
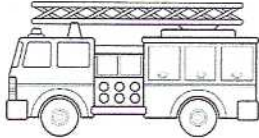






Bulletin #65, A Little Drop Will Do Ya, September 16, 2022
 [Updated Bulletin #23, May 14, 2021, with USEPA's new health advisories¹]

<i>Item</i>	<i>Delivery System</i>	<i>Amount of Aqueous Film-Forming Foam (AFFF)</i>	<i>H₂O Contamination (gallons)</i>
	5 Gallon Pail	5 Gallons	285.2 Billion
	Fire Apparatus	30 Gallons	3.13 Trillion
	Tote (53 5 Gallon pails)	265 Gallons	14.8 Trillion
	ARFFs	600 Gallons	34 Quadrillion

“Put another way, a single Olympic-sized swimming pool filled with PFOS would contain enough of the chemical to contaminate the drinking water of every American, said Chris Higgins, a professor of civil and environmental engineering at the Colorado School of Mines. A little bit goes a long way.”²

The contamination reach of PFAS-containing firefighting foams cannot be contained. AFFF is designed to spread.³ PFAS will go anywhere that water goes. For visualization purposes, Lake Michigan contains one quadrillion gallons of water.⁴

¹ USEPA News Release: EPA Announces New Drinking Water Health Advisories for PFAS Chemicals, \$1 Billion in Bipartisan Infrastructure Law Funding to Strengthen Health Protections, June 15, 2022, <https://www.epa.gov/newsreleases/epa-announces-new-drinking-water-health-advisories-pfas-chemicals-1-billion-bipartisan>
² *Chicago Tribune*, Environment, More than 8 million Illinoisans get drinking water from a utility where forever chemicals have been detected, Tribune investigation finds, Michael Hawthorne, Jul 12, 2022, <https://www.chicagotribune.com/news/environment/ct-pfas-illinois-drinking-water-20220710-1cql5pafjicqrm2libb3aei5iv-htmlstory.html>
³ *Industrial Fire Protection*, Vanguard, Everything You Need to Know About AFFF, Micah Dickson, January 2020, <https://vanguard-fire.com/everything-you-need-to-know-about-afpp/>
⁴ WGN9, Chicago News, Ask WGN, With a quadrillion gallons in Lake Michigan, lowering the water isn't an option, Mike Lowe, Mike Ewing, Updated: Feb 13, 2020, <https://wgnv.com/news/ask-wgn/with-a-quadrillion-gallons-in-lake-michigan-lowering-the-water-isnt-an-option/>



One drop of PFAS

“Earlier this summer, the EPA released updated lifetime health advisories for several PFAS chemicals, including PFOA and PFOS, setting them at .004 parts per trillion (ppt) and .02 ppt respectively. For context, one part per trillion is the equivalent of one drop of water in an Olympic-sized swimming pool. These advisories and the proposed rule released today leave no doubt that no amount of PFOA and PFOS chemicals are safe for people or wildlife.” (The National Wildlife Federation, Designating PFAS Chemicals as Hazardous Essential for People, Wildlife, Clean Water, Anna Marie Zorn, Aug 26, 2022, <https://www.nwf.org/Latest-News/Press-Releases/2022/8-26-22-EPA-PFAS-Rule>)

The new proposed EPA PFOA / PFOS levels will require reporting any use of over one pound.

Liability will become an important issue for entities using these hazardous material chemicals.