

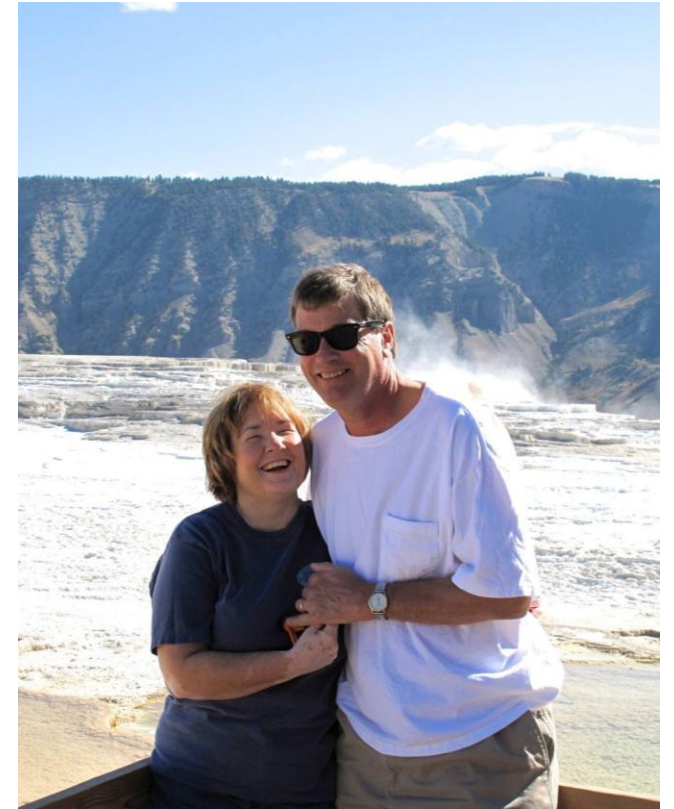


GREAT LAKES
DEAS
TAC
ACTION NETWORK



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My Story



A white rectangular warning sign is attached to a silver wire mesh fence. The sign features a red horizontal band at the top with the word "WARNING" in white, bold, sans-serif capital letters. Below this band, the text "ENVIRONMENTAL CONTAMINATION INVESTIGATION ONGOING AT THIS SITE NO TRESPASSING" is printed in black, bold, sans-serif capital letters, centered on the white background. The fence is set against a backdrop of dense green trees and foliage, with sunlight filtering through the leaves.

WARNING

**ENVIRONMENTAL
CONTAMINATION INVESTIGATION
ONGOING AT THIS SITE
NO TRESPASSING**

Let's start at the beginning

PFAS: Per- and Polyfluoroalkyl substances

This is a broad phrase that captures a class of chemicals, by some estimates 15,000 different chemicals. These go by names such as PFOS, PFOA, PFHxS, MeFOSAA, Gen-X and many others.

These were originally marketed and used in the US in the 1940's as a way to be indestructible in manufacturing

Better living through Science!

The first PFAS-related chemical, polytetrafluorethylene (PTFE) was accidentally created in 1938 by DuPont chemist, Dr. Roy J. Plunkett, and introduced under the product name of Teflon.

You will also hear PFAS referred to as “forever chemicals” because they were designed to be indestructible, made by one of the strongest bonds known in organic chemistry (carbon-fluorine bonds).

However, because of this, they accumulate easily, stick around in our environment, and are very persistent in our bodies.

Characteristics of PFAS

Complex mixtures that are nearly indestructible in nature

Bioaccumulate in animals and humans

Travel far and wide in the environment

Very useful chemicals in industry and everyday life

Toxic to humans in multiple ways

They are used
EVERYWHERE



Legacy PFAS

PFOA, PFOS

- *Historically regulated*
- *High public awareness*

The Larger PFAS Universe

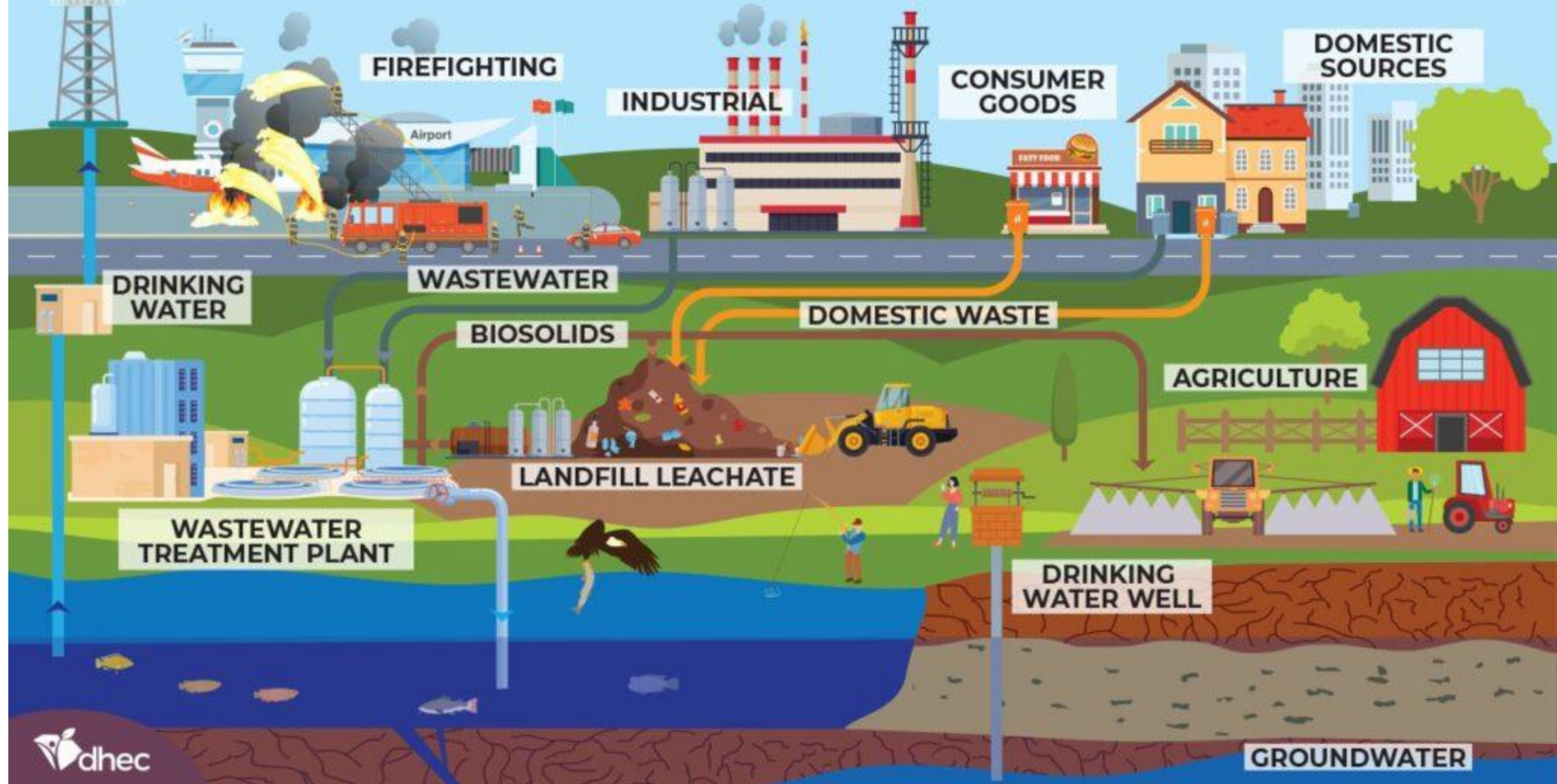
- **Short-chain PFAS**
- **Ultra-short-chain PFAS**
- **Precursors to PFAS**
- *Thousands of additional compounds*

Includes GenX, PFBA, TFA

Health Problems associated with PFAS contamination include:

- Elevated Cholesterol
- Liver Damage
- Kidney Damage
- Cancer (testicular and Kidney)
- Asthma
- Lower infant Birth weights
- Increased risk of preeclampsia
- Thyroid Disease
- Endocrine Disruption
- Possible lower response to vaccinations

PFAS SOURCES IN THE ENVIRONMENT





Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762



January 05, 2018

[Redacted] Stelt

Address: [Redacted]

[Redacted]

Sample ID: 102017A
Matrix: Blood/Serum
Lab 1701629-01

Date Collected: 07-Nov-17 09:00
Date Received: 08-Nov-17 10:07
Date Analyzed: 02-Jan-18 12:57

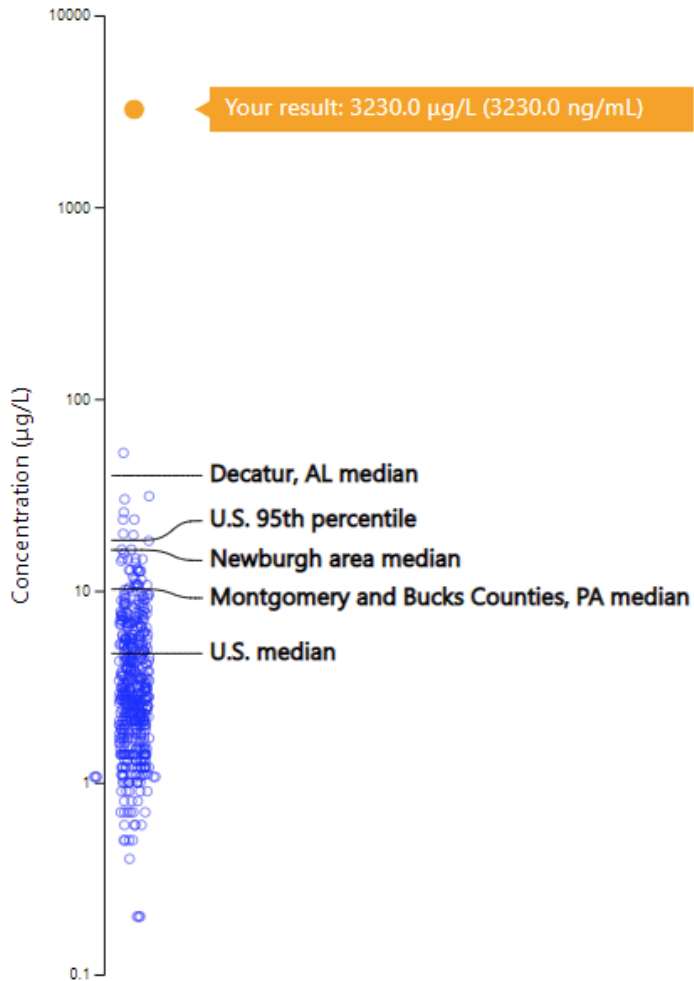
VAL - PFAS

Analyte	Conc. (ng/mL)	Reporting Limit (ng/mL)
PFHxS	1150	10.0
PFOA	639	10.0
PFOS	3230	15.0
PFNA	1.35	0.500
PFDA	Not Detected	0.500
PFOSA	Not Detected	0.500
PFUnA	Not Detected	0.500
EtFOSAA	Not Detected	0.500
MeFOSAA	Not Detected	0.500

PFOS (Perfluorooctane sulfonic acid)

Your result: 3230.0 µg/L (You entered this as: 3230.0 ng/mL)

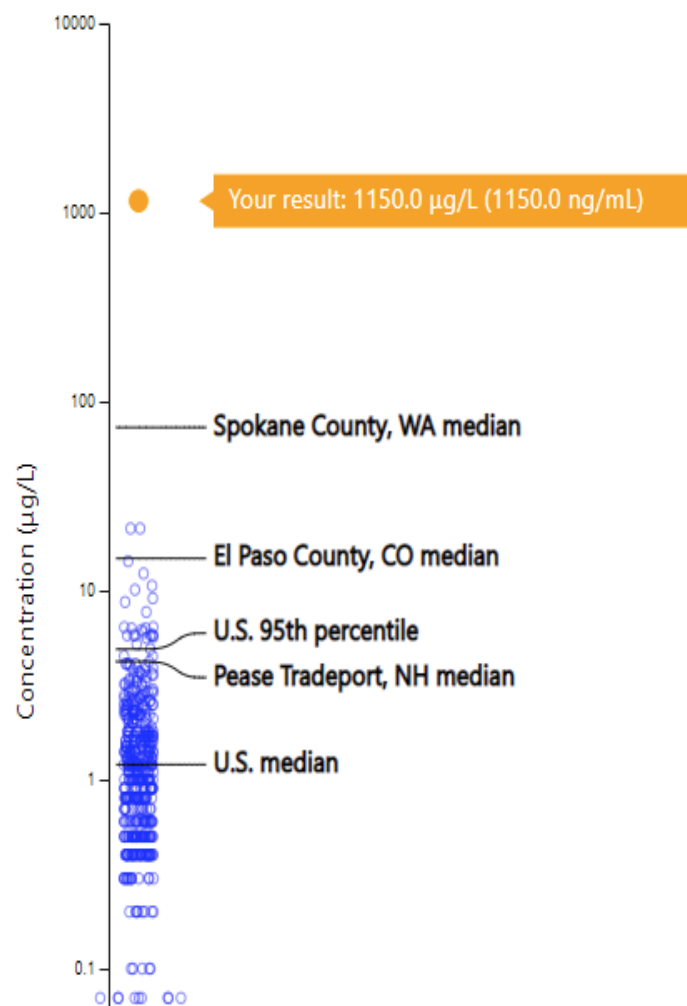
- ⚠ Your result was **above** the U.S. 95th percentile of 18.3 ng/mL (18.3 µg/L)
- ⚠ Your result was **above** the U.S. median of 4.7 ng/mL (4.7 µg/L)



PFHxS (Perfluorohexane sulfonic acid)

Your result: 1150.0 µg/L (You entered this as: 1150.0 ng/mL)

- ⚠ Your result was **above** the U.S. 95th percentile of 4.9 ng/mL (4.9 µg/L)
- ⚠ Your result was **above** the U.S. median of 1.2 ng/mL (1.2 µg/L)



What's My Exposure?

Information from your blood report

	Value	Unit
PFOA (in blood) -- Perfluorooctanoic acid	639	ng/mL
PFOS (in blood) -- Perfluorooctane sulfonic acid	3230	ng/mL
PFHxS (in blood) -- Perfluorohexane sulfonic acid	1150	ng/mL
PFNA (in blood) -- Perfluorononanoic acid	1.35	ng/mL

Generate report

Graph legend

- People in a representative sampling of Americans
- PFOA level in my blood
- Benchmarks from a representative sampling of Americans and from other PFAS exposure studies



What does your state need to do when you find it in a community?

1. Be honest about what has been found, and honest about what is not known.
2. Don't minimize the reaction from communities
 - People are scared when they hear about this. The emotional response is normal, expected and NOT personal
3. Don't hide behind data
4. Be proactive at providing people with a clean water source

What we need from Decision Makers:

- Blood testing: This is crucial and in most cases IS NOT covered by insurance. This needs to change. It will save money in the long run, and can provide either peace of mind, or give physicians a means of better treating their patients.
- Water/wells need to be tested. The primary exposure path is ingestion through water. Safe water is a basic human right.

What we need from Decision Makers:

- Stop the source (Turn off the tap). These chemicals are everywhere. We will continue to throw money at the problem while continuing to create the problem.
 - This could be a product ban, labeling requirements and procurement programs
 - Minnesota is leading the nation in this with Amara's Law!
- Food source: There is a lot of concern about biosolids and soil contamination, which all relates to problems with food contamination. We need to have a system of testing, but before that **WE MUST PROTECT FARMERS**



Resources

Great Lakes PFAS Action Network (<https://glpan.org>)

PFAS Exchange (<https://pfas-exchange.org>)

Michigan PFAS Action Response Team
(<https://www.michigan.gov/pfasresponse>)

PFAS Reach <https://silentspring.org/project/pfas-reach>