Release of the Updated PFOA & PFOS Health-Based Values

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Update on MDH health-based guidance values (HBVs)

- The Minnesota Department of Health (MDH) has released updated health-based values (HBVs) for PFOA and PFOS
- An HBV reflects the level of a contaminant that can be present in water and pose little or no health risk to a person drinking that water, including sensitive populations and those who are highly exposed

Update on MDH health-based guidance values (HBVs)

- MDH lowered the noncancer HBVs for PFOA and PFOS
  - New HBVs are based on new human data from epidemiology studies, whereas previous HBVs only had animal data available.
- MDH derived cancer HBVs for PFOA and PFOS
  - MDH is classifying PFOA and PFOS as likely to be carcinogenic based on new studies and new data analysis.
  - PFOA: Kidney (basis of cancer guidance), testicular cancer in human studies
  - PFOS: Liver in animal studies

PFAS Drinking water guidance updates over time

Year	Bioaccumulative (µg/L, ppb)			Non-bioaccumulative (µg/L, ppb)		
	PFOA	PFOS	PFHxS	PFHxA	PFBA	PFBS
2002	7	1	--	--	--	--
2006	1	0.6	--	--	1	--
2007	0.5	0.3	--	--	7	--
2009	0.3		--	--		7
2013			0.3	--		
2016	0.07	0.07	0.07	--		
2017	0.035	0.027	0.027	--		2
2019		0.015	0.047	--		
2022				0.2		0.1
2024	0.00024 (noncancer) 0.0000079 (cancer)	0.0023 (noncancer) 0.0076 (cancer)				

PFOA Cancer HBV

- Cancer HBVs are calculated with a different method than noncancer values
  - Limit excess cancer risk to 1/100,000
  - Contain an adjustment to account for early life exposures
  - It is a risk-based value
    - To reduce risk of developing cancer there are many things you can do beyond reducing PFAS in water: exercise, drink in moderation, quit smoking, eat less red meat, etc.

How to reduce PFAS exposures

- Residents in the East Metro have been exposed to PFAS in their drinking water
- There are also many other sources for PFAS exposures:
  - Consumer products
  - Fish
  - Household dust
- People can learn more about actions they can take to reduce their exposure to PFAS at Reducing Exposures: Per- and Polyfluoroalkyl substances (PFAS)
- People can also reach out to MDH's Health Risk Assessment Unit with health-related questions: call 651-201-4899 or email health.risk@state.mn.us

Impact to public and private drinking water

- MDH is considering how the updated guidance values for PFOS and PFOA will be used for evaluating PFAS in public water systems
  - No timeline yet for issuing new advisories
- MDH currently uses a quarterly running annual average (four quarters of sampling data) to determine if the HRI is over 1; if it is over 1, MDH issues a health risk advisory.
- Use of the HRI may change with the new values
  - HRI not relevant for new PFOA value
  - New PFOS value has different health endpoints than old value

U.S. EPA Draft MCLs - refresher

- EPA plans to finalize the draft MCL rule for PFOA and PFOS in early 2024
- MCLs – national primary regulations for public water systems
  - Factor in costs and benefits, feasibility, laboratory detection limitations, etc.
  - Enforceable
- Although the rule will be final then, the water system operators will have additional time to meet the regulatory requirements of the MCLs

U.S. EPA Draft MCLs

PFAS Compound	MDH drinking water criteria (ppt) Noncancer / cancer	EPA MCLs (ppt)	EPA Hazard Index (unitless)	Practical Quantification Level (PQL)** (ppt)
PFOA	**0.24 / 0.0079**	4	-	4
PFOS	**2.3 / 7.6**	4	-	4
PFBA	7,000	-	-	-
PFHxA	200	-	-	-
PFBS	100	-	2,000*	3
PFHxS	47	-	9*	3
PFNA	-	-	10*	4
GenX	-	-	10*	5

*EPA Hazard index equation uses the numbers displayed on the table; these numbers are not used for evaluation of individual compounds

**Practical Quantification Level (PQL) is the lowest analyte concentration that can be reliably measured within specified limits of precision and accuracy during routine laboratory operating conditions

Thank you!

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