



State of New Hampshire

DEPARTMENT OF SAFETY – STATE FIRE MARSHAL
DEPARTMENT OF ENVIRONMENTAL SERVICES

Joint Informational Bulletin – PFAS/Class B Firefighting Foam January 1, 2020

Scope:

During the 2019 legislative season, the NH Legislature adopted Senate Bill 257 relative to perfluoroalkyl and polyfluoroalkyl substances (also known as PFAS) in firefighting foam and firefighter protective clothing. NH RSA 154:8-b, which Governor Sununu signed into law and became effective September 3, 2019, sets out certain requirements relative to the sale and use of firefighting foam containing PFAS. This bulletin, issued jointly by the Department of Safety, State Fire Marshal's Office (FMO) and the Department of Environmental Services (NHDES) is being put forth in order to guide NH fire departments in complying with the new law. A bulletin focusing on PFAS in firefighting protective clothing will be issued separately.

Background:

PFAS are a family of man-made chemicals. They have been used for decades in products such as clothing, carpets, fabrics for furniture, adhesives, packaging for food, non-stick cookware, and other household items but also in fire protection equipment and firefighting foam.

Firefighting foam with PFAS can enter the environment in multiple ways including (but not limited to) through applications associated with emergencies (fire or hazardous materials releases); system discharge or false activation; firefighter training; and system testing. Firefighting foam with PFAS can get into ground water and contaminate wells and drinking water supplies, as well as expose firefighters and others to PFAS.

The use of firefighting foams containing PFAS constitutes an urgent public health challenge where action and associated changes are needed to limit future contamination and to reduce exposure to firefighters and New Hampshire residents.

What types of firefighting foams have PFAS chemicals?

There are two major types of firefighting foam, Class A and Class B. Class A foams are used to extinguish fires involving class A combustibles such as wood, paper, and brush. Class A foams generally do not contain PFAS. However, some foams can be used for Class A and Class B fires (example: FireAde). These types of foams would likely contain PFAS.

Class B foams are used to extinguish fires involving flammable liquids like gasoline, oil, and jet fuel. Class B foam can also be used as a vapor-suppressant for flammables that have not ignited.

Class B foams can be divided into two categories: fluorinated foams and fluorine-free foams. Fluorinated foams contain PFAS chemicals, and fluorine-free foams do not. One of the most common Class B fluorinated foams is Aqueous Film Forming Foam (AFFF). **All AFFF foams contain PFAS.** See the attached flow chart for additional information.

How to tell if firefighting foam contains PFAS?

It may not be easy to tell if the foam you have contains PFAS. These chemicals are not required to be reported on any Safety Data Sheets, as they are not considered a hazardous substance. PFAS may not be listed under any active ingredients list, either. A good indicator that the foam contains PFAS is if the container or paperwork mentions “fluorinated surfactant.” However, not all fluorinated surfactants are made of PFAS. If the foam is labeled AFFF, it contains PFAS. The best thing to do is to note the brand and manufacturer of the foam and contact the manufacturer to see if PFAS are used in its production.

What is the new law?

NH RSA 154:8-b prohibits foams containing PFAS for use in testing or training on or after January 1, 2020. This new law includes requirements designed to reduce environmental contamination and also to reduce the risk of public health impacts for firefighters and New Hampshire citizens.

NH RSA 154:8-b also bans manufacturers of Class B foams containing PFAS from knowingly selling or distributing these foams in the State of New Hampshire unless otherwise specifically exempt.

What the new law says:

- Bans the use of Class B firefighting foam that contains PFAS chemicals for training or for testing systems that suppress fire.
- Bans the sale of Class B firefighting foam with PFAS chemicals (there are exemptions detailed in the bill).
- Requires manufacturers to notify businesses that sell firefighting foam containing PFAS about the sale restriction.
- Requires NHDES to:
 - (1) assist state and local agencies in avoiding the purchase of firefighting foams with PFAS;
 - (2) conduct a statewide survey of fire departments inventory and use of firefighting foams with PFAS; and
 - (3) institute a take back program for legacy foams by July, 2021The FMO is committed to assisting the NHDES with these items where possible.
- For fire departments that discharge Class B foams containing PFAS (intentionally or accidentally), the municipality making the discharge is required to notify NHDES within 48 hours of making the discharge.
- Holds fire departments immune from using remaining class B firefighting foam (to which PFAS has been added) under emergency conditions.

Exemptions from the law:

Some entities are currently authorized or required by federal law to have Class B firefighting foam that contains intentionally added PFAS due to explicit military, aviation, or industry standards. The law exempts other users as well. A list of these exemptions are outlined in NH RSA 154:8-b. However, the new law makes it illegal for any entity to use foam with these chemicals for training activities or testing fire suppression systems.

Frequently Asked Questions:

1. What if my foam is unlabeled or the label is unreadable?

It is our recommendation that unlabeled foam be treated as if it contains PFAS, and therefore handled as such.

2. Does this new law affect my Class A foam?

Class A foam generally does not contain PFAS, and therefore is not impacted by this new law (the exception to this is when it is a combination Class A/Class B foam, in which case it would contain PFAS and therefore be affected).

3. Does this new law apply to ALL Class B foams?

YES, unless it specifically states it is a Fluorine-Free Foam. If the foam your department has in the station or on your apparatus does not specifically state that it's fluorine-free, then it should be treated as if it contains PFAS until/unless a determination can be made from the manufacturer and supported by appropriate documentation.

4. If my fire department does not have a fluorine-free Class B foam alternative to replace our existing foam, what do we do?

Do **NOT** compromise firefighter or life safety by removing the existing Class B foam from service until your department has a suitable alternative foam in place. Just be mindful of its discharge, and use it only under emergency conditions. However, if Class B foam is discharged, the law required NHDES notification (see #7 below).

5. Are there fluorine-free Class B foams available?

YES. However, neither the FMO nor the NHDES can speak to the effectiveness of these foams, or if it will work with existing fire department equipment (inductors, proportioners, around-the-pump foam systems, etc.). The NH Association of Fire Chiefs and the NH Firemen's Association, in conjunction with the FMO, will be setting up some vendor meetings to explore options for fire departments in the near future.

6. How do I dispose of Class B foams containing PFAS?

NHDES is planning to work with the firefighting community to provide additional guidance and develop a take-back program as required by the new law by 2021 or sooner. In the meantime, if you are storing PFAS Class B foam in anticipation of the take-back program, keep it in a secured location where it will not be susceptible to damage (leakage) and well labeled so it does not accidentally end up on a piece of fire apparatus and unintentionally deployed.

7. What if my fire department uses Class B foam at an emergency scene?

Incident Commanders should use whatever Class B foam they have available to them in the event the situation needs it to mitigate the incident. If that requires PFAS Class B foam be used, the new law requires that NHDES be contacted within 48-hours of its deployment. To report a discharge of Class B foams containing PFAS, contact Amy

Doherty of the Waste Management Division, Hazardous Waste Remediation Bureau at 603.271.6542 or amy.doherty@des.nh.gov.

8. What if my fire department accidentally discharges PFAS Class B foam under non-emergency conditions?

In the event a non-emergency PFAS Class B foam discharge occurs, fire departments are required to notify NHDES. To report a discharge of Class B foams containing PFAS, contact Amy Doherty of the Waste Management Division, Hazardous Waste Remediation Bureau at 603.271.6542 or amy.doherty@des.nh.gov.

9. Are there best management practices for product selection, discharge containment, and waste disposal of Class B foam containing PFAS?

YES. NHDES and the FMO recognizes that Class B firefighting foam containing PFAS is an important resource for emergency responders that will continue to be necessary to perform certain duties safely and effectively until a suitable replacement is found. To the extent practical and possible, NHDES recommends implementing appropriate best management practices when Class B foam containing PFAS is used, discharged, and/or disposed of. Refer to the Fire Fighting Foam Coalition's Best Practice Guidance for Use of Class B Firefighting Foam:

https://docs.wixstatic.com/ugd/331cad_188bf72c523c46adac082278ac019a7b.pdf

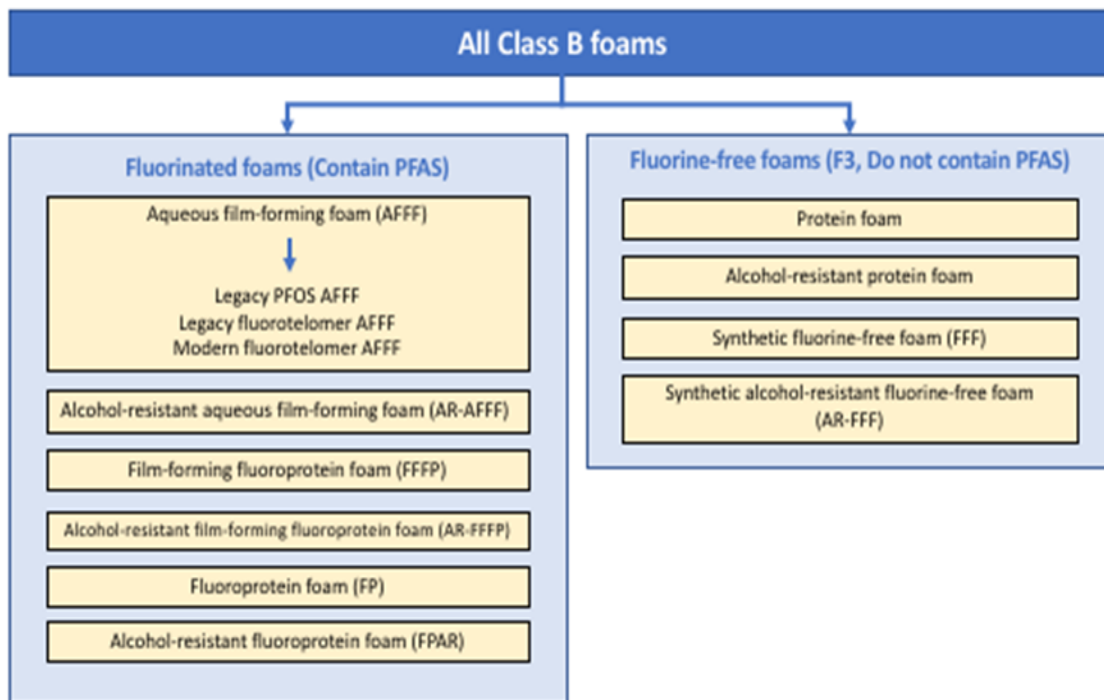
The Interstate Technology Regulatory Council (ITRC) recently published a Fact Sheet about Class B firefighting foam. The purpose of this Fact Sheet is to outline how to properly identify, handle, store, capture, collect, manage, and dispose of Class B firefighting foam: https://pfas-1.itrcweb.org/wp-content/uploads/2018/10/pfas_fact_sheet_aff_10_3_18.pdf.

Additional fact sheets on PFAS:

- <https://www.epa.gov/pfas/fact-sheet-protecting-public-health-and-addressing-pfas-chemicals>
- [Perfluoroalkyl and Polyfluoroalkyl Substances \(PFAS\) - Frequently Asked Questions](#)
- <https://www.defense.gov/explore/story/Article/1953510/5-things-to-know-about-dods-research-on-fluorine-free-firefighting-foam/>

Fire Departments who have questions about this bulletin can contact State Fire Marshal

Paul J. Parisi at (603) 223-4293 for further information.



Additional detail regarding the three AFFF products:

- **Legacy PFOS AFFF** was manufactured in the United States from the late 1960s until 2002 exclusively by 3M. Legacy PFOS AFFF contain PFOS and perfluoroalkane sulfonates (PFASs) such as perfluorohexane sulfonate (PFHxS). Although phased out of production in 2002, legacy PFOS AFFFs are the dominant source of PFAS at AFFF-impacted sites. Furthermore, because of its long shelf life, stock of legacy PFOS AFFF could exist at any given fire department today.
- **Legacy fluorotelomer AFFF** were manufactured and sold in the United States from the 1970s until 2016 and encompass all other brands of AFFF besides 3M. Although they are not made with PFOA, they contain polyfluorinated precursors that are known to degrade to PFCAs, including PFOA.
- **Modern fluorotelomer AFFF** was developed in response to the USEPA 2010/2015 voluntary PFOA Stewardship Program. Most foam manufacturers have now transitioned to the production of only short-chain (C6) fluorotelomer-based fluorosurfactants. These foams are referred to as “modern” to distinguish them from the legacy foams manufactured before the phase-out. Short-chain (C6) PFAS do not contain or breakdown in the environment to PFOS and other long-chained PFAS such as PFHxS and PFOA (see below) and are currently considered lower in toxicity and have significantly reduced bioaccumulation potential compared to long-chain PFAS. However, foams made with only short-chain (C6) PFAS may still contain trace quantities (parts per billion [ppb] levels) of PFOA and PFOA precursors as byproducts of the manufacturing process.

Interstate Technology & Regulatory Council (ITRC). 2018. *PFAS Fact Sheet “Aqueous Film-Forming Foam (AFFF)”*. <https://pfas-1.itrcweb.org>.

TITLE XII

PUBLIC SAFETY AND WELFARE

CHAPTER 154

FIREWARDS, FIREFIGHTERS, AND FIRE HAZARDS

Firewards, Fire Chiefs and Fire Departments; Organization, Powers and Duties

154:8-b Certain Chemicals Prohibited in Firefighting Foam. -

I. In this section:

- (a) "Chemical plant" means chemical plants, refineries, and re-refineries.
- (b) "Class B firefighting foam" means foam designed for flammable liquid fires.
- (c) "Department" means the department of environmental services.
- (d) "Legacy foams" mean firefighting foams manufactured prior to January 1, 2004, containing perfluorooctanesulfonic acid and/or perfluorooctanoic acid-related long chain PFAS chemicals.
- (e) "Manufacturer" includes any person, firm, association, partnership, corporation, organization, joint venture, importer, or domestic manufacturer or distributor of firefighting agents or firefighting equipment. For the purposes of this section, "importer" means the owner of the product.
- (f) "Municipalities" means any county, city, town, fire district, regional fire district, or other special purpose district that provides firefighting services.
- (g) "Perfluoroalkyl and polyfluoroalkyl substances" or "PFAS chemicals" means, for the purposes of firefighting agents and firefighting equipment, a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom.
- (h) "Testing" includes calibration testing, conformance testing, and fixed system testing.

II. Beginning on January 1, 2020, no person, local government, or state agency shall discharge or otherwise use for training or testing purposes class B firefighting foam to which PFAS chemicals have been intentionally added. However, the testing of class B firefighting foam to which PFAS chemicals have been intentionally added may occur if the department has evaluated the testing facility for containment, treatment, and disposal measures to prevent uncontrolled release of foam to the environment.

III. Beginning January 1, 2020, a manufacturer of class B firefighting foam shall not knowingly sell, offer for sale, distribute for sale, or distribute for use in this state class B firefighting foam to which PFAS chemicals have been intentionally added. However:

- (a) The restrictions in this paragraph shall not apply to any sale or use of class B firefighting foam where the inclusion of PFAS chemicals are required by federal law, including but not limited to the requirements of 14 C.F.R. section 139.317, as that section existed as of January 1, 2018. In the event that applicable federal regulations change after January 1, 2018, to allow the use of alternative firefighting agents that do not contain PFAS chemicals, the department may adopt rules for the sale and uses of firefighting foam that

are addressed by the federal regulation that restrict the use of firefighting foam that contains PFAS chemicals.

(b) The restrictions under this paragraph shall not apply to any sale or distribution of class B firefighting foam to which PFAS chemicals have been intentionally added for use at a chemical plant.

(c) The restrictions under this paragraph shall not apply to any sale or distribution of class B firefighting foam to which PFAS chemicals have been intentionally added for use at a storage or distribution facility, tank farm, or terminal for flammable liquids.

IV. The manufacturer that produces, sells, or distributes a class B firefighting foam to which PFAS chemicals have been intentionally added following the effective date of this section shall recall the product and reimburse the retailer or any other purchaser for the product.

V. A manufacturer of class B firefighting foam in violation of paragraph III shall be subject to an administrative fine not to exceed \$5,000 for each violation in the case of a first offense. Manufacturers or persons that are repeat violators shall be subject to an administrative fine not to exceed \$10,000 for each repeat offense.

VI. A manufacturer of class B firefighting foam restricted under paragraph III shall notify, in writing, persons that sell the manufacturer's products in this state about the provisions of this chapter no less than one year after the effective date of the restrictions.

VII. The department shall assist other state agencies, fire protection districts, and other municipalities in avoiding purchasing or using firefighting agents containing PFAS chemicals, as required under paragraph III.

VIII. The department shall survey municipalities throughout the state on the quantitative stock of legacy foams and determine the cost of instituting a take-back program for the purpose of safe and contained disposal. The development and processing of the survey shall be subject to rules adopted by the commissioner of the department of environmental services pursuant to RSA 541-A. On or before December 1, 2020, the department shall submit a report of its findings and any recommendations for proposed legislation to the president of the senate, the speaker of the house of representatives, the senate clerk, the house clerk, the governor, and the state library. Beginning on July 1, 2021, the department shall institute a take-back program of legacy foams for the purpose of safe and contained disposal.

IX. Fire departments which use remaining class B firefighting foam to which PFAS chemicals have been intentionally added shall be immune from civil or criminal damages only if such foam is discharged in an emergency situation.

X. Nothing in this section shall be construed to create a new civil or criminal right of action against a fire department if class B firefighting foam to which PFAS chemicals have been added has been discharged either unintentionally or in an emergency situation.

XI. Any time a class B firefighting foam to which PFAS chemicals have been intentionally added is discharged, the municipality making such discharge shall notify the department of environmental services within 48 hours of such discharge.

Source. 2019, 337:1, eff. Sept. 3, 2019.