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S.49

Introduced by Senators Bray, Balint, Campion, and MacDonald

Referred to Committee on Natural Resources and Energy

Date: January 23, 2019

Subject: Conservation and development; environmental health; water supply;  
water quality; polyfluoroalkyl substances

Statement of purpose of bill as introduced: This bill proposes to adopt a maximum contaminant level for polyfluoroalkyl substances under the Agency of Natural Resources's Water Supply Rule. The bill would require the Secretary of Natural Resources to amend the Vermont Quality Standards to include criteria or effluent limitations for polyfluoroalkyl substances. The bill would also require landfills to treat leachate for polyfluoroalkyl substances prior to delivery to a wastewater treatment facility or other facility where the leachate would be discharged to the waters of the State.

An act relating to the regulation of polyfluoroalkyl substances in drinking and surface waters

1 It is hereby enacted by the General Assembly of the State of Vermont:

2 Sec. 1. FINDINGS

3 The General Assembly finds that:

4 (1) Perfluoroalkyl, polyfluoroalkyl substances (PFAS), and other  
5 perfluorochemicals are a large group of human-made chemicals that have been  
6 used in industry and consumer products worldwide since the 1950s.

7 (2) PFAS may enter the environment when emitted during a  
8 manufacturing process, from the disposal of goods containing PFAS, or from  
9 leachate from landfills.

10 (3) Many PFAS do not break down and persist in the environment for a  
11 very long time, especially in water, and, consequently, PFAS can be found in  
12 many bodies of water and in the blood of humans and wildlife.

13 (4) More research is needed to determine the health effects to humans  
14 from exposure to low levels of environmental exposure to PFAS, but some  
15 studies in people have shown that certain PFAS may affect infant weight,  
16 affect human growth, affect the learning and behavior of babies and older  
17 children, lower a woman's chance of getting pregnant, interfere with the  
18 body's natural hormones, increase cholesterol levels, affect the immune  
19 system, and increase the risk of cancer.

20 (5) The Vermont Department of Health has adopted a health advisory  
21 level for certain PFAS of 20 parts per trillion.

1 ~~(6) The Vermont Water Supply Rule provides that the Secretary of~~  
2 ~~Natural Resources may adopt a Vermont Department of Health advisory level~~  
3 ~~as a maximum contaminant level for a substance.~~

4 ~~(7) The Agency of Natural Resources (ANR) has adopted the 20 parts~~  
5 ~~per trillion level as part of ANR's Remediation of Contaminated Properties~~  
6 ~~Rule and Groundwater Protection Rule and Strategy, but not as part of the~~  
7 ~~Vermont Water Supply Rule or the Vermont Water Quality Standards.~~

8 ~~(8) To adopt a precautionary approach to the regulation of PFAS, to~~  
9 ~~prevent further contamination of State water, and to reduce the potential~~  
10 ~~harmful effects of PFAS on human health and the environment, the State of~~  
11 ~~Vermont should adopt:~~

12 ~~(A) a maximum contaminant level for PFAS under the Vermont~~  
13 ~~Water Supply Rule;~~

14 ~~(B) water quality criteria or effluent limitations for PFAS under the~~  
15 ~~Vermont Water Quality Standards that protect human health and aquatic biota;~~  
16 ~~and~~

17 ~~(C) standards for the treatment of landfill leachate prior to treatment~~  
18 ~~in a wastewater treatment facility or other facility where the leachate would be~~  
19 ~~discharged to State waters.~~

1 ~~Sec. 2. DEPARTMENT OF ENVIRONMENTAL CONSERVATION~~

2 ~~WATER SUPPLY RULE; MAXIMUM CONTAMINANT LEVEL~~

3 ~~(MCL) FOR POLYFLUOROALKYL SUBSTANCES~~

4 ~~Subchapter 21-6, Section 6.12, Table 6-1 of the Department of~~  
5 ~~Environmental Conservation Water Supply Rule is amended to read:~~

6 CONTAMINANT	STANDARD MCL	MCLG or	Initial
	or MRDL as noted	MRDLG	Source
	(mg/l unless	(as noted)	Testing
	otherwise noted)*		Required

9 \*\*\*

10 \*\*\*

11 \*\*\*

12 \*\*\*

11 9. Polyfluoroalkyl

MCLG

12 substances

13 Perfluorooctanoic

20 parts per trillion— ---

Yes

14 acid

sum of all five PFAS

15 Perfluorooctanesulfonic

20 parts per trillion— ---

Yes

16 acid

sum of all five PFAS

17 Perfluorohexane sulfonic

20 parts per trillion—

18 acid

sum of all five PFAS ---

Yes

19 Perfluoroheptanoic

20 parts per trillion— ---

Yes

20 acid

sum of all five PFAS

1	<u>Perfluorononanoic</u>	<u>20 parts per trillion</u>	<u>Yes</u>
2	<u>acid</u>	<u>sum of all five PFAS</u>	

3 Sec. 3. DEPARTMENT OF ENVIRONMENTAL CONSERVATION

4 WATER SUPPLY RULE; MONITORING FOR

5 POLYFLUOROALKYL SUBSTANCES

6 Section 6.10a of Subchapter 21-6 of the Department of Environmental  
7 Conservation Water Supply Rule is added to read:

8 § 6.10a. Polyfluoroalkyl Substances (PFAS) Monitoring Requirements

9 All public water systems shall conduct PFAS monitoring annually.

10 Sec. 4. VERMONT WATER QUALITY STANDARDS; WATER

11 QUALITY CRITERIA; POLYFLUOROALKYL SUBSTANCES

12 On or before July 1, 2020, the Secretary of Natural Resources shall amend  
13 the Vermont Water Quality Standards to include water quality criteria or  
14 effluent limitations for the discharge of polyfluoroalkyl substances (PFAS) to  
15 the surface waters of the State. The amendment to the Vermont Water Quality  
16 Standards shall, at a minimum, include criteria or effluent limitations for the  
17 following PFAS individually and in combination: perfluorooctanoic acid,  
18 perfluorooctanesulfonic acid, perfluorohexane sulfonic acid,  
19 perfluoroheptanoic acid, and perfluorononanoic acid. The amendment to the  
20 rule may address additional PFAS.

1 ~~Sec. 5-10 V.S.A. § 6605(d) is amended to read:~~

2 ~~(d)(1) New landfills placed in operation after July 1987 shall be lined and~~  
3 ~~shall collect and treat leachate. Except as provided in section 6614 of this title,~~  
4 ~~or if, pursuant to information obtained through the pilot projects completed~~  
5 ~~under subsection 6604(b) of this title or from other sources, the Secretary~~  
6 ~~identifies particular waste components that will not be the source of leachate~~  
7 ~~harmful to health or the environment, the Secretary may waive the~~  
8 ~~requirements for liners in landfills or portions of landfills designated solely to~~  
9 ~~receive these wastes. Solid waste shall be included among these waste~~  
10 ~~components that will not be the source of harmful leachate, in situations where~~  
11 ~~all of the following apply:~~

12 ~~(1)(A) material to be landfilled has been subjected to a hazardous waste~~  
13 ~~collection, diversion, and inspection program that removes at least 90 percent~~  
14 ~~of the hazardous and toxic waste, including that classified as hazardous~~  
15 ~~household waste and including that generated by small quantity generators;~~

16 ~~(2)(B) material to be landfilled has had at least 90 percent of the~~  
17 ~~compostable material and marketable recyclables removed by source~~  
18 ~~separation or by a combination of source separation and mechanical~~  
19 ~~separation;~~

20 ~~(3)(C) the municipality in which the landfill or any portion of the~~  
21 ~~landfill exists has permission of the facility operator to monitor landfill~~

1 ~~ations during operating hours, by means of a person appointed or hired by~~  
2 town officials or elected by the voters of the municipality.

3 (2) On or after January 1, 2020, a landfill shall treat collected leachate  
4 for polyfluoroalkyl substances on-site or at an Agency-approved, off-site  
5 facility prior to delivery to a wastewater treatment facility or other facility  
6 from which the leachate would be discharged to waters of the State. As used  
7 in this subdivision, “wastewater treatment facility” has the same meaning as in  
8 section 1295 of this title.

9 Sec. 6. EFFECTIVE DATES

10 (a) This section and Secs. 1 (findings), 2 (MCL for polyfluoroalkyl  
11 substances), and 3 (monitoring of MCL for polyfluoroalkyl substances) shall  
12 take effect on passage.

13 ~~(b) The remaining sections shall take effect on July 1, 2019.~~

*Sec. 1. FINDINGS*

*The General Assembly finds that:*

*(1) Perfluoroalkyl, polyfluoroalkyl substances (PFAS), and other perfluorochemicals are a large group of human-made chemicals that have been used in industry and consumer products worldwide since the 1950s.*

*(2) PFAS may enter the environment from numerous industrial or commercial sources, including when emitted during a manufacturing process, from the disposal of goods containing PFAS, or from leachate from landfills.*

*(3) Many PFAS do not break down and persist in the environment for a very long time, especially in water, and, consequently, PFAS can be found in many bodies of water and in the blood of humans and wildlife.*

*(4) The Vermont Department of Health has adopted a health advisory level for certain PFAS of 20 parts per trillion.*

(5) The Vermont Water Supply Rule provides that the Secretary of Natural Resources may adopt a Vermont Department of Health advisory level as a maximum contaminant level for a substance.

(6) The Agency of Natural Resources (ANR) has adopted the 20 parts per trillion level as part of ANR's Remediation of Contaminated Properties Rule and Groundwater Protection Rule and Strategy, but not as part of the Vermont Water Supply Rule or the Vermont Water Quality Standards.

(7) To prevent further contamination of State water, and to reduce the potential harmful effects of PFAS on human health and the environment, the State of Vermont should:

(A) require the Agency of Natural Resources to adopt by rule maximum contaminant level or levels for PFAS under the Vermont Water Supply Rule;

(B) prior to adoption by rule of maximum contaminant level or levels for PFAS, require public water systems to monitor for certain PFAS chemicals and respond appropriately when results indicate levels of PFAS in excess of the Vermont Department of Health advisory level;

(C) require the Agency of Natural Resource to adopt surface water quality standards for certain PFAS chemicals; and

(D) authorize the Agency of Natural Resources to require any permitted facility to monitor for any release of a chemical that exceeds a health advisory issued by the Vermont Department of Health.

Sec. 2. INTERIM DRINKING WATER STANDARD; TESTING; PER AND POLYFLUOROALKYL SUBSTANCES

(a) As used in this section, "PFAS contaminants" means perfluorooctanoic acid, perfluorooctane sulfonic acid, perfluorohexane sulfonic acid, perfluorononanoic acid, and perfluoroheptanoic acid.

(b) On or before December 1, 2019, all public community water systems and all nontransient noncommunity water systems in the State shall conduct monitoring for the presence of PFAS contaminants in drinking water supplied by the system. Continued monitoring shall be conducted as follows until adoption of the rules required under Sec. 3 of this act:

(1) If monitoring results detect the presence of any PFAS contaminants individually or in combination in excess of the Vermont Department of Health advisory level of 20 parts per trillion, the public water system shall conduct continued quarterly monitoring.



(2) If monitoring results detect the presence of any PFAS contaminants individually or in combination at a level equal to or below the Vermont Department of Health advisory level of 20 parts per trillion, the public water system shall conduct continued monitoring annually.

(3) If monitoring results do not detect the presence of any PFAS contaminants, the public water system shall conduct continued monitoring every two years.

(c) If monitoring results under subsection (b) of this section confirm the presence of any PFAS contaminants individually or in combination in excess of the Vermont Department of Health advisory level of 20 parts per trillion, the Agency of Natural Resources shall direct the public water system to implement treatment or other remedy to reduce the levels of PFAS contaminants in the drinking water of the public water system below the Vermont Department of Health advisory level.

(d) During the period of treatment or implementation of another remedy under this section to reduce the levels of PFAS contaminants in the drinking water of the public water system below the Vermont Department of Health advisory level, the public water system shall provide potable water through other means to all customers or users of the system. The requirement for a public water system to provide potable water to customers and users of the systems through other means shall cease when monitoring results indicate that the levels of PFAS contaminants in the drinking water of the public water system are below the Vermont Department of Health advisory level.

(e) The Secretary may enforce the requirements of this section under 10 V.S.A. chapter 201. A person may appeal the acts or decisions of the Secretary of Natural Resources under this section under 10 V.S.A. chapter 220.

*Sec 3. DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
WATER SUPPLY RULE; MAXIMUM CONTAMINANT LEVEL  
FOR PER AND POLYFLUOROALKYL SUBSTANCES;  
STANDARD FOR PER AND POLYFLUOROALKYL  
SUBSTANCES; CLASS OR SUBCLASSES*

(a) On or before February 1, 2020, the Secretary of Natural Resources shall file under 3 V.S.A. § 841 a final proposed rule with the Secretary of State and the Legislative Committee on Administrative Rules regarding adoption of the Vermont Department of Health's health advisory level for perfluorooctanoic acid, perfluorooctane sulfonic acid, perfluorohexane sulfonic acid, perfluorononanoic acid, and perfluoroheptanoic acid as a maximum contaminant level (MCL) under the Department of Environmental Conservation's Water Supply rule.

(b) On or before August 1, 2020, the Secretary of Natural Resources shall initiate a public notice and comment process by publishing an advance notice of proposed rulemaking regarding the regulation under the Department of Environmental Conservation's Water Supply Rule of per and polyfluoroalkyl (PFAS) compounds as a class or subclasses.

(c) On or before March 1, 2021, the Secretary of Natural Resources shall either:

(1) file a proposed rule with the Secretary of State regarding the regulation of PFAS compounds under the Department of Environmental Conservation's Water Supply Rule as a class or subclasses; or

(2) publish a notice of decision not to regulate PFAS compounds as a class or subclasses under the Department of Environmental Conservation's Water Supply Rule that includes, at a minimum, an identification of all legal, technical, or other impediments to regulating PFAS compounds as a class or subclasses and a detailed response to all public comments received.

(d) If the Secretary of Natural Resources proposes a rule pursuant to subsection (c), on or before December 31, 2021, the Secretary of Natural Resources shall file a final rule with the Secretary of State regarding the regulation of PFAS compounds as a class or subclasses under the Department of Environmental Conservation's Water Supply Rule.

**Sec. 4. REPEAL; INTERIM DRINKING WATER MONITORING; PFAS  
CONTAMINANTS**

Sec. 2 (interim drinking water monitoring; PFAS contaminants) shall be repealed on the effective date of the rules required under Sec. 3(a) of this act.

**Sec 5. VERMONT WATER QUALITY STANDARDS; PER AND  
POLYFLUOROALKYL SUBSTANCES**

(a) On or before January 15, 2020, the Secretary of Natural Resources shall publish a plan for public review and comment for adoption of surface water quality standards for per and polyfluoroalkyl substances (PFAS) that shall include, at a minimum, a proposal for standards for:

(1) perfluorooctanoic acid; perfluorooctane sulfonic acid; perfluorohexane sulfonic acid; perfluorononanoic acid; and perfluoroheptanoic acid; and

(2) the PFAS class of compounds or subgroups of the PFAS class of compounds.

(b) On or before January 1, 2022, the Secretary of Natural Resources shall file a final rule with the Secretary of State to adopt surface water quality

standards for, at a minimum, perfluorooctanoic acid, perfluorooctane sulfonic acid, perfluorohexane sulfonic acid, perfluorononanoic acid, and perfluoroheptanoic acid.

*Sec 6. INVESTIGATION OF POTENTIAL SOURCES OF PER AND POLYFLUOROALKYL SUBSTANCES CONTAMINATION*

(a) On or before May 1, 2019, the Secretary of Natural Resources shall publish a plan for public review and comment to complete a statewide investigation of potential sources of per and polyfluoroalkyl substances (PFAS) contamination. As part of this investigation, the Secretary shall conduct a pilot project at public water systems to evaluate PFAS that are not quantified by standard laboratory methods using a total oxidizable precursor assay or other applicable analytical method to evaluate total PFAS. The Secretary of Natural Resources shall initiate implementation of the plan not later than July 1, 2019.

(b) On or before December 1, 2019, all public community water systems and all nontransient noncommunity water systems shall conduct monitoring for the maximum number of PFAS detectable from standard laboratory methods.

*Sec 7. 3 V.S.A. § 2810 is added to read:*

*§ 2810. INTERIM ENVIRONMENTAL MEDIA STANDARDS*

The Secretary of Natural Resources may require any entity permitted by the Agency of Natural Resources to monitor the operation of a facility, discharge, emission, or release for any constituent for which the Department of Health has established a health advisory. The Secretary may impose conditions on a permitted entity based on the health advisory if the Secretary determines that the operation of the facility, discharge, emission, or release may result in an imminent and substantial endangerment to human health or the natural environment. The authority granted to the Secretary under this section shall last not longer than two years from the date the health advisory was adopted.

*Sec. 8. 10 V.S.A. § 8003 is amended to read:*

*§ 8003. APPLICABILITY*

*(a) The Secretary may take action under this chapter to enforce the following statutes and rules, permits, assurances, or orders implementing the following statutes, and the Board may take such action with respect to subdivision (10) of this subsection:*

*\* \* \**

*(28) 30 V.S.A. § 255, relating to regional coordination to reduce greenhouse gases; and*

(29) 10 V.S.A. § 1420, relating to abandoned vessels; and

(30) 3 V.S.A. § 2810, relating to interim environmental media standards.

\* \* \*

Sec. 9. 10 V.S.A. § 8503 is amended to read:

§ 8503. APPLICABILITY

(a) This chapter shall govern all appeals of an act or decision of the Secretary, excluding enforcement actions under chapters 201 and 211 of this title and rulemaking, under the following authorities and under the rules adopted under those authorities:

\* \* \*

(2) 29 V.S.A. chapter 11 (management of lakes and ponds).

(3) 24 V.S.A. chapter 61, subchapter 10 (relating to salvage yards).

(4) 3 V.S.A. § 2810 (interim environmental media standards).

\* \* \*

Sec. 10. ENVIRONMENTAL MEDIA STANDARDS; GUIDANCE; PLAN

(a) On or before January 1, 2020, the Secretary of Natural Resources shall publish a guidance document for public review and comment that sets forth detailed practices for implementation by the Secretary of Natural Resources of interim environmental media standards authority under 3 V.S.A. § 2810.

(b) On or before January 1, 2020, the Secretary of Natural Resources shall publish for public review and comment a plan to collect data for contaminants in drinking water from public community water systems and all nontransient noncommunity water systems for which a health advisory has been established but no maximum contaminant level has been adopted.

Sec. 11. AGENCY OF NATURAL RESOURCES CONTAMINANTS OF  
EMERGING CONCERN PILOT PROJECT

On or before January 15, 2020, the Agency of Natural Resources shall submit to the House Committees on Natural Resources, Fish, and Wildlife and on Commerce and Economic Development and the Senate Committees on Natural Resources and Energy and on Economic Development, Housing and General Affairs a report regarding the management at landfills of leachate containing contaminants of emerging concern (CECs). The report shall include:

(1) the findings of the leachate treatment evaluation conducted at any landfill in Vermont;

(2) the Agency of Natural Resources' assessment of the results of landfill leachate evaluations; and

(3) the Agency of Natural Resources' recommendations for treatment of CECs in leachate from landfills, including whether the State should establish a pilot project to test methods for testing or managing CECs in landfill leachate.

Sec. 12. EFFECTIVE DATE

This act shall take effect on passage.