

## **PFAS Fact Sheet**

### **WHAT ARE PFAS?**

PFAS are a large group of human-made chemicals that have been used for decades due to their resistance to heat, oil, stains, grease, and water. PFAS do not break down in the environment and will bioaccumulate in plants and animals. PFAS are ubiquitous in our environment and have been found in lakes, ponds, rivers, groundwater, soils, food, indoor dust, as well as in a plants, animals, and humans.

### **WHY ARE PFAS A CONCERN?**

When PFAS enters a municipal wastewater treatment facility (WWTF) through residential and industrial wastewater, the chemicals cannot be removed or destroyed. PFAS largely pass through the WWTF and are either discharged to Vermont lakes and rivers or accumulate in sludge or biosolids.

PFAS have toxic effects and pose human health risks even at very low levels (parts per trillion). PFAS exposure has been associated with the following health impacts according to the Vermont Department of Health:

- Affecting the growth, learning, and behavior of infants and older children;
- Lowering a person's chance of getting pregnant;
- Interfering with the body's natural hormones;
- Increasing cholesterol levels;
- Affect the immune system; and
- Increasing the risk of cancer

To protect public health, Vermont has developed PFAS standards for drinking water, groundwater and soil.

### **HOW IS THE METAL FINISHING INDUSTRY USING PFAS?**

PFAS in the metal finishing industry can be associated with:

- Surfactants, dispersants, wetting agents, or fume/mist suppressing agents;
- Corrosion inhibitors or other products to reduce wear, enhance heat resistance, or aesthetic appearance;
- Leveling agents for zinc electrodeposition;
- Electroless plating of nickel/copper and electroplating of copper, nickel, and/or tin.

A major source of PFAS in metal finishing was a PFOS-based mist suppressant used as a control for hexavalent chromium emissions. By 2002, the primary U.S. manufacturer of PFOS voluntarily phased out production of PFOS and industry transitioned to other PFAS precursors such as 6:2 fluorotelemer sulfonate. However, mist suppressants and other sources of PFAS are still a concern because precursor compounds can transform to terminal PFAS through wastewater processes. Furthermore, PFOS is still detected in metal finishing effluent.

For more information on PFAS visit the ITRC's webpage: <https://pfas-1.itrcweb.org/>

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