



# *EMERGING CONTAMINANTS*

## *LAKE COUNTY PUBLIC WORKS MONITORING PROGRAM*

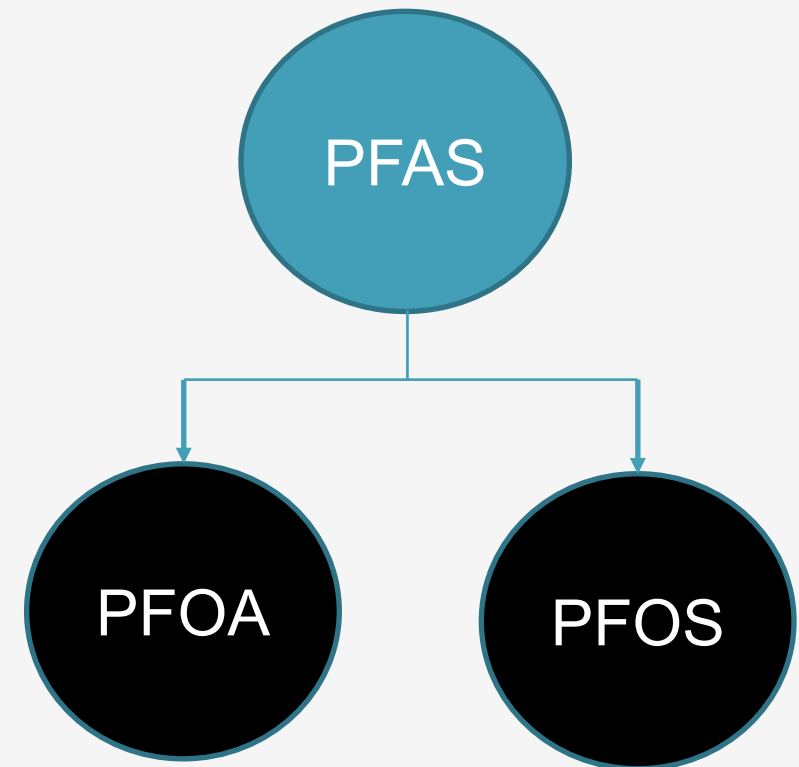
*(PFOA & PFOS)*

### *Lake County's Mission*

*Deliver exceptional, financially and environmentally responsive/responsible services that promote a safe, affordable, healthy, and resilient community*

# *WHAT ARE PFOA AND PFOS?*

- PFOA (perfluorooctanoic acid) and PFOS (perfluorooctane sulfonate) are synthetic compounds that are used in a variety of consumers and industrial products as well as food items.
- Because of strong carbon-fluorine bonds, PFOA is stable to metabolic and environmental break-down.
- PFOA is one of a large group of perfluoroalkyl substances (PFAS) that are also used to make products more resistant to stains, grease, and water.



# WHAT ARE THE SOURCES OF PFOA AND PFOS?

- PFOA and PFOS contamination in drinking water were thought to stem from factories that formerly manufactured or used the chemical.
- They can be found in different products and industrial applications.
- Some examples of common goods that can be manufactured using PFOs or PFOAs are:

Firefighting foams  
Cleaning products  
Non-stick pans

Paint  
Cosmetics  
Adhesives

Cosmetic  
Pesticides  
Leather

**Seemed like a good idea at the time...**

PFOA and PFOS are really good at repelling dirt, grease, water & stains

These chemicals were key ingredients in two of 3M's most iconic products until 2002.

Post-it® Notes

Scotchguard®

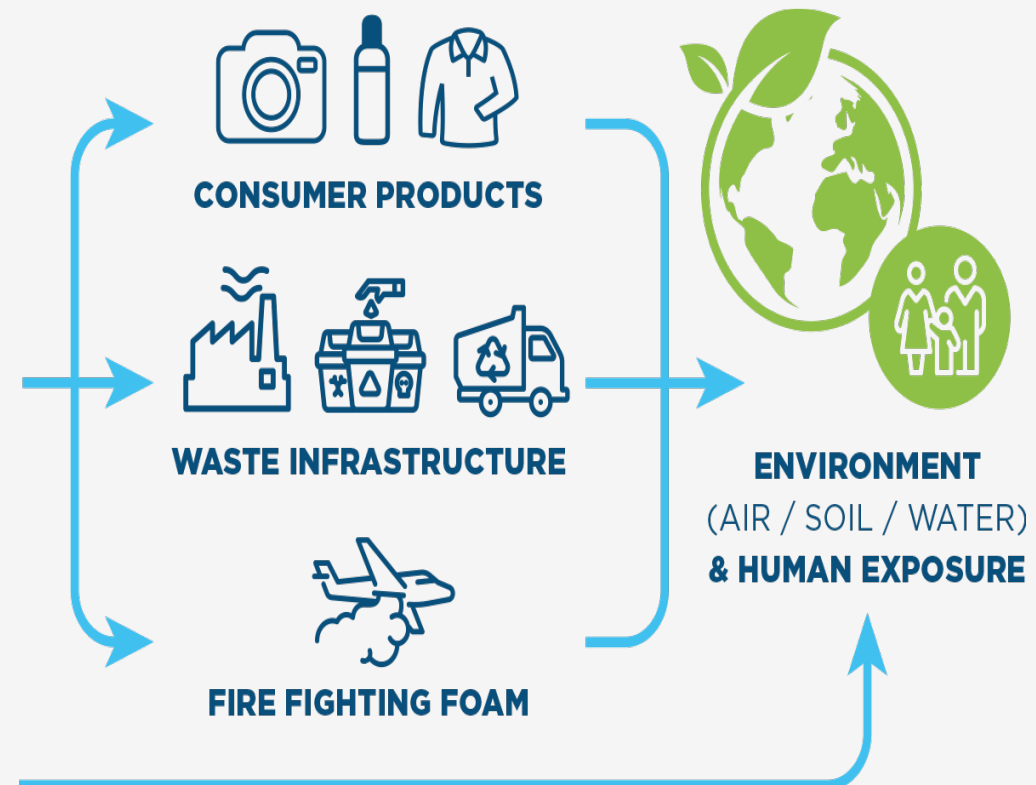
Non-Stick Pans

Water Resistant Jackets

Stain Resistant Carpet

# HOW ARE PEOPLE EXPOSED TO PFOA AND PFOS?

- People are most likely exposed to PFOA and PFOS by drinking contaminated water sources.
- By using products that contain PFOA and PFOS.
- Workers in the perfluorochemical industry can be exposed to greater amounts of PFOA than people in the general population.
- Indoor dust from carpets is also an important source of exposure for children.



# *ARE PFOS AND PFOA IN DRINKING WATER A HEALTH CONCERN?*

- EPA has established health advisories for PFOA and PFOS based on the agency's assessment of the latest peer-reviewed studies of human populations that have been exposed to PAFS.
- These studies indicate that exposure to the compounds over certain levels may result in adverse health effects (i.e., problems with fetus development, low birth weight, kidney cancer, liver damage, immune and thyroid effects).
- EPA's health advisory levels were calculated to offer a margin of protection against adverse health effects to the most sensitive populations.



# *ARE PFOA AND PFOS REGULATED BY THE EPA?*

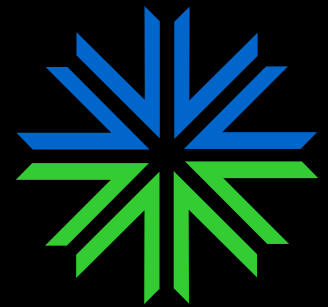
- The Environmental Protection Agency (EPA) established health advisory levels in drinking water for PFOA and PFOS.
- EPA classified these compounds as emerging contaminants because they do not have established regulatory standards, but evolving science has identified potential risk to humans and regulatory standards are under consideration.
- EPA is committed to supporting states and public water systems as they determine the appropriate steps to reduce exposure to PFOA and PFOS in drinking water.
- EPA has established the health advisory levels at 70 parts per trillion.



# IS LAKE COUNTY PUBLIC WORKS MONITORING FOR PFOA AND PFOS?

## PFOS and PFAS Monitoring (Monitoring Period: November 2019)

<u>LCPW Water Systems</u>	<u>Results, ng/L</u>		<u>Water Source</u>
	<u>PFOA</u>	<u>PFOS</u>	
Highland Lake	<2.0	< 2.0	Wells
Brooks Farm	< 2.0	< 2.0	Wells
Grandwood Park	2.1	< 2.0	Lake Michigan
Arden Shores	2.3	2.1	Lake Michigan
Vernon Hills	<2.0	< 2.0	Lake Michigan
Pekara	<2.0	< 2.0	Wells
Hawthorn Woods	<2.0	< 2.0	Wells



LakeCounty  
Department of Public Works

*QUESTIONS?*