

# Colorado's approach to addressing PFAS contamination

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# Per- and polyfluoroalkyl substances (PFAS)

- Family of thousands of human-made substances.
- Carbon fluorine bond - strongest in nature, no natural degradation.
- Used in products that resist heat, oil, stains, grease and water.
  - Class B fire-fighting foams.
  - Raincoats, shoes, popcorn bags, pizza boxes, Teflon pans.
- Found in 99% of people's blood.
- Primary concern is drinking water. People drinking contaminated water tend to have high PFAS blood levels.



# PFAS and health



- High cholesterol.
- Liver damage.
- Decrease vaccine effectiveness.
- Asthma.
- Thyroid disease.
- Decrease fertility.
- Pre-eclampsia.
- Lower birth weight.
- Possible kidney & testicular cancer.

EPA PFAS drinking water health advisory (non-regulatory)

2016: PFOS + PFOA < 70 ng/L



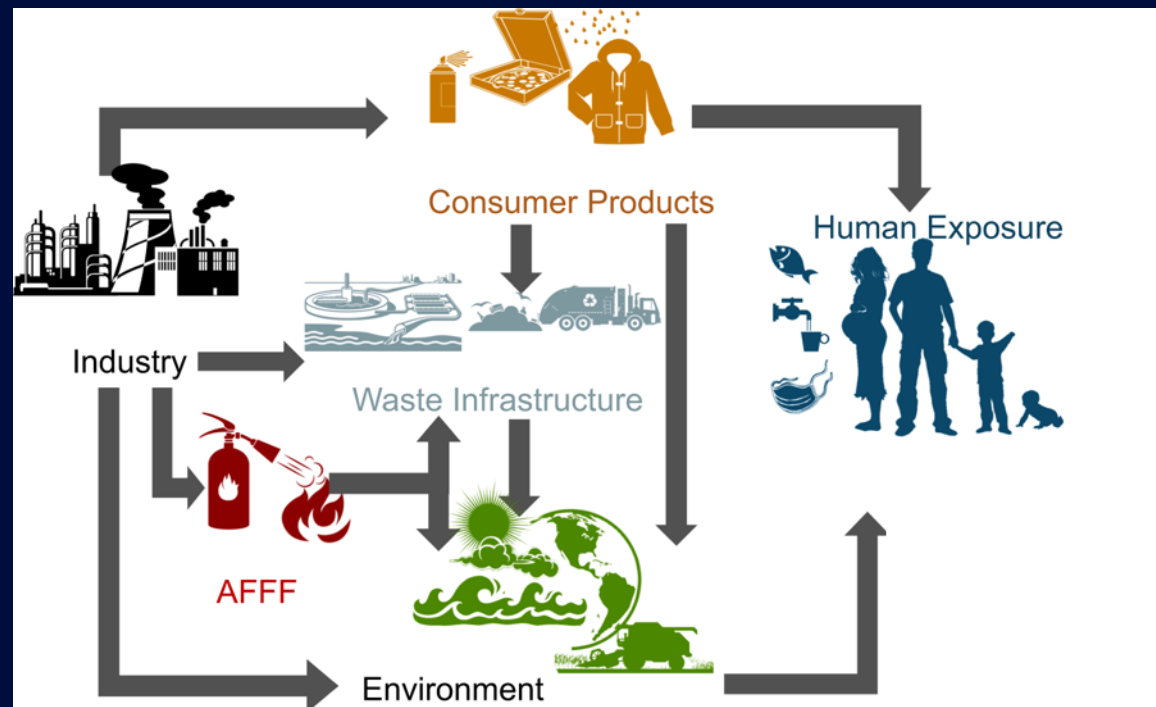
# EPA PFAS Action Plan and NDAA

- Will be regulating PFOA and PFOS in drinking water.
- Determining if PFOA and PFOS are CERCLA hazardous substances.
- Determining if regulation is appropriate for broader class of PFAS.
- Developing toxicity assessments for more PFAS.
- Drinking water monitoring of PFAS in UCMR 5 (2023-2025).
- PFAS releases will be reported to EPA's Toxics Release Inventory.
- \$100M per year in public water system grants.
- EPA to publish guidance on disposal of PFAS materials.
- Research health/environmental effects, monitoring, remediation.
- USGS to improve lab standards and sample nationwide.
- DoD to phase out PFAS foams by Oct 2024.



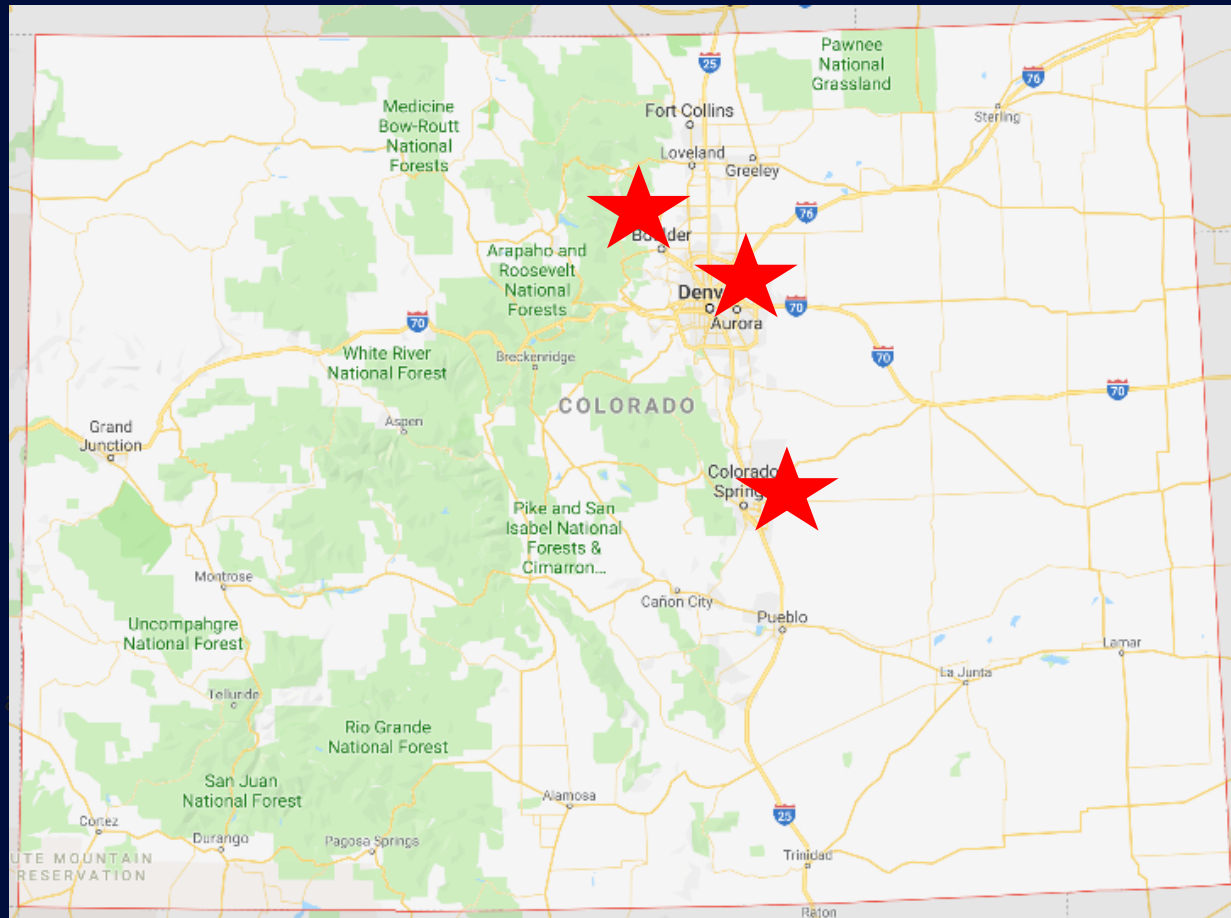
# CDPHE PFAS Action Plan

- Statewide monitoring to identify impacted drinking water.
- Develop inventory of contaminated sites.
- Reduce exposure when levels found above health advisory.
- Regulatory authority.





# PFAS contamination impacting water supplies in Colorado - what we know and don't know



Hu, et al.



# PFAS drinking water sampling project

- Statewide PFAS testing to identify drinking water impacts.
  - Public water systems.
  - Fire districts.
  - Surface waters.
- Results available June 22.
- If results are above level of concern, we'll coordinate with water system to notify public and identify options to reduce exposure.



# Water systems who have applied dashboard

## PFAS 2020 Sampling Project



### NOTE:

This dashboard reflects water systems that have signed up to take advantage of **this funding**. Other systems have **previously sampled** or plan on doing their own sampling. If your system has not signed up, please contact them for more information.

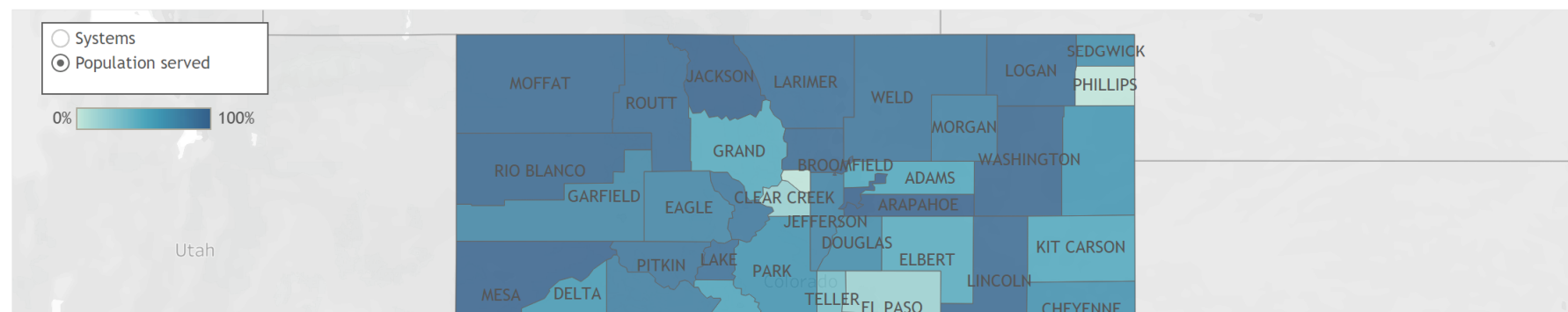
### Statewide enrollment summary

All community water systems and non-transient, non-community water systems are eligible to participate in the sampling project. Systems that purchase water and don't have their own water sources are not reflected in this dashboard but may be eligible for future sampling.

Eligible water systems	Enrolled systems	Enrolled systems (%)	People served by enrolled systems (estimate)	People served by enrolled systems (estimate) (%)
895	435	49%	4,563,918	80%

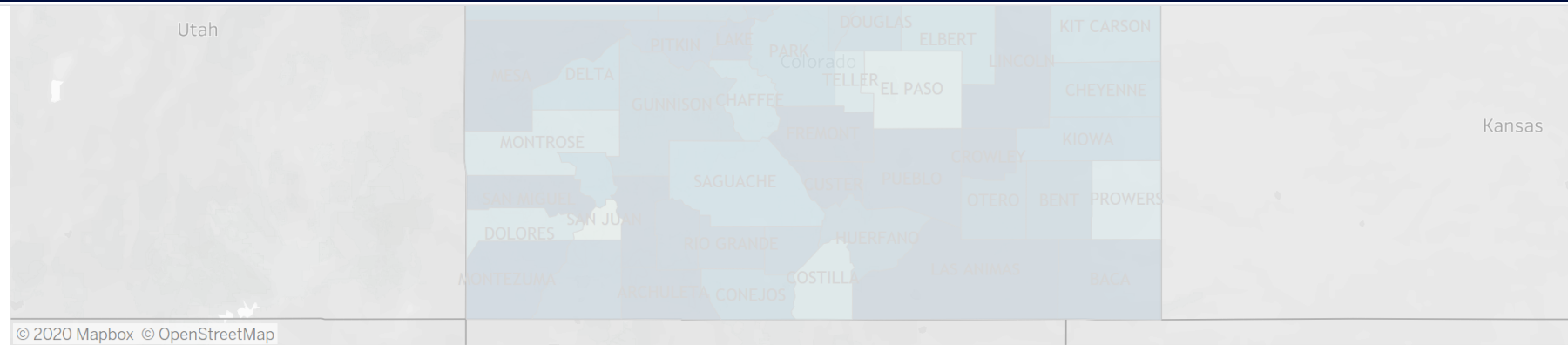
### Project enrollment by county

View map by how many water systems are currently enrolled or by the number of people served by the enrolled systems (displayed as percent).





# Water systems who have applied dashboard



## Is your water system participating in the 2020 PFAS Sampling Project?

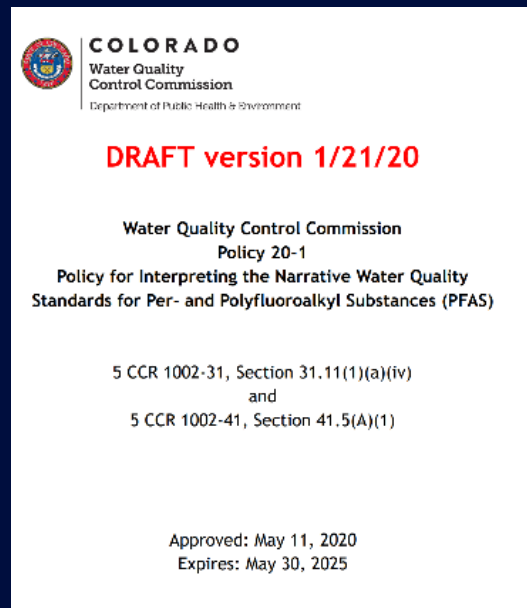
Search by water system name or filter by principal county served. Your water system name can be found on your water bill. If you do not receive a water bill, contact your landlord or homeowners association for more information.

Name	Name	Principal county served	Enrolled yet?	Sample results available?	People served (estimate)
<input type="text"/>	ANNUNCIATION HEIGHTS	LARIMER	No		320
	BERTHOUD TOWN OF	LARIMER	Yes	Not yet sampled	7,540
Principal county served	BIG ELK MEADOWS WA	LARIMER	Yes	Not yet sampled	351
<input type="text" value="LARIMER"/>	CARTER LAKE FILTER PLANT	LARIMER	Yes	Not yet sampled	0
	CRYSTAL LAKES 11TH FILING	LARIMER	No		87
	EDEN VALLEY INSTITUTE	LARIMER	Yes	Not yet sampled	91
	ESTES PARK TOWN OF	LARIMER	No		16,722
	FOX ACRES COMM SERV CORP	LARIMER	No		306
	FT COLLINS CITY OF	LARIMER	Yes	Not yet sampled	124,262
	GLACIER VIEW MEADOWS WSA	LARIMER	Yes	Not yet sampled	395
	LOVELAND CITY OF	LARIMER	Yes	Not yet sampled	75,840
	NEWELL WARNOCK WA	LARIMER	Yes	Not yet sampled	320
	NORTHERN COLORADO WA	LARIMER	No		4,550
	PINEWOOD SPRINGS WD	LARIMER	No		745
	PLATTE RIVER POWER AUTHORITY	LARIMER	Yes	Not yet sampled	88
	RAVENCREST CHALET	LARIMER	No		55
	RIVERVIEW CG	LARIMER	No		450



# PFAS Narrative Policy Workgroup

- Narrative provisions in Regulations 31 and 41 to limit PFAS contamination entering surface water and groundwater.
- Implementation in Colorado Discharge Permit System:
  - Initial monitoring: based on survey results for 25 PFAS species.
  - Continued monitoring and source investigation.
  - Effluent limits.
- CDPHE will propose policy to WQCC in July 2020.



# PFAS Narrative Policy Translation Levels

- Division should consider permit effluent limits if exceeded.
- Grouped based on health effects.
- Levels based on relative toxicity.

**Table 3 Translation Levels for PFOA, PFOS, PFNA, PFHxS, and PFBS**

PFAS Constituent	Individual Translation Level (ng/L)	Additive Translation Level (ng/L)
PFOA	70	70
PFOA parent constituents: 8:2 FTS (adjusted)	70	
PFOS	70	
PFOS parent constituents: NEtFOSAA, NMeFOSAA, and PFOSA/FOSA (adjusted)	70	
PFNA	70	
PFHxS	700	NA
PFBS	400,000	NA

Developmental

Endocrine  
Renal



# Fire Fighting Foams Control Act (HB 19-1279)

- Prohibits use of PFAS foam for training or testing.
- Prohibits sale of PFAS foam by August 2021.
- Requires CDPHE to survey fire departments every 3 years on amount of PFAS foam held, used, and disposed of.
  - Results were due October 31 and report due January 1.
  - 89 of 331 fire departments, airports, and industries responded.



# Recent Legislation

- HB 20-1119
- Senate Bill 20-218





# Thank you!

## What are your questions?

More information available at [colorado.gov/cdphe/PFCS](https://colorado.gov/cdphe/PFCS)

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