‘Forever Chemicals’ in Food Packaging: A View from the U.S.

Jomarie Garcia
Senior Regulatory Research Analyst
North America

12 February 2019
Who is Verisk 3E

Intelligent compliance. Sustainable progress. A safer world.

Strategic Anchors

Unique and intelligent data assets
We are data aggregators and content providers

Deep domain expertise
We are global regulatory and decision support experts

Premium customer experience
Our dedication and commitment is unwavering

Embedded into customer workflows
We are technology and analytical providers committed to partnering and growing with customers
Overview

■ How per- and polyfluoroalkyl substances (PFAS) exposure became a national priority in the U.S.

■ Current U.S. legislative action on PFAS concerning food packaging

■ Case studies: Quest for safer alternatives to PFAS
  ✓ Washington State
  ✓ Maine
PFAS Profile

- Routes of exposure
- Examples of applications
PFAS Profile

Figure 1.
Family Tree of Per- and polyfluoroalkyl Substances

Source: The Family Tree of Per- and Polyfluoroalkyl Substances (PFAS) for Environmental Health Professionals.
PFAS Exposure Routes

Examples of PFAS Commercial Applications

- Non-stick cookware
- Fast food packaging
- Fire fighting foam
- Personal care
So the larger question is…

How does food packaging contribute to the PFAS contamination?

Source: M. Arora for CNN. From filthy to fabulous: Mumbai beach undergoes dramatic makeover.
PFAS, A National Priority

- U.S. EPA
- U.S. FDA
U.S. EPA’s Comprehensive PFAS Action Plan

The EPA is leading the effort to understand PFAS and reduce risks associated with PFAS.

- Priority actions
  - Address regulatory uncertainty for PFAS in drinking water
  - Hold responsible parties accountable for releasing PFAS into the environment (enforcement)
  - Increase awareness of the potential human health impacts of other PFAS
  - Review new PFAS via TSCA SNURs

- Short-term actions
  - Establish a clearinghouse of chemical information regarding PFAS
  - Develop and validate test methods for PFAS
  - Enforcement activities

- Long-term actions
  - Reduce releases of PFAS into the environment

U.S. FDA Continues to Lead National Efforts to Estimate Dietary Exposure to PFAS through Food

Legislation of PFAS in the U.S.
H.R. 2827 | Keep Food Containers Safe from PFAS Act of 2019

116th CONGRESS
1st Session

H. R. 2827

To amend the Federal Food, Drug, and Cosmetic Act to deem any perfluorooctyl or polyfluoroalkyl substance used as a food contact substance to be unsafe and therefore treated as adulterated under such Act, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES
MAY 17, 2019

Mrs. Bigelow introduced the following bill, which was referred to the Committee on Energy and Commerce.

A BILL

To amend the Federal Food, Drug, and Cosmetic Act to deem any perfluorooctyl or polyfluoroalkyl substance used as a food contact substance to be unsafe and therefore treated as adulterated under such Act, and for other purposes.

1 Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,
2 SEC. 1. SHORT TITLE. This Act may be cited as the “Keep Food Containers Safe from PFAS Act of 2019”.

History

MAY 17, 2019
Introduced
Bills and resolutions are referred to committees which debate the bill before possibly sending it on to the whole chamber.

JAN 29, 2020
Considered by Health
A committee held a hearing or business meeting about the bill.

According to govtrack.us, H.R. 2827 has 4% chance of being enacted based on the predictive models of Skopos Lab.
Actions to Amend Federal Law Concerning Food Packaging

**H.R. 2827 | Keep Food Containers Safe from PFAS Act of 2019**

- Introduced to the House of Representatives on 17 May 2019 by Debbie Dingle (D).
- Seeks to amend the Federal FD&C Act to deem PFAS to be unsafe when use in food packaging (adulteration).

**S. 3227 | Prevent Future American Sickness Act of 2020**

- Introduced to the Senate on 28 January 2020 by Bernie Sanders (D).
- Seeks to amend to the Federal FD&C Act, CERCLA and the Clean Air Act to deem PFAS as:
  - An adulterated substance when used in food packaging (Federal FD&C Act);
  - A hazardous substances (CERCLA); and
  - A hazardous air pollutant (Clean Air Act).
- Establish a grant program to address contamination of PFAS in drinking water; and prohibit the incineration of PFAS, re: firefighting foams.

Source(s): H.R. 2827; S. 3227.
Case Studies: Quest for Safer Alternatives to PFAS

- Washington State
- Maine
Washington State
Purpose

- To reduce toxic packaging and solid packaging waste posing a hazard to public health, safety, and the environment.

Ban on food packaging to which PFAS chemicals have been intentionally added in any amount.

- Food packaging is defined by the act as “a package or packaging component that is intended for direct food contact.
  - Paper
  - Paperboard
  - Materials originally derived from plant fibers

Business impact

- Manufacturers will be required to develop a compliance certificate stating that the package or packaging component is compliant.

Source: An Act Relating to the Use of Perfluorinated Chemicals in Food Packaging; Amending RCW 70.95G.010 and 70.95G.040; and Adding a New Section to Chapter 70.95G RCW.
**Definition of ‘safer alternatives’**

“alternative substance or chemical, demonstrated by an alternatives assessment, that meets improved hazard and exposure consideration and can be practicably and economically substituted for the original chemical.”

**QUEST FOR SAFER ALTERNATIVES**

- **PFAS in food packaging**
- **ID safer alternatives**
- **Alternatives assessment**
- **Findings published (Washington Register)**
- **Safer alternatives available**
- **Ban on PFAS to take effect**

Source: An Act Relating to the Use of Perfluorinated Chemicals in Food Packaging; Amending RCW 70.95G.010 and 70.95G.040; and Adding a New Section to Chapter 70.95G RCW.
Evaluate less toxic chemicals and nonchemical alternatives to replace the use of PFAS.

Follow the guidelines for alternatives assessment issued by the interstate chemicals clearinghouse.

Alternatives assessment must include, at a minimum, evaluation of chemical hazards, exposure, performance, availability and cost.

Source: An Act Relating to the Use of Perfluorinated Chemicals in Food Packaging; Amending RCW 70.95G.010 and 70.95G.040; and Adding a New Section to Chapter 70.95G RCW.
An Act Relating to the Use of Perfluorinated Chemicals in Food Packaging (ESHB 2658 to amend RCW 70.95G.010 and .040)

**DEADLINES**

**Washington DoE** to publish findings of safer alternatives available for PFAS in the *Washington State Register*  
**January 2020**

Effective date of the ban on food packaging containing PFAS, *if safer alternatives were identified by 1 January 2020*  
**January 2022**

**Washington DoE** to review and report on safer alternatives on this year and each year following  
**January 2021**

Alternatives identified in 2021 will trigger a ban in 2023 (**effective 2 years after**).  
**January 2023**

*Note: The prohibition would only take effect after Washington DoE has determined that safer alternatives are available.*  
Source: [An Act Relating to the Use of Perfluorinated Chemicals in Food Packaging; Amending RCW 70.95G.010 and 70.95G.040; and Adding a New Section to Chapter 70.95G RCW](https://app.leg.wa.gov/billsummary?BillNumber=ESHB2658&Year=2020).
Maine | An Act to Protect the Environment and Public Health by Further Reducing Toxic Chemicals in Packaging (L.D. 1433 (H.P. 1043))

■ Purpose
  ✓ To reduce the toxicity of packaging and packaging waste without impeding or discouraging the expanded use of post-consumer materials.

■ Ban on the intentional use of the following, other than incidental presence, in food packaging*
  ✓ Heavy metals
    – Lead
    – Mercury
    – Cadmium
    – Hexavalent chromium
  ✓ Chemicals of concern
    – PFAS
    – Phthalates

■ Disclosure requirements prospectively to apply to chemicals of concern in food packaging

Note: According to the act, food packaging includes packaging designed for direct food contact.
Source: An Act to Protect the Environment and Public Health by Further Reducing Toxic Chemicals in Packaging
Maine | An Act to Protect the Environment and Public Health by Further Reducing Toxic Chemicals in Packaging (L.D. 1433 (H.P. 1043))

Source: An Act to Protect the Environment and Public Health by Further Reducing Toxic Chemicals in Packaging
Maine

An Act to Protect the Environment and Public Health by Further Reducing Toxic Chemicals in Packaging (L.D. 1433 (H.P. 1043))

Safer Alternatives

■ Before Maine DEP authorizes a ban on food packaging containing PFAS, the department will need to determine first whether a safer alternatives is available

Criteria for ‘availability’
- Sufficient quantity
- Comparable cost
- Performance

Industry Concerns

■ Equal treatment for all PFAS and broad category of substances regardless of their toxicity and concentration in the package

Definition of PFAS as described in the act
“any member of the class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom.”

■ Lack of credible science and actual exposure data to support this action

■ Duplicative regulatory action since the FDA already regulates PFAS in food packaging

Source(s):
EXEMPTIONS

- Food packaging manufactured before 1992
- Alcoholic beverages bottled before 1992
- Businesses with an annual national sale below $1 bn
California | Actions on PFAS for Food Packaging Applications

Health Concerns

Ingredient disclosure
## Concluding Remarks

### U.S. FEDERAL

**Current** –

- U.S. EPA is targeting PFAS entering the environment and PFAS contamination.
- U.S. FDA is assessing the impacts of PFAS in food from environmental contamination, and reviewing authorized uses of PFAS for food contact applications.
- Legislators have introduced numerous bills seeking to deem the use of PFAS unsafe (adulteration) for food packaging applications nation-wide.

### U.S. STATES

**In general** –

- Almost every state is targeting PFAS either broadly or narrowly.

**Washington State** –

- The ban on PFAS is more defined compared to other states, *i.e.*, the ban is specific to PFAS used in paper food packaging in any amount.

**Maine** –

- The ban on PFAS seems subject to interpretation; the ban is broad and overreaching without clarity of its limits.
Businesses may expect national efforts to understand PFAS and reduce PFAS contamination to be materialized by the end of 2022.

Other U.S. states may also be expected to follow suit in regulating PFAS in food packaging as well as uses of PFAS for other applications.
Are PFAS Safe or Not, That is the Question!
Thank you for your time!

Jomarie Garcia
Senior Regulatory Research Analyst - North America
3E Research & Content Development
jgarcia@verisk3e.com