PFAS:
THE PENNSYLVANIA PROBLEM

Governor Tom Wolf's
PFAS Action Team
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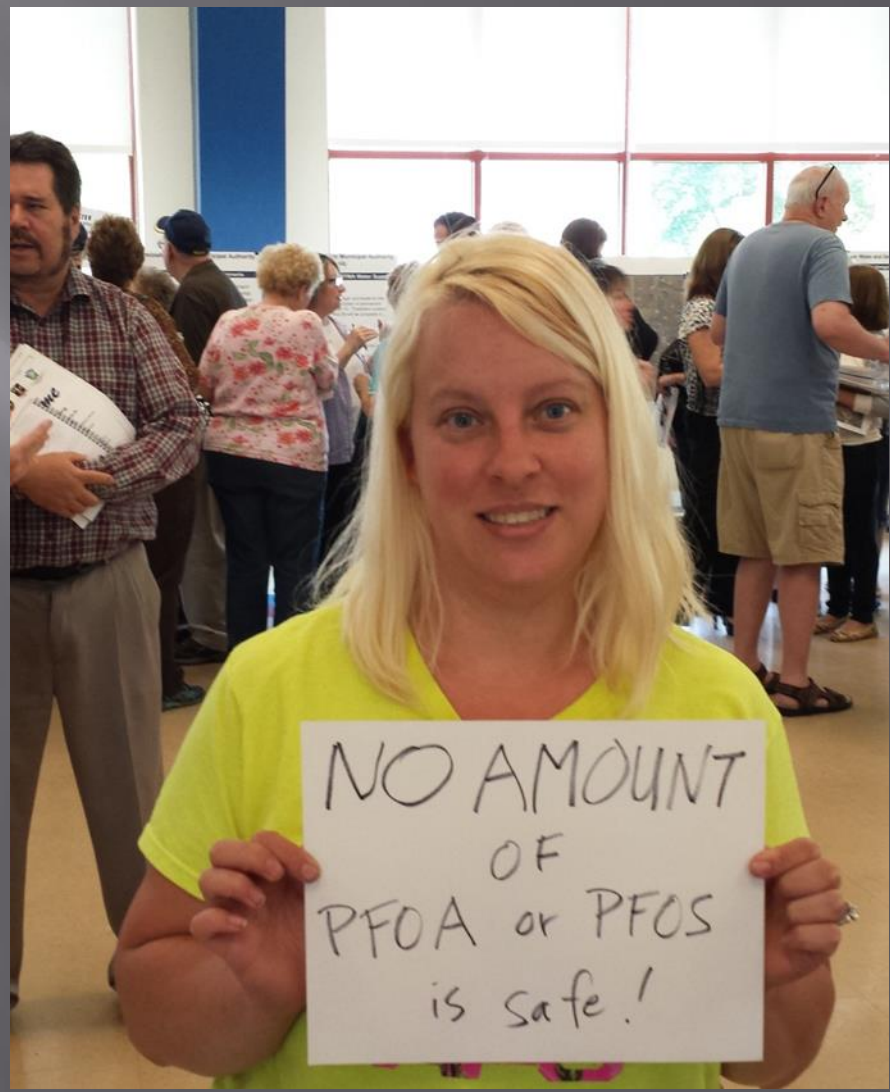
DELAWARE RIVERKEEPER NETWORK

Perfluorinated Compounds (PFCs) PFOS and PFOA have been found in groundwater and surface water in Pennsylvania and, in drinking water, amongst the highest concentrations in the nation in the vicinity of military bases in Bucks and Montgomery Cos.

As more sampling is done in suspected locations, more contamination is found.



PFCs found in other locations in Pennsylvania through EPA

- **Susquehanna Area Regional Airport Authority, Harrisburg**
  Includes Lower Swatara Township and Highspire, Dauphin County
- **Ridge Run Road, Bucks County**
  Includes parts of East and West Rockhill Twps., Perkasie Borough

Locations to investigate PFCs in groundwater- PADEP sampling some

- **Letterkenny Army Depot,** Franklin County
- **Fort Indiana Gap,** Lebanon and Dauphin Counties
- **North Penn USARC,** Montgomery County
- **Tobyhanna Army Depot,** Monroe County
- **Philadelphia Naval Shipyard,** Philadelphia
- **Defense Logistics Agency Susquehanna,** Susquehanna
- **Airports,** 140 active or decommissioned across PA
- **Foam manufacturers** and other manufacturing, i.e. plastics
- **Sewage Treatment Plants** and sludge disposal/application areas
- **Fire Departments**
- **Transportation facilities**

Pennsylvania is lagging behind other states

- 18 states have taken some action regarding PFAS
- Some have addressed ground water, drinking water, remediation levels, and effluent limits through government action
- Ten states have actually promulgated regulations
- Only one state has adopted a mandatory maximum contaminant level (MCL)
- New Jersey adopted a MCL for PFNA in 2018 of 0.013 ppt, as recommended by the NJ Drinking Water Quality Institute

Information extracted from: Table 4-1. Standards and guidance values for PFAS in groundwater, drinking water, and surface water/effluent (wastewater). ITRC (Interstate Technology & Regulatory Council). 2018. PFAS Fact Sheets PFAS-1. Washington, D.C.: Interstate Technology & Regulatory Council, PFAS Team. www.itrcweb.org.

Pennsylvania has a problem but also has the solution

Pennsylvania Safe Drinking Water Act

To establish and enforce drinking water standards to ensure the supply of safe drinking water to the public. (35 Pa. Stat. Sect. 721.2(b)(1)

Pennsylvania Safe Drinking Water Act also recognizes the people's constitutional right:

Article 1, Section 27 of the Pennsylvania Constitution

"The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

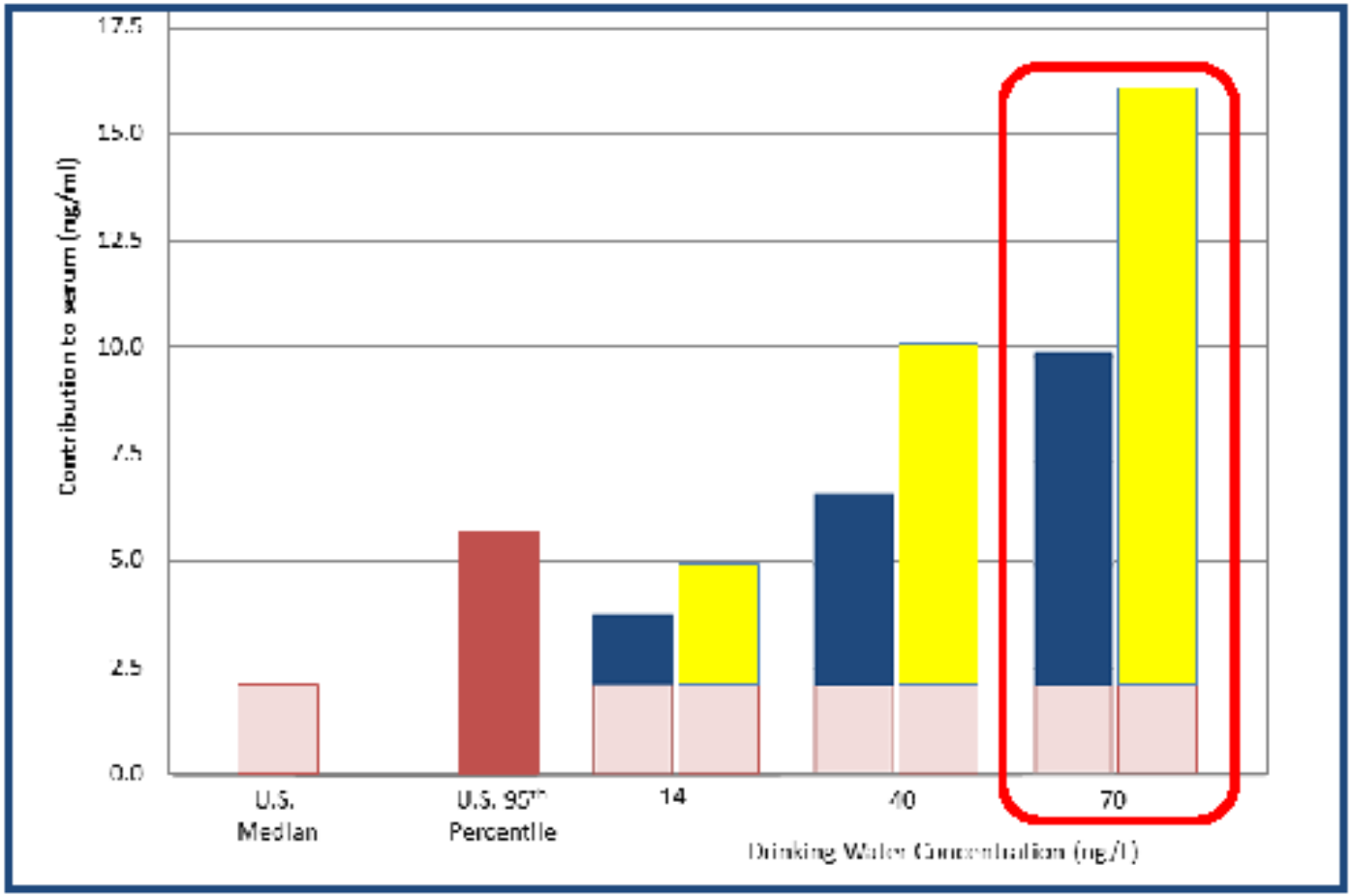
Why EPA PFOA Health Advisory Level of 70ppt is not protective of human health

Why accurate detection and reporting levels matter, UCMR got it wrong, and PA must get it right

Why a MCL of 1ppt to 6ppt for PFOA and no greater than 5 ppt for PFOS is needed in PA

Why we need, essentially, “non-detect”

Increase in Serum PFOA Predicted from USEPA Health Advisory (70 ng/L)



U.S. NHANES Median

U.S. 95th Percentile

Average Water Ingestion

Upper Percentile Water Ingestion

Health-based Maximum Contaminant Level Support Document: PFOA, NJ Drinking Water Quality Institute, Sept. 22, 2016

- Predicted increases of ~5-fold with average ingestion and ~8-fold with upper percentile (2 L/day). Greater increases in infants (next slide).
- Several health effects are associated with serum levels below these.
- **Health Effects Subcommittee concludes that these increases are not desirable and may not be protective of public health.**

Conclusions

- USEPA Health Advisory may not be sufficiently protective of public health because:
  - Sensitive toxicological endpoints that are well established and considered relevant to humans were not considered.
  - Increases in human serum PFOA levels expected from exposure to 70 ng/L, as compared to serum PFOA levels associated with human health effects, were not considered.
- Sensitive subpopulations should include women who plan to become pregnant (or similar language).

Health-based Maximum Contaminant Level Support Document: PFOA, New Jersey Drinking Water Quality Institute, Subcommittee Members Gleason, Cooper, Klotz, Post, Van Orden, September 22, 2016

Frequency of Detection Comparison by # of Samples

Compound	Official NCOD Database samples with detection (UCMR 3 MRLs)	EEA Subset of Samples with detection using UCMR 3 MRLs	EEA Subset of Samples with detection using 5 ng/L MRL	EEA Subset of Samples with detection using 2.5 ng/L MRL
N	~36,000	~10,500u	~10,500	~10,500
PFOS	0.8%	1.3%	11.5%	20.5%
PFOA	1.0%	1.8%	12.5%	23.5%
PFNA	0.1%	0.1%	0.6%	1.9%
PFHxS	0.6%	1.0%	6.0%	12.3%
PFHpA	0.6%	1.5%	3.3%	8.8%
PFBS	<0.1%	0.2%	5.3%	11.9%

- **Petition to establish a MCL for PFOA by Delaware Riverkeeper Network accepted by PA EQB by unanimous vote August 2017 - nothing has happened**
- **NJ Drinking Water Quality Institute scientific research resulted in recommended MCL of 14 ppt**
- **DRN independent toxicologist report recommends between 1 and 6 ppt**
- **DRN letter to EQB requesting MCL for PFOS June 2018 NJ DWQI recommends 13 ppt**
- **DRN toxicologist report – no more than 5ppt for PFOS**

These levels are much more protective of human health than EPA HAL – the scientific research is complete, urgent need for mandatory safe drinking standards for PFAS

Environmental Quality Board Action Required and Should be Advocated by PFAS Team

EQB has the authority and the responsibility to provide safe drinking water

Pennsylvania needs MCLs that equitably protect all water users

Adopting a mandatory MCL will require comprehensive investigation and removal from drinking water

Adopting a MCL will ultimately set a groundwater remediation standard, enabling effective clean up of pollution sources, an essential action


HONK 4BLOOD
SCREENING

Summer 2016

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