



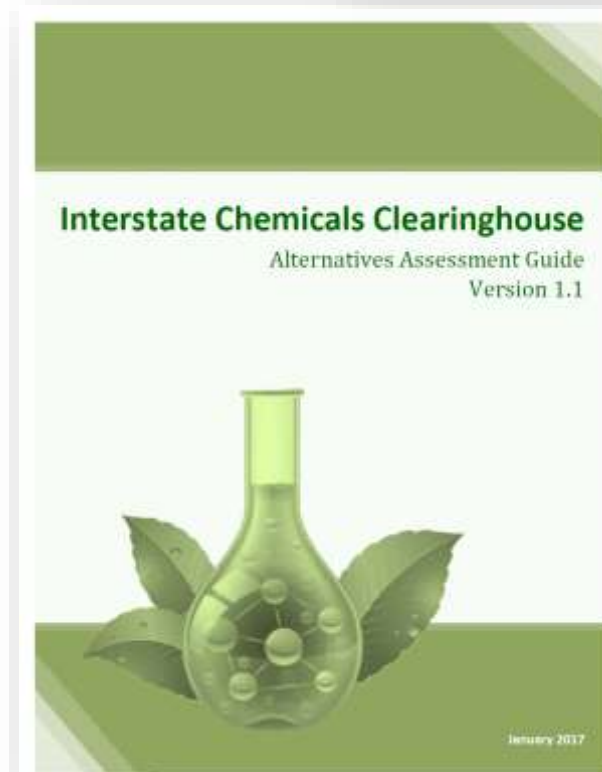
# PFAS In Food Packaging Alternatives Assessment Project Update

September 22, 2020



# PFAS in Food Packaging AA Agenda

- Intro/Welcome
- Background
- Alternatives Assessment Modules
- Peer Review
- Next Steps
- Q&A



# WA Toxics in Packaging Law

## RCW 70A.222.070

- Bans PFAS in specific paper food packaging applications following determination that safer alternatives are available
- Ecology conducts alternatives assessment and reports to the Legislature
- An external peer review of the assessment is required



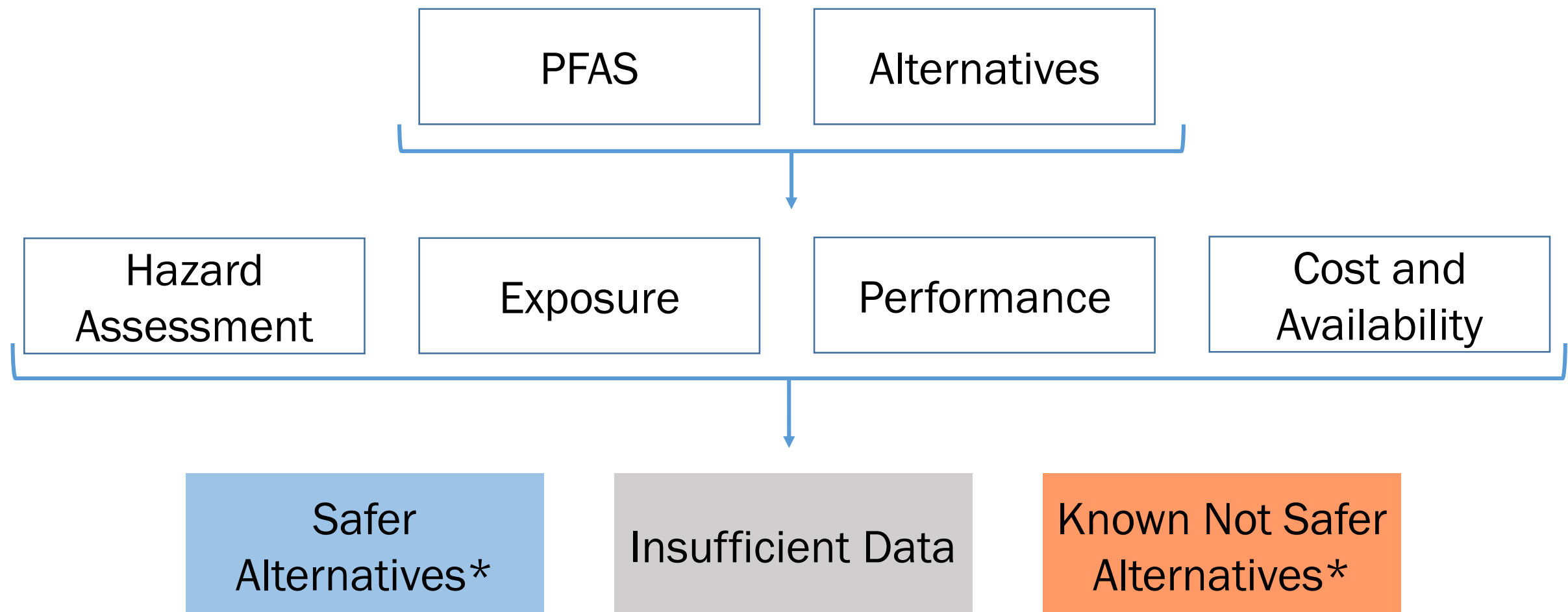
# General Alternatives Assessment Process

- Priorities:
  - Reducing chemical hazard instead of prioritizing exposure reduction.
  - Minimizing regrettable substitutions.
- Considers (at minimum) hazard, exposure, performance, and cost and availability



# General Alternatives Assessment Process

- Based on Interstate Chemicals Clearinghouse Alternatives Assessment Guide v1.1



\* Safer alternative is defined by criteria in RCW 70A.222.070

# Assessment Scope

- Category 1: Food Contact Paper
  - Wraps & Liners
  - Bags & Sleeves
- Category 2: Dinnerware
  - Plates
  - Bowls
  - Trays
  - Boats
- Category 3: Containers
  - Pizza boxes
  - Fry cartons
  - Clamshells
  - Food Containers



Photos: [catalog.westernpaper.com](http://catalog.westernpaper.com) (deli paper) [earth-to-go.com](http://earth-to-go.com) (tray) [westrock.com](http://westrock.com) (food container)



# Assessment Scope

Food Contact Paper	Dinnerware	Containers
Wax coated paper	Polylactide (PLA) foam as primary material	PLA coated paper
Silicone coated or infused paper	Clay coated paper	PVOH coated paper
Uncoated paper	Polyethylene (PE) coated paper	PE coated paper
Polyvinyl alcohol (PVOH) coated paper	Polyethylene terephthalate (PET) coated paper	Clay coated paper
Ethylene vinyl alcohol (EVOH) coated paper	PVOH coated paper	PLA plastic as primary material
–	PLA coated paper	PLA foam as primary material
–	EVOH coated paper	EVOH coated paper
–	Uncoated paper	–

- Also considered reusable food packaging



# Hazard Evaluation (IC2 Guide Level 2)

- GreenScreen evaluation
  - Based on EPA Safer Choice hazard criteria
  - 18 endpoints for human and environmental health
  - Translates into four benchmarks from 1 Avoid to 4 Prefer

TABLE 1. Example GreenScreen Hazard Summary Table for a Chemical

Group I Human					Group II and II* Human								Ecotex		Fate		Physical		
C	M	R	D	E	AT	ST		N		SnS*	SnR*	IrS	IrE	AA	CA	P	B	Rx	F
						SINGLE	REPEATED*	SINGLE	REPEATED*										
DG	L	L	M	M	DG	L	L	M	M	L	L	L	L	L	L	VH	M	L	L

## Glossary of GreenScreen\* Hazard Endpoint Abbreviations

AA Acute Aquatic Toxicity	D Developmental Toxicity	M Mutagenicity and Genotoxicity	SnS Sensitization (Skin)
AT Acute Mammalian Toxicity	E Endocrine Activity	N Neurotoxicity	SnR Respiratory Sensitization
B Bioaccumulation	F Flammability	P Persistence	ST Systemic/Organ Toxicity
C Carcinogenicity	IrE Eye Irritation	R Reproductive Toxicity	
CA Chronic Aquatic Toxicity	IrS Skin Irritation	Rx Reactivity	* Repeated exposure





# Hazard Evaluation (IC2 Guide Level 2)


- Hazard evaluations depend on available chemical information
- PFAS evaluated for hazard concerns using GreenScreen®
- Alternatives assessed using:
  - EPA Safer Chemicals Ingredients List (low concern)
  - GreenScreen® chemical hazard assessment
  - Neither (insufficient data)



# Exposure Evaluation (IC2 Guide Level 1)

- Performed after hazard evaluation
- Questions to determine if exposure evaluation is needed (from IC2 AA Guide):

Was the alternative determined to be of low concern during the hazard evaluation?



Does the alternative have persistence, bioaccumulative, and/or toxic properties of concern?



# Performance Evaluation (IC2 Guide Level 1)

- The alternatives under assessment should “perform as well as or better than PFAS chemicals” (RCW 70A.222.070)
- Additional questions from IC2 AA Guide:

Being used for same or similar function?

Available on the commercial market?

Promotional materials state this provides the desired function?



# Cost & Availability Evaluation (IC2 Guide Level 1 and RCW 70A.222)

- Additional considerations: “the safer alternatives must be readily available in sufficient quantity and at a comparable cost” (RCW 70A.222.070)
- Additional questions from IC2 AA Guide:

Is the alternative currently used in the application of interest?

Is the alternative currently offered for sale for the application of interest?

Is the price of the alternative close to the current?





# Preliminary Findings of Safer

- For each food packaging application, made a finding of safer for each alternative substance assessed

Alternative Substance	Hazard Module	Exposure Module	Performance Module	Cost & Availability	Safer Alternative?
Alternative 1	BM-3	Not applicable	Favorable	Favorable	Yes
Alternative 2	BM-3	Not applicable	Favorable	Not Favorable	No




# Peer Review Process

- Findings must be “supported by feedback from an external peer review of the department's alternatives assessment” (RCW 70A.222.070)
- Washington State Academy of Sciences assembled committee and is overseeing the review
- Committee member bios posted to EZView site

# Current Timeline

August – Early October 2020 – WA State Academy of Sciences Peer Review



Late October - November 2020 – Final Ecology/Health AA Review and Response to Peer Review Comments



December 2020 – Submit notice to WA State Register; Legislative Report



# Next Steps

- Monthly listserv/website updates through 2020
- Next year's AA scope:
  - Applications where no safer alternative was found
  - New applications not previously assessed





# Reminder: Stakeholder Release Survey

- To be publicly identified as a stakeholder in the published report please fill out the [Stakeholder Release Survey](#).
- Will not disclose non-replies
- Please note, participation could be confirmed even for stakeholders who did not respond/affirmatively asked to not be disclosed via a public disclosure request (applies to any internal, educational, promotional, or commercial uses across Ecology websites, publications, platforms, etc.)





## Contacts:

Rae Eaton, Ecology, [rae.eaton@ecy.wa.gov](mailto:rae.eaton@ecy.wa.gov)

Cathy Rudisill, SRC, Inc., [Rudisill@srcinc.com](mailto:Rudisill@srcinc.com)

### EZView Website:

[https://www.ezview.wa.gov/site/alias\\_1962/37610/pfas\\_in\\_food\\_packaging\\_alternatives\\_assessment.aspx](https://www.ezview.wa.gov/site/alias_1962/37610/pfas_in_food_packaging_alternatives_assessment.aspx)