

PFAS at Colorado Airports - Regulatory Considerations and Practical Solutions for Management

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Disclaimer

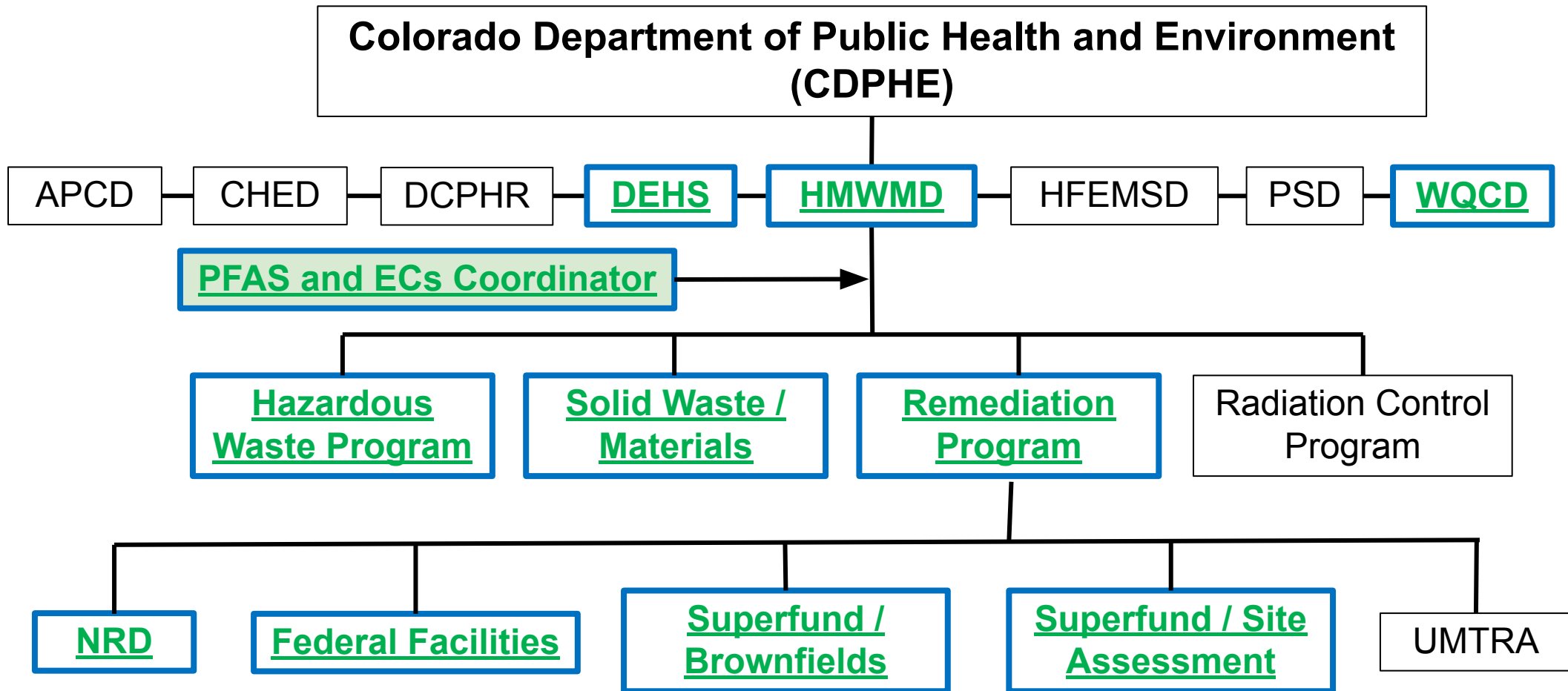
The opinions expressed in this presentation are my own and do not reflect those of the State of Colorado or CDPHE.



Additional Disclaimer

This is also going to be a fun
with acronyms day...sorry in
advance.

PFAS @ CDPHE





EPA wants to repeal limits on 'forever chemicals' in drinking water

If finalized...

...n-era restr...
... years to...



EPA pens partial rollback on 'forever chemicals' limits

Federal PFAS action may slow, but not state efforts or litigation
As the EPA moves to roll back some PFAS limits for drinking water, the definition of these 'forever chemicals' is up for debate



States Continue to Address PFAS in U.S. Food and Water Supply

JULY 25, 2025 | HEATHER TOMLINSON, BETH GIAMBRONE

Trump's First EPA Promised to Crack Down on Forever Chemicals. His Second EPA Is



E.P.A. to End Some Limits on 'Forever Chemicals' in Drinking Water

The rules were established by the Biden administration after research linked the compounds to a range of serious health problems.

CDPHE Oversight of PFAS Releases

- Safe Drinking Water Act (SDWA) - Federal MCLs for 6 PFAS
- 6 CCR 1007-3 Subpart Q contains requirements around the storage and use of PFAS AFFF
 - Spills of any amount must be reported to the Water Quality Spills Hotline
 - Mandates safe storage of PFAS AFFF and registration with CDPHE
- PFOA and PFOS are hazardous constituents under the Colorado Hazardous Waste Act (CHWA)
 - CDPHE authority for investigation and cleanup at sites under hazardous waste cleanup orders or permits.
- Voluntary Cleanup Program (VCUP) may be available to sites with PFAS impacts not covered by the hazardous constituents designation

Per- and Polyfluoroalkyl Substances (PFAS)



Prepared By
The Interstate Technology & Regulatory Council (ITRC)
PFAS Team



PFAS Guidance

- ITRC PFAS Technical and Regulatory Guidance Document (PFAS-1) and Priority Topics
 - PFAS-1 published in 2023
 - Priority Topics and updates to PFAS-1 in 2026
 - Naming conventions, firefighting foams, fate and transport, human and eco health effects, sampling and analysis, treatment technologies, biosolids, and PFAS & Microplastics

- PFAS Treatment Technologies Team, including management of treatment residuals - 2027

- Guidance from States and EPA

EGLE
MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

GENERAL PFAS SAMPLING GUIDANCE

This document contains an introduction to PFAS, biosecurity recommendations, and general recommendations to decrease the possibility of cross-contamination.

January 2024

Michigan.gov/EGLE
800-662-9278

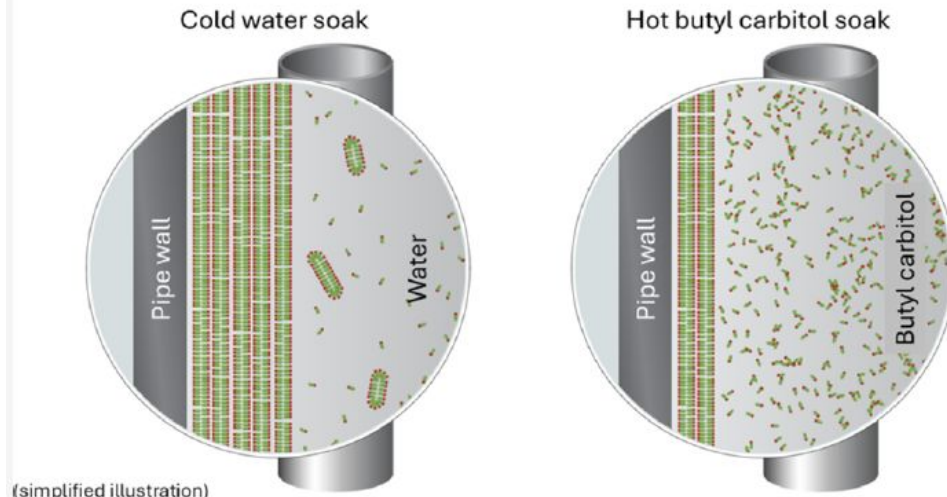
Transitions to Fluorine-free Foams (F3)

- No Colorado-specific guidance for transitioning fixed or mobile systems to F3
- **FAA CertAlert 24-05** recommends following DoD guidance on F3 transition - Single rinse process
- Several strategies employed at Colorado airports:
 - Replacing trucks
 - Single/Triple rinse processes, rinsing using heat/additives
- Research shows these processes do not completely remove all PFAS from the cleaned systems
- Important information on F3:
 - Ecological toxicity may be greater than PFAS AFFF
 - New Mil-Spec F3 can contain up to **1 ppb** of PFAS



Source: OshKosh

Decontamination of AFFF impacted fire suppression system pipes



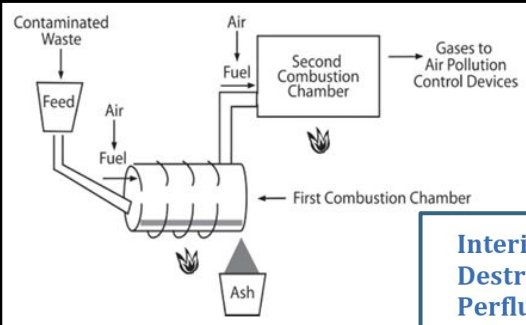
Bonnet, et al., *Environmental Science & Technology* (2025)



COLORADO
Hazardous Materials
& Waste Management Division
Department of Public Health & Environment

PFAS Waste Management

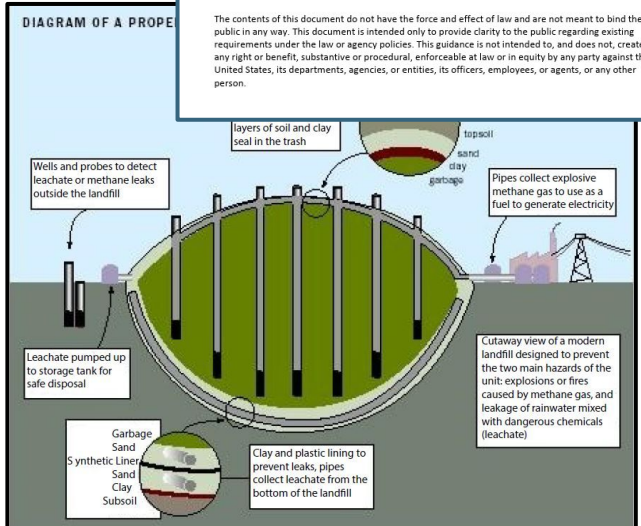
- EPA's 2026 Interim Guidance on the Destruction and Disposal of PFAS
 - Does not establish limits for disposal
 - Updated annually
- Engage T&D vendors early when PFAS is suspected in waste stream.
- Explore cost-effective options to limit material for off-site treatment or disposal
- Conventional Disposal for PFAS wastes
 - Landfill (hazardous or non-hazardous)
 - Incineration
 - Underground injection (Class I)
- Novel PFAS Destruction Technologies



Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances— 2026 Version

INTERIM GUIDANCE FOR PUBLIC COMMENT
APRIL 20, 2026

The contents of this document do not have the force and effect of law and are not meant to bind the public in any way. This document is intended only to provide clarity to the public regarding existing requirements under the law or agency policies. This guidance is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.



PFAS Waste Management (cont.)

- **Beneficial Use Determination (BUD) - CDPHE Solid Waste Program - Reuse of impacted media (e.g., soils) on-site once environmental criteria are met.**
 - Lower concentration soils
 - Site-specific considerations to Limit Exposure/Migration to Groundwater
 - Environmental Covenant Required (Ongoing maintenance)
- **Water Quality Control Commission (WQCC) Policy 20-1 sets limits for PFAS entering state waters.**
 - Construction dewatering discharges
 - Stormwater discharges
 - Treatment system effluents

Complications for PFAS Management

- No currently accepted PFAS background values in Colorado
- EPA Regional Screening Levels (RSLs) are used to guide cleanups
- Contamination left on-site above default residential RSLs necessitates a Notice of Environmental Use Restrictions (“NEUR”; environmental covenant).
- **Current EPA RSLs and PFAS Background Soil Values observed in NE States:**

PFAS	ME	NH	VT	MA	RI	NY	NJ	EPA Ind. RSL	EPA GW Protection SSL
	BTV (ng/g)	BTV (ng/g)	UTL (ng/g)	UTL (ng/g)	UTL (ng/g)	Mean (ng/g)	Mean (ng/g)	(ng/g)	(ng/g)
PFOA	2.2	3	1.6	2	0.639	1.16	1.467	0.078	0.061
PFNA	1.9	1	0.44	0.72	0.172	-	0.911	2,500	0.042
PFDA	-	-	-	0.46	0.11	-	0.54	1.6	0.000081
<u>PFHxS</u>	-	0.1	0.38	-	0.087	-	0.062	16,000	0.0042
PFOS	0.55-3.0	3	3.4	3.1	0.842	0.55	1.1	58	0.03

PFAS Takeback & AFFF Destruction

- Colorado fire departments and commercial service airports paid to take unspent firefighting foam containing PFAS out of service and store it until safe destruction.
- Collection, Storage, & Destruction contract executed in late-2025.
 - Hydrothermal Alkaline Treatment (HALT) destroys PFAS molecules
 - Technology developed at MINES
 - Working with local authorities to establish/permit destruction facility



Source: Aquagga Inc.

Consultant Support

How Can your Consultant Help You?

- Regulatory Discussions
- Site Due Diligence &
- Investigation Support
 - Phase 1's
 - ASTM E1527-21
 - NAICS Codes
 - Phase 2's
 - Remedial Support



Consultant Support

Onsite Management of media Soil

- VCP + BRD
- Nothing? (Good Luck!)

Groundwater/Stormwater

- Treatment and onsite disposal in stormwater (Policy 20-1)
- Off-site disposal
- Offsite Management
- Do you need more property?



Consultant Support

What does state want to hear?

- Where it came from
- History of site
- Use History, deployments
- Severity
- Status of CSM...do you have one?
- Be honest about you data gaps.



Conclusions/Wrap Up

- Regulatory Bow
- Don't be afraid of opening the box.
- Document your spills and use areas.



Questions?

THANK YOU!

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ITRC Document



EGLE Document



EPA Document

