
Committee Report

CONSENT CALENDAR

April 30, 2019

HOUSE OF REPRESENTATIVES

REPORT OF COMMITTEE

The Committee on Executive Departments and Administration to which was referred SB 257-FN,

AN ACT prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires. Having considered the same, report the same with the following amendment, and the recommendation that the bill OUGHT TO PASS WITH AMENDMENT.

Rep. Mark Proulx

FOR THE COMMITTEE

COMMITTEE REPORT

Committee:	Executive Departments and Administration
Bill Number:	SB 257-FN
Title:	prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires.
Date:	April 30, 2019
Consent Calendar:	CONSENT
Recommendation:	OUGHT TO PASS WITH AMENDMENT 2019-1547h

STATEMENT OF INTENT

This bill, as amended, prohibits foams containing perfluoroalkyl substances (PFAS chemicals) for use in fighting fires. It also requires firefighting personal protective equipment manufacturers to notify purchasers if their products contain PFAS chemicals. The amended version makes exemptions for those communities which have chemical plants and refineries, while accommodating federal regulations for airports, and also requires the Department of Environmental Services to conduct a study for the safe collection of legacy firefighting foams containing PFOA and PFOS. All of these chemicals, once discharged at a fire scene, have a negative environmental impact and jeopardize the public health.

Vote 19-0.

Rep. Mark Proulx
FOR THE COMMITTEE

Original: House Clerk
Cc: Committee Bill File

CONSENT CALENDAR

Executive Departments and Administration

SB 257-FN, prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires.
OUGHT TO PASS WITH AMENDMENT.

Rep. Mark Proulx for Executive Departments and Administration. This bill, as amended, prohibits foams containing perfluoroalkyl substances (PFAS chemicals) for use in fighting fires. It also requires firefighting personal protective equipment manufacturers to notify purchasers if their products contain PFAS chemicals. The amended version makes exemptions for those communities which have chemical plants and refineries, while accommodating federal regulations for airports, and also requires the Department of Environmental Services to conduct a study for the safe collection of legacy firefighting foams containing PFOA and PFOS. All of these chemicals, once discharged at a fire scene, have a negative environmental impact and jeopardize the public health.
Vote 19-0.

SB 257

From: Jeff <jgoley03104@yahoo.com>
Sent: Tuesday, April 30, 2019 4:36 PM
To: Proulx, Mark
Cc: Simmons, Miriam; Smarling, Pam
Subject: Re: SB 257 Blurb

Approved.

Rep. Jeff Goley

Sent from my iPad

On Apr 30, 2019, at 3:47 PM, nhcisd@aol.com wrote:

Please see below. Feel free to revise.

SB 257, prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires. OUGHT TO PASS WITH AMENDMENT.

Rep. Mark Proulx for Executive Departments and Administration. This bill, as amended, prohibits foams containing perfluoroalkyl (PFAS) chemicals for use in fighting fires. It also requires firefighting personal protective equipment manufacturers to notify purchasers if their products contain PFAS chemicals. The amended version makes exemptions for those communities which have chemical plants and refineries, while accommodating federal regulations for airports, and also requires the Department of Environmental Services to conduct a study for safe collection of legacy firefighting foams containing PFOA and PFOS. All of these chemicals, once discharged at a fire scene, have a negative environmental impact and jeopardize the public health. Vote 19-0.

Rep. Proulx

Amendment to SB 257-FN

1 Amend the bill by replacing all after the enacting clause with the following:

2

3 1 New Sections; Certain Chemicals Prohibited in Firefighting Foam. Amend RSA 154 by
4 inserting after section 8-a the following new sections:

5 154:8-b Certain Chemicals Prohibited in Firefighting Foam.

6 I. In this section,

7 (a) "Chemical plant" means chemical plants, refineries, and re-refineries

8 (b) "Class B firefighting foam" means foam designed for flammable liquid fires.

9 (c) "Department" means the department of environmental services.

10 (d) "Legacy foams" mean firefighting foams manufactured prior to January 1, 2004,
11 containing perfluorooctanesulfonic acid and/or perfluorooctanoic acid-related long chain PFAS
12 chemicals.

13 (e) "Manufacturer" includes any person, firm, association, partnership, corporation,
14 organization, joint venture, importer, or domestic manufacturer or distributor of firefighting agents
15 or firefighting equipment. For the purposes of this section, "importer" means the owner of the
16 product.

17 (f) "Municipalities" means any county, city, town, fire district, regional fire district, or
18 other special purpose district that provides firefighting services.

19 (g) "Perfluoroalkyl and polyfluoroalkyl substances" or "PFAS chemicals" means, for the
20 purposes of firefighting agents and firefighting equipment, a class of fluorinated organic chemicals
21 containing at least one fully fluorinated carbon atom.

22 (h) "Testing" includes calibration testing, conformance testing, and fixed system testing.

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

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

32 (a) The restrictions in this paragraph shall not apply to any sale or use of class B

Amendment to SB 257-FN

- Page 2 -

1 firefighting foam where the inclusion of PFAS chemicals are required by federal law, including but
2 not limited to the requirements of 14 C.F.R. section 139.317, as that section existed as of January 1,
3 2018. In the event that applicable federal regulations change after January 1, 2018, to allow the
4 use of alternative firefighting agents that do not contain PFAS chemicals, the department may
5 adopt rules for the sale and uses of firefighting foam that are addressed by the federal regulation
6 that restrict the use of firefighting foam that contains PFAS chemicals.

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

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

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

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

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

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

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

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

Amendment to SB 257-FN

- Page 3 -

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

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

7 154:8-c Firefighting Personal Protective Equipment.

8 I. In this section,

9 (a) "Department" means the department of safety.

10 (b) "Firefighting personal protective equipment" means any clothing designed, intended,
11 or marketed to be worn by firefighting personnel in the performance of their duties, designed with
12 the intent for use in fire and rescue activities, including jackets, pants, shoes, gloves, helmets,
13 hoods, and respiratory equipment.

14 (c) "Manufacturer" includes any person, firm, association, partnership, corporation,
15 governmental entity, organization, joint venture, importer, or domestic manufacturer or distributor
16 of firefighting agents or firefighting equipment. For the purposes of this section, "importer" means
17 the owner of the product.

18 (d) "Municipalities" means any county, city, town, fire district, regional fire district, or
19 other special purpose district that provides firefighting services.

20 (e) "Perfluoroalkyl and polyfluoroalkyl substances" or "PFAS chemicals" means, for the
21 purposes of firefighting agents and firefighting equipment, a class of fluorinated organic chemicals
22 containing at least one fully fluorinated carbon atom.

23 II. Beginning January 1, 2020, a manufacturer or other person that sells firefighting
24 personal protective equipment to any person, municipality, or state agency shall provide written
25 notice to the purchaser at the time of sale if the firefighting personal protective equipment contains
26 PFAS chemicals. The written notice shall include a statement that the firefighting personnel
27 protective equipment contains PFAS chemicals. All notices shall be included in all personnel files of
28 all employees using the firefighting personal protective equipment which contain PFAS chemicals

29 III. The manufacturer or person selling firefighting personal protective equipment and the
30 purchaser of the equipment shall retain the notice in procurement files for at least 3 years from the
31 date of the transaction. Upon the request of the department, a person, manufacturer, or purchaser
32 shall furnish the notice, or written copies, and associated sales documentation to the department
33 within 60 days.

34 IV. The department shall assist other state agencies, fire protection districts, and other
35 municipalities to give priority and preference to the purchase of firefighting personal protective
36 equipment that does not contain PFAS chemicals.

37 2 Effective Date. This act shall take effect upon its passage.

Voting Sheets



2019 SESSION

Executive Departments and Administration

Bill #: SB 257 Motion: ADOPT AMEND AM #: 1547H Exec Session Date: 4/30/19

<u>Members</u>	<u>YEAS</u>	<u>Nays</u>	<u>NV</u>
Goley, Jeffrey P. Chairman	X		
Schuett, Dianne E. Vice Chairman	X		
Jeudy, Jean L.			
Schmidt, Peter B.	X		
Schultz, Kristina M. <i>F. Davis</i>	X		
Fontneau, Timothy J. <i>Cannon</i>	X		
Desjardin, Kathy J.	X		
Fellows, Sallie D.	X		
Fox, Samantha L.	X		
Grote, Jaci L.	X		
Merchant, Gary <i>Soucy</i>	X		
Pimentel, Roderick L.	X		
McGuire, Carol M.	X		
Sytek, John Clerk	X		
Beaudoin, Steven P.	X		
Proulx, Mark L.	X		
Panasiti, Reed A.	X		
Pearson, Stephen C.	X		
Roy, Terry	X		
Yakubovich, Michael	X		
TOTAL VOTE:			



2019 SESSION

1547h

Executive Departments and Administration

Bill #: SB 287

Motion: OTPIA

AM #: 1547H

Exec Session Date: 4-30-19

<u>Members</u>	<u>YEAS</u>	<u>Nays</u>	<u>NV</u>
Goley, Jeffrey P. Chairman	X		
Schuett, Dianne E. Vice Chairman	X		
Jeudy, Jean L.			
Schmidt, Peter B.	X		
Schultz, Kristina M. F. Davis	X		
Fontneau, Timothy J. Cannon	X		
Desjardin, Kathy J.	X		
Fellows, Sallie D.	X		
Fox, Samantha L.	X		
Grote, Jaci L.	X		
Merchant, Gary Saucy	X		
Pimentel, Roderick L.	X		
McGuire, Carol M.	X		
Sytek, John Clerk	X		
Beaudoin, Steven P.	X		
Proulx, Mark L.	X		
Panasiti, Reed A.	X		
Pearson, Stephen C.	X		
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TOTAL VOTE:			

19-0

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37 2 Effective Date. This act shall take effect upon its passage.

Sub-Committee Minutes

4/17/2019

HOUSE COMMITTEE ON EXECUTIVE DEPARTMENTS AND ADMINISTRATION

SUBCOMMITTEE WORK SESSION on SB 257-FN

BILL TITLE: prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires.

DATE: April 17, 2019

Subcommittee Members: Reps. Proulx, Grote, Desjardin and S. Pearson

Comments and Recommendations: reviewed amendment 2019-1497h - changes to OLS to update...

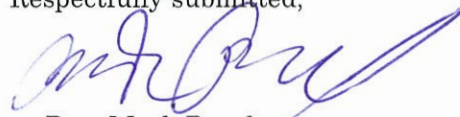
MOTIONS: OUGHT TO PASS WITH AMENDMENT

Moved by Rep. Desjardin Seconded by Rep. S. Pearson AM Vote: 4-0

Amendment # 2019-1547h drafting at OLS

Moved by Rep. Desjardin Seconded by Rep. S. Pearson Vote: 4-0

Respectfully submitted,



Rep. Mark Proulx
Subcommittee Chairman

HOUSE COMMITTEE ON EXECUTIVE DEPARTMENTS AND ADMINISTRATION

SUBCOMMITTEE WORK SESSION on SB 257-FN

BILL TITLE: prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires.

DATE: 4-17-19

Subcommittee Members: Reps. Goley, Schuett, Sytek, Jedy, P. Schmidt, Schultz, Fontneau, Desjardin, Fellows, Fox, Grote, Merchant, Pimental, McGuire, S. Beaudoin, Proulx, Panasiti, S. Pearson, Roy and Yakubovich

Comments and Recommendations:

reviewed amendment 2019-1497h
spelling changes to OLS to update

MOTIONS: (OTP), (OTP/A), ITL, Retained (1st Yr), Interim Study (2nd Yr) (Please circle one)

Moved by Rep. DESJARDIAN Seconded by Rep. PEARSON AM Vote: 4 YES 0 NO
Adoption of Amendment # 2019-1547h

OTP/A Moved by Rep. DESJARDIAN Seconded by Rep. PEARSON Vote: 4 YES 0 NO

Amendment Adopted Amendment Failed

MOTIONS: OTP, (OTP/A), ITL, Retained (1st Yr), Interim Study (2nd Yr) (Please circle one)

Moved by Rep. Seconded by Rep. AM Vote:

Adoption of Amendment #

Moved by Rep. Seconded by Rep. Vote:

Amendment Adopted Amendment Failed

Respectfully submitted,

Rep. [Signature] Subcommittee Chairman/Clerk

HOUSE COMMITTEE ON EXECUTIVE DEPARTMENTS AND ADMINISTRATION

SUBCOMMITTEE WORK SESSION on SB 257-FN

BILL TITLE: prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires.

DATE: April 9, 2019

Subcommittee Members: Reps. Proulx, S. Pearson, Grote, Desjardin and Jeudy

Comments and Recommendations: Discussion of Bill intent and language, amendment needed, schedule subcommittee follow-up work session, to review draft amendment.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mark Proulx', with a long, sweeping horizontal stroke extending to the right.

Rep. Mark Proulx
Subcommittee Chairman

HOUSE COMMITTEE ON EXECUTIVE DEPARTMENTS AND ADMINISTRATION

SUBCOMMITTEE WORK SESSION on SB 257-FN

BILL TITLE: prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires.

DATE:

4/9/2019

Subcommittee Members: Reps. Goley, Schuett, Sytek, Jeudy, P. Schmidt, Schultz, Fontneau, Desjardin, Fellows, Fox, Grote, Merchant, Pimental, McGuire, S. Beaudoin, Proulx, Panasiti, S. Pearson, Roy and Yakubovich

Comments and Recommendations:

discuss it, amendment needed -
schedule subcommittee work session
Weds 4/17 @ 1:30 pm

MOTIONS: OTP, OTP/A, ITL, Retained (1st Yr), Interim Study (2nd Yr)
(Please circle one)

Moved by Rep. _____ Seconded by Rep. _____ AM Vote: _____

Adoption of Amendment # _____

Moved by Rep. _____ Seconded by Rep. _____ Vote: _____

_____ Amendment Adopted _____ Amendment Failed

MOTIONS: OTP, OTP/A, ITL, Retained (1st Yr), Interim Study (2nd Yr)
(Please circle one)

Moved by Rep. _____ Seconded by Rep. _____ AM Vote: _____

Adoption of Amendment # _____

Moved by Rep. _____ Seconded by Rep. _____ Vote: _____

_____ Amendment Adopted _____ Amendment Failed

Respectfully submitted,

Rep. [Signature]
Subcommittee Chairman/Clerk

Reviewed &
with Rep.
Proulx

Hearing Minutes

HOUSE COMMITTEE ON EXECUTIVE DEPARTMENTS AND ADMINISTRATION

PUBLIC HEARING ON SB 257-FN

BILL TITLE: prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires.

DATE: April 2, 2019

LOB ROOM: 306 **Time Public Hearing Called to Order:** 1:00 p.m.

Time Adjourned: 2:25 p.m.

Committee Members: Reps. Goley, Schuett, Sytek, Jeudy, P. Schmidt, Schultz, Fontneau, Desjardin, Fellows, Grote, Merchant, Pimental, McGuire, Proulx and Roy

Bill Sponsors:

Sen. Sherman
Sen. Levesque
Sen. Cavanaugh

Sen. Rosenwald
Sen. Fuller Clark
Rep. Goley

Sen. Hennessey
Sen. Kahn

TESTIMONY

* Use asterisk if written testimony and/or amendments are submitted.

Vice-Chairman Rep. Schuett conducted the public hearing since Chairman Goley was a bill sponsor.

1. **Sen. Sherman, District 24, introduced the bill and spoke in favor.** He described the general nature of PFAS chemistry, their toxic effects on health, "C8" vs. "C6" viz. the toxicity of C8 was well documented but not that of the newer C6. PFAS have been found extensively in NH, at the Coakley landfill site and most concerning, they were also discovered in many wells. He said that the federal government was not assisting very much in the clean-up efforts. He described the bill as preventive. PFAS were found in higher concentrations around fire stations since they were used for practice and from run off from equipment cleaning. Committee questions: since there was no fiscal note, what was the cost? Were there substitute foams? Who was responsible for clean-up?
- *2. **Bryan Rambo, Firefighting Foam Coalition spoke in opposition to the bill as written.** He distributed a hand out and described the effectiveness of PFAS foams and that non-chlorine-based foams did not work well on fuel fires. He suggested ways to limit the use of PFAS. Although this bill would be going to subcommittee, there was extensive, detailed committee questioning and discussion about the chemistry and nature of the foams, different scenarios in handling it *vis-à-vis* training practice versus actual use. He said he would be available for subcommittee work.
- *3. **Max Schultz, Assistant Deputy State Fire Marshall spoke in opposition** citing the health risks to firefighters.
- *4. **Mike Wimsatt, DES, distributed a hand out and spoke for informational purposes.** The Department supports the intent of the bill but had questions. He said the Department was not chemists and would defer to the fire service for information. He said the Department was working on a take-back program but the amount of PFAS "out there" was unknown and there were no funds for the effort. He noted the widespread use of these chemicals as stain removers and as protectors from stains.
- *5. **Cordell Johnston, NHMA, spoke, taking no position but raising questions.** He noted inconsistency in wording raising the question of exactly what foams were being prohibited. Did the bill apply to just the testing and practice or was their use also prohibited in emergency situations?

6. **Bill McQuillen, President of the Professional Firefighters of NH, spoke in opposition** also citing the health risks to firefighters. (He noted that he was on his own time at the hearing.)
- * 7. **Robert Simon, Arlington VA – American Chemistry Council / Fluoro Council – Opposes the bill.** handout - cost effective remediation.
8. **Martial Pabon, Phd new Canaan CT, FFFC – Firefighting Foam Coalition – Opposes the bill.**

Respectfully submitted by
Rep. John Sytek Committee Clerk



SB 257 Prohibiting Foams Containing Perfluoroalkyl Chemicals . . .

(Vice-Chairman Rep. Shuett conducted the public hearing since Chairman Goley was a sponsor.)

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* 2 Bryan Rambo, Firefighting Foam Coalition spoke in opposition to the bill as written. He distributed a hand out and described the effectiveness of PFAS foams and that non-chlorine-based foams did not work well on fuel fires. He suggested ways to limit the use of PFAS. Although this bill would be going to subcommittee, there was extensive, detailed committee questioning and discussion about the chemistry and nature of the foams, different scenarios in handling it vis-à-vis training practice versus actual use. He said he would be available for subcommittee work.

* 3 Max Schultz, Assistant Deputy State Fire Marshall spoke in opposition citing the health risks to firefighters.

* 4 Mike Wimsatt, DES, distributed a hand out and spoke for informational purposes. The Department supports the intent of the bill but had questions. He said the Department was not chemists and would defer to the fire service for information. He said the Department was working on a take-back program but the amount of PFAS "out there" was unknown and there were no funds for the effort. He noted the widespread use of these chemicals as stain removers and as protectors from stains.

* 5 Cordell Johnston, NHMA, spoke, taking no position but raising questions. He noted inconsistency in wording raising the question of exactly what foams were being prohibited. Did the bill apply to just the testing and practice or was their use also prohibited in emergency situations?

6 Bill McQuillen, President of the Professional Firefighters of NH, spoke in opposition also citing the health risks to firefighters. (He noted that he was on his own time at the hearing.)

Respectfully submitted by,
Rep. John Sytek Committee Clerk

7.
8.

Last 2 Pink cards
* 7. Robert Simon
8. Mental Polson PHed
FC

SIGN UP SHEET

To Register Opinion If Not Speaking

SB 257 Bill # _____ Date 4-2-19

Committee EDA

** Please Print All Information **

Name	Address	Phone	Representing	(check one)	
				Pro	Con
Sen. [unclear]					
Sen. Cindy Rosenwald			SD #13	<input checked="" type="checkbox"/>	
Maura Wilkins	Concord		self	<input checked="" type="checkbox"/>	
SUSAN COVERT	CONTOCOCOC		self	<input checked="" type="checkbox"/>	
Liz-Anne Platt	Concord		self	<input checked="" type="checkbox"/>	
Cheri Falk	Wilton		Self	<input checked="" type="checkbox"/>	
Jeanne Torrey	Concord		self	<input checked="" type="checkbox"/>	
Dennis Jakubowski	Loudon		Self	<input checked="" type="checkbox"/>	
Dario Soalco	Professional Firefighters of NH			<input checked="" type="checkbox"/>	
Bill McQuillen	"			<input checked="" type="checkbox"/>	
Deborah Jakubowski	Loudon		Self	<input checked="" type="checkbox"/>	
Sen. Tom Sherman			SD24	<input checked="" type="checkbox"/>	
Melissa Hinebaugh	Concord		self	<input checked="" type="checkbox"/>	
Rep. Rosemarie Rung	Merrimack		Hills 21	<input checked="" type="checkbox"/>	
Rep Suzanne Smith	Grafton		8	<input checked="" type="checkbox"/>	
Sen Jay Kahn			SD #10	<input checked="" type="checkbox"/>	
Max Schultz	Concord		NH State Fire Marshal	<input checked="" type="checkbox"/>	
Marissa Chase	NH Association for Justice			<input checked="" type="checkbox"/>	
Senator Melanie Levesque			SD#12	<input checked="" type="checkbox"/>	

Testimony

#2



**Fire
Fighting
Foam
Coalition**

April 1, 2019

The Honorable Jeff Goley
Chair of the House Executive Departments
And Administration Committee
Concord, New Hampshire

Dear Mr. Chairman and Members of the House Executive Departments and Administration Committee,

I am writing on behalf of the Fire Fighting Fire Fighting Foam Coalition (FFFC)¹, a global association that represents manufacturers of firefighting foams and their chemical components on issues related to the efficacy and environmental impact of firefighting foams.

With regard to the proposed legislation, SB 257-FN, we respectfully oppose this bill for the following reasons.

AFFF foams are the most effective foams currently available to fight high-hazard flammable liquid fires (Class B) in military, industrial, chemical, fuel depot/storage, aviation and other applications. AFFF have proven effectiveness in large-scale tank fires, fuel-in-depth fires and other high hazard Class B fires. Their unique film-forming and fuel repellency properties provide rapid extinguishment, critical burnback resistance and protection against vapor release, which help to prevent re-ignition and protect fire fighters working as part of rescue and recovery operations.

Fluorine-free foams can and do provide an alternative to fluorinated foams in some applications such as spill fires and smaller tank fires. However, they are not currently able to provide the same level of fire suppression capability, efficiency, flexibility, and scope of usage. Fire test results presented at international fire protection conferences in 2011, 2013, 2015 and 2016, including some performed by the Naval Research Labs (NRL), all show that fluorinated foams are significantly more effective at extinguishing flammable liquid fires than fluorine-free foams. In a recent trade publication, an NRL scientist stated that fluorinated foams "outperform

¹ FFFC members include the following companies: BeachEdge Consulting, Buckeye, Chemours, Dafo Fomtec, Dr. Sthamer, Dynax, Fire Service Plus, Fire Safety Devices, Orchidee Europe, KV Fire, National Foam, Oil Technics, Perimeter Solutions (Auxquimia, Solberg), Profoam, and Johnson Controls (Ansul, Chemguard, Sabo, Williams). Together these companies provide a significant percentage of the firefighting foam used worldwide.



STATE OF NEW HAMPSHIRE DEPARTMENT OF SAFETY

John J. Barthelmes, Commissioner

Division of Fire Safety
Office of the State Fire Marshal
Paul J. Parisi, State Fire Marshal



3

Office: 110 Smokey Bear Blvd., Concord, NH
Mailing Address: 33 Hazen Drive, Concord, NH 03305
PHONE 603-223-4289 • FAX 603-223-4294
TDD Access: (7-1-1) • ARSON HOTLINE 1-800-400-3526

LEGISLATIVE POSITION
NH DEPARTMENT OF SAFETY

SB 257-FN: Prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires.

Committee: Executive Departments & Administration

Position: Support

Dear Honorable Members of the Committee:

The Office of the New Hampshire State Fire Marshal supports the concepts outlined in SB 257. We understand that there are legacy Class B Aqueous Film Forming Foams currently in New Hampshire fire stations that should no longer be used in a flammable liquid firefighting operation due to their carcinogenic properties. This foam is harmful not only to the groundwater it may find its way to, but also to the firefighters who use it. We also hope that this legislation prompts the firefighting foam and protective equipment industries to continue to find safe, suitable and more effective replacements for Class B foam so firefighters can fight these types of flammable liquid fires in a safe, effective, and environmentally conscious manner.

Respectfully submitted:

Maxim F. Schultz
Assistant Director Deputy State Fire Marshal
April 2, 2019



The State of New Hampshire
Department of Environmental Services



Robert R. Scott, Commissioner

#4

April 2, 2019

The Honorable Jeffrey Goley
Chair, House Executive Departments and Administration Committee
Legislative Office Building, Room 306
Concord, NH 03301

RE: SB 257 - prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires

Dear Chair Goley and Members of the Committee:

Thank you for the opportunity to testify on SB 257. This bill, as amended by the Senate, would prohibit the manufacture, sale, or distribution of class B firefighting foams (i.e., foams used to control flammable liquid fires) containing per- and poly-fluoroalkylated substances ("PFAS"); require certain notices relative to the sale of firefighting personal protective equipment that contains PFAS; and limit the use of PFAS foams in training. The bill also establishes a role for the New Hampshire Department of Environmental Services (NHDES) in implementing these prohibitions, and directs NHDES to institute a take-back program for the proper disposal of legacy PFAS foams. NHDES supports the effort to limit or eliminate the use of PFAS chemistry in firefighting foams, but does have some concerns with the bill as currently drafted. We understand that this bill may be assigned to a subcommittee, and we would welcome the opportunity to assist the subcommittee in further refinement of the bill.

In 2014, when the contamination in the Haven Well at Pease Tradeport was discovered, NHDES began its work to address drinking water contamination and human exposures to perfluorooctane sulfonic acid (PFOS) and other PFAS compounds from firefighting foams. Since then, we have identified drinking water contamination in several communities resulting from training and firefighting use of PFAS-containing foams. We share concerns, along with thousands of citizens across the state, about the potential health risks posed by these exposures, and have been heavily engaged in ensuring that safe, clean drinking water is provided in these areas.

NHDES is aware that current class B foam formulations, while now not formulated with PFOS, still contain other PFAS compounds that are of concern, including one, PFHxS, for which NHDES will be setting a drinking water standard later this year. Accordingly, NHDES supports the idea of getting PFAS compounds out of firefighting foams, and replacing them with safer chemicals. However, while we understand that the performance of new, fluorine-free foams is steadily increasing, the information we have does not clearly indicate that these products are a completely effective substitute for PFAS-containing foams. We want to make clear that NHDES defers all decisions about how to best protect life and property during a fire emergency to the fire service. We are not the experts on this question; we do not know if there are effective substitutes for foams containing PFAS; and we would not support the prohibition contained in this bill if it is not also supported by representatives of the fire service, including especially the Office of the State Fire Marshall.

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April 2, 2019

Hon. Jeffrey Goley, Chair
Executive Departments and Administration Committee
Legislative Office Building, Room 306
Concord, New Hampshire

Re: SB 257, prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires

Dear Rep. Goley:

The New Hampshire Municipal Association does not have a position for or against SB 257. However, the bill as amended by the Senate contains a number of ambiguities and seeming contradictions that will make compliance difficult. We believe these matters need to be clarified before the bill goes forward. Below are some of the questions the bill raises.

What foam is subject to the prohibitions? The bill defines “class B firefighting foam” to mean any foam “designed for flammable liquid fires.” It then imposes (1) a prohibition on the manufacture, sale, and distribution of class B foam (paragraph III) and (2) a prohibition on the use of class B foam (paragraph II).

- The prohibition on manufacture, sale, and distribution (paragraph III) applies to class B foam “to which PFAS chemicals have been intentionally added”; **BUT**
- The prohibition on use (paragraph II) applies to all class B foam, regardless of the addition of PFAS. This would prohibit a fire department from using any foam on a flammable liquid fire. Is this a mistake?

Does the prohibition on use apply only to training and testing? Paragraph II states that beginning in 2020, no person, local government, or state agency shall “discharge or otherwise use for training or testing purposes class B firefighting foam.” It is unclear whether the phrase “for training or testing purposes” refers to both “discharge” and “otherwise use” or just the latter. In other words, can a fire department discharge class B foam for purposes other than training or testing—specifically, in a real-life fire emergency?

Recall of firefighting foam. Paragraph VIII states that a manufacturer that produces, sells, or distributes class B firefighting foam restricted under paragraph III “shall recall the

SB 257

#7

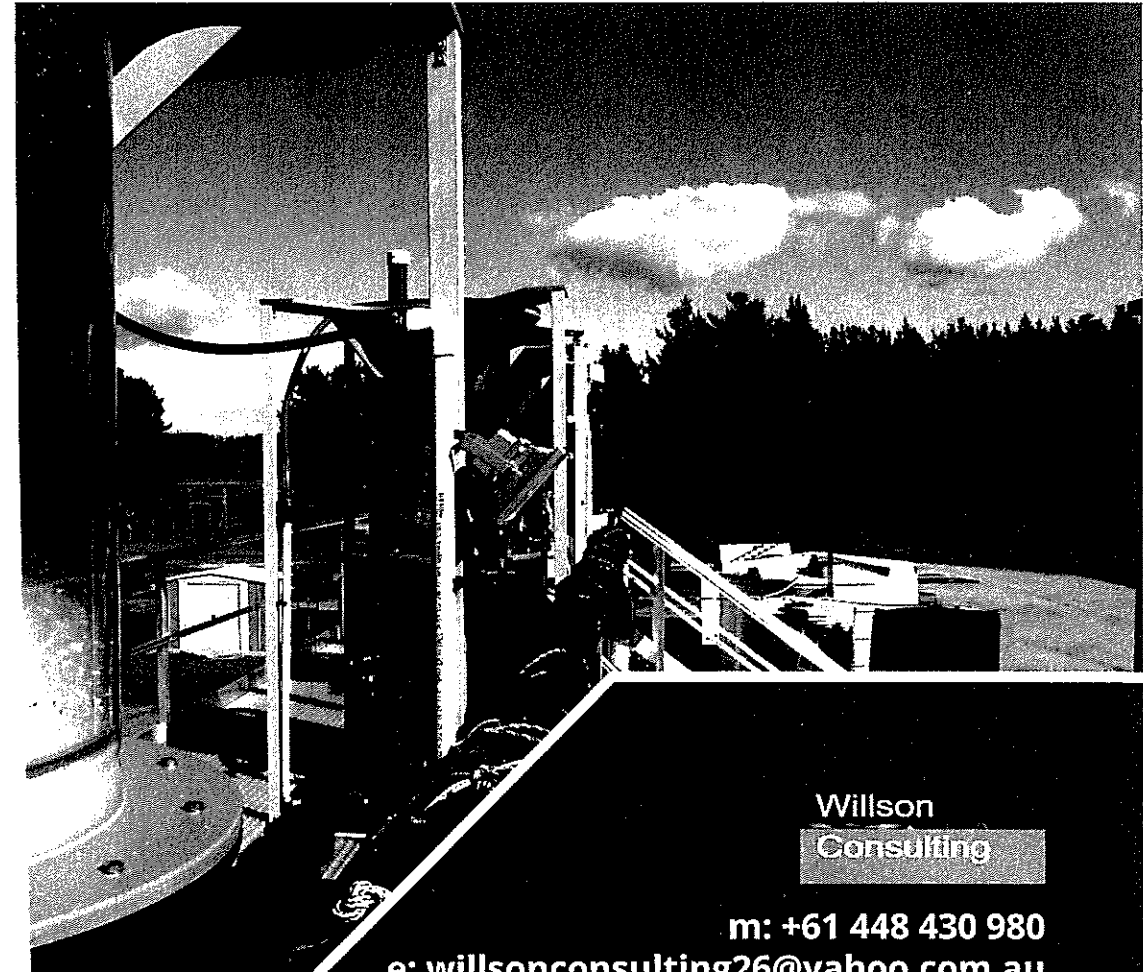
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COST-EFFECTIVE ≤C6 REMEDIATION IS ACHIEVABLE.

Mike Willson, Willson Consulting, Tasmania 7054.
Presented at ECOFORUM Australia, 2-4th October 2018



Key emerging contaminants of high concern because of their Persistent (P), Bioaccumulative (B) and Toxic (T) status are long-chain C8 PFAS, particularly PFOS/PFHxS and PFOA. Regulators are encouraging transition away from firefighting foams containing these legacy ≥C8 agents toward Fluorine Free Foams (F3) and environmentally more benign short-chain ≤C6 PFAS alternatives, categorized as neither Bioaccumulative nor Toxic.



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THE OBJECTIVE:

To dispel some misleading suggestions that these C6 PFAS are "very difficult" to treat and breakdown effectively, since there are several effective options available.

Effective treatment of C6 PFAS foam agents enables foam users (particularly in Major Hazard facilities [MHFs]) to continue using C6 agents to deliver the fastest, effective efficient, life safety fire protection available.

Detailed research confirms a range of technologies are able to adsorb, concentrate and breakdown C6 (including PFHxA and 6:2 FTS) as effectively as legacy C8 PFAS, ... even though Granulated Activated Carbon (GAC) and some Ion Exchange resins are generally less effective than for long-chain C8s.

EFFECTIVE ADSORPTION AND SEPARATION TECHNOLOGIES NOW AVAILABLE AT SCALE FOR C6 (although most require pre-treatments particularly for dissolved solids and organic matter to reduce risk of breakthrough and extend life expectancy), INCLUDE:

- Some Ion Exchange resins can effectively treat short-chain C6 PFAS (Liu 2017).
- Modified clays –permanently lock up C8 & C6 PFAS within their structures for centuries (Naidu 2015).
- Bioabsorbent granules –adsorb and concentrate C8 & C6 PFAS with re-generation up to five times as cost-effective life extension (Customem 2018).
- Ozofractionatively Catalysed Reagent Addition (OCRA) –effective at removing C4-C12 PFAS as a concentrate to very low µg/L levels including co-contaminants (hydrocarbons, saline water, solvents, heavy metals, sewage) without any pre-treatments. Research is also on-going to destroy PFAS as an extension of this process (Horst et al 2018, Evocra 2018).
- Nano-Filtration – nanometre scale filtration system proven effective at removing long and short-chain PFAS compounds.
- Reverse Osmosis – the finest of membranes effective for all PFAS removal down to ng/L levels. NF & RO widely used as final polishing following other treatments (Horst 2018; Kucharzyk 2017).

EFFECTIVE BREAKDOWN TECHNOLOGIES FOR C6 INCLUDE:

- electrochemical oxidation achieves direct electron transfer of molecules in a "battery type" electrochemical cell, demonstrating effective breakdown of 6:2 FTSA, 6:2 FTAB and PFHxA at current densities up to 50 mA/cm² over several hours mineralizing Fluorine. Boron Doped Diamond anodes demonstrated 99.7% destruction of C6 PFAS in industrial wastewater effluent (Gomez-Ruiz 2017).
- Sonolytic destruction – relies on sound waves causing cavitation of microbubbles in solutions, pyrolyzing C8 & C6 PFAS attaching onto bubble surfaces. When cavitation occurs, surface temperatures can reach >9,000°C mineralising Fluorine within 3 hours. Without reliance on oxidation or reduction, the resulting water quality is clean (Merino 2016, Gole 2018).
- Cement kiln incineration – Recent approval granted to permit PFAS wastes (incl. firefighting foams) to be incinerated in QLD. Volumes up to 20,000L/day can be destroyed, although there are PFAS concentration limits imposed (Geocycle 2018). This is expected to be more cost-effective than traditional Plasma Arc incineration.

CASE STUDY 1

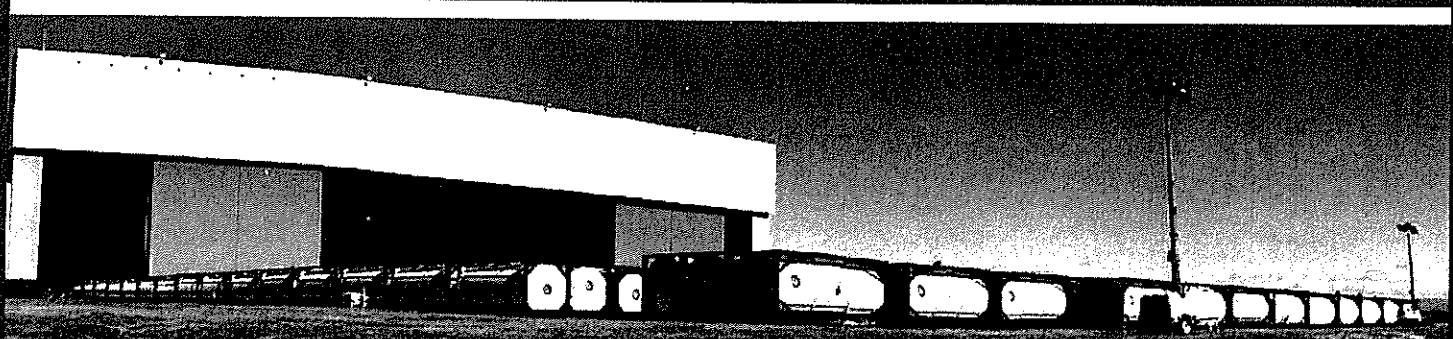


Fig 1: Some of the 600 x 20,000L ISO Containers, holding PFAS impacted industrial sewer water.

OZOFRACTIONATIVELY CATALYSED REAGENT ADDITION (OCRA)

PFAS decontamination of over 18 Million litres of firefighting foam impacted water, averaging 429µg/L to max. 5,810µg/L PFAS contaminated effluent at a major Australian Airport has recently been achieved. Water is cleaned using ozone, creating high oxidation environment enhancing free radical creation, driving stabilising chemical reactions intensifying electrostatic attractions. Customizable to remove varied target compounds including C8 & C6 PFAS plus co-contaminants in a single pass high volume process up to 110kL/day (this project) without pre-treatments.

This project required removing sum of PFAS from combined sewage, stormwater, estuarine water and industrial wastewater, to exceed the client's stringent very low ng/L (TOP Assay) discharge requirement.

Co-contaminants included varying levels of:

- Heavy metals
- Cyanide, hydrocarbon fuels, pesticides, Mono and Polycyclic Aromatic Hydrocarbons, Phenols, organics (sewage) and pathogens
- Stabilised compounds as solid precipitates, eg. metals with recoverable value

- Capture in stable reagents, typically metals of low value or quantity.

High volumes of clean water for environmental release achieved >99.7% (by mass) PFAS removal, separately concentrated to ≤ 0.3% mass for cost-effective thermal destruction. OCRA removes sum PFAS (TOP Assay) down to 0.25µg/L. It was then further polished by RO down to sum PFAS at no detect (≤0.002µg/L). No GAC nor IXR were used for this project.

CASE STUDY 2

A SMALLER AIRPORT PROJECT TREATING FIREWATER RUNOFF FROM AN ACTIVE FIRE TRAINING GROUND



Fig 2: OCRA process with airport fire training area in background

where F3 is being used for many years, but legacy C8 PFAS continues leaching from the concrete fire training pads every time they train with F3, use water only, or even when it rains (Badel 2015).

Up to 25,000L /day is being treated effectively and efficiently from influent total PFAS levels typically 60µg/L down to drinking water criteria. To meet client requirements, a RO polishing plant further reduces sum PFAS levels down to no detect (≤0.002µg/L), before returning to Waste Water Treatment Plant (WWTP) stream. With fewer co-contaminants, separated PFAS is concentrated to typically 0.03% by mass, for cost-

RESULTS/LESSONS LEARNED:

A number of effective remediation/ destruction technologies are now available to treat short-chain C6 plus long-chain legacy C8 PFAS compounds from firefighting foams and other uses, whether produced from firewater runoff, other foam usage incidents, wastewater treatment plant effluent, groundwater contamination or industrial wastes/leachate/sewage.

IMPLICATIONS FOR FIREFIGHTING FOAM USERS:

These effective treatment technologies should give regulators confidence to permit continued use of highly effective C6 firefighting foam agents, which deliver improved life safety, speed of incident control and reduced environmental impacts from firewater runoff at Major Hazard Facilities (MHFs). Alternative F3 agents generally provide slower control and extinguishment, requiring larger F3 volumes, increased risk of unpredictable flashbacks and escalation, placing life safety at increased risk. Caused by absence of fuel shedding or vapour sealing additives in F3s. Evidence shows F3s are particularly vulnerable when forcefully applied to volatile fuel in-depth fires, and ambient temperatures $\geq 32^{\circ}\text{C}$, which C6 agents handle effectively and reliably.

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12. Baduel C et al, 2015 - Perfluoroalkyl Substances in a Firefighting Training Ground (FTG), Distribution and Potential Future Release, https://www.researchgate.net/profile/Christine_Baduel/publication/276151390_Perfluoroalkyl_substances_in_a_firefighting_training_ground_FTG_distribution_and_potential_future_release/links/55e7b9a708ae21d099c15634.pdf?origin=publication_detail&ev=pub_int_prw_xdl&msrp=bbVZSR_iYRA8qx_CUd8zNXPQ4qv04fqj1JZ47Lj1PYz6X_uKSp3zr-15tlFxHMOjH7f4BJ9xuz8fjoEb6ZH-w.K586zRpGT3xjnS63DMN1y-bd5dxAhe3Tv0A5g4ycRffvHZJQHwEZE-6yvhdDuh_iewb8ljTuNFv4wqsqv10JaJg.42ikF_qtvbGO2IB9nqNtCR7TxR5vR1nMXro3r-7chGOfmWTmxrBIAIG7V18IA7pUsfg5eHFC0xV

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Fiscal Note

SB 257-FN- FISCAL NOTE
 AS AMENDED BY THE SENATE (AMENDMENT #2019-0845s)

AN ACT prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires.

FISCAL IMPACT: State County Local None

STATE:	Estimated Increase / (Decrease)			
	FY 2020	FY 2021	FY 2022	FY 2023
Appropriation	\$0	\$0	\$0	\$0
Revenue	\$0	\$0	Indeterminable Increase	Indeterminable Increase
Expenditures	\$0	\$0	Indeterminable Increase	Indeterminable Increase
<i>Funding Source:</i>	<input checked="" type="checkbox"/> General	<input type="checkbox"/> Education	<input type="checkbox"/> Highway	<input type="checkbox"/> Other

COUNTY:

Revenue	\$0	\$0	\$0	\$0
Expenditures	\$0	\$0	Indeterminable Increase	Indeterminable Increase

LOCAL:

Revenue	\$0	\$0	\$0	\$0
Expenditures	\$0	\$0	Indeterminable Increase	Indeterminable Increase

METHODOLOGY:

This bill prohibits the use of foams containing perfluoroalkyl chemicals in fighting fires. The Department of Environmental Services (DES) assumes the bill would require the Department to perform the following tasks:

- At the request of local, state, or other fire training organizations, evaluate their testing facilities for adequate containment, treatment, and disposal measures to prevent releases of foam to the environment.
- In the event that federal law changes, adopt rules to restrict the use of PFAS-containing foams at certain facilities.
- As necessary, request copies of notices or sales documentation from foam manufacturers, distributors, or purchasers of firefighting personal protective equipment.
- As necessary, request certificates of compliance from manufacturers of firefighting foams.
- Assist the office of strategic initiatives and other state agencies, fire protection districts, and municipalities to avoid purchase or use of PFAS-containing firefighting foams and

Department of Environmental Services, Office of Strategic Initiatives, and New Hampshire
Municipal Association

Bill as Introduced

SB 257-FN - AS AMENDED BY THE SENATE

03/14/2019 0845s

2019 SESSION

19-1011
08/03

SENATE BILL **257-FN**

AN ACT prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires.

SPONSORS: Sen. Sherman, Dist 24; Sen. Rosenwald, Dist 13; Sen. Hennessey, Dist 5; Sen. Levesque, Dist 12; Sen. Fuller Clark, Dist 21; Sen. Kahn, Dist. 10; Sen. Cavanaugh, Dist 16; Rep. Goley, Hills. 8

COMMITTEE: Executive Departments and Administration

ANALYSIS

This bill prohibits the use of foams containing perfluoroalkyl chemicals in fighting fires.

Explanation: Matter added to current law appears in *bold italics*.
 Matter removed from current law appears [~~in brackets and struckthrough~~]
 Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

1 foam where the inclusion of PFAS chemicals are required by federal law, including but not limited
2 to the requirements of 14 C.F.R. section 139.317, as that section existed as of January 1, 2018. In
3 the event that applicable federal regulations change after January 1, 2018, to allow the use of
4 alternative firefighting agents that do not contain PFAS chemicals, the department may adopt rules
5 for the sales and uses of firefighting foam that are addressed by the federal regulation that restrict
6 the use of firefighting foam that contains PFAS chemicals.

7 V. Beginning January 1, 2020, a manufacturer or other person that sells firefighting
8 personal protective equipment to any person, municipality, or state agency shall provide written
9 notice to the purchaser at the time of sale if the firefighting personal protective equipment contains
10 PFAS chemicals. The written notice shall include a statement that the firefighting personnel
11 protective equipment contains PFAS chemicals. All notices shall be included in all personal files of
12 all employees using the firefighting personal protective equipment which contain perfluoroalkyl
13 chemicals

14 VI. The manufacturer or person selling firefighting personal protective equipment and the
15 purchaser of the equipment shall retain the notice on file for at least 3 years from the date of the
16 transaction. Upon the request of the department, a person, manufacturer, or purchaser shall
17 furnish the notice, or written copies, and associated sales documentation to the department within
18 60 days.

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

22 VIII. A manufacturer that produces, sells, or distributes a class B firefighting foam
23 restricted under paragraph III shall recall the product and reimburse the retailer or any other
24 purchaser for the product.

25 IX. The department may request a certificate of compliance from a manufacturer of class B
26 firefighting foam or firefighting personal protective equipment. A certificate of compliance attests
27 that a manufacturer's product or products meets the requirements of this chapter.

28 X. The department shall assist the office of strategic initiatives, other state agencies, fire
29 protection districts, and other municipalities to avoid purchasing or using firefighting agents
30 containing PFAS chemicals, as required under paragraph III. The department shall assist the office
31 of strategic initiatives, other state agencies, fire protection districts, and other municipalities to give
32 priority and preference to the purchase of firefighting personal protective equipment that does not
33 contain PFAS chemicals.

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

38 XII. Beginning on January 1, 2021, the department shall institute a take-back program of

SB 257-FN- FISCAL NOTE
AS INTRODUCED

AN ACT prohibiting foams containing perfluoroalkyl chemicals for use in fighting fires.

FISCAL IMPACT: State County Local None

STATE:	Estimated Increase / (Decrease)			
	FY 2020	FY 2021	FY 2022	FY 2023
Appropriation	\$0	\$0	\$0	\$0
Revenue	\$0	\$0	\$0	\$0
Expenditures	\$0	\$0	Indeterminable Increase	Indeterminable Increase
<i>Funding Source:</i>	<input type="checkbox"/> General <input type="checkbox"/> Education <input type="checkbox"/> Highway <input checked="" type="checkbox"/> Other - Hazardous Waste Cleanup Fund			

COUNTY:

Revenue	\$0	\$0	\$0	\$0
Expenditures	\$0	\$0	Indeterminable Increase	Indeterminable Increase

LOCAL:

Revenue	\$0	\$0	\$0	\$0
Expenditures	\$0	\$0	Indeterminable Increase	Indeterminable Increase

METHODOLOGY:

This bill prohibits the use of foams containing perfluoroalkyl chemicals in fighting fires. The Department of Environmental Services (DES) indicates this bill prohibits the manufacture, sale and distribution of Class B firefighting foam, to which PFAS chemicals have been intentionally added, for use in New Hampshire except for use at facilities where inclusion of PFAS chemicals are required by federal law. This prohibition would take effect on July 1, 2021.

The bill requires that:

- Manufacturers or other persons that sell firefighting personnel protective equipment provide written notice to the purchaser at the time of sale if the equipment contains PFAS chemicals. The bill includes requirements for of documentation related to such notifications.
- Manufacturers of class B firefighting foam provide written notification to persons selling the manufacturer's products in the state about the provisions of this bill no less than one year before the effective date of the restrictions (July 1, 2021).
- Manufacturers that produce, sell, or distribute a class B firefighting foam to recall the

restricted foam is in New Hampshire and assumes the effects of this bill would vary among municipalities. The Association indicates there would be no impact on local revenues.

The Office of Strategic Initiatives has no information on the manufacture, distribution, sale or use of firefighting foam and equipment. The Office states the bill does not provide specifics on how it would work with the other state agencies, fire protection districts and municipalities to avoid purchasing agents containing PFAS or give preference to purchasing non-PFAS protective equipment.

AGENCIES CONTACTED:

Department of Environmental Services, Office of Strategic Initiatives, and New Hampshire Municipal Association