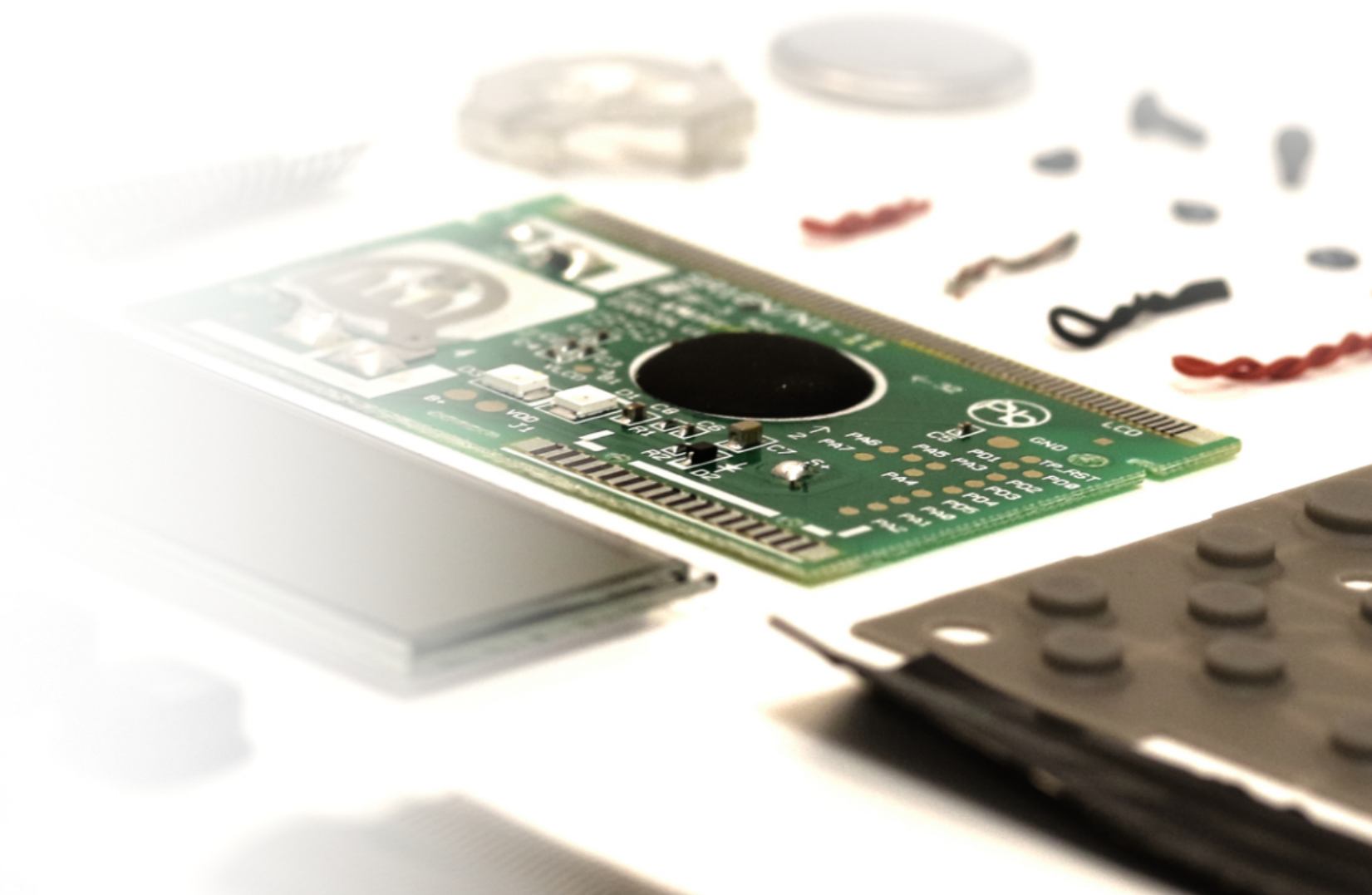


Webinar - Global Tour of PFAS Regulation

Where is this all going?

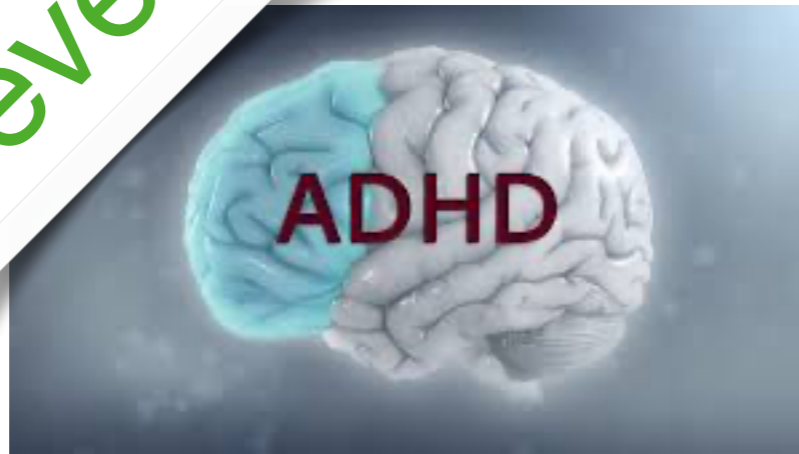
Presented by:
Bruce Calder
VP Consulting

December 4, 2024



What does Claigan Environmental do?

Prevent



Prevent



Trace



TIN



TANTALUM



TUNGSTEN



GOLD

Conflict Minerals

To the warlords
in the Congo

Claigan Environmental



Consulting



Testing



Open Source Intelligence

Claigan Environmental

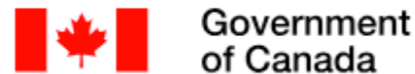
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Claigan Lunch and Learn Series

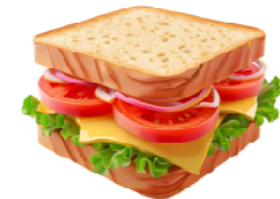
- [Claigan Youtube](#)

•

Now for a Sneak Peek!

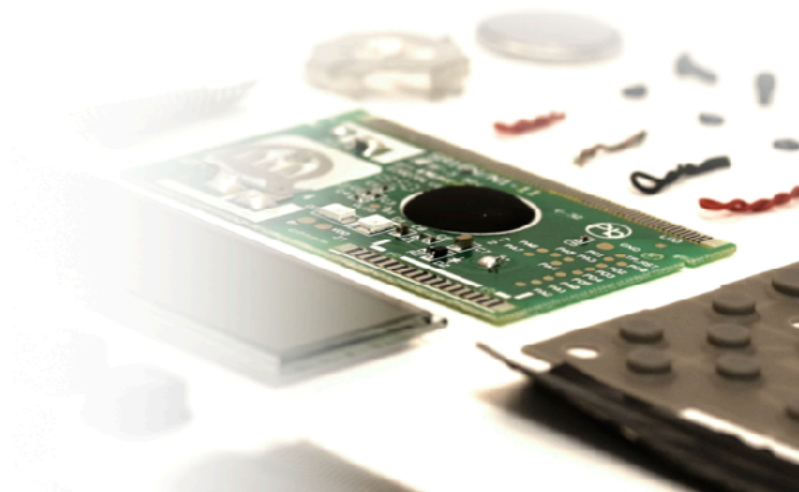
 Claigan
Journey. More Results.

The Ultimate Primer for EU RoHS
Claigan - Lunch & Learn



Presented by:
Bruce Calder
VP Consulting

November 28, 2024



Due Diligence - RoHS

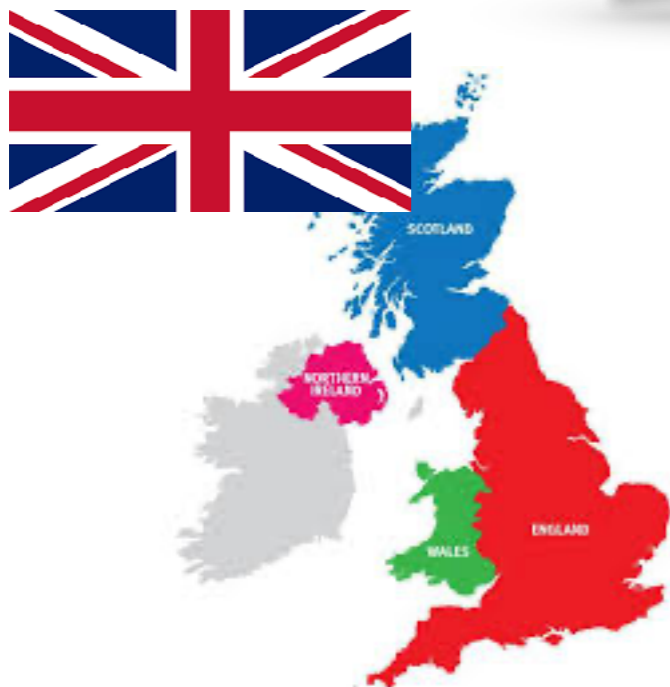
Does not exist!

Search for it in

RoHS Directive

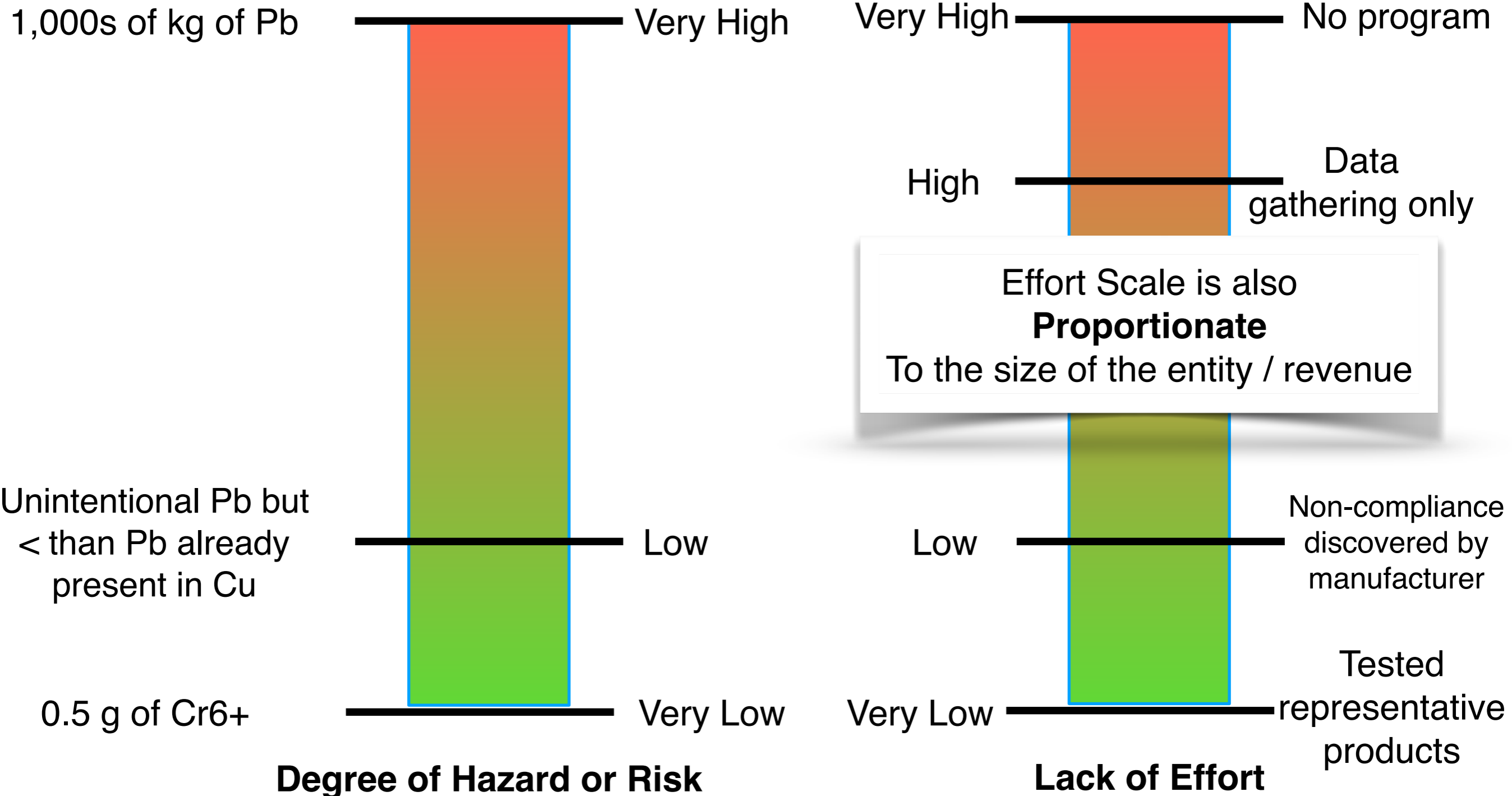
Proportionate

Decision 768/200



Proportionality

Two metrics



Claigan Conference

Forthcoming - Call for Papers

- **Call for Papers**

- Coming in January 2025

- **Conference**

- Tentatively End of September 2025

- **Tentative Highlights**

- Presentations by the Canadian government (PFAS, Plastics)
- Presentation by UN Stockholm Convention observers
- Wide range of industry presentations
- Tour of a Conflict-Free Gold Refinery
- Presentations by NGOs on restricted materials



Claigan Conference

Forthcoming - Call for Papers



- **Topics (Restricted Materials)**

- Upcoming regulation
- Common sources of restricted materials
- North American Regulation
- EU Regulation
- Asia Pacific Regulation
- Chemical exposure from products
- Managing compliance in a complex business
- Environmental, Social, and Governance (and Controversies)



Until web page set up, send to info@claigan.com

How we got here - PFAS

- **Up until now**
 - **What has been driving PFAS Regulation?**

Study links higher PFAS levels to 'superfund' sites and limited fresh-food access

Findings highlight how built environment in low-income neighborhoods presents multiple PFAS exposure routes



Perdue faces class action lawsuit over PFAS contamination in Maryland

by Christine Condon, The Baltimore Sun

Lawsuits

3M, Corteva, Chemours hit with class action over 'forever chemicals' in carpet

Texas farmers say sewage-based fertilizer tainted with "forever chemicals" poisoned their land and killed their livestock

Journalism



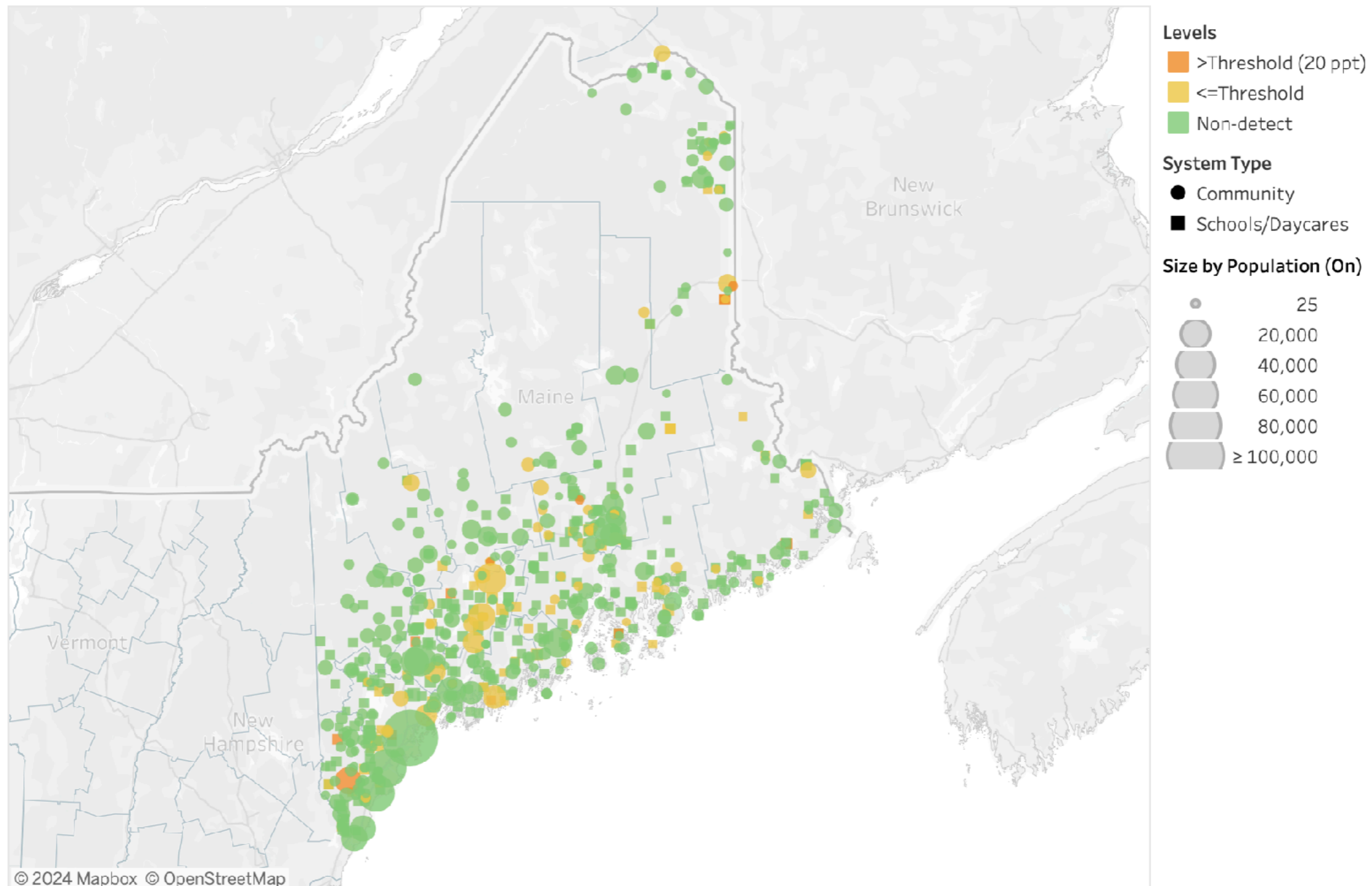
Movies and TV

Example Maine PFAS

- **Tracking PFAS in Maine**

PFAS - Sum of 6 | Above or Below Threshold of 20 ppt based on Most Recent Results

County: All | System Population Served: All | System Type: All

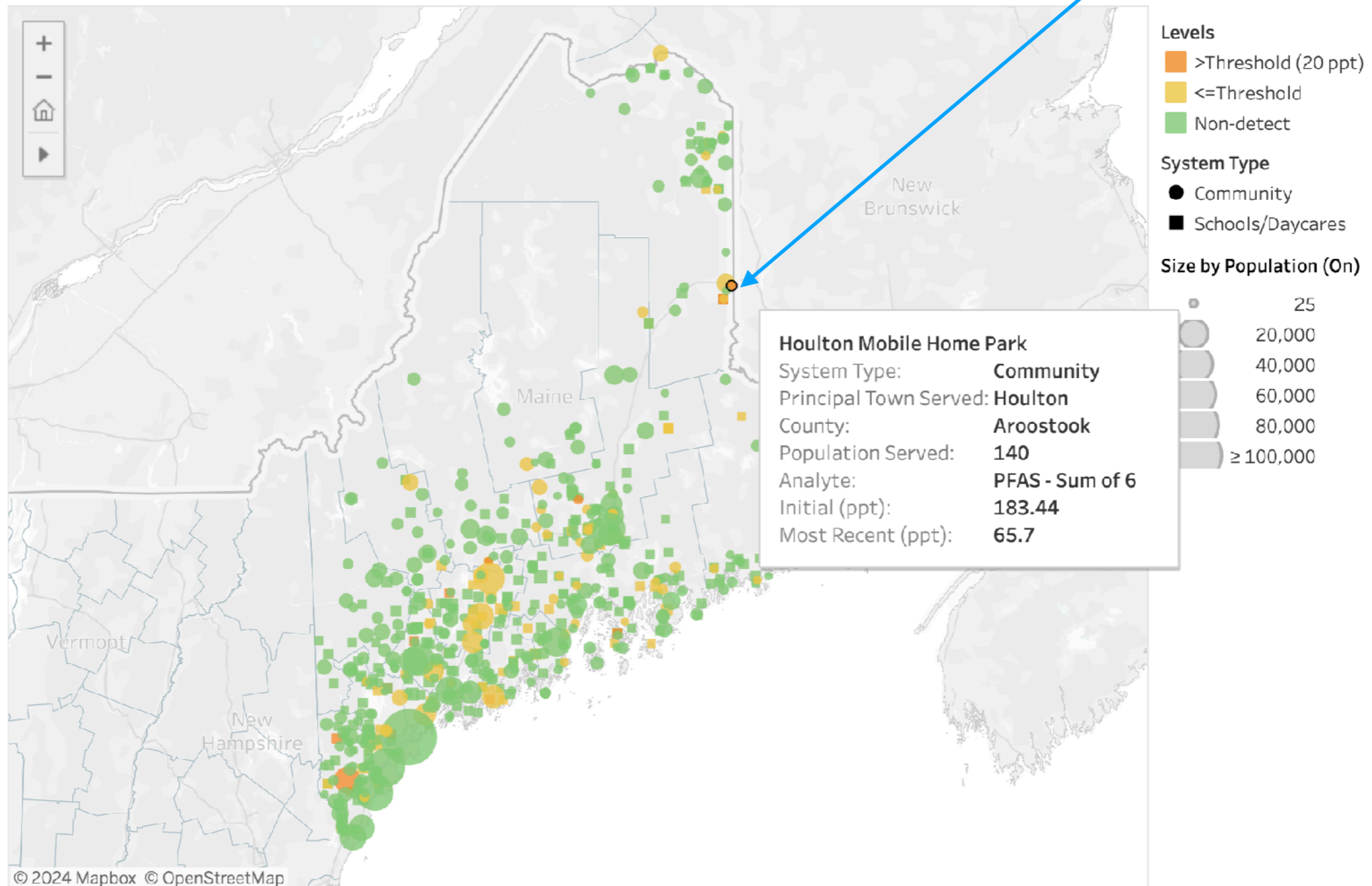


Example Maine PFAS

PFAS Contaminated Water

PFAS - Sum of 6 | Above or Below Threshold of 20 ppt based on Most Recent Results

County: All | System Population Served: All | System Type: All



ppt = parts per trillion. Sum of 6 PFAS = summed results for individual compounds PFOA, PFOS, PFHpA, PFNA, PFDA, and PFHxS.

Example

Maine PFAS

Houlton trailer park has relied on bottled water for 4 years after finding PFAS in its well

by **Joseph Cyr** • 3 years ago



Example Maine PFAS

- **Water test**

ler Park - Maine

Surfactant

Fire Fighting Foam

16.2 ppt
1 ppt

NO LEGAL LIMIT

[DETAILS](#)

Not Pulp and Paper

Potential Effect:

62x

EWG'S HEALTH GUIDELINE

THIS UTILITY	62.0 ppt
EWG HEALTH GUIDELINE	1 ppt
LEGAL LIMIT	10 ppt

[DETAILS](#)

Potential Effect:

71x

EWG'S HEALTH GUIDELINE

THIS UTILITY	70.6 ppt
EWG HEALTH GUIDELINE	1 ppt
PROPOSED LEGAL LIMIT	4 ppt

[DETAILS](#)

Potential Effect: cancer

14x

EWG'S HEALTH GUIDELINE

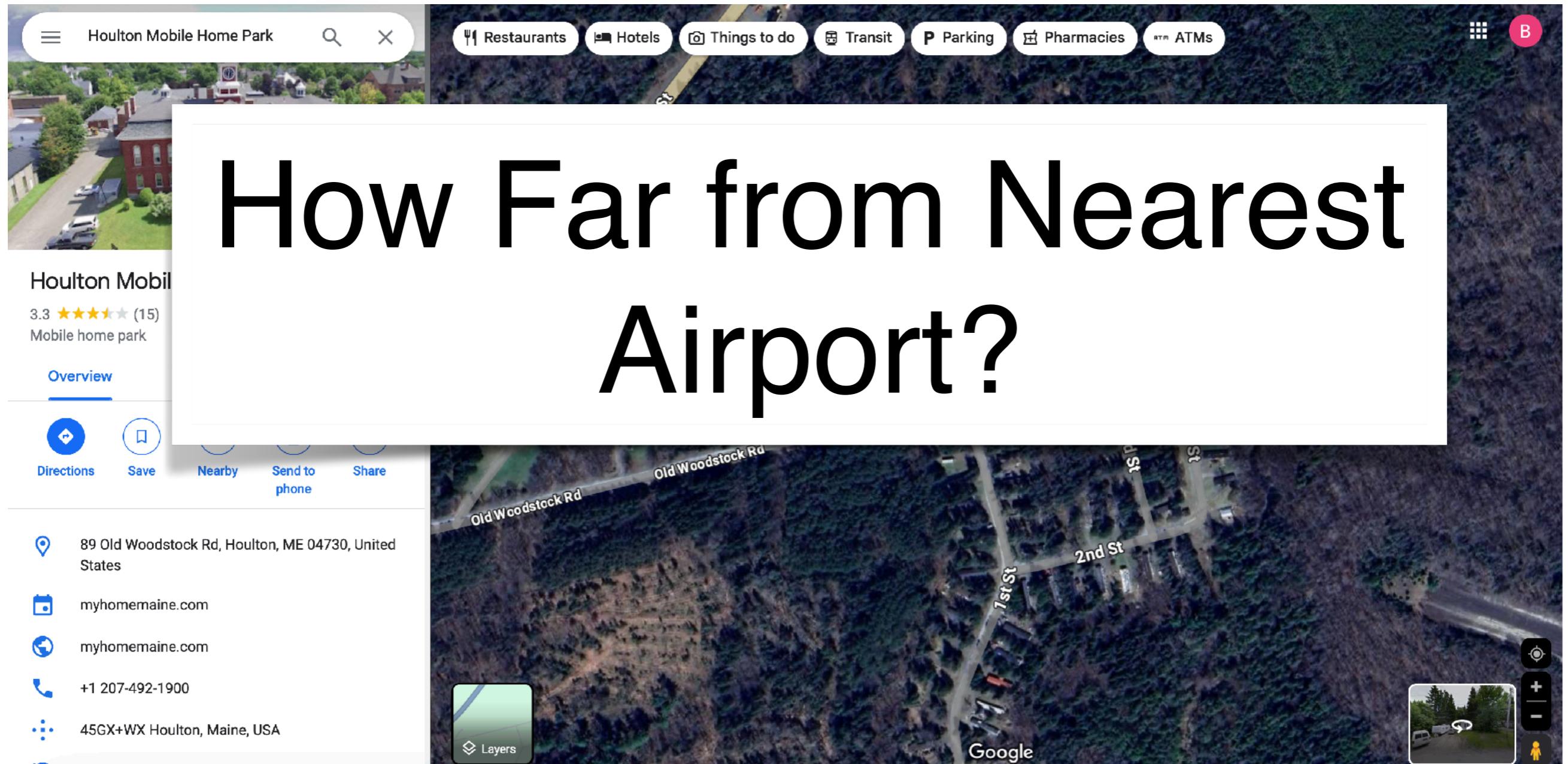
THIS UTILITY	2.15 ppb
EWG HEALTH GUIDELINE	0.15 ppb
LEGAL LIMIT	80 ppb

[DETAILS](#)

PFOS
PFHxS
No Arsenic
No PCBs

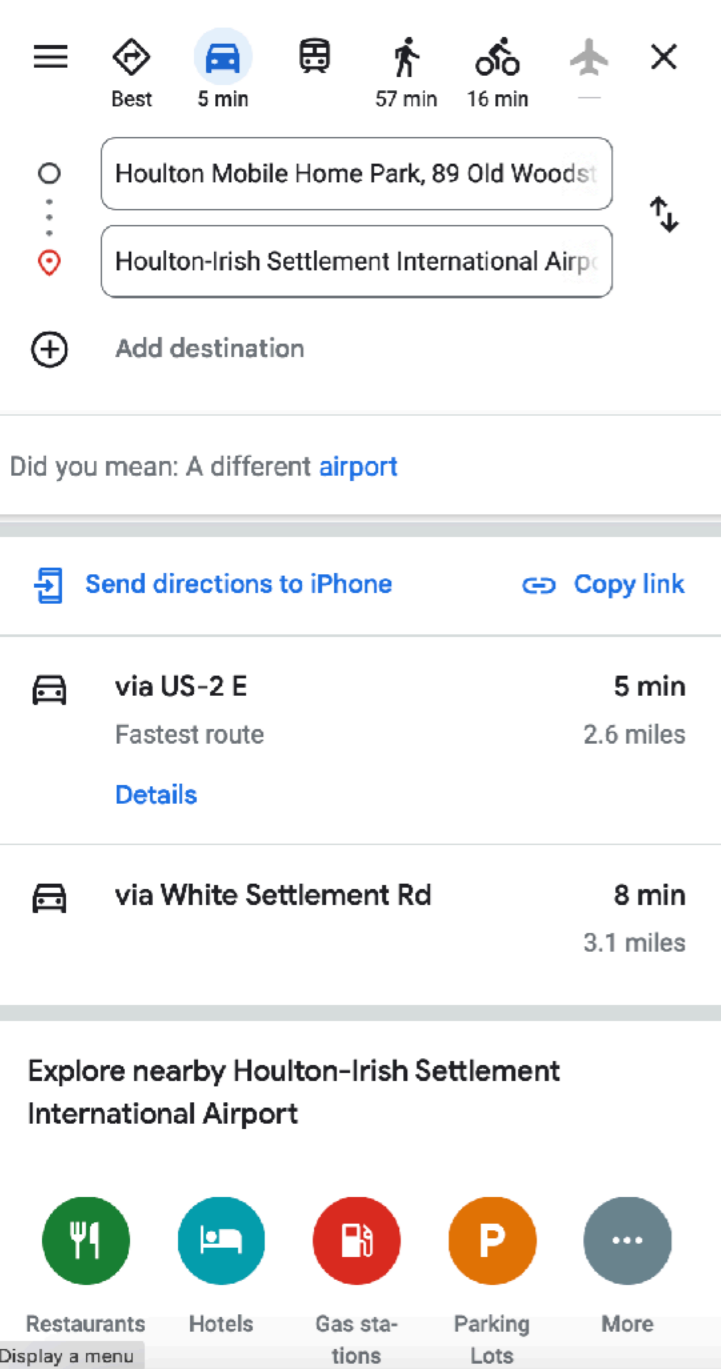
Example Maine PFAS

- **Google Maps**



Example Maine PFAS

- **How far from nearest airport?**



Best 5 min 57 min 16 min

Houlton Mobile Home Park, 89 Old Woodst

Houlton-Irish Settlement International Airp

Add destination

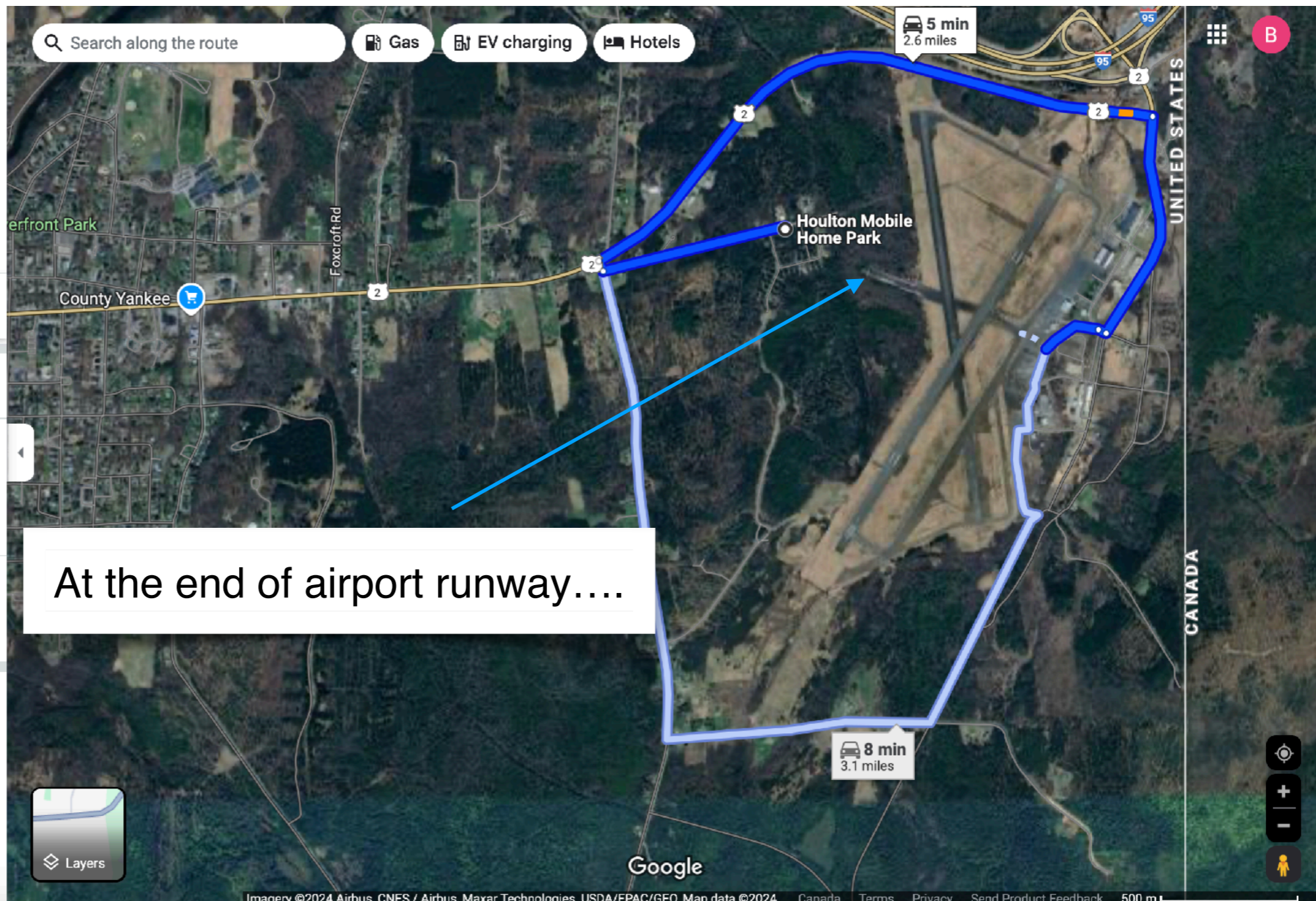
Did you mean: A different [airport](#)

Send directions to iPhone Copy link

via US-2 E	5 min
Fastest route	2.6 miles
Details	
via White Settlement Rd	8 min
	3.1 miles

Explore nearby Houlton-Irish Settlement International Airport

Restaurants Hotels Gas stations Parking Lots More



Search along the route Gas EV charging Hotels

5 min 2.6 miles

Houlton Mobile Home Park

At the end of airport runway....

8 min 3.1 miles

Google

Imagery ©2024 Airbus, CNES / Airbus, Maxar Technologies, USDA/FPAC/GEO, Map data ©2024 Canada Terms Privacy Send Product Feedback 500 m

New Factors that are Changing PFAS Regulation

- **There are three (3) new factors re-directed PFAS regulation**



I - PFAS vs. Fluoropolymer

- **Separating**

PFAS



From



Fluoropolymers



Water soluble fluorosalts found in

- Water
- Humans

Solid polymers **NOT** found in

- Water 
- Humans 

Interesting Video on PFAS



Uses of Fluoropolymers

2 - PFAS Reporting and Socio Economic Impact

- **If companies report**
 - Uses of fluoropolymer

Short Summary

- **Restriction by countries is very difficult**

- **You WANT to report**

- **Reporting protects your products**

Claigan Environmental

The Leader in PFAS in Products



United Nations

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European Union

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Government of Canada

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IChEMS
Industrial Chemicals
Environmental
Management Standard

Claigan submitted PFOA / LC-PFAC exemptions and uses to the Australian Government.



EPA United States
Environmental Protection
Agency

Claigan presented extensive PFAS report with large group of industry stakeholders to the US Federal Environmental Protection Agency.



**MAINE DEPARTMENT OF
Environmental Protection**

Claigan spearheaded extensive PFAS report with large group of industry stakeholders for Certain Unavoidable Uses (CUU) to the State of Maine.



**International
Organization for
Standardization**

Claigan is a ISO 17025 Accredited Laboratory.

3 - UN Stockholm Convention Change

- **Change in the UN Stockholm Convention**
 - UN Stockholm Convention agreed with **Claigan Submission**
- Unintentional contaminants
 - PFOA and LC-PFCAs from
 - Irradiated PTFE
 - PFA fluoropolymer

Will affect all related PFOA / LC-PFAC restrictions

- To be excluded from PFOA / LC-PFCA regulation

Canadian PFAS Reporting

Brief summary

- **Mandatory Data Gathering**
 - Section 71 Notice under Canadian Environmental Protection Act (CEPA)
- **Importers and manufacturers of specific PFAS in**
 - Chemicals, and
 - Physical products (articles)
- **By January 29 2025**

Canada PFAS Reporting

- **So you report all PFAS in your products?**
 - **Nope**

Canada Gazette, Part I, Volume 158, Number 30: SUPPLEMENT

July 27, 2024

DEPARTMENT OF THE ENVIRONMENT

CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999

Notice with respect to certain per- and polyfluoroalkyl substances (PFAS)

PFAS Reporting Canada

Positive Lists

- Canada PFAS is three (3) **POSITIVE LISTs** of PFAS substances
- To be reportable the substance has to be on one of the three (3) lists

List 1 -

Part 1 - 273 substances. Mostly liquids and powders



List 2 -

Part 2 - 26 substances. Mostly polymers (solids)



List 3 -

Part 3 - 13 substances. Mostly gases



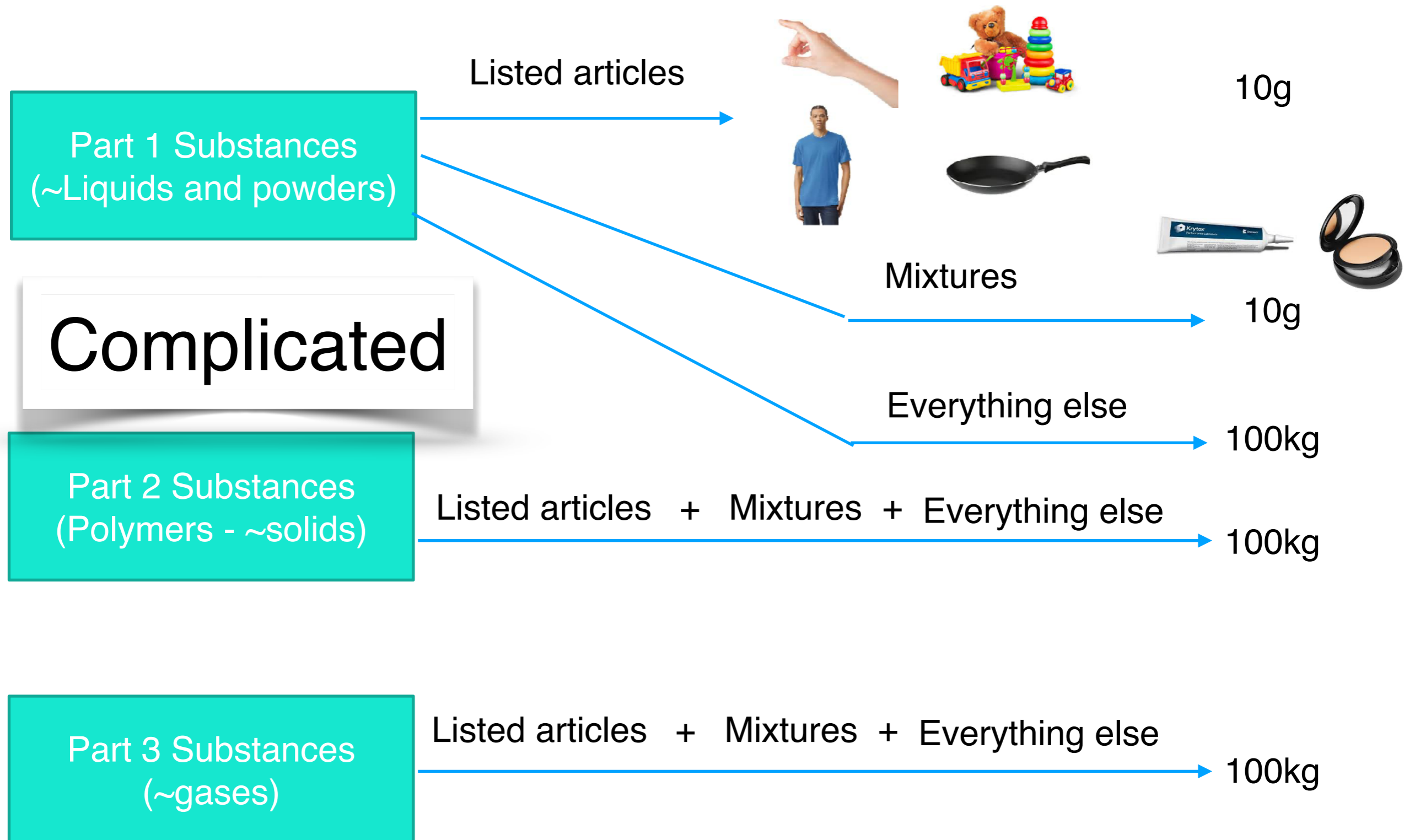
PFAS Reporting Canada

Positive Lists

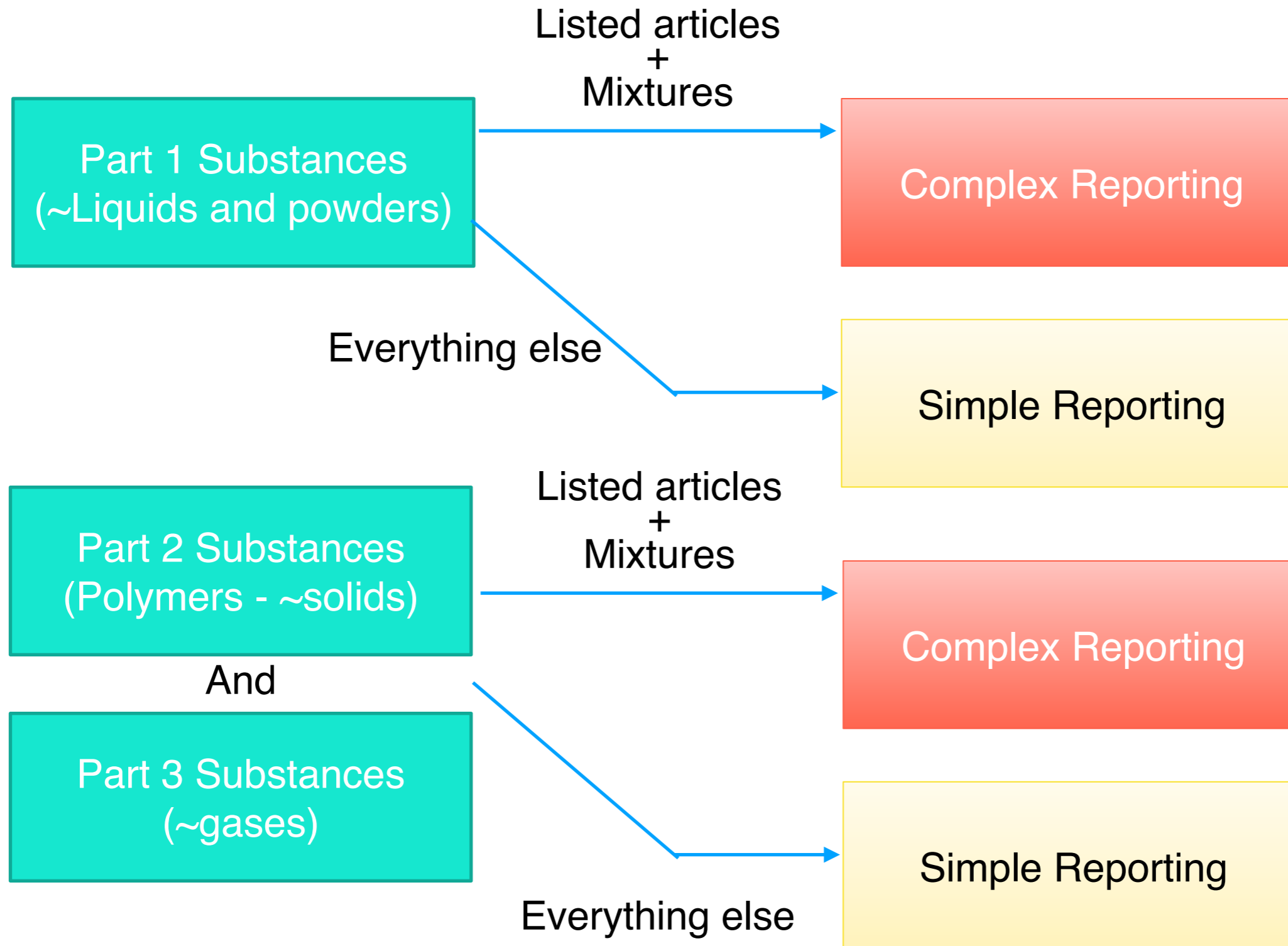
- Do you have to report all substances on those list?
 - **Nope**
- You need to meet reporting thresholds
 - Based on your use

PFAS Reporting Canada

Minimum Volumes for Reporting



PFAS Reporting Canada Reporting



US TSCA PFAS Reporting

- **Delayed to January 2026**
 - Due to reduction in EPA funding
 - Which forced the EU to spread funding on external resources to write the PFAS CDX over a longer period



**TSCA Section 8(a)(7) Reporting and
Recordkeeping Requirements for Perfluoroalkyl
and Polyfluoroalkyl Substances**

US Maine PFAS Reporting

- **Reduced scope**
 - Only products in scope that use **C**urrently **U**navoidable **U**ses
 - Consultation to determine CUUs TBD
 - All reporting requirements TBD
- Note
 - Restrictions are still in place for a specific list of products in 2026

US Maine PFAS Restrictions

Sales Prohibitions on Products Containing Intentionally Added PFAS

Effective Date	Product Category
January 1, 2023	<ul style="list-style-type: none"> • Carpet or rug • Fabric treatment • Fabric treatment that does not contain intentionally added PFAS, but is sold, offered for sale, or distributed for sale in a fluorinated container or in a container that otherwise contains intentionally added PFAS
January 1, 2026	<ul style="list-style-type: none"> • Cleaning product • Cookware product • Cosmetic product • Dental floss • Juvenile product • Menstruation product • Textile articles (with exception) • Ski wax • Upholstered furniture • Products listed that do not contain intentionally added PFAS but are sold, offered for sale, or distributed for sale in a fluorinated container or in a container that otherwise contains intentionally added PFAS.
January 1, 2029	<ul style="list-style-type: none"> • Artificial turf • Outdoor apparel for severe wet conditions unless accompanied with a disclosure: "Made with PFAS chemicals."
January 1, 2032	<ul style="list-style-type: none"> • Any products containing intentionally added PFAS sold in Maine unless the use of PFAS in the product is a currently unavoidable use. • Products that do not contain intentionally added PFAS but that are sold, offered for sale, or distributed for sale in a fluorinated container or in a container that otherwise contains intentionally added PFAS.
January 1, 2040	<ul style="list-style-type: none"> • Cooling, heating, ventilation, air conditioning or refrigeration equipment. • Refrigerants, foams or aerosol propellants.

Standard State List

US Maine PFAS Restrictions

Good Idea

January 1, 2026

- Cleaning product
- Cookware product
- Cosmetic product
- Dental floss
- Juvenile product
- Menstruation product
- Textile articles (with exception)
- Ski wax
- Upholstered furniture
- Products listed that do not contain intentionally added PFAS but are sold, offered for sale, or distributed for sale in a fluorinated container or in a container that otherwise contains intentionally added PFAS.

US Maine PFAS Restrictions

Long gone

January 1, 2026

- Cleaning product
- Cookware product
- Cosmetic product
- Dental floss
- Juvenile product
- Menstruation product
- Textile articles (with exception)
- Ski wax
- Upholstered furniture
- Products listed that do not contain intentionally added PFAS but are sold, offered for sale, or distributed for sale in a fluorinated container or in a container that otherwise contains intentionally added PFAS.

US Maine PFAS Restrictions

Incompetent Idea

January 1, 2026

- Cleaning product
- Cookware product
- Cosmetic product

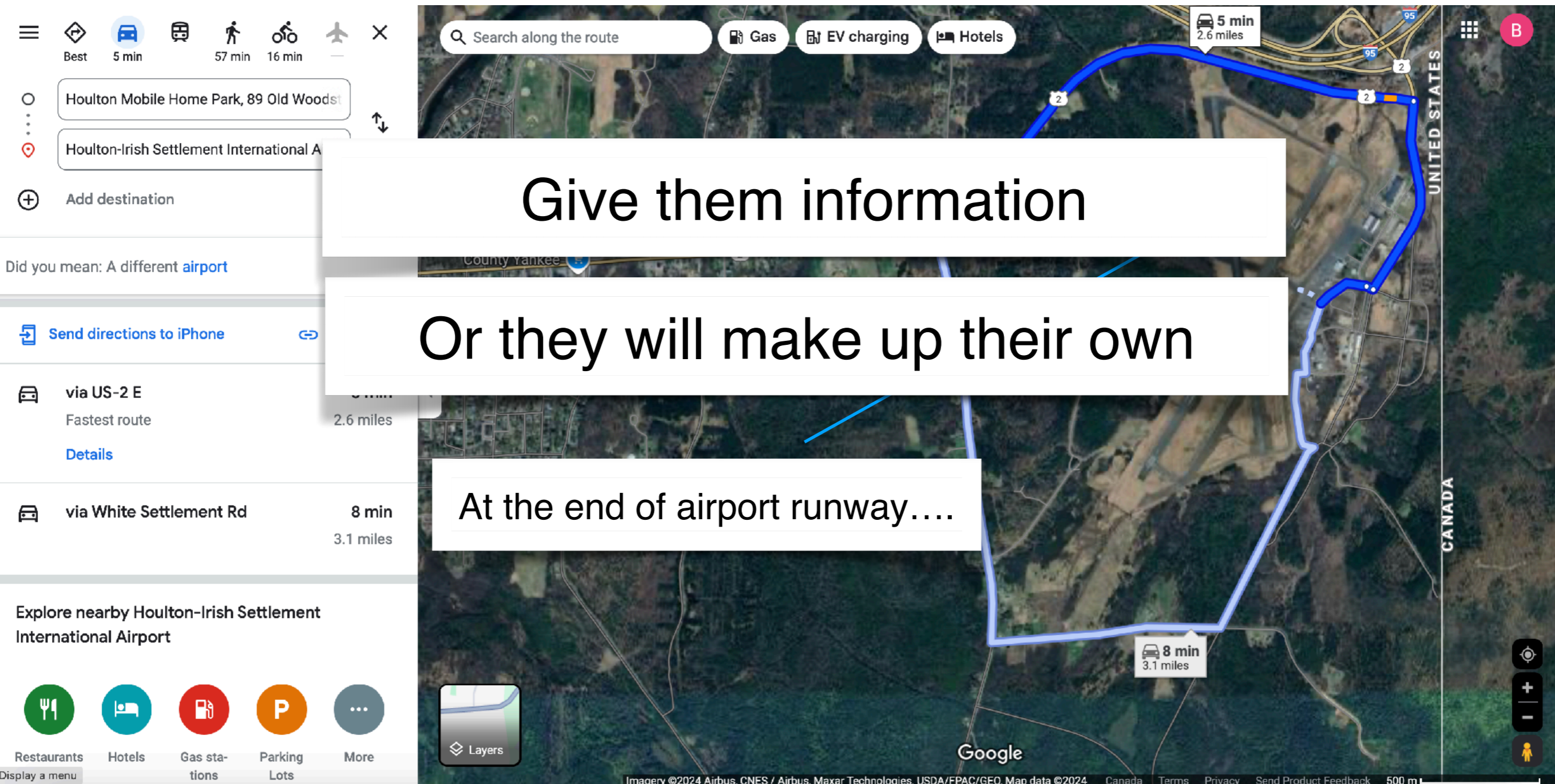
Why you want to report

- Textile articles (with exception)
- Ski wax
- Upholstered furniture

Before they do something this **stupid** to
your products

From the same people as....

- **A trailer part at the end of a runway**



Search along the route

Gas EV charging Hotels

5 min 2.6 miles

8 min 3.1 miles

Give them information

Or they will make up their own

At the end of airport runway....

via US-2 E
Fastest route
2.6 miles
Details

via White Settlement Rd
8 min
3.1 miles

Explore nearby Houlton-Irish Settlement International Airport

Restaurants Hotels Gas stations Parking Lots More

Layers

Google

Imagery ©2024 Airbus, CNES / Airbus, Maxar Technologies, USDA/FPAC/GEO, Map data ©2024 Canada Terms Privacy Send Product Feedback 500 m

US Minnesota PFAS Reporting

- **PFAS reporting**

- January 2026

Consumer Products Only

- **Reporting requirements**

- Description of product or product family

- Purpose of the PFAS

- Amount of PFAS (by CAS number if applicable)

- Contact information of the manufacturer

- Payment of fee

- **Cannot sell products with PFAS if not submitted**

US Minnesota PFAS Reporting

- **Current status**
 - [Consultation](#) in progress on fees and reporting

- **Consultation**
 - On reporting requirements
 - Fee payments

US Minnesota PFAS Restrictions

- **Similar to Maine**
 - [But starting January 1 2025](#)

2025 PFAS prohibitions

← PFAS USE PROHIBITIONS
2025 PFAS prohibitions
Disposing of products containing PFAS
PFAS Communications Toolkit


Starting on Jan. 1, 2025, the first prohibitions of products containing intentionally added PFAS under [Amara's Law \(Minn. Stat. § 116.943\)](#) will take effect in Minnesota.

Intentionally added PFAS will be prohibited in products that fall under 11 categories:

- [carpets or rugs](#)
- [cleaning products](#)
- [cookware](#)
- cosmetics
- [dental floss](#)
- [fabric treatments](#)
- [juvenile products](#)
- [menstruation products](#)
- textile furnishings
- ski wax
- [upholstered furniture](#)

Not a good idea
And very poorly done

Contact

MPCA PFAS info
pfasinfo.pca@state.mn.us 

The prohibition also applies to [certain types of packaging](#) used with the products above.

While PFAS are often found in these product categories, PFAS-free alternatives are already widely available.

US California Restrictions

- **Watered down version of Maine and Minnesota**
- **AB 1817**
 - Ban in textiles / apparel
 - January 2025
- **AB 1800**
 - Ban for PFAS in food contact packaging
 - Label PFAS containing cookware

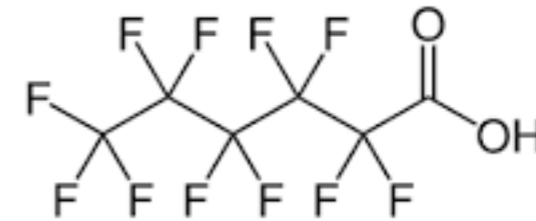
EU PFAS Restrictions

- **General REACH Restriction on PFAS**
 - Sent back to the drawing board
- **Moving forward**
 - Select products likely to move forward with PFAS restriction
 - Similar to the products in Minnesota or Maine
 - However, consultations and socio economic impact will take time

EU REACH Restriction PFHxA

- **PFHxA banned in the EU**

- [Regulation 2024/2462](#)



- **Banned at 25 ppb - October 1 2026 in**

- Clothing and textiles for the general public
- Footwear for the general public
- Food contact paper and cardboard
- Mixtures for the general public
- Cosmetics

- **But not in industrial Viton**

Common source

Key Message from EU Commission

- “The Commission considers that it is **not** demonstrated that the proposed restriction, as modified by RAC and SEAC, is the most appropriate Union-wide measure to address the identified risks, taking into account that **the data presented on emissions, risk reduction and socio-economic impacts are uncertain.**”
- This is going to be more and more common for PFAS
- Especially for
 - PFAS polymers
 - Industrial applications

Singapore POP


- **Notification**

- [Restriction](#) of dechlorane plus, UV-328, and PFOA
- Because of their listings as POP under UN Stockholm Convention

- **Note**

- 21. This Part applies to the hazardous substances specified in the first column of Part I of the Second Schedule except where —
 - (a) they fall within the exclusion specified in the second column of that Part corresponding to those substances; or
 - (b) they are contained in any substance, preparation or product specified in Part II of that Schedule

Environmental Protection and Management Act 1999  ✕

Status: Current version
as at 05 Apr 2024 

Schedule II - Hazardous Substances

- Part I (Restricted Substances)**

PART I

HAZARDOUS SUBSTANCES

Dechlorane plus	
Pentadecafluorooctanoic acid (PFOA); its salts and related compounds	
UV-328	

- Part II (Exemptions) - April 5 2024**

PART II

GENERAL EXEMPTIONS

Plastics other than those containing any of the following substances as defined in Part I of this Schedule: polychlorinated naphthalenes or short-chain chlorinated paraffins;

Rubber;

Which are most of the uses for the substances above

Singapore Consultation

- **Consultation ongoing on LC-PFCA and MCCP**

Industry Consultation: Uses of LC-PFCAs and Chlorinated Paraffins with C14-C17

For Industry's Feedback

Latest Developments under the Stockholm Convention (SC)

Section A: Scope of Chemicals under SC

(1) Long-chain Perfluorocarboxylic Acids (LC-PFCAs), their salts, and related compounds

(2) b) Chlorinated Paraffins with carbon chain lengths in the range C14-17 and chlorination levels at or exceeding 45% chlorine by weight

Section B: Control as Hazardous Substances (HS) under EPMA and/or EPM(HS) Regulations

(1) LC-PFCAs, their Salts and Related Compounds

- Fire-fighting foam
- Automotive care products such as automotive lubricant oils, hydraulic fluids, waxes & polishes and paint sealants
- Building materials
- Ink
- Cosmetics/Personal care
- Photographic film and paper
- Cooling applications for the manufacture of high-heat and high-voltage parts for semiconductor manufacturing equipment
- Inactive/inert fluorine liquid for reliability testing and temperature control for the manufacture of electric components and electrical and electronic equipment
- Heat media in a closed system, including heat media in components of in vitro diagnostic medical devices, refractive media in analytical instruments for detecting fluorescence, and heat media in thermostatic chambers for reliability and durability testing of electric and electronic equipment
- Textiles for oil and water repellence for the protection of workers from dangerous liquids that comprise risks to their health and safety

Claigan Environmental

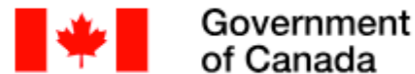
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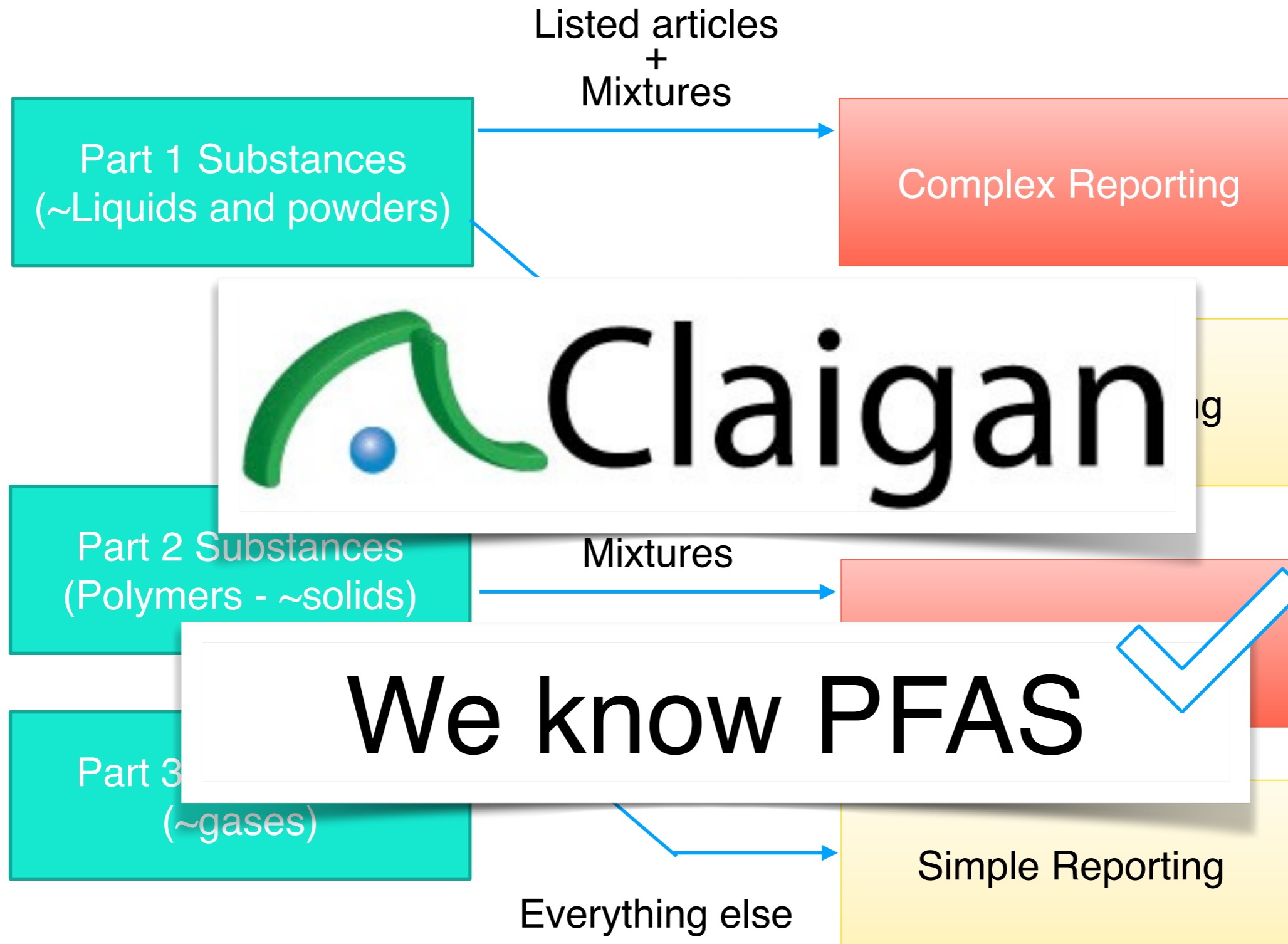
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PFAS Reporting Canada

Reporting



Claigan Lunch and Learn Series

- [Claigan Youtube](#)
 - First in series
 - The **Ultimate** Primer for EU RoHS



 Claigan
Less Journey. More Results.

The Ultimate Primer for EU RoHS
Claigan - Lunch & Learn

Presented by:
Bruce Calder
VP Consulting

November 28, 2024

PFAS Reporting Canada Reporting

