

What States Can Do to Protect Drinking Water, Wildlife and People From PFAS Chemicals





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For more than 30 years, Toxic-Free Future has used strong science and advocacy to get results, winning strong health protections for people and the environment, both locally and nationally.

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Safer States is a network of diverse environmental health coalitions and organizations in states around the country that work towards new state and national chemical policies that protect families, communities, and the environment from our society's heavy use of chemicals.

SaferStates.org



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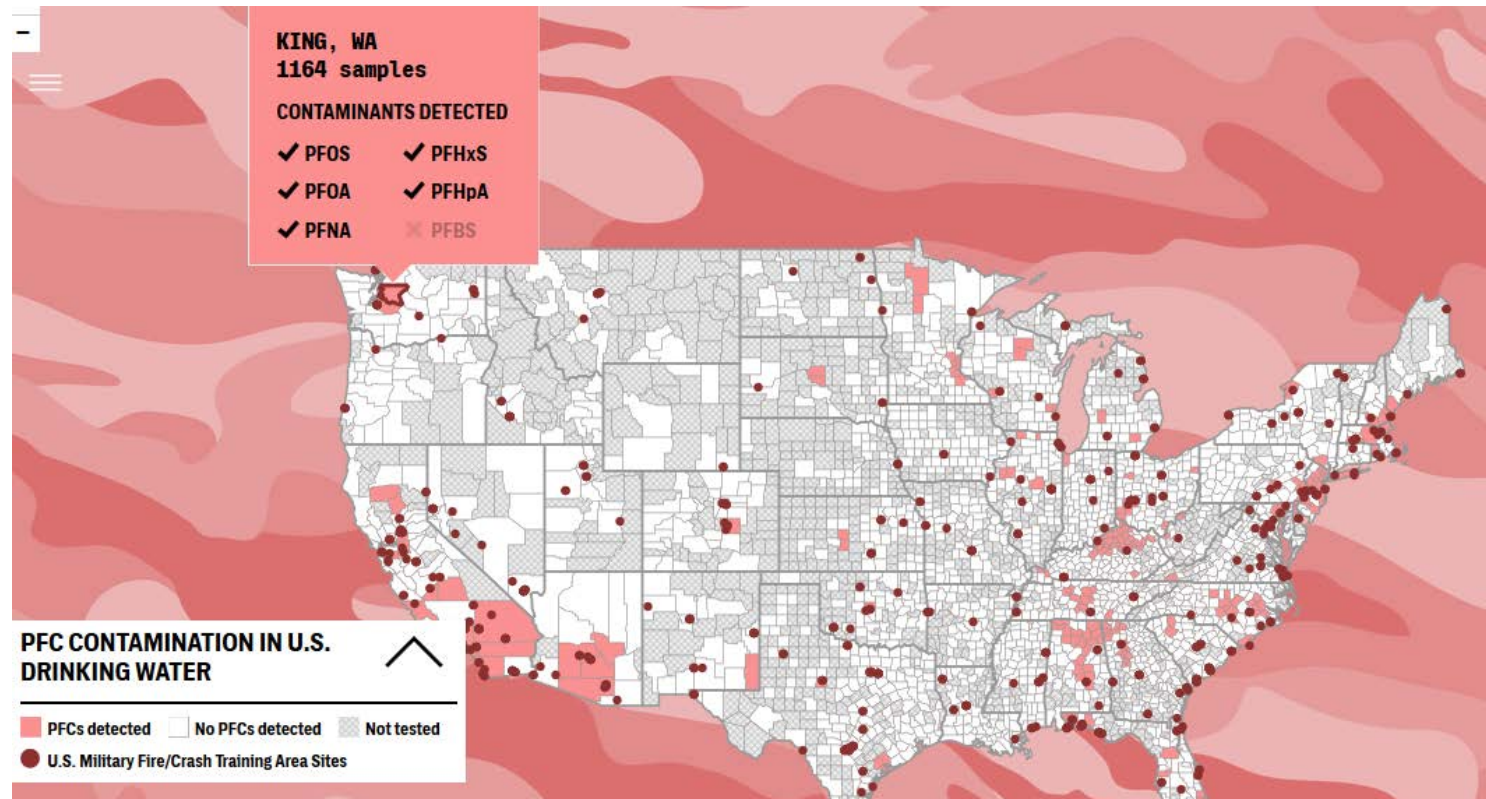


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PFASs: “Virtually Indestructible” Industrial Chemicals

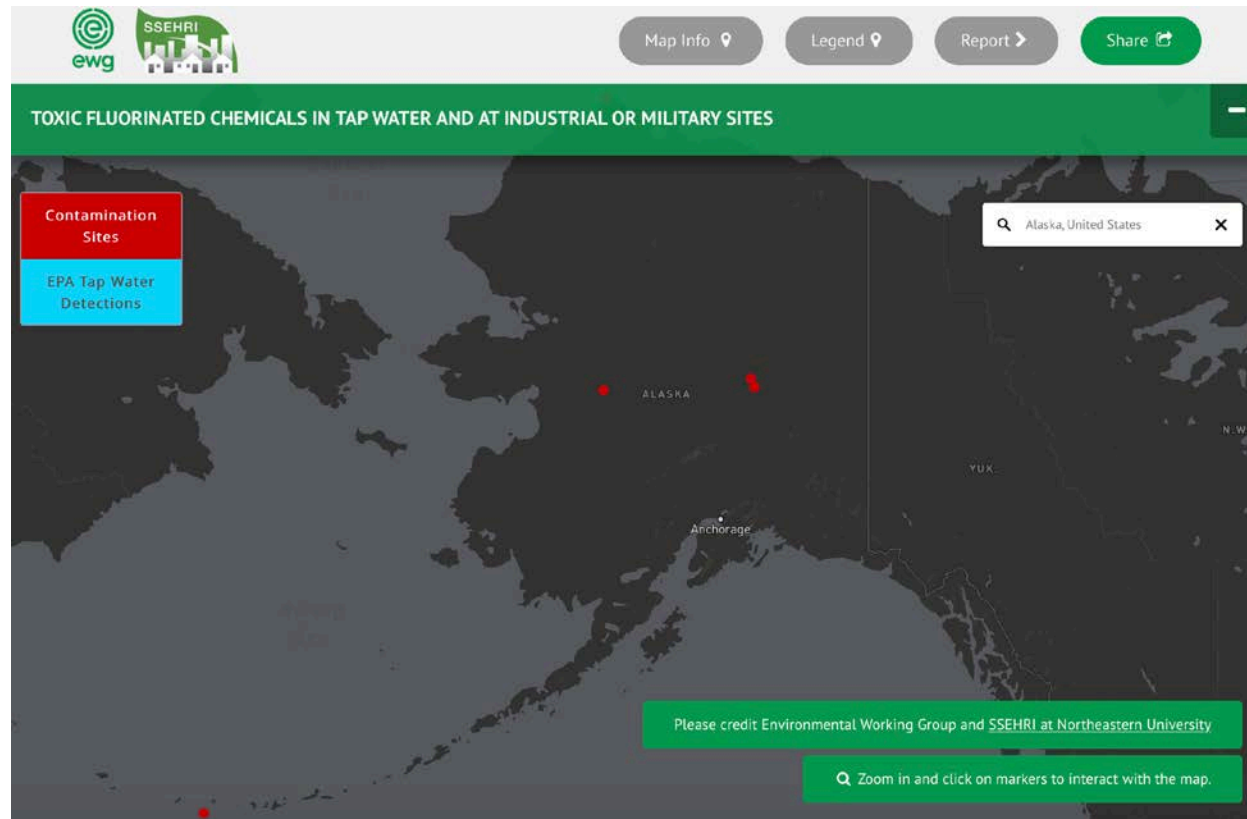


PFASs in Drinking Water of at Least 33 Million Americans, & Likely Up to 100 million Americans



Data on PFC drinking water contamination are collected under the Unregulated Contaminant Monitoring Rule (UCMR) for suspected contaminants for which the EPA has not established health-based standards under the Safe Drinking Water Act. The drinking water data in this map were taken from the October 2015 UCMR 3 data summary. In addition, the map shows 664 fire- or crash-training sites, identified by the Department of Defense, where a PFC-laced fire suppressant known as Aqueous Film-Forming Foam was used, often for decades. Not all of these sites have been tested for PFCs, but it is likely that all of them are contaminated. *Data visualization: Moiz Syed. Sources: EPA and Department of Defense.*

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PFAS in People and Environment

- PFAS in homes – house dust, drinking water, people.
- PFAS have been detected in many species, including salmon, ospreys, surface waters and freshwater lakes and rivers.



Profiles of PFAS Toxicity and Adverse Health Effects

- Liver and Metabolic toxicity
 - *Mouse*: enlarged and fatty liver, decreased [serum cholesterol](#), triglycerides
 - *Humans*: increased [serum cholesterol](#), uric acid
- Reproductive and Developmental Toxicity
 - *Mouse*: neonatal mortality, [low birth weight](#), [growth deficits](#), [developmental delays](#)
 - *Humans*: preeclampsia, [low birth weight and small size](#), [delayed onset of puberty](#)
- Tumor Induction
 - *Mouse*: liver, pancreas and [testes](#)
 - *Humans*: kidney and [testes](#)
- Immunotoxicity
 - *Mouse*: atrophy of thymus and spleen, [suppressed immune responses](#)
 - *Humans*: [reduced immune responses to vaccines in children](#)
- Endocrine Disruption
 - *Mouse*: reduced serum thyroid hormones
 - *Humans*: slight elevation of serum thyroid hormones
- Neurotoxicity
 - *Mouse*: a few reports of neuronal deficits and behavioral abnormalities
 - *Humans*: some reports of learning disability

Cost of PFAS Contamination

- Cleanup of 400 U.S. military installations may cost up to **\$2 billion**.
- MI is spending [\\$23.2 million](#) for costs associated with PFAS contamination at more than a dozen sites.
- MN costs associated with PFOA pollution from a 3M plant are an estimated \$5 billion. MN settled an [\\$850 million](#) lawsuit with 3M.
- AK: City of Fairbanks spent \$3 million help with contaminated drinking water.
- VT estimates providing clean water to residents in Bennington, VT, will cost up to \$40 million.



Experts Agree PFAS Are a Concern

“All PFASs share problematic properties with legacy long-chain PFOA and PFOS and could be considered “regrettable substitutions....State toxics reduction programs...should prioritize reduction of PFASs to catalyze movement to safer alternatives.”

- American Public Health Association Policy on Reducing Human Exposure to Highly Fluorinated Chemicals to Protect Public Health, November 2016

Experts Agree PFAS Are a Concern

“[W]e call on the international community to cooperate in limiting the production and use of PFASs and in developing safer nonfluorinated alternatives...We therefore urge governments... to enact legislation to require only essential uses of PFASs.”

- The Madrid Statement, signed in 2015
by over 200 leading scientists

Federal Government

Environmental Protection Agency

- PFOA Voluntary Stewardship Program involved 8 US based companies who agreed to voluntarily reduce emissions.
- There are no federally enforceable drinking water standards (MCL), cleanup standards, reporting requirements (TRI).
- The Toxic Substances Control Act fails to address PFAS as a class and many new PFAS were allowed to be manufactured and put into thousands of products without adequate health and safety testing.
- January 21, 2015 EPA **PROPOSED** a Significant New Use Rule (SNUR) to require manufacturers (including importers) and processors of PFOA and related chemicals (including as part of articles), to notify EPA at least 90 days before starting or resuming new uses of these chemicals in any products. **NEVER FINALIZED**
- On October 22, 2013, [EPA issued a rule requiring companies to report all new uses of certain PFOA-related chemicals as part of carpets.](#)

Federal Government

Food and Drug Administration

- In 2016 issued a regulation to stop the use of some PFAS in food contact materials, however 31 PFAS are approved for use.

Federal Aviation Administration

- Currently requires airports of a certain size to use AFFF firefighting foam that meets military specifications. Mil Spec requires PFAS foams. Steps taken by Congress this year to change this requirement. (<https://toxicfreefuture.org/congress-directs-faa-to-stop-requiring-toxic-firefighting-foams-at-airports/>)

Military

- Adopted new policies to reduce use of PFAS firefighting foams in training, however is still using new PFAS foams despite huge efforts and cost to cleanup old PFAS.
- Issued RFP to change Mil Spec and remove PFAS-foam requirements. Awarded to Jensen Hughes.

Opinion

OPINION

States Are Doing What Scott Pruitt Won't

By Sharon Lerner

Ms. Lerner has been reporting on the effects of this class of chemicals for more than two years.

April 21, 2018



Long before the advent of Mr. Trump, the federal response to this contamination crisis had been slow. Though the first reports of PFOA in drinking water are now two decades old, the Environmental Protection Agency and its administrator, Scott Pruitt, have yet to set enforceable limits on it. In 2006, [DuPont and seven other companies](#) that manufactured or used PFOA agreed to phase it out by 2015, along with other long-chain perfluorinated compounds. The agency did set drinking water health advisory limits for PFOA and PFOS in 2016, but those can't be used to enforce cleanups — nor do the limits prevent further use of products containing any of the chemicals in their class.

PFAS Pollution Prevention!



Interim Chemical Action Plan for Per- and Polyfluorinated Alkyl Substances

April 2018
Publication 18-04-005

PFAS Chemical Action Plan

PFAS Chemical Action Plan Advisory Committee

This advisory committee will help the Departments of Ecology and Health develop a Chemical Action Plan (CAP) for Per- and Poly-Fluorinated Alkyl Substances (PFAS).

Subscribe to the [CAP listserv](#) to receive updates.

The Interim PFAS CAP is posted.

The [Interim PFAS CAP](#) is available for review. Comments on this document will be accepted until May 31, 2018. Revisions will be incorporated into the DRAFT PFAS CAP (see timeline below). A summary is provided in the [PFAS Chemical Action Plan Focus Sheet](#) (April 2018). Submit comments to Ecology and Health through the online [E-Comments](#) system.

Ecology and Health will host a [webinar](#) on June 6 to review the Interim PFAS CAP, discuss agency activities, and other PFAS issues.

Links to the 2017 draft chapters (posted below): [Chemistry](#), [Health](#), [Environment](#), [Uses](#), [Regulations](#), [Biosolids](#), and [Ecotoxicology](#). Comments on these 'chapters' are available in the documents posted at the bottom of this site. These 'chapters' will be updated and published with the Draft PFAS CAP (Spring 2019).

PFAS CAP TIMELINE

June 6, 2018 [webinar](#)

Discuss interim document/comments, Ecology and Health work underway, review PFAS issues/options/questions

Fall 2018 (October) in-person meeting (webinar option)

Review gathered data, update on agency work and other data/resources, identify recommendations for the Draft CAP.

Spring 2019 post the Draft PFAS CAP (will include updated "chapters")

Advisory Committee review and comment

Official 60-day public review period – with public meetings

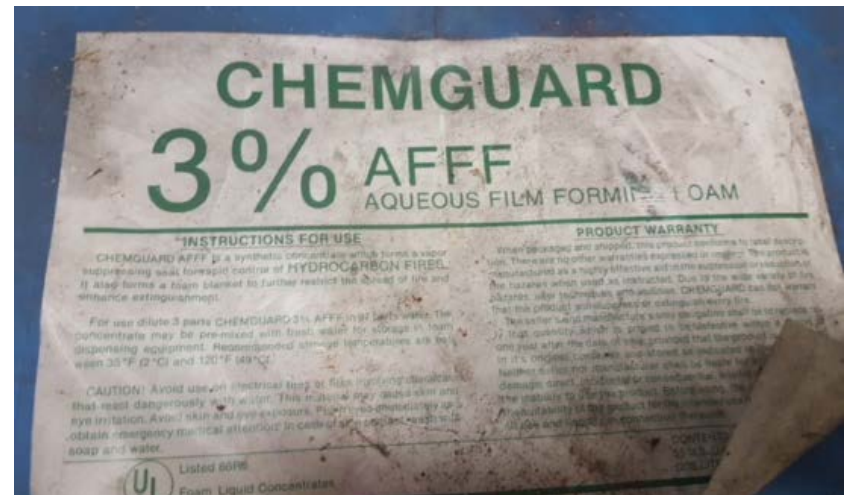
Fall 2019 finalize PFAS CAP

Advisory Committee meeting to review comments on the Draft

Washington Leads: First-In-Nation Restrictions on PFAS in Firefighting Foam and Food Packaging



PFASs in Class B Firefighting Foams Identified as Large Source



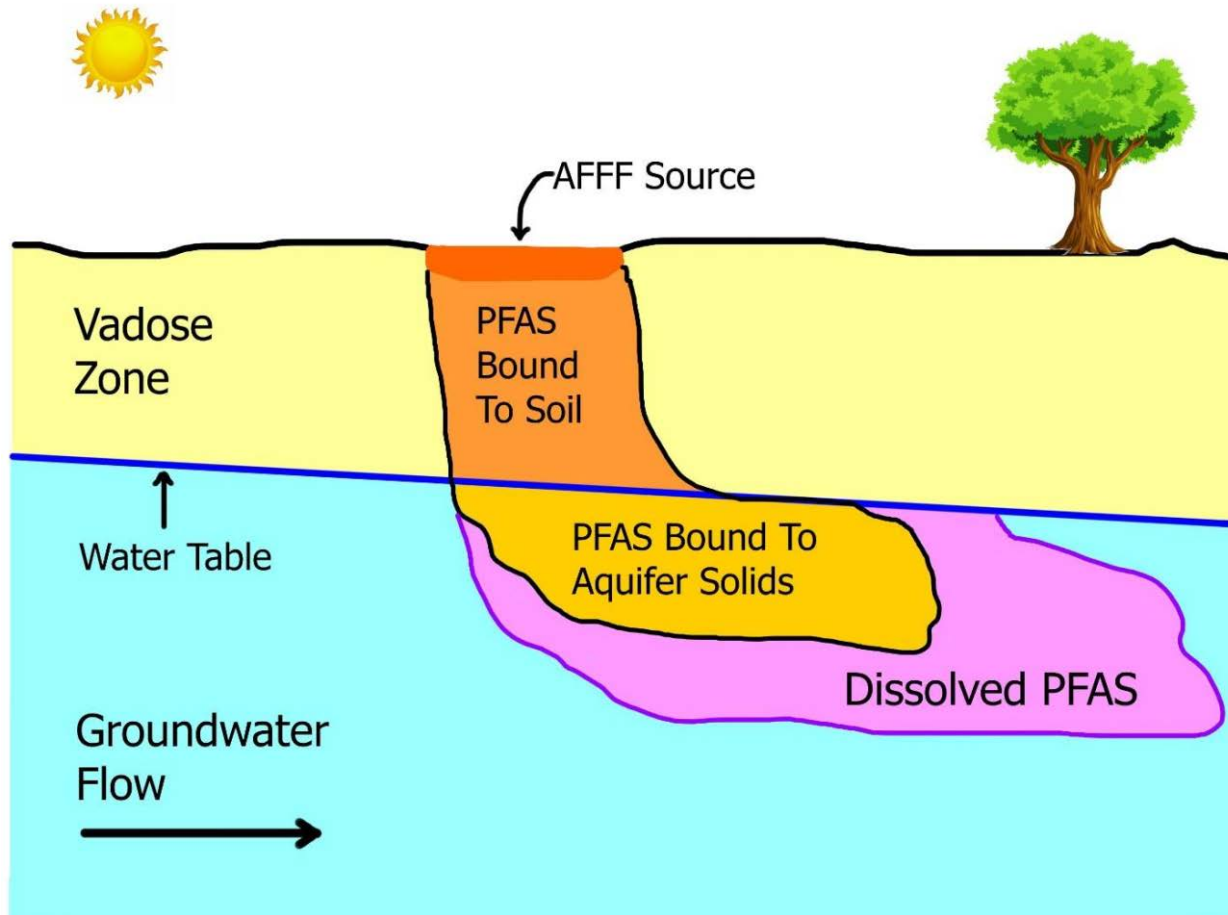
Chemical Industry
Developed as Solution to
Navy Fire/Bomb Explosions

3M



04/19/2008

PFAS Moves through Environment



SOURCE: Washington State Department of Health

Fire Fighters Highly Exposed



- Training and Use
- Testing of Equipment
- Gear

Cancer is Leading Cause of Death of Firefighters

- Testicular cancer (102% greater risk)
- Multiple myeloma (53% greater risk)
- Non-Hodgkin lymphoma (51% greater risk)
- Skin cancer (39% greater risk)
- Prostate cancer (28% greater risk)
- Malignant melanoma (32% greater risk)
- Brain cancer (32% greater risk)
- Rectum (29% greater risk)
- Stomach (22% greater risk)
- Colon cancer (21% greater risk)

PFAS Health Concerns

- Kidney and **testicular cancer**
- Hormone disruption
- Liver toxicity
- Harm to the immune system



FLUORINE-FREE FIREFIGHTING FOAMS (3F) VIABLE ALTERNATIVES TO FLUORINATED AQUEOUS FILM-FORMING FOAMS (AFFF)

**Independent Expert Panel Convened by IPEN
Stockholm Convention POPRC-14
Rome**

September 2018

https://ipen.org/sites/default/files/documents/IPEN_F3_Position_Paper_POPRC-14_12September2018d.pdf

2018 New Law: First-In-Nation Restrictions on PFAS in Firefighting Foam and Disclosure for Turnout Gear



**Washington State
Council of Fire Fighters**



New Law: First-In-Nation Restrictions on PFAS in Firefighting Foam

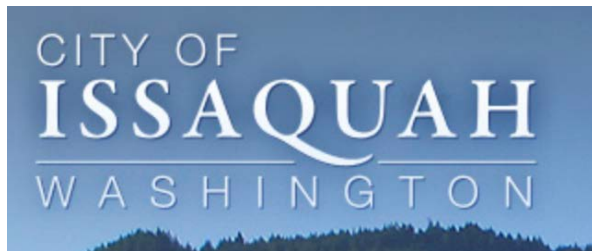
- Prohibits the use of PFAS-containing firefighting foams for training purposes beginning on July 1, 2018.
- Prohibits the sale of PFAS-containing firefighting foams for use in Washington state beginning on July 1, 2020, unless the use for which it is intended is required by federal law such as at airports, or by an oil refinery, oil terminal, or chemical plant for firefighting at those facilities.
- Requires that any manufacturer of PFAS-firefighting foam recall their product and reimburse retailers or other purchasers once the ban on sale is in effect.
- Requires anyone selling firefighting gear containing PFAS chemicals to notify the buyer.

Key Partner: Michael White, Washington State Council of Fire Fighters



The Washington State Council of Fire Fighters (WSCFF) was founded on September 1, 1939, and represents 130 affiliated local fire fighter unions and more than 6900 affiliated members of the [International Association of Fire Fighters](#) (IAFF) within the state.

Other Supporters



PFAS in Food Packaging





PFAS CHEMICALS MOVE FROM FOOD PACKAGING



TO FOOD



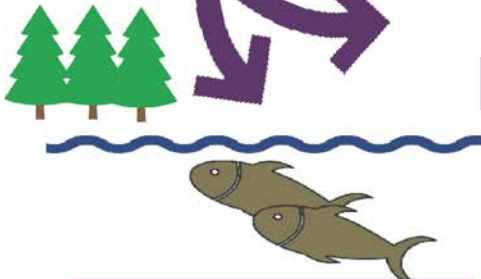
TO CROPS



TO PEOPLE



TO LANDFILLS AND COMPOST



TO THE ENVIRONMENT

Safer Chemicals Healthy Families & Toxic-Free Future

PFAS in Food Packaging Report (Dec 2018)

Results

The study tested packaging from top grocery chains Ahold Delhaize (parent of Food Lion, Stop and Shop, and Hannaford); Albertsons; Kroger; Trader Joe's; and Whole Foods Market (Amazon).

RESULTS OF SCREENING RETAILER FOOD-CONTACT MATERIALS FOR LIKELY PFAS TREATMENT

ITEM CATEGORY	Ahold Delhaize	Albertsons	Kroger	Trader Joe's	Whole Foods (Amazon)	TOTAL BY PRODUCT CATEGORY
Take-out container		0/2	1/1		4/5	5/8
Bakery or deli paper	1/6	1/7	1/11	0/6	1/8	4/38
Single-use plate	1/3	0/2	0/1	0/1		1/7
Tray for cook-at-home food	0/1	0/1	0/1	0/3	0/2	0/8
Baking or cooking supplies	0/4	0/5	0/4	0/2	0/2	0/17
TOTAL BY RETAILER	2/14	1/17	2/18	0/12	5/17	10/78

<https://toxicfreefuture.org/science/research/take-out-toxics-pfas-chemicals-in-food-packaging/>

Market Movement and Government Procurement



PFAS-Free Alternatives

Material Category	Bowls	Take-out & Soup Containers	Plates	Clamshells	Trays, Boats, & Scoops	Deli, & Portion Cups	Bags, Wrappers, & Liners
PLA (biodegradable plastic)	X		X	X	X	X	
Bamboo	X		X				
Palm Leaf	X		X				
Uncoated Paper	X		X			X	
PLA Coated Paper		X			X		
Clay Coated Paper			X		X		
BioWax Coated Paper							X
Coated Paper (Unknown)	X	X	X				X
Polyethylene Coated Paper		X			X		

<https://www.cleanproduction.org/resources/entry/pfas>



WA New Law: First-In-Nation Restrictions on PFAS in Food Packaging

- Bans the use of PFAS chemicals in paper food packaging, like microwave popcorn bags, sandwich and butter wrappers, and french fry boxes, on January 1, 2022, as long as the Department of Ecology identifies that safer alternatives to PFASs are available by January 1, 2020.
- If Ecology is not able to identify a safer alternative by January 1, 2020, then the ban does not go into effect and Ecology must review the availability of alternatives every year.
- Once Ecology identifies a safer alternative, the ban goes into effect 2 years after the alternatives are identified.

Supporters of PFAS Packaging Bill





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