

The State of New Hampshire **DEPARTMENT OF ENVIRONMENTAL SERVICES**

Robert R. Scott, Commissioner



MEMORANDUM

TO:	The Honorable Christopher Sununu, Governor The Honorable Chuck Morse, President of the Senate The Honorable Sherman Packard, Interim Speaker of the House Tammy Wright, Clerk of the Senate Paul Smith, Clerk of the House Michael York, State Librarian
FROM:	Robert R. Scott, Commissioner
RE:	Report on the municipal quantitative stock of legacy Class B firefighting foam and preliminary cost of instituting a take-back program for the purpose of safe and contained disposal RSA 154:8-b (SB 257, Chapter 337:1, Laws of 2019)
DATE:	December 1, 2020

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. RSA 154:8-b, effective September 3, 2019, among other things, required the New Hampshire Department of Environmental Services (NHDES) to survey municipalities throughout the state on the quantitative stock of legacy Class B firefighting foams containing PFAS.

Pursuant to NH RSA 154:8-b, the NHDES in partnership with the New Hampshire Department of Safety, State Fire Marshal's Office (FMO) issued a Legacy PFAS Firefighting Foam (AFFF) Self-Inventory Survey Letter to New Hampshire municipalities on July 31, 2020. The law further required NHDES to estimate the cost of, and institute a take-back program by July 1, 2021 for the purpose of safe and contained disposal of the legacy firefighting foams identified in the survey.

This report has been prepared to summarize the survey findings and provide recommendations and a framework for an AFFF takeback program. However, there are emerging challenges regarding safe disposal of AFFF that prevent NHDES from accurately estimating disposal costs and implementing a takeback program within the timeframe established by law, as discussed below.

Current AFFF Disposal Challenges

Determining the appropriate method for ultimate disposal of PFAS wastes is a complex issue due to their solubility, environmental mobility and persistence. To date, thermal destruction ("incineration") is the preferred and best available control technology for AFFF disposal. However, regulatory, technical, and industry uncertainties persist across the country. These uncertainties include political opposition regarding PFAS waste classification; limited acceptance at treatment, storage and disposal facilities (TSDFs); and concerns about the effectiveness of various waste treatment technologies.

PFAS compounds are extremely stable and very difficult to break down. New data has raised concerns regarding the effectiveness of incineration in destroying PFAS compounds, and the potential for formation of fluorinated byproducts as a result of incomplete combustion. These processes are not well understood. In late August 2020, the United States Environmental Protection Agency (EPA) announced a partnership with DoD and state and local partners to identify innovative ways to destroy PFAS in AFFF. In the interim, several TSDFs have had to stop accepting and processing AFFF, thus making it difficult at the current time to find an acceptable disposal facility for AFFF.

NHDES Initial AFFF Takeback Program

In 2019, NHDES secured funds through a negotiated settlement with Tradebe Treatment and Recycling Northeast, LLC (Tradebe) that resulted in a Supplemental Environmental Project (SEP) comprised of an initial AFFF take-back program. NHDES acknowledged at the time that this settlement amount would not be sufficient to remove and dispose of all the legacy AFFF stock in New Hampshire; however, it provided a model program to expand upon once additional funding sources were identified.

Tradebe's plan for implementation of the SEP anticipated that collected AFFF would be sent to the Norlite waste incineration facility in Cohoes, New York, which is owned by Norlite LLC, an affiliate of Tradebe. Subsequently, the New York State Department of Environmental Conservation (DEC) directed Norlite to cease thermal treatment due to the concerns noted above. As a result of this action and the uncertainties regarding incineration of AFFF, Tradebe has been unable to implement the SEP to date.

NHDES-FMO 2020 AFFF Self-Inventory Survey Results

A copy of the July 31, 2020 NHDES-FMO AFFF Self-Inventory Survey letter to New Hampshire municipalities is included as Attachment A. Municipalities were given until September 30, 2020 to respond. The survey letter was sent to all 234 municipalities via email.

A total of 135 of the 234 municipalities (58%) responded to the survey. A summary of the municipal response is included in the attached Table 1. Of the respondents, 43 (32%) of the municipalities reported no AFFF at their fire stations. Of the remaining respondents, a total of

~8,375 gallons of AFFF, either in storage or on apparatus, were identified that will require disposal.

The estimated cost to dispose of the reported 8,375 gallons of AFFF using available 2019 pricing from the SEP model and Norlite as a disposal facility could range between \$150,000 and \$250,000. As additional information is obtained and EPA completes its studies regarding appropriate disposal options for AFFF, the cost for disposal should be re-evaluated.

Five additional, non-municipal firefighting entities responded to the survey reporting AFFF in storage or on apparatus including Meadowood County Area Fire Department (~175 gallons AFFF), NH Division of Forest and Lands (DNCR) Forest Protection Bureau in Concord (~6 gallons AFFF), Manchester-Boston Regional Airport Fire Department (~2,810 gallons AFFF), Pease ANGB Fire Department (~3,325 gallons AFFF), and the Southeast New Hampshire Hazardous Material Mutual Aid District (~105 gallons AFFF). The combined total for these five additional responding firefighting entities listed above accounts for an additional 6,421 gallons of AFFF in New Hampshire.

The estimated cost to dispose of the additional 6,421 gallons of AFFF using available 2019 pricing from the SEP model and Norlite as a disposal facility could range between \$75,000 and \$125,000.

Conceptual Framework for a Takeback Program

The following outlines the conceptual framework of an AFFF takeback program in New Hampshire.

- NHDES would competitively bid for one or more waste disposal contractors to manage the transportation and disposal of qualifying AFFF concentrate waste to an NHDES-approved facility.
- NHDES would coordinate with respondents from the AFFF Self-Inventory database to verify quantities of qualifying AFFF. Qualifying AFFF ("legacy foams") is defined in RSA 154:8-b, I(d) as "firefighting foams manufactured prior to January 1, 2004, containing perfluorooctanesulfonic acid and/or perfluorooctanoic acid-related long chain PFAS chemicals".

It is assumed that qualifying AFFF concentrate would be containerized in either a 55gallon drum or a 5-gallon pail. If qualifying AFFF concentrate is contained within apparatus, additional hourly fees / demurrage fees associated with transfer to appropriate shipping containers would apply.

• Once quantities of a qualifying AFFF are confirmed at fire departments, the waste disposal contractor(s) would coordinate pick up and transport of containerized AFFF at each of the fire departments in each county throughout the state.

- The waste disposal contractor(s) would provide to participating entities a waste stream profile, a waste-stream profile number, and a waste-stream approval letter.
- Participating entities would sign the waste stream profile and provide it to the waste disposal contractor(s) prior to, or at the time of, the pickup of qualifying AFFF concentrate.
- The waste disposal contractor(s) would provide a copy of shipping documentation to the participating entity at the time of pick-up.
- After collection of AFFF by the waste disposal contractor(s), the AFFF concentrate would be transported to an NHDES-approved facility at no cost to the municipality.

Recommendations for Proposed Legislation

At this time NHDES recommends that the legislature consider amending NH RSA 154:8-b to extend the date for instituting an AFFF takeback program two years (from July 2021 to July 2023), based on the current scientific and regulatory uncertainties, and the challenges in identifying appropriate disposal facilities for AFFF. This would allow for time necessary for EPA and others to complete much needed on-going research and studies to determine if thermal destruction results in the complete destruction of PFAS, and if incineration facilities are capable of accepting the PFAS waste stream; or for the identification of other effective treatment technologies.

Once the disposal options are known, NHDES will be in a position to refine the estimated disposal costs and its estimated costs for instituting an AFFF takeback program.

Attachment A

NHDES-FMO AFFF Self-Inventory Survey Letter dated July 31, 2020





July 31, 2020

Subject: Legacy PFAS Firefighting Foam (AFFF) Survey

Dear Fire Departments:

The use of fluorinated Class B Firefighting Foam, including Aqueous Film Forming Foams (AFFF), is an emerging and urgent public health challenge because these foams contain Per- and Polyfluoroalkyl substances (PFAS) which contaminate drinking water supplies and pose a risk to human health¹. **These foams are referred to as <u>legacy foams</u>**. Action is needed to limit future environmental contamination by these foams and to reduce exposure to firefighters and New Hampshire residents while still addressing public safety.

The New Hampshire Department of Environmental Services (NHDES), in partnership with the New Hampshire Department of Safety, State Fire Marshal's Office (FMO), is conducting a survey of legacy AFFF under NH RSA 154-8:b. Survey results will be used to develop a statewide solution to assist in the proper disposal of AFFF.

We respectfully request that you fill out the attached self-inventory form and submit it to <u>Amy Doherty of NHDES by regular mail, email or fax on or before September 30, 2020</u>. Contact information is provided at the bottom of the survey.

We greatly appreciate your assistance in completing this survey as it will help us to better plan for and ultimately implement a take back program for the safe disposal of this material.

Should you have any questions please feel free to contact Ms. Doherty at NHDES directly.

Sincerely,

Any Dohesty

Amy T. Doherty, P.G. NHDES, Hazardous Waste Remediation Bureau Phone: (603) 271-6542 email: <u>amy.doherty@des.nh.gov</u>

Paul J. Parisi State Fire Marshal Phone: (603) 223-4289 email: paul.parisi@dos.nh.gov

cc: Municipal Health Officer, Municipal Governing Body (Selectmen/Council)

¹ Additional information regarding Class B foam can be found at NHDES website: <u>https://www4.des.state.nh.us/nh-pfas-investigation/?page_id=148</u>

² Information can also be found at the State Fire Marshal's website: <u>https://www.nh.gov/safety/divisions/firesafety/bulletins/documents/IB2020-07PFASFoamFactSheet.pdf</u>

Legacy PFAS Firefighting Foam Inventory Form

To comply with RSA 154:8-b, the intent of this form is to document the current stock of legacy firefighting foam (containing PFAS) for reporting to the New Hampshire legislature. NHDES will maintain a database for reporting to the legislature, and use this information for developing cost estimates and potential recommendations for proposed legislation to dispose of the AFFF stock.

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 caused by wood, paper, and brush. Class A foams generally do not contain PFAS, unless they are a combination Class A/Class B foam. Class B foam is used to put out fires caused by flammable liquids like gasoline, oil, and jet fuel. Class B foams can be divided into two categories: fluorinated foams and fluorine-free foams. Fluorinated foams (or legacy foams) contain PFAS chemicals, and fluorine-free foams do not. Many Class B foams are aqueous film forming foams or "AFFF". All AFFF foams contain PFAS.

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 it 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.

Inventory Information – Legacy Foam containing PFAS, including Aqueous Film Forming Foam or "AFFF" Firefighting Foam

- 1. Point of Contact for firefighting foam management for the Fire Department (*please provide contact name, Fire Department name, address, phone number, and email address*):
- 2. Type of legacy foam containing PFAS (i.e., Class B aqueous film forming foam or "AFFF" firefighting foam (if known):
- 3. Manufacture Brand(s) name (if known):_____
- 4. Manufacture date(s) (if known):
- 5. Size and Type of Containers present (i.e., 5-gallon pail, 55-gallon drum, tank, etc.):

6. Estimate of the total amount (gallons) of legacy foam containing PFAS stored at your facility:

7. Any additional / supporting information:

Return to Amy Doherty by regular mail, email or fax by September 30, 2020.

Amy T. Doherty, P.G. State Sites Section Supervisor NH Department of Environmental Services Hazardous Waste Remediation Bureau 29 Hazen Drive, PO Box 95 Concord, NH 03302-0095 Phone: (603) 271-6542 · Fax: (603) 271-2181 email: amy.doherty@des.nh.gov

Table 1

Summary of Results from the Municipal Survey on the Quantitative Stock of Legacy Firefighting Foams Containing to perfluoroalkyl and polyfluoroalkyl substances (PFAS)

Table 1 - Summary of Results from the Municipal Survey on the Quantitative Stock of Legacy Firefighting Foams Containing to perfluoroalkyl and polyfluoroalkyl substances (PFAS)

		Total Reported
County	Responding Towns	Class B Firefighting Foam (Gallons)
		may include multiple fire stations per Town
	Alton	30
	Belmont	55
	Center Harbor	No Class B Foam
	Gilford	235
Belknan	Gilmanton	No Class B Foam
Dennap	Laconia	30
	Meredith	22
	New Hampton	65
	Sanbornton	No Class B Foam
	Tilton-Northfield	8
	Albany	No Class B Foam
	Bartlett	12
	Conway	95
	Effingham	80
	Jackson	35
Carroll	Madison	No Class B Foam
	Moultonborough	10
	Ossipee	60
	Tamworth	No Class B Foam
	Tuftonboro	5
	Wolfeboro	20
	Alstead	No Class B Foam
	Dublin	148
	Fitzwilliam	No Class B Foam
	Jaffrey	140
	Keene	120
	Marlow	No Class B Foam
Chochiro	Nelson	No Class B Foam
Cheshire	Rindge	5
	Sullivan	55
	Swanzey	110
	Troy	50
	Walpole	No Class B Foam
	Westmoreland	No Class B Foam
	Winchester	55
	Colebrook	No Class B Foam
	Dalton	38
	Gorham	20
Coos	Jefferson	No Class B Foam
	Randolph	20
	Stark	45
	Whitefield	80

Table 1 - Summary of Results from the Municipal Survey on the Quantitative Stock of Legacy Firefighting Foams Containing to perfluoroalkyl and polyfluoroalkyl substances (PFAS)

		Total Reported
County	Responding Towns	Class B Firefighting Foam (Gallons)
		may include multiple fire stations per Town
	Ashland	5
	Bethlehem	No Class B Foam
	Canaan	No Class B Foam
	Enfield	No Class B Foam
	Hanover	No Class B Foam
	Hebron	5
	Holderness	No Class B Foam
Grafton	Lebanon	165
	Lincoln	110
	Littleton	12
	Monroe	6
	Piermont	5
	Plymouth	12
	Rumney	6
	Waterville Valley	No Class B Foam
	Antrim	No Class B Foam
	Bedford	50
	Brookline	75
	Deering	5
	Goffstown	120
	Greenville	55
	Hancock	No Class B Foam
	Hollis	No Class B Foam
	Hudson	25
	Litchfield	7
Hillsborough	Manchester	1,170
	Merrimack	40
	Milford	70
	Nashua	970
	New Boston	40
	New Ipswich	15
	Pelham	155
	Peterborough	175
	Temple	No Class B Foam
	Weare	35
	Wilton	65

Table 1 - Summary of Results from the Municipal Survey on the Quantitative Stock of Legacy Firefighting Foams Containing to perfluoroalkyl and polyfluoroalkyl substances (PFAS)

County Responding Towns Class B Firefighting Foam (Sallons) imay include multiple fire stations per Town* Allenstown 240 Andover No Class B Foam Boscawen 10 Bow No Class B Foam Chichester 95 Concord 125 Danbury No Class B Foam Durbarton 40 Epsom 9 Franklin No Class B Foam Honkset 45 Loudon 65 New London 120 Newbury No Class B Foam Pembroke No Class B Foam Vilimot No Class B Foam Vilimot No Class B Foam Salisbury No Class B Foam Petroke No Class B Foam Vilimot No Class B Foam Porry 80 Epping 150 Exeter 30			Total Reported
Allenstown 240 Andover No Class B Foam Boscawen 10 Bow No Class B Foam Chichester 95 Concord 125 Danbury No Class B Foam Dunbarton 40 Epsom 9 Franklin No Class B Foam Henniker No Class B Foam Hooksett 45 Loudon 65 New London 120 New London 120 Newbury No Class B Foam Pembroke No Class B Foam Pembroke No Class B Foam Pembroke No Class B Foam Vilinot No Class B Foam Vilinot No Class B Foam Station A0 Chester 25 Darville No Class B Foam Derry 80 Epping 150 Exeter 30 Fremot 55 Hampton No Class B Foam <	County	Responding Towns	Class B Firefighting Foam (Gallons)
Andover No Class B Foam Box No Class B Foam Box No Class B Foam Box No Class B Foam Chichester 95 Concord 125 Danbury No Class B Foam Dunbarton 40 Epsom 9 Franklin No Class B Foam Honokett 45 Loudon 65 New London 120 Newbury No Class B Foam Pembroke No Class B Foam Pettsfield 5 Salisbury No Class B Foam Vilmot No Class B Foam Derry 80 Epping 150 Exeter 30 Fremont 55 Danville No Class B Foam Hampton Falls 10 Kingston No Class B Foam Londonderry <td< td=""><td></td><td></td><td>*may include multiple fire stations per Town*</td></td<>			*may include multiple fire stations per Town*
Andover No Class B Foam Boscawen 10 Bow No Class B Foam Concord 125 Danbury No Class B Foam Dunbarton 40 Epsom 9 Franklin No Class B Foam Henniker No Class B Foam Henniker No Class B Foam Hooksett 45 Loudon 65 New London 120 Newbury No Class B Foam Pembroke No Class B Foam Pittsfield 5 Salisbury No Class B Foam Pittsfield 5 Sutton No Class B Foam Pittsfield 5 Danville No Class B Foam Wilmot No Class B Foam Borry 80 Epping 150 Exter 30 Perty 80 Epping 10 Kingston No Class B Foam Hampton No Class B Foam		Allenstown	240
Boscawen 10 Bow No Class B Foam Chichester 95 Concord 125 Danbury No Class B Foam Dunbarton 40 Epsom 9 Franklin No Class B Foam Henniker No Class B Foam Hooksett 45 Loudon 65 New London 120 New London No Class B Foam Pembroke No Class B Foam Wilmot No Class B Foam Danville No Class B Foam Derry 80 Epring 150 Exeter 30 Fremont		Andover	No Class B Foam
Bow No Class B Foam Chichester 95 Concord 125 Danbury No Class B Foam Dunbarton 40 Epsom 9 Franklin No Class B Foam Henniker No Class B Foam Henniker No Class B Foam Hooksett 45 Loudon 65 New London 120 Newbury No Class B Foam Pembroke No Class B Foam Pembroke No Class B Foam Pembroke No Class B Foam Wilmot No Class B Foam Wilmot No Class B Foam Wilmot No Class B Foam Denry 80 Exeter 30 Perny 80 Exeter 30 Fremont 55 Hampton Falls 10 Kensington 70 Kingston No Class B Foam Loudonderry 205 New Kon 5 <		Boscawen	10
Atkinson 95 Concord 125 Danbury No Class B Foam Dunbarton 40 Epsom 9 Franklin No Class B Foam Henniker No Class B Foam Hooksett 45 Loudon 65 New London 120 New London 120 Newbury No Class B Foam Pembroke No Class B Foam Pembroke No Class B Foam Pittsfield 5 Salisbury No Class B Foam Wilmot No Class B Foam Wilmot No Class B Foam Derry 80 Epping 150 Exeter 30 Fremont 55 Hampton Falls 10 Hampton Falls 10 Iondonderry 205 New Caste 250 New ton 5 Notlingham 5 Salem 780 Sandown		Bow	No Class B Foam
Aniology 125 Danbury No Class B Foam Dunbarton 40 Epsom 9 Franklin No Class B Foam Henniker No Class B Foam Hooksett 45 Loudon 65 New London 120 New bury No Class B Foam Pembroke No Class B Foam Pembroke No Class B Foam Pembroke No Class B Foam Vilmot No Class B Foam Suton No Class B Foam Wilmot No Class B Foam Wilmot No Class B Foam Wilmot No Class B Foam Bury No Class B Foam Suton No Class B Foam Permore 25 Danville No Class B Foam Perny 80 Exeter 30 Exeter 30 Fremont 55 Hampton Falls 10 No Class B Foam No Class B Foam Hampton Fall		Chichester	95
Banbury No Class B Feam Qunbarton 40 Epsom 9 Franklin No Class B Feam Henniker No Class B Feam Hooksett 45 Loudon 65 New London 120 Newbury No Class B Feam Pembroke No Class B Feam Pembroke No Class B Feam Pittsfield 5 Salisbury No Class B Feam Viimot No Class B Feam Pembroke No Class B Feam Pittsfield 5 Salisbury No Class B Feam Viimot No Class B Feam Viimot No Class B Feam Derry 80 Epping 150 Exeter 30 Fremont 55 Hampton No Class B Feam Londonderry 205 New Kon 5 Northwood No Class B Feam Nottingham 5 Portsmouth 133		Concord	125
Bunbarton 40 Epsom 9 Franklin No Class B Foam Henniker No Class B Foam Hooksett 45 Loudon 65 New London 120 Newbury No Class B Foam Pembroke No Class B Foam Pembroke No Class B Foam Pittsfield 5 Salisbury No Class B Foam Wilmot No Class B Foam Wilmot No Class B Foam Wilmot No Class B Foam Ochester 25 Danville No Class B Foam Derry 80 Epping 150 Exeter 30 Fremont 55 Hampton Falls 10 Kensington 70 Kingston No Class B Foam Hampton Falls 10 Kensington 70 Newton 5 Northwood No Class B Foam Nottingham 5		Danbury	No Class B Foam
MerrimackEpsom9FranklinNo Class B FoamHennikerNo Class B FoamHooksett45Loudon65New London120NewburyNo Class B FoamPembrokeNo Class B FoamPembrokeNo Class B FoamSuttonNo Class B FoamWilmotNo Class B FoamVilmotNo Class B FoamAtkinson40Chester25DarvilleNo Class B FoamDerry80Epping150Exeter30Fremont55HamptonNo Class B FoamHampton Falls10KingstonNo Class B FoamLondonderry205Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Newton5Portsmouth133Raymond298Salem780StrathamNo Class B FoamNot Class B Foam20Newton5FarmingtonNo Class B FoamNeuton5Farmington40Nover15StrathamNo Class B FoamNew Durham20New Durham5FarmingtonNo Class B FoamNew Durham20New Durham		Dunbarton	40
MerrimackFranklinNo Class B FoamHennikerNo Class B FoamHooksett45Loudon65New London120NewburyNo Class B FoamPembrokeNo Class B FoamPembrokeNo Class B FoamSuttonNo Class B FoamSuttonNo Class B FoamWilmotNo Class B FoamVilmotNo Class B FoamDarvilleNo Class B FoamDarvilleNo Class B FoamExeter25DarvilleNo Class B FoamExeter30Exeter30Fremont55Hampton Falls10Kingston70KingstonNo Class B FoamLondonderry205New Castle250Newton5NorthwoodNo Class B FoamNotringham5Strafford40Lee10Newton5Strafford40Now Durham20Newton5NorthwoodNo Class B FoamNow Durham20New Durham5FarmingtonNo Class B FoamNew Durham20New Durham<		Epsom	9
HennikerNo Class B FoamHooksett45Loudon65New London120NewburyNo Class B FoamPembrokeNo Class B FoamPittsfield5SalisburyNo Class B FoamSuttonNo Class B FoamWilmotNo Class B FoamWilmotNo Class B FoamMilmotNo Class B FoamVilmotNo Class B FoamAtkinson40Chester25DanvilleNo Class B FoamDerry80Epping150Exeter30Fremont55Hampton Falls10KingstonNo Class B FoamLondonderry205New Castle250NewingtonNo Class B FoamNottingham5Nottingham5Strafford40Londown133Raymond298Salem780Sandown5Strafford40No Class B FoamVindham20NortangtonNo Class B FoamNortangton20Nortangton100No Class B FoamNo Class B FoamNo Class B FoamNot Class B FoamNo Class B FoamNot Class B FoamNot Class B FoamNot Class B FoamNo Class B FoamStrafford20No Class B FoamStrafford20No Class B FoamNo Class B Fo	Merrimack	Franklin	No Class B Foam
Hooksett45Loudon65New London120NewburyNo Class B FoamPembrokeNo Class B FoamPittsfield5SalisburyNo Class B FoamSuttonNo Class B FoamWilmotNo Class B FoamWilmotNo Class B FoamDerry80Epping150Exeter30Fremont55HamptonNo Class B FoamHampton Falls10Kensington70KingstonNo Class B FoamHampton Falls10Londonderry205New Castle250New Castle250New Castle250New Castle250NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem7800Sandown15Strafford40Dover15Durham5FarmingtonNo Class B FoamNothwood5Strafford40Dover15StraffordNo Class B FoamLee10Now Durham5FarmingtonNo Class B FoamLee10Now Durham5FarmingtonNo Class B FoamLefordNo Class B FoamStraffordNo Class B Foam		Henniker	No Class B Foam
Loudon6.5New London120NewburyNo Class B FoamPembrokeNo Class B FoamPittsfield5SalisburyNo Class B FoamSuttonNo Class B FoamWilmotNo Class B FoamWilmotNo Class B FoamWilmotNo Class B FoamDerry80Epring150Exeter30Fremont55HamptonNo Class B FoamHampton Falls10Kensington70KingstonNo Class B FoamHampton Falls10Kensington70Not Class B Foam10Kangton70KingstonNo Class B FoamNewton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Durham5FarmingtonNo Class B FoamLee10New Durham20New Durham20New Durham20New Durham20New Durham20NorthwoothNo Class B FoamNorthwoothNo Class B FoamNorthwoothNo Class B FoamStraffordNo Class B FoamNorthwoothNo Class B FoamNorthwoothNo Class B FoamNorthwoothNo Class B FoamNorthwoo		Hooksett	45
New London120NewburyNo Class B FoamPembrokeNo Class B FoamPittsfield5SalisburyNo Class B FoamSuttonNo Class B FoamWilmotNo Class B FoamWilmotNo Class B FoamAtkinson40Chester25DanvilleNo Class B FoamDerry80Epping150Exeter30Fremont55Hamptead50Hampton Falls10KingstonNo Class B FoamLondonderry205Newton5Newton5NorthwoodNo Class B FoamNottingham5Salem780Salem780Salem780Salem780Strafford40Nover15Dover15Dover15Durham5Portsmouth15Dover15Durham5FarmingtonNo Class B FoamWindham20Barrington40Nover15Durham5FarmingtonNo Class B FoamKingtonNo Class B FoamNotlass B Foam40Notlass B Foam40Notras B Foam40North No Class B Foam<		Loudon	65
NewburyNo Class B FoamPembrokeNo Class B FoamPittsfield5SalisburyNo Class B FoamSuttonNo Class B FoamWilmotNo Class B FoamVolimotNo Class B FoamAtkinson40Chester25DanvilleNo Class B FoamDerry80Exeter30Fremont55HamptonNo Class B FoamHamptonNo Class B FoamKingston70Kingston70Kingston70KingstonNo Class B FoamNew Castle250Newton5Nottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Stratford40New Durham5FarmingtonNo Class B FoamNot Class B Foam20SomersworthNo Class B FoamNot Class B Foam20SomersworthNo Class B FoamLee10New Durham5FarmingtonNo Class B FoamLee10New Durham5FarmingtonNo Class B FoamLee10New Durham5FarmingtonNo Class B FoamLee10New Durham5Strafford40Strafford20Strafford40 <td></td> <td>New London</td> <td>120</td>		New London	120
PembrokeNo Class B FoamPittsfield5SalisburyNo Class B FoamSuttonNo Class B FoamWilmotNo Class B FoamWilmotNo Class B FoamAtkinson40Chester25DanvilleNo Class B FoamDerry80Exeter30Fremont55HamptonNo Class B FoamHampton Falls10Kingston70KingstonNo Class B FoamDerry205New Castle250NewingtonNo Class B FoamNottingham5NorthwoodNo Class B FoamNottingham5Strafford208Strafford20Kington780Strafford20Now Durban20SomersworthNo Class B FoamNot Class B Foam20Not Class B Foam20Not Class B Foam20Strafford20SomersworthNo Class B FoamStrafford20SomersworthNo Class B FoamStrafford20Strafford20Strafford20Strafford40Strafford20Strafford20Strafford40Strafford40Strafford40Strafford40Strafford40Strafford20Strafford40Strafford40 <tr< td=""><td></td><td>Newbury</td><td>No Class B Foam</td></tr<>		Newbury	No Class B Foam
Pittsfield5SalisburyNo Class B FoamSuttonNo Class B FoamWilmotNo Class B FoamAtkinson40Chester25DanvilleNo Class B FoamDerry80Epping150Exeter30Fremont55HamptonNo Class B FoamHampton Falls10Kingston70KingstonNo Class B FoamLondonderry205New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Salem780Salem780Sandown15StrathamNo Class B FoamVindham20Notingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamVindham20Notingham5Portsmouth15StrathamNo Class B FoamLee10New Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStraffordKaffordStrafford20Strafford5Strafford6Strafford10Strafford5Strafford5 <td></td> <td>Pembroke</td> <td>No Class B Foam</td>		Pembroke	No Class B Foam
SalisburyNo Class B FoamSuttonNo Class B FoamWilmotNo Class B FoamWilmotNo Class B FoamChester25DanvilleNo Class B FoamDerry80Epping150Exeter30Fremont55HamptonNo Class B FoamHampton Falls10Kensington70KingstonNo Class B FoamLondonderry205New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Salem780Sandown15StrathamNo Class B FoamVindham20Nottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Notwo5Durham5Portsmouth15Strafford40No Class B FoamLee10New Durham20StraffordNo Class B FoamStraffordNo Class B Foam		Pittsfield	5
SuttonNo Class B FoamWilmotNo Class B FoamAtkinson40Chester25DanvilleNo Class B FoamDerry80Epping150Exeter30Fremont55HamptonNo Class B FoamHampton Falls10Kensington70Kingston70New Class B Foam205New Castle250New Castle250New Costle250Newton5NorthwoodNo Class B FoamRockingham5Strafford133Raymond298Salem780Strafford40Northam20North15Strafford40No Class B Foam20Northam20SomersworthNo Class B FoamNo Class B Foam20Strafford40		Salisbury	No Class B Foam
WilmotNo Class B FoamAtkinson40Chester25DanvilleNo Class B FoamDerry80Epping150Exeter30Fremont55Hamptoad50HamptonNo Class B FoamHampton Falls10KingstonNo Class B FoamLondonderry205New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5Portsmouth132Raymond208Sandown15StrathamNo Class B FoamWindham20Dover15Durham5FarmingtonNo Class B FoamNov Class B Foam20Strafford20SomersworthNo Class B FoamStrafford20Strafford20Strafford20Strafford20Strafford20Strafford40		Sutton	No Class B Foam
Atkinson40Chester25DanvilleNo Class B FoamDerry80Epping150Exeter30Fremont55Hamptead50Hampton Falls10Kensington70KingstonNo Class B FoamLondonderry205New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Sandown15StrathamNo Class B FoamWindham20StrathamNo Class B FoamLondonderry205Nottingham5OrthwoodNo Class B FoamNottingham5Dersonuth133Raymond298Salem780StrathamNo Class B FoamVindham20StrathamNo Class B FoamLower15Durham5Durham20Now Durham20StraffordNo Class B FoamLee10New Durham20StraffordNo Class B FoamStraffordNo Class B Foam		Wilmot	No Class B Foam
Chester25DanvilleNo Class B FoamDerry80Epping150Exeter30Fremont55Hampstead50Hampton Falls10Kensington70KingstonNo Class B FoamLondonderry205New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Over15Durbam5Durbam5Londonderny205Nottingham5Portsmouth133Raymond298Salem780StrathamNo Class B FoamUndham20Dover15Durham5Durham5Durham5Lee10New Durham20SomersworthNo Class B FoamNot Class B Foam20		Atkinson	40
DanvilleNo Class B FoamDerry80Epping150Exeter30Fremont55Hampstead50HamptonNo Class B FoamHampton Falls10Kensington70KingstonNo Class B FoamLondonderry205New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5Durham5Lee10New Durham20Strafford10Not Class B FoamLee10No Class B FoamLee10Now Durham20SomersworthNo Class B FoamStrafford10Now Durham5Strafford10Now Durham20StraffordNo Class B FoamStraffordNo Class B FoamStrafford10Now Durham20StraffordNo Class B FoamStraffordNo Class B Foam		Chester	25
Derry80Epping150Exeter30Fremont55Hampstead50HamptonNo Class B FoamHampton Falls10Kingston70KingstonNo Class B FoamLondonderry205New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5FarmingtonNo Class B FoamKington15Strafford10New Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamLord40Strafford40Strafford10New Durham20StraffordNo Class B FoamStrafford10New Durham20StraffordNo Class B FoamStraffordNo Class B FoamStraffordNo Class B FoamStrafford40		Danville	No Class B Foam
Epping150Exeter30Fremont55Hampstead50HamptonNo Class B FoamHampton Falls10Kingston70KingstonNo Class B FoamLondonderry205New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5FarmingtonNo Class B FoamLee10New Durham20Strafford10KarffordNo Class B FoamStraffordNo Class B FoamStraffordNo Class B FoamStrafford10New Durham20SomersworthNo Class B FoamLee10New Durham20Strafford40Strafford40		Derry	80
Exeter30Fremont55Hampstead50HamptonNo Class B FoamHampton Falls10Kensington70KingstonNo Class B FoamLondonderry205New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Londom5Dover15Durham5Durham5Durham20Strafford10New Durham20Strafford10No Class B FoamNo Class B FoamMindham20Strafford10Now Durham5Strafford10New Durham20SomersworthNo Class B FoamStrafford40		Epping	150
Fremont55Hampstead50HamptonNo Class B FoamHampton Falls10Kensington70KingstonNo Class B FoamLondonderry205New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5Durham5Lee10New Durham20SomersworthNo Class B FoamNo Class B Foam20Stratford40Dover15StraffordNo Class B FoamKingtonNo Class B FoamStraffordNo Class B FoamStrafford40Now Durham20SomersworthNo Class B FoamStrafford40		Exeter	30
Hampstead50HamptonNo Class B FoamHampton Falls10Kensington70KingstonNo Class B FoamLondonderry205New Castle250New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5Durham5Durham5Strafford40New Durham20SomersworthNo Class B FoamNort Class B Foam20Northam5Strafford40No Class B Foam40Dover15Durham5StraffordNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Fremont	55
HamptonNo Class B FoamHampton Falls10Kensington70KingstonNo Class B FoamLondonderry205New Castle250New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5Durham5Durham20Strafford10New Durham20SomersworthNo Class B FoamNo Class B Foam20No Class B Foam20Strafford40Dover15Durham5StraffordNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Hampstead	50
Hampton Falls10Kensington70KingstonNo Class B FoamLondonderry205New Castle250New Castle250Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5Durham5Durham20Strafford10New Durham20SomersworthNo Class B FoamNo Class B Foam20		Hampton	No Class B Foam
Kensington70RockinghamKingstonNo Class B FoamLondonderry205New Castle250NewingtonNo Class B FoamNewton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5ParringtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamNow Durham20SomersworthNo Class B FoamStrafford40		Hampton Falls	10
KingstonNo Class B FoamLondonderry205New Castle250NewingtonNo Class B FoamNewton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5Durham5Lee10New Durham20SomersworthNo Class B FoamNo Class B Foam5Durham5Durham5Strafford10New Durham20SomersworthNo Class B FoamStrafford40		Kensington	70
Londonderry205New Castle250NewingtonNo Class B FoamNewton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5Farmington40Lee10New Durham20SomersworthNo Class B FoamStrafford40	Rockingham	Kingston	No Class B Foam
New Castle250NewingtonNo Class B FoamNewton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5Farmington40Lee10New Durham20SomersworthNo Class B FoamStrafford40		Londonderry	205
NewingtonNo Class B FoamNewton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5Farmington40Dover15Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		New Castle	250
Newton5NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5Farmington40Lee10New Durham20SomersworthNo Class B FoamStrafford40		Newington	No Class B Foam
NorthwoodNo Class B FoamNottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Newton	5
Nottingham5Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Dover15Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Northwood	No Class B Foam
Portsmouth133Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Barrington40Dover15Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Nottingham	5
Raymond298Salem780Sandown15StrathamNo Class B FoamWindham20Barrington40Dover15Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Portsmouth	133
Salem780Sandown15StrathamNo Class B FoamWindham20Barrington40Dover15Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Raymond	298
Sandown15StrathamNo Class B FoamWindham20Barrington40Dover15Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Salem	780
StrathamNo Class B FoamWindham20Barrington40Dover15Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Sandown	15
Windham20Barrington40Dover15Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Stratham	No Class B Foam
Barrington40Dover15Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Windham	20
Dover15Durham5FarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Barrington	40
Durham5StraffordFarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Dover	15
StraffordFarmingtonNo Class B FoamLee10New Durham20SomersworthNo Class B FoamStrafford40		Durham	5
Lee 10 New Durham 20 Somersworth No Class B Foam Strafford 40	Strafford	Farmington	No Class B Foam
New Durham20SomersworthNo Class B FoamStrafford40	Suanoru	Lee	10
SomersworthNo Class B FoamStrafford40		New Durham	20
Strafford 40		Somersworth	No Class B Foam
		Strafford	40

Table 1 - Summary of Results from the Municipal Survey on the Quantitative Stock of Legacy Firefighting Foams Containing to perfluoroalkyl and polyfluoroalkyl substances (PFAS)

County	Responding Towns	Total Reported Class B Firefighting Foam (Gallons) *may include multiple fire stations per Town*
	Charlestown	No Class B Foam
	Claremont	120
Sullivan	Grantham	35
	Newport	5
	Plainfield	65
Municipal Respondents - Total Gallons :		8,375
Other* - Total Gallons:		6,421

Notes:

* Meadowood County Area Fire Department, NH Division of Forest and Lands (DNCR) Forest Protection Bureau, Manchester-Boston Regional Airport Fire Department, Pease ANGB Fire Department, and the Southeast New Hampshire Hazardous Material Mutual Aid District