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PFAS Update

(Per- and Polyfluoroalkyl Substances)

Annie Berlemann | Watershed Planning

May 2020

Per- and Polyfluoroalkyl Substances (PFAS)

“Forever Compounds”



Family of human-made chemicals



Over 5,000 compounds



Used for decades in food packaging, carpets, clothing, cookware, firefighting foams (FFFs)



High ability to resist staining and heat



Human health: developmental effects, endocrine impacts and renal toxicity

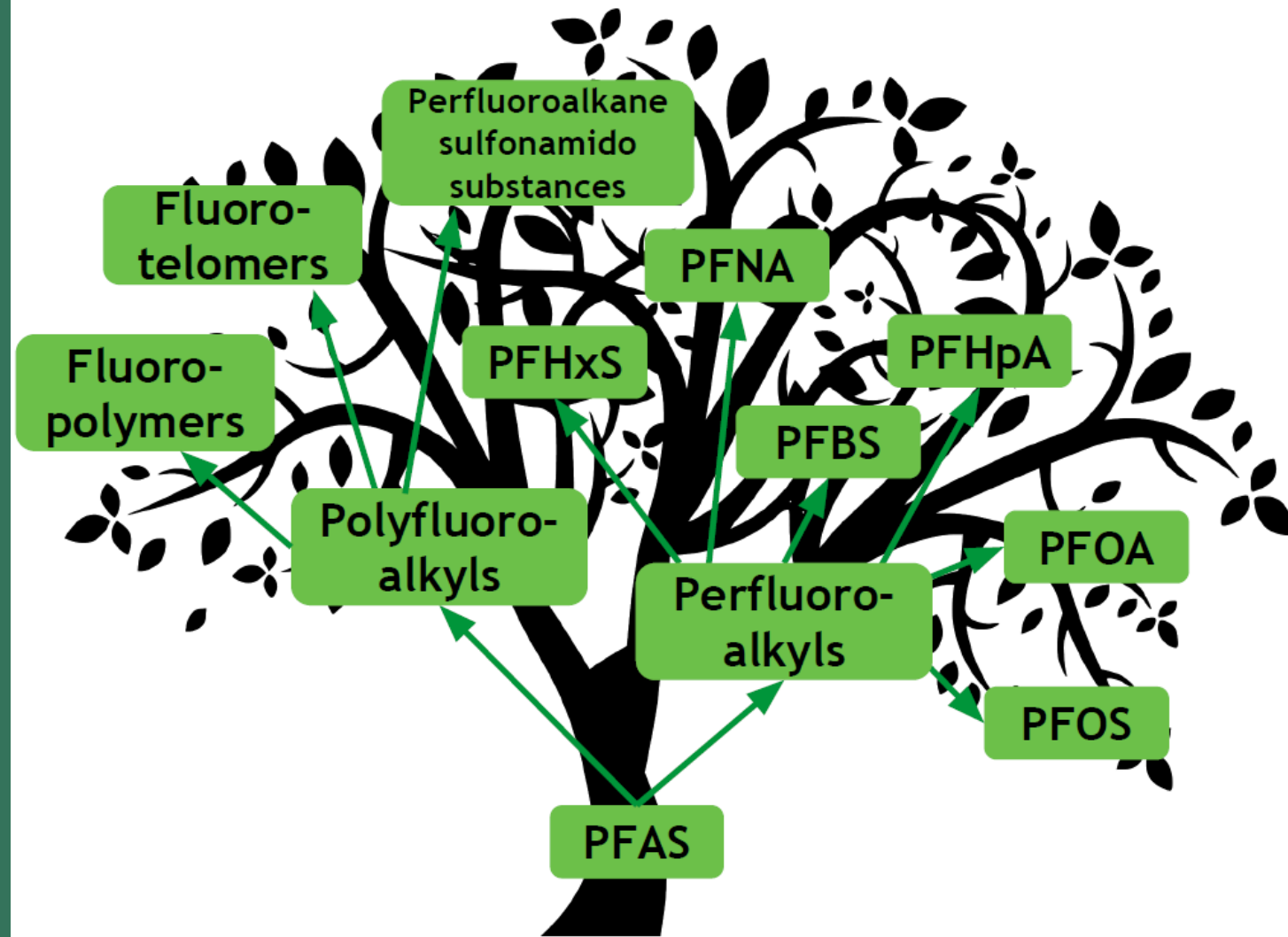


Do not breakdown and are expected to be widespread in the environment

Water Quality Control Division Policy 20-1

- Aims to move quickly and “break the chain”
- Outside typical procedures
- Policy 20-1 will use “translation values”
 - Applied to permits
 - Framework for laboratory methods
 - Outlines groundwater clean up, monitoring, source investigation, and 303(d) listing.
- WQCD cites authority to use the narrative standard (Regulations 31 and Regulation 41)

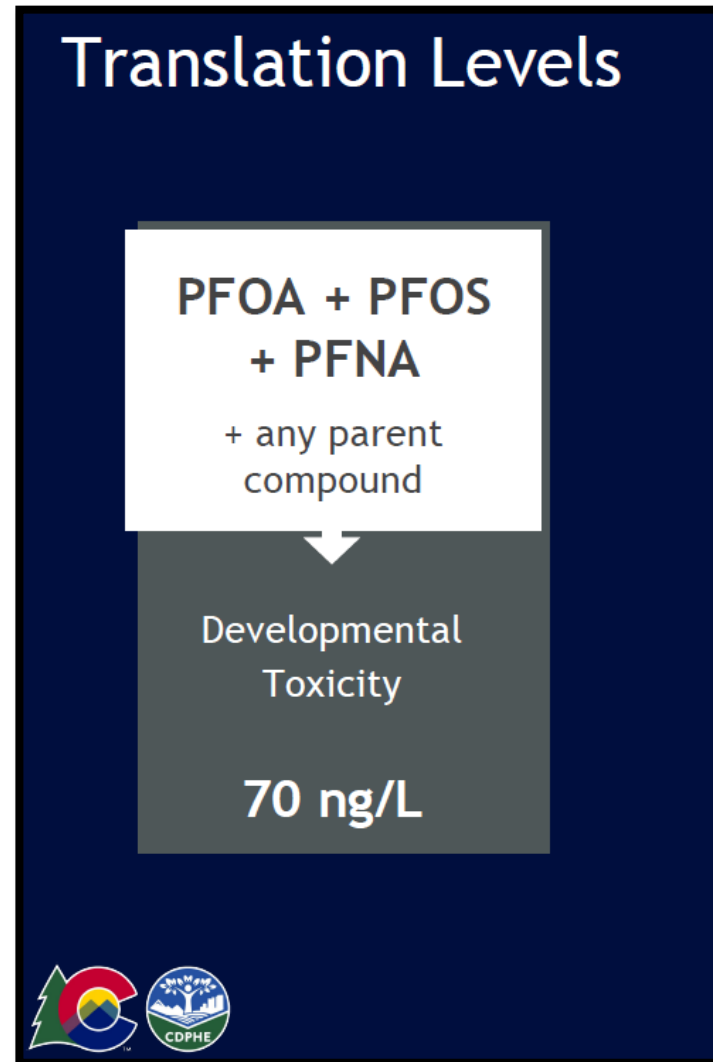
“Waters shall be free from toxins and toxic amounts”



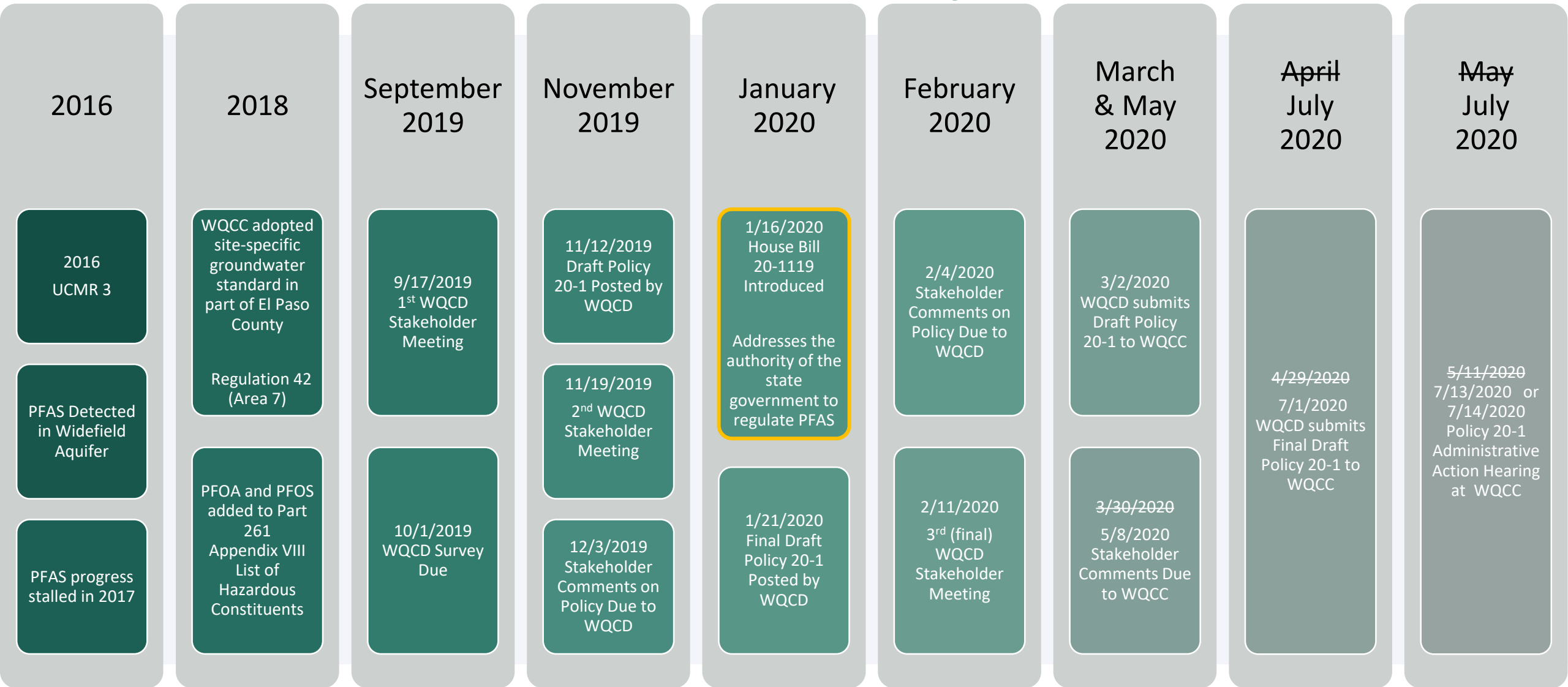
Adapted from ATSDR’s PFAS family tree, ITRC Naming Conventions fact sheet, and Wang et al 2017

Challenges

- Laboratory Methods
 - Only approved method is SDWA
 - Policy does not include drinking water standard or levels
 - No CWA approved methods
 - Limited number laboratories capable of PFAS analysis, likely to have capacity challenges
- False Positive Results
 - Sampling Contamination
 - Laboratory Contamination
- No Federal Standards
- PFAS is ubiquitous and does not breakdown leading to bioaccumulation
- Inconsistent approach across the States to address PFAS



PFAS Narrative Policy Timeline



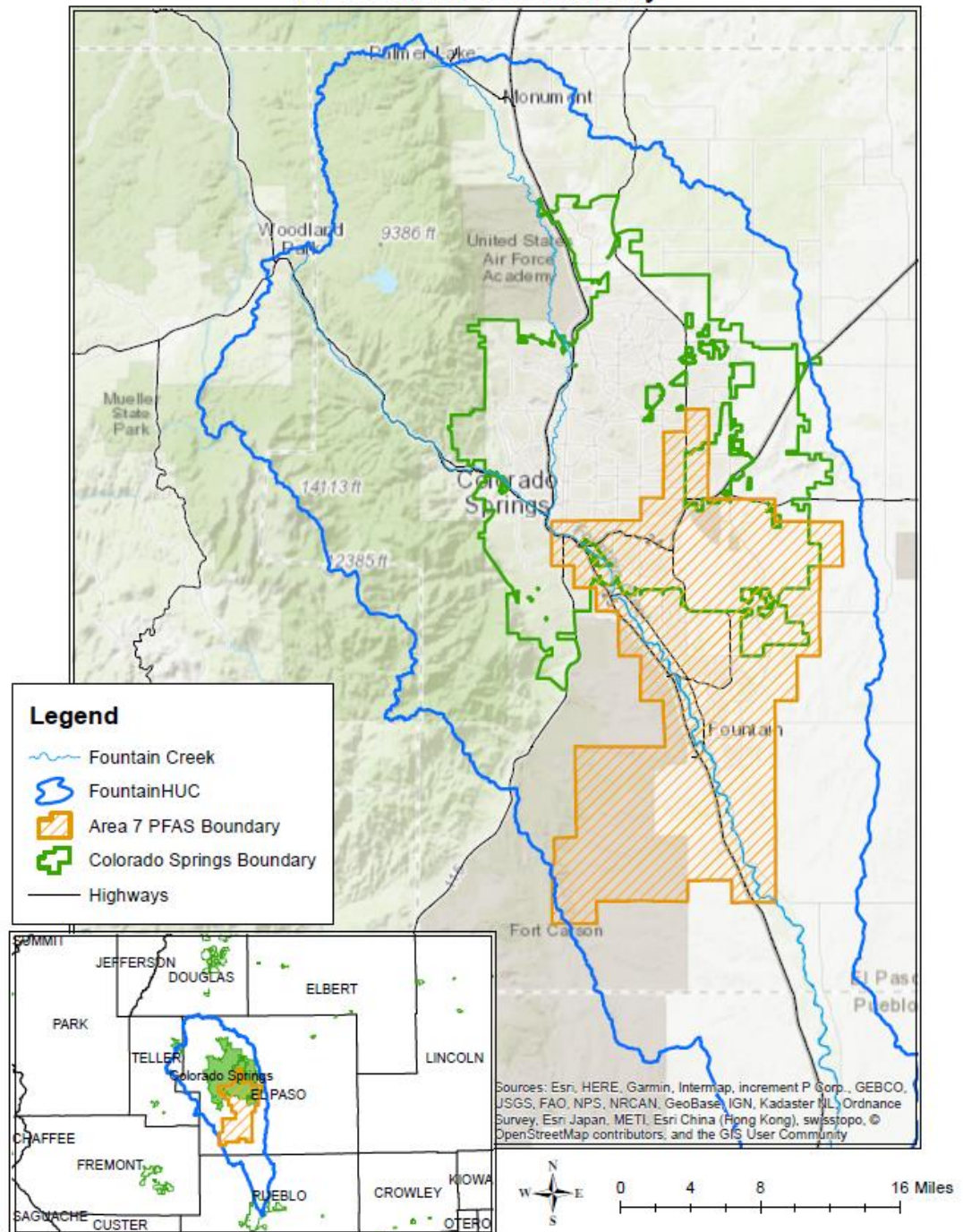
Regulation 42

- Specified Area 7
 - Numeric Standard
 - 0.070 micrograms per liter PFOS+PFOA
- Permitting
 - Initial: PFOA+PFAS
 - Now: PFAS, PFOA, PFNA, PFBS, PFHxS and PFHpA
 - Data must <1 yr old
- Environmental Assessment
 - \$250-500 / sample, 2-3 week TAT
- Treatment
 - Onsite Mobile Remediation Systems
 - Recent BETX cost \$1.88 / gallon
 - Vac Truck- contain, store, dispose

<https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=7626&fileName=5%20CCR%201002-42>

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PFAS Area 7 Boundary



House Bill 20-1119

Introduced January 16, 2020

Addresses the authority of the State government to regulate PFAS.

1. PFAS may be used for FFF system testing in general and in certain aircraft hangars.
2. CDPHE power to adopt and enforce standards and regulations that require PWS to sample drinking water supply sources and finished water for PFAS.
3. Water Quality Control Commission (WQCC) may set standards related to PFAS in surface water, groundwater and may require wastewater systems to collect PFAS data.
4. Solid and Hazardous Waste Commission to promulgate a rule for certificate of registration for any facility or firefighting department that possesses PFAS in FFFs.

LLS NO. 20-0717.01 Pierce Lively x2059

HOUSE BILL 20-1119

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House Committees
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A BILL FOR AN ACT

101 **CONCERNING THE AUTHORITY OF THE STATE GOVERNMENT TO**
102 **REGULATE PERFLUOROALKYL AND POLYFLUOROALKYL**
103 **SUBSTANCES.**

Bill Summary

(Note: This summary applies to this bill as introduced and does not reflect any amendments that may be subsequently adopted. If this bill passes third reading in the house of introduction, a bill summary that applies to the reengrossed version of this bill will be available at <http://leg.colorado.gov>.)

The bill addresses the authority of the state government to regulate perfluoroalkyl and polyfluoroalkyl substances (PFAS).

Section 1 of the bill addresses when PFAS may be used for firefighting foam system testing both in general and in certain aircraft hangars.



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With support from many more