

The webinar will begin shortly.

Safer Products for Washington: Safer, Feasible, and Available

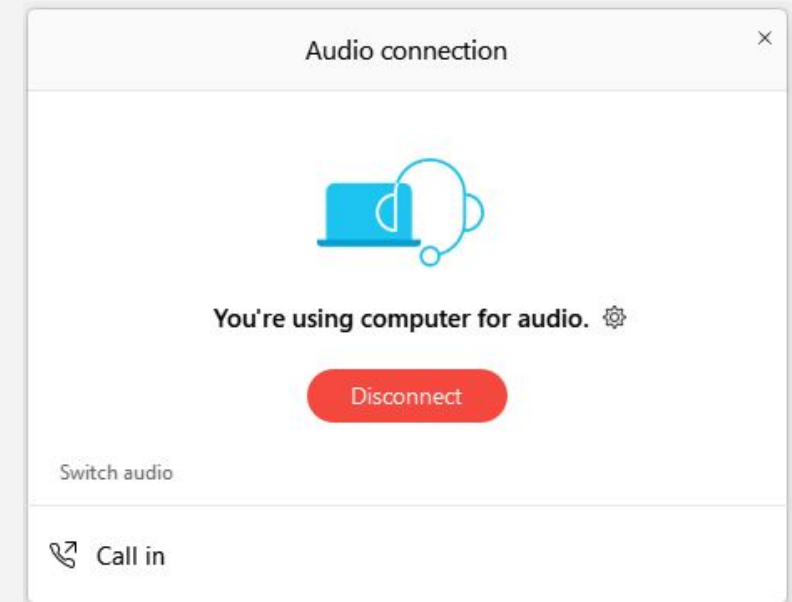
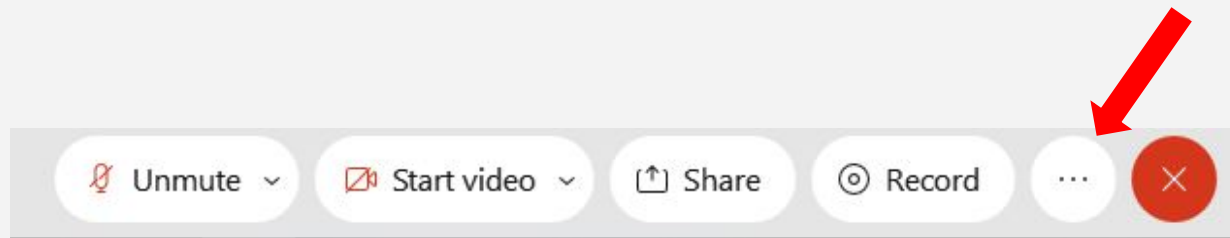
Implementing RCW 70A.350: The Pollution Prevention for Healthy People and Puget Sound Act

OCTOBER 8, 2020



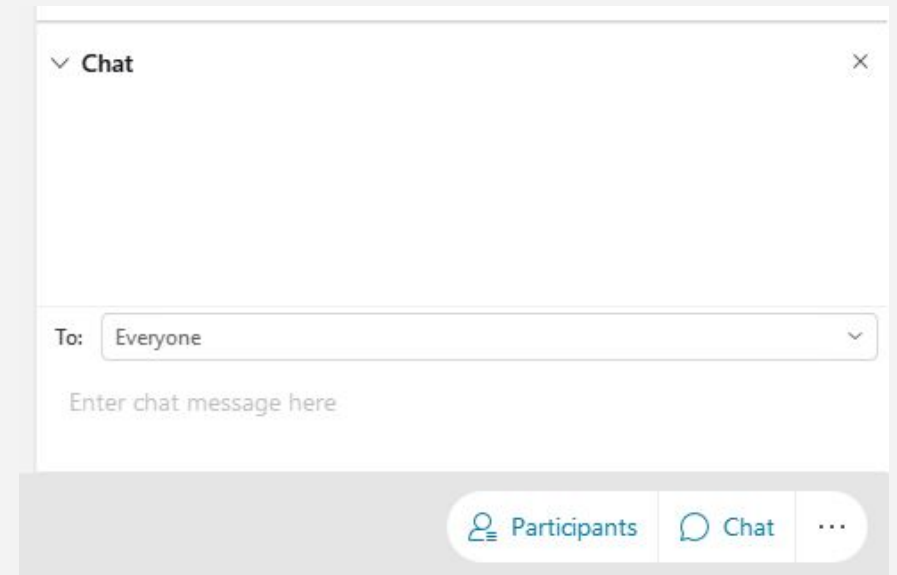
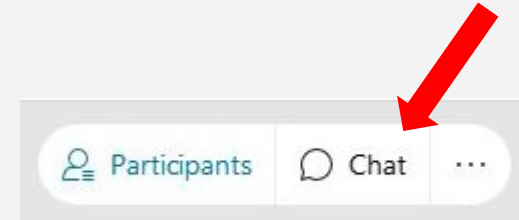
Audio connection logistics

- For audio connection, we recommend using your computer speaker.
- If you are unable to join using computer audio, use “Call In” to access dial-in information.
- To open the audio options, select the three dots icon in the menu at the bottom of your screen.



Webinar logistics

- All lines are muted.
- All questions should be typed into the Q & A box.
 - Ask them anytime, we will address at the end.
- All technical difficulty issues should be typed into the chat box.
- To open the chat box, select the chat button at the lower right hand side of your screen and the chat box will appear in the right panel.
- In the event of major technical difficulties, we will reschedule the webinar.



Safer Products for Washington:

Safer, Feasible, and Available

From Ecology: Cheryl Niemi, Marissa Smith, Saskia van Bergen, Craig Manahan, Kimberly Goetz, Lauren Tamboer, and Amber Sergent.
From Health: Holly Davies and Barbara Morrissey.



What we'll cover

1. Recap: Safer Products for Washington background and law requirements
2. How are we approaching **safer**?
3. How are we approaching **feasible**? How are we approaching **available**?
4. Opportunities for input
5. Questions and comments

* We won't cover the scope of any potential regulations by chemical class or product. (We're not there yet!)





Section 1. Safer Products for WA background



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).
- Safer Products for Washington is the implementation program for RCW 70A.350.
- Ecology has separate (but related), ongoing pollution prevention projects that include alternatives analyses and Chemical Action Plans around PFAS.

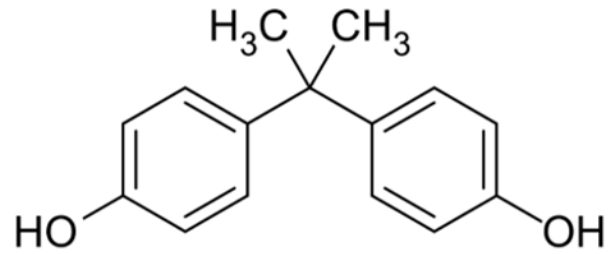
Safer Products for WA Implementation Process



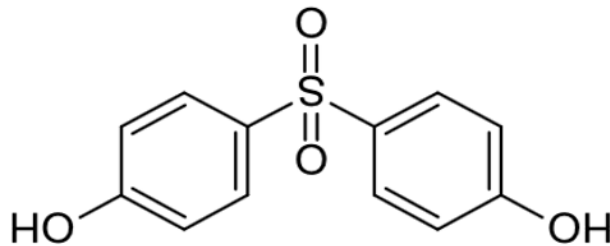


Priority chemical classes

- In 2019, the Legislature identified PFAS, phthalates, flame retardants, PCBs, and phenolic compounds (alkylphenol ethoxylates and bisphenols) as priority chemicals.
- Some chemicals within each of these classes are associated with:
 - Endocrine disruption.
 - Reproductive and developmental toxicity.
 - Cancer.
 - Organ system toxicity.
 - Ecotoxicity.
- Some chemicals within these classes are persistent and/or bioaccumulative.
- Almost everyone is exposed to chemicals within these classes.



Bisphenol A (BPA)



Bisphenol S (BPS)

Chemical class and regrettable substitution

- BPA demonstrates need for class-based approach to regulating toxic chemicals.
- BPA is an endocrine disruptor.
- “BPA-free” products emerge.
- Substituted with BPS in some products.
- Similar endocrine disruption from BPS.
- Avoiding toxic chemical use is smartest approach.

A reminder: Phase 2 priority products

Priority chemical or chemical class	Priority product in the report
Flame retardants	Electric and electronic equipment
Flame retardants	Recreational polyurethane foam
PCBs	Paints and printing inks
PFAS	Carpet and rugs
PFAS	Aftermarket stain and water resistance treatments
PFAS	Leather and textile furnishings
Phenolic compounds (alkylphenol ethoxylates)	Laundry detergent
Phenolic compounds (bisphenols)	Thermal paper
Phenolic compounds (bisphenols)	Food and drink cans
Phthalates	Flooring
Phthalates	Personal care products

Phase 3

Regulatory actions

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

Phase 3: Make regulatory determinations

- RCW 70A.350.040(1)
 - (a) Determine that **no regulatory action is currently required**;
 - (b) Require a manufacturer to **provide notice of the use** of a priority chemical or class of priority chemicals consistent with RCW 70A.430.040; or
 - (c) **Restrict or prohibit** the manufacture, wholesale, distribution, sale, retail sale, or use, or any combination thereof, of a priority chemical or class of priority chemicals in a consumer product.

June 1, 2022



**DO WE NEED
TO REGULATE
WHEN THESE
CHEMICALS ARE
USED?**



Regulatory determinations

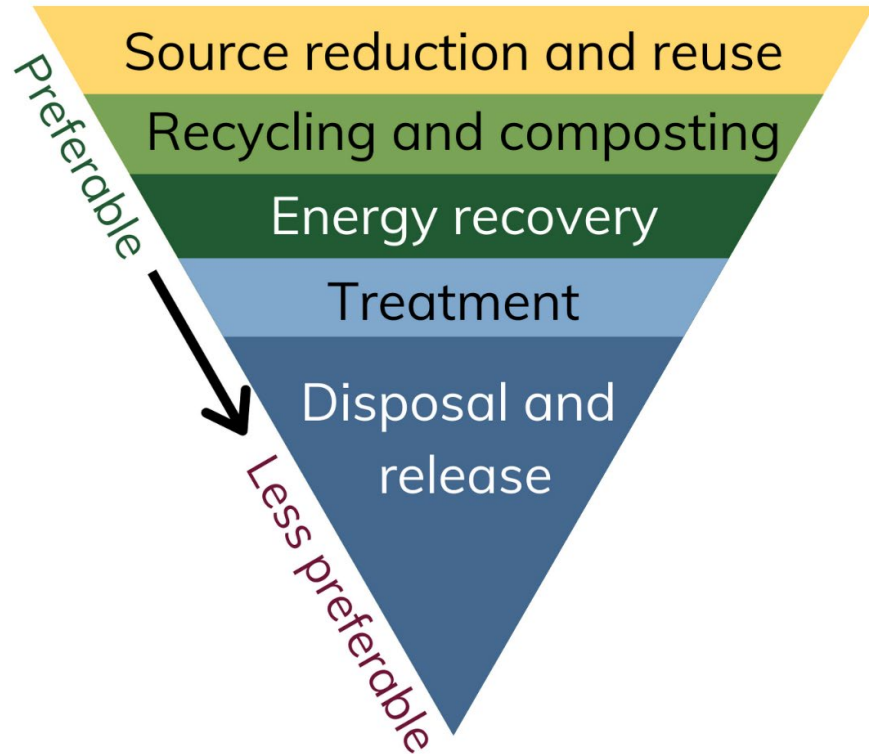
- In order to restrict the use of a priority chemical, **safer** alternatives must be **feasible** and **available**.
 - The restriction must:
 - Reduce a significant source or use of priority chemical(s).
- OR**
- Be necessary to protect sensitive species or sensitive populations.



Section 2. What is safer?

Reducing risks from priority chemicals

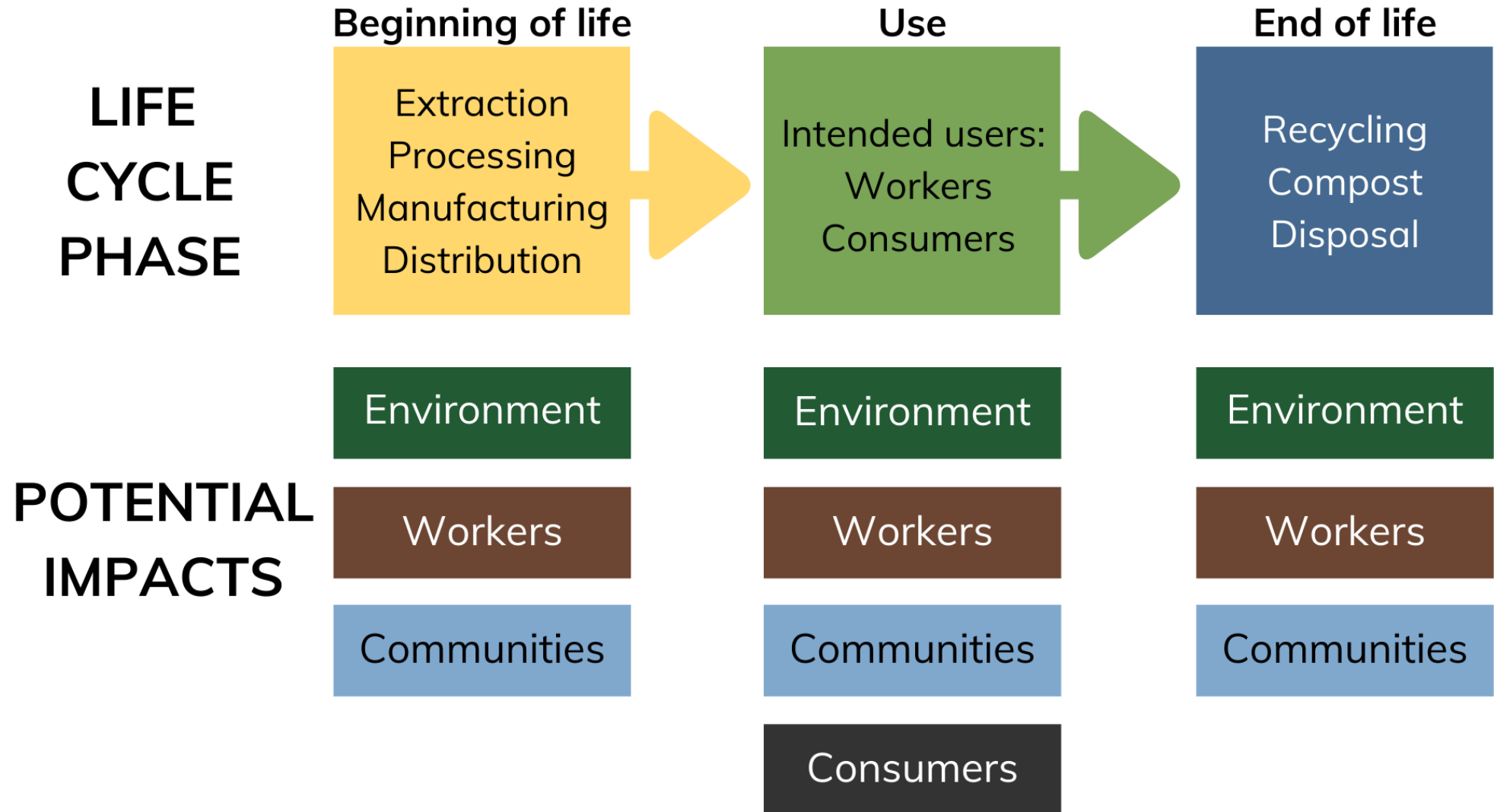
Waste Management Hierarchy



- Safer Products for Washington relies on principles of an alternatives assessment.
- The alternatives assessment framework focuses on reducing risk by avoiding exposure to hazardous chemicals
- Healthier for people and the environment.
- Avoids monetary and environmental costs associated with hazardous chemical cleanups.

$$\downarrow \text{Hazard} \times \text{Exposure} = \downarrow \text{Risk}$$

Lifecycle assessment consideration



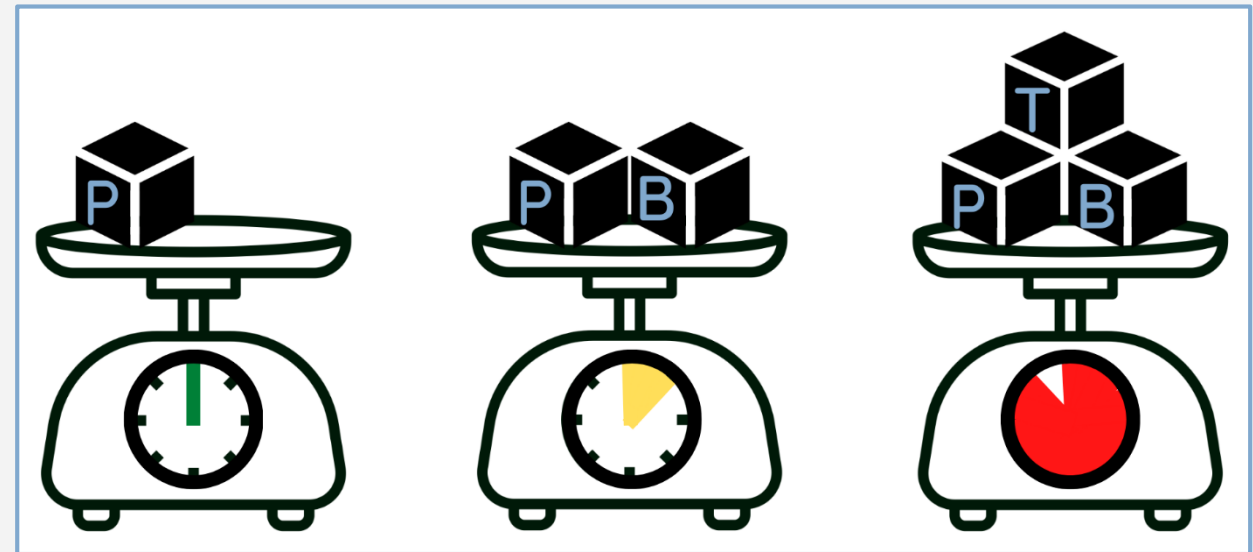


Safer in the law

- 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 particular chemical may include a chemical substitute or a change in materials or design that eliminates the need for a chemical alternative.

Safer is....

- Catered to the priority chemical-product combination.
 - What's considered safer than PFAS in carpet may be different that what's considered safer than phthalates in personal care products.
- A continuous improvement **process**.
 - Just because an alternative is safer than the priority chemical, doesn't mean there isn't room for improvement.
- A **balancing act** of acceptable hazards and data gaps.
 - Considering an array of hazards means there will be trade-offs.
 - Newer chemical alternatives may have less data.



How have others approached safer?

- Existing approaches for identifying safer chemicals and products focus on **hazard reduction**.
- Established transparent data requirements and hazard criteria.
- Consistently use criteria from the **Global Harmonization System of Classification and Labeling of Chemicals (GHS)**.
 - **Internationally standardized criteria** for classifying chemicals according to health, physical, and environmental hazards.
 - Applying GHS criteria to score a chemical for **hazard endpoints**.

**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



EPA Design for the Environment Alternatives Assessment Criteria for Hazard Evaluation

EPA Criteria for Safer Chemical Ingredients

EPA's Safer Choice Program Master Criteria for Safer Ingredients

Version 2.1
September 2012

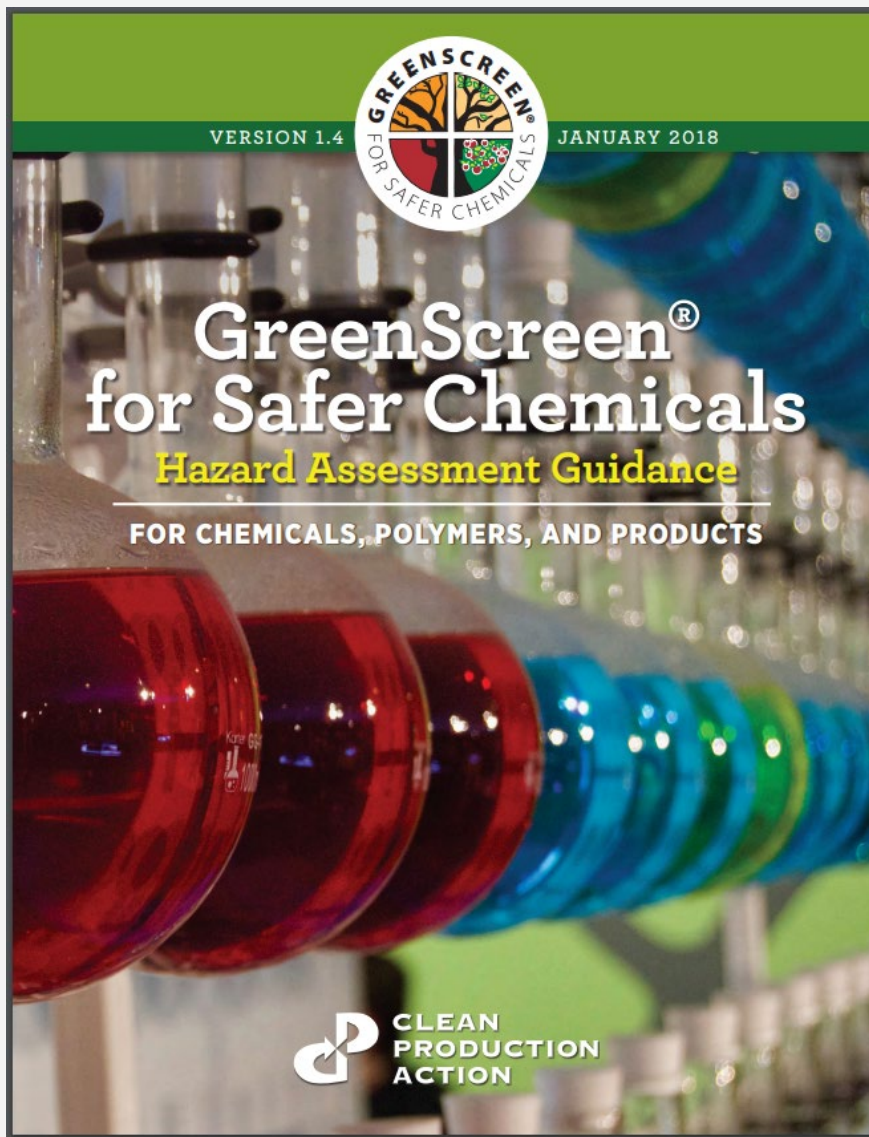
Office of Pollution Prevention & Toxics
U.S. Environmental Protection Agency



- Chemicals that meet the master criteria are considered low concern and can be found on the Safer Chemical Ingredient List (SCIL).
- Currently there are almost 1,000 chemicals on the SCIL.
- Safer Choice Products contain chemicals that meet the master criteria.
- There are currently over 2,000 products labeled as “Safer Choice.”

GreenScreen® for Safer Chemicals

Bins chemicals into
several groups—
Benchmarks 1 – 4, U



GreenScreen® for Safer Chemicals

Summary table of
Methyl Acetate



GreenScreen® Assessment [View source](#) [View key](#)

Group I Human						Group II Human								Ecotox			Fate		Physical	
C	M	R	D	E	AT	ST		N		SnS	SnR	IrS	IrE	AA	CA	Eo	P	B	Rx	F
						single	repeat	single	repeat											
L	L	L	M	DG	L	M	M	M	M	L	L	L	H	L	L		vL	vL	L	H

The full assessment is available as a PDF document

GreenScreen® Benchmark Score [View key](#)

Benchmark 2	Assessment Level
Moderate Concern	Certified

Sourced from [NEWMOA](#) and [GreenScreen®](#)



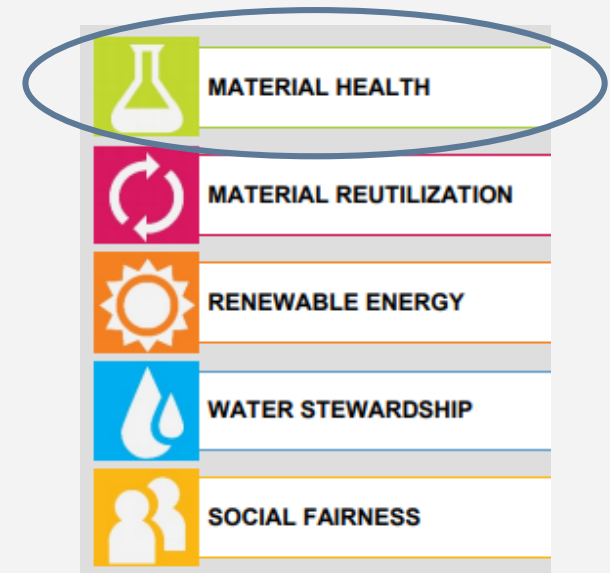
Material Health Assessment Methodology

Last Revision: January 2019

VERSION 3.1 CRADLE TO CRADLE CERTIFIED PRODUCT STANDARD
Controlled Document/Effective December 10, 2014/Approved by C2CPII Certification Standards Board

Cradle to Cradle Certified™

- Part of the Cradle to Cradle Certified product standard.
- Bins chemicals into several groups

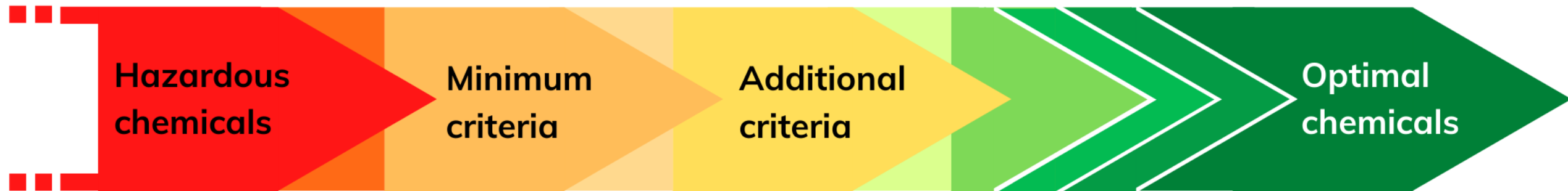


What do these methods have in common?

- Hazard-based criteria.
- Criteria transparency.
- Minimum data requirements and ability to include additional data when it's available.
- Ingredient and chemical transparency.
- Stakeholder involvement.

How does our approach build on existing methods for safer?

- Set criteria for safer—based on existing methods.
 - EPA’s Safer Choice Master Criteria and Design for Environment Alternatives Assessment Hazard Criteria.
 - GreenScreen®
 - Cradle to Cradle Certified™
- The criteria is not one size fits all.
 - Adjusted based on attributes of the priority chemical-product combination
- Certifications and labeling programs that meet our criteria could be used to identify safer products.



Criteria for safer is a spectrum

Minimum criteria for safer

- No chemicals that are persistent and bioaccumulative, and toxic chemicals.
- No very persistent and toxic chemicals.
- No very bioaccumulative and toxic chemicals.
- No known carcinogens or mutagens.
- No chemicals with high reproductive or developmental toxicity.
- No chemicals with endocrine disrupting properties associated with adverse health outcomes.

Examples of certifications that meet our minimum criteria for safer

Examples of chemicals that meet or exceed this criteria:

- GreenScreen® Benchmark 2, 3 and 4.
- EPA Safer Chemical Ingredients List.

Examples of products that meet or exceed this criteria:

- GreenScreen Certified™ Gold and Silver Products.
- EPA Safer Choice Products.
- Cradle to Cradle Certified™ Gold and Platinum Material Health Certificate products.

Example priority chemicals that do not meet our minimum criteria for safer

- Phenolic compounds
 - BPA
 - BPS
 - Nonylphenol ethoxylates
- Flame retardants
 - PBDEs
 - TBBPA
 - BTBPE

- PFAS
 - PFHxS
 - PFHxA
 - 6:2 FTOH
- PCBs
 - PCB-11

- Phthalates
 - DEHP
 - BBP
 - DBP
 - DIBP

**Hazardous
chemicals**

**Minimum
criteria**

**Additional
criteria**

**Optimal
chemicals**

Additional criteria for safer

- No chemicals with known or suspected carcinogenicity.
- Chemicals must have evidence showing lack of mutagenicity, reproductive toxicity, and developmental toxicity.
- No chemicals with endocrine disrupting properties associated with adverse health outcomes.
- No chemicals with high persistence and high bioaccumulation.
- No chemicals with high persistence and high toxicity.
- No chemicals with high bioaccumulation and high toxicity.

Examples of certifications that meet our additional criteria

Examples of chemicals that meet or exceed this criteria:

- GreenScreen® Benchmark 3 and 4.
- EPA Safer Chemical Ingredients List.

Examples of products that meet or exceed this criteria:

- GreenScreen™ Gold Products.
- EPA Safer Choice Products.

Hazard data requirements

Hazard Endpoint	Requirement
Carcinogenicity	Required
Mutagenicity/Genotoxicity	Required
Reproductive <u>or</u> Developmental Toxicity	Required
Endocrine Disruption	Not required
Acute Toxicity	Required
Single <u>or</u> Repeat Systemic Toxicity	Required
Single or Repeat Neurotoxicity	Required (potential exemption based on other hazard endpoints)
Skin <u>or</u> Respiratory Sensitization	Required
Skin <u>or</u> Respiratory Irritation	Not required
Eye Irritation	Not required
Acute <u>or</u> Chronic Aquatic Toxicity	Required (potential exemption for chemicals with low water solubility)
Persistence	Required
Bioaccumulation	Required



What chemicals are being evaluated?

- Chemicals used in products to function like priority chemicals.
- Certifications and labeling programs may evaluate whole products.
- Safer products do not need to have all ingredients meet the criteria for safer—**only the chemicals with the same function as priority chemicals.**

What chemical concentrations are evaluated?

Must meet the full criteria:

- Any intentionally added chemicals over 100 ppm used to serve the function of the priority chemical.
- Residual monomers over 1,000 ppm.
- Impurities and breakdown products over 1,000 ppm.

Cannot be carcinogens, mutagens, reproductive/developmental toxicants.

- Impurities and known breakdown products between 100 and 1,000 ppm

Priority chemicals may be evaluated at concentrations below these thresholds:

- If low concentrations contribute to exposure potential.
- De minimus concentration levels for priority chemicals—likely on a product or chemical basis.

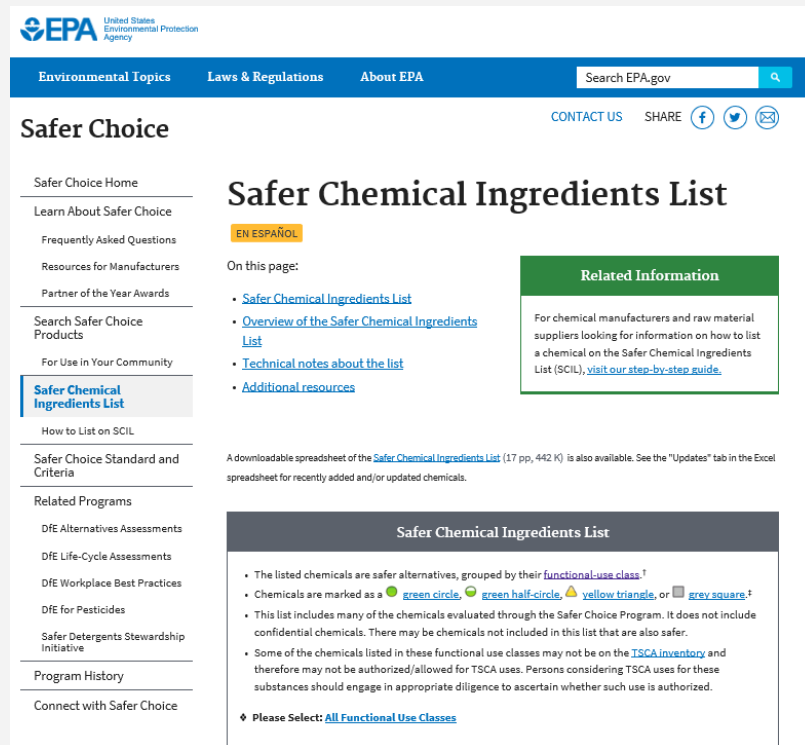
What about exposure potential?

- The law directs us to identify alternatives that are less **hazardous**.
- **Exposure potential** is helpful in understanding the context around hazards across the lifecycle.
- **Product** information helps determine high or low exposure potential concerns.
- In cases of **high exposure potential**, we may make the hazard criteria more protective.
 - Based on EPA's Safer Choice Product-Class Criteria.
 - Avoid regrettable substitutions.
- There may be exemptions to the criteria for safer in cases of **low exposure potential**.
 - Based on Cradle to Cradle Certified™
 - Example: Chemicals with low water solubility are exempted from aquatic toxicity data requirements.

Can an alternative chemical within the class ever be safer?

- Class-based approach to identifying safer alternatives.
- Within-class alternatives must meet additional, more protective criteria.
- To confirm they do not share hazard traits with the priority chemical class, they must:
 - Meet the criteria for safer.
 - Not be known or suspected carcinogens, mutagens, reproductive and developmental toxicants.
 - Not have endocrine disrupting activity.
 - Have sufficient, high-quality data for all hazard endpoints (even for hazard endpoints not typically required—like endocrine disruption).
 - Data gaps will be filled using read-across data from the priority chemical class.
 - Not be highly persistent or highly bioaccumulative.

Chemicals that may meet our criteria



The screenshot shows the EPA's Safer Chemical Ingredients List (SCIL) website. The header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, and About EPA. The main heading is "Safer Chemical Ingredients List" with a search bar and social media icons. A sidebar on the left contains links for "Safer Choice Home", "Learn About Safer Choice", "Frequently Asked Questions", "Resources for Manufacturers", "Partner of the Year Awards", "Search Safer Choice Products", "For Use in Your Community", "Safer Chemical Ingredients List", "How to List on SCIL", "Safer Choice Standard and Criteria", and "Related Programs". The main content area features a "Related Information" box with links to "Safer Chemical Ingredients List", "Overview of the Safer Chemical Ingredients List", "Technical notes about the list", and "Additional resources". Below this is a note about a downloadable spreadsheet and a section titled "Safer Chemical Ingredients List" with a legend for functional use classes: green circle, green half-circle, yellow triangle, and grey square.

Sourced from [EPA Safer Chemical Ingredients List](#)



BENCHMARK 2, 3 and 4 Chemicals

Certification and labeling programs that may meet our criteria for safer



Material Health Certificates
(Platinum and Gold)



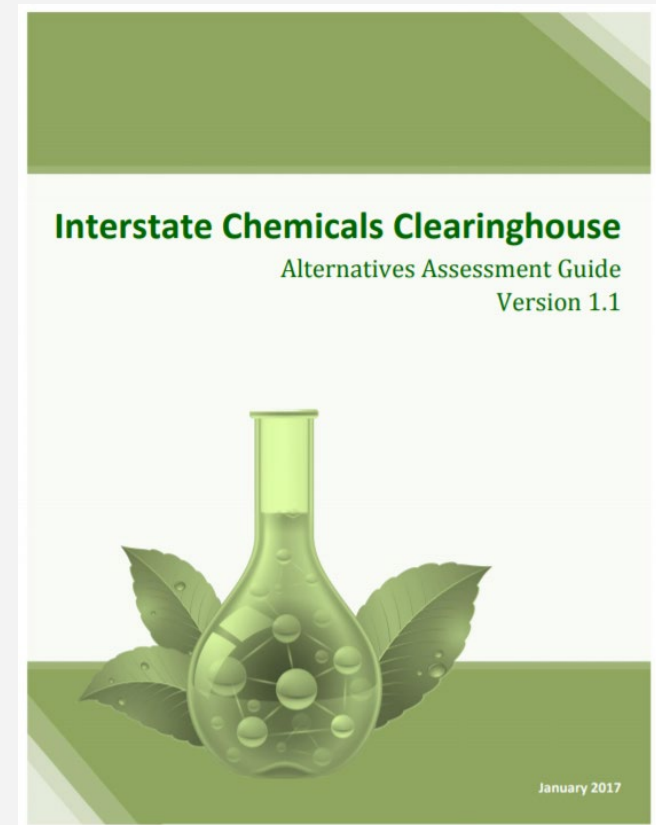
Silver and Gold



Section 3. Feasible and available

Feasible and available

- RCW 70A.350 requires that Ecology determine that safer alternatives are “feasible and available” before restricting the use of a priority chemical.
- Feasible and available and are not defined in the statute.
- The IC2 created a guide for Alternatives Assessment (2017), which contains modules to assess feasibility and availability of potential alternatives.
 - Performance module—technical feasibility.
 - Cost and availability module—price competitive and available in sufficient quantity.



IC2 Performance Module—How performance is defined

What are the performance needs for the application, process, or product that contains the chemical of concern (COC)? Why is the COC being used in this specific application?

- What are the performance requirements at the chemical level?
- What are the performance requirements at the material level?
- What are the performance requirements at the product level?
- What are the performance requirements at the process level?

IC2 Performance Module—Performance assessment

Has the alternative(s) already been identified as a favorable alternative with respect to performance?

- Is the alternative being used (i.e., by others) for the same or similar function? For example, is a chemical being used as a flame retardant in other applications?
- Is the alternative used in similar products available on the market?
- Is the alternative marketed in promotional materials as an option for providing the desired function for the specific application of interest?
- Based on the above questions, does the alternative appear applicable to the product or process under evaluation?
 - If yes, identify the **alternative as favorable**. Evaluation complete.
 - If no, identify that the alternative is not technically favorable and document the information used to reach the conclusion. Continue evaluation.

IC2 Cost and Availability Module

The IC2 guide identifies two key questions for assessing cost and availability. If the answer to either question is positive, the alternative is considered favorable for both cost and availability.

- 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?
 - “Close to the current” is not yet defined, and may depend on the chemical-product combination.



Section 4. Opportunities for input



Get involved with our Phase 3 process

- We shared a lot with you today!
- Think it over, bring questions and thoughts now—or later.
 - Our door is always open!
- Reach out to us if you have input or concerns to share.
 - Additional certification programs.
 - Resources from work on safer alternatives.
 - Other ideas.



Stakeholder involvement next steps

- Discussions on safer, feasible, and available continuing this winter.
- Product-specific webinars (Spring – Fall 2021).
- Formal public comment period on draft regulatory actions report (Fall 2021 – Winter 2022).

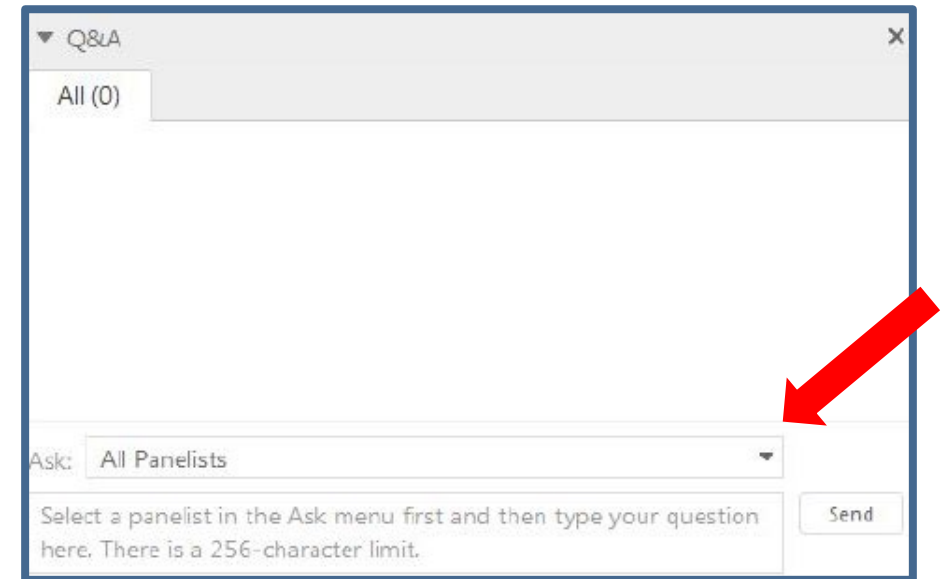


Section 5. Questions

Questions? Comments?

Type them in the Q & A box.

- Use the drop-down arrow to select who to ask your question to.
- Choose **all panelists**, not host or presenter.
- This ensures we can keep track of and address all questions.
- If you need more than 256 characters, send us an email at SaferProductsWA@ecy.wa.gov.



The screenshot shows a Q&A interface with a title bar "Q&A" and a close button "X". Below the title bar is a tab labeled "All (0)". The main area is empty. At the bottom, there is a form with a label "Ask:" and a dropdown menu currently showing "All Panelists". To the right of the dropdown is a "Send" button. Below the form, there is a note: "Select a panelist in the Ask menu first and then type your question here. There is a 256-character limit." A red arrow points to the dropdown arrow.

Thank you for joining us!



SaferProductsWA@ecy.wa.gov



ecology.wa.gov/Safer-Products-WA



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



Chapter 70A.350 RCW (formerly 70.365)



End of presentation.

Safer Products for WA Implementation Process

The implementation process for Safer Products for Washington involves **four major phases**.

1. Phase 1. May 8, 2019: What chemicals are we most concerned about?

- The first five priority chemical classes are PFAS, PCBs, phthalates, phenols, and flame retardants.

2. Phase 2. June 1, 2020: What consumer products contain these chemicals?

- This phase identifies priority consumer products that are significant sources of exposure to people and the environment.

3. Phase 3. June 1, 2022: Do we need to regulate when these chemicals are used?

- This phase determines regulatory actions—whether to require notice, restrict/prohibit, or take no action.

4. Phase 4. June 1, 2023: What rules do we need to keep people and the environment safe?

- This phase includes restrictions on the use of chemicals in products or reporting requirements. Restrictions take effect one year after rule adoption.

After these four phases are completed, the **5-year cycle repeats**, and we return to Phase 1 to identify a new set of priority chemical classes.

Lifecycle assessment consideration

The Safer Products for Washington program considers the full lifecycle of products and the potential impacts at each stage in the lifecycle.

1. The beginning of life phase involves extraction, processing, manufacturing, and distribution. During this stage, there are potential impacts to the environment, workers, and communities.
2. The use phase involves workers, consumers, and intended users of the products. During this stage, there are potential impacts to the environment, workers, communities, and consumers.
3. The end of life phase involves recycling, compost, and disposal of products. During this stage, there are potential impacts to the environment, workers, and communities.