Evaluating alternatives to PFASs as a class of chemicals in consumer products in a regulatory context – examples from Washington State

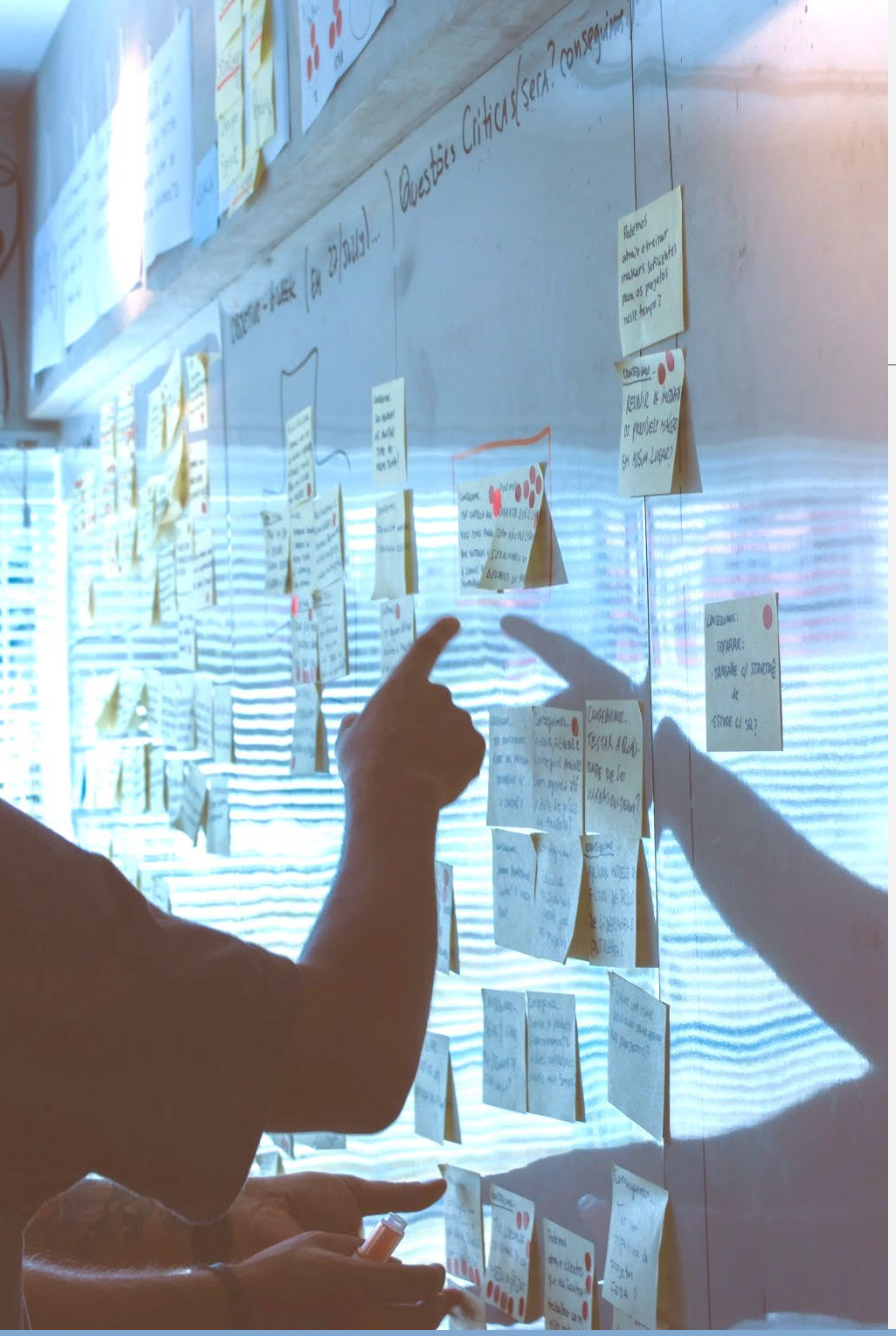
Overview

- Introduction to Safer Products for Washington Program
- Development of criteria for safer
- Evaluation of PFAS as a class
- Comparison of PFAS and alternatives in carpets (an example)

Why reduce toxic chemicals in consumer products?

- Once hazardous chemicals are in consumer products, reducing exposure is challenging.
  - People use consumer products in unpredicted ways.
  - Products made with recycled materials can unintentionally expose people to hazardous chemicals
- Contamination from hazardous chemicals in consumer products can expose communities, wildlife and harm environmental resources.

Hazard X Exposure = Risk



So what can we do about it?

- Focus on prevention! Reduce the use of toxic chemicals in consumer products
- Prevention strategies should:
  - Stop assuming that chemicals with no data are safe
  - Take a class-based approach to reducing toxic chemicals, to avoid regrettable substitutions
  - Ask whether safer alternatives can be used instead of a toxic chemical in a product

↓ Hazard X Exposure = ↓ Risk

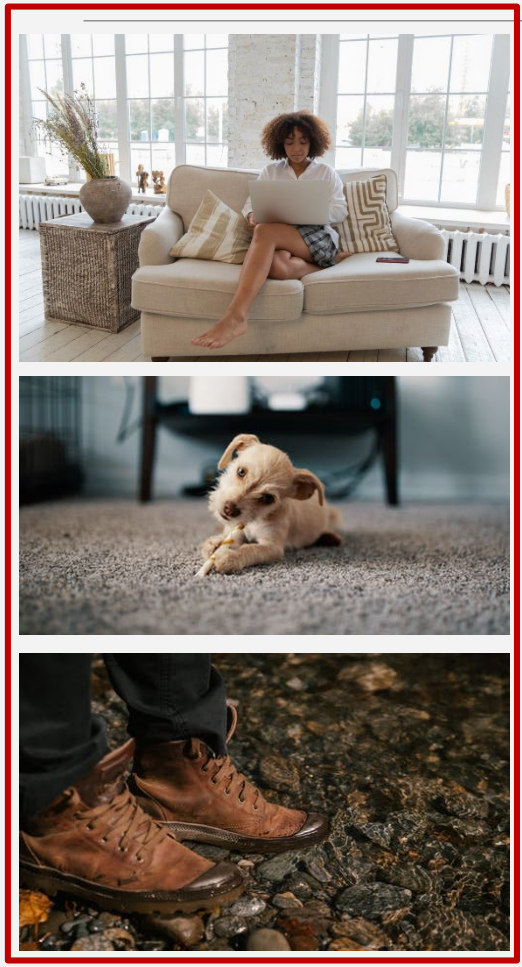
Safer Products for WA background

- Pollution Prevention for Healthy People and Puget Sound Act, signed into law May 2019 (RCW 70A.350).
- Act aims to reduce exposures to priority chemicals resulting from the use of consumer products.
- Act sets requirements for Ecology to:
  - Report to Legislature at multiple points.
  - Consider and use information in specific ways.
  - Enact rulemaking (if needed).

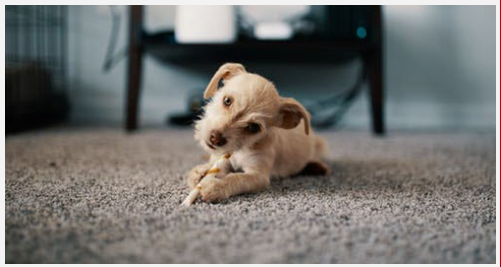
Phase 1: Priority chemical classes

- In 2019, the Legislature identified five priority chemical classes, including PFAS
- Chemical within each class have been identified as chemicals of concern because of their health hazards or environmental hazards.
- Some chemicals are also persistent and/or bioaccumulative.

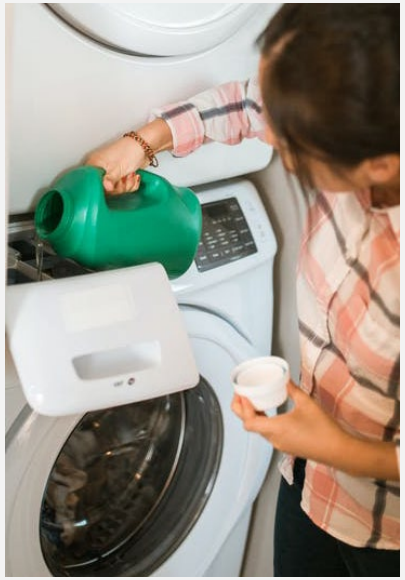
Phase 2: Priority Products—2020 Report

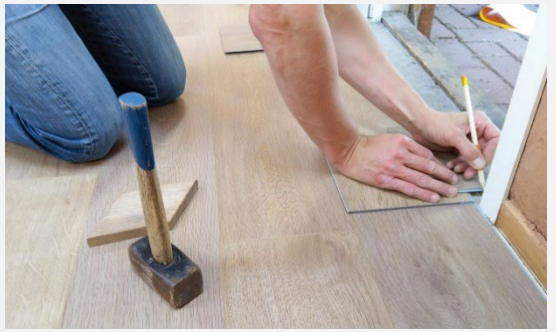


Phase 2: Priority Products—2020 Report



Phase 3

Regulatory actions

Determine whether to require notice, restrict/prohibit, or take no action.

June 1, 2022

DO WE NEED TO REGULATE WHEN THESE CHEMICALS ARE USED?

Phase 3: Regulatory determinations

- In order to restrict the use of a priority chemical, **safer** alternatives must be feasible and available**.**
- The restriction must:
  - Reduce a significant source or use of priority chemical(s).

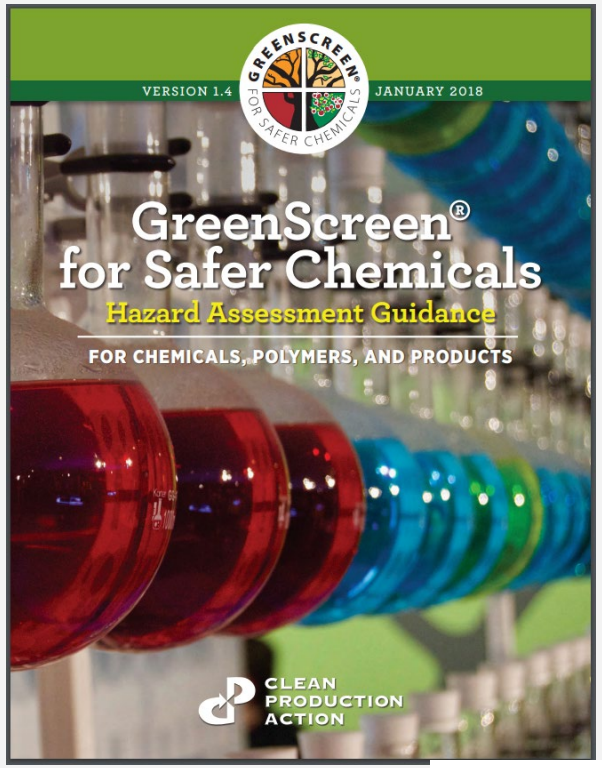
    OR

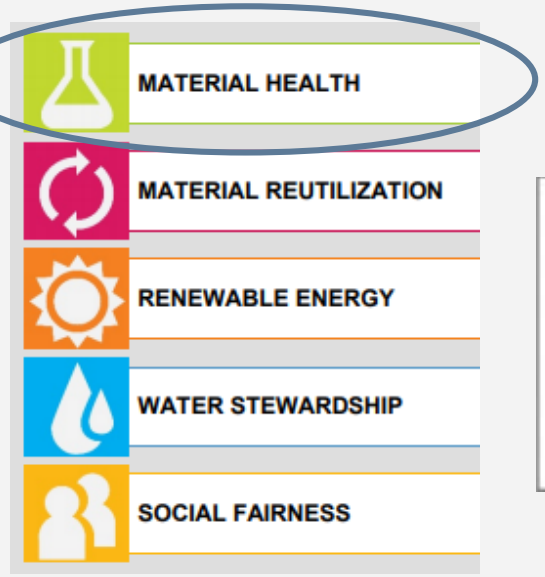
  - Be necessary to protect sensitive species or sensitive populations.

Safer in the law

- Safer is defined in the law as "less hazardous to humans or the environment than the existing chemical or process."
- A safer alternative to a chemical may include a chemical substitute or a change in materials or design that eliminates the need for a chemical alternative.

Examples of Existing Approaches to Evaluate Chemical Hazards





EPA's Safer Choice Program
Master Criteria for Safer Ingredients

Design for the Environment Program Alternatives
Assessment Criteria for Hazard Evaluation

Version 2.0
August 2011

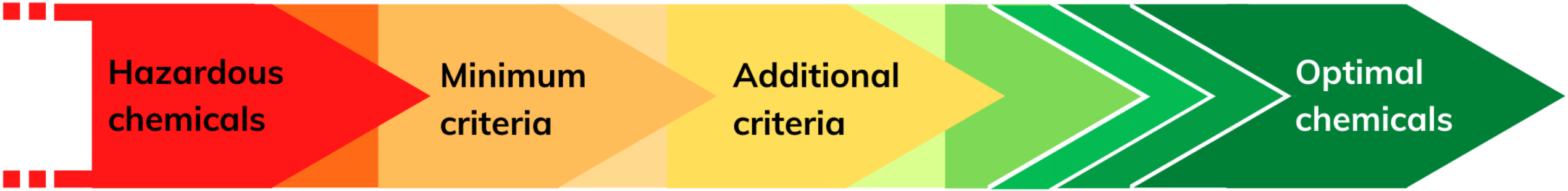
Office of Pollution Prevention & Toxics
U.S. Environmental Protection Agency

Version 2.1
September 2012

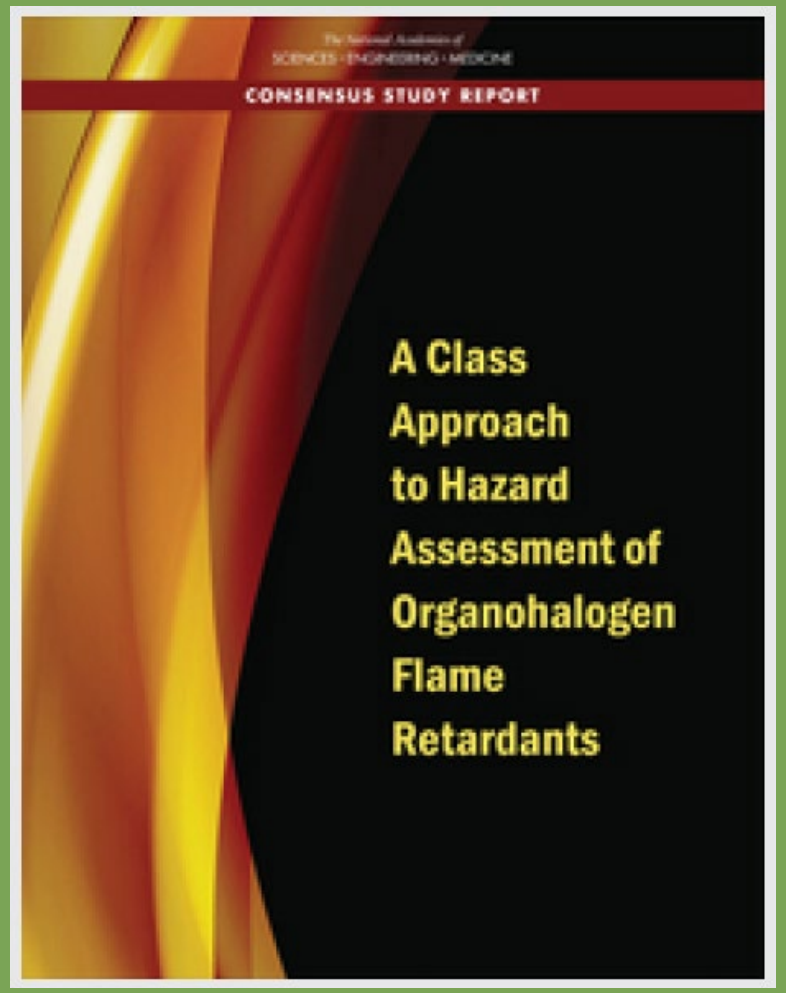
Office of Pollution Prevention & Toxics
U.S. Environmental Protection Agency

Design for the Environment
U.S. EPA

SAFER CHOICE
Meets U.S. EPA Safer Product Standards
epa.gov/saferchoice



Safer is a *spectrum*



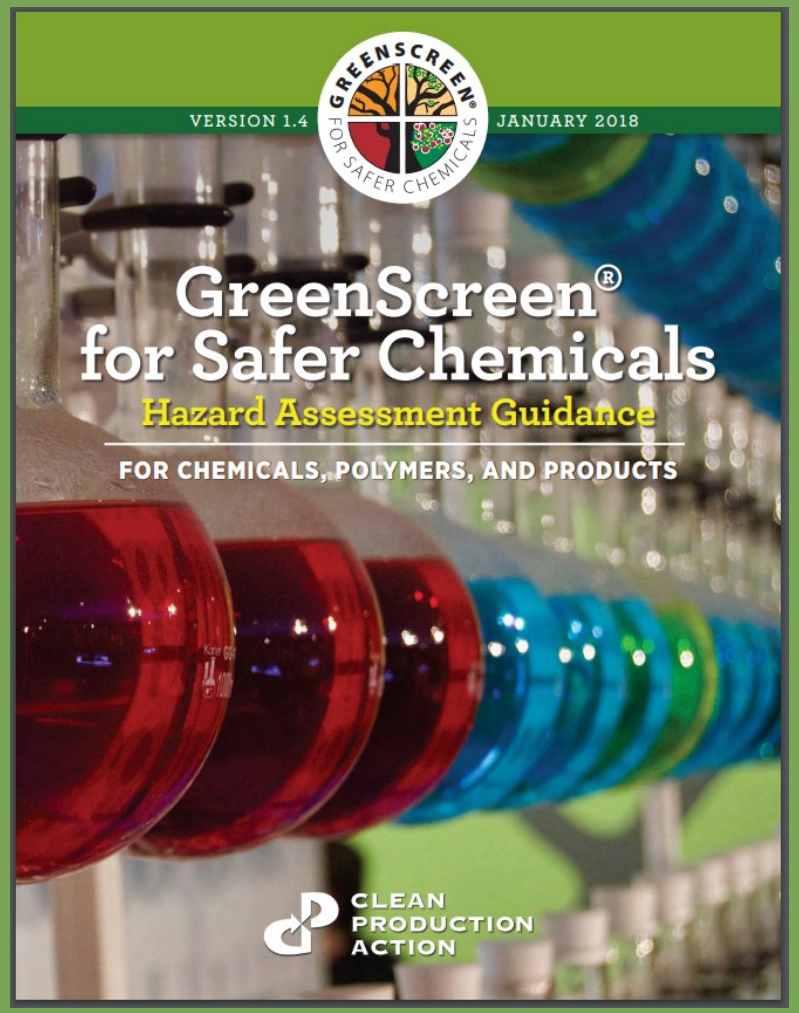
How and why we approach chemicals by class

How?

- Borrow ideas from the NAS 2019 report on organohalogen flame retardants.
- Use NAS scenarios to classify chemicals with data gaps and variable hazard data.

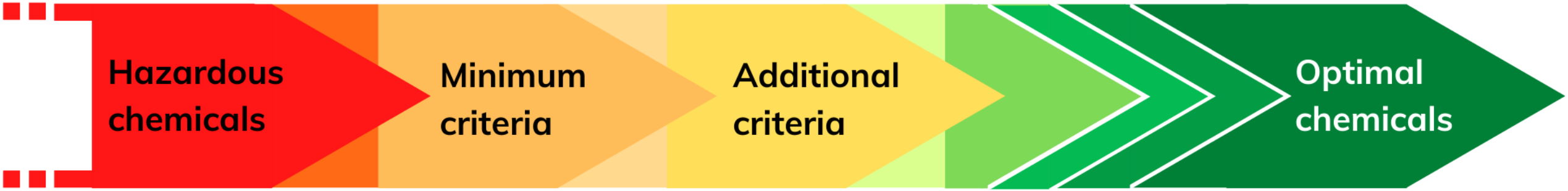
Why?

- Avoids assuming no data = no hazard.
- Reduces regrettable substitutions.
- Faster evaluation than a single chemical approach.



Evaluating PFAS as a class

- We identified data rich chemicals by looking for existing hazard assessments:
  - GreenScreen® and List Translator (LT):
    - GreenScreens®—conducted by a licensed profiler, publicly available.
    - List Translator reviews authoritative lists and identifies chemicals that would likely be Benchmark-1 chemicals.
- Other hazard assessment methods are possible, if:
  - Compatible with our criteria for safer and scoring methodology.
  - Publicly available or third-party reviewed.
- All 15 data rich PFAS identified either score **LT-1** or **GreenScreen® Benchmark-1**.



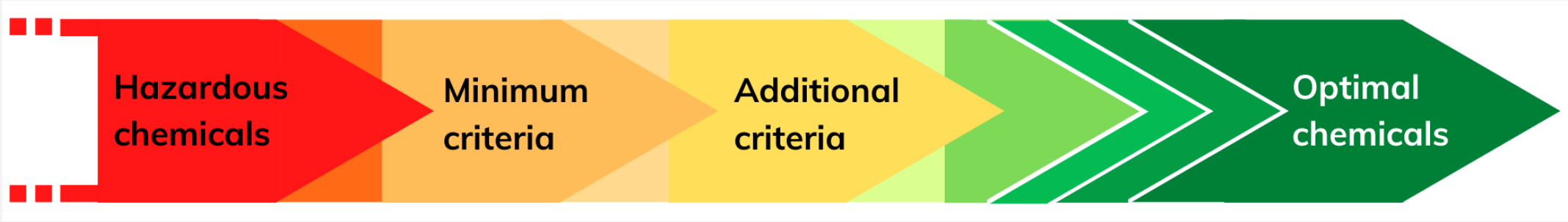
GreenScreen®
BM-1
LT-1 (authoritative lists)
PFAS

Safer alternatives

Criteria for safer is a *spectrum*

Example: Alternatives for carpets

- Looked at alternatives for commercial and residential carpets



PFAS

Cradle-to-Cradle Certified Silver or higher*

EPA Safer Choice

* Obtained additional information to determine alternative meets minimum criteria

Example: Alternatives for carpets

- **Safer topical treatments instead of PFAS**
  - Some alternatives used in carpets that have received Cradle-to-Cradle certification
  - Other treatments use chemicals that have been evaluated by EPA Safer Choice polymer criteria
  - Treatments used on commercial and residential carpets sold in the US

Key Takeaways

- Our program focuses on reducing chemical hazards in products by identifying safer alternatives to priority chemicals.
- We use established methods to evaluate chemical hazards to create our approach (criteria for safer)
- We use our approach to evaluate chemical classes while accounting for data gaps and variability in hazard data

Questions? Thank you!

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ecology.wa.gov/Safer-Products-WA

bit.ly/SaferProductsWA (Find links to everything here!)

Chapter 70A.350 RCW

DEPARTMENT OF ECOLOGY State of Washington

Washington State Department of Health