



Valley Water

Clean Water • Healthy Environment • Flood Protection

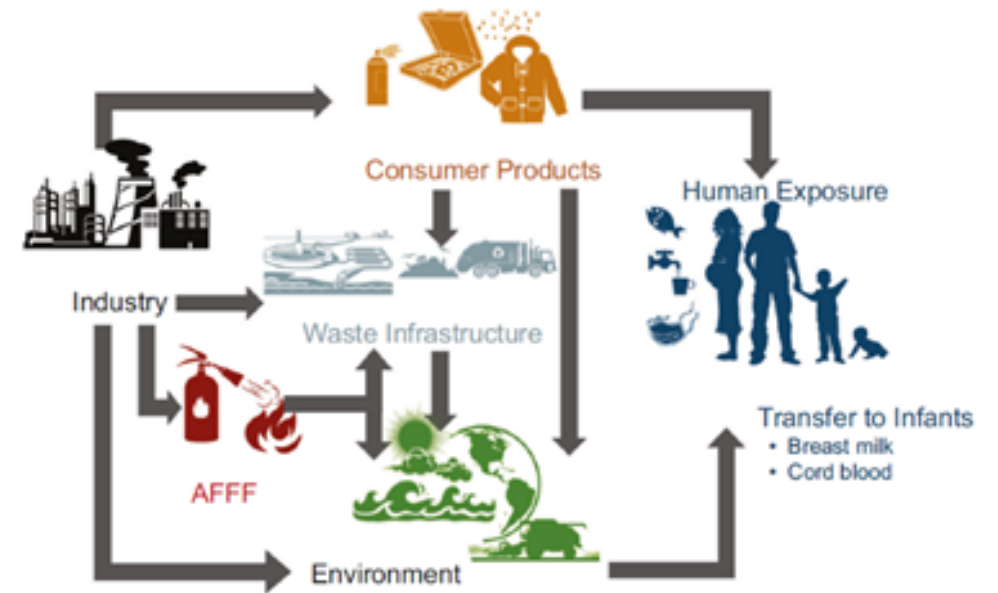


PFAS Update

Board of Directors Meeting August 11, 2020

What are PFAS?

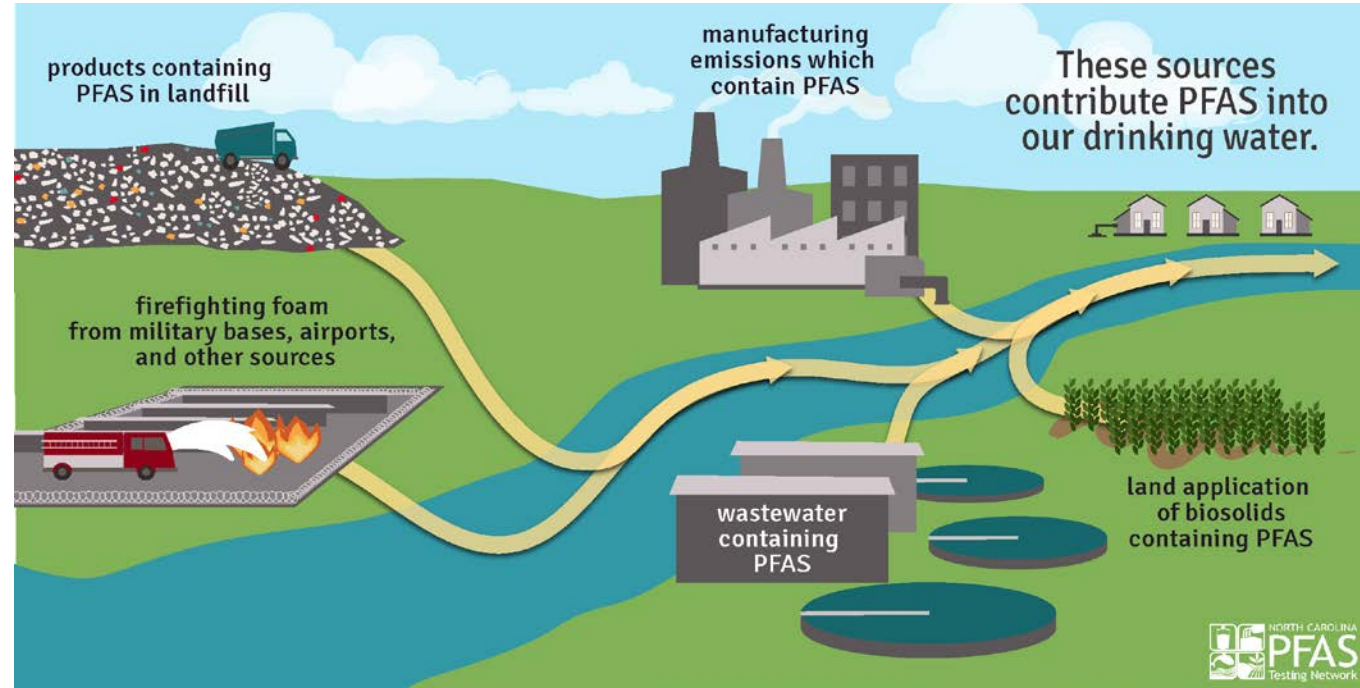
- Large group of man-made chemicals that make products resistant to heat, oils, stains, or water
- Thousands of chemicals used extensively in industrial and consumer products (cookware, clothing, food packaging, furniture, etc.)
- Potential adverse health effects include reproductive/developmental harm, immune system suppression, and cancer



Potential major exposure pathways of PFAS to humans.
Figure from Sunderland et. al. (2019)

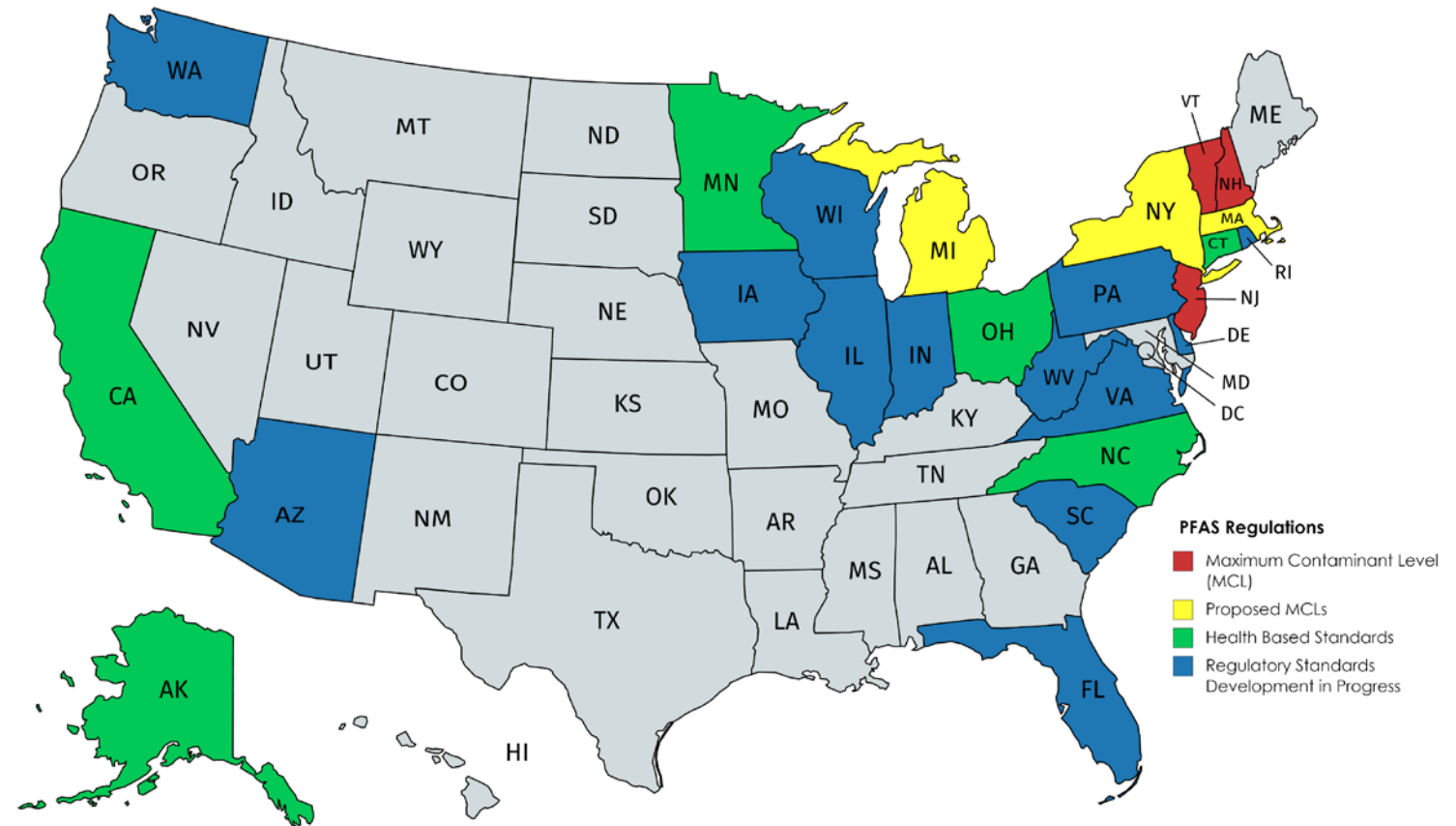
How do PFAS get into drinking water?

- Major environmental sources
 - fire training/fire response sites,
 - industrial sites,
 - landfills, and
 - wastewater treatment plants/biosolids
- PFAS accumulate in groundwater and are persistent in the environment



Status of drinking water regulations

- No federal standards for PFAS in drinking water
- A few states have adopted drinking water standards
- Some states working to develop standards



Status of PFAS regulations in California

- Health-based advisory levels in the part per trillion range for two common PFAS: PFOA and PFOS
 - Notification levels
 - If exceeded, water providers must notify their governing bodies, and the State Board recommends they inform customers
 - Response levels
 - If exceeded, water providers must take the source out of service, provide treatment, or notify customers
- State Board ordering sampling near potential sources and seeking guidance from Office of Health and Hazard Assessment to inform potential drinking water limits

Local PFAS testing in groundwater

- Mandated testing
 - EPA required large water systems to test PFAS between 2013 and 2015
 - No detections, but now able to detect at lower levels
 - State Board orders to test various wells beginning in 2019
 - Valley Water required to test Campbell well field under State Board order
 - PFOA and PFOS detected in two wells, no detections above notification levels
- Voluntary testing
 - Valley Water monitoring well testing
 - PFAS not widely present above notification levels, but detected in some wells
 - Some retailer testing of water supply wells
 - PFOS above notification level in 8 active San Jose Water Company wells
 - Active wells taken out of service out of abundance of caution and customers notified

PFAS in local groundwater

- Valley Water monitoring near recycled water irrigation sites shows consistent PFOA/PFOS detections above notification levels in some shallow monitoring wells not used for drinking water.
- Testing by Valley Water and others shows PFOA/PFOS not widely present above notification levels.
- No water supply wells have had PFAS detections above the response level, which requires taking the source out of service, treatment, or notification.
- The presence of PFAS in local groundwater is concerning and warrants further evaluation.
 - Valley Water is analyzing all available data to assess the extent of PFAS in groundwater.

Ongoing work

- Continue to coordinate with water retailers and regulatory agencies to understand PFAS occurrence and potential sources
- Continue to monitor evolving regulatory and treatment technology developments for PFAS
- Maintain updated information for interested stakeholders
- Assess the need for additional sampling
 - Valley Water lab now accredited to test for PFAS

FACT SHEET

Per- and Polyfluoroalkyl Substances (PFAS)



What are PFAS, PFOA, and PFOS?

Per- and Polyfluoroalkyl Substances (PFAS) are a grouping of more than 4,500 chemicals that resist heat, oils, stains and water. They have been widely used in consumer products such as carpets, clothing, furniture fabrics, paper packaging for food, firefighting foams, and other materials including waterproof/stain resistant/nonstick cookware. Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are two common types of PFAS.

Certain PFAS chemicals (including PFOA and PFOS) are no longer manufactured in the United States (U.S.). However, they are still produced internationally and are imported into the U.S. in consumer goods.



What are the health effects of PFOA and PFOS?

PFOA is a possible human carcinogen according to the International Agency for Research on Cancer. Available studies suggest PFAS exposure can cause adverse effects in humans, including increased cholesterol, thyroid and liver disease, decreased fertility, lower birth weights, decreased vaccine response, and pregnancy-induced hypertension.



How are people exposed to PFAS?

These chemicals have been widely used for decades in industrial applications and consumer products. Most people have been exposed to these chemicals through consumer products but drinking water can be an additional source of exposure. The major sources of PFAS in water supplies are fire training/response sites, industrial sites, landfills, and wastewater treatment plants/biosolids. Because of their persistence in the environment, PFAS have the potential to accumulate in water supplies.



Are there drinking water standards for PFOA and PFOS?

State and federal lawmakers, along with regulators are moving toward stricter standards and guidelines for the detection, public notification, and treatment of PFOA and PFOS in drinking water.

Currently, the Environmental Protection Agency (EPA) has established a drinking water health advisory of 70 parts per trillion (ppt) for a combined concentration of PFOA and PFOS. If exceeded, EPA recommends water providers assess the contamination, inform customers, and limit exposure. EPA is working to establish drinking water regulations for PFOA and PFOS by setting an enforceable Maximum Contaminant Level.

In 2019, the State Water Resources Control Board (State Board) set a drinking water notification level for PFOA (5.1 ppt) and PFOS (6.5 ppt). If exceeded, water providers must notify their governing bodies, and the State Board recommends they inform customers. In the beginning of 2020, the State Board set the current response level at 10 ppt for PFOA and 40 ppt for PFOS. If exceeded, water providers are required to either take the water source out of service, provide treatment, or notify customers in writing.



Has local water been tested for PFOA and PFOS?

To better understand the occurrence of PFAS, the EPA required large public water systems to test for various PFAS, including PFOA and PFOS, between 2013 and 2015. There were no detections of PFAS in groundwater or surface water in Santa Clara County as part of this testing.

The ability to detect these chemicals at even lower levels has evolved since the EPA-required sampling. Based on limited sampling conducted since then, PFOA and PFOS have not been detected in Valley Water's imported water or treated water supplies.

In February 2020, Valley Water voluntarily sampled PFAS at 55 monitoring wells throughout Santa Clara County. These results and other available data indicate that PFOA and PFOS are not widely present above current State Board health-advisory levels.

PFOS was found above the notification level in six water supply wells in San Jose, prompting the water retailer to discontinue use of the wells out of an abundance of caution. PFOA or PFOS have not been detected in any water supply wells at levels where the State Board recommends removing the water source from service (also known as the response level) in Santa Clara County.