



ROBUST TECHNOLOGIES
FOR WATER AND WASTEWATER TREATMENT

AFFF Destruction and PFAS Management

Supporting State Takeback Programs

Protecting the People that Protect Us

Firefighters are vital to community safety, often facing immense risks to protect us from fires. Unfortunately, their commitment comes with hidden dangers, including from aqueous film forming foams (AFFF), which are used to extinguish gasoline or hydrocarbon fires. Studies indicate that the more often firefighters interact with AFFF, the greater the accumulation of per and polyfluoroalkyl substances (PFAS) in their bloodstreams, with levels found to be 6 to 10 times higher than those of the average American. This increased exposure is linked to several long-term health issues.

The Onvector Solution

Onvector's Plasma Vortex technology employs ionized gas to rapidly destroy PFAS, breaking down harmful compounds into harmless, non-reactive materials like fluoride, sulfate, and water without extreme temperatures or pressures. In support of state takeback programs, Onvector's Plasma Vortex technology provides a crucial solution for effectively managing and disposing of AFFF, ensuring compliance with regulatory initiatives while prioritizing public health and safety.



99.999% PFAS
Destruction



No toxic
by-products



No toxic
air emissions



Safe &
Modular



Low Cost



Validated

Our Commitment

Onvector is focused on addressing this pressing issue by providing a cost-effective AFFF destruction method that produces no harmful by-products. We are actively collaborating with federal and private-sector organizations to ensure the complete and safe destruction of concentrated PFAS including AFFF. Onvector is leading the charge against PFAS contamination. Together, we can create a safer future for our firefighters and the communities they serve.

Danger to Firefighters

Data from an analysis of 149 firefighters revealed a strong positive correlation between exposure to 3M AFFF and elevated levels of PFOS (a common type of PFAS).

On average, firefighters exhibited PFOS levels **6 to 10 times greater** than the general population.

An emerging clinical consensus is that PFAS are endocrine disruptors which have been linked with a range of health effects, including increases in cholesterol levels, reduced responsiveness to vaccines, liver dysfunction, pregnancy-induced hypertension and preeclampsia, kidney and testicular cancer.

SOURCE: [How PFAS Impacts Your Health](#)

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Destroy PFAS Caused by Firefighting Foams

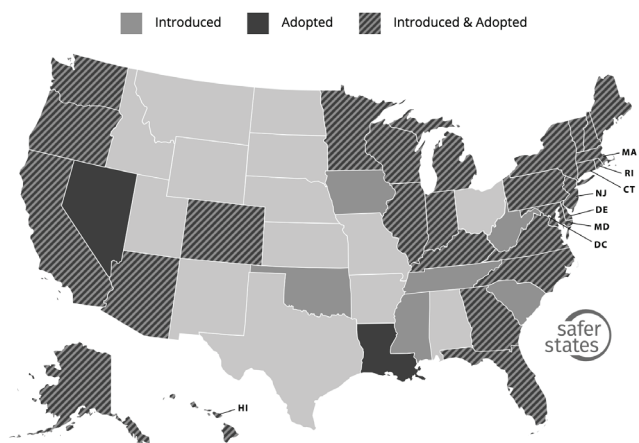
AFFF is still used to combat flammable liquid fires across various sectors, including industrial, commercial, and airport applications. Historically, the widespread use of AFFF for routine fire-training exercises over decades, has resulted in PFAS contamination in drinking water sources near numerous Department of Defense (DOD) installations, raising serious environmental and human health concerns.

Over 34 states have introduced 292 policies aimed at mitigating the impact of PFAS (see U.S.map below). Many private and public organizations—such as manufacturers and airports—are proactively discontinuing usage, reflecting a collective commitment to addressing the PFAS challenge and ensuring a safer environment.

States are Already Banning & Restricting PFAS in AFFF

Some companies have already banned the production of AFFF and other substances containing PFAS, and 300 municipalities are involved in MDL 2873 a federal class action lawsuit in South Carolina, in which there are over 10,000 associated cases.

Policies for Addressing PFAS



Learn More about State Takeback Programs

Various U.S. states have initiated takeback programs to tackle the disposal of AFFF, due to the presence of PFAS, reflecting a growing commitment to address the environmental and health risks associated with these materials. Learn more here: [FIREFIGHTING FOAM: DOD Is Working to Address Challenges to Transitioning to PFAS-Free Alternatives](#)