & Industry, Towns and Environmental Professionals  
Guidance  
Policies  
Forms  
Permits  
Remediation / Sites Clean-Up Main Page  
Main Menu

Report an ENVIRONMENTAL Concern/Problem

Calendar of Events



Connecticut Department of Energy and Environmental Protection



Questions?

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Thank you!



Connecticut Department of Energy and Environmental Protection