



GREEN SCIENCE  
POLICY INSTITUTE

# PFAS and the Class Concept

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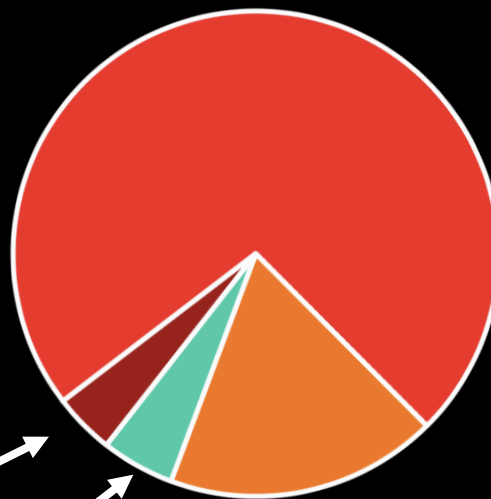
Green Science Policy Institute

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# 1. Most chemicals in commerce have not been tested for health and safety

62,000 previous chemicals  
“grandfathered in”

Chemical data reporting under TSCA



15% health & env. data

18% some env. data

majority: no data

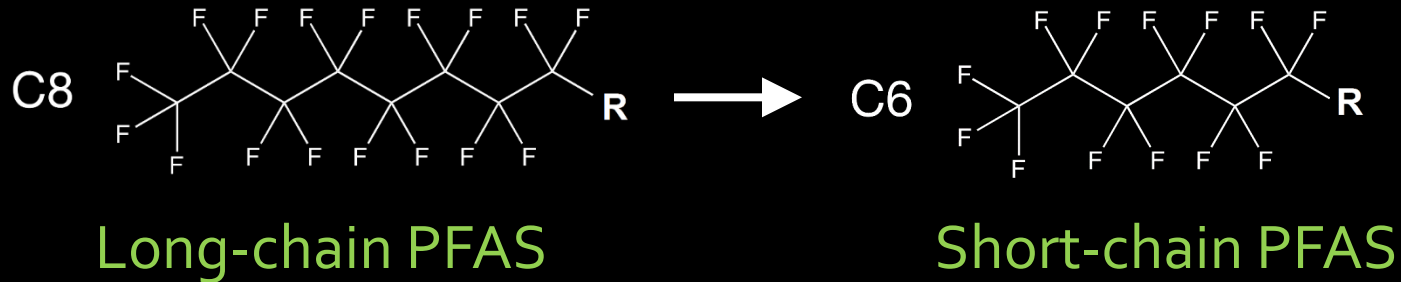
23,000 new chemicals

## 2. Restriction of toxic chemicals is a slow process

The example of PFOA & PFOS:

- 1975-1976: Organofluorines discovered in blood of general population; 3M determines it is likely PFOA
- 1978: Immunotoxicity of PFOA & PFOS observed in monkeys
- 1981: PFOA found in umbilical cord blood
- 1992: Leukocyte cell count changes in PFOA production workers
- 1998: PFOS found in blood from the general population
- 2000: 3M announces voluntary phaseout of PFOS
- 2010-2015: DuPont & others finish phaseout of PFOA

# 3. Regrettable Substitution



Concerns:

- Extreme persistence
- Bioaccumulation
- Toxicity

Concerns:

- Extreme persistence
- Build up in plants
- Suspected toxicity
- Remediation more difficult



**EVALUATING TENS OF THOUSANDS OF  
INDIVIDUAL CHEMICALS IS UNWORKABLE**



BUT ADDRESSING **SIX GROUPS** OF  
CHEMICALS OF CONCERN IS MANAGEABLE



# The Six Classes

1 PFAS	2 Anti-microbials	3 Flame Retardants	4 Bisphenols + Phthalates	5 Some Solvents	6 Certain Metals
					

**Limit to essential uses**

## Scientific Basis for Managing PFAS as a Chemical Class

Carol F. Kwiatkowski,\* David Q. Andrews, Linda S. Birnbaum, Thomas A. Bruton, Jamie C. DeWitt, Detlef R. U. Knappe, Maricel V. Maffini, Mark F. Miller, Katherine E. Pelch, Anna Reade, Anna Soehl, Xenia Trier, Marta Venier, Charlotte C. Wagner, Zhanyun Wang, and Arlene Blum

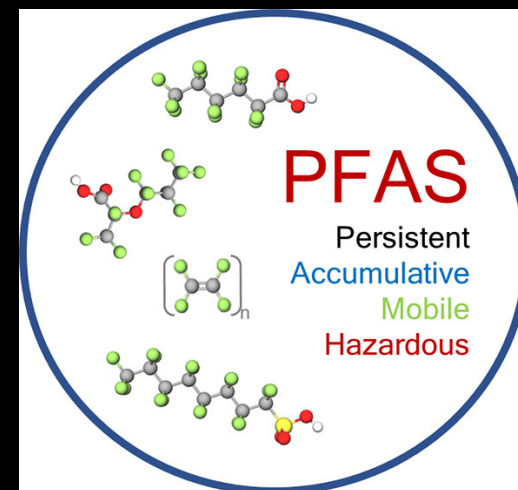


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Read Online

- Extreme persistence and potential toxicity make all PFAS suspect
- Not enough time to study them all
- Avoid their use when possible





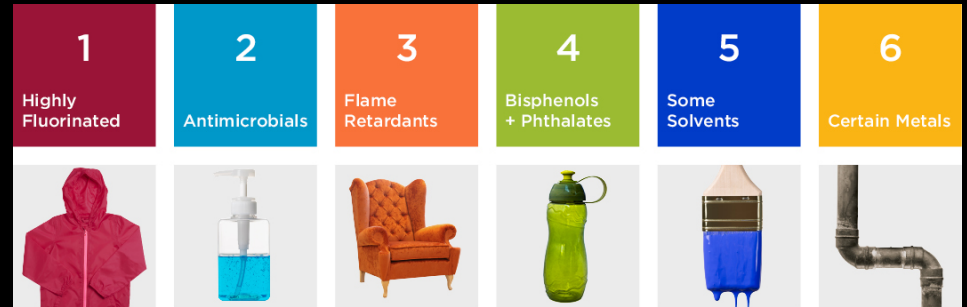
# PFAS Phase-out Gaining Traction in Europe

- Proposal from Sweden, Netherlands, Germany, Norway & Denmark:
- Take action “on the EU-level to phase out PFASs at the latest by 2025, to be in effect by 2030.”
- “A broad restriction under REACH covering all PFAS would be the preferred option.”



# Learn More

sixclasses.org



[pfascentral.org](https://pfascentral.org)  
[pfascentral.org/free](https://pfascentral.org/free)

## Questions?

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