



Fire Service Partner:

Our office has recently learned of an emerging environmental issue that may be placing your firefighters and communities at risk.

Class-B firefighting foam Aqueous Film-Forming Foam (AFFF) contains PFAS, a chemical recently found to cause groundwater contamination and other serious environmental and human health hazards.

While health impact studies are still being conducted, exposure (especially ingestion) to various PFAS substances can increase the prevalence of certain cancers, as well as cause damage to the liver, kidneys and other organs. PFAS are also extremely persistent in the environment and have been shown to bioaccumulate in wildlife.

To help mitigate this issue and minimize the risk of danger to your communities, I strongly urge you to take the following precautions:

- **Conduct an inventory of all AFFF in your department and keep strict records regarding those compounds.** While risks exist with all AFFF-type foams, those manufactured prior to 2003 – as well as military specification foams – are even more hazardous. If you have these types of foam in your station, I strongly recommend prohibiting their use unless absolutely necessary.
- **Only dispose of AFFF through hazardous waste incineration.** Never dispose of these products through sanitary sewer systems as waste water plants do not remove PFASs from the water. Some states have even developed programs to have foam picked up and properly disposed of by hazardous waste contractors.
- **Never use AFFF for training purposes.** Fluorine-free foams are available for training, and class-A foam concentrates do not contain PFAS. Repeated application of AFFF to a training site has been shown to contaminate soil and ground water. Additionally, use of AFFF near well fields can result in contamination of an entire community's drinking water.
- **Conduct a risk-benefit analysis prior to any planned use of AFFF during an actual emergency involving flammable liquids.** If the fire can be controlled with water or class-A foam, those tactics should be considered first. If AFFF must be used for life-safety reasons, firefighters should only use the minimum amount needed, control runoff into waterways and report such usage to the Ohio Environmental Protection Agency (EPA).
- **Ensure all personnel are equipped with proper protective equipment.** This will help minimize firefighters' exposure when working with fluorinated foams.

For a comprehensive look at best practices for the use of class-B firefighting foams, click [here](#). For more information on Aqueous Film-Forming Foam, click [here](#).

In the future, I expect Ohio will see regulation over these foams as several states have already established regulatory oversight. I also expect the foam manufacturers to be developing and promoting fluorine-free foams to replace AFFF for class-B fires. Going forward, it will also be vital to prepare for public inquiries regarding foam usage – including questions about class-A foams, which do not carry the same risks as AFFF.

Your State Fire Marshal's office will continue to work with the Ohio Environmental Protection Agency (EPA) to provide education, guidance and mitigation strategies as we learn more about this serious safety risk.

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State Fire Marshal