



PFAS Basics

Camano Island Community PFAS Listening Session June 23, 2023

Claire Nitsche, MPH



Environmental Health Educator

Health Promotion and Education Division

Office of Public Affairs and Equity

Washington State Department of Health

claire.nitsche@doh.wa.gov

What ARE PFAS?

- “PFAS” is short for “**p**er- and poly**f**luoro**a**lky**l s**ubstances.”
 - “Forever chemicals.”
- Family of 10,000 human-made chemicals.
 - PFOA and PFOS = two of the most studied, no longer used in U.S. manufacturing.
- Used since 1950s in wide range of consumer products.
 - Historically used in AFFF firefighting foam.
- **Currently unregulated at the federal level in drinking water – proposed federal regulations are being reviewed right now by EPA.**



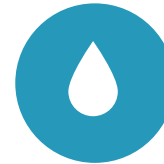
PFAS are a problem because...



**Some are
toxic.**



**Escape
from
products.**



**Can get into
soil and
groundwater.**



**Don't break
down
easily.**



**Spread easily
in outdoor
environment.**



Bioaccumulate.



Having higher levels of the BEST studied PFAS in your body could...



Affect your immune system and make some vaccinations less effective.



Increase risk for kidney cancer.



Increase risk for high cholesterol.



Increase risk for low birthweights.



Exposure to the BEST studied PFAS may also increase your risk for...



**Other cancers,
like testicular
cancer.**



**Thyroid
disease.**



**High blood
pressure
during
pregnancy.**



**Other
reproductive
issues.**



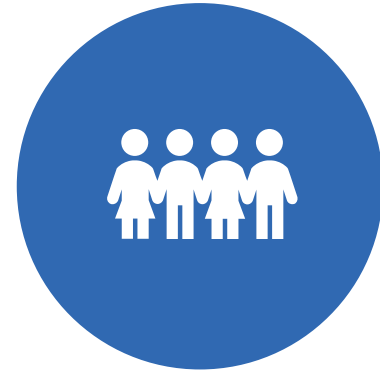
Who is most vulnerable?



Pregnant people.



**Babies in the
womb.**



**Children ages 5
and younger.**



What is my risk?

Current public health studies look at how PFAS affect people's health on a community level.

Factors that influence how your body responds to ANY toxic chemical:

- 1) Your diet, lifestyle, and habits.
- 2) Your individual and family medical history.
- 3) Your overall health.

Individual exposure:




- 1) How much of the chemicals you were exposed to.
- 2) How often you were exposed.
- 3) How long you were exposed for.
- 4) Which PFAS chemicals you were exposed to.

Washington State Action Levels (SALs)

Washington State Action Levels for PFAS in Drinking Water

WHEN AND HOW TO LOWER YOUR EXPOSURE TO PFAS IN DRINKING WATER:



-  PFAS have been discovered above recommended federal and state safety levels in the drinking water supplies of millions of Americans, including in Washington State. Because it can take many years for our bodies to clear PFAS chemicals, exposure to levels above recommended limits could lead to harmful health effects.
-  Washington State Action Levels (SALs) help you know when to take action to protect your health. If your tap water has PFAS above our SALs, take action to reduce PFAS in the water you drink and cook with.
-  Limiting PFAS exposure is the best way to protect yourself and your family. The sooner you lower your PFAS exposure, the sooner your body can start clearing PFAS.

Installing a PFAS-reducing water filter on your kitchen sink can help lower PFAS levels in your drinking and cooking water.

Follow the advice on the back page if PFAS levels in your drinking water are higher than our SALs.

Our SALs are based on the best available science, and may be updated as we get more information on PFAS health impacts.

Water tests from private labs sometimes give results with different measurements, or "units", than parts per trillion. Our SALs are shown here in these other common units.

PFAS CHEMICALS	SAL in parts per trillion (ppt)	SAL in nanograms per liter (ng/L)	SAL in micrograms per liter (ug/l)	SAL in parts per billion (ppb)
PFOA <small>(perfluorooctanoic acid)</small>	10 ppt	10 ng/l	0.010 ug/l	0.010 ppb
PFOS <small>(perfluorooctane sulfonate)</small>	15 ppt	15 ng/l	0.015 ug/l	0.015 ppb
PFNA <small>(perfluorononanoic acid)</small>	9 ppt	9 ng/l	0.009 ug/l	0.009 ppb
PFHxS <small>(perfluorohexane sulfonate)</small>	65 ppt	65 ng/l	0.065 ug/l	0.065 ppb
PFBS <small>(perfluorobutane sulfonic acid)</small>	345 ppt	345 ng/l	0.345 ug/l	0.345 ppb

Washington State Action Levels (SALs)



Help you know when to take action to protect your health by lowering your PFAS exposure.



Based on the best available science at the time they were set.



May be updated as we get more information about PFAS health impacts.

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PFOS (perfluorooctane sulfonate)	<i>15 ppt</i>	<i>15 ng/l</i>	<i>0.015 ug/l</i>	<i>0.015 ppb</i>
PFNA (perfluorononanoic acid)	<i>9 ppt</i>	<i>9 ng/l</i>	<i>0.009 ug/l</i>	<i>0.009 ppb</i>
PFHXS (perfluorohexane sulfonate)	<i>65 ppt</i>	<i>65 ng/l</i>	<i>0.065 ug/l</i>	<i>0.065 ppb</i>
PFBS (Perfluorobutane sulfonic acid)	<i>345 ppt</i>	<i>345 ng/l</i>	<i>0.345 ug/l</i>	<i>0.345 ppb</i>

CHANGING FEDERAL REGULATIONS



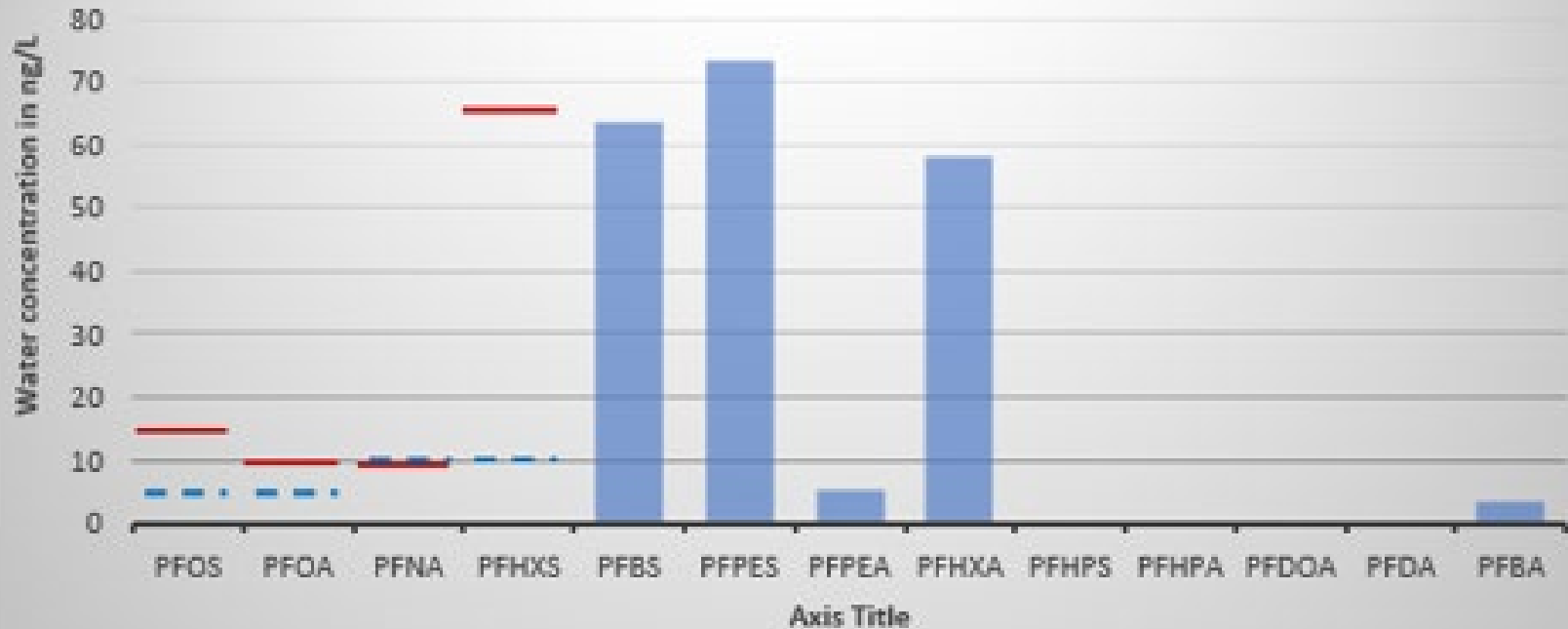
Proposed Maximum Contaminant Levels
("MCLs") for 6 of the best studied PFAS in
Drinking Water

2023 EPA Draft MCLs

- MCLs are an enforceable standard for public water systems.
 - “Law of the Land,” though states are allowed to set stricter limits.
 - When MCLs are adopted, they will replace our SALs.
- EPA proposed the new MCLs in March, held public comment period through May.
 - We are waiting to hear what their final MCL numbers are. Expecting that early 2024.



Mabana Shores - PFAS profile



— Washington State Action Level

- - - 2023 EPA Draft MCL

These levels are below:

- Washington's State Action Levels for 5 PFAS
- Proposed EPA MCLs for 6 PFAS.
- Any health guidance established by other US states

WASHINGTON STATE DEPARTMENT OF ECOLOGY

What is the MTCA Clean Up Process?

The MTCA Cleanup Process

